

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

STREAMFLOW STATISTICS AND DRAINAGE-BASIN CHARACTERISTICS  
FOR THE PUGET SOUND REGION, WASHINGTON

Volume II. Eastern Puget Sound from Seattle to  
The Canadian Border

By J. R. Williams, H. E. Pearson, and J. D. Wilson

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UNITED STATES DEPARTMENT OF THE INTERIOR  
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GEOLOGICAL SURVEY  
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### METRIC (SI) CONVERSION FACTORS

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<u>Multiply</u>	<u>By</u>	<u>To obtain</u>
inches (in.)	25.4	millimeters (mm)
feet (ft)	0.3048	meters (m)
miles (mi)	1.609	kilometers (km)
square miles (mi <sup>2</sup> )	2.590	square kilometers (km <sup>2</sup> )
cubic feet per second(ft <sup>3</sup> /s)	0.02832	cubic meters per second (m <sup>3</sup> /a)
	28.32	liters per second (L/s)

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### Temperature

To convert degree Fahrenheit (°F) to degree Celsius (°C):  
°C = 5/9 (°F-32)

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National Geodetic Vertical Datum of 1929 (NGVD of 1929): A geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "mean sea level." NGVD of 1929 is referred to as sea level in this report.

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ABSTRACT

This report presents streamflow data and drainage-basin characteristics for 166 sites from the Cedar River, near Seattle, to the Canadian border. All gaging stations with 5 or more years of record (through 1979) are included. The data include monthly and annual mean discharges and their statistics, low-flow and high-flow analyses, flow duration, and flood frequency.

## INTRODUCTION

This report presents a summary of historic streamflow records for specific areas of the State. Volumes I and II cover the Puget Sound region of Washington. Because there are 299 specific sites in the Puget Sound Region at which 5 years or more of data have been collected, the report has been divided into two volumes. Volume I contains data for sites 1 through 133—the area from Cape Flattery through the Green River basin near Seattle, and Volume II contains data for sites 134 through 299—the area from the Cedar River basin near Seattle to the Canadian border (see fig. 1).

This report was prepared at the request of Bruce L. Foxworthy, Project Leader, U.S. Geological Survey, Puget Sound Earth Sciences Applications Project Office. The report has been prepared under the general supervision of Charles R. Collier, former District Chief.

A similar report (U.S. Geological Survey Open-File Report 84-145A and B) presents historic streamflow data for the remainder of the State in two volumes—Volume I, southwestern Washington, and Volume II, eastern Washington.

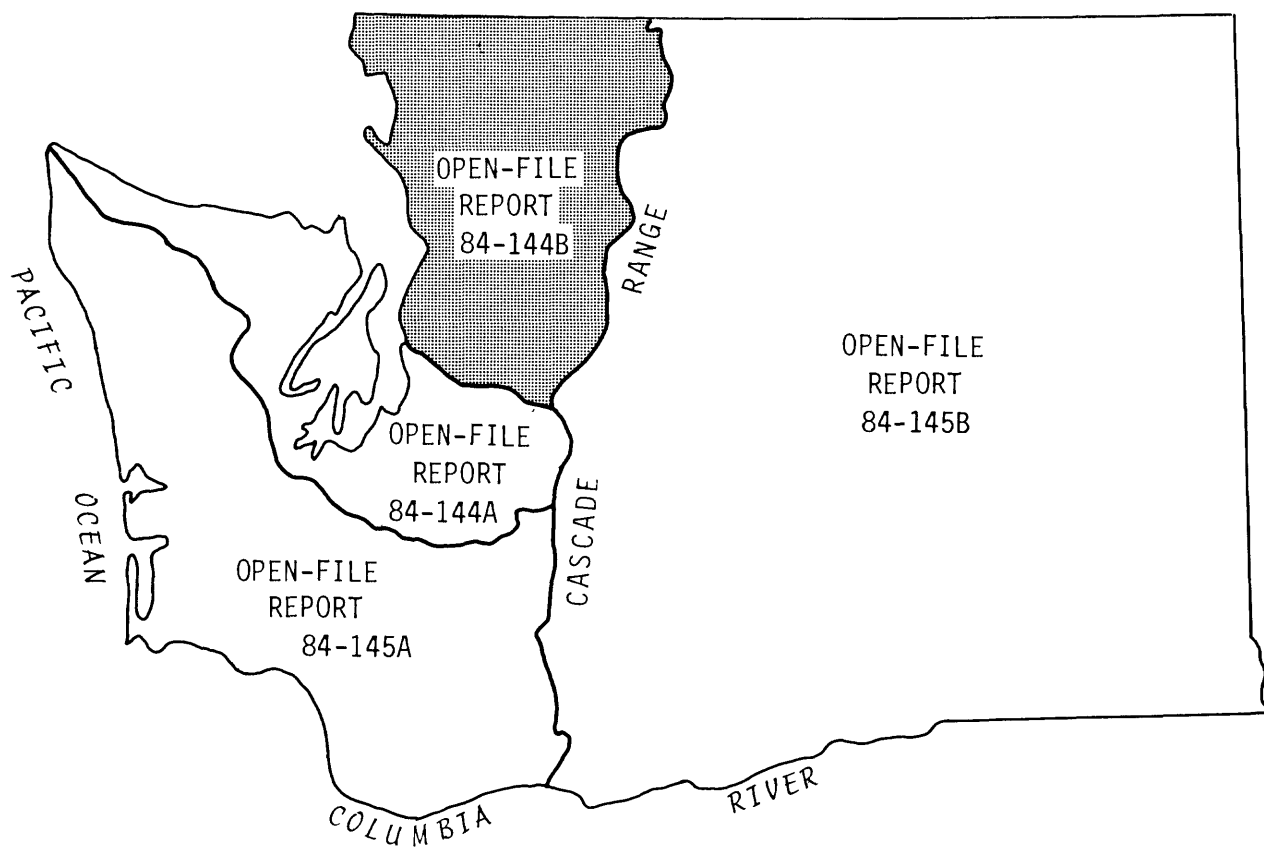


FIGURE 1.--Map showing areas in Washington State for which open-file reports containing streamflow statistics and drainage-basin characteristics are available. Shaded area is covered in this report.

## PART A

### General Explanation of Data

When the U.S. Geological Survey (USGS) operates a recording-gaging station on a stream, it publishes daily mean discharges in its annual State Water-Data Reports. Although these daily discharges are not repeated in this report, they are the basis for most of the data in this report. The summary tables of monthly and annual mean discharges, as well as the tables of highest and lowest mean flows, were obtained from the daily mean figures at each site.

Annual instantaneous peak flows are also included in this report. These values were obtained at regular recording gaging stations and also at some special sites and partial-record stations where these data are the only data available. The annual peak-flow data were used to compute estimates of the magnitude and frequency of floods on the streams.

This report also contains drainage-basin and climatic characteristics for each site, either obtained from U.S. Weather Bureau data or computed from standard USGS topographic quadrangle maps. A more detailed explanation of the methods used to compute the various characteristics is given in the next section of this report.

Most of the water-resources data collected by the U.S. Geological Survey is stored in several computer files maintained at the central computer facilities in Reston, Va. As a part of the Survey's program of releasing water data to the public, a large-scale computerized system for WATER data STORAGE and RETRIEVAL (WATSTORE-1975) has been developed. Much of the data presented in this report was retrieved from four WATSTORE computer files—the station header file, the daily values file, the peak-flow file, and the streamflow and basin characteristics file. The station header file was used to list the gaging-station name and standard USGS downstream order number for each site, along with the location by county and latitude and longitude, as shown in table 1. The other three files were used to make retrievals from which the streamflow-summary tables, peak-flow tables, and basin-characteristics tables were made.

Only data for gaging stations having 5 or more years of record are included in this report. For those stations having 5 to 9 years of record, only listings of the monthly and annual mean flows and annual peak flows are presented. For stations with 10 or more years of record, additional statistics are presented.

The data for sites with less than 5 years of continuous record can be obtained by consulting either the annual USGS State Water-Data Reports or Washington State Department of Conservation Water-Supply Bulletin 23 (1964), or by contacting the USGS office in Tacoma.

The first column of table 2 (the table of basin characteristics) lists the gaging-station numbers, which follow the standard U.S. Geological Survey method for numbering surface-water stations that has been used since 1950. Each station has an 8-digit number, such as 12114000, which includes a 2-digit part number ("12") plus a 6-digit downstream order number ("114000"). The downstream order numbers increase in a downstream direction along the main stream. All stations on a tributary entering upstream from a main-stream station are listed before that station. A station on a tributary that enters between two main-stream stations is listed between them. No distinction is made between station numbers for recording gaging stations and partial-record stations.

For other supplemental information about a site, such as the period of record, a narrative-type location, or notes concerning diversion and regulation, the user is referred to the annual USGS State Water-Data Reports for the years when that station was in operation.

The State of Washington, in cooperation with the U.S. Geological Survey, has published three reports concerned with the water resources of three of the larger areas in the Puget Sound region: Water-Supply Bulletin 47, "Water in the Skagit River Basin, Washington"; Water-Supply Bulletin 12, "Water Resources of the Nooksack River Basin and Certain Adjacent Streams"; and Water-Supply Bulletin 18, "Water Resources and Geology of the Kitsap Peninsula and Certain Adjacent Islands." All three reports contain hydrologic data collected at gaging stations, and also contain information on ground water, geology, chemical quality of the water, water use, and climatological data within their respective basins.

Table 1 lists the page on which the data for each of the 133 sites can be found. The gaging stations are ordered by station number—the standard downstream order number used by the Geological Survey (an explanation of the numbering system was previously given in the description of table 2).

The gaging-station name is the name used in the header file. It agrees with the name under which the data have been published most recently by the USGS.

Following the station name, a county code and the latitude and longitude are given for each site. The county codes are those used by the Geological Survey's WATSTORE programs as defined by Federal Information Processing Standards (FIPS) and are the ones used by all Federal agencies. The codes for the counties or parts of counties in the Puget Sound region as defined in this report are as follows:

Clallam-----	009	Pierce-----	053
Island-----	029	San Juan-----	055
Jefferson-----	031	Skagit-----	057
King-----	033	Snohomish-----	061
Kitsap-----	035	Thurston-----	067
Lewis-----	041	Whatcom-----	073
Mason-----	045		



Table 1 also lists a map-site number for each station for which data are included in this report. Station locations and site numbers are plotted on plate 1, in the pocket at the end of the report. The numbers increase in the same order that the sites are presented in the report; that is, beginning with site number 134 on the Cedar River near Seattle and ending with site number 299 near the Canadian border.

The users of the statistical data found in this report should be aware of the possibility of significant regulations or diversion of the flows at the sites. For stations with two or more levels of regulations, separate tabulations and statistical summaries are given for each homogeneous segment of the record. It should be remembered that statistics of regulated record segments include both natural hydrological fluctuations and the manmade operating policies at the regulating structure. Because the operating policies are subject to changes in our society and our economic needs (the price of hydropower, especially), the streamflow statistics of regulated records, although descriptive of the past, may be unrepresentative of the future. Regulated records should, therefore, be carefully considered when using monthly and annual mean flows, high and low mean flows, and annual peak flows. One can determine the years of record which were regulated at all sites in this report by observing which years of annual peak flows are coded with an R.

## Drainage Basin and Climatic Characteristics

There are times when analytical studies require the use of various streamflow and drainage basin characteristics. As a part of the WATSTORE system, the Geological Survey has created a computer file in which about 200 characteristics for any particular site may be stored, including some physical characteristics for the specific sites themselves, but also include characteristics for the drainage basin above the sites. These characteristics were computed in accordance with the National Handbook of Recommended Methods for Water-Data Acquisition.

Many streamflow characteristics in the file are computed from statistical analyses of the gaging station records. These are shown in the summary tables presented in part B of this report. Eleven basin characteristics were selected for retrieval for each site and are presented in table 2. A brief description of each of the eleven characteristics is given below.

**AREA** - The total drainage area above the stream-gaging site, in square miles, including non-contributing area.

**SLOPE** - The main channel slope, in feet per mile. It was computed by first extending the main stream upstream to the basin divide and then locating on the stream a point that was 10 percent of the distance from the gage to the divide and another point on the stream that was 85 percent of the distance from the gage to the divide. The slope between those points was then computed by dividing the difference in elevation between the points by the distance between the points.

**LENGTH** - The stream length, in miles, measured along the channel from the gage to the basin divide.

**ELEVATION** - The mean basin elevation, in feet above mean sea level. It was computed from topographic maps by using a grid-sampling method. A grid size was selected that had between 20 and 80 points inside the drainage-area boundary. The elevation of each grid point was then determined, and the mean of the points was considered to be the mean basin elevation.

**STORAGE** - The percentage of the contributing drainage area that is made up of lakes, ponds, and swamps, as measured by the grid-sampling method.

**LAKE AREA** - The area of lakes and ponds, as a percentage of contributing drainage area, measured by the grid-sampling method. It differs from STORAGE only in that it does not include swamp area.

FOREST - The area covered by trees, as a percentage of the contributing drainage area. It is measured by the grid-sampling method and is based on the color code and map symbols on standard U.S. Geological Survey topographic maps.

PRECIP. - The mean annual precipitation in the basin, in inches, taken from U.S. Weather Bureau series, "Climates of the States—Washington." Grid-sampling method is used with an isohyetal map.

I 24,2 - The precipitation intensity within the basin. It is the 24-hour rainfall, in inches, that can be expected on the average once every 2 years. It is estimated from U.S. Weather Bureau Technical Paper 40.

SNOFALL - The mean annual snowfall for the basin, in inches, taken from U.S. Weather Bureau series, "Climates of the States—Washington."

JANMIN - The mean minimum January temperature for the basin, in degrees Fahrenheit, taken from U.S. Weather Bureau series, "Climates of the States—Washington."

#### Monthly and Annual Mean Discharges

The monthly and annual mean discharge tables (part B of this report) are based on data from the daily-values file in the WATSTORE system and are listed on a water-year basis. A water year begins on October 1st of a year and ends on September 30th of the next year—for example, the 1979 water year began on October 1, 1978, and ended on September 30, 1979.

Monthly and annual mean discharges are listed for each station for its period of record. (These, together with annual peak flows, are the only data presented for stations with 5 to 9 years of record.) The mean values are arithmetic means of individual daily mean discharges.

For stations having 10 or more years of monthly mean discharges, results of additional statistical analyses are given. The statistics, computed from the monthly and annual mean discharges, are the mean, maximum, minimum, standard deviation, coefficient of skewness, coefficient of variation, percentage of the average discharge, and the statistics of the logarithms of the flows. Note that due to the method of rounding off the numbers, the sum of the monthly percentage of the average discharges does not always equal the 100.0 shown under the "Annual" column.

Also listed are monthly and annual mean discharge exceedence probabilities based on log-Pearson Type III analyses. The magnitudes of the monthly and annual mean discharges for each year are assumed to be independent random variables that follow the log-Pearson Type III probability distribution; that is, the logarithms of the discharges follow a Pearson Type III distribution. This distribution defines the probability that any single monthly mean flow will exceed a specified discharge. For example, a monthly mean flow with a probability of 0.04 would be expected to be exceeded four times in 100 years on the average, and the chance of its being exceeded in any one year is 4 percent. This should not be construed to indicate that a monthly mean flow of that magnitude would occur on a regular basis. It is quite possible that the given flow could be exceeded several times within a few years, and then not be exceeded again for many years.

#### Highest Mean Flows and Annual Peak Flows

The highest mean flow table (Part B) lists the highest n-day mean flow for nine selected periods of n-consecutive days for each year of record that has no missing values. These values are listed only for those stations that have 10 years or more of record. Statistics computed from these flows are also shown. These statistics are the mean, maximum, minimum, standard deviation, skewness, standard error of skewness, serial correlation coefficient, coefficient of variation, and the statistics of the logarithms of the flows.

The date and magnitude of annual peak flows are listed. When a peak is considered to be affected significantly by upstream regulation, it is coded with an R. Uncoded peaks may be assumed to be natural flow or not significantly affected by regulation. The user of these data should be aware that some stations have had varying degrees of regulation with time, such as construction of several dams upstream from a station. In such cases, the user would probably want to investigate the effect of changes in regulation on an individual station basis.

For some stations, 10 years or more of record have been gathered both before and after significant regulation on the stream. In those cases, the statistics have been computed using the unregulated or natural flow first, and then using the regulated years only. A comparison of the two sets of statistics gives a good measure of the effect of regulation. The years of the historical data that were used in each statistical computation are shown in parentheses; the user must be aware of the possibility of significant regulation during those years.

For some stations, annual peaks were obtained for several years after the station was discontinued as a recording streamflow station. Therefore, the statistics for the high mean flow and low mean flow were based on a different span of years than were those of the annual peak-flow statistics. The total span of years for the annual peak-flow statistics is shown in parentheses, but only those years for which daily flows are available were used for computing the high- and low-flow statistics.

For all stations with 10 or more years of data, flow exceedence probabilities based on log-Pearson Type III analyses are listed both for the highest mean flows for the various consecutive days and for the annual peak flows. This listing states the probability that in any year the flow will equal or exceed a specified discharge. For example, a flow with an exceedence probability of 0.04 would be expected to be exceeded four times in 100 years on the average. However, this should not be construed to indicate that flows of those magnitudes would occur on a regular basis.

Because the term "recurrence interval" is a more familiar term to many people than "exceedence probability", it is appropriate to explain their relationship. An annual peak flow with an exceedence probability of 0.10 is expected to occur or be exceeded 10 times in 100 years on the average, or it can be said to have a 10-percent chance of being equaled or exceeded in any year on the average. This same peak flow can be said to have a recurrence interval of 10 years since it can be expected to occur once in 10 years on the average. It should be noted, however, that recurrence intervals cannot be thought of as indicating that floods occur on a regular schedule and cannot be used to predict the timing of floods. This is avoided by stating that the flow for a flood with a 10-year recurrence interval has, instead, an exceedence probability of 0.10. A table of exceedence probabilities and their corresponding recurrence intervals follows.

Exceedence probability	Recurrence interval (years)
0.99	1.01
.95	1.05
.90	1.11
.80	1.25
.50	2
.20	5
.10	10
.05	20
.04	25
.02	50
.01	100

For the annual peak-flow data, two sets of values are given for both the statistics and the exceedence probabilities—"Systematic Record" and "WRC Estimate." Both sets of values were computed by using the "log-Pearson Type III" distribution method, as recommended by the Water Resources Council (1976). The two sets of values may differ because the mean and skew coefficient used in the computations may differ depending on the length of record available. The skew coefficient used for the "Systematic Record" set of values was computed directly from the peak-flow data for that station. The skew coefficient used in the "WRC Estimate" set of values has been determined by the Water Resources Council by using a generalized skew coefficient for the area and certain guidelines for its application.

The skew coefficient for a station with a short-term record is greatly affected by extremely high or low values. The effect can be overcome somewhat by using the skew-coefficient-weighting formula specified in the WRC guidelines. That formula gives more weight to the generalized skew coefficient when the station record is short-term and more weight to the calculated station skew coefficient when the record is long. For stations having less than 25 years of record, the generalized skew coefficient is used, and for stations having more than 75 years of record, the systematic-record skew coefficient is used; a weighted value is used between these limits.

At some sites, one or more peak discharges are known to be the highest in a period that is longer than the period of gaging-station record. At such sites, the "WRC Estimate" takes this into account by making an historic adjustment. The mean of the logarithms after the adjustment differs from that used in the "Systematic Record" computation. The "WRC Estimate" of flood frequency, with its appropriate generalized skew coefficients and adjustments for outliers and historic peaks, is the one that should be adopted. The "Systematic Record" flood-frequency values are an intermediate step and diagnostic check of the "WRC Estimate" and show what would have resulted had not a generalized skew been used or adjustments been made.

The user is reminded that the flood-frequency discharges listed in this report for each station are the results of statistical analyses of the data collected at that station for the specified period of record and under the hydrologic condition of that time, and that the discharges necessarily will change as more records become available in the future and as hydrologic conditions change. There is no substitute for the personal judgment of an experienced hydrologist in analyzing flood-frequency data.

### Lowest Mean Flows and Flow-Duration Data

The source of the lowest mean flow and flow-duration data is the daily mean discharge published for each gaging station. For most streams, minimum discharges usually occur during the period July-October. Because that period straddles the end of a water year (September 30), the lowest mean-flow table is based on a climatic year, beginning April 1 and ending the following March 31.

For all gaging stations with 10 or more complete years of record, a lowest-mean-flow table is presented that lists the lowest n-day mean flow for nine selected periods of n-consecutive days for each year of record. Also included are the mean, maximum, minimum, standard deviation, skewness, standard error of skewness, serial correlation coefficient, coefficient of variation, and the statistics of the logarithms of the flows.

The probability of an n-day low mean flow being equal to, or less than, a specified discharge was computed by using a log-Pearson Type III analysis. The probabilities and corresponding discharges are given in the "Lowest mean flow non-exceedence probabilities" table for each station. The n-day low mean discharge corresponding to a probability of 0.10 has a 10-percent chance of occurring in any given year and would occur on the average, over a long period of time, 10 times in 100 years. Such a mean discharge has a recurrence interval of 10 years. For example, the 7-day low mean flow corresponding to a probability of 0.10 for N.F. Cedar River near Lester is 7.3 ft<sup>3</sup>/s. On an average of once in 10 years, the low mean flow for 7 consecutive days will be equal to or less than 7.3 ft<sup>3</sup>/s. The recurrence interval should not be construed to indicate that flows of that magnitude would occur on a regular basis. The relationship between recurrence intervals and probabilities has been explained in the "Highest Mean Flows and Annual Peak Flows" section of this report.

Also included are the annual flow-duration data for all stations having 10 or more years of daily record. These data help indicate the availability of streamflow and are useful for investigating problems of water supply, power development, waste disposal, and administration of water rights. The flow-duration data list discharges that were equaled or exceeded for specified percentages of time for each station for its period of record. (Monthly flow-duration tables can also be useful, as they show a chronological sequence of flows, but they are beyond the scope of this report.)

There are many natural factors that influence the low-flow characteristics of streams, including precipitation within the basin, geographical position, elevation, and geology. A discussion of the influence of these factors on streams in the Puget Sound region can be found in Hidaka (1973).

TABLE 1.--Numerical listing of stations

STATION NUMBER	STATION NAME	COUNTY	LAT- I- TUDE	LONG- I- TUDE	MAP SITE NUMBER	PAGE NUMBER
12113500	NORTH FORK CEDAR RIVER NEAR LESTER, WASH.	033	47 19 10	121 30 05	134	26
12114000	SOUTH FORK CEDAR RIVER NEAR LESTER, WASH.	033	47 18 30	121 31 00	135	29
12114500	CEDAR R. BELOW BEAR CH., NEAR CEDAR FALLS, WASH.	033	47 20 32	121 32 52	136	32
12115000	CEDAR RIVER NEAR CEDAR FALLS, WASH.	033	47 22 13	121 37 26	137	35
12115300	GREEN POINT CREEK NEAR CEDAR FALLS, WASH.	033	47 23 20	121 40 30	138	38
12115500	REX RIVER NEAR CEDAR FALLS, WASH.	033	47 21 03	121 39 43	139	39
12116100	CANYON CREEK NEAR CEDAR FALLS, WASH.	033	47 25 11	121 45 55	140	42
12116500	CEDAR RIVER AT CEDAR FALLS, WASH.	033	47 25 02	121 47 27	141	45
12116700	MIDDLE FORK TAYLOR CREEK NEAR SELLECK, WASH.	033	47 21 15	121 47 30	142	51
12116800	NORTH FORK TAYLOR CREEK NEAR SELLECK, WASH.	033	47 22 20	121 48 20	143	51
12117000	TAYLOR CREEK NEAR SELLECK, WASH.	033	47 23 12	121 50 42	144	52
12117500	CEDAR RIVER NEAR LANDSBURG, WASH.	033	47 23 38	121 57 12	145	55
12118400	ROCK CREEK AT STATE HWY 5A NR RAVENSDALE, WASH.	033	47 21 45	122 00 35	146	63
12118500	ROCK CREEK NEAR MAPLE VALLEY, WASH.	033	47 22 48	122 00 58	147	64
12119000	CEDAR RIVER AT RENTON, WASH.	033	47 28 10	122 09 30	148	67
12119500	MAY CREEK NR RENTON, WASH.	033	47 31 25	122 11 45	149	70
12119600	MAY CREEK AT MOUTH, NEAR RENTON, WASH.	033	47 31 48	122 12 00	150	70
12119700	COAL CREEK NR BELLEVUE, WASH.	033	47 34 00	122 10 45	151	71
12119800	VALLEY (NO BRANCH MERCER) CR NR BELLEVUE, WASH.	033	47 37 42	122 09 06	152	72
12120000	MERCER CREEK NEAR BELLEVUE, WASH.	033	47 36 11	122 10 47	153	73
12120500	JUANITA CREEK NEAR KIRKLAND, WASH.	033	47 42 27	122 12 51	154	76
12121000	ISSAQUAH CREEK NEAR ISSAQUAH, WASH.	033	47 28 55	122 02 10	155	79
12121600	ISSAQUAH CREEK NR MOUTH, NR ISSAQUAH, WASH.	033	47 33 09	122 02 48	156	82
12121700	TIBBETTS CREEK NEAR ISSAQUAH, WASH.	033	47 32 30	122 03 47	157	85
12123000	COTTAGE LAKE CR NEAR REDMOND, WASH.	033	47 44 15	122 04 45	158	86
12123300	EVANS CREEK TRIBUTARY NEAR REDMOND, WASH.	033	47 39 05	122 02 45	159	89
12124000	EVANS CREEK (ABOVE MOUTH) NR REDMOND, WASH.	033	47 40 31	122 04 48	160	90
12124500	BEAR CREEK AT REDMOND, WASH.	033	47 40 10	122 06 30	161	93
12125000	SAMMAMISH RIVER NEAR REDMOND, WASH.	033	47 40 10	122 07 50	162	94
12125200	SAMMAMISH RIVER NEAR WOODINVILLE, WASH.	033	47 42 15	122 08 29	163	97
12125500	BEAR CREEK AT WOODINVILLE, WASH.	033	47 45 25	122 09 50	164	100
12126000	NORTH CREEK NEAR BOTHELL, WASH.	061	47 47 30	122 11 47	165	100
12126500	SAMMAMISH RIVER AT BOTHELL, WASH.	033	47 45 32	122 12 09	166	104
12127100	SWAMP CREEK AT KENMORE, WASH.	033	47 45 22	122 13 57	167	
12127300	LYON CREEK AT LAKE FOREST PARK, WASH.	033	47 45 11	122 16 35	168	110
12127600	MCALLEN CREEK AT LAKE FOREST PARK, WASH.	033	47 45 07	122 16 48	169	110
12128000	THORNTON CREEK NEAR SEATTLE, WASH.	033	47 41 45	122 16 30	170	111
12128900	TYE RIVER NEAR SCIENIC, WASH.	033	47 43 35	121 08 30	171	112
12130500	S. F. SKYKOMISH RIVER NEAR SKYKOMISH, WASH.	033	47 42 20	121 18 30	172	112
12130800	BULLHUCKER CREEK NR SKYKOMISH, WASH.	061	47 49 51	121 17 55	173	113
12131000	BECKLER RIVER NEAR SKYKOMISH, WASH.	033	47 44 20	121 19 10	174	113
12132000	MILLER RIVER AT MILLER RIVER, WASH.	033	47 42 30	121 23 50	175	114
12132700	S.F. SKYKOMISH RIVER TRIBUTARY AT BARING, WASH.	033	47 46 14	121 28 51	176	114
12133000	S.F. SKYKOMISH RIVER NEAR INDEX, WASH.	061	47 48 20	121 32 44	177	115
12133500	TROUBLESOME CREEK NEAR INDEX, WASH.	061	47 54 00	121 23 40	178	121
12134000	NORTH FORK SKYKOMISH RIVER AT INDEX, WASH.	061	47 49 10	121 33 10	179	124
12134500	SKYKOMISH RIVER NEAR GOLD BAR, WASH.	061	47 50 15	121 34 25	180	127
12135000	WALLACE RIVER AT GOLD BAR, WASH.	061	47 51 50	121 41 47	181	133
12135500	OLNEY CREEK NEAR GOLD BAR, WASH.	061	47 56 40	121 42 30	182	136
12136000	OLNEY CREEK NEAR STARTUP, WASH.	061	47 55 35	121 43 10	183	136
12136500	MAY CREEK NEAR GOLD BAR, WASH.	061	47 51 30	121 36 30	184	137
12137500	SULTAN RIVER NEAR STARTUP, WASH.	061	47 58 27	121 46 47	185	138
12138000	SULTAN RIVER NEAR SULTAN, WASH.	061	47 55 40	121 47 50	186	142
12141000	WOODS CREEK NEAR MONROE, WASH.	061	47 52 08	121 55 31	187	145
12141300	MIDDLE FORK SNOQUALMIE RIVER NEAR TANNER, WASH.	033	47 29 10	121 38 48	188	148
12141500	MIDDLE FORK SNOQUALMIE R NR NORTH BEND, WASH.	033	47 29 20	121 45 35	189	151
12142000	N.F. SNOQUALMIE RIVER NR SNOQUALMIE FALLS, WA.	033	47 36 54	121 42 44	190	154
12142200	CALLIGAN CREEK NR SNOQUALMIE, WASH.	033	47 36 05	121 41 20	191	159
12142300	HANCOCK CREEK NR SNOQUALMIE, WASH.	033	47 34 21	121 41 12	192	159
12143000	N.F. SNOQUALMIE RIVER NEAR NORTH BEND, WASH.	033	47 32 15	121 44 26	193	160
12143300	S F SNOQUALMIE R TRIB NEAR NORTH BEND, WASH.	033	47 23 47	121 28 33	194	163
12143310	SF SNOQUALMIE R TR NO.9 NR NORTH BEND, WASH.	033	47 23 48	121 28 38	195	163
12143400	SF SNOQUALMIE R AB ALICE CR NR GARCIA, WASH.	033	47 24 50	121 35 10	196	164
12143500	S.F. SNOQUALMIE RIVER NR GARCIA, WASH.	033	47 25 00	121 35 20	197	166
12143700	BOXLEY CREEK NEAR CEDAR FALLS, WASH.	033	47 25 58	121 45 04	198	167
12144000	S.F. SNOQUALMIE RIVER AT NORTH BEND, WASH.	033	47 29 18	121 47 03	199	170
12144500	SNOQUALMIE RIVER NEAR SNOQUALMIE, WASH.	033	47 32 43	121 50 28	200	175



TABLE 1.--Continued

STATION NUMBER	STATION NAME	COUNTY	LAT- I- TUDE	LONG- I- TUDE	MAP SITE NUMBER	PAGE NUMBER
12145000	TOKUL CREEK NEAR SNOQUALMIE, WASH.	033	47 33 20	121 50 15	201	177
12145500	RAGING RIVER NEAR FALL CITY, WASH.	033	47 32 24	121 54 28	202	178
12146000	PATTENSON CREEK NEAR FALL CITY, WASH.	033	47 34 52	121 56 23	203	181
12147000	GRIFFIN CREEK NEAR CARNATION, WASH.	033	47 36 58	121 54 15	204	184
12147500	NORTH FORK TOLT RIVER NEAR CARNATION, WASH.	033	47 42 45	121 47 15	205	187
12147600	SOUTH FORK TOLT RIVER NEAR INDEX, WASH.	033	47 42 25	121 35 56	206	190
12148000	SOUTH FORK TOLT RIVER NR CARNATION, WASH.	033	47 41 22	121 42 44	207	193
12148100	SO FK TOLT RIVER TRIB NR CARNATION, WASH.	033	47 41 50	121 44 00	208	199
12148500	TOLT RIVER NEAR CARNATION, WASH.	033	47 38 15	121 54 55	209	200
12148700	STOSSEL CREEK NEAR CARNATION, WASH.	033	47 41 45	121 49 50	210	205
12149000	SNOQUALMIE RIVER NEAR CARNATION, WASH.	033	47 39 58	121 55 27	211	206
12150500	CHERRY CREEK NEAR DUVAL, WASH.	033	47 44 40	121 56 35	212	212
12150800	SNOHOMISH RIVER NEAR MONROE, WASH.	061	47 49 52	122 02 50	213	212
12152500	PILCHUCK RIVER NEAR GRANITE FALLS, WASH.	061	48 03 15	121 57 25	214	215
12153000	LITTLE PILCHUCK C NEAR LAKE STEVENS, WASH.	061	48 02 00	122 03 04	215	218
12156400	MUNSON CREEK NEAR MARYSVILLE, WASH.	061	48 03 50	122 08 10	216	221
12157000	QUILCEDA CREEK NEAR MARYSVILLE, WASH.	061	48 06 20	122 09 40	217	221
12158300	DEER CREEK NEAR SILVERTON, WASH.	061	48 06 40	121 34 50	218	225
12159500	S.F. STILLAGUAMISH RIVER NR SILVERTON, WASH.	061	48 04 00	121 36 20	219	225
12161000	S.F. STILLAGUAMISH R. NR. GRANITE FALLS, WASH.	061	48 06 12	121 57 07	220	226
12162500	S.F. STILLAGUAMISH R AB JIM CR NR ARLNGTN, WASH.	061	48 10 05	122 04 05	221	232
12164000	JIM CREEK NEAR ARLINGTON, WASH.	061	48 10 25	122 04 05	222	235
12164500	S.F. STILLAGUAMISH RIVER NR ARLINGTON, WASH.	061	48 11 40	122 05 45	223	238
12165000	SQUIRE CREEK NEAR DARRINGTON, WASH.	061	48 16 15	121 40 00	224	239
12165500	N F STILLAGUAMISH R NR DARRINGTON, WASH.	061	48 16 48	121 42 04	225	242
12166500	DEER CREEK AT OSO, WASH.	061	48 17 00	121 55 45	226	243
12167000	N.F. STILLAGUAMISH R. NR. ARLINGTON, WASH.	061	48 15 42	122 02 47	227	246
12167500	ARMSTRONG CREEK NR ARLINGTON, WASH.	061	48 13 15	122 08 00	228	252
12168500	PILCHUCK CREEK NEAR BRYANT, WASH.	061	48 15 58	122 09 46	229	252
12169500	FISH CREEK NEAR ARLINGTON, WASH.	061	48 10 35	122 13 25	230	256
12171000	LIGHTING CREEK NEAR NEWHALEM, WASH.	073	48 53 30	120 58 50	231	256
12171500	SKAGIT RIVER AB DEVILS CR NR NEWHALEM, WASH.	073	48 50 30	121 02 20	232	256
12172000	BIG HEAVER CREEK NEAR NEWHALEM, WASH.	073	48 46 40	121 04 20	233	257
12172500	SKAGIT RIVER NEAR NEWHALEM, WASH.	073	48 44 50	121 01 50	234	260
12173500	RUBY C BELOW PANTHER C, NR NEWHALEM, WASH.	073	48 42 30	120 58 10	235	263
12174000	RUBY CREEK NEAR NEWHALEM, WASH.	061	48 43 20	121 00 30	236	266
12174500	SKAGIT R BELOW RUBY C, NEAR NEWHALEM, WASH.	073	48 44 20	121 03 40	237	269
12175400	THUNDER CR BLW MCALLISTER CR NR NEWHALEM, WASH.	073	48 38 00	121 03 00	238	272
12175500	THUNDER CREEK NR. NEWHALEM, WASH.	073	48 40 22	121 04 18	239	272
12176000	THUNDER CREEK NEAR MARBLEMOUNT, WASH.	073	48 42 30	121 06 00	240	278

TABLE 1.--Continued

STATION NUMBER	STATION NAME	COUNTY	LAT- I- TUDE	LONG- I- TUDE	MAP SITE NUMBER	PAGE NUMBER
12177000	SKAGIT R AT REFLECTOR BAR, NR NEWHALEM, WASH.	073	48 42 50	121 08 30	241	281
12177500	STETATTLE CREEK NEAR NEWHALEM, WASH.	073	48 43 20	121 08 58	242	282
12177520	PYRAMID CR NR NEWHALEM WASH.	073	48 42 37	121 08 40	243	288
12178000	SKAGIT RIVER AT NEWHALEM, WASH.	073	48 40 19	121 14 42	244	288
12178100	NEWHALEM CREEK NR. NEWHALEM, WASH.	073	48 39 22	121 14 14	245	294
12179000	SKAGIT RIVER ABV ALMA CR. NR MARBLEMOUNT, WASH.	057	48 36 27	121 21 37	246	297
12180000	BACON CREEK NEAR MARBLEMOUNT, WASH.	057	48 35 20	121 23 40	247	300
12181000	SKAGIT RIVER AT MARBLEMOUNT, WASH.	057	48 31 35	121 25 40	248	301
12181100	S.F. CASCADE R AT SO CASCADE GL NR MBLMNT, WASH.	057	48 22 13	121 04 23	249	302
12181200	SALIX CR AT SO CASCADE GL NR MARBLEMOUNT, WASH.	057	48 22 16	121 04 35	250	305
12182500	CASCADE RIVER AT MARBLEMOUNT, WASH.	057	48 31 37	121 24 50	251	308
12184300	IRON CREEK NEAR ROCKPORT, WASH.	057	48 26 05	121 27 55	252	314
12185500	S.F. SAUK RIVER NR BARLOW PASS, WASH.	061	48 03 45	121 24 20	253	314
12186000	SAUK R ABV WHITECHUCK R NR DARRINGTON, WASH.	061	48 10 08	121 28 10	254	315
12187500	SAUK RIVER AT DARRINGTON, WASH.	061	48 15 00	121 35 00	255	321
12188300	STRAIGHT CREEK NEAR DARRINGTON, WASH.	061	48 14 05	121 23 10	256	324
12188400	SUIATTLE R ABV BIG CR NR DARRINGTON, WASH.	057	48 20 32	121 27 08	257	324
12189000	SUIATTLE RIVER NEAR MANSFORD, WASH.	057	48 21 50	121 29 30	258	325
12189400	SAUK RIVER TRIBUTARY NEAR DARRINGTON, WASH.	057	48 20 30	121 33 00	259	328
12189500	SAUK RIVER NEAR SAUK, WASH.	057	48 25 29	121 34 02	260	328
12190700	MOROVITZ CREEK NEAR CONCRETE, WASH.	073	48 45 35	121 40 25	261	333
12191500	BAKER R BELOW ANDERSON C. NR CONCRETE, WASH.	073	48 39 50	121 40 25	262	334
12191800	SULPHUR CREEK NEAR CONCRETE, WASH.	073	48 40 04	121 45 00	263	337
12193500	BAKER RIVER AT CONCRETE, WASH.	057	48 32 24	121 44 31	264	340
12194000	SKAGIT RIVER NEAR CONCRETE, WASH.	057	48 31 30	121 46 13	265	347
12196000	ALDER CREEK NR HAMILTON, WASH.	057	48 31 42	121 56 58	266	357
12196200	DAY CREEK BELOW DAY LAKE, NEAR LYMAN, WASH.	057	48 24 31	121 58 47	267	360
12196400	DAY CREEK NEAR HAMILTON, WASH.	057	48 29 10	122 01 57	268	360
12196500	DAY CREEK NEAR LYMAN, WASH.	057	48 30 05	122 02 45	269	361
12197200	PARKER CREEK NEAR LYMAN, WASH.	057	48 29 25	122 05 50	270	364
12199000	SKAGIT RIVER NEAR SEDMO WOOLLEY, WASH.	057	48 29 03	122 14 31	271	365
12199800	EAST FORK NOOKACHAMPS CREEK NEAR BIG LAKE, WASH.	057	48 24 50	122 09 25	272	368
12200000	E.F. NOOKACHAMPS CREEK NR CLEAR LAKE, WASH.	057	48 25 30	122 12 30	273	371
12200500	SKAGIT RIVER NEAR MOUNT VERNON, WASH.	057	48 30 45	122 20 25	274	372
12200700	CARPENTER CH TRIB NR MOUNT VERNON, WASH.	061	48 17 10	122 17 25	275	375
12200800	LAKE CREEK NEAR BELLINGHAM, WASH.	073	48 41 05	122 23 30	276	375
12201000	FRIDAY CREEK NR BURLINGTON, WASH.	057	48 34 20	122 20 15	277	375
12201500	SAMISH RIVER NR BURLINGTON, WASH.	057	48 32 46	122 20 13	278	376
12201950	ANDERSON CREEK NEAR BELLINGHAM, WASH.	073	48 40 26	122 15 58	279	379
12202000	AUSTIN CREEK NR BELLINGHAM, WASH.	073	48 42 47	122 19 48	280	379
12202300	OLSEN CREEK NR BELLINGHAM, WASH.	073	48 45 05	122 21 08	281	379
12203000	WHATCOM CREEK NR BELLINGHAM, WASH.	073	48 45 14	122 25 35	282	379
12203500	WHATCOM CR BLW HATCHERY NR BELLINGHAM, WASH.	073	48 45 06	122 25 42	283	380
12204400	NOOKSACK RIVER TRIBUTARY NEAR GLACIER, WASH.	073	48 54 30	121 48 20	284	383
12205000	N.F. NOOKSACK R BLW CASCADE CR NR GLACIER, WASH.	073	48 54 22	121 50 35	285	383
12205490	KIDNEY CREEK NR GLACIER, WASH.	073	48 56 40	121 55 20	286	387
12205500	N.F. NOOKSACK RIVER NR GLACIER, WASH.	073	48 54 15	121 59 30	287	387
12207200	N.F. NOOKSACK RIVER NR DEMING, WASH.	073	48 52 24	122 08 56	288	388
12208000	M.F. NOOKSACK RIVER NR DEMING, WASH.	073	48 46 43	122 06 20	289	391
12208500	CANYON CREEK AT KULSHAN, WASH.	073	48 50 00	122 08 05	290	391
12209000	S.F. NOOKSACK RIVER NEAR WICKERSHAM, WASH.	073	48 39 52	122 07 56	291	392
12209500	SKOOKUM CREEK NEAR WICKERSHAM, WASH.	073	48 40 20	122 08 24	292	398
12210500	NOOKSACK RIVER AT DEMING, WASH.	073	48 48 38	122 12 13	293	401
12211500	NOOKSACK RIVER NEAR LYNDEN, WASH.	073	48 55 14	122 29 04	294	406
12212000	FISHTRAP CREEK AT LYNDEN, WASH.	073	48 57 52	122 25 50	295	409
12212700	TENMILE CREEK TRIBUTARY NR BELLINGHAM, WASH.	073	48 50 30	122 24 30	296	412
12212800	TENMILE CREEK TRIB #2 NR BELLINGHAM, WASH.	073	48 50 35	122 24 30	297	412
12213100	NOOKSACK RIVER AT FERNDAL, WASH.	073	48 50 45	122 35 15	298	413
12214000	DAKOTA CREEK NEAR BLAINE, WASH.	073	48 57 25	122 39 30	299	416

TABLE 2.--Drainage-basin and climatic characteristics at sites

STATION NUMBER	AREA (SQ-MI)	SLOPE (FT/MI)	LENGTH (MI)	ELEV (FT)	STORAGE (%)	LAKEAREA (%)	FOREST (%)	PRECIP (IN)	I24.2 (IN)	SNOFALL (IN)	JANMIN (FAHR)
12113500	9.38	317	3.7	3830	5.38	5.38	78.0	118.0	3.0	510	21.0
12114000	6.00	317	4.0	3500	0.00	0.00	78.0	118.0	3.0	500	21.0
12114500	25.40	189	7.1	3460	1.97	1.97	71.0	124.0	3.0	490	22.0
12115000	40.70	116	12.2	3230	1.47	1.47	77.0	120.0	3.0	440	23.0
12115300	0.89	1540	1.8	3030	0.00	0.00	70.0	103.0	3.5	200	28.0
12115500	13.40	386	6.4	3360	0.00	0.00	87.0	119.0	3.0	310	25.0
12116100	0.19	--	--	--	--	--	--	90.0	--	--	--
12116500	84.20	--	--	--	--	--	--	--	--	--	--
12116700	5.17	--	--	--	--	--	--	--	--	--	--
12116800	3.77	--	--	--	--	--	--	--	--	--	--
12117000	17.20	289	8.2	2300	0.00	0.00	100.0	82.0	2.5	75	29.0
12117500	117.00	--	--	--	--	--	--	--	--	--	--
12118400	11.20	--	--	--	--	--	--	--	--	--	--
12118500	12.60	46	6.3	750	0.13	--	83.0	53.0	2.0	--	30.0
12119000	184.00	--	--	--	--	--	65.0	83.0	--	--	--
12119500	12.50	--	--	--	--	--	--	--	--	--	--
12119600	12.70	221	6.4	770	0.00	--	91.0	45.0	2.0	--	29.0
12119700	6.80	206	6.6	770	0.00	--	95.0	45.0	2.0	--	31.0
12119800	3.05	95	2.6	360	0.00	0.00	75.0	47.0	2.0	15	32.0
12120000	12.00	65	3.9	305	0.00	0.00	80.0	43.0	2.0	.15	32.0
12120500	6.43	83	3.6	225	2.00	--	80.0	40.0	1.7	--	32.0
12121000	27.00	144	10.6	940	7.00	0.36	91.0	66.0	2.5	45	30.0
12121600	54.70	232	19.5	940	4.00	--	88.0	53.0	2.5	--	30.0

TABLE 2.---Continued

STATION NUMBER	AREA (SQ-MI)	SLOPE (FT/MI)	LENGTH (MI)	ELEV (FT)	STORAGE (%)	LAKEAREA (%)	FOREST (%)	PRECIP (IN)	12+2 (IN)	SNOFALL (IN)	JANMIN (FAHR)
12121700	3.90	290	3.3	880	0.00	--	97.0	55.0	2.5	--	31.0
12123000	10.70	42	7.5	375	1.40	1.77	87.0	43.0	2.0	10	32.0
12123300	2.46	127	3.2	450	0.00	0.00	90.0	45.0	2.0	16	31.0
12124000	13.00	74	8.6	365	8.00	8.00	92.0	45.0	2.0	15	32.0
12124500	46.20	--	--	--	--	--	--	--	--	--	--
12125000	150.00	23	30.1	600	5.69	5.69	87.0	53.0	2.5	35	31.0
12125200	157.00	21	33.0	645	18.60	--	78.0	48.0	2.3	--	30.0
12125500	15.30	--	--	--	--	--	--	--	--	--	--
12126000	24.60	49	9.9	390	2.07	2.07	82.0	38.0	2.0	10	33.0
12126500	212.00	16	34.3	500	4.25	4.25	80.0	49.0	2.5	30	31.0
12127100	23.10	43	13.5	390	0.17	--	55.0	39.0	1.7	--	32.0
12127300	3.67	108	4.2	340	3.00	--	76.0	38.0	1.7	--	32.0
12127600	7.80	109	3.1	340	0.00	--	65.0	38.0	1.7	--	32.0
12128000	12.10	69	6.6	310	1.50	--	50.0	36.0	1.6	--	32.0
12128900	7.60	438	4.8	4180	0.15	--	65.0	85.0	4.0	--	16.0
12130500	135.00	211	16.6	3870	1.38	1.38	95.0	119.0	4.0	475	21.0
12130800	0.70	--	--	--	--	--	--	--	--	--	--
12131000	96.50	173	18.6	3600	0.52	0.52	95.0	126.0	4.0	400	21.0
12132000	45.60	--	--	--	--	--	--	80.0	--	--	--
12132700	0.95	2010	1.9	2260	0.00	0.00	95.0	97.0	4.0	50	24.0
12133000	355.00	98	33.8	3800	0.90	0.90	85.0	122.0	4.0	360	21.0
12133500	10.60	673	6.9	3500	3.87	3.87	62.0	170.0	4.5	310	21.0
12134000	146.00	132	27.0	3800	0.41	0.41	85.0	151.0	4.5	300	21.0
12134500	535.00	87	42.4	3700	0.73	0.73	85.0	128.0	4.5	320	22.0
12135000	19.00	300	9.3	2660	0.84	0.84	75.0	88.0	4.0	30	26.0
12135500	8.31	610	5.9	1800	0.00	0.00	90.0	75.0	4.0	28	28.0

TABLE 2.--Continued

STATION NUMBER	AREA (SQ-MI)	SLOPE (FT/MI)	LENGTH (MI)	ELEV (FT)	STORAGE (%)	LAKEAREA (%)	FOREST (%)	PRECIP (IN)	I24,2 (IN)	SNOFALL (IN)	JANMIN (FAHR)
12136000	10.30	472	6.5	2400	0.20	--	88.0	80.0	4.0	--	28.0
12136500	3.80	494	3.4	3670	0.60	--	52.0	85.0	4.2	--	28.0
12137500	74.50	80	19.2	3120	0.40	0.40	83.0	120.0	4.0	45	25.0
12138000	86.60	88	22.8	2670	1.27	--	98.0	149.0	5.0	--	26.0
12141000	56.40	40	15.1	625	2.11	2.11	91.0	48.0	3.0	15	31.0
12141300	154.00	117	29.6	3710	1.30	--	75.0	137.0	4.0	--	23.0
12141500	169.00	91	37.2	3500	1.30	1.30	74.0	132.0	3.5	335	23.0
12142000	64.00	85	17.3	3200	0.78	0.78	77.0	131.0	3.5	60	26.0
12142200	7.31	--	--	--	--	--	--	--	--	--	--
12142300	7.67	210	4.4	3380	13.80	--	76.0	65.0	2.5	--	29.0
12143000	95.70	68	24.2	3100	1.67	1.66	75.0	119.0	3.0	60	26.0
12143300	0.15	2800	1.1	2850	0.00	0.00	70.0	121.0	3.9	460	21.0
12143310	0.34	2530	1.4	3900	0.00	--	20.0	121.0	4.0	--	26.0
12143400	41.60	760	2.3	3390	0.31	--	80.0	120.0	4.0	--	22.0
12143500	45.80	--	--	--	--	--	--	--	--	--	--
12143700	1.57	--	--	--	--	--	--	--	--	--	--
12144000	81.70	102	27.2	2900	0.37	0.37	81.0	110.0	3.5	320	25.0
12144500	375.00	72	44.8	3300	1.23	1.23	76.0	118.0	3.0	240	25.0
12145000	32.20	--	--	--	--	--	--	--	--	--	--
12145500	30.60	179	12.5	1330	0.00	0.00	99.0	77.0	2.7	50	29.0
12146000	15.50	52	8.4	410	6.00	0.00	90.0	47.0	2.5	20	31.0
12147000	17.10	50	11.2	781	0.23	0.23	97.0	53.0	2.0	25	30.0
12147500	39.90	103	15.2	2590	3.00	3.00	73.0	97.0	3.5	25	28.0
12147600	5.34	225	3.9	3230	1.20	--	98.0	66.0	2.5	--	29.0
12148000	19.70	162	10.2	2940	7.11	7.11	59.0	112.0	5.0	35	27.0
12148100	2.19	610	4.1	2290	0.00	0.00	99.0	80.0	3.2	25	29.0

TABLE 2.--Continued

STATION NUMBER	AREA (SQ-MI)	SLOPE (FT/MI)	LENGTH (MI)	ELEV (FT)	STORAGE (%)	LAKEAREA (%)	FOREST (%)	PRECIP (IN)	12+2 (IN)	SNOFALL (IN)	JANMIN (FAHR)
12148500	81.40	115	18.2	2300	1.79	1.79	73.0	94.0	5.0	30	28.0
12148700	5.58	--	--	--	--	--	--	--	--	--	--
12149000	603.00	40	60.8	2400	1.16	0.69	79.0	99.0	4.5	160	26.0
12150500	19.20	--	--	--	--	--	--	--	--	--	--
12150800	1537.00	57	44.7	3320	1.74	--	96.0	105.0	4.0	--	25.0
12152500	54.50	46	20.5	1500	0.18	0.18	96.0	68.0	4.0	25	29.0
12153000	17.00	40	8.7	376	0.12	8.00	94.0	42.0	3.0	15	30.0
12156400	0.97	193	1.8	300	0.00	0.00	10.0	38.0	2.1	14	34.0
12157000	15.40	78	6.0	220	6.00	6.00	75.0	37.0	3.0	13	31.0
12158300	1.07	593	1.5	3360	6.30	--	93.0	140.0	6.0	--	27.0
12159500	43.70	--	--	--	--	--	--	123.0	--	--	--
12161000	119.00	46	36.0	2600	8.00	8.00	94.0	106.0	3.5	40	25.0
12162500	199.00	43	47.2	2300	5.00	5.00	94.0	94.0	3.5	35	26.0
12164000	46.20	132	18.7	1400	0.87	0.87	92.0	91.0	3.0	25	29.0
12164500	251.00	45	47.5	1895	1.00	--	89.0	80.0	3.5	--	30.0
12165000	20.00	308	10.2	2530	0.00	1.00	70.0	100.0	4.5	45	24.0
12165500	82.20	101	18.4	2271	2.00	--	87.0	85.0	3.0	--	28.0
12166500	65.90	101	22.6	2540	0.00	0.00	98.0	89.0	3.0	30	30.0
12167000	262.00	33	42.0	2300	0.00	0.00	92.0	83.0	3.5	40	28.0
12167500	7.33	--	--	--	--	--	--	45.0	--	--	--
12168500	52.00	75	16.3	1290	2.48	2.48	91.0	64.0	2.5	20	30.0
12169500	7.52	74	6.0	270	3.45	3.45	60.0	37.0	2.1	10	36.0
12171000	129.00	--	--	--	--	--	--	78.0	--	--	--
12171500	655.00	--	--	--	--	--	--	--	--	--	--
12172000	63.20	115	18.5	4400	0.00	0.00	76.0	74.0	3.5	540	18.0
12172500	780.00	38	56.0	4800	0.20	0.20	78.0	75.0	3.0	460	16.0

TABLE 2.--Continued

STATION NUMBER	AREA (SQ-MI)	SLOPE (FT/MI)	LENGTH (MI)	ELEV (FT)	STORAGE (%)	LAKEAREA (%)	FOREST (%)	PRECIP (IN)	I24+2 (IN)	SNOFALL (IN)	JANMIN (FAHR)
12173500	206.00	194	19.6	5700	5.00	4.00	79.0	77.0	3.0	465	18.0
12174000	210.00	190	20.5	5700	5.00	5.00	79.0	77.0	3.0	460	18.0
12174500	999.00	34	59.0	4990	0.16	0.16	78.0	75.0	3.0	460	17.0
12175400	91.70	--	--	--	--	--	--	--	--	--	--
12175500	105.00	257	15.2	5800	0.10	0.10	61.0	129.0	4.0	340	22.0
12176000	114.00	218	18.2	5600	9.00	9.00	63.0	128.0	4.0	310	22.0
12177000	1125.00	30	64.0	5040	0.16	0.16	77.0	81.0	3.0	440	18.0
12177500	22.00	560	7.8	5000	0.45	0.45	84.0	88.0	3.5	500	24.0
12177520	2.82	--	--	--	--	--	--	--	--	--	--
12178000	1175.00	28	71.3	5000	2.18	0.22	75.0	81.0	3.0	435	17.0
12178100	27.90	578	7.7	4140	0.31	--	77.0	125.0	4.0	--	26.0
12179000	1274.00	--	--	--	--	--	--	77.0	--	--	--
12180000	50.90	428	12.9	3240	0.75	--	85.0	95.0	4.5	--	28.0
12181000	1381.00	--	--	--	--	--	--	77.0	--	--	--
12181100	2.36	876	2.6	6240	5.00	--	1.0	154.0	5.5	--	16.0
12181200	0.08	36	0.3	5390	0.00	--	67.0	150.0	5.5	--	16.0
12182500	172.00	156	28.6	4400	0.17	0.16	78.0	131.0	4.5	360	23.0
12184300	1.70	1640	2.0	4020	2.00	--	99.0	100.0	3.5	--	28.0
12185500	33.10	220	10.6	4164	0.65	--	60.0	160.0	6.0	--	24.0
12186000	152.00	125	24.5	3700	0.13	0.13	81.0	139.0	4.5	315	21.0
12187500	293.00	89	34.4	3800	7.00	7.00	80.0	128.0	4.5	310	21.0
12188300	4.32	861	3.2	3750	0.14	--	99.0	125.0	5.0	--	25.0
12188400	307.00	--	--	--	--	--	--	--	--	--	--
12189000	335.00	96	42.0	4500	0.15	0.15	74.0	132.0	4.5	425	20.0
12189400	1.30	842	2.6	1620	0.00	0.00	80.0	79.0	4.0	90	28.0
12189500	714.00	69	54.9	3900	0.10	0.10	79.0	125.0	4.5	380	21.0

TABLE 2.---Continued

STATION NUMBER	AREA (SQ-MI)	SLOPE (FT/MI)	LENGTH (MI)	ELEV (FT)	STORAGE (%)	LAKEAREA (%)	FOREST (%)	PRECIP (IN)	12+2 (IN)	SNOFALL (IN)	JANMIN (FAHR)
12190700	0.55	--	--	--	--	--	--	--	--	--	--
12191500	211.00	89	23.3	3900	0.71	0.71	69.0	126.0	3.5	390	20.0
12191800	8.36	667	6.8	3960	0.00	--	90.0	125.0	4.5	--	22.0
12193500	297.00	51	32.8	3510	3.30	3.30	72.0	134.0	4.0	320	21.0
12194000	2737.00	--	--	--	--	--	--	103.0	--	--	--
12196000	10.70	203	7.1	1280	0.00	0.00	99.0	58.0	3.0	25	29.0
12196200	6.56	422	3.8	2470	0.60	--	85.0	75.0	3.0	--	31.0
12196400	32.30	--	--	--	--	--	--	--	--	--	--
12196500	34.20	143	12.6	2310	0.64	0.64	88.0	77.0	3.0	20	31.0
12197200	1.82	1080	3.6	1970	0.00	0.00	90.0	60.0	2.4	16	31.0
12199000	3015.00	--	--	--	--	--	--	46.0	--	--	--
12199800	3.56	435	3.8	2700	0.00	--	62.0	60.0	2.5	--	33.0
12200000	20.50	--	--	--	--	--	--	--	--	--	--
12200500	3093.00	--	--	--	--	--	--	97.0	--	--	--
12200700	2.58	166	2.9	490	0.00	0.00	70.0	35.0	2.0	9	37.0
12200800	2.35	398	2.3	1220	0.00	0.00	95.0	48.0	2.5	9	31.0
12201000	37.10	--	--	--	--	--	--	--	--	--	--
12201500	87.80	14	22.2	904	1.82	1.81	87.0	49.0	2.0	10	30.0
12201950	4.13	1236	2.4	1641	0.00	--	98.0	55.0	2.5	--	30.0
12202000	7.73	493	3.3	1235	0.00	--	98.0	55.0	2.5	--	30.0
12202300	3.78	489	4.8	1774	0.00	--	95.0	54.0	2.5	--	30.0
12203000	55.40	--	--	--	--	--	--	34.0	--	--	--
12203500	56.10	--	--	--	--	--	--	50.0	--	--	--
12204400	1.15	1700	2.2	4070	0.00	0.00	95.0	80.0	3.8	400	22.0
12205000	105.00	106	17.6	4300	0.19	0.19	71.0	109.0	3.5	690	19.0
12205490	2.66	1279	2.9	4380	4.00	--	100.0	80.0	3.0	--	23.0



TABLE 2.--Continued

STATION NUMBER	AREA (SQ-MI)	SLOPE (FT/MI)	LENGTH (MI)	ELEV (FT)	STORAGE (%)	LAKEAREA (%)	FOREST (%)	PRECIP (IN)	I2+2 (IN)	SNOFALL (IN)	JANMIN (FAHR)
12205500	195.00	--	--	--	--	--	--	58.0	--	--	--
12207200	282.00	68	38.2	3200	2.00	--	93.0	90.0	4.0	--	22.0
12208000	73.30	349	17.4	3540	4.00	--	97.0	90.0	4.0	--	22.0
12208500	8.70	--	--	--	--	--	--	--	--	--	--
12209000	103.00	58	25.8	3000	0.29	0.29	84.0	92.0	3.5	35	25.0
12209500	23.10	334	9.5	3020	9.00	9.00	90.0	93.0	3.0	25	24.0
12210500	584.00	62	43.1	3000	0.24	0.24	86.0	92.0	3.0	240	22.0
12211500	648.00	41	63.1	2760	0.23	0.23	82.0	88.0	3.0	220	23.0
12212000	22.30	23	8.2	154	1.35	1.25	20.0	42.0	2.5	15	28.0
12212700	0.74	78	1.4	290	0.00	--	25.0	40.0	2.7	--	29.0
12212800	0.24	115	1.1	230	0.00	--	20.0	40.0	2.7	--	29.0
12213100	786.00	12	64.6	1750	3.00	--	89.0	79.0	2.6	--	28.0
12214000	18.40	--	--	--	--	--	--	34.0	--	--	--

## PART B

### Statistics and Characteristics for Specific Sites

This section of the report presents the streamflow statistics and drainage-basin characteristics for specific sites in eastern Puget Sound from Seattle to the Canadian border.

## STATION 12113500 NORTH FORK CEDAR RIVER NEAR LESTER, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945	17.6	25.2	50.2	112	65.8	25.9	48.8	192	115	29.0	11.5	27.0	60.0
1946	45.3	73.7	51.2	36.8	19.2	34.4	82.2	210	183	83.4	16.2	10.6	70.8
1947	43.9	38.4	131	74.7	65.6	80.9	113	125	74.2	52.9	11.4	17.2	67.0
1948	98.8	118	57.4	31.5	36.3	26.4	49.9	184	270	52.9	20.1	17.0	80.1
1949	35.2	44.0	32.7	25.3	37.0	39.9	82.0	245	172	94.1	23.9	13.5	70.5
1950	63.8	107	56.7	41.4	34.0	65.5	54.8	131	278	144	22.3	11.2	85.2
1951	68.8	110	115	48.0	120	31.6	91.2	185	124	32.1	12.3	11.5	78.8
1952	45.9	51.2	28.7	19.3	98.8	28.5	107	170	106	43.9	13.3	8.69	55.9
1953	6.89	6.39	10.2	174	98.5	32.9	69.3	104	120	74.2	15.6	9.96	60.0
1954	21.7	65.4	132	43.9	45.1	32.1	58.1	155	191	146	40.0	26.2	80.0
1955	27.7	70.6	30.0	34.9	50.7	16.4	31.3	97.4	266	175	45.8	15.6	71.6
1956	95.6	113	84.9	21.9	14.5	17.7	91.6	222	189	119	21.3	13.6	83.8
1957	58.3	68.2	179	25.2	21.1	35.6	93.3	179	90.4	22.0	11.9	8.31	66.4
1958	12.6	33.6	69.1	51.4	71.7	37.4	87.5	165	61.2	18.7	9.37	18.4	52.8
1959	62.7	154	134	101.4	36.4	47.2	107.2	124	147	50.9	14.9	97.6	89.8
1960	96.7	185	113	24.8	48.3	53.0	96.2	169	141	27.3	13.7	15.6	81.7
1961	39.5	99.1	36.7	89.5	121	62.2	89.8	157	160	26.7	10.6	11.8	74.7
1962	41.1	55.7	73.7	102	62.4	194.8	114	87.3	113	41.5	19.0	15.2	61.9
1963	42.9	101	92.9	64.3	99.9	46.9	63.0	92.5	55.2	26.6	12.5	10.0	58.6
1964	18.1	67.6	41.2										

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1964)

MEAN	47.2	79.4	76.0	59.0	57.7	38.6	80.5	157.6	150.3	65.0	18.5	19.3	71.0
MAXIMUM	98.8	185.0	179.0	174.0	121.0	80.9	114.0	245.0	278.0	175.0	45.8	97.6	89.8
MINIMUM	6.9	6.4	10.2	19.3	14.5	16.4	31.3	87.3	55.2	18.7	9.4	8.3	52.8
STD DEVIATION	27.54	44.20	45.16	40.69	32.18	17.11	23.95	45.06	67.28	48.65	9.90	19.66	10.92
SKWESS	0.587	0.651	0.653	1.442	0.764	0.982	-0.436	0.058	0.624	1.100	1.813	3.882	-0.015
STD ERR SKEW	0.512	0.512	0.512	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524
SER CORR COEFF	0.015	0.139	-0.168	-0.163	-0.086	-0.021	0.012	0.007	0.079	0.451	0.460	-0.013	0.011
COEFF OF VAR	0.584	0.557	0.594	0.689	0.558	0.443	0.297	0.286	0.448	0.749	0.536	1.021	0.154
MEAN LOGS	1.587	1.813	1.795	1.685	1.693	1.549	1.884	2.179	2.134	1.705	1.221	1.194	1.846
STD DEV LOGS	0.307	0.325	0.302	0.276	0.260	0.184	0.151	0.132	0.204	0.309	0.191	0.240	0.068
SKWESS LOGS	-0.797	-1.569	-0.745	0.376	-0.342	0.037	-1.065	-0.432	-0.278	0.408	1.028	2.105	-0.222
STD ERR SKEW LOGS	0.512	0.512	0.512	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524
SER CORR LOGS	0.067	0.044	-0.093	-0.128	0.013	0.072	0.029	0.045	0.099	0.356	0.412	0.039	0.020
COEFF OF VAR LOGS	0.193	0.179	0.169	0.164	0.154	0.122	0.080	0.061	0.096	0.181	0.157	0.201	0.037
% OF AVE FLOW	5.6	9.3	8.9	7.0	6.8	4.6	9.5	18.6	17.7	7.7	2.2	2.3	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1964)

0.99	5.0	5.2	8.5	13.2	10.5	13.0	26.5	67.8	41.5	12.0	8.3	9.3	47.6
0.95	10.5	15.0	17.5	18.3	17.4	17.4	39.8	88.6	60.7	17.2	9.4	9.4	53.8
0.90	15.0	24.0	24.6	22.1	22.5	20.3	48.1	101.2	73.7	21.1	10.2	9.7	57.3
0.80	22.3	39.1	36.1	28.2	30.1	24.5	59.0	118.0	92.4	27.6	11.4	10.2	61.7
0.50	42.4	78.4	67.9	46.6	51.0	35.3	81.3	154.5	139.1	48.3	15.4	13.1	70.6
0.20	70.7	120.1	113.2	81.4	82.2	50.9	102.7	196.0	203.0	90.7	23.2	21.6	80.2
0.10	88.1	137.6	141.4	111.6	103.5	61.8	112.6	219.4	244.5	129.6	30.0	31.9	85.5
0.05	107.6	151.3	173.6	159.1	130.6	76.0	121.7	245.3	295.5	193.8	41.0	53.6	91.2
0.02	120.3	157.5	195.0	202.1	150.7	87.0	126.7	262.4	332.3	254.5	51.2	79.4	95.0
0.01	131.6	161.5	214.3	252.2	170.5	98.2	130.6	278.0	368.2	327.9	63.4	117.9	98.5

STATION 12113500 NORTH FORK CEDAR RIVER NEAR LESTER, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1946	10.0	10.0	10.0	10.0	11.0	13.0	18.0	23.0	36.0
1947	8.4	8.5	8.6	8.8	9.3	10.0	15.0	25.0	46.0
1948	8.9	9.0	9.4	9.8	10.0	14.0	17.0	30.0	55.0
1949	12.0	12.0	13.0	13.0	17.0	18.0	24.0	24.0	29.0
1950	12.0	12.0	12.0	12.0	13.0	16.0	29.0	39.0	50.0
1951	13.0	13.0	13.0	14.0	16.0	22.0	37.0	47.0	64.0
1952	8.5	8.6	8.8	9.2	10.0	11.0	14.0	24.0	28.0
1953	5.4	5.4	5.5	5.7	6.1	6.5	6.9	7.9	12.0
1954	8.9	9.0	9.0	9.1	9.6	12.0	15.0	22.0	48.0
1955	13.0	13.0	14.0	15.0	16.0	26.0	28.0	32.0	37.0
1956	11.0	11.0	12.0	12.0	13.0	15.0	18.0	35.0	57.0
1957	11.0	11.0	11.0	12.0	13.0	15.0	27.0	40.0	60.0
1958	7.2	7.4	7.6	7.7	8.1	8.5	9.9	13.0	25.0
1959	7.4	7.5	7.6	7.9	8.4	10.0	14.0	51.0	53.0
1960	12.0	12.0	13.0	13.0	15.0	26.0	34.0	58.0	81.0
1961	11.0	11.0	11.0	12.0	13.0	14.0	15.0	21.0	38.0
1962	8.4	8.5	9.0	9.3	10.0	11.0	13.0	22.0	32.0
1963	12.0	12.0	12.0	14.0	15.0	17.0	21.0	26.0	49.0

LOWEST MEAN FLOW STATISTICS (YEARS 1946-1963)

MEAN	10.0	10.1	10.4	10.8	11.9	14.7	19.8	28.3	44.4
MAXIMUM	13.0	13.0	14.0	15.0	17.0	26.0	37.0	58.0	81.0
MINIMUM	5.4	5.4	5.5	5.7	6.1	6.5	6.9	7.9	12.0
STANDARD DEVIATION	2.20	2.16	2.33	2.55	3.14	5.51	8.34	12.03	18.51
SKEWNESS	-0.393	-0.424	-0.289	-0.170	0.024	0.860	0.847	0.836	0.167
STD ERROR OF SKEWNESS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SERIAL CORR COEFF	0.177	0.178	0.196	0.133	0.088	-0.036	0.032	-0.027	-0.072
COEFF OF VARIATION	0.220	0.215	0.225	0.236	0.265	0.374	0.422	0.425	0.371
MEAN LOGS	0.989	0.992	1.004	1.021	1.059	1.140	1.258	1.413	1.613
STD DEVIATION LOGS	0.104	0.102	0.106	0.110	0.122	0.160	0.189	0.199	0.191
SKEWNESS LOGS	-0.452	-0.919	-0.816	-0.692	-0.475	0.003	-0.265	-0.751	-1.205
STD ERR SKEWNESS LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SER CORR COEFF LOGS	0.186	0.185	0.212	0.173	0.145	0.061	0.084	0.039	-0.030
COEFF OF VAR LOGS	0.105	0.103	0.105	0.108	0.115	0.140	0.150	0.141	0.118

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1963)

	0.99	0.98	0.96	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01
1946	14.6	14.4	15.3	16.0	16.6	17.9	19.9	22.6	25.9	29.4	33.6	38.3	43.7	49.9	57.6
1947	14.2	14.1	14.9	15.6	16.0	17.8	19.9	22.6	25.9	29.4	33.6	38.3	43.7	50.7	59.5
1948	13.7	13.6	14.3	15.3	15.8	17.8	19.9	22.6	25.9	29.4	33.6	38.3	43.7	50.7	59.5
1949	12.9	12.8	13.4	14.2	14.6	16.1	18.1	20.1	22.1	24.1	26.3	28.3	30.3	32.3	34.3
1950	12.0	12.0	12.4	13.1	13.4	14.6	16.6	18.6	20.6	22.6	24.6	26.6	28.6	30.6	32.6
1951	10.1	10.2	10.4	10.8	11.0	11.7	12.7	13.8	14.9	16.0	17.1	18.2	19.3	20.4	21.5
1952	8.1	8.2	8.3	8.6	8.7	9.1	9.6	10.1	10.6	11.1	11.6	12.1	12.6	13.1	13.6
1953	7.1	7.2	7.3	7.5	7.6	7.9	8.3	8.7	9.1	9.5	9.9	10.3	10.7	11.1	11.5
1954	6.3	6.3	6.4	6.6	6.7	7.0	7.4	7.8	8.2	8.6	9.0	9.4	9.8	10.2	10.6
1955	5.4	5.4	5.5	5.7	5.8	6.0	6.4	6.8	7.2	7.6	8.0	8.4	8.8	9.2	9.6
1956	4.8	4.9	5.0	5.1	5.2	5.4	5.8	6.2	6.6	7.0	7.4	7.8	8.2	8.6	9.0

FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1946-1963)

P	P95	P90	P75	P70	P50	P25	P10
10.0	10.0	13.0	21.0	24.0	42.0	93.0	170.0

## STATION 12113500 NORTH FORK CEDAR RIVER NEAR LESTER, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE	REG. (R)
1945	754.	402.	330.	204.	194.	157.	122.	99.	94.	1180.	01/07/45	
1946	342.	278.	258.	242.	221.	200.	173.	142.	102.	575.	10/25/45	
1947	698.	551.	390.	221.	147.	125.	115.	101.	101.	1050.	12/11/46	
1948	500.	493.	389.	360.	323.	232.	178.	141.	103.	645.	10/19/47	
1949	500.	486.	436.	322.	265.	212.	179.	151.	113.	590.	05/12/49	
1950	660.	415.	360.	314.	284.	236.	186.	154.	118.	960.	11/27/49	
1951	830.	626.	347.	236.	191.	158.	135.	113.	106.	1200.	02/09/51	
1952	312.	273.	251.	230.	193.	158.	135.	111.	84.	363.	05/13/52	
1953	700.	483.	317.	282.	233.	137.	113.	101.	105.			
1954	524.	362.	283.	223.	202.	192.	167.	140.	106.	858.	12/09/53	
1955	646.	584.	454.	329.	274.	226.	185.	148.	108.	754.	06/09/55	
1956	519.	480.	378.	317.	261.	216.	190.	158.	110.	1280.	12/11/55	
1957	1100.	636.	427.	308.	187.	147.	123.	101.	94.	2320.	12/09/56	
1958	334.	236.	232.	202.	167.	137.	107.	95.	82.	402.	04/20/58	
1959	632.	353.	279.	192.	180.	151.	132.	116.	99.	962.	11/06/58	
1960	1100.	400.	576.	244.	244.	163.	139.	119.	96.	3160.	11/22/59	
1961	398.	302.	265.	224.	209.	163.	137.	123.	113.	491.	02/21/61	
1962	339.	260.	228.	177.	135.	105.	106.	90.	86.	540.	04/06/62	
1963	687.	493.	278.	169.	137.	116.	100.	92.	82.	1460.	11/19/62	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1945-1963)

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	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKWENESS	STD ERROR OF SKWENESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKWENESS LOGS	STD ERR SKWENESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	611.8	453.3	340.9	256.1	213.0	169.6	143.1	120.8	100.1							
	1100.0	900.0	576.0	323.0	236.0	190.0	158.0	118.0								
	312.0	236.0	228.0	169.0	135.0	105.0	90.0	82.0								
	231.17	164.72	90.73	58.91	52.05	40.18	30.93	23.15	10.87							
	0.737	0.967	0.918	0.214	0.364	0.273	0.285	0.277	-0.355							
	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524							
	-0.427	-0.334	-0.068	0.273	0.186	0.293	0.294	0.244	0.226							
	0.378	0.363	0.266	0.230	0.244	0.237	0.216	0.192	0.109							
	2.757	2.630	2.519	2.397	2.316	2.218	2.146	2.075	1.998							
	0.165	0.155	0.111	0.101	0.107	0.104	0.094	0.083	0.048							
	-0.057	0.058	0.371	-0.031	-0.114	-0.082	0.095	0.116	-0.523							
	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524							
	-0.453	-0.299	-0.007	0.305	0.214	0.298	0.289	0.236	0.226							
	0.060	0.059	0.044	0.042	0.046	0.047	0.044	0.040	0.024							
										2.9328	2.9125					
										0.2351	0.2148					
										0.0250	0.2110					

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1963)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
	232.9	304.6	350.9	416.1	574.1	788.1	928.2	1103.4	1232.7	1361.2
	189.3	239.1	271.1	316.1	425.4	575.4	675.1	801.7	896.6	992.0
	196.0	223.6	241.2	265.8	325.2	406.9	461.7	532.0	585.4	639.6
	144.7	170.0	185.3	205.4	250.0	303.7	336.0	374.1	400.8	426.4
	93.2	110.7	121.2	135.1	165.7	202.2	224.0	249.4	267.2	284.2
	86.0	98.8	105.4	116.6	139.5	167.7	184.9	205.6	220.4	234.7
	77.4	87.3	93.2	101.0	118.3	139.2	152.0	167.1	177.8	188.1
	73.6	81.6	89.9	91.0	100.5	109.5	113.9	118.4	121.2	123.5
	245.5	352.9	428.6	542.8	854.7	1350.2	1716.9	2220.5	2623.1	3048.4
	279.6	373.8	439.2	537.0	803.6	1232.4	1556.5	2012.0	2385.0	2787.2

## STATION 12114000 SOUTH FORK CEDAR RIVER NEAR LESTER, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CURIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945	8.40	10.6	37.6	80.2	39.8	13.4	31.2	122	48.4	10.5	4.15	10.1	34.7
1946	24.0	37.4	37.1	23.0	10.6	27.2	62.1	178	107	35.7	6.84	3.70	46.3
1947	27.9	25.8	90.0	51.5	38.1	49.0	33.1	44.8	27.9	13.5	5.08	6.66	47.2
1948	51.0	80.7	38.9	20.1	22.4	19.9	63.7	109	114	20.3	9.19	7.67	34.8
1949	18.0	29.4	26.1	15.3	27.6	28.6	54.3	149	91.3	44.6	12.0	5.77	41.1
1950	48.6	39.5	41.7	30.5	27.4	42.5	33.4	76.0	173	62.1	12.4	7.45	54.2
1951	38.2	77.1	76.8	29.5	75.4	16.3	56.4	98.6	42.3	9.45	4.25	3.83	43.7
1952	30.7	35.3	18.4	10.0	29.8	12.3	69.5	95.8	45.4	19.3	5.36	3.28	30.4
1953	12.59	22.49	4.91	92.8	55.5	17.3	43.5	77.4	57.6	23.9	6.39	4.27	32.3
1954	10.0	37.8	93.1	31.5	32.6	21.3	38.8	95.8	111	51.4	13.0	10.3	45.6
1955	15.8	39.8	18.6	22.3	43.8	9.29	18.7	95.2	145	78.7	20.8	7.38	39.8
1956	53.3	65.0	50.1	13.0	32.6	21.3	38.8	95.8	111	51.4	13.0	10.3	45.6
1957	37.3	65.0	125	13.0	7.65	9.55	56.3	136	105	48.1	7.95	5.24	46.5
1958	3.98	18.6	45.8	35.1	52.8	23.5	64.1	87.5	29.4	7.58	3.71	5.46	29.5
1959	36.6	81.9	65.7	65.6	21.1	28.2	56.3	74.6	20.9	15.6	5.57	46.7	45.6
1960	56.3	108	56.1	12.9	27.6	30.7	56.3	88.6	49.5	15.6	5.57	46.7	45.6
1961	18.4	61.1	23.1	57.9	84.8	38.0	54.7	80.2	44.1	9.35	5.98	7.25	42.3
1962	22.2	32.5	47.7	56.0	35.3	11.0	73.5	52.3	42.8	12.1	7.97	6.86	33.3
1963	17.2	60.7	55.9	39.5	52.2	26.0	39.6	36.1	15.0	10.4	5.68	4.17	30.0
1964	8.32	41.4	26.5	35.8	18.1	16.3	39.4	86.0	153	60.2	17.3	20.4	43.3
1965	29.8	24.1	61.4	61.3	54.5	28.2	63.6	92.6	42.2	11.0	4.80	5.00	31.7
1966	10.3	19.0	25.8	19.5	12.5	22.9	65.6	92.6	42.2	11.0	4.80	5.00	31.7
1967	17.4	31.0	68.1	44.6	44.6	19.5	17.2	82.2	67.9	11.9	4.28	3.33	36.8
1968	38.9	36.5	71.6	57.7	74.9	31.6	32.6	48.4	31.6	9.92	10.0	33.1	39.6
1969	29.4	46.3	32.4	29.4	4.36	13.9	38.4	104	48.5	13.5	4.82	5.34	31.0
1970	17.1	15.9	23.8	52.2	35.5	32.5	42.0	67.0	49.1	8.50	3.83	6.14	29.4
1971	13.3	31.6	13.9	54.4	64.0	14.3	30.9	127	89.8	47.1	8.89	6.18	41.6
1972	19.9	52.2	35.8	42.7	65.6	83.2	43.7	116	75.4	36.5	9.03	16.0	49.6
1973	10.2	22.8	75.5	39.8	12.4	19.1	32.9	47.6	26.7	11.5	4.44	3.54	25.7
1974	7.50	23.8	40.1	73.0	26.7	32.0	55.9	79.9	187	47.7	15.2	5.25	46.2
1975	3.42	16.7	59.8	63.6	20.0	20.7	17.3	102	83.6	30.0	18.71	8.15	36.1
1976	20.0	67.9	119	62.8	28.8	13.7	39.6	89.0	47.0	22.2	10.8	7.93	44.0
1977	7.42	22.9	30.9	18.9	19.9	14.3	56.1	33.5	22.3	5.67	4.47	13.4	21.9
1978	14.6	84.0	108	17.6	20.9	36.6	46.5	44.9	22.5	7.52	4.03	10.6	34.0
1979	8.74	28.9	38.4	12.3	29.1	45.8	46.5	80.9	28.3	11.4	4.64	4.30	28.3

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1979)

MEAN	22.2	43.2	51.0	40.7	35.0	25.5	46.7	85.4	65.7	24.1	7.6	8.8	38.0
MAXIMUM	56.3	108.0	125.0	92.8	84.8	83.2	73.5	178.0	173.0	78.7	20.8	46.7	54.2
MINIMUM	2.6	2.5	4.9	10.0	4.4	9.3	17.2	35.5	15.0	5.7	3.7	3.0	21.9
STD DEVIATION	14.99	25.88	29.69	22.30	20.79	14.35	15.48	31.56	42.45	19.29	4.18	8.77	7.47
SKENNESS	0.810	0.831	0.904	0.442	0.740	2.101	-0.160	0.698	1.054	1.232	1.519	3.205	-0.083
STD ERR SKEW	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398
SER CORR COEFF	0.199	0.083	-0.203	-0.033	-0.171	-0.113	0.086	0.005	0.065	0.266	0.127	-0.132	-0.067
COEFF OF VAR	0.675	0.599	0.583	0.548	0.595	0.563	0.331	0.369	0.646	0.801	0.551	1.002	1.097
MEAN LOGS	1.234	1.546	1.627	1.536	1.458	1.353	1.642	1.902	1.733	1.260	0.828	0.833	1.571
STD DEV LOGS	0.341	0.317	0.289	0.270	0.297	0.214	0.167	0.167	0.276	0.322	0.207	0.274	0.090
SKENNESS LOGS	-0.546	-1.303	-0.888	-0.371	-0.659	0.320	-0.934	-0.346	0.092	0.469	0.709	1.349	-0.518
STD ERR SKEW LOGS	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398
SER CORR LOGS	0.129	0.004	-0.080	0.052	-0.224	-0.035	0.018	0.007	0.083	0.246	0.134	-0.122	-0.077
COEFF OF VAR LOGS	0.276	0.205	0.178	0.176	0.204	-0.158	0.102	0.088	0.159	0.256	0.250	0.329	0.057
% OF AVE FLOW	4.9	9.5	11.2	8.9	7.7	5.6	10.2	18.7	14.4	5.3	1.7	1.9	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1979)

0.99	2.0	3.4	6.0	6.9	4.2	8.0	13.9	29.7	12.9	4.2	2.9	2.9	21.3
0.95	4.2	8.6	12.3	11.6	8.3	10.5	21.4	41.0	19.3	6.0	3.4	3.2	25.8
0.90	6.1	13.2	17.4	15.2	11.5	12.2	24.1	48.2	24.1	7.3	3.8	3.5	28.3
0.80	9.1	20.8	25.4	20.7	16.7	14.8	32.7	58.3	31.6	9.6	4.5	4.0	31.5
0.50	18.4	41.0	46.7	35.7	30.9	21.9	46.5	110.7	53.5	17.2	6.4	5.9	37.9
0.20	33.6	64.8	74.9	58.4	51.6	33.8	60.8	110.7	92.1	33.2	9.8	10.7	44.4
0.10	44.3	70.3	91.1	74.0	64.8	43.0	67.9	128.3	122.9	48.5	12.7	15.9	47.8
0.04	57.9	86.8	108.5	93.8	80.4	56.2	74.8	149.9	167.9	74.6	17.2	25.9	51.3
0.02	67.8	92.2	119.4	108.5	91.1	67.3	78.9	163.1	206.0	100.0	21.2	37.1	53.6
0.01	77.5	96.2	128.7	122.9	100.9	79.5	82.1	176.5	247.8	131.5	25.9	52.7	55.5

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1946	3.2	3.3	3.4	3.6	3.9	4.5	7.0	8.9	17.0
1947	2.9	3.0	3.1	3.2	3.2	3.8	5.8	14.0	29.0
1948	3.8	3.9	4.0	4.2	4.6	5.7	7.6	13.0	24.0
1949	5.8	5.8	5.9	6.2	7.6	8.4	11.0	12.0	18.0
1950	4.8	4.8	4.8	5.1	5.6	7.7	16.0	24.0	38.0
1951	6.2	6.2	6.3	6.5	7.2	9.2	16.0	25.0	39.0
1952	2.6	2.7	2.8	2.9	3.3	3.8	5.4	8.8	17.0
1953	2.0	2.0	2.0	2.2	2.3	2.5	3.0	3.0	5.1
1954	3.5	3.5	3.6	3.7	4.1	5.1	6.1	10.0	23.0
1955	7.0	7.1	7.3	8.2	9.2	10.0	13.0	14.0	20.0
1956	5.3	5.4	5.7	6.5	7.0	7.7	10.0	20.0	33.0
1957	4.5	4.5	4.5	4.7	4.8	5.6	11.0	22.0	37.0
1958	2.4	2.5	2.5	2.6	2.7	2.9	3.5	4.5	11.0
1959	2.6	2.6	2.6	2.8	3.0	3.9	5.1	7.7	23.0
1960	4.5	4.6	4.8	5.0	5.5	8.9	17.0	26.0	36.0
1961	4.1	4.2	4.6	4.9	5.1	6.6	6.5	7.9	21.0
1962	3.6	3.6	3.7	3.8	4.1	4.8	5.5	9.9	16.0
1963	5.4	5.5	5.7	6.1	6.5	7.2	8.0	10.0	20.0
1964	3.0	3.0	3.2	3.2	3.3	4.0	4.9	6.3	12.0
1965	8.3	8.5	9.0	10.0	13.0	18.0	22.0	21.0	29.0
1966	3.5	3.6	3.7	4.0	4.4	4.9	5.3	7.2	12.0
1967	3.2	3.3	3.5	3.5	3.6	3.9	4.9	9.4	19.0
1968	2.9	2.9	2.9	3.1	3.3	3.6	4.7	9.3	21.0
1969	2.7	2.8	2.9	3.2	3.3	6.4	11.0	18.0	25.0
1970	2.9	3.0	3.0	3.3	3.6	4.6	7.4	9.4	13.0
1971	3.0	3.0	3.1	3.2	3.6	4.8	5.4	7.6	13.0
1972	4.1	4.1	4.2	4.6	4.8	5.7	9.4	20.0	24.0
1973	4.4	4.4	4.6	5.0	5.5	9.5	12.0	13.0	22.0
1974	2.9	2.9	3.0	3.2	3.5	3.7	4.5	6.2	13.0
1975	2.3	2.8	3.1	3.1	3.3	4.0	5.6	9.5	22.0
1976	3.6	3.7	4.0	4.4	4.8	8.1	8.2	15.0	36.0
1977	4.1	4.1	4.2	4.5	5.0	7.1	8.2	10.0	16.0
1978	3.0	3.0	3.0	3.2	3.5	4.8	6.3	8.9	16.0
1979	3.5	3.6	3.7	3.8	4.0	4.6	6.5	7.6	13.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1946-1979)

MEAN	3.9	3.9	4.1	4.3	4.8	6.1	8.3	12.3	21.6
MAXIMUM	8.3	8.5	9.0	10.0	13.0	18.0	22.0	26.0	39.0
MINIMUM	2.0	2.0	2.0	2.2	2.3	2.5	2.6	3.0	5.1
STANDARD DEVIATION	1.41	1.41	1.48	1.66	2.10	2.92	4.35	6.14	8.73
SKWENESS	1.385	1.475	1.516	1.650	2.186	2.199	1.413	0.879	0.540
STD ERROR OF SKWENESS	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403
SERIAL CORR COEFF	0.112	0.094	0.093	0.083	0.033	-0.064	-0.025	-0.001	0.038
COEFF OF VARIATION	0.363	0.358	0.363	0.383	0.439	0.483	0.522	0.498	0.405
MEAN LOGS	0.564	0.572	0.586	0.612	0.650	0.744	0.871	1.040	1.296
STD DEVIATION LOGS	0.143	0.139	0.141	0.146	0.158	0.178	0.207	0.217	0.190
SKWENESS LOGS	0.575	0.643	0.590	0.720	0.908	0.576	0.315	-0.153	-0.664
STD ERR SKWENESS LOGS	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403
SER CORR COEFF LOGS	0.184	0.165	0.171	0.152	0.111	0.034	0.025	-0.008	-0.016
COEFF OF VAR LOGS	0.253	0.243	0.241	0.239	0.243	0.240	0.237	0.209	0.147

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1979)

0.99	9.0	9.1	9.4	10.6	13.1	17.1	25.1	33.1	44.2
0.98	7.9	8.0	8.3	9.2	11.1	14.5	19.3	29.3	41.4
0.96	6.9	7.0	7.2	7.9	9.3	12.3	18.0	26.6	38.2
0.90	5.7	5.7	5.9	6.4	7.3	9.6	13.9	20.6	33.3
0.80	4.8	4.8	5.0	5.3	5.9	7.7	11.0	16.7	28.8
0.50	3.5	3.6	3.7	3.9	4.2	5.3	7.3	11.1	20.8
0.20	2.8	2.8	2.9	3.1	3.3	3.9	5.0	7.2	14.0
0.10	2.5	2.5	2.6	2.8	2.9	3.4	4.1	5.7	11.0
0.05	2.3	2.4	2.4	2.5	2.7	3.0	3.6	4.7	9.0
0.02	2.1	2.2	2.2	2.3	2.5	2.7	3.0	3.8	6.9
0.01	2.0	2.1	2.1	2.2	2.4	2.5	2.7	3.2	5.8

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1946-1979)

P95	P90	P75	P70	P50	P25	P10
4.0	5.2	11.0	13.0	24.0	49.0	90.0

STATION 12114000 SOUTH FORK CEDAR RIVER NEAR LESTER, WASH.  
HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1945	620.	330.	247.	150.	123.	90.	68.	55.	56.	878. 01/07/45
1946	285.	237.	224.	211.	185.	151.	122.	98.	71.	398. 12/28/45
1947	448.	365.	274.	153.	133.	99.	72.	63.	58.	630. 12/11/46
1948	325.	287.	232.	203.	160.	113.	88.	71.	53.	540. 01/07/47
1949	278.	267.	244.	182.	152.	120.	100.	84.	65.	305. 05/13/49
1950	473.	335.	246.	203.	176.	139.	106.	87.	70.	511. 01/27/49
1951	461.	375.	220.	122.	101.	81.	72.	65.	62.	556. 02/09/51
1952	181.	155.	140.	127.	103.	85.	69.	57.	44.	199. 05/13/52
1953	366.	246.	163.	148.	124.	76.	63.	59.	59.	520. 01/31/53
1954	376.	266.	196.	130.	115.	110.	89.	75.	58.	596. 12/09/53
1955	319.	302.	245.	178.	151.	120.	97.	78.	59.	497. 02/08/55
1956	240.	273.	226.	189.	158.	124.	107.	88.	61.	511. 12/11/55
1957	496.	352.	282.	214.	129.	87.	73.	57.	56.	2340. 12/09/56
1958	254.	178.	131.	95.	82.	71.	56.	54.	49.	284. 04/20/58
1959	294.	212.	173.	112.	90.	78.	73.	64.	56.	542. 11/12/58
1960	700.	517.	339.	185.	133.	90.	74.	59.	55.	1940. 11/22/59
1961	324.	211.	132.	98.	86.	73.	63.	65.	59.	406. 02/21/61
1962	242.	180.	127.	109.	81.	65.	57.	47.	49.	402. 04/06/62
1963	482.	301.	173.	106.	85.	72.	60.	54.	47.	904. 11/20/62
1964	241.	224.	201.	182.	164.	129.	101.	85.	63.	264. 05/31/64
1965	385.	339.	225.	135.	93.	75.	60.	61.	56.	512. 01/29/65
1966	241.	204.	169.	121.	94.	83.	71.	59.	44.	275. 05/06/66
1967	203.	185.	143.	115.	98.	76.	66.	56.	54.	275. 01/15/67
1968	399.	328.	203.	120.	88.	76.	72.	62.	55.	520. 12/25/67
1969	234.	175.	156.	137.	118.	80.	65.	54.	40.	337. 01/05/69
1970	161.	141.	126.	93.	80.	62.	55.	50.	47.	195. 01/22/70
1971	227.	201.	168.	145.	129.	110.	91.	75.	66.	242. 01/30/71
1972	321.	194.	139.	127.	124.	97.	83.	85.	74.	504. 11/04/71
1973	290.	220.	199.	133.	91.	67.	47.	39.	39.	491. 12/21/72
1974	327.	260.	215.	201.	161.	114.	96.	84.	72.	437. 01/15/74
1975	406.	262.	165.	133.	127.	95.	74.	59.	54.	568. 01/18/75
1976	540.	500.	323.	207.	130.	98.	85.	72.	61.	850. 12/02/75
1977	150.	112.	90.	69.	61.	47.	39.	34.	32.	233. 01/18/77
1978	718.	487.	311.	205.	142.	98.	72.	59.	51.	1020. 12/02/77
1979	139.	124.	111.	99.	91.	66.	60.	53.	43.	152. 03/07/79

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1945-1979)

W R C  
ESTIMATE

SYSTEMATIC  
RECORD

MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKEWNESS	STD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKEWNESS LOGS	STD ERR SKEWNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
349.6	718.0	139.0	146.95	0.921	0.874	-0.369	0.420	2.508	0.180	-0.014	0.398	-0.375	0.072	2.6692	2.6692
266.4	517.0	112.0	198.8	0.398	0.398	-0.364	0.379	2.396	0.163	-0.034	0.398	-0.361	0.068	0.2570	0.2570
265.4	517.0	112.0	198.8	0.398	0.398	-0.364	0.379	2.396	0.163	-0.034	0.398	-0.361	0.068	0.6510	0.6510
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	2.6692	2.6692
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.2570	0.2570
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.6510	0.6510
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	2.6692	2.6692
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.2570	0.2570
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.6510	0.6510
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	2.6692	2.6692
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117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.6510	0.6510
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117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.6510	0.6510
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117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.6510	0.6510
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117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.6510	0.6510
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117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.2570	0.2570
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.6510	0.6510
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117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.2570	0.2570
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.6510	0.6510
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117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.6510	0.6510
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	2.6692	2.6692
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.2570	0.2570
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.6510	0.6510
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	2.6692	2.6692
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.2570	0.2570
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	0.6510	0.6510
117.8	185.0	61.0	146.8	0.376	0.376	-0.008	0.268	2.056	0.117	-0.074	0.398	-0.022	0.057	2.6692	2.669



## STATION 12114500 CEDAR R. BELOW BEAR CR., NEAR CEDAR FALLS, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1946	112	194	160	132	66.2	133	238	491	387	164	42.0	27.4	180
1947	106	130	353	219	183	211	283	245	162	72.0	28.5	39.9	169
1948	256	338	173	104	109	90.9	168	457	543	114	49.0	42.1	204
1949	91.7	154	116	172.8	125	127	256	565	608	184	58.6	34.9	178
1950	155	256	192	125	123	195	169	362	608	282	65.4	41.2	215
1951	153	297	289	149	311	95.2	271	412	233	57.1	25.4	23.4	192
1952	143	157	88.2	49.9	134	75.6	289	412	227	98.3	30.4	20.5	143
1953	16.2	16.5	27.9	45.9	251	94.4	199	309	266	133	73.6	24.4	152
1954	49.0	167	387	134	149	94.9	188	404	456	285	73.5	52.9	202
1955	67.4	180	92.1	101	169	49.4	102	293	594	352	92.0	36.0	177
1956	234	280	231	81.5	43.9	70.9	313	599	458	220	42.2	27.5	217
1957	150	180	448	71.8	64.4	102	266	393	157	47.7	27.7	18.9	164
1958	26.0	80.9	190	157	224	98.1	237	308	101	39.8	21.9	35.2	126
1959	152	443	384	339	108	144	274	294	294	106	33.9	23.1	234
1960	262	466	267	60.3	132	160	288	332	253	51.5	32.8	33.6	194
1961	100	286	104	258	375	192	251	360	280	54.0	24.8	29.6	191
1962	105	159	223	277	161	66.7	298	210	214	79.1	48.0	39.0	156
1963	96.6	234	243	176	244	122	183	188	98.1	62.0	34.2	24.3	141
1964	48.0	193	120	285	136	72.2	188	360	235	150	66.8	46.4	205
1976	112	311	496	144	135	107	90.7	221	126	36.0	24.8	65.2	104
1977	39.5	103	144	86.1	96.6	150	170	214	147	49.2	28.2	75.1	156
1978	66.7	357	436	60.1	141	204	195	304	171	67.7	26.8	24.0	126
1979	42.3	123	154										

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## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1946-1979)

MEAN	112.3	222.0	231.2	160.6	155.6	120.0	230.8	348.8	290.2	122.0	41.4	45.1	173.9
MAXIMUM	262.0	466.0	496.0	459.0	375.0	211.0	313.0	599.0	608.0	352.0	92.0	231.0	234.0
MINIMUM	16.2	16.5	27.9	44.9	43.9	44.4	102.0	163.0	98.1	36.0	21.9	18.9	104.0
STD DEVIATION	69.19	112.40	130.48	105.38	81.71	47.98	56.02	114.37	156.78	86.81	16.88	43.84	33.57
SKWENESS	0.816	0.521	0.581	1.376	1.203	0.627	-0.403	0.466	0.796	1.266	1.276	3.959	-0.256
STD ERR SKEW	0.481	0.481	0.481	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491
SER CORR COEFF	0.083	-0.008	-0.381	-0.131	-0.077	0.195	0.020	0.167	0.330	0.450	0.273	-0.042	-0.067
COEFF OF VAR	0.616	0.506	0.564	0.656	0.525	0.400	0.243	0.328	0.540	0.728	0.456	0.972	0.193
MEAN LOGS	1.959	2.273	2.285	2.126	2.138	2.046	2.349	2.519	2.402	1.987	1.580	1.568	2.232
STD DEV LOGS	0.311	0.303	0.292	0.266	0.225	0.174	0.118	0.148	0.238	0.295	0.177	0.236	0.089
SKWENESS LOGS	-0.657	-1.917	-0.926	0.286	-0.122	0.001	-1.079	-0.326	-0.014	0.379	0.684	1.912	-0.684
STD ERR SKEW LOGS	0.481	0.481	0.481	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491
SER CORR LOGS	0.085	-0.021	-0.211	-0.105	0.042	0.233	-0.008	0.215	0.321	0.366	0.247	0.060	-0.055
COEFF OF VAR LOGS	0.133	0.139	0.128	0.125	0.105	0.065	0.050	0.059	0.099	0.149	0.112	0.150	0.040
% OF AVE FLOW	5.4	10.7	11.1	7.7	7.5	5.8	11.1	16.8	14.0	5.9	2.0	2.2	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1979)

0.99	12.3	15.7	26.2	36.7	39.4	43.7	96.6	138.1	70.2	24.2	18.1	21.2	95.9
0.95	24.9	46.8	55.2	51.5	57.7	57.5	133.4	183.3	102.3	34.3	21.3	21.8	117.6
0.90	35.0	75.3	78.5	62.3	70.4	66.5	155.0	211.5	125.0	42.0	23.5	22.5	129.8
0.80	51.4	121.4	115.3	79.3	89.2	79.3	182.2	249.9	159.2	54.3	26.8	24.2	145.1
0.50	98.3	230.5	213.5	129.8	138.8	111.2	234.4	336.8	252.7	93.1	36.3	31.5	174.6
0.20	168.0	324.2	341.9	221.4	212.9	155.8	281.6	442.2	400.3	169.4	52.5	52.0	203.4
0.10	213.4	354.8	415.0	297.7	264.6	185.9	302.5	504.7	508.9	237.6	65.5	75.3	217.5
0.04	267.5	373.8	492.3	413.5	384.3	224.4	321.3	576.9	656.8	347.5	84.7	122.7	231.8
0.02	304.8	380.4	539.9	515.0	384.0	224.4	321.3	626.3	744.4	449.1	101.2	177.1	240.3
0.01	339.5	384.0	580.3	630.4	436.7	282.7	339.2	672.7	897.8	569.7	119.7	255.4	247.6

## STATION 12114500 CEDAR R. BELOW BEAR CR., NEAR CEDAR FALLS, WASH

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1947	20.0	20.0	20.0	21.0	22.0	27.0	36.0	65.0	125.0
1948	22.0	22.0	23.0	24.0	26.0	34.0	43.0	73.0	132.0
1949	32.0	32.0	34.0	35.0	42.0	45.0	60.0	63.0	87.0
1950	28.0	29.0	30.0	32.0	35.0	42.0	73.0	92.0	134.0
1951	32.0	32.0	33.0	34.0	40.0	50.0	84.0	108.0	162.0
1952	18.0	18.0	18.0	19.0	21.0	23.0	33.0	52.0	80.0
1953	13.0	13.0	14.0	15.0	16.0	17.0	19.0	30.0	30.0
1954	20.0	20.0	21.0	22.0	24.0	29.0	34.0	50.0	110.0
1955	36.0	37.0	39.0	42.0	45.0	55.0	61.0	73.0	94.0
1956	28.0	28.0	30.0	34.0	35.0	48.0	65.0	108.0	152.0
1957	22.0	22.0	23.0	24.0	26.0	30.0	51.0	92.0	154.0
1958	16.0	17.0	17.0	18.0	19.0	19.0	23.0	28.0	56.0
1959	16.0	17.0	18.0	18.0	19.0	23.0	30.0	41.0	105.0
1960	26.0	27.0	28.0	30.0	33.0	57.0	88.0	144.0	186.0
1961	24.0	24.0	25.0	28.0	30.0	34.0	44.0	101.0	101.0
1962	20.0	20.0	20.0	21.0	25.0	27.0	31.0	52.0	82.0
1963	32.0	32.0	33.0	36.0	37.0	43.0	49.0	62.0	102.0
1977	22.0	22.0	23.0	25.0	29.0	41.0	50.0	59.0	82.0
1978	15.0	15.0	15.0	15.0	15.0	25.0	37.0	46.0	79.0
1979	23.0	23.0	25.0	27.0	28.0	32.0	46.0	47.0	76.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1979)

MEAN	23.3	23.5	24.4	25.9	28.7	35.1	47.3	65.9	106.4
MAXIMUM	36.0	37.0	39.0	42.0	49.0	57.0	88.0	144.0	186.0
MINIMUM	13.0	13.0	14.0	16.0	16.0	16.0	16.0	19.0	30.0
STANDARD DEVIATION	6.44	6.50	7.01	7.69	8.90	11.86	19.51	30.18	38.44
SKEWNESS	0.364	0.421	0.412	0.370	0.603	0.318	0.655	0.965	0.247
STD ERROR OF SKEWNESS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SERIAL CORR COEFF	0.185	0.181	0.175	0.170	0.196	0.134	0.135	0.017	0.066
COEFF OF VARIATION	0.277	0.277	0.287	0.297	0.310	0.337	0.413	0.458	0.361
MEAN LOGS	1.350	1.355	1.370	1.396	1.438	1.521	1.638	1.775	1.996
STD DEVIATION LOGS	0.122	0.121	0.126	0.131	0.134	0.153	0.185	0.206	0.180
SKEWNESS LOGS	-0.128	-0.094	-0.056	-0.086	0.049	-0.287	-0.243	-0.417	-1.101
STD ERR SKEWNESS LOGS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SER CORR COEFF LOGS	0.219	0.213	0.198	0.184	0.242	0.217	0.193	0.092	0.057
COEFF OF VAR LOGS	0.091	0.090	0.092	0.094	0.093	0.101	0.113	0.092	0.090

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1979)

0.99	42.0	42.6	45.5	49.2	56.8	69.9	108.4	154.8	185.9
0.98	39.2	39.7	42.2	45.5	52.1	64.8	98.5	141.3	179.6
0.96	36.2	36.6	38.7	41.8	47.3	59.3	88.3	127.0	171.5
0.90	32.0	32.3	33.9	36.5	40.8	51.5	74.1	106.6	156.8
0.80	28.4	28.7	30.0	32.1	35.5	44.8	62.5	89.3	140.8
0.50	22.5	22.8	23.5	25.0	27.4	33.8	44.2	61.6	106.7
0.20	17.7	17.9	18.4	19.3	21.2	24.8	30.6	40.5	72.7
0.10	15.6	15.8	16.1	16.9	18.5	20.9	25.0	31.9	56.8
0.05	14.0	14.2	14.5	15.0	16.4	18.1	21.0	26.0	45.1
0.02	12.3	12.6	12.8	13.2	14.7	15.3	17.2	20.3	33.9
0.01	11.3	11.6	11.8	12.1	13.5	13.6	15.0	17.2	27.5

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1947-1979)

P95	P90	P75	P70	P50	P25	P10
24.0	31.0	56.0	67.0	110.0	230.0	390.0

STATION 12114500 CEDAR R. BELOW BEAR CR., NEAR CEDAR FALLS, WASH

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30										ANNUAL PEAK-FLOW DATA		
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW(CFS)	DATE	REG.(R)
1946	914.	707.	568.	537.	505.	457.	394.	327.	251.	1110.	12/28/45	
1947	1460.	1270.	960.	573.	393.	291.	261.	254.	253.	1940.	12/11/46	
1948	1130.	1020.	875.	810.	675.	507.	405.	327.	247.	1250.	05/28/48	
1949	1010.	998.	928.	719.	599.	490.	413.	350.	270.	1090.	05/13/49	
1950	1250.	911.	762.	663.	614.	536.	425.	359.	292.	1510.	11/27/49	
1951	1370.	1300.	829.	492.	421.	355.	309.	281.	263.	1800.	02/09/51	
1952	680.	648.	588.	534.	444.	380.	316.	266.	206.	764.	05/13/52	
1953	1490.	1040.	727.	667.	584.	359.	281.	273.	270.	1900.	01/31/53	
1954	1220.	914.	748.	546.	469.	461.	383.	333.	260.	1770.	12/09/53	
1955	1160.	1120.	950.	702.	612.	512.	421.	344.	262.	1530.	02/09/55	
1956	1110.	1050.	919.	787.	663.	557.	486.	405.	285.	2200.	12/12/55	
1957	1560.	1180.	937.	746.	611.	551.	488.	242.	236.	3260.	12/09/56	
1958	866.	656.	489.	354.	311.	283.	222.	218.	202.	938.	04/20/58	
1959	1470.	1000.	740.	576.	506.	440.	396.	340.	290.	2140.	11/12/58	
1960	2490.	2100.	1430.	792.	602.	409.	336.	265.	248.	7620.	11/22/59	
1961	1260.	879.	583.	457.	410.	336.	305.	301.	283.	1500.	02/21/61	
1962	968.	721.	621.	488.	383.	279.	242.	215.	218.	1490.	04/06/62	
1963	1220.	936.	586.	388.	329.	289.	253.	231.	208.	2710.	11/19/62	
1974	2300.	2030.	1310.	849.	551.	415.	370.	323.	265.	3830.	12/02/75	
1976	642.	452.	330.	270.	240.	198.	176.	158.	149.	950.	01/18/77	
1977	642.	452.	330.	270.	240.	198.	176.	158.	149.	950.	01/18/77	
1978	2180.	1640.	1100.	765.	565.	405.	299.	247.	217.	3810.	12/01/77	
1979	555.	489.	368.	331.	325.	264.	242.	223.	181.	605.	03/07/79	

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1946-1979)

	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKEWNESS	STD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKEWNESS LOGS	STD ERR SKEWNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	1286.6	2490.0	555.0	504.99	1.002	0.491	-0.437	3.079	0.167	-0.026	-0.067	0.491	-0.542	0.054	3.2383	3.2383
	2490.0	2100.0	452.0	427.89	1.169	0.491	-0.490	2.988	0.170	0.170	0.067	0.491	-0.578	0.054	0.2557	0.2557
	555.0	452.0	330.0	275.08	0.542	0.491	-0.492	2.870	0.159	0.138	-0.441	0.491	-0.501	0.057	0.0	0.5720
	504.99	427.89	330.0	169.36	-0.262	0.491	-0.344	2.754	0.121	0.117	-0.550	0.491	-0.355	0.045	0.0	
	1.002	1.169	0.491	0.542	-0.262	0.491	-0.344	2.754	0.121	0.117	-0.550	0.491	-0.355	0.045	0.0	
	0.491	0.491	0.491	0.491	-0.492	0.491	-0.492	2.870	0.159	0.138	-0.441	0.491	-0.501	0.057	0.0	
	-0.437	-0.490	-0.492	-0.490	-0.492	0.491	-0.492	2.870	0.159	0.138	-0.441	0.491	-0.501	0.057	0.0	
	3.079	2.988	2.870	2.754	2.754	2.754	2.754	2.754	2.754	2.754	2.754	2.754	2.754	2.754	3.2383	3.2383
	0.167	0.170	0.159	0.138	0.121	0.117	0.117	0.117	0.117	0.117	0.117	0.117	0.117	0.117	0.2557	0.2557
	-0.026	0.067	-0.441	-0.775	-0.775	-0.775	-0.775	-0.775	-0.775	-0.775	-0.775	-0.775	-0.775	-0.775	0.0	0.5720
	-0.067	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.0	
	-0.542	-0.578	-0.501	-0.355	-0.355	-0.355	-0.355	-0.355	-0.355	-0.355	-0.355	-0.355	-0.355	-0.355	0.0	
	0.054	0.057	0.055	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.0	

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
	486.7	635.4	731.9	868.2	1201.3	1658.5	1961.1	2343.2	2627.8	2912.5
	398.9	515.0	591.0	699.3	969.5	1352.2	1613.2	1950.8	2207.9	2469.7
	281.6	389.2	457.5	550.7	762.1	1015.1	1162.3	1328.7	1440.5	1543.5
	227.0	316.2	370.6	442.0	590.6	744.9	823.2	902.3	950.1	990.5
	213.1	282.2	323.2	376.0	483.8	594.0	650.0	708.8	741.5	771.0
	181.1	203.1	226.8	263.8	325.6	396.5	436.0	476.8	506.8	531.9
	162.1	187.2	207.9	233.9	285.6	347.5	364.1	391.2	407.9	422.3
	151.1	173.8	191.8	212.8	248.9	277.0	287.9	296.9	301.3	304.4
	140.2	165.1	183.9	204.5	230.6	258.9	268.2	275.7	281.4	286.9
	139.9	151.5	165.1	183.9	204.5	230.6	258.9	275.7	281.4	286.9
	129.7	140.2	151.1	162.1	181.1	203.1	226.8	248.9	268.2	281.4
	117.8	129.7	140.2	151.1	162.1	181.1	203.1	226.8	248.9	268.2
	1054.5	1173.8	1297.9	1402.3	1511.1	1621.1	1731.1	1841.1	1951.1	2061.1
	1045.0	1164.5	1284.0	1394.0	1504.0	1614.0	1724.0	1834.0	1944.0	2054.0
	1730.9	1840.9	1950.9	2060.9	2170.9	2280.9	2390.9	2500.9	2610.9	2720.9
	1636.9	1746.9	1856.9	1966.9	2076.9	2186.9	2296.9	2406.9	2516.9	2626.9
	2775.7	2885.7	2995.7	3105.7	3215.7	3325.7	3435.7	3545.7	3655.7	3765.7
	3781.4	3891.4	4001.4	4111.4	4221.4	4331.4	4441.4	4551.4	4661.4	4771.4
	5396.6	5506.6	5616.6	5726.6	5836.6	5946.6	6056.6	6166.6	6276.6	6386.6
	6889.9	6999.9	7109.9	7219.9	7329.9	7439.9	7549.9	7659.9	7769.9	7879.9
	8668.7	8778.7	8888.7	8998.7	9108.7	9218.7	9328.7	9438.7	9548.7	9658.7

## STATION 12115000 CEDAR RIVER NEAR CEDAR FALLS, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1946	179	325	278	251	131	255	375	678	533	223	61.5	43.4	278
1947	168	235	602	384	326	317	417	327	217	107	44.0	67.1	267
1948	403	523	297	213	206	175	281	618	640	156	74.7	68.7	304
1949	140	274	211	121	246	277	417	757	451	227	80.0	47.4	267
1950	237	387	313	220	247	420	363	558	779	330	102	68.4	335
1951	279	487	508	303	636	185	362	535	285	78.0	39.6	36.8	309
1952	228	251	167	96.6	260	143	407	545	300	140	49.2	31.3	218
1953	24.3	27.1	63.5	722	430	183	311	426	370	178	54.0	34.1	234
1954	85.9	273	649	247	310	178	317	532	597	327	101	87.2	309
1955	113	293	172	198	316	99.1	214	450	768	472	14.3	58.6	274
1956	366	486	499	163	88.9	162	470	834	639	295	66.3	44.6	344
1957	238	287	745	119	123	218	449	556	222	4.7	43.9	29.2	260
1958	40.5	139	336	303	378	159	390	420	133	56.4	32.9	51.7	202
1959	234	759	620	532	189	268	486	450	380	140	51.1	365	373
1960	391	688	412	101	232	233	401	471	341	73.3	46.7	51.1	288
1961	155	483	187	419	604	304	373	484	329	73.1	36.3	46.3	286
1962	160	238	360	435	230	113	443	312	282	101	63.4	51.8	232
1963	125	374	397	266	381	204	296	268	138	96.4	50.8	37.4	218
1964	77.5	312	214	308	179	211	344	560	797	399	150	158	309
1965	185	202	433	430	435	215	404	387	291	94.1	44.1	43.9	263
1966	87.5	161	182	198	119	218	479	530	312	162	51.4	32.5	211
1967	130	222	472	553	350	201	160	455	428	105	38.2	30.5	262
1968	247	253	508	257	528	267	175	418	403	86.7	87.5	231	295
1969	223	333	287	274	81.9	175	418	658	403	145	59.8	80.2	261
1970	156	266	180	453	274	235	323	427	362	84.9	38.3	60.1	216
1971	123	266	180	453	274	235	323	427	362	84.9	38.3	60.1	216
1972	138	402	281	362	581	172	266	684	514	370	89.1	58.9	303
1973	77.9	158	499	274	104	158	212	320	200	81.0	34.7	32.1	180
1974	71.8	209	346	572	238	251	424	543	874	390	128	47.5	341
1975	29.8	162	404	445	177	195	161	617	512	228	83.9	71.5	258
1976	183	478	780	465	209	122	291	526	322	193	95.8	69.4	312
1977	60.5	157	225	209	164	160	332	235	177	149.6	36.8	92.1	158
1978	100	542	717	156	161	227	228	313	194	65.8	42.6	127.1	240
1979	69.8	201	261	91.7	270	346	314	446	220	92.4	40.3	38.2	199

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1946-1979)

MEAN	162.5	315.1	375.9	313.2	283.5	227.8	345.0	498.8	406.2	175.3	65.5	73.9	269.9
MAXIMUM	403.0	759.0	780.0	722.0	636.0	698.0	485.0	834.0	874.0	472.0	150.0	365.0	373.0
MINIMUM	24.3	27.1	63.5	91.7	81.9	99.1	160.0	235.0	133.0	49.6	32.9	29.2	158.0
STD DEVIATION	97.55	163.29	186.31	155.75	151.65	106.93	87.57	142.97	201.02	116.24	31.17	66.04	52.75
SKENESS	0.906	0.906	0.583	0.570	0.467	2.808	-0.422	0.238	0.790	0.035	1.296	3.197	-0.005
STD ERR SKEW	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403
SER CORR COEFF	0.170	0.089	-0.220	-0.033	-0.132	-0.108	-0.009	0.040	0.026	0.200	0.039	-0.111	-0.020
COEFF OF VAR	0.600	0.518	0.496	0.497	0.535	0.469	0.254	0.287	0.495	0.466	0.476	0.893	0.195
MEAN LOGS	2.125	2.434	2.518	2.338	2.392	2.324	2.522	2.680	2.557	2.157	1.775	1.777	2.423
STD DEV LOGS	0.296	0.267	0.239	0.238	0.238	0.163	0.125	0.131	0.218	0.277	0.185	0.254	0.088
SKENESS LOGS	-0.641	-1.421	-0.639	-0.429	-0.137	0.803	-1.024	-0.445	-0.079	0.285	0.603	1.318	-0.488
STD ERR SKEW LOGS	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403
SER CORR LOGS	0.133	-0.005	-0.135	0.022	-0.153	-0.060	-0.034	0.059	0.051	0.200	0.048	-0.064	-0.403
COEFF OF VAR LOGS	0.139	0.110	0.095	0.098	0.100	0.070	0.050	0.049	0.085	0.128	0.104	0.143	0.036
% OF AVE FLOW	5.0	9.7	11.6	9.7	8.7	7.0	10.6	15.4	12.5	5.4	2.0	2.3	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1979)

0.99	20.0	36.1	71.1	64.5	65.0	110.3	138.6	214.8	108.9	37.2	26.8	26.9	153.5
0.95	38.9	82.4	121.8	104.4	97.8	125.4	193.4	280.7	156.1	53.1	32.1	29.7	184.6
0.90	53.9	119.5	158.3	121.0	121.0	136.3	226.0	320.8	188.7	64.8	35.8	32.2	202.3
0.80	77.6	176.4	212.4	175.3	155.8	153.1	226.6	374.0	236.8	83.3	41.4	36.7	224.5
0.50	143.5	312.3	349.0	285.0	249.0	200.8	349.0	488.9	363.0	139.2	57.1	52.9	269.1
0.20	239.6	452.0	527.0	438.2	392.3	282.7	425.0	619.3	551.2	242.8	83.8	91.1	315.1
0.10	301.4	512.9	635.3	493.6	393.2	348.4	459.6	692.2	683.2	330.4	105.0	131.0	339.2
0.04	374.5	563.5	757.4	557.5	421.3	345.8	491.5	772.8	856.6	465.3	136.2	205.7	366.6
0.02	424.9	587.9	838.7	742.9	530.3	445.7	503.2	825.8	989.6	584.7	163.0	285.7	380.7
0.01	471.7	604.9	912.6	824.7	635.7	624.6	523.0	874.0	1126.1	721.9	192.9	393.5	394.9

## STATION 12115000 CEDAR RIVER NEAR CEDAR FALLS, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1947	35.0	35.0	36.0	37.0	38.0	42.0	56.0	100.0	199.0
1948	36.0	36.0	37.0	39.0	41.0	55.0	68.0	105.0	193.0
1949	50.0	50.0	53.0	56.0	66.0	70.0	91.0	99.0	148.0
1950	37.0	38.0	39.0	42.0	47.0	57.0	98.0	134.0	205.0
1951	48.0	49.0	51.0	54.0	64.0	81.0	123.0	180.0	284.0
1952	27.0	27.0	27.0	28.0	32.0	36.0	49.0	75.0	132.0
1953	20.0	21.0	22.0	23.0	24.0	26.0	27.0	31.0	51.0
1954	25.0	26.0	27.0	28.0	32.0	44.0	54.0	81.0	161.0
1955	61.0	62.0	64.0	70.0	84.0	86.0	98.0	111.0	157.0
1956	47.0	47.0	51.0	56.0	58.0	85.0	137.0	229.0	278.0
1957	35.0	36.0	39.0	39.0	41.0	49.0	77.0	142.0	232.0
1958	25.0	26.0	26.0	27.0	29.0	31.0	36.0	44.0	89.0
1959	27.0	27.0	27.0	29.0	30.0	35.0	44.0	58.0	149.0
1960	44.0	44.0	45.0	47.0	50.0	80.0	145.0	208.0	267.0
1961	38.0	39.0	40.0	42.0	43.0	48.0	49.0	63.0	165.0
1962	29.0	30.0	31.0	32.0	36.0	41.0	47.0	74.0	121.0
1963	40.0	41.0	42.0	46.0	50.0	57.0	64.0	80.0	136.0
1964	30.0	30.0	31.0	31.0	33.0	37.0	44.0	59.0	107.0
1965	82.0	83.0	86.0	98.0	109.0	151.0	158.0	158.0	218.0
1966	33.0	33.0	33.0	35.0	39.0	43.0	48.0	63.0	99.0
1967	30.0	30.0	31.0	32.0	32.0	35.0	45.0	80.0	148.0
1968	26.0	26.0	27.0	28.0	31.0	34.0	43.0	78.0	154.0
1969	38.0	39.0	41.0	46.0	55.0	79.0	100.0	141.0	198.0
1970	43.0	44.0	45.0	47.0	48.0	60.0	91.0	102.0	117.0
1971	30.0	30.0	31.0	32.0	36.0	47.0	54.0	74.0	124.0
1972	42.0	42.0	43.0	47.0	48.0	58.0	85.0	159.0	201.0
1973	33.0	33.0	34.0	36.0	42.0	71.0	87.0	96.0	162.0
1974	23.0	23.0	24.0	26.0	28.0	32.0	38.0	53.0	102.0
1975	24.0	24.0	27.0	27.0	28.0	35.0	50.0	86.0	172.0
1976	36.0	37.0	39.0	42.0	50.0	75.0	78.0	127.0	254.0
1977	38.0	38.0	39.0	42.0	48.0	62.0	74.0	86.0	123.0
1978	24.0	24.0	24.0	25.0	29.0	42.0	62.0	65.0	114.0
1979	35.0	36.0	37.0	39.0	43.0	49.0	66.0	75.0	115.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1979)

MEAN	36.1	36.5	37.8	40.2	44.4	55.5	72.0	100.5	162.9
MAXIMUM	82.0	83.0	86.0	98.0	109.0	151.0	158.0	229.0	284.0
MINIMUM	20.0	21.0	22.0	23.0	24.0	26.0	27.0	31.0	51.0
STANDARD DEVIATION	12.25	12.35	12.92	14.93	17.39	24.48	32.92	46.50	57.17
SKWENESS	1.859	1.882	1.870	2.049	1.997	1.963	1.078	1.132	0.515
STD ERROR OF SKWENESS	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409
SERIAL CORR COEFF	-0.006	-0.019	-0.020	-0.040	-0.040	-0.104	-0.040	-0.006	0.033
COEFF OF VARIATION	0.340	0.338	0.342	0.371	0.392	0.441	0.457	0.463	0.351
MEAN LOGS	1.537	1.543	1.557	1.582	1.621	1.711	1.817	1.960	2.185
STD DEVIATION LOGS	0.130	0.129	0.130	0.138	0.145	0.167	0.188	0.193	0.161
SKWENESS LOGS	0.658	0.705	0.743	0.807	0.832	0.576	0.267	0.036	-0.536
STD ERR SKWENESS LOGS	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409
SER CORR COEFF LOGS	0.073	0.055	0.046	0.022	0.025	-0.018	0.032	0.020	0.020
COEFF OF VAR LOGS	0.085	0.084	0.084	0.087	0.089	0.097	0.103	0.099	0.074

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1979)

0.99	79.6	80.9	84.7	95.9	110.6	147.1	194.9	260.3	312.4
0.98	70.4	71.4	74.6	83.4	95.4	126.6	169.2	229.8	293.2
0.96	61.9	62.7	65.2	72.0	81.6	108.0	145.2	200.1	271.9
0.90	51.3	51.9	53.8	58.4	65.4	85.6	115.4	161.8	239.5
0.80	43.7	44.1	45.6	48.9	54.2	70.0	93.7	132.6	210.1
0.50	33.3	33.7	34.7	36.6	39.9	49.6	64.3	91.0	158.1
0.20	26.6	27.1	27.9	29.1	31.4	37.0	45.4	62.7	113.5
0.10	24.1	24.6	25.3	26.3	28.4	32.4	38.2	51.7	93.6
0.05	22.4	22.9	23.6	24.5	26.4	29.3	33.3	44.1	79.1
0.02	20.7	21.3	22.0	22.9	24.6	26.5	28.8	36.9	64.6
0.01	19.8	20.4	21.2	22.0	23.6	24.8	26.1	32.8	56.1

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1947-1979)

P95	P90	P75	P70	P50	P25	P10
37.0	48.0	93.0	110.0	190.0	360.0	580.0

## STATION 12115000 CEDAR RIVER NEAR CEDAR FALLS, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE	REG. (R)
1946	1620.	1240.	869.	729.	692.	631.	554.	466.	388.	2600.	12/28/45	
1947	2620.	2240.	1520.	966.	677.	503.	457.	404.	404.	4930.	12/11/46	
1948	1540.	1300.	966.	638.	810.	638.	526.	439.	356.	2150.	11/07/47	
1949	1370.	1300.	1220.	951.	776.	654.	553.	481.	391.	1470.	05/13/49	
1950	2040.	1380.	990.	856.	788.	709.	601.	536.	456.	2990.	11/27/49	
1951	2450.	2280.	1680.	1000.	651.	553.	542.	484.	438.	3620.	02/09/51	
1952	1010.	894.	796.	708.	581.	503.	424.	365.	301.	1250.	02/04/52	
1953	2400.	1760.	1260.	1080.	935.	578.	449.	436.	412.	3860.	01/31/53	
1954	2380.	1610.	1300.	884.	652.	599.	510.	448.	378.	4710.	12/09/53	
1955	1970.	1510.	1250.	914.	793.	673.	574.	485.	387.	3620.	02/08/55	
1956	2580.	1740.	1310.	1100.	945.	781.	678.	575.	415.	5590.	12/11/55	
1957	3000.	2150.	1610.	1250.	767.	526.	448.	376.	376.	6090.	12/10/56	
1958	1580.	1100.	821.	583.	483.	415.	339.	337.	330.	1810.	04/20/58	
1959	3700.	2160.	1430.	1030.	857.	725.	650.	554.	489.	5040.	11/12/58	
1960	3540.	3000.	2110.	1170.	901.	611.	504.	402.	369.	9490.	11/22/59	
1961	2090.	1420.	939.	646.	598.	524.	458.	440.	416.	2650.	02/21/61	
1962	1490.	1040.	960.	787.	609.	434.	365.	330.	328.	2140.	04/06/62	
1963	2500.	1550.	954.	644.	545.	469.	402.	368.	332.	4430.	11/20/62	
1964	1250.	1150.	1030.	946.	856.	719.	599.	530.	417.	1350.	01/01/64	
1965	2570.	2170.	1510.	944.	673.	466.	445.	412.	385.	3210.	01/29/65	
1966	1220.	1080.	908.	669.	538.	519.	456.	398.	317.	1320.	05/06/66	
1967	1240.	1040.	880.	672.	582.	544.	478.	409.	377.	1450.	12/13/66	
1968	2700.	2090.	1370.	823.	637.	554.	519.	450.	411.	3280.	01/20/68	
1969	1520.	1050.	900.	783.	737.	584.	500.	433.	336.	2090.	12/03/68	
1970	1060.	915.	793.	555.	484.	414.	377.	345.	326.	1270.	01/22/70	
1971	1350.	990.	864.	771.	692.	604.	536.	467.	443.	1690.	01/19/71	
1972	2360.	1610.	1070.	966.	865.	685.	597.	522.	546.	2650.	11/04/71	
1973	1970.	1480.	1310.	877.	606.	497.	317.	273.	266.	2420.	12/26/72	
1974	2300.	1830.	1200.	1080.	909.	712.	625.	566.	509.	3120.	01/15/74	
1975	2410.	1670.	1110.	795.	736.	580.	472.	385.	371.	3290.	01/18/75	
1976	3600.	3160.	2040.	1320.	862.	662.	586.	509.	414.	3600.	12/02/75	
1977	892.	683.	467.	377.	351.	290.	263.	241.	229.	1250.	01/18/77	
1978	3500.	2210.	1530.	1170.	904.	643.	481.	400.	340.	3500.	12/02/77	
1979	1090.	950.	669.	521.	489.	391.	377.	357.	289.	1190.	03/07/79	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1946-1979)

W R C  
ESTIMATESYSTEMATIC  
RECORD

MEAN	2085.6	1581.2	1170.3	868.0	705.9	567.6	490.1	433.4	380.6			
MAXIMUM	3700.0	3160.0	2110.0	1320.0	945.0	781.0	678.0	622.0	546.0			
STANDARD DEVIATION	892.0	683.0	467.0	377.0	351.0	290.0	263.0	241.0	229.0			
SKWENESS	0.431	0.884	0.714	-0.056	-0.260	-0.328	-0.248	0.053	0.192			
STD ERROR OF SKEWNESS	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403			
SERIAL CORR COEFF	-0.204	-0.277	-0.351	-0.360	-0.270	-0.233	-0.196	-0.292	-0.233			
COEFF OF VARIATION	0.383	0.375	0.313	0.250	0.214	0.201	0.199	0.196	0.175			
MEAN LOGS	3.287	3.171	3.048	2.924	2.838	2.745	2.681	2.628	2.574			
STD DEVIATION LOGS	0.173	0.159	0.137	0.118	0.100	0.095	0.093	0.089	0.078			
SKWENESS LOGS	-0.185	0.097	-0.265	-0.803	-0.802	-0.849	-0.804	-0.593	-0.452			
STD ERR SKWENESS LOGS	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403			
SER CORR COEFF LOGS	-0.245	-0.312	-0.385	-0.366	-0.277	-0.245	-0.201	-0.282	-0.200			
COEFF OF VAR LOGS	0.053	0.050	0.045	0.040	0.035	0.034	0.035	0.034	0.030			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1979)

0.99	726.6	649.5	503.5	382.0	353.4	292.3	258.6	241.5	232.9	781.8	821.8
0.95	985.6	820.2	648.9	508.8	450.6	370.9	323.9	293.9	273.2	1120.2	1142.5
0.90	1154.0	930.9	738.7	583.5	506.1	415.1	360.7	323.5	295.8	1357.8	1368.3
0.80	1390.6	1087.3	859.7	678.9	575.5	469.8	406.3	360.5	324.0	1714.8	1709.9
0.50	1960.1	1472.8	1131.8	870.1	710.3	573.5	493.7	433.6	380.0	2684.6	2654.6
0.20	2715.5	2011.6	1461.0	1059.5	839.4	669.0	576.1	506.8	437.1	4211.9	4196.4
0.10	3198.1	2375.6	1656.8	1152.4	901.5	713.3	615.5	544.0	466.9	5334.5	5370.4
0.04	3788.3	2843.8	1883.8	1244.3	962.0	755.3	653.6	582.1	486.8	6867.8	7025.4
0.02	4214.7	3198.8	2040.6	1298.7	997.7	779.2	675.9	605.7	518.3	8088.2	8382.4
0.01	4630.7	3559.2	2188.2	1344.1	1027.2	798.6	694.4	626.1	535.9	9372.4	9846.0

STATION 12115300 GREEN POINT CREEK NEAR CEDAR FALLS, WASH.									
ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1957-1979)				W R C		SYSTEMATIC RECORD
WATER YEAR	FLOW(CFS)	DATE	MEAN LOGS STANDARD DEVIATION LOGS SKEWNESS LOGS				ESTIMATE		
1957	119.0	12- 9-1956							
1958	43.0	1-16-1958					1.8327		1.8327
1959	119.0	11-18-1958					0.2281		0.2281
1960	113.0	12-15-1959					0.0		-0.399
1961	64.0	2-21-1961							
1962	56.0	12-24-1961							
1963	112.0	2- 3-1963							
1964	27.0	1- 1-1964							
1965	47.0	12- 1-1964					0.99		17.2
1966	27.0	4- 1-1966					0.95		27.1
1967	36.0	12-13-1966					0.90		34.1
1968	65.0	12-25-1967					0.80		44.3
1969	125.0	1- 5-1969					0.50		70.4
1970	37.0	1-19-1970					0.20		106.6
1971	68.0	1-19-1971					0.10		129.9
1972	107.0	2-28-1972					0.04		158.1
1973	84.0	12-26-1972					0.02		178.3
1974	96.0	1-15-1974					0.01		197.6
1975	120.0	1-17-1975							
1976	104.0	12- 2-1975							
1977	36.0	1-18-1977							
1978	114.0	12- 2-1977							
1979	46.0	3- 6-1979							

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1957-1979)

## STATION 12115500 REX RIVER NEAR CEDAR FALLS, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1946	87.8	130	138	115	68.6	113	143	256	186	61.1	13.7	34.0	111
1947	72.2	106	278	141	134	112	157	92.5	80.0	31.0	11.4	34.4	104
1948	171	213	137	89.5	94.5	59.1	107	218	218	40.2	29.8	31.0	117
1949	60.6	131	78.7	40.1	101	111	160	243	158	74.8	22.6	16.9	99.6
1950	116	152	127	79.8	111	138	130	186	263	116	30.3	25.5	123
1951	123	184	191	115	210	58.1	134	179	76.4	13.9	17.27	12.7	108.3
1952	103	104	62.7	34.3	97.7	50.6	145	181	108	37.5	10.4	8.02	78.3
1953	6.30	7.91	37.7	326	140	66.0	119	161	126	39.9	12.9	12.9	87.7
1954	50.2	123	261	91.4	145	60.0	128	181	218	90.5	28.5	38.6	118
1955	38.0	115	72.4	70.1	128	28.7	70.8	167	269	174	49.5	20.5	99.8
1956	155	184	193	63.2	31.7	56.3	168	256	205	91.0	14.7	13.8	120
1957	120	125	321	32.6	47.9	104	166	171	72.8	26.2	17.8	10.4	102
1958	27.2	74.0	141	136	148.9	55.2	152	95.8	28.7	12.3	7.37	23.7	74.6
1959	101	316	233	208	65.6	104	178	151	107	38.2	19.4	189	142
1960	159	261	158	45.1	98.2	89.1	150	190	116	19.7	19.4	26.6	111
1961	81.6	207	93.2	177	250	116	147	162	93.1	17.8	8.10	18.1	112
1962	86.8	105	161	156	69.0	41.1	187	119	90.2	25.3	26.5	22.7	90.8
1963	59.1	167	165	99.3	144	71.7	116	84.8	41.6	40.7	18.6	13.0	84.6
1964	43.4	156	111	128	70.4	73.3	129	213	301	125	62.4	83.0	124
1965	81.5	99.0	182	218	152	68.6	144	128	77.9	20.2	14.8	24.8	101
1966	55.7	86.6	86.3	95.0	46.5	94.5	191	214	142	65.1	15.5	11.0	92.1
1967	93.2	135	224	236	133	71.8	50.7	174	138	20.3	6.99	6.54	108
1968	111	97.1	194	174	214	94.3	91.5	125	94.5	26.1	49.1	106	114
1969	98.8	148	118	119	20.6	58.9	143	239	148	47.1	12.7	46.6	110
1970	72.0	63.2	83.2	175	109	83.7	124	155	92.4	18.2	9.35	40.1	85.3
1971	63.0	126	84.8	204	182	64.5	106	280	217	124	18.1	28.3	124
1972	55.2	158	123	154	253	250	129	253	191	88.3	18.3	65.4	144
1973	30.7	18.1	230	118	40.7	61.8	182.6	114	76.5	26.5	28.7	9.08	73.5
1974	43.5	108	167	274	96.2	121	81	229	354	133	32.2	11.8	146
1975	8.32	108	206	209	79.6	82.7	60.1	156	109	47.2	33.5	25.9	104
1976	99.4	221	357	220	85.5	46.3	123	209	156	14.4	18.4	53.8	63.6
1977	27.9	72.3	96.5	83.0	60.4	56.8	136	93.3	52.3	14.4	20.0	74.1	98.2
1978	49.7	307	307	76.2	71.4	80.6	80.4	97.9	44.9	18.7	10.1	13.5	82.2
1979	28.1	117	119	43.9	137	141	127	180	48.4	26.0			

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## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1946-1979)

MEAN	76.2	139.3	162.9	133.7	112.8	84.8	131.1	177.4	137.6	52.9	20.7	34.0	105.2
MINIMUM	171.0	316.0	357.0	326.0	253.0	250.0	191.3	280.0	354.0	174.0	62.4	189.0	146.0
STD DEVIATION	6.3	7.9	37.7	32.6	20.6	28.7	50.7	84.8	28.7	12.3	7.0	6.5	63.6
SKEDNESS	0.451	0.822	0.724	0.670	0.780	0.403	35.07	54.57	80.00	41.47	13.05	35.89	20.29
STD ERR SKEW	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403
SER CORR COEFF	0.117	0.021	-0.160	0.037	-0.173	-0.101	-0.136	-0.059	0.021	0.143	-0.077	-0.047	-0.302
COEFF OF VAR	0.545	0.453	0.483	0.543	0.522	0.475	0.268	0.308	0.591	0.784	0.630	1.057	0.193
MEAN LOGS	1.794	2.087	2.160	2.056	1.989	1.890	2.099	2.227	2.065	1.806	1.245	1.382	2.014
STD DEV LOGS	0.323	0.268	0.223	0.264	0.251	0.181	0.137	0.166	0.264	0.321	0.249	0.343	0.086
SKEDNESS LOGS	-1.418	-2.561	-0.386	-0.461	-0.605	0.311	-1.249	-0.570	-0.247	0.311	0.289	0.634	-0.384
STD ERR SKEW LOGS	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403
SER CORR LOGS	0.043	-0.007	-0.077	0.092	-0.201	-0.131	-0.053	0.030	0.118	-0.063	0.063	0.063	-0.294
COEFF OF VAR LOGS	0.180	0.129	0.103	0.126	0.095	0.065	0.065	0.066	0.200	0.200	0.200	0.248	0.043
% OF AVE FLOW	6.0	11.0	12.9	10.6	8.9	6.7	10.4	14.0	10.9	4.2	1.6	2.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1979)

0.99	5.4	11.2	38.0	22.7	19.4	32.5	46.1	67.0	25.3	8.6	5.2	5.6	61.7
0.95	14.7	35.2	59.0	39.0	34.5	40.7	68.7	92.1	41.0	12.8	7.2	7.7	73.0
0.90	23.1	56.7	73.6	51.0	45.3	46.3	82.4	107.7	52.5	16.1	8.6	9.4	79.5
0.80	36.9	89.4	95.1	69.5	61.5	54.5	99.9	128.6	70.2	21.5	10.8	12.2	87.7
0.50	73.8	153.1	149.4	119.2	103.4	76.0	133.9	173.9	117.2	38.8	17.1	22.2	104.5
0.20	115.5	188.5	224.1	191.4	160.0	109.3	163.7	224.9	195.2	45.1	28.2	45.1	122.3
0.10	134.6	195.0	272.0	239.0	195.0	133.9	176.2	252.9	249.1	106.2	57.2	68.8	131.9
0.04	150.9	197.4	330.1	297.4	235.6	167.7	186.9	283.2	319.9	158.5	50.6	112.1	142.3
0.02	158.9	197.8	371.4	339.3	263.1	195.1	192.3	302.6	373.9	207.3	62.2	157.0	149.1
0.01	164.4	198.0	411.1	379.5	288.4	224.3	196.2	320.0	428.6	265.7	75.2	215.8	155.2



## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	163 DAYS
1947	8.4	8.8	9.3	9.7	10.0	11.0	14.0	33.0	72.0
1948	8.6	8.6	8.9	9.4	11.0	15.0	32.0	38.0	67.0
1949	16.0	16.0	18.0	20.0	24.0	28.0	28.0	39.0	61.0
1950	9.8	9.9	10.0	11.0	14.0	18.0	34.0	70.0	80.0
1951	11.0	11.0	12.0	13.0	18.0	25.0	44.0	50.0	104.0
1952	6.0	6.0	6.1	6.3	7.0	7.3	9.9	22.0	49.0
1953	5.3	5.3	5.3	5.5	5.9	7.0	7.4	8.0	17.0
1954	7.4	7.5	7.7	8.2	9.7	11.0	18.0	27.0	58.0
1955	18.0	18.0	19.0	20.0	27.0	33.0	37.0	37.0	57.0
1956	14.0	15.0	15.0	17.0	19.0	29.0	49.0	85.0	108.0
1957	7.9	8.0	8.3	9.5	10.0	13.0	21.0	54.0	86.0
1958	7.6	7.7	8.1	8.7	10.0	12.0	18.0	18.0	38.0
1959	5.9	5.9	6.0	6.3	7.0	7.7	11.0	16.0	44.0
1960	9.7	10.0	11.0	11.0	13.0	23.0	45.0	71.0	101.0
1961	8.2	8.2	8.4	9.3	11.0	19.0	20.0	24.0	70.0
1962	5.5	5.6	5.8	6.2	7.2	12.0	14.0	23.0	49.0
1963	11.0	11.0	12.0	13.0	20.0	22.0	24.0	33.0	50.0
1964	9.8	9.9	10.0	10.0	12.0	16.0	16.0	23.0	40.0
1965	24.0	26.0	29.0	34.0	48.0	66.0	75.0	95.0	95.0
1966	11.0	11.0	11.0	12.0	14.0	19.0	25.0	31.0	46.0
1967	9.7	9.8	10.0	10.0	11.0	13.0	18.0	25.0	37.0
1968	4.9	5.0	5.3	5.4	6.0	6.7	10.0	23.0	56.0
1969	9.9	9.9	11.0	12.0	17.0	26.0	39.0	58.0	80.0
1970	6.7	7.0	7.4	8.3	9.1	14.0	31.0	42.0	51.0
1971	6.9	6.9	7.1	7.3	8.7	12.0	22.0	28.0	54.0
1972	11.0	11.0	12.0	14.0	18.0	22.0	29.0	57.0	78.0
1973	10.0	11.0	11.0	12.0	15.0	23.0	38.0	42.0	67.0
1974	4.8	4.8	5.1	6.2	6.6	8.7	12.0	21.0	43.0
1975	6.6	6.6	6.7	7.0	7.6	9.9	13.0	28.0	76.0
1976	11.0	12.0	13.0	14.0	17.0	30.0	27.0	41.0	91.0
1977	11.0	11.0	12.0	13.0	15.0	22.0	25.0	31.0	46.0
1978	7.2	7.4	7.5	7.6	8.8	13.0	21.0	29.0	46.0
1979	9.1	9.5	10.0	11.0	14.0	19.0	25.0	35.0	46.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1979)

MEAN	9.5	9.7	10.3	11.1	13.7	18.4	25.3	37.6	63.6
MAXIMUM	24.0	26.0	29.0	34.0	48.0	66.0	75.0	85.0	108.0
MINIMUM	4.8	4.8	5.1	5.4	5.9	6.7	7.4	8.0	17.0
STANDARD DEVIATION	3.97	4.24	4.75	5.55	8.07	11.27	14.08	18.18	21.54
SKWENESS	1.863	2.043	2.184	2.436	2.632	2.476	1.549	0.931	0.341
STD ERROR OF SKWENESS	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409
SERIAL CORR COEFF	0.141	0.129	0.066	0.050	-0.001	-0.086	-0.079	-0.031	-0.004
COEFF OF VARIATION	0.417	0.435	0.463	0.497	0.589	0.613	0.556	0.483	0.338
MEAN LOGS	0.948	0.957	0.977	1.009	1.084	1.204	1.345	1.526	1.777
STD DEVIATION LOGS	0.159	0.163	0.170	0.177	0.205	0.225	0.229	0.216	0.162
SKWENESS LOGS	0.543	0.581	0.639	0.740	0.700	0.389	0.057	-0.396	-0.939
STD ERR SKWENESS LOGS	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409
SER CORR COEFF LOGS	0.158	0.152	0.101	0.092	0.047	-0.011	0.034	0.038	0.029
COEFF OF VAR LOGS	0.168	0.170	0.174	0.176	0.189	0.187	0.170	0.141	0.091

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1979)

0.99	24.0	25.3	28.2	32.6	46.0	61.7	77.1	92.2	110.1
0.98	20.8	21.9	24.0	27.4	37.8	51.4	66.3	83.7	105.8
0.96	17.9	18.7	20.3	22.8	30.7	42.3	56.2	74.7	100.6
0.90	14.4	14.9	16.0	17.6	22.8	31.6	43.6	62.0	91.6
0.80	11.9	12.2	12.9	14.1	17.6	24.4	34.4	51.4	82.3
0.50	8.6	8.7	9.1	9.7	11.5	15.5	22.0	34.7	63.4
0.20	6.5	6.6	6.8	7.2	8.1	10.3	14.2	22.4	45.0
0.10	5.7	5.8	5.9	6.3	6.9	8.4	11.3	17.5	36.3
0.05	5.2	5.2	5.4	5.7	6.2	7.3	9.4	14.1	29.8
0.02	4.7	4.7	4.9	5.2	5.5	6.2	7.6	10.9	23.4
0.01	4.4	4.4	4.6	4.9	5.2	5.6	6.6	9.2	19.6

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1947-1979)

P95	P90	P75	P70	P50	P25	P10
10.0	14.0	32.0	39.0	71.0	140.0	230.0

## STATION 12115500 REX RIVER NEAR CEDAR FALLS, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1946	1050.	731.	451.	323.	263.	228.	202.	176.	158.	1580. 12/28/45
1947	1250.	1050.	766.	474.	320.	215.	197.	175.	160.	
1948	614.	465.	401.	324.	265.	222.	185.	155.	132.	1090. 11/07/47
1949	500.	391.	363.	299.	252.	222.	190.	175.	141.	938. 11/23/48
1950	728.	491.	368.	285.	264.	239.	205.	180.	162.	1560. 11/27/49
1951	1420.	1120.	634.	343.	247.	201.	200.	179.	155.	1660. 02/11/51
1952	483.	307.	267.	231.	194.	171.	147.	126.	105.	702. 02/04/52
1953	1150.	724.	478.	433.	379.	234.	179.	169.	156.	1640. 01/23/53
1954	1340.	759.	511.	360.	278.	211.	180.	157.	146.	1870. 12/09/53
1955	824.	631.	396.	307.	280.	241.	208.	174.	140.	1570. 02/08/55
1956	986.	673.	376.	317.	278.	246.	220.	188.	137.	2160. 12/11/55
1957	1540.	1040.	783.	570.	330.	233.	196.	153.	142.	2550. 12/09/56
1958	676.	489.	349.	233.	168.	141.	141.	127.	121.	1070. 04/19/58
1959	1520.	974.	620.	443.	343.	285.	256.	220.	187.	2160. 11/12/58
1960	1620.	1160.	809.	447.	352.	242.	195.	161.	144.	4200. 11/22/59
1961	1110.	729.	445.	286.	250.	218.	190.	185.	168.	1640. 02/21/61
1962	845.	540.	381.	340.	249.	169.	145.	133.	126.	1510. 04/06/62
1963	1050.	791.	443.	280.	233.	197.	163.	148.	130.	3020. 11/19/62
1964	522.	480.	403.	358.	331.	269.	221.	194.	155.	728. 01/01/64
1965	1380.	1280.	770.	435.	297.	197.	196.	168.	152.	2130. 01/28/65
1966	535.	447.	366.	267.	217.	210.	188.	168.	135.	632. 05/06/66
1967	743.	620.	427.	328.	264.	239.	214.	194.	153.	903. 12/13/66
1968	1110.	805.	564.	339.	284.	216.	199.	173.	155.	1770. 01/20/68
1969	1000.	617.	359.	279.	267.	205.	179.	155.	123.	3110. 01/05/69
1970	646.	602.	509.	319.	210.	151.	145.	136.	129.	938. 01/18/70
1971	819.	477.	380.	322.	283.	251.	216.	187.	180.	1200. 01/19/71
1972	980.	800.	466.	400.	346.	273.	232.	235.	207.	1640. 02/28/72
1973	1110.	773.	599.	391.	275.	188.	145.	121.	112.	1390. 12/21/72
1974	1270.	876.	576.	471.	376.	292.	257.	233.	218.	
1975	1260.	938.	560.	363.	262.	212.	182.	163.	153.	2210. 01/18/75
1976	1940.	1780.	997.	631.	402.	314.	276.	237.	183.	2600. 12/01/75
1977	461.	338.	214.	160.	143.	118.	101.	92.	90.	788. 01/18/77
1978	2430.	1550.	934.	615.	415.	293.	220.	182.	147.	4030. 12/02/77
1979	564.	476.	315.	232.	207.	157.	152.	148.	126.	940. 02/06/79

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1946-1979)

	MEAN	W R C ESTIMATE	SYSTEMATIC RECORD
MAXIMUM	1043.4		
MINIMUM	2430.0		
STANDARD DEVIATION	446.00		
SKEWNESS	1.002		
STD ERROR OF SKEWNESS	0.403		
SERIAL CORR COEFF	-0.313		
COEFF OF VARIATION	0.427		
MEAN LOGS	2.981		
STD DEVIATION LOGS	0.184		
SKEWNESS LOGS	-0.022		
STD ERR SKEWNESS LOGS	0.403		
SER CORR COEFF LOGS	-0.320		
COEFF OF VAR LOGS	0.062		
		3.1901	3.1901
		0.2166	0.2166
		0.0080	0.0080
			0.0890

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
MEAN	355.1	475.9	556.0	670.7	958.9	1367.9	1645.6	2002.9	2273.2	2546.7
STD DEVIATION	280.4	360.5	414.0	491.6	691.6	989.9	1202.3	1447.2	1711.1	1945.1
COEFF OF VARIATION	222.6	273.7	303.0	354.3	472.1	640.2	756.0	907.7	1024.6	1144.9
MEAN LOGS	174.3	213.3	237.4	270.0	345.1	440.1	499.4	571.0	622.5	672.6
STD DEVIATION LOGS	143.9	178.8	199.0	224.9	277.8	333.6	363.2	394.5	414.5	432.2
SKEWNESS LOGS	116.0	145.2	161.7	182.3	221.9	259.8	278.1	296.0	306.4	315.4
STD ERR SKEWNESS LOGS	105.1	130.0	143.8	160.9	193.4	223.7	238.0	251.9	260.0	266.7
SER CORR COEFF LOGS	96.2	115.5	127.9	142.2	169.9	197.4	211.1	225.2	233.8	241.1
COEFF OF VAR LOGS	93.4	107.2	115.1	125.2	146.3	169.7	182.9	197.5	207.4	215.5
	486.9	682.8	821.5	1017.9	1548.1	2356.9	3293.2	4376.5	4418.9	4959.1
	501.6	690.8	821.5	1017.9	1548.1	2356.9	3293.2	4376.5	4418.9	5107.8

## STATION 12116100 CANYON CREEK NEAR CEDAR FALLS, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1946	2.21	13.0	11.8	16.3	6.47	7.53	5.75	40.9	55.6	22.9	4.50	2.85	19.9
1947	2.57	4.29	52.4	36.2	37.1	19.0	16.3	16.2	73.1	41.2	16.0	3.92	17.3
1948	5.46	67.3	46.6	37.0	20.3	13.7	5.73	9.58	62.2	34.0	3.62	2.04	26.3
1949	2.38	3.61	14.8	7.03	4.25	6.66	6.72	39.2	50.1	24.8	11.0	3.09	14.4
1950	1.69	7.97	44.2	43.1	21.8	47.7	36.9	35.5	40.9	34.5	22.6	1.74	29.3
1951	7.60	43.8	37.0	40.6	40.6	18.0	9.84	16.0	30.9	17.7	5.14	1.74	20.8
1952	1.13	7.03	11.5	6.82	6.74	6.29	6.88	11.5	21.1	9.06	3.58	1.56	7.22
1953	0.95	0.54	0.46	5.94	65.6	18.4	8.47	16.3	21.1	20.3	15.4	3.01	14.4
1954	0.54	0.76	35.3	51.5	26.1	35.8	25.2	37.4	58.9	46.1	21.8	3.09	28.6
1955	0.85	0.79	11.2	17.0	23.8	15.8	7.92	7.77	37.3	63.9	39.8	18.4	20.4
1956	5.21	25.4	38.9	23.9	10.9	3.85	4.31	36.2	53.4	37.8	30.2	12.6	23.6
1957	1.94	8.34	35.0	26.3	8.56	5.58	7.77	20.3	23.1	16.5	7.66	2.73	13.7
1958	1.26	0.64	3.38	7.90	13.9	12.2	12.3	22.3	18.7	12.5	3.73	1.03	9.13
1959	2.87	39.6	39.6	25.9	22.7	11.2	16.4	23.6	23.7	25.9	20.8	11.3	21.9
1960	22.6	22.9	23.8	9.63	6.19	4.80	8.63	10.9	26.5	20.9	6.12	1.79	13.8
1961	0.53	4.56	14.5	9.36	19.9	30.5	18.0	14.3	28.1	20.2	5.84	1.09	13.9
1962	0.52	0.58	1.35	23.3	8.94	1.88	5.63	19.0	22.3	23.7	13.6	4.07	10.5
1963	2.25	3.38	32.6	30.4	16.1	10.3	5.60	4.82	9.70	9.37	5.99	3.42	11.2
1964	1.74	1.80	8.97	15.3	19.0	14.1	10.1	18.1	36.6	26.0	19.6	7.41	14.9
1965	3.60	2.24	15.7	10.1	25.5	16.6	6.09	11.4	13.0	13.3	8.05	1.89	10.6
1966	0.52	0.50	1.71	3.07	3.29	2.48	10.8	28.7	20.4	13.1	6.19	1.73	7.73
1967	0.52	1.19	17.4	37.3	28.7	12.2	7.15	7.62	24.7	28.2	13.3	3.06	15.1
1968	0.61	18.9	24.5	30.3	24.3	25.6	18.7	14.8	22.0	21.8	17.6	5.73	17.9
1969	13.4	9.75	11.6	11.4	4.63	2.27	6.14	16.5	37.7	30.3	11.2	3.84	13.3
1970	2.88	1.85	0.91	3.06	15.7	6.80	11.4	9.69	18.9	8.19	2.60	1.04	6.83
1971	0.56	0.40	5.39	7.84	40.3	19.0	7.55	20.8	39.5	31.7	26.0	13.2	17.5
1972	2.31	9.81	11.4	6.57	19.4	45.9	20.7	20.6	38.7	31.4	16.4	4.01	18.9
1973	0.83	0.53	3.54	31.0	10.3	2.21	4.89	17.9	19.8	23.8	15.1	2.43	11.1
1974	1.08	1.17	11.1	23.0	34.4	9.77	12.6	34.0	61.6	43.5	23.5	7.80	21.9
1975	0.96	0.59	7.03	26.2	25.9	8.71	4.75	17.8	63.7	42.0	23.9	4.81	18.8
1976	2.91	17.6	58.6	24.0	15.0	6.36	5.80	42.6	54.0	22.6	13.9	7.04	22.6
1977	1.02	0.56	0.53	2.10	3.20	3.31	9.12	19.3	18.7	10.5	4.19	2.35	6.25
1978	1.99	8.03	47.6	9.66	4.32	2.89	8.49	19.5	15.0	5.74	2.29	0.53	10.6
1979	3.73	3.13	3.74	3.46	3.87	11.1	16.2	29.4	24.7	12.0	5.69	2.09	9.95

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1979)

MEAN	3.0	9.2	20.3	19.4	18.8	13.5	10.8	20.9	33.4	24.4	12.8	4.6	15.9
MAXIMUM	22.6	67.3	58.6	51.5	65.6	47.7	36.9	42.6	73.1	63.9	39.8	18.4	29.3
MINIMUM	0.5	0.4	0.5	2.1	3.2	1.9	4.3	4.8	9.7	5.7	2.3	0.5	6.3
STD DEVIATION	4.29	13.81	17.58	13.35	13.72	11.71	6.91	10.42	17.62	13.01	9.00	4.29	6.20
SKWENESS	3.527	2.771	0.676	0.539	1.335	1.620	2.046	0.672	0.668	0.887	1.045	1.746	0.413
STD ERR SKEW	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.398	0.398	0.398	0.398	0.403
SER CORR COEFF	-0.086	-0.040	-0.140	0.020	-0.078	-0.058	-0.238	-0.157	0.184	0.284	0.266	0.006	0.127
COEFF OF VAR	1.441	1.508	0.865	0.689	0.732	0.868	0.637	0.499	0.527	0.534	0.705	0.923	0.390
MEAN LOGS	0.246	0.537	1.050	1.157	1.150	0.979	0.971	1.265	1.463	1.323	0.995	0.520	1.167
STO DEV LOGS	0.413	0.649	0.586	0.375	0.354	0.381	0.227	0.231	0.237	0.250	0.327	0.357	0.180
SKWENESS LOGS	0.703	0.163	-0.912	-0.539	-0.343	-0.119	0.745	-0.369	-0.084	-0.376	-0.145	0.235	-0.328
STD ERR SKEW LOGS	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.398	0.398	0.398	0.398	0.403
SER CORR LOGS	0.008	0.024	-0.225	0.063	-0.032	-0.120	-0.270	-0.174	0.071	0.186	0.125	-0.024	0.110
COEFF OF VAR LOGS	1.680	1.209	0.558	0.324	0.308	0.389	0.234	0.182	0.162	0.169	0.329	0.667	0.154
% OF AVE FLOW	1.6	4.8	10.6	10.1	9.8	7.1	5.7	10.9	17.5	12.8	6.7	2.4	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1979)

0.99	0.3	0.1	0.2	1.4	1.7	1.1	3.7	4.6	7.9	4.7	1.6	0.6	5.1
0.95	0.5	0.3	0.9	3.1	3.4	2.2	4.5	7.3	11.7	7.7	2.8	0.9	7.2
0.90	0.6	0.5	1.8	4.6	4.8	3.1	5.1	9.2	14.4	9.9	3.7	1.2	8.5
0.80	0.8	1.0	4.0	7.2	7.2	4.6	6.0	11.9	18.4	13.1	5.3	1.6	10.5
0.50	1.6	3.3	13.7	15.5	14.8	9.7	8.8	19.0	29.3	21.8	10.1	3.2	15.0
0.20	3.7	11.9	35.5	30.1	28.3	20.0	14.1	28.9	46.1	34.4	18.7	6.5	20.9
0.10	6.3	23.9	52.6	40.8	38.7	28.9	18.8	35.4	58.1	42.7	25.7	9.7	24.5
0.04	11.5	51.1	74.4	54.8	53.1	42.6	26.4	43.4	74.3	53.2	35.6	14.9	28.9
0.02	17.4	84.3	89.8	65.2	64.5	54.5	33.3	49.1	86.8	68.8	43.8	18.9	31.9
0.01	26.0	133.0	104.1	75.6	76.3	67.8	41.7	54.7	99.8	68.2	52.7	25.9	34.8

## STATION 12116100 CANYON CREEK NEAR CEDAR FALLS, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1947	2.1	2.1	2.1	2.2	2.3	2.8	3.5	5.4	18.0
1948	1.7	1.7	1.7	1.7	1.8	2.2	2.9	4.3	7.6
1949	2.1	2.1	2.1	2.2	2.3	2.6	2.9	4.5	5.9
1950	1.2	1.2	1.3	1.4	1.5	1.9	3.1	5.3	15.0
1951	4.2	4.3	4.6	5.0	6.7	10.0	13.0	16.0	24.0
1952	0.8	0.8	1.0	1.0	1.1	1.3	2.0	3.6	5.4
1953	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.7	1.6
1954	0.3	0.3	0.3	0.4	0.4	0.6	1.2	3.5	9.2
1955	0.3	0.3	0.3	0.3	0.5	0.8	1.4	3.7	8.3
1956	2.7	2.7	2.9	3.0	3.7	7.2	13.0	19.0	18.0
1957	1.4	1.4	1.5	1.6	1.9	3.8	6.5	10.0	14.0
1958	0.3	0.3	0.3	0.4	0.6	0.9	1.2	1.9	3.9
1959	0.4	0.4	0.5	0.5	0.7	1.2	2.4	4.6	9.4
1960	2.9	3.0	3.1	3.4	4.7	5.5	6.8	11.0	15.0
1961	0.3	0.3	0.3	0.4	0.5	0.9	1.5	3.0	6.0
1962	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.8	4.3
1963	1.2	1.2	1.2	1.4	2.2	2.3	3.1	5.6	12.0
1964	1.0	1.0	1.1	1.2	1.3	1.7	2.3	3.1	5.1
1965	1.3	1.4	1.6	1.9	2.2	2.8	3.7	6.3	9.5
1966	0.4	0.4	0.4	0.4	0.4	0.5	0.7	1.0	1.8
1967	0.3	0.3	0.3	0.4	0.4	0.6	1.1	2.1	5.8
1968	0.4	0.4	0.4	0.4	0.6	1.6	4.1	8.1	13.0
1969	1.9	2.0	2.1	2.2	2.3	3.5	6.2	7.5	8.9
1970	0.7	0.8	0.8	0.9	0.9	1.1	1.5	1.8	3.8
1971	0.3	0.3	0.4	0.4	0.4	0.5	0.6	1.0	2.4
1972	1.6	1.6	1.7	1.7	1.9	4.4	7.3	7.4	10.0
1973	0.4	0.4	0.4	0.4	0.4	0.6	0.9	1.9	8.0
1974	0.7	0.7	0.8	1.0	1.1	1.1	1.3	3.0	8.2
1975	0.5	0.5	0.5	0.5	0.5	0.7	1.5	3.8	11.0
1976	2.1	2.2	2.2	2.3	2.7	3.4	6.3	12.0	21.0
1977	0.5	0.5	0.5	0.5	0.5	0.5	0.6	1.0	1.8
1978	1.5	1.5	1.5	1.6	1.8	2.0	2.4	3.4	7.6
1979	0.4	0.4	0.4	0.4	0.5	1.2	2.2	2.4	2.8

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1979)

MEAN	1.1	1.1	1.2	1.3	1.5	2.2	3.3	5.1	9.0
MAXIMUM	4.2	4.3	4.6	5.0	6.7	10.0	13.0	19.0	24.0
MINIMUM	0.3	0.3	0.3	0.3	0.4	0.5	0.6	0.7	1.6
STANDARD DEVIATION	0.94	0.97	1.02	1.08	1.40	2.12	3.18	4.33	5.69
SKWENESS	1.451	1.470	1.516	1.618	2.058	2.169	1.922	1.676	0.872
STD ERROR OF SKWENESS	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409
SERIAL CORR COEFF	-0.077	-0.090	-0.081	-0.095	-0.128	-0.096	-0.045	0.004	0.007
COEFF OF VARIATION	0.854	0.859	0.854	0.850	0.928	0.981	0.967	0.848	0.630
MEAN LOGS	-0.100	-0.094	-0.069	-0.035	0.031	0.176	0.354	0.568	0.861
STD DEVIATION LOGS	0.359	0.360	0.359	0.362	0.360	0.367	0.378	0.367	0.313
SKWENESS LOGS	0.298	0.301	0.287	0.299	0.411	0.407	0.256	-0.140	-0.526
STD ERR SKWENESS LOGS	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409
SER CORR COEFF LOGS	-0.002	-0.008	-0.004	-0.034	-0.075	-0.056	-0.045	-0.039	-0.038
COEFF OF VAR LOGS	-3.580	-3.826	-5.200	-9.981	11.414	2.081	1.069	0.646	0.363

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1979)

0.99	6.5	6.7	6.9	7.2	9.3	13.7	20.2	24.2	29.2
0.98	4.9	5.0	5.3	5.5	5.9	10.2	15.2	19.7	25.8
0.96	3.7	3.7	3.9	4.1	5.0	7.4	11.2	15.6	22.3
0.90	2.3	2.4	2.5	2.7	3.2	4.6	7.0	10.8	17.4
0.80	1.6	1.6	1.7	1.8	2.1	3.0	4.6	7.6	13.4
0.50	0.8	0.8	0.8	0.9	1.0	1.4	2.2	3.8	7.7
0.20	0.4	0.4	0.4	0.5	0.5	0.7	1.1	1.8	4.1
0.10	0.3	0.3	0.3	0.3	0.4	0.5	0.8	1.2	2.8
0.05	0.2	0.2	0.2	0.3	0.3	0.4	0.6	0.9	2.0
0.02	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.6	1.4
0.01	0.1	0.1	0.1	0.2	0.2	0.3	0.4	0.5	1.0

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1947-1979)

P95	P90	P75	P70	P50	P25	P10
0.7	1.4	3.9	5.0	12.0	23.0	38.0

## STATION 12116100 CANYON CREEK NEAR CEDAR FALLS, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1946	84.	84.	83.	81.	76.	64.	53.	44.	31.	86. 05/31/46
1947	100.	100.	96.	86.	67.	51.	43.	37.	29.	102. 12/19/46
1948	96.	96.	94.	89.	76.	58.	43.	37.	32.	96. 11/19/47
1949	64.	64.	63.	62.	59.	47.	39.	32.	23.	85. 05/26/49
1950	65.	64.	60.	55.	51.	45.	40.	40.	39.	66. 03/12/50
1951	64.	63.	59.	50.	44.	41.	41.	37.	28.	66. 02/15/51
1952	17.	17.	17.	16.	15.	13.	11.	11.	9.	17. 06/05/52
1953	90.	89.	88.	81.	64.	42.	31.	27.	25.	94. 02/07/53
1954	69.	69.	68.	67.	63.	55.	48.	43.	40.	72. 12/27/53
1955	75.	74.	73.	72.	67.	57.	49.	41.	29.	76. 07/08/55
1956	62.	62.	61.	61.	58.	47.	45.	40.	29.	64. 05/26/56
1957	76.	73.	69.	60.	47.	31.	25.	20.	18.	78. 12/23/56
1958	25.	25.	25.	25.	23.	21.	19.	17.	15.	25. 05/02/58
1959	84.	83.	78.	68.	55.	43.	38.	32.	27.	88. 11/27/58
1960	41.	40.	37.	32.	27.	24.	23.	20.	15.	41. 11/30/59
1961	41.	40.	39.	37.	32.	26.	23.	20.	15.	42. 03/05/61
1962	34.	34.	33.	31.	25.	23.	22.	20.	15.	34. 01/17/62
1963	42.	41.	40.	38.	32.	27.	23.	20.	17.	42. 01/08/63
1964	39.	38.	38.	38.	37.	32.	29.	25.	21.	40. 06/07/64
1965	32.	32.	32.	29.	27.	21.	19.	17.	14.	37. 02/13/65
1966	32.	32.	32.	31.	29.	25.	22.	19.	14.	32. 05/13/66
1967	46.	46.	45.	43.	38.	35.	29.	24.	20.	46. 01/27/67
1968	39.	39.	38.	35.	30.	28.	27.	24.	24.	39. 01/01/68
1969	40.	40.	40.	39.	38.	35.	29.	24.	18.	41. 06/13/69
1970	23.	22.	22.	22.	19.	15.	14.	12.	12.	23. 06/17/70
1971	43.	43.	43.	41.	40.	36.	34.	31.	26.	44. 02/10/71
1972	54.	54.	53.	51.	47.	36.	31.	31.	30.	58. 03/05/72
1973	38.	38.	37.	34.	31.	22.	21.	19.	15.	39. 01/07/73
1974	72.	70.	70.	68.	62.	54.	48.	41.	33.	76. 06/16/74
1975	82.	82.	80.	75.	65.	54.	46.	38.	27.	82. 06/08/75
1976	120.	118.	109.	87.	62.	51.	40.	34.	26.	131. 12/07/75
1977	20.	20.	20.	20.	20.	19.	17.	15.	11.	21. 05/23/77
1978	78.	75.	70.	64.	49.	31.	23.	18.	16.	81. 12/07/77
1979	33.	33.	33.	33.	31.	27.	24.	21.	17.	34. 05/25/79

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1946-1979)

	MEAN	MINIMUM	STANDARD DEVIATION	SKENNESS	STD ERROR OF SKENNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKENNESS LOGS	STD ERR SKENNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
0.99	14.3	14.2	14.3	13.9	13.0	11.5	10.9	9.6	8.2	16.0	14.5				
0.95	21.5	21.4	21.3	20.6	19.1	16.5	15.1	13.3	11.2	22.7	21.9				
0.90	26.5	26.3	26.1	25.1	23.1	17.7	17.8	15.7	13.0	27.3	27.0				
0.80	33.7	33.5	33.0	31.6	28.8	24.3	21.6	19.0	15.6	34.2	34.5				
0.50	52.0	51.4	50.2	47.3	42.2	34.9	30.4	26.7	21.6	52.1	53.3				
0.20	77.0	76.1	73.6	68.1	59.2	48.1	41.4	36.1	29.0	79.1	79.5				
0.10	93.2	92.0	88.5	81.2	69.3	56.0	47.7	33.6	26.0	98.2	96.5				
0.04	112.9	111.4	106.8	96.7	81.1	65.1	55.7	48.1	38.9	123.6	117.5				
0.02	127.1	125.3	119.8	107.7	89.1	71.2	61.0	52.6	42.6	143.2	132.6				
0.01	140.8	138.8	132.4	118.2	96.5	77.0	66.0	56.7	46.1	163.5	147.3				

## STATION 12116500 CEDAR RIVER AT CEDAR FALLS, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1914	128	338	224	204	179	191	635	525	356	187	167	147	
1915	218	502	515	232	525	858	565	690	873	81.3	85.5	179	164
1916	145	245	283	459	671	275	459	811	1419	491	237	221	493
1917	152	150	2197	1393	617	363	512	502	440	117	258	160	498
1918	227	405	506	511	311	261	319	433	395	253	117	123	567
1919	182	330	344	408	435	320	319	319	316	214	106	95.9	319
1920	336	319	333	491	410	423	370	379	382	214	112	219	293
1921	187	292	849	361	205	153	260	317	430	328	215	172	346
1922	187	292	849	361	205	153	260	317	430	328	215	172	346
1923	106	277	295	813	315	283	315	387	380	288	174	92.0	302
1924	152	151	354	400	524	421	301	387	285	266	53.2	52.3	312
1925	147	165	346	410	610	240	291	332	174	65.1	44.0	92.5	241
1926	69.8	246	302	423	214	189	119	88.5	79.1	24.5	30.8	110	158
1927	281	219	297	363	149	223	161	292	471	257	75.5	75.9	240
1928	212	637	519	740	176	171	203	427	126	257	53.4	47.1	299
1929	168	78.5	108	152	136	136	308	265	318	136	99.4	37.4	165
1930	36.6	91.8	108	148	229	358	193	180	148	136	56.9	38.2	147
1931	160	244	284	234	152	158	287	228	197	160	99.5	120	184
1932	137	233	240	302	337	800	716	504	452	215	132	132	352
1933	137	960	509	302	337	800	716	504	452	215	132	132	352
1934	162	960	509	302	337	800	716	504	452	215	132	132	352
1935	100	207	439	1175	304	528	422	261	180	342	174	116	395
1936	64.5	64.3	114	524	512	265	236	195	180	342	174	116	395
1937	57.4	43.7	159	205	224	407	205	251	249	160	76.6	45.0	496
1938	77.6	276	495	205	224	407	205	251	249	160	76.6	45.0	496
1939	58.6	97.0	143	547	230	131	327	424	147	174	99.0	62.5	261
1940	106	79.1	224	142	272	342	140	354	333	126	76.5	62.8	232
1941	62.1	91.2	143	134	116	89.0	346	361	98.3	85.7	81.8	84.2	193
1942	199	151	238	392	286	228	404	284	281	301	123	65.7	250
1943	61.2	262	610	392	317	220	410	361	376	395	180	115	308
1944	99.1	142	385	202	234	215	371	212	316	108	126	113	215
1945	116	139	203	202	234	215	371	212	316	108	126	113	215
1946	163	502	368	506	553	467	392	396	478	224	78.6	81.1	314
1947	47.0	200	784	526	526	417	506	473	258	137	227	59.6	362
1948	158	662	358	371	369	500	433	440	866	177	96.4	79.1	346
1949	104	323	473	194	317	523	384	653	585	346	191	90.0	349
1950	141	234	275	441	297	638	468	656	1009	463	114	145	407
1951	143	370	714	448	939	574	316	332	301	298	109	53.3	380
1952	105	252	254	133	355	154	458	595	435	166	104	66.8	255
1953	34.7	24.9	47.7	472	972	394	291	438	412	108	88.1	48.7	273
1954	205	344	677	481	270	378	299	419	667	423	424	192	400
1955	204	111	204	181	395	298	364	471	610	515	243	146	311
1956	352	494	692	470	359	317	433	753	777	255	115	287	442
1957	247	407	842	421	191	438	512	540	271	71.0	45.9	28.3	336
1958	47.5	88.2	453	495	522	228	280	421	88.0	47.2	60.3	40.5	230
1959	49.4	960	817	865	483	388	462	560	400	68.4	107	324	456
1960	547	1031	831	334	419	276	604	458	439	191	83.8	102	442
1961	170	616	525	532	753	624	583	336	329	134	103	70.8	395
1962	184	441	466	757	392	206	399	315	151	63.1	61.9	52.2	290
1963	154	277	537	567	514	430	450	262	151	33.6	31.7	41.3	278
1964	86.9	363	538	393	278	414	377	504	1216.3	359	279	322	433
1965	261	258	699	388	681	498	351	530	177	50.7	72.5	109	338
1966	85.8	252	295	355	214	341	556	587	501	168	59.6	93.8	292
1967	124	286	665	878	741	375	186	360	318	94.8	82.4	65.1	346
1968	74.7	182	668	803	770	474	468	407	115	203	51.4	159	364
1969	330	456	526	591	185	135	664	704	598	249	150	68.8	389
1970	187	218	325	383	383	143	539	408	409	148	100	65.2	305
1971	161	276	437	545	886	601	450	684	693	359	147	126	444
1972	152	526	568	536	777	1324	647	640	644	389	207	175	548
1973	173	191	560	679	320	131	106	155	120	55.3	91.2	43.6	219
1974	138	259	539	843	769	388	536	515	1152	436	263	135	495
1975	145	138	418	804	559	388	188	387	618	214	374	71.8	358
1976	137	170	496	1811	588	260	120	290	414	317	53.0	224	473
1977	178	178	243	361	176	200	290	248	217	69.4	40.8	39.9	186
1978	152	530	1730	374	259	158	124	293	106	99.7	56.2	84.4	357
1979	224	242	441	200	416	412	216	450	298		75.5	70.3	261

## STATION 12116500 CEDAR RIVER AT CEDAR FALLS, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1914-1979)

MEAN	152.7	310.6	518.6	489.6	413.7	360.1	361.3	412.1	422.9	210.9	123.5	108.7	322.8
MAXIMUM	547.0	1031.0	2197.0	1393.0	972.0	1324.0	716.0	811.0	1419.0	814.0	424.0	324.0	567.0
MINIMUM	34.7	24.9	47.7	133.0	116.0	86.0	77.1	71.7	146.3	24.5	30.8	28.3	93.0
STD DEVIATION	87.36	214.07	430.78	251.49	213.16	198.21	151.06	165.23	286.76	147.26	80.29	65.87	104.13
SKWENESS	1.754	1.520	2.568	1.127	0.854	2.175	0.213	0.257	1.326	1.372	1.608	1.506	0.219
STD ERR SKEW	0.297	0.297	0.297	0.297	0.297	0.297	0.295	0.295	0.295	0.295	0.295	0.295	0.297
SER CORR COEFF	0.063	0.230	-0.055	0.264	0.095	-0.051	0.136	0.193	0.050	0.247	0.214	-0.022	0.312
COEFF OF VAR	0.572	0.689	0.831	0.514	0.515	0.550	0.418	0.401	0.678	0.698	0.650	0.606	0.323
MEAN LOGS	2.117	2.391	2.606	2.633	2.561	2.502	2.513	2.572	2.523	2.321	2.015	1.968	2.484
STD DEV LOGS	0.249	0.316	0.310	0.232	0.223	0.218	0.213	0.215	0.322	0.321	0.257	0.243	0.154
SKWENESS LOGS	-0.327	-0.571	-0.184	-0.350	0.036	0.008	-0.825	-1.351	-0.526	-0.286	0.237	0.202	-0.735
STD ERR SKEW LOGS	0.297	0.297	0.297	0.297	0.297	0.297	0.295	0.295	0.295	0.295	0.295	0.295	0.297
SER CORR LOGS	0.120	0.154	0.103	0.261	0.112	-0.102	0.124	0.105	0.022	0.199	0.266	0.023	0.347
COEFF OF VAR LOGS	0.118	0.132	0.119	0.088	0.087	0.087	0.085	0.083	0.128	0.145	0.127	0.123	0.062
% OF AVE FLOW	3.9	8.0	13.4	12.6	10.6	9.3	9.3	10.6	10.9	5.4	3.2	2.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1914-1979)

0.99	30.1	33.7	69.7	108.5	111.9	99.2	78.5	75.2	44.8	25.3	29.0	27.5	111.4
0.95	48.5	67.0	120.4	170.0	157.4	139.3	132.1	143.6	89.0	46.1	40.8	38.2	159.9
0.90	61.8	93.9	159.7	213.2	189.0	167.1	169.4	192.6	124.7	62.7	49.3	45.9	190.2
0.80	81.8	137.5	223.1	277.3	236.2	208.2	222.7	262.4	183.2	89.6	62.6	57.7	230.9
0.50	135.2	263.8	413.0	442.9	362.9	317.6	348.2	415.4	355.4	170.7	101.1	91.1	318.3
0.20	213.8	459.3	741.2	676.9	560.0	484.7	495.2	563.5	629.0	309.6	168.8	147.7	412.9
0.10	267.1	591.5	994.1	830.7	703.7	604.8	575.0	627.4	818.6	414.5	223.7	192.3	462.5
0.04	334.3	754.6	1347.1	1020.7	899.1	766.2	656.4	681.1	1057.5	557.8	305.2	256.7	513.7
0.02	383.9	870.9	1631.3	1158.2	1054.1	892.7	709.8	707.7	1231.2	670.6	375.1	310.9	545.3
0.01	432.9	982.0	1931.5	1292.0	1216.8	1024.5	753.8	726.6	1399.8	787.3	453.3	370.5	572.4

## STATION 12116500 CEDAR RIVER AT CEDAR FALLS, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1915	48.0	58.0	75.0	89.0	113.0	133.0	144.0	156.0	198.0
1916	10.0	29.0	30.0	44.0	61.0	65.0	71.0	74.0	104.0
1917	42.0	48.0	51.0	62.0	131.0	178.0	194.0	210.0	241.0
1918	43.0	93.0	112.0	122.0	146.0	168.0	150.0	173.0	414.0
1919	60.0	69.0	76.0	83.0	103.0	119.0	122.0	160.0	251.0
1920	59.0	63.0	84.0	86.0	90.0	101.0	119.0	155.0	218.0
1921	90.0	99.0	104.0	109.0	110.0	125.0	178.0	212.0	250.0
1922	51.0	61.0	69.0	84.0	117.0	170.0	188.0	211.0	262.0
1923	2.0	30.0	44.0	50.0	69.0	75.0	119.0	156.0	205.0
1924	30.0	31.0	33.0	41.0	46.0	95.0	114.0	148.0	202.0
1925	7.0	8.0	16.0	21.0	31.0	55.0	96.0	109.0	145.0
1926	5.0	6.0	15.0	25.0	39.0	44.0	62.0	64.0	109.0
1927	4.0	4.3	11.0	19.0	23.0	27.0	31.0	48.0	75.0
1928	28.0	29.0	30.0	33.0	41.0	67.0	109.0	151.0	221.0
1929	14.0	16.0	17.0	18.0	30.0	49.0	64.0	80.0	87.0
1930	22.0	23.0	24.0	28.0	32.0	35.0	48.0	60.0	85.0
1931	27.0	28.0	29.0	29.0	33.0	38.0	44.0	56.0	90.0
1932	59.0	62.0	68.0	78.0	96.0	106.0	114.0	132.0	158.0
1933	85.0	89.0	90.0	94.0	103.0	125.0	132.0	140.0	238.0
1934	100.0	103.0	106.0	113.0	129.0	146.0	160.0	191.0	311.0
1935	45.0	45.0	45.0	45.0	45.0	45.0	60.0	69.0	108.0
1936	42.0	46.0	53.0	60.0	62.0	63.0	65.0	67.0	91.0
1937	30.0	30.0	30.0	31.0	40.0	48.0	53.0	60.0	97.0
1938	61.0	66.0	70.0	71.0	74.0	83.0	91.0	98.0	196.0
1939	37.0	37.0	39.0	51.0	55.0	57.0	62.0	67.0	87.0
1940	48.0	58.0	59.0	60.0	66.0	74.0	82.0	83.0	112.0
1941	53.0	54.0	58.0	58.0	62.0	68.0	73.0	75.0	82.0
1942	52.0	54.0	57.0	58.0	59.0	64.0	70.0	72.0	80.0
1943	34.0	37.0	54.0	54.0	55.0	60.0	76.0	122.0	175.0
1944	53.0	59.0	76.0	83.0	98.0	106.0	114.0	125.0	181.0
1945	51.0	60.0	76.0	96.0	104.0	112.0	115.0	134.0	134.0
1946	32.0	34.0	46.0	54.0	57.0	71.0	86.0	130.0	231.0
1947	9.5	9.8	10.0	12.0	30.0	43.0	58.0	123.0	240.0
1948	50.0	54.0	69.0	69.0	77.0	87.0	96.0	112.0	181.0
1949	44.0	69.0	75.0	87.0	99.0	102.0	112.0	140.0	223.0
1950	56.0	60.0	63.0	65.0	85.0	103.0	131.0	158.0	207.0
1951	54.0	56.0	64.0	74.0	88.0	120.0	129.0	157.0	314.0
1952	32.0	34.0	36.0	48.0	53.0	67.0	87.0	117.0	151.0
1953	23.0	23.0	23.0	24.0	25.0	28.0	33.0	42.0	70.0
1954	6.8	9.3	33.0	39.0	49.0	69.0	68.0	104.0	186.0
1955	24.0	25.0	49.0	75.0	100.0	137.0	157.0	173.0	207.0
1956	36.0	37.0	72.0	118.0	134.0	188.0	229.0	282.0	385.0
1957	35.0	52.0	58.0	64.0	87.0	172.0	185.0	213.0	307.0
1958	24.0	24.0	24.0	25.0	27.0	29.0	36.0	42.0	90.0
1959	0.5	0.6	0.8	3.1	8.6	30.0	40.0	41.0	114.0
1960	17.0	31.0	39.0	46.0	50.0	86.0	125.0	207.0	311.0
1961	5.0	21.0	49.0	53.0	61.0	82.0	93.0	123.0	237.0
1962	37.0	37.0	64.0	65.0	67.0	80.0	99.0	115.0	190.0
1963	34.0	4.0	44.0	45.0	52.0	56.0	57.0	73.0	100.0
1964	21.0	23.0	24.0	25.0	31.0	32.0	33.0	37.0	77.0
1965	27.0	59.0	85.0	154.0	188.0	235.0	271.0	263.0	355.0
1966	13.0	25.0	28.0	30.0	33.0	49.0	73.0	76.0	117.0
1967	13.0	20.0	40.0	43.0	53.0	60.0	77.0	95.0	201.0
1968	12.0	17.0	24.0	26.0	26.0	55.0	63.0	78.0	134.0
1969	10.0	11.0	12.0	16.0	35.0	95.0	121.0	131.0	194.0
1970	36.0	39.0	60.0	63.0	66.0	81.0	129.0	151.0	195.0
1971	23.0	24.0	25.0	30.0	65.0	73.0	80.0	105.0	186.0
1972	12.0	35.0	49.0	56.0	104.0	106.0	137.0	180.0	305.0
1973	71.0	72.0	72.0	90.0	128.0	172.0	172.0	183.0	256.0
1974	35.0	37.0	38.0	39.0	43.0	57.0	63.0	69.0	90.0
1975	67.0	81.0	98.0	113.0	130.0	138.0	138.0	145.0	249.0
1976	7.7	8.8	23.0	51.0	68.0	83.0	154.0	197.0	298.0
1977	26.0	34.0	35.0	37.0	50.0	132.0	141.0	148.0	183.0
1978	29.0	35.0	36.0	36.0	39.0	40.0	48.0	65.0	122.0
1979	36.0	37.0	38.0	40.0	47.0	66.0	79.0	111.0	173.0



## STATION 12116500 CEDAR RIVER AT CEDAR FALLS, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1915-1979)

MEAN	34.7	41.1	49.2	57.0	69.3	87.5	103.2	123.4	185.9
MAXIMUM	100.0	103.0	112.0	154.0	188.0	235.0	271.0	282.0	414.0
MINIMUM	0.5	0.6	0.8	3.1	8.6	27.0	31.0	37.0	70.0
STANDARD DEVIATION	21.91	23.69	25.72	30.64	36.18	44.83	49.54	56.00	82.95
SKEWNESS	0.683	0.591	0.423	0.774	0.849	1.000	0.923	0.564	0.573
STD ERROR OF SKEWNESS	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297
SERIAL CORR COEFF	0.441	0.441	0.340	0.224	0.272	0.162	0.195	0.217	0.226
COEFF OF VARIATION	0.631	0.577	0.523	0.537	0.522	0.512	0.480	0.454	0.446
MEAN LOGS	1.412	1.509	1.608	1.683	1.779	1.887	1.963	2.044	2.224
STD DEVIATION LOGS	0.411	0.369	0.328	0.282	0.244	0.224	0.215	0.212	0.204
SKEWNESS LOGS	-1.675	-2.012	-2.310	-1.282	-0.547	-0.102	-0.245	-0.366	-0.201
STD ERR SKEWNESS LOGS	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297
SER CORR COEFF LOGS	0.249	0.331	0.263	0.264	0.341	0.200	0.196	0.199	0.245
COEFF OF VAR LOGS	0.291	0.245	0.204	0.168	0.137	0.119	0.110	0.104	0.092

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1915-1979)

0.99	77.0	74.6	77.9	119.2	176.9	245.8	266.2	302.2	466.0
0.98	75.1	74.0	77.7	114.6	160.9	215.9	238.1	273.7	417.7
0.96	72.1	72.8	77.2	108.3	143.6	186.5	209.7	244.1	368.9
0.90	65.0	69.0	75.2	96.4	118.6	148.3	171.0	202.4	302.6
0.80	55.6	62.5	70.8	83.1	97.3	119.2	140.2	168.0	249.9
0.50	33.1	42.0	52.5	55.1	63.2	77.7	93.8	113.9	170.3
0.20	13.8	19.3	26.7	30.1	38.2	50.1	61.0	74.1	113.5
0.10	7.4	10.7	15.5	20.2	28.5	39.6	48.2	58.2	91.0
0.05	4.0	5.9	8.9	13.8	22.0	32.5	39.4	47.2	75.5
0.02	1.8	2.7	4.2	8.6	16.2	26.0	31.2	36.9	60.8
0.01	1.0	1.5	2.4	6.0	13.0	22.4	26.6	31.2	52.5

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1915-1979)					
P95	P90	P75	P70	P25	P10
43.0	59.0	110.0	130.0	450.0	690.0



## STATION 12116500 CEDAR RIVER AT CEDAR FALLS, WASH.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1915-1979)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

MEAN	1652.2	1530.3	1290.3	1034.8	846.7	679.9	590.2	528.8	484.6
MAXIMUM	6500.0	6000.0	4720.0	3600.0	2980.0	1950.0	1450.0	1150.0	956.0
MINIMUM	338.0	317.0	298.0	243.0	164.0	146.0	133.0	127.0	109.0
STANDARD DEVIATION	1328.09	1197.05	902.25	646.85	475.14	321.18	244.99	202.96	160.40
SKWENESS	2.081	2.084	2.103	2.176	2.261	1.733	1.231	0.916	0.606
STD ERROR OF SKWENESS	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297
SERIAL CORR COEFF	-0.014	0.012	0.050	0.084	0.137	0.214	0.258	0.264	0.296
COEFF OF VARIATION	0.804	0.782	0.699	0.525	0.561	0.472	0.415	0.384	0.345
MEAN LOGS	3.119	3.090	3.033	2.952	2.874	2.790	2.735	2.691	2.640
STD DEVIATION LOGS	0.280	0.275	0.251	0.228	0.214	0.194	0.181	0.173	0.162
SKWENESS LOGS	0.611	0.580	0.510	0.396	0.043	-0.193	-0.418	-0.527	-0.794
STD ERR SKWENESS LOGS	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297
SER CORR COEFF LOGS	0.055	0.067	0.118	0.135	0.222	0.288	0.304	0.308	0.340
COEFF OF VAR LOGS	0.090	0.089	0.083	0.077	0.074	0.070	0.066	0.064	0.061

3.1888  
0.2550  
0.84803.1888  
0.2550  
0.8480

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1915-1979)

0.99	392.3	370.1	350.7	308.3	241.7	204.6	181.7	167.4	148.9	570.0
0.95	513.9	486.3	457.2	402.3	334.9	288.6	261.5	241.8	220.1	690.3
0.90	606.1	573.7	535.3	469.1	394.1	344.8	313.8	289.9	265.3	783.0
0.80	755.6	714.5	658.1	571.6	494.1	425.3	387.0	356.4	326.3	934.6
0.50	1231.2	1157.0	1027.5	864.5	746.2	625.7	559.7	508.7	458.1	1422.7
0.20	2201.1	2042.8	1719.5	1373.2	1132.6	902.0	776.8	690.9	600.1	2434.0
0.10	3100.4	2851.0	2316.3	1784.6	1411.4	1083.4	907.7	795.9	673.7	3387.6
0.04	4605.8	4184.7	3255.0	2397.1	1787.5	1309.3	1059.4	913.0	748.8	5014.0
0.02	6050.3	5447.8	4106.4	2925.9	2083.9	1474.9	1163.4	990.6	794.4	6605.3
0.01	7823.8	6981.9	5104.6	3521.3	2393.7	1638.2	1260.7	1061.2	833.1	8594.3

## STATION 12116700 MIDDLE FORK TAYLOR CREEK NEAR SELLECK, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1956													
1957	27.9	39.2	91.5	19.8	28.7	51.4	56.8	38.3	25.1	14.4	9.08	8.87	34.1
1958	9.98	19.7	43.9	62.9	50.1	22.0	39.4	16.8	9.66	6.79	5.51	6.76	24.3
1959	21.6	90.2	78.9	84.0	39.2	49.8	67.7	46.3	30.2	21.0	10.5	7.05	50.0
1960	49.5	87.6	74.3	30.5	51.5	35.3	53.6	54.0	27.6	12.1	11.2	11.6	41.5
1961	21.4	81.3	41.4	58.4	88.9	54.7	49.9	39.1	15.7	8.00	5.19	6.30	38.8
1962	16.2	31.3	64.2	63.3	24.4	23.6	56.0	35.3	21.5	12.4	13.1	11.4	31.1
1963	22.2	44.7	62.4	40.5	51.7	28.3	48.8	29.5	21.0	20.8	12.4	9.40	32.5
1964	15.5	54.5	41.5										

## STATION 12116700 MIDDLE FORK TAYLOR CREEK NEAR SELLECK, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1957	450.0	12-9-1956
1958	231.0	4-19-1958
1959	452.0	4-1-1959
1960	823.0	12-15-1959
1961	397.0	2-21-1961
1962	386.0	12-24-1961
1963	392.0	2-3-1963

## STATION 12116800 NORTH FORK TAYLOR CREEK NEAR SELLECK, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1956													
1957	20.9	26.6	58.0	12.3	30.3	36.0	28.9	17.1	14.6	8.13	2.93	3.15	21.4
1958	5.61	14.4	32.4	38.0	29.3	10.1	24.8	8.20	3.91	6.94	3.88	1.97	21.4
1959	9.75	52.1	47.1	55.2	25.0	30.2	38.7	24.5	16.8	2.05	1.14	1.82	14.2
1960	28.0	48.8	43.6	19.7	31.2	26.7	32.2	32.1	14.4	11.5	3.57	39.7	29.5
1961	12.5	48.1	24.6	30.8	49.5	36.0	30.1	22.6	7.78	4.58	4.57	5.31	24.2
1962	9.36	18.1	43.5	35.9	14.1	19.0	24.3	17.7	11.9	2.84	1.18	3.31	22.2
1963	14.6	29.9	35.7	20.8	30.1	17.9	29.9	15.6	12.0	6.45	6.77	5.80	17.8
1964	12.0	34.2	29.1							11.3	6.02	5.01	19.0

## STATION 12116800 NORTH FORK TAYLOR CREEK NEAR SELLECK, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1957	185.0	12-10-1956
1958	108.0	1-17-1958
1959	243.0	1-24-1959
1960	522.0	12-15-1959
1961	237.0	2-21-1961
1962	312.0	12-24-1961
1963	241.0	2-3-1963

## STATION 12117000 TAYLOR CREEK NEAR SELLECK, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1956	91.7	120	207	85.4	103	149	139	102	73.7	41.6	26.2	59.0	
1957	29.1	119	119	152	155	183.6	109	102	30.0	44.6	32.0	25.4	
1958	41.7	201	204	239	145	138	158	127	36.6	25.6	37.0	22.8	97.5
1959	132	229	221	115	157	117	151	144	98.6	65.9	15.7	20.0	131.8
1960	56.9	197	127	168	249	195	150	118	62.1	44.0	36.4	128	122
1961	47.3	79.4	157	170	87.6	89.4	128	97.3	64.1	36.4	23.5	22.5	116
1962	55.3	118	163	122	140	102	142	92.8	67.3	40.6	38.5	32.7	86.1
1963	43.2	134	128	236	154	130	138	149	171	65.4	40.3	27.6	94.1
1964	68.8	106	175	226	244	119	112	90.7	48.1	30.7	50.1	68.1	122
1965	30.5	57.7	79.2	143	99.4	131	157	116	66.1	71.4	25.0	22.1	105
1966	52.5	95.1	192	275	205	131	131	116	58.6	33.5	33.9	25.6	84.1
1967	48.3	64.7	140	184	191	119	131	131	107	48.1	55.3	64.0	108
1968	79.0	120	157	169	122.3	111	151	130	96.1	63.0	55.3	51.1	103
1969	58.6	56.9	119	193	138	105	148	114	56.1	35.1	24.9	29.7	89.6
1970	47.5	82.6	143	277	235	152	142	158	106	56.6	30.9	32.4	121
1971	44.4	122	151	239	293	313	151	125	88.1	77.0	40.7	50.1	141
1972	34.5	59.3	182	160	80.7	79.0	174.2	64.8	153	66.1	36.9	25.3	73.6
1973	28.5	106	193	243	200	189	170	153	153	66.1	36.9	25.3	130
1974	20.0	60.4	139	238	142	150	96.1	152	83.8	46.0	42.0	33.9	100
1975	88.6	163	291	264	142	103	120	98.9	60.9	43.4	41.2	34.6	121
1976	30.4	44.9	70.5	81.2	55.2	76.2	95.6	80.9	66.7	34.3	31.9	46.1	59.5
1977	40.7	158	262	122	101	84.9	95.6	91.6	52.3	36.1	29.8	68.7	95.1
1978	40.4	83.6	130	67.2	169	149	116	83.2	41.2	32.7	21.0	20.8	79.0

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1979)

MEAN	52.6	109.2	163.0	181.3	154.7	131.1	129.3	111.0	78.2	47.4	33.2	39.5	102.3
MAXIMUM	132.0	229.0	291.0	277.0	293.0	313.0	170.0	158.0	171.0	77.0	56.3	128.0	141.0
MINIMUM	20.0	44.9	70.5	67.2	55.2	76.2	74.2	61.5	38.6	25.6	19.7	20.0	59.5
STD DEVIATION	25.49	51.67	52.31	64.13	62.07	50.94	25.44	27.99	32.66	14.68	8.95	24.16	21.13
SKENNESS	1.605	0.847	0.612	-0.159	0.470	2.197	-0.485	0.113	1.534	0.560	0.710	2.289	-0.122
STD ERR SKEW	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.464	0.464	0.481
SER CORR COEFF	-0.140	0.066	-0.578	0.117	-0.133	-0.145	-0.194	-0.023	-0.170	-0.253	-0.138	-0.180	-0.221
COEFF OF VAR	0.485	0.473	0.321	0.354	0.401	0.388	0.197	0.252	0.418	0.310	0.270	0.611	0.207
MEAN LOGS	1.680	1.993	2.190	2.227	2.134	2.093	2.103	2.031	1.863	1.557	1.507	1.541	2.000
STD DEV LOGS	0.190	0.202	0.145	0.177	0.186	0.143	0.093	0.114	0.162	0.132	0.115	0.210	0.095
SKENNESS LOGS	0.355	0.115	-0.456	-0.775	-0.402	0.868	-0.843	-0.389	0.362	0.172	0.078	0.988	-0.579
STD ERR SKEW LOGS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.464	0.464	0.481
SER CORR LOGS	-0.111	-0.185	-0.606	0.157	-0.144	-0.181	-0.186	-0.060	-0.149	-0.267	-0.160	-0.182	-0.233
COEFF OF VAR LOGS	0.113	0.102	0.066	0.079	0.086	0.068	0.044	0.056	0.087	0.080	0.077	0.136	0.047
% OF AVE FLOW	4.3	8.9	13.2	14.7	12.6	10.7	10.5	9.0	6.4	3.9	2.7	3.2	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1979)

0.99	19.4	34.6	64.0	52.4	46.5	71.3	68.0	54.1	35.8	23.2	17.6	16.1	55.1
0.95	24.4	46.5	86.1	80.0	67.3	79.2	85.4	67.9	42.1	27.9	20.9	18.4	67.8
0.90	27.8	54.5	99.8	98.0	81.1	84.9	95.2	76.0	46.5	30.9	22.9	20.2	75.0
0.80	32.9	66.4	118.2	122.7	100.4	93.6	107.4	86.7	53.0	35.0	25.7	23.1	84.1
0.50	46.6	97.6	158.9	177.8	146.6	118.3	130.5	109.3	70.4	45.0	32.0	32.2	102.2
0.20	68.4	145.4	206.1	239.1	205.4	159.3	152.0	134.6	98.3	58.4	40.1	50.2	120.2
0.10	84.9	180.0	232.9	271.7	241.2	192.3	162.1	148.7	119.5	67.4	45.2	66.4	130.1
0.04	108.1	226.8	262.7	305.5	283.1	232.8	171.8	164.2	149.5	78.7	51.5	93.1	139.9
0.02	127.2	254.0	282.4	326.4	312.1	280.1	177.5	174.5	174.3	87.2	56.0	118.4	146.0
0.01	147.8	303.0	300.5	344.2	339.3	324.9	182.1	183.8	201.4	95.7	60.4	149.1	151.3

## STATION 12117000 TAYLOR CREEK NEAR SELLECK, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1958	20.0	20.0	21.0	21.0	22.0	24.0	27.0	30.0	42.0
1959	16.0	16.0	17.0	17.0	18.0	19.0	21.0	24.0	33.0
1960	32.0	32.0	33.0	34.0	36.0	47.0	62.0	72.0	94.0
1961	24.0	24.0	24.0	24.0	24.0	35.0	34.0	38.0	65.0
1962	19.0	19.0	19.0	20.0	20.0	23.0	25.0	31.0	44.0
1963	25.0	26.0	27.0	29.0	31.0	34.0	36.0	40.0	50.0
1964	19.0	19.0	20.0	21.0	23.0	27.0	33.0	41.0	54.0
1965	33.0	34.0	36.0	38.0	46.0	52.0	60.0	62.0	85.0
1966	18.0	18.0	19.0	19.0	22.0	23.0	24.0	27.0	36.0
1967	22.0	23.0	24.0	25.0	26.0	27.0	31.0	41.0	55.0
1968	18.0	18.0	18.0	19.0	21.0	22.0	24.0	28.0	41.0
1969	30.0	30.0	31.0	32.0	37.0	46.0	53.0	58.0	72.0
1970	23.0	23.0	24.0	25.0	27.0	33.0	47.0	49.0	58.0
1971	21.0	22.0	23.0	24.0	24.0	27.0	29.0	33.0	43.0
1972	23.0	23.0	24.0	26.0	27.0	30.0	32.0	40.0	65.0
1973	29.0	29.0	30.0	32.0	34.0	41.0	41.0	43.0	57.0
1974	18.0	18.0	18.0	28.0	22.0	23.0	25.0	28.0	38.0
1975	18.0	18.0	18.0	19.0	22.0	22.0	23.0	30.0	49.0
1976	22.0	23.0	24.0	25.0	30.0	38.0	37.0	43.0	70.0
1977	23.0	23.0	23.0	25.0	26.0	32.0	34.0	35.0	41.0
1978	22.0	22.0	22.0	23.0	25.0	31.0	35.0	37.0	50.0
1979	25.0	25.0	25.0	27.0	29.0	33.0	37.0	44.0	50.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1958-1979)

MEAN	22.7	23.0	23.5	24.9	27.1	31.3	35.1	39.7	54.2
MAXIMUM	33.0	34.0	36.0	38.0	46.0	52.0	62.0	72.0	94.0
MINIMUM	16.0	16.0	16.0	17.0	18.0	19.0	21.0	24.0	33.0
STANDARD DEVIATION	4.73	4.85	5.22	5.52	6.68	8.99	11.41	12.01	15.74
SKEWNESS	0.831	0.793	0.851	0.727	1.177	0.814	1.167	1.198	1.016
STD ERROR OF SKEWNESS	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491
SERIAL CORR COEFF	-0.369	-0.415	-0.403	-0.381	-0.340	-0.289	-0.210	-0.256	-0.253
COEFF OF VARIATION	0.208	0.211	0.222	0.222	0.246	0.287	0.325	0.302	0.291
MEAN LOGS	1.348	1.352	1.362	1.387	1.422	1.480	1.526	1.582	1.718
STD DEVIATION LOGS	0.087	0.088	0.092	0.093	0.100	0.120	0.130	0.122	0.119
STD LOGS	0.466	0.398	0.403	0.420	0.592	0.593	0.593	0.522	0.429
STD ERR SKEWNESS LOGS	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491
SER CORR COEFF LOGS	-0.371	-0.416	-0.406	-0.380	-0.343	-0.268	-0.215	-0.269	-0.283
COEFF OF VAR LOGS	0.064	0.065	0.068	0.067	0.070	0.081	0.085	0.077	0.069

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1958-1979)

0.99	37.9	38.3	40.2	42.2	49.7	61.2	76.5	81.5	107.6
0.98	35.2	35.6	37.3	39.2	45.4	55.8	67.9	73.3	97.5
0.96	32.6	33.0	34.4	36.3	41.3	50.4	59.9	65.4	87.7
0.90	29.0	29.4	30.5	32.3	35.9	43.3	49.9	55.4	75.0
0.80	26.2	26.6	27.4	29.1	31.8	37.9	42.6	47.9	65.3
0.50	21.9	22.2	22.7	24.1	25.8	28.7	32.6	37.3	51.2
0.20	18.8	18.9	19.2	20.3	21.7	23.8	25.9	30.0	41.3
0.10	17.5	17.5	17.7	18.7	20.1	21.4	23.4	27.2	37.3
0.05	16.5	16.5	16.7	17.5	18.9	19.7	21.7	25.2	34.5
0.02	15.6	15.5	15.6	16.3	17.8	18.6	19.3	20.0	31.7
0.01	15.0	14.9	15.0	15.6	17.1	17.0	19.1	22.2	30.1

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1958-1979)

P95	P90	P75	P70	P50	P25	P10
23.0	28.0	44.0	51.0	83.0	130.0	190.0

## STATION 12117000 TAYLOR CREEK NEAR SELLECK, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW(CFS)	DATE	REG.(R)
1957	602.	479.	371.	301.	216.	166.	154.	142.	137.	1090.	12/09/56	
1958	330.	257.	213.	187.	172.	160.	145.	130.	114.	425.	01/17/58	
1959	775.	542.	380.	283.	240.	221.	224.	204.	185.	1240.	11/12/58	
1960	1200.	676.	515.	365.	313.	261.	205.	185.	166.	2170.	12/15/59	
1961	781.	543.	398.	318.	262.	221.	210.	198.	182.	1600.	02/21/61	
1962	512.	394.	297.	267.	230.	169.	135.	122.	122.	714.	12/24/61	
1963	406.	287.	250.	200.	183.	170.	152.	143.	136.	696.	02/03/63	
1964	1040.	565.	390.	290.	233.	200.	178.	164.	164.	1390.	01/25/64	
1965	1370.	1010.	637.	428.	334.	245.	216.	199.	166.	2730.	01/29/65	
1966	328.	287.	232.	202.	164.	145.	138.	121.	121.	360.	01/13/66	
1967	445.	370.	344.	303.	271.	250.	225.	203.	170.	530.	12/13/66	
1968	542.	474.	342.	261.	221.	199.	178.	169.	148.	856.	01/20/68	
1969	542.	479.	363.	250.	182.	173.	152.	134.	134.	676.	12/03/68	
1970	450.	420.	381.	301.	219.	176.	161.	154.	137.	500.	01/18/70	
1971	664.	476.	412.	378.	323.	259.	226.	205.	185.	1050.	01/19/71	
1972	940.	738.	517.	459.	389.	340.	287.	252.	213.	1360.	01/20/72	
1973	548.	448.	392.	312.	250.	180.	147.	129.	109.	622.	12/21/72	
1974	566.	472.	371.	343.	301.	239.	223.	212.	196.	711.	01/15/74	
1975	711.	585.	420.	339.	244.	205.	191.	171.	156.	888.	01/17/75	
1976	739.	675.	505.	372.	292.	231.	244.	223.	185.	1040.	12/03/75	
1977	242.	195.	147.	107.	100.	90.	87.	81.	80.	379.	01/18/77	
1978	662.	497.	396.	368.	308.	219.	184.	162.	137.	864.	12/02/77	
1979	334.	314.	266.	212.	198.	162.	147.	131.	121.	602.	02/06/79	

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1957-1979)

MEAN	640.4	486.2	371.3	297.0	246.0	204.7	183.2	168.0	150.6										
MAXIMUM	1370.0	1010.0	637.0	459.0	369.0	340.0	287.0	252.0	213.0										
MINIMUM	242.0	195.0	147.0	107.0	100.0	90.0	87.0	81.0	80.0										
STANDARD DEVIATION	284.11	179.22	109.63	81.65	65.83	52.21	44.64	39.76	32.49										
SKWENNESS	1.033	0.992	0.923	-0.240	0.022	0.231	0.464	0.059	-0.083										
STD ERROR OF SKWENNESS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481										
SERIAL CORR COEFF	0.083	0.122	-0.136	-0.142	-0.136	-0.189	-0.203	-0.215	-0.198										
COEFF OF VARIATION	0.444	0.369	0.295	0.275	0.268	0.255	0.244	0.237	0.216										
MEAN LOGS	2.767	2.659	2.550	2.454	2.374	2.297	2.250	2.213	2.167										
STD DEVIATION LOGS	0.189	0.162	0.141	0.139	0.128	0.117	0.112	0.109	0.100										
SKWENNESS LOGS	0.006	-0.291	-0.870	-1.313	-0.975	-0.747	-0.642	-0.705	-0.578										
STD ERR SKWENNESS LOGS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481										
SER CORR COEFF LOGS	-0.027	-0.161	-0.184	-0.199	-0.193	-0.237	-0.257	-0.253	-0.204										
COEFF DF VAR LOGS	0.068	0.061	0.055	0.057	0.054	0.051	0.050	0.049	0.046										
HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1957-1979)																			
0.99	213.5	177.8	136.7	101.7	97.5	92.0	87.0	80.1	77.3	248.7	288.5								
0.95	286.7	240.3	194.4	153.7	136.2	121.2	111.8	103.3	97.0	356.5	378.7								
0.90	335.6	280.2	229.7	185.5	159.4	138.4	126.3	116.7	108.4	431.9	442.8								
0.80	406.1	335.4	275.9	226.2	189.2	160.4	144.9	133.8	122.6	544.9	541.2								
0.50	585.2	463.9	371.3	304.4	248.2	204.8	182.7	168.1	150.9	850.1	822.3								
0.20	843.7	626.2	467.7	371.7	304.5	249.4	221.6	202.6	178.9	1326.1	1309.7								
0.10	1021.8	725.5	515.1	399.2	330.8	271.8	241.5	219.9	193.0	1673.2	1703.2								
0.04	1253.5	842.8	561.7	422.0	355.5	294.1	262.1	237.4	207.2	2143.8	2287.9								
0.02	1430.6	924.9	589.0	433.2	369.4	307.6	274.9	248.0	215.9	2516.1	2791.8								
0.01	1611.2	1003.2	611.5	441.2	380.5	319.0	285.9	257.1	223.3	2905.9	3358.1								

## STATION 12117500 CEDAR RIVER NEAR LANDSBURG, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1895													
1896	166	141		1166	1209	910	774	1100	1538	688	163	210	
1897	159	1535	2203	1333	1174	814	1498	1412	977	1013	236	165	
1898	308	1268	1527	754	1297	508	618	921	724	262	373	318	1066
1901							759	973	824	439	124	127	699
1902	197	1037	1117	947	676	745	705	1137	710	604	207	205	695
1903							653	1017	980	533	179	440	
1904	657	780	1066	1110	572	480	1034	942	856	502	183	175	730
1905	141	359	831	647	744	712	644	829	679	352	243	221	523
1906	734	499	756	968	557	766	635	566	567	349	238	230	601
1907	712	1933	1039	675	1467	625	828	826	486	312	246	259	777
1908	224	637	868	680	563	1192	979	1015	1018	553	288	269	691
1909	297	548	634	870	705	612	692	933	985	429	305	298	608
1910	303	2057	1119	579	695	1546	1093	868	501	316	226	265	796
1911				724	527	490	454	995	689	343	254	293	
1912	267	1758	800	1091	1102	561	614	990	708	517	316	318	750
1913	343	852	738	1072	847	644	827	998	689	517	316	318	736
1914	611	674	555	1300	918	948	783	763	554	678	392	373	736
1915	290	660	440	563	504	450	510	306	358	340	300	292	669
1916	447	902	1046	641	1151	1499	510	306	358	366	300	346	722
1917	347	510	641	924	1134	1222	884	1142	1249	916	560	479	927
1918	313	317	2759	2198	1251	792	887	810	650	1077	469	354	837
1919	459	663	1011	1212	914	860	862	943	817	389	304	264	912
1920	354	680	656	974	928	767	865	692	663	568	330	276	742
1921	670	609	770	1158	1124	1067	918	838	757	502	315	466	654
1922	418	644	1445	699	526	444	610	671	752	644	472	394	784
1923	292	473	603	1480	737	444	610	671	752	571	427	287	626
1924	306	312	628	732	1224	730	675	729	791	579	476	230	650
1925	357	493	747	1042	1314	868	682	571	527	301	227	332	556
1926	223	418	710	866	726	622	476	709	495	359	297	277	619
1927	525	463	703	987	738	786	611	773	402	268	217	283	470
1928	590	1377	1215	1545	737	726	739	889	456	584	373	362	651
1929	432	280	333	437	445	628	764	694	456	410	325	278	775
1930	221	259	368	478	654	755	601	548	809	521	425	278	504
1931	255	448	484	540	445	539	778	585	530	403	333	266	449
1932	394	522	583	828	498	1641	1300	585	530	459	379	352	483
1933	368	1504	1094	1371	608	782	694	940	821	518	427	388	771
1934	556	1126	3126	2013	880	931	838	539	1433	708	485	427	831
1935	371	707	943	1518	996	721	641	595	465	334	259	220	944
1936	270	267	337	979	675	896	617	1096	557	467	360	326	682
1937	271	225	512	469	605	814	715	764	859	515	398	329	604
1938	318	803	1052	1037	664	576	846	632	1029	402	402	374	555
1939	247	306	433	998	802	807	525	679	463	371	335	289	632
1940	359	351	611	516	731	905	729	732	713	444	355	323	552
1941	253	311	413	399	394	360	335	331	360	344	312	284	521
1942	440	400	709	815	709	587	674	551	635	610	402	290	588
1943	266	640	1016	804	786	622	843	729	535	681	450	334	656
1944	300	348	632	435	519	838	629	553	568	681	450	334	656
1945	281	336	424	962	924	830	940	928	539	539	335	299	434
1946	395	928	807	1179	754	975	814	747	831	539	327	324	635
1947	278	503	1418	1053	1174	851	924	796	1074	700	520	304	766
1948	473	1182	869	921	875	971	873	796	576	403	311	286	712
1949	349	656	934	569	770	967	789	901	1260	689	488	369	821
1950	388	536	736	951	823	1326	1035	1056	931	650	469	321	707
1951	476	851	1299	1080	1773	1072	1229	1108	1405	791	397	409	825
1952	332	516	590	457	760	521	553	882	726	416	343	241	806
1953	190	162	179	944	1516	838	733	946	803	427	367	301	604
1954	438	688	1252	1049	868	870	761	795	1079	477	367	477	816
1955	426	372	487	539	882	686	873	928	1052	886	555	434	675
1956	743	1064	1431	1074	779	787	916	1123	1126	551	551	512	874
1957	568	767	1468	837	638	962	660	899	604	345	288	231	716
1958	228	301	746	907	1010	623	660	755	379	309	285	240	535
1959	241	1445	1442	1598	1013	875	972	1015	790	398	383	716	906
1960	1015	1672	1467	784	907	690	1034	886	779	479	355	331	865
1961	410	1110	944	1023	1416	1217	1101	769	657	410	345	267	801
1962	368	663	812	1139	715	1217	1101	745	466	357	348	291	801
1963	390	620	1009	1040	1012	852	920	630	345	316	276	261	637
1964	318	727	881	957	773	858	790	942	1647	697	586	655	818
1965	569	621	1201	1191	1666	942	753	896	456	295	305	311	762



## STATION 12117500 CEDAR RIVER NEAR LANDSBURG, WASH.

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1966	261	450	523	715	540	729	973	970	851	517	315	310	596
1967	335	547	1081	1519	1296	849	605	723	615	373	345	305	713
1968	295	380	1033	1329	1320	928	927	791	515	472	333	420	727
1969	605	858	1038	1060	534	509	1012	997	831	568	428	344	733
1970	446	474	671	848	1072	694	1011	798	702	402	304	263	637
1971	357	504	774	1148	1487	974	826	1066	1077	689	421	408	806
1972	434	914	1053	1193	1543	2233	1109	1036	1011	735	485	453	1015
1973	403	428	967	1109	661	451	374	423	396	321	335	279	513
1974	321	543	978	1444	1417	940	1031	986	1616	748	530	375	907
1975	343	365	740	1380	1049	872	561	786	957	491	656	309	708
1976	431	893	2531	1694	1064	673	526	631	720	617	340	499	886
1977	410	393	489	617	393	474	585	564	536	321	263	265	443
1978	350	893	2394	856	649	492	457	643	708	365	275	337	703
1979	421	521	825	501	912	872	621	828	603	363	296	267	584

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1895-1979)

MEAN	383.8	695.9	958.5	988.0	899.4	804.0	788.0	822.5	779.3	503.6	352.2	322.5	691.2
MAXIMUM	1015.0	2057.0	3126.0	2198.0	1773.0	2233.0	1498.0	1412.0	1795.0	1077.0	735.0	716.0	1066.0
MINIMUM	141.0	141.0	179.0	399.0	393.0	360.0	335.0	306.0	345.0	262.0	124.0	127.0	344.0
STD DEVIATION	152.35	412.28	535.83	365.06	315.16	292.55	201.66	204.24	309.54	174.26	108.76	95.75	144.69
SKEWNESS	1.422	1.417	1.988	0.794	0.686	2.049	0.519	-0.071	1.138	1.033	0.882	1.457	0.082
STD ERR SKEW	0.271	0.271	0.272	0.267	0.267	0.267	0.266	0.266	0.266	0.266	0.266	0.264	0.272
SER CORR COEFF	-0.024	0.215	-0.004	0.192	0.041	-0.164	-0.016	0.269	0.005	0.130	0.342	0.036	0.157
COEFF OF VAR	0.397	0.592	0.559	0.350	0.350	0.364	0.336	0.248	0.397	0.346	0.309	0.297	0.209
MEAN LOGS	2.554	2.776	2.927	2.965	2.928	2.882	2.882	2.900	2.861	2.578	2.527	2.491	2.830
STD DEV LOGS	0.162	0.242	0.217	0.163	0.152	0.139	0.115	0.120	0.164	0.142	0.134	0.122	0.095
SKEWNESS LOGS	0.129	0.046	0.046	-0.230	-0.027	0.468	-0.460	-1.013	0.160	0.326	-0.272	0.100	-0.526
STD ERR SKEW LOGS	0.271	0.271	0.272	0.267	0.267	0.267	0.266	0.266	0.266	0.266	0.264	0.264	0.272
SER CORR LOGS	-0.040	0.135	0.074	0.056	0.048	-0.187	0.006	0.210	0.0	0.087	0.396	0.109	0.168
COEFF OF VAR LOGS	0.063	0.087	0.074	0.055	0.052	0.048	0.040	0.041	0.057	0.053	0.053	0.049	0.034
% DF AVE FLOW	4.6	8.4	11.6	11.9	10.8	9.7	9.5	9.9	9.4	6.1	4.2	3.9	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1895-1979)

0.99	156.1	166.0	269.4	361.3	373.4	403.6	377.7	344.6	314.7	241.2	153.9	165.1	373.7
0.95	196.8	240.1	374.6	485.7	475.8	470.4	478.1	473.3	396.3	287.6	197.5	197.3	457.5
0.90	223.4	292.7	447.2	541.0	514.8	514.8	537.7	549.1	449.8	317.8	224.3	217.3	505.5
0.80	261.2	372.6	554.9	676.0	631.8	578.8	615.1	645.1	526.2	360.8	260.4	244.7	566.3
0.50	355.1	594.0	842.1	936.7	848.6	743.1	777.8	831.8	718.0	468.6	341.0	308.6	688.6
0.20	488.4	952.7	1284.9	1271.6	1137.2	988.4	955.7	1004.7	993.9	624.0	437.7	391.8	814.9
0.10	579.5	1222.7	1606.0	1480.2	1324.1	1164.4	1052.8	1083.5	1184.8	732.3	494.9	445.1	880.9
0.04	697.9	1598.2	2040.7	1730.2	1556.3	1402.6	1158.1	1156.2	1435.3	875.5	561.0	510.9	950.0
0.02	788.5	1902.1	2384.4	1907.7	1726.9	1591.9	1226.4	1196.4	1628.6	986.9	606.4	559.1	993.6
0.01	881.1	2226.1	2744.5	2078.4	1895.8	1791.7	1287.8	1228.1	1827.7	1102.5	649.1	606.7	1031.9

## STATION 12117500 CEDAR RIVER NEAR LANDSBURG, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1915	290	660	440	563	504	450	510	306	358	366	280	346	422
1916	447	902	1046	641	1151	1499	1104	1142	1249	916	560	479	927
1917	347	510	641	924	1134	626	887	1222	1795	1077	469	354	837
1918	313	317	2759	2198	1251	792	887	810	650	389	304	264	912
1919	459	663	1011	1212	914	860	862	943	650	568	330	276	742
1920	354	656	656	974	928	767	865	692	663	502	315	466	654
1921	670	609	770	1158	1124	1067	918	838	663	502	472	394	654
1922	418	644	1445	659	526	444	610	671	752	571	427	287	626
1923	222	473	603	1480	737	730	675	729	791	579	476	230	650
1924	306	312	628	732	1224	862	682	571	527	301	227	332	556
1925	357	493	747	1042	1314	688	705	709	495	359	297	277	619
1926	223	418	710	866	726	622	476	449	402	268	217	283	470
1927	525	463	703	987	737	786	611	773	911	584	325	362	651
1928	590	1377	1215	1545	737	726	739	889	456	410	325	278	775
1929	432	280	333	437	445	628	764	694	809	521	425	278	504
1930	221	259	368	478	654	755	601	548	514	403	333	266	449
1931	1931	255	448	540	445	539	778	585	530	459	379	352	483
1932	394	522	583	828	898	1641	1300	940	821	518	427	388	771
1933	368	1564	1094	1371	608	782	694	689	1243	708	485	427	831
1934	556	1126	3126	2013	880	931	838	539	465	334	259	220	944
1935	371	707	943	1518	996	721	641	595	557	467	380	329	604
1936	270	267	337	979	675	896	617	1096	859	515	398	329	555
1937	271	225	512	459	605	814	715	764	1029	493	402	374	632
1938	318	803	1052	1037	664	576	846	832	463	371	335	289	632
1939	247	306	433	998	802	807	525	679	713	444	355	323	552
1940	359	351	611	516	731	905	729	732	382	344	312	284	521
1941	253	311	413	399	394	360	331	331	360	312	275	337	340
1942	440	400	709	815	709	587	674	551	635	610	402	290	568
1943	266	640	1016	804	786	422	843	729	713	681	450	334	656
1944	300	348	632	435	519	483	629	553	568	353	450	299	454
1945	281	336	424	962	924	830	940	928	831	539	327	324	635
1946	395	928	807	1179	754	851	814	747	1074	700	520	304	766
1947	278	503	1418	1053	1174	851	924	796	576	403	311	286	712
1948	473	1182	869	921	875	971	873	901	1260	689	488	369	821
1949	349	656	934	569	770	987	789	1056	931	650	469	321	707
1950	388	536	736	951	823	1326	1035	1108	1405	791	397	409	825
1951	476	851	1299	1080	1773	1072	729	682	616	579	343	241	806
1952	332	516	590	457	760	521	853	946	726	416	319	241	555
1953	190	162	179	944	1516	838	733	862	803	427	367	301	604
1954	438	688	1252	1049	858	870	761	795	1079	778	735	477	816
1955	426	372	1431	1074	882	586	873	928	1052	886	555	434	675
1956	743	1084	1431	1074	774	787	916	1123	1126	551	379	512	874
1957	568	767	1468	837	638	962	968	999	604	345	288	231	716
1958	228	301	746	907	1010	623	660	755	379	309	285	240	535
1959	241	1445	1442	1598	1013	875	972	1015	790	398	383	331	906
1960	1015	1672	1467	784	907	690	1034	886	779	479	355	731	865
1961	410	1110	944	1023	1416	1217	1101	769	657	410	348	267	801
1962	368	663	812	1139	715	547	745	650	466	357	345	291	591
1963	390	620	1009	1040	1012	852	920	630	345	316	276	261	637
1964	318	727	881	957	773	858	790	942	1647	697	586	655	818
1965	569	621	1201	1191	1666	942	753	896	1647	295	305	311	762
1966	261	450	523	715	560	729	973	970	851	517	315	310	596
1967	335	547	1061	1519	1296	849	605	723	615	373	345	305	713
1968	295	380	1033	1329	1320	928	927	791	515	573	427	333	420
1969	605	858	1038	1060	534	509	1012	997	831	568	428	344	733
1970	446	474	671	848	1072	694	1011	798	702	402	304	263	637
1971	357	504	774	1148	1487	974	826	1066	1077	689	421	408	806
1972	434	914	1053	1193	1533	2233	1109	1036	1011	735	485	453	1015
1973	403	428	967	1109	661	451	374	423	396	321	335	279	513
1974	321	543	978	1444	1417	940	1031	986	1616	741	530	375	907
1975	343	365	740	1380	1049	872	561	786	957	491	656	309	708
1976	431	893	2531	1694	1064	673	526	631	720	617	340	499	886
1977	410	393	449	617	393	474	585	564	536	321	263	265	443
1978	350	893	2394	856	649	492	457	643	708	365	275	337	703
1979	421	521	825	501	912	872	621	828	603	363	296	267	584

STATION 121J7500 CEDAR RIVER NEAR LANDSBURG, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1915-1979)

MEAN	387.7	629.2	946.4	989.6	904.7	814.4	784.0	787.0	769.6	508.7	380.2	340.0	685.7
MAXIMUM	1015.0	1672.0	3126.0	2198.0	1773.0	2233.0	1300.0	1222.0	1795.0	1077.0	735.0	716.0	1015.0
MINIMUM	190.0	162.0	179.0	399.0	393.0	360.0	335.0	306.0	345.0	268.0	217.0	220.0	340.0
STD DEVIATION	136.95	325.79	555.51	377.47	321.38	296.34	192.11	196.85	321.42	171.44	100.96	93.57	147.91
SKEWNESS	1.930	1.266	2.039	0.771	0.709	2.159	0.027	-0.124	1.178	0.967	1.199	1.818	-0.035
STD ERR SKEW	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297
SER CORR COEFF	0.009	0.171	-0.060	0.205	0.019	-0.136	0.090	0.150	-0.021	0.135	0.130	-0.098	0.170
COEFF OF VAR	0.353	0.518	0.587	0.381	0.355	0.364	0.245	0.250	0.418	0.337	0.266	0.275	0.216
MEAN LOGS	2.566	2.747	2.917	2.964	2.930	2.888	2.880	2.881	2.852	2.684	2.566	2.518	2.825
STD DEV LOGS	0.136	0.214	0.226	0.170	0.154	0.140	0.115	0.121	0.171	0.139	0.108	0.105	0.099
SKEWNESS LOGS	0.554	0.080	0.071	-0.274	-0.072	0.386	-0.140	-0.096	0.207	0.298	0.487	0.961	-0.553
STD ERR SKEW LOGS	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297
SER CORR LOGS	0.013	0.093	0.001	0.209	0.035	-0.154	0.091	0.111	-0.032	0.086	0.115	-0.089	0.181
COEFF OF VAR LOGS	0.053	0.078	0.077	0.057	0.053	0.048	0.040	0.042	0.060	0.052	0.042	0.042	0.035
% OF AVE FLOW	4.7	7.6	11.5	12.0	11.0	9.9	9.5	9.5	9.3	6.2	4.6	4.1	100.0

MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1915-1979)

0.99	202.7	182.5	252.9	341.5	365.4	400.3	357.5	328.3	301.8	245.8	226.5	223.1	360.1
0.95	232.6	250.9	354.6	468.7	471.0	472.0	468.5	451.2	380.8	293.2	254.4	239.0	445.6
0.90	252.7	298.0	425.6	550.8	538.3	519.0	533.6	522.6	433.2	323.9	275.5	250.6	494.8
0.80	282.0	367.9	532.0	665.5	631.8	586.2	616.7	615.6	508.8	361.4	298.0	268.3	557.3
0.50	358.0	554.3	820.5	936.6	854.5	756.1	783.9	793.3	702.1	475.3	361.1	317.3	683.2
0.20	473.5	843.0	1276.5	1285.3	1148.7	1004.2	951.8	963.0	987.5	625.0	450.2	396.2	813.1
0.10	557.4	1053.5	1613.8	1501.6	1337.6	1178.9	1035.6	1040.0	1189.6	735.0	511.1	455.6	880.7
0.04	672.1	1340.0	2077.9	1759.7	1570.6	1411.9	1119.9	1111.4	1459.5	873.9	590.6	538.7	951.4
0.02	764.2	1567.7	2450.1	1942.0	1740.5	1594.7	1170.7	1151.3	1671.2	981.2	651.8	606.6	995.8
0.01	862.1	1807.3	2844.2	2116.5	1907.8	1785.5	1213.6	1182.7	1892.0	1091.9	714.7	680.0	1034.6

## STATION 12117500 CEDAR RIVER NEAR LANDSBURG, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1916	233.0	244.0	250.0	252.0	275.0	311.0	327.0	328.0	337.0
1917	239.0	241.0	244.0	258.0	335.0	400.0	431.0	467.0	548.0
1918	223.0	243.0	260.0	279.0	311.0	320.0	326.0	358.0	638.0
1919	229.0	230.0	234.0	238.0	249.0	282.0	284.0	332.0	452.0
1920	233.0	254.0	266.0	272.0	274.0	287.0	317.0	375.0	473.0
1921	273.0	276.0	284.0	296.0	308.0	327.0	423.0	481.0	535.0
1922	264.0	296.0	320.0	351.0	366.0	390.0	420.0	454.0	545.0
1923	197.0	200.0	206.0	210.0	231.0	262.0	329.0	361.0	429.0
1924	187.0	191.0	197.0	205.0	208.0	267.0	278.0	328.0	418.0
1925	185.0	187.0	196.0	201.0	213.0	255.0	279.0	300.0	371.0
1926	167.0	169.0	173.0	187.0	218.0	248.0	263.0	339.0	339.0
1927	187.0	196.0	204.0	215.0	223.0	287.0	245.0	287.0	346.0
1928	314.0	315.0	319.0	323.0	360.0	420.0	474.0	598.0	598.0
1929	234.0	235.0	241.0	271.0	277.0	299.0	332.0	341.0	341.0
1930	190.0	194.0	196.0	200.0	218.0	238.0	272.0	338.0	338.0
1931	223.0	224.0	226.0	233.0	240.0	257.0	283.0	306.0	363.0
1932	286.0	292.0	299.0	305.0	326.0	340.0	389.0	437.0	437.0
1933	279.0	287.0	291.0	301.0	325.0	372.0	391.0	420.0	552.0
1934	365.0	371.0	375.0	383.0	402.0	435.0	471.0	555.0	680.0
1935	206.0	206.0	209.0	211.0	216.0	219.0	240.0	288.0	353.0
1936	236.0	237.0	241.0	248.0	257.0	266.0	278.0	291.0	336.0
1937	197.0	199.0	200.0	202.0	218.0	241.0	266.0	294.0	368.0
1938	292.0	294.0	295.0	299.0	311.0	333.0	356.0	544.0	544.0
1939	207.0	209.0	215.0	228.0	233.0	250.0	273.0	291.0	326.0
1940	285.0	299.0	300.0	304.0	319.0	335.0	342.0	347.0	405.0
1941	229.0	232.0	234.0	245.0	251.0	263.0	271.0	282.0	311.0
1942	260.0	263.0	267.0	269.0	274.0	288.0	305.0	317.0	325.0
1943	220.0	223.0	227.0	229.0	238.0	265.0	306.0	381.0	455.0
1944	238.0	241.0	268.0	290.0	295.0	315.0	326.0	349.0	410.0
1945	214.0	224.0	243.0	253.0	272.0	285.0	292.0	303.0	336.0
1946	242.0	242.0	258.0	270.0	282.0	313.0	327.0	389.0	540.0
1947	226.0	229.0	232.0	239.0	266.0	273.0	297.0	381.0	552.0
1948	235.0	248.0	249.0	272.0	286.0	295.0	313.0	350.0	458.0
1949	282.0	306.0	320.0	324.0	344.0	356.0	374.0	556.0	556.0
1950	256.0	267.0	269.0	274.0	308.0	337.0	374.0	500.0	500.0
1951	317.0	334.0	341.0	347.0	366.0	392.0	423.0	468.0	685.0
1952	208.0	220.0	229.0	234.0	241.0	262.0	303.0	345.0	411.0
1953	148.0	149.0	152.0	154.0	159.0	169.0	177.0	191.0	244.0
1954	262.0	266.0	273.0	281.0	301.0	335.0	346.0	374.0	491.0
1955	225.0	229.0	258.0	288.0	353.0	380.0	406.0	434.0	500.0
1956	317.0	319.0	356.0	405.0	427.0	491.0	544.0	633.0	759.0
1957	277.0	295.0	325.0	331.0	358.0	431.0	437.0	492.0	616.0
1958	190.0	193.0	197.0	199.0	209.0	225.0	239.0	255.0	329.0
1959	189.0	189.0	192.0	200.0	214.0	231.0	250.0	285.0	359.0
1960	290.0	326.0	330.0	336.0	343.0	386.0	444.0	546.0	692.0
1961	221.0	229.0	259.0	274.0	299.0	316.0	337.0	378.0	536.0
1962	224.0	225.0	230.0	232.0	246.0	284.0	321.0	344.0	378.0
1963	256.0	261.0	266.0	276.0	285.0	309.0	323.0	343.0	378.0
1964	224.0	232.0	235.0	244.0	253.0	257.0	268.0	281.0	346.0
1965	318.0	360.0	420.0	461.0	478.0	542.0	586.0	720.0	720.0
1966	202.0	215.0	223.0	228.0	259.0	282.0	290.0	293.0	338.0
1967	260.0	264.0	269.0	276.0	287.0	303.0	309.0	331.0	474.0
1968	218.0	222.0	231.0	240.0	243.0	288.0	308.0	325.0	382.0
1969	268.0	274.0	279.0	291.0	318.0	367.0	403.0	415.0	504.0
1970	288.0	293.0	298.0	304.0	318.0	358.0	397.0	480.0	480.0
1971	209.0	210.0	214.0	230.0	261.0	281.0	290.0	313.0	416.0
1972	263.0	292.0	300.0	313.0	368.0	378.0	414.0	479.0	647.0
1973	302.0	326.0	343.0	345.0	373.0	412.0	437.0	540.0	540.0
1974	252.0	256.0	259.0	265.0	270.0	296.0	302.0	313.0	345.0
1975	261.0	264.0	291.0	305.0	315.0	341.0	356.0	373.0	511.0
1976	248.0	250.0	263.0	278.0	294.0	325.0	441.0	458.0	598.0
1977	256.0	271.0	289.0	327.0	337.0	392.0	395.0	407.0	437.0
1978	224.0	225.0	228.0	236.0	258.0	260.0	277.0	295.0	377.0
1979	245.0	248.0	256.0	259.0	264.0	291.0	319.0	346.0	434.0

## STATION 12117500 CEDAR RIVER NEAR LANDSBURG, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1916-1979)

MEAN	242.1	250.0	259.6	270.2	287.2	314.1	338.9	369.6	460.9
MAXIMUM	365.0	371.0	420.0	461.0	478.0	542.0	586.0	633.0	759.0
MINIMUM	148.0	149.0	152.0	154.0	159.0	177.0	177.0	191.0	244.0
STANDARD DEVIATION	41.43	45.87	50.54	55.04	58.75	67.53	75.16	84.40	117.43
SKEWNESS	0.401	0.442	0.633	0.633	0.667	0.802	0.859	0.815	0.603
STD ERROR OF SKEWNESS	0.299	0.299	0.299	0.299	0.299	0.299	0.299	0.299	0.299
SERIAL CORR COEFF	-0.011	-0.015	-0.014	0.007	0.096	0.083	0.087	0.085	0.079
COEFF OF VARIATION	0.171	0.183	0.195	0.195	0.205	0.215	0.222	0.228	0.255
MEAN LOGS	2.378	2.391	2.406	2.423	2.449	2.488	2.520	2.557	2.650
STD DEVIATION LOGS	0.074	0.080	0.084	0.087	0.088	0.091	0.094	0.096	0.109
SKEWNESS LOGS	-0.116	-0.063	0.022	0.081	0.016	0.130	0.131	0.143	0.137
STD ERR SKEWNESS LOGS	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239	0.239
SER CORR COEFF LOGS	0.028	0.025	0.025	0.043	0.116	0.085	0.092	0.081	0.089
COEFF OF VAR LOGS	0.031	0.033	0.035	0.036	0.036	0.037	0.037	0.038	0.041

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1916-1979)

0.99	350.5	373.5	400.0	426.3	451.4	510.0	558.3	618.8	820.0
0.98	335.8	356.1	379.3	402.5	426.9	479.1	523.5	578.7	760.7
0.96	320.0	337.6	357.5	377.7	401.3	447.4	487.7	537.8	700.5
0.90	296.6	310.6	326.3	342.6	364.8	403.0	437.8	480.9	617.9
0.80	275.9	287.1	299.6	315.0	333.6	366.0	396.5	434.0	550.6
0.50	239.4	246.4	254.7	264.2	281.4	306.0	329.6	358.8	444.3
0.20	206.8	210.9	216.8	223.8	237.5	257.5	275.8	298.8	361.5
0.10	191.2	194.2	199.3	205.5	217.4	235.8	252.0	272.3	325.5
0.05	179.0	181.4	186.0	191.7	202.1	219.6	234.2	252.6	299.1
0.02	166.0	167.8	172.1	177.4	186.3	203.0	215.9	232.6	272.3
0.01	157.8	159.2	163.4	168.5	176.4	192.8	204.7	220.3	256.1

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1916-1979)

P95	P90	P75	P70	P50	P25	P10
260.0	290.0	380.0	420.0	590.0	880.0	1200.0

## STATION 12117500 CEDAR RIVER NEAR LANDSBURG, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATE	REG. (R)
1896	1240.	1110.	989.	834.	662.	551.	556.	542.	520.	3420.	01/09/96	
1897	2480.	2470.	2320.	1910.	1580.	1390.	1330.	1290.	1170.	5380.	11/14/96	
1898	2100.	1980.	1890.	1850.	1800.	1580.	1440.	1290.	1150.	5030.	11/19/97	
1902	6820.	6370.	5170.	4250.	3680.	2710.	2130.	1800.	1470.	2240.	06/17/17	
1903	2480.	2260.	1930.	1690.	1300.	1120.	1050.	1010.	972.	3160.	01/29/17	
1904	1760.	1710.	1540.	1320.	1160.	975.	932.	889.	820.	10200.	12/24/01	
1905	1770.	1690.	1440.	1310.	1220.	1130.	1130.	1080.	988.	2020.	01/05/03	
1906	5410.	4570.	3150.	1990.	1500.	1130.	954.	846.	750.	2080.	01/15/04	R
1907	3960.	3630.	2980.	2050.	1510.	1170.	1010.	935.	872.	12400.	05/24/05	R
1908	2410.	1860.	1520.	1320.	1230.	1060.	948.	863.	782.	2020.	01/25/06	R
1909	2430.	2130.	2080.	1810.	1430.	1170.	1050.	942.	862.	12400.	11/15/06	R
1910	1350.	1230.	1040.	942.	892.	838.	789.	737.	641.	2480.	01/20/09	R
1911	1610.	1560.	1450.	1300.	1070.	880.	853.	815.	807.	8370.	11/23/09	R
1912	4560.	3930.	3040.	2360.	1800.	1560.	1390.	1230.	1060.	4520.	11/21/10	R
1913	996.	950.	899.	881.	814.	763.	762.	725.	648.	14200.	11/19/11	R
1915	1060.	953.	907.	825.	769.	718.	643.	569.	574.	3790.	01/03/13	R
1916	1030.	994.	944.	927.	792.	708.	648.	616.	574.	1330.	04/04/15	R
1917	3120.	2640.	2020.	1880.	1740.	1580.	1340.	1250.	1070.	2530.	03/10/16	R
1918	4030.	3740.	3340.	2340.	1930.	1560.	1340.	1170.	1020.	2830.	06/17/17	R
1934	6850.	6400.	5170.	4340.	3430.	2680.	2110.	1830.	1500.	7500.	12/29/17	R
1935	4000.	3700.	3090.	2330.	1630.	1360.	1160.	1050.	926.	3160.	01/22/19	R
1936	1600.	1510.	1470.	1380.	1220.	980.	879.	886.	857.	1860.	01/28/20	R
1937	1430.	1420.	1340.	1160.	1030.	892.	844.	828.	738.	1920.	02/11/21	R
1938	1930.	1850.	1500.	1230.	1150.	1100.	1010.	908.	859.	5960.	12/12/21	R
1939	1330.	1290.	1170.	1090.	1010.	911.	874.	788.	754.	4160.	01/10/23	R
1940	1360.	1290.	1230.	1130.	961.	861.	846.	784.	705.	3100.	02/12/24	R
1941	658.	627.	594.	547.	440.	418.	406.	399.	376.	2740.	02/08/25	R
1942	1570.	1250.	1010.	880.	856.	827.	758.	714.	678.	1720.	01/05/26	R
1943	1470.	1250.	1220.	1190.	1150.	945.	875.	823.	809.	1800.	06/20/37	R
1944	1070.	1040.	970.	800.	655.	604.	588.	561.	544.	1800.	11/29/37	R
1945	1630.	1440.	1340.	1150.	1120.	975.	936.	945.	909.	2360.	11/29/37	R
1946	1540.	1420.	1350.	1320.	1230.	1300.	1240.	1130.	1050.	1500.	02/15/39	R
1947	4000.	3620.	2810.	2000.	1450.	1099.	1050.	957.	933.	1880.	03/07/40	R
1948	1780.	1660.	1570.	1450.	1260.	1099.	1010.	988.	940.	1050.	11/28/40	R
1949	1490.	1370.	1250.	1180.	1070.	1010.	951.	965.	865.	1830.	12/19/41	R
1950	2860.	2590.	2150.	1650.	1430.	1310.	1220.	1220.	1120.	2140.	11/23/42	R
1951	5450.	4930.	3840.	2530.	1790.	1520.	1410.	1320.	1130.	4300.	01/08/33	R
1952	1320.	1130.	1030.	1020.	990.	930.	859.	771.	714.	7520.	12/22/33	R
1953	3240.	2900.	2500.	2070.	1650.	1310.	1110.	1040.	948.	1900.	05/17/36	R
1954	1850.	1590.	1540.	1400.	1300.	1190.	1070.	1030.	940.	1800.	06/20/37	R
1955	1940.	1380.	1230.	1110.	1090.	1060.	986.	943.	881.	2800.	02/26/32	R
1956	2270.	2060.	1780.	1670.	1460.	1300.	1200.	1120.	1030.	4860.	02/26/32	R
1957	3100.	2910.	2540.	2050.	1560.	1180.	1040.	1010.	969.	3240.	01/08/33	R
1958	1410.	1350.	1210.	1100.	1050.	995.	924.	820.	778.	1970.	12/22/33	R
1959	2850.	2790.	2490.	1990.	1740.	1400.	1260.	1260.	1260.	1900.	05/17/36	R
1960	4340.	4190.	3330.	2400.	2070.	1620.	1560.	1400.	1260.	1800.	06/20/37	R
1961	2100.	2000.	1830.	1620.	1440.	1310.	1250.	1200.	1110.	2360.	11/29/37	R
1962	1660.	1510.	1380.	1270.	1190.	1050.	919.	837.	788.	1500.	02/15/39	R
1963	1910.	1830.	1640.	1370.	1160.	1060.	1030.	998.	943.	1880.	02/21/61	R
1964	2160.	2050.	1880.	1820.	1670.	1330.	1140.	1080.	996.	1960.	12/24/61	R
1965	4060.	3820.	3230.	2470.	1940.	1460.	1340.	1250.	1110.	1930.	01/03/63	R
1966	1210.	1170.	1100.	1060.	992.	985.	934.	897.	811.	2340.	06/18/64	R
1967	2120.	2010.	1860.	1700.	1550.	1410.	1320.	1190.	1010.	4640.	01/30/65	R
1968	2070.	2040.	1820.	1500.	1420.	1360.	1270.	1180.	1060.	1380.	06/29/66	R
1969	1860.	1800.	1570.	1380.	1170.	1110.	999.	907.	865.	2170.	01/19/67	R
1970	1420.	1410.	1390.	1290.	1170.	1130.	1060.	968.	863.	2240.	01/21/68	R
1971	1960.	1840.	1730.	1590.	1570.	1390.	1220.	1120.	1100.	2440.	12/03/68	R
										1620.	01/20/70	R
										2240.	01/19/71	R

## STATION 12117500 CEDAR RIVER NEAR LANDSBURG, WASH.

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA	
										FLOW (CFS)	DATE REG. (R)
1972	3770.	3490.	3080.	2840.	2450.	1900.	1710.	1530.	1370.	3840.	03/05/72 R
1973	2200.	2070.	1730.	1510.	1300.	1090.	922.	814.	671.	2310.	12/27/72 R
1974	2640.	2600.	2480.	2180.	1850.	1470.	1330.	1240.	1240.	2770.	01/26/74 R
1975	2210.	2040.	1930.	1680.	1430.	1260.	1170.	1040.	964.	2320.	01/17/75 R
1976	7550.	7030.	5640.	3810.	2580.	2140.	1820.	1570.	1240.	7930.	12/04/75 R
1977	1110.	1030.	960.	735.	671.	605.	578.	546.	545.	1250.	01/18/77 R
1978	5730.	5040.	4000.	3330.	2500.	1780.	1420.	1220.	959.	5900.	12/03/77 R
1979	1480.	1410.	1290.	1110.	1050.	915.	835.	818.	758.	1590.	03/07/79 R

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1915-1979)

W R C SYSTEMATIC  
ESTIMATE RECORD

MEAN	2523.0	2321.9	1998.7	1664.9	1412.6	1204.0	1089.8	1009.4	916.0		
MAXIMUM	7550.0	7030.0	5640.0	4340.0	3680.0	2710.0	2130.0	1830.0	1500.0		
MINIMUM	658.0	627.0	594.0	547.0	440.0	418.0	406.0	399.0	376.0		
STANDARD DEVIATION	1538.20	1405.84	1078.77	776.06	579.35	420.50	329.52	276.85	224.05		
SKEWNESS	1.570	1.604	1.557	1.634	1.729	1.411	0.934	0.620	0.219		
STD ERROR OF SKEWNESS	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297		
SERIAL CORR COEFF	0.007	0.020	0.041	0.057	0.110	0.143	0.142	0.130	0.157		
COEFF OF VARIATION	0.610	0.605	0.540	0.466	0.410	0.349	0.302	0.274	0.245		
MEAN LOGS	3.337	3.302	3.249	3.182	3.119	3.057	3.018	2.988	2.948		
STD DEVIATION LOGS	0.231	0.229	0.208	0.182	0.164	0.146	0.131	0.122	0.113		
SKEWNESS LOGS	0.489	0.500	0.429	0.316	0.076	-0.115	-0.285	-0.443	-0.656		
STD ERR SKEWNESS LOGS	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297		
SER CORR COEFF LOGS	0.063	0.081	0.097	0.102	0.153	0.170	0.163	0.151	0.173		
COEFF OF VAR LOGS	0.069	0.069	0.064	0.057	0.053	0.048	0.044	0.041	0.038		
										3.4022	3.4022
										0.2147	0.2147
										0.5510	0.5510

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1915-1979)

0.99	766.1	716.4	678.1	632.6	557.6	507.4	484.7	461.0	430.2	978.6	978.6
0.95	982.5	914.5	858.9	794.0	712.1	649.0	619.5	591.6	555.3	1218.1	1218.1
0.90	1138.2	1057.0	985.7	903.2	812.8	738.2	702.1	670.0	628.6	1389.2	1389.2
0.80	1379.2	1277.4	1177.5	1063.6	955.5	860.7	812.6	772.9	722.5	1652.7	1652.7
0.50	2082.1	1919.8	1714.1	1487.9	1308.7	1146.6	1057.9	992.4	913.0	2413.1	2413.1
0.20	3341.8	3069.9	2619.1	2147.7	1804.5	1513.6	1349.5	1237.2	1108.5	3756.8	3756.8
0.10	4389.4	4026.0	3334.7	2635.3	2140.3	1743.8	1520.6	1372.9	1208.7	4863.3	4863.3
0.04	5988.2	5484.9	4382.1	3310.4	2572.8	2022.6	1717.1	1521.5	1311.5	6539.8	6539.8
0.02	7400.3	6773.4	5273.2	3857.0	2900.9	2222.6	1851.4	1618.9	1375.0	8012.1	8012.1
0.01	9020.5	8251.9	6265.4	4441.8	3234.1	2417.1	1977.2	1707.0	1429.6	9694.8	9694.8

STATION 12118400 ROCK CREEK AT STATE HWY 5A NR RAVENSDALE, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1956													
1957	7.05	10.7	24.4	25.2	26.4	39.9	28.3	17.6	13.2	11.2	8.92	7.65	18.1
1958	6.45	5.67	10.1	20.0	29.4	20.6	14.0	12.4	7.59	10.0	7.55	6.84	11.6
1959	3.66	7.27	26.4	46.5	37.9	23.1	21.8	18.4	13.1	10.4	4.85	3.86	18.7
1960	11.6	28.9	48.7	29.0	33.7	23.9	23.5	21.3	16.5	9.80	8.86	7.92	21.7
1961	6.87	23.2	28.9	24.8	56.9	51.8	30.7	26.0	18.9	10.1	8.53	6.88	23.9
1962	5.31	5.18	7.45	15.1	11.0	13.1	14.7	12.7	10.9	8.26	6.90	6.26	9.74

STATION 12118400 ROCK CREEK AT STATE HWY 5A NR RAVENSDALE, WASH.

ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1957	50.0	3-11-1957
1958	33.0	2-15-1958
1959	98.0	1-25-1959
1960	114.0	12-16-1959
1961	112.0	2-26-1961
1962	18.0	1-10-1962



## STATION 12118500 ROCK CREEK NEAR MAPLE VALLEY, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1946	8.77	20.1	27.9	47.8	49.0	46.2	31.4	17.4	14.3	11.4	8.31	7.73	24.4
1947	6.46	9.85	46.5	34.8	46.1	27.4	22.2	15.5	10.2	8.36	6.30	5.26	19.8
1948	9.19	31.2	36.4	56.0	37.5	43.5	34.5	28.9	23.3	17.4	11.2	8.75	28.1
1949	8.00	12.6	48.0	29.3	35.2	32.5	19.7	16.8	10.5	7.94	7.11	6.60	19.5
1950	5.47	7.42	23.6	51.4	59.0	83.4	53.6	31.8	16.8	11.0	8.23	7.95	29.8
1951	7.48	16.3	46.2	59.4	83.7	46.1	25.5	14.6	9.84	7.24	5.86	5.44	27.0
1952	5.55	8.45	14.2	12.3	21.7	20.0	18.3	12.4	16.8	7.08	5.82	4.82	11.6
1953	4.78	4.83	4.04	15.8	42.7	18.7	21.3	12.4	12.2	12.2	8.35	6.53	14.3
1954	7.41	15.5	42.1	50.2	40.4	31.1	26.1	16.4	11.2	9.98	8.24	7.40	22.1
1955	7.65	9.49	13.3	23.1	27.4	20.8	33.5	27.4	16.9	12.6	9.70	7.43	17.4
1956	9.55	27.5	81.1	79.5	38.9	41.7	35.5	17.1	11.7	9.29	7.70	6.84	30.6
1957	7.19	13.1	30.5	29.5	30.6	47.5	30.7	17.8	12.0	9.28	6.41	5.64	20.0
1958	5.78	6.82	9.59	24.7	40.1	24.2	16.3	14.2	8.18	5.65	4.95	3.85	13.5
1959	3.53	9.38	31.8	56.5	48.0	28.3	27.1	23.6	16.5	11.0	7.97	8.32	22.5
1960	14.5	38.4	57.6	33.7	39.0	26.8	26.5	24.5	18.3	10.7	7.08	5.90	25.2
1961	6.52	28.4	32.5	31.9	60.4	62.6	38.1	31.1	17.8	10.3	8.40	6.69	27.5
1962	4.86	5.55	9.78	14.8	11.9	15.2	16.7	14.1	12.9	9.63	7.30	6.12	10.7
1963	7.78	13.0	29.9	32.9	32.6	23.9	30.6	20.7	12.5	9.37	6.99	2.26	18.5
1964	3.90	9.29	21.4	52.2	46.4	28.1	21.6	16.6	17.8	15.0	9.78	8.66	20.8
1965	7.45	16.7	46.6	53.4	87.6	38.7	20.2	19.0	10.7	5.02	4.90	4.05	25.8
1966	4.11	6.99	7.42	23.2	14.3	19.9	17.9	13.5	8.79	6.29	4.89	3.56	10.9
1967	3.47	5.92	24.2	51.9	52.9	34.6	24.4	17.6	7.65	3.67	1.77	2.17	19.0
1968	1.86	3.31	5.89	19.7	33.0	26.6	21.1	11.4	12.8	5.03	4.15	4.60	12.4
1969	5.96	11.6	37.9	52.9	34.6	22.3	15.0	11.5	6.73	6.16	2.97	2.06	17.4
1970	4.16	5.87	14.2	31.6	32.7	23.5	21.8	18.6	8.23	3.19	1.63	1.72	13.8
1971	1.84	3.51	18.4	43.9	42.5	34.6	34.6	15.7	9.43	6.37	3.26	5.23	19.0
1972	3.38	12.3	27.8	43.6	51.7	128.6	34.4	17.9	8.11	8.24	3.16	4.63	28.6
1973	4.23	4.23	17.9	36.7	22.3	13.5	5.28	4.15	4.28	3.10	1.46	1.05	9.81

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1973)

MEAN	6.1	12.7	28.8	39.0	41.5	36.4	25.9	18.1	12.3	8.8	6.3	5.5	20.0
MAXIMUM	14.5	38.4	81.1	79.5	87.6	128.0	53.6	31.8	23.3	17.4	11.2	8.8	30.6
MINIMUM	1.8	3.3	4.0	12.3	11.9	13.5	5.3	4.1	4.3	3.1	1.5	1.1	9.8
STD DEVIATION	2.67	8.83	17.78	16.20	17.21	23.52	9.38	6.21	4.38	3.49	2.64	2.21	6.32
SKEWNESS	0.966	1.459	0.922	0.302	0.946	2.578	0.654	0.558	0.553	0.367	-0.304	-0.415	0.020
STD ERR SKEW	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.434	0.434	0.434	0.441
SER CORR COEFF	0.151	0.093	-0.183	-0.333	-0.259	-0.079	-0.142	-0.037	0.103	0.208	0.594	0.534	-0.103
COEFF OF VAR	0.437	0.696	0.617	0.415	0.415	0.646	0.363	0.342	0.358	0.396	0.417	0.403	0.316
MEAN LOGS	0.743	1.014	1.365	1.550	1.580	1.502	1.381	1.231	1.061	0.909	0.750	0.690	1.278
STD DEV LOGS	0.203	0.282	0.316	0.203	0.192	0.217	0.184	0.170	0.162	0.191	0.240	0.234	0.148
SKEWNESS LOGS	-0.606	0.192	-0.678	-0.614	-0.702	0.834	-1.502	-1.451	-0.391	-0.633	-1.321	-0.391	-0.437
STD ERR SKEW LOGS	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.434	0.434	0.434	0.441
SER CORR LOGS	0.274	0.073	-0.191	-0.213	-0.328	-0.137	-0.176	-0.012	0.207	0.316	0.650	0.275	-0.127
COEFF OF VAR LOGS	0.273	0.278	0.231	0.131	0.122	0.145	0.133	0.138	0.153	0.210	0.319	0.339	0.116
% OF AVE FLOW	2.5	5.3	11.9	16.2	17.2	15.1	10.7	7.5	5.1	3.7	2.6	2.3	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1973)

0.99	1.5	2.5	3.0	9.8	10.9	13.5	5.9	4.7	4.3	2.4	1.0	0.9	7.7
0.95	2.4	3.7	6.2	15.3	17.0	15.9	10.5	7.9	6.0	3.7	2.0	1.7	10.4
0.90	3.0	4.6	8.8	19.1	21.1	17.8	13.7	10.1	7.0	4.5	2.7	2.4	12.1
0.80	3.8	6.0	13.0	24.4	26.8	20.7	17.9	13.0	8.5	5.7	3.8	3.3	14.4
0.50	5.8	10.1	25.2	37.2	40.1	29.6	26.6	18.6	11.8	8.5	6.3	5.5	19.4
0.20	8.3	17.7	43.2	52.9	55.6	46.8	34.0	23.5	15.8	11.8	9.0	7.7	25.4
0.10	9.7	24.0	55.0	62.1	64.3	62.0	36.9	25.5	18.2	10.2	8.7	28.8	32.6
0.04	11.3	33.6	68.9	72.2	73.6	86.4	39.2	27.0	20.9	15.8	11.4	9.5	32.6
0.02	12.4	41.9	78.4	78.9	79.5	109.1	40.2	27.7	22.8	17.1	12.0	9.9	35.2
0.01	13.3	51.2	87.3	84.9	84.6	136.4	40.8	28.2	24.6	18.3	12.5	10.3	37.5

## STATION 12118500 ROCK CREEK NEAR MAPLE VALLEY, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1947	5.7	5.8	5.9	6.1	6.5	6.7	7.3	8.2	10.0
1948	3.5	3.6	3.9	4.2	4.4	5.2	5.8	6.6	9.1
1949	7.7	7.7	7.7	7.7	7.9	8.2	7.9	8.6	13.0
1950	4.2	4.3	4.5	4.7	5.0	5.8	6.0	6.5	7.5
1951	6.6	6.7	6.8	7.0	7.3	7.6	7.9	8.5	11.0
1952	4.8	4.8	4.9	5.0	5.2	5.5	5.6	5.9	7.0
1953	2.8	2.9	3.0	3.3	4.0	4.3	4.5	4.6	5.1
1954	5.9	6.1	6.1	6.2	6.4	6.9	7.4	8.4	11.0
1955	7.0	7.0	7.0	7.1	7.4	7.5	7.6	7.9	9.0
1956	6.2	6.2	6.5	6.7	7.1	7.9	7.7	9.7	13.0
1957	5.5	5.8	6.0	6.3	6.6	6.8	7.2	7.7	9.2
1958	5.2	5.4	5.5	5.5	5.6	5.6	5.7	6.1	7.1
1959	2.8	2.9	3.3	3.4	3.5	3.7	4.0	4.3	5.7
1960	6.7	6.8	7.0	7.2	7.3	7.8	9.0	10.0	13.0
1961	5.3	5.5	5.7	5.7	5.8	6.1	6.5	7.0	11.0
1962	3.5	3.5	3.7	4.0	4.3	4.9	5.7	6.3	7.6
1963	5.8	5.8	5.8	5.8	6.1	6.5	7.0	7.4	9.0
1964	1.5	1.5	1.5	1.5	2.0	3.0	3.9	5.1	7.4
1965	5.1	5.1	5.5	6.6	7.3	8.0	8.3	9.4	12.0
1966	2.7	2.8	3.1	3.6	4.0	4.1	4.3	4.4	5.3
1967	2.7	2.9	3.0	3.2	3.4	3.5	3.8	4.2	5.5
1968	1.0	1.1	1.2	1.4	1.7	2.0	1.9	2.2	2.9
1969	2.4	2.5	2.7	2.9	3.4	4.2	4.3	4.9	6.8
1970	0.8	0.9	0.9	1.1	1.6	2.4	3.0	3.6	4.5
1971	1.0	1.0	1.1	1.1	1.4	1.6	1.7	2.0	3.2
1972	1.3	2.1	2.4	2.6	3.2	4.0	3.9	4.4	6.3
1973	2.4	2.5	2.5	2.6	2.9	3.7	4.0	3.9	5.2

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1973)

MEAN	4.1	4.2	4.3	4.5	4.9	5.3	5.7	6.2	8.1
MAXIMUM	7.7	7.7	7.7	7.7	7.9	8.2	9.0	10.0	13.0
MINIMUM	0.8	0.9	0.9	1.1	1.4	1.6	1.7	2.0	2.9
STANDARD DEVIATION	2.08	2.04	2.04	2.06	2.01	1.96	2.08	2.28	2.97
SKENNESS	-0.057	-0.065	-0.150	-0.220	-0.196	-0.193	-0.151	-0.048	0.172
STD ERROR OF SKEWNESS	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448
SERIAL CORR COEFF	0.374	0.356	0.376	0.350	0.318	0.322	0.362	0.334	0.258
COEFF OF VARIATION	0.509	0.486	0.470	0.453	0.414	0.369	0.366	0.364	0.369
MEAN LOGS	0.535	0.555	0.574	0.597	0.641	0.690	0.720	0.762	0.874
STD DEVIATION LOGS	0.287	0.269	0.263	0.255	0.220	0.191	0.190	0.184	0.177
SKENNESS LOGS	-0.857	-0.870	-0.953	-0.992	-0.895	-0.941	-1.020	-0.891	-0.589
STD ERR SKEWNESS LOGS	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448
SER CORR COEFF LOGS	0.495	0.454	0.449	0.428	0.398	0.388	0.432	0.411	0.332
COEFF OF VAR LOGS	0.537	0.484	0.458	0.426	0.344	0.277	0.263	0.241	0.202

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1973)

	0.99	0.95	0.90	0.85	0.80	0.75	0.70	0.65	0.60	0.55	0.50	0.45	0.40	0.35	0.30	0.25	0.20	0.15	0.10	0.05	0.02	0.01
0.99	10.5	10.2	10.0	9.4	8.7	7.5	6.5	5.2	4.7	3.8	3.0	2.5	2.2	1.7	1.3	1.0	0.7	0.6	0.4	0.3	0.2	0.1
0.98	9.7	9.5	9.4	8.7	8.0	6.8	5.5	4.2	3.7	2.8	2.0	1.6	1.2	0.9	0.7	0.5	0.4	0.3	0.2	0.1	0.0	0.0
0.96	8.8	8.6	8.5	7.8	7.1	5.9	4.6	3.3	2.8	1.9	1.1	0.8	0.6	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0
0.90	7.4	7.3	7.2	6.5	5.8	4.6	3.3	2.0	1.6	0.9	0.6	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
0.80	6.0	5.9	5.8	5.1	4.4	3.2	2.0	0.8	0.6	0.3	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.50	3.8	3.7	3.6	3.0	2.4	1.6	1.0	0.5	0.4	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.20	2.1	2.0	1.9	1.6	1.3	0.9	0.6	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.10	1.4	1.3	1.2	1.0	0.8	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.05	1.0	0.9	0.8	0.7	0.5	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.02	0.7	0.6	0.5	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
0.01	0.5	0.4	0.3	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1947-1973)

P95	P90	P85	P75	P70	P50	P25	P10
3.2	4.4	7.1	7.9	14.0	26.0	44.0	

## STATION 12118500 ROCK CREEK NEAR MAPLE VALLEY, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

ANNUAL PEAK-FLOW DATA  
FLOW (CFS) DATE REG. (R)

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	
1946	71.	70.	65.	56.	50.	49.	48.	44.	37.	72.
1947	100.	97.	88.	66.	50.	46.	43.	39.	32.	105.
1948	85.	81.	79.	70.	57.	48.	46.	44.	40.	87.
1949	71.	70.	66.	58.	49.	40.	38.	36.	31.	72.
1950	135.	125.	110.	102.	89.	75.	67.	62.	50.	138.
1951	180.	150.	128.	104.	82.	71.	64.	58.	46.	165.
1952	24.	24.	24.	23.	22.	21.	20.	18.	16.	24.
1953	62.	62.	60.	53.	43.	32.	28.	26.	22.	70.
1954	72.	72.	66.	58.	51.	41.	35.	31.	25.	75.
1955	37.	37.	37.	37.	34.	31.	28.	27.	25.	39.
1956	120.	113.	104.	94.	91.	81.	69.	61.	51.	125.
1957	59.	59.	57.	54.	49.	41.	36.	31.	26.	59.
1958	43.	43.	41.	41.	40.	36.	29.	26.	21.	45.
1959	108.	105.	94.	79.	64.	52.	47.	42.	36.	111.
1960	110.	105.	88.	70.	65.	54.	48.	43.	37.	117.
1961	114.	111.	106.	96.	79.	62.	54.	48.	44.	114.
1962	14.	19.	19.	18.	17.	16.	15.	15.	14.	19.
1963	44.	43.	43.	41.	35.	33.	32.	30.	29.	44.
1964	107.	98.	89.	77.	61.	49.	42.	38.	31.	113.
1965	177.	168.	141.	115.	95.	70.	62.	56.	44.	187.
1966	29.	29.	28.	28.	24.	19.	20.	19.	16.	30.
1967	77.	75.	68.	66.	59.	53.	47.	42.	34.	79.
1968	46.	46.	44.	40.	34.	28.	25.	21.	16.	47.
1969	102.	97.	87.	70.	54.	42.	37.	29.	24.	104.
1970	52.	51.	48.	44.	38.	33.	30.	28.	24.	54.
1971	64.	63.	59.	53.	48.	45.	41.	33.	31.	66.
1972	218.	209.	193.	184.	139.	94.	78.	66.	51.	221.
1973	59.	55.	51.	43.	41.	34.	27.	23.	17.	61.
1974										133.
1975										137.
1976										135.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1946-1976)

W R C  
ESTIMATE SYSTEMATIC  
RECORD

MEAN	84.5	81.3	74.4	65.7	55.7	46.8	42.1	38.3	32.0		
MAXIMUM	218.0	209.0	193.0	184.0	139.0	94.0	78.0	66.0	51.0		
MINIMUM	19.0	19.0	19.0	18.0	17.0	16.0	15.0	15.0	14.0		
STANDARD DEVIATION	47.53	44.50	38.51	33.98	26.14	18.79	15.88	13.77	10.90		
SKEWNESS	1.035	1.061	1.149	1.619	1.289	0.667	0.437	0.309	0.132		
STD ERROR OF SKEWNESS	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441		
SERIAL CORR COEFF	-0.162	-0.182	-0.203	-0.217	-0.188	-0.208	-0.207	-0.181	-0.203		
COEFF OF VARIATION	0.563	0.547	0.517	0.469	0.402	0.377	0.360	0.340	0.340		
MEAN LOGS	1.858	1.846	1.815	1.766	1.702	1.635	1.592	1.554	1.479		
STD DEVIATION LOGS	0.257	0.249	0.233	0.218	0.201	0.184	0.175	0.168	0.161		1.8967
SKEWNESS LOGS	-0.352	-0.364	-0.365	-0.201	-0.211	-0.443	-0.446	-0.457	-0.454		0.2582
STD ERR SKEWNESS LOGS	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441		-0.0450
SER CORR COEFF LOGS	-0.173	-0.186	-0.204	-0.232	-0.194	-0.211	-0.212	-0.195	-0.222		
COEFF OF VAR LOGS	0.139	0.135	0.128	0.123	0.118	0.112	0.110	0.108	0.109		

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1976)

0.99	15.6	15.9	16.3	16.9	15.9	14.1	13.4	12.8	11.2	19.4	15.6
0.95	25.7	25.8	25.7	24.9	22.9	20.5	19.2	18.1	15.6	29.4	27.2
0.90	33.1	33.0	32.3	30.4	27.5	24.7	23.0	21.5	18.5	36.7	35.8
0.80	44.4	43.8	42.1	38.5	34.3	30.6	28.3	26.1	22.3	47.9	48.9
0.50	74.7	72.6	67.5	59.4	51.2	44.5	40.3	36.8	31.0	79.2	83.3
0.20	119.7	114.5	103.3	89.4	74.7	62.0	55.2	49.8	41.3	130.2	131.2
0.10	150.3	142.6	126.7	109.7	90.2	72.4	64.0	57.4	47.2	168.4	161.5
0.04	188.9	177.7	155.6	135.5	109.6	84.5	74.1	66.0	53.8	221.2	197.4
0.02	217.4	203.3	176.4	154.8	123.8	92.8	81.0	71.8	58.2	263.5	222.2
0.01	245.4	228.3	196.6	174.0	137.8	100.5	87.3	77.1	62.1	308.3	245.4

## STATION 12119000 CEDAR RIVER AT RENTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1946	339	1095	957	1507	1002	1176	905	717	1039	629	408	250	829
1947	195	515	1636	884	1211	976	985	801	529	296	176	186	699
1948	511	1357	1070	1225	1101	1076	941	960	1329	618	383	292	903
1949	281	747	1176	657	1066	1066	771	1006	789	487	317	234	708
1950	308	520	800	1155	1066	1651	1032	968	1320	618	256	239	826
1951	385	953	1439	1146	2029	1023	604	548	439	368	150	119	759
1952	259	463	595	444	855	579	850	879	577	239	135	109	497
1953	76.4	61.2	91.2	1059	1590	769	680	803	706	288	184	173	533
1954	354	674	1363	1197	962	879	747	659	1014	640	582	402	789
1955	332	336	510	565	981	658	940	917	916	785	405	270	632
1956	711	1103	1769	1336	779	876	907	1008	1043	373	167	432	876
1957	517	701	1595	785	740	1151	992	832	467	200	123	66.9	682
1958	152	229	716	992	1110	584	642	609	168	44.9	41.1	52.9	441
1959	105	1386	1380	1740	952	804	874	931	648	182	138	587	809
1960	884	1761	1556	779	1007	714	1203	763	504	171	101	133	779
1961	278	1203	991	1062	1743	1369	1124	578	267	101	145	147	488
1962	249	587	775	1042	715	549	776	843	185	143	71.5	83.9	546
1963	330	585	1033	1016	1037	776	843	925	1757	570	462	601	831
1964	177	730	916	1232	877	931	812	820	332	119	168	223	752
1965	539	661	1404	1314	1819	965	733	820	332	119	168	223	752
1966	205	385	479	776	526	741	908	823	675	432	107	198	519
1967	255	452	1159	1721	1370	848	552	635	432	139	93.6	112	644
1968	209	293	983	1349	1435	956	884	686	423	286	182	376	670
1969	532	942	1160	1332	613	497	1072	985	758	377	237	218	728
1970	338	409	677	1102	1085	715	1030	732	544	186	104	200	590
1971	325	469	892	1356	1534	1165	854	972	1012	526	234	323	801
1972	402	896	1186	1356	1590	2577	1158	974	894	545	287	339	1016
1973	409	397	1113	1182	639	444	335	325	288	149	157	196	470
1974	368	550	1174	1223	1479	1103	1012	853	1492	595	336	218	905
1975	310	364	823	1821	1270	1067	551	739	838	304	562	245	739
1976	413	909	2845	1665	1187	747	592	649	641	419	192	392	889
1977	341	419	453	573	386	444	519	536	561	158	113	213	387
1978	343	857	2589	875	662	471	482	603	568	168	110	284	669
1979	373	497	837	497	1015	874	580	668	448	163	105	179	517

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1979)

MEAN	346.6	691.4	121.8	1130.7	1099.2	918.3	818.4	774.0	712.1	340.0	216.6	243.3	698.9
MAXIMUM	864.0	1761.0	2845.0	1821.0	2029.0	2577.0	1203.0	1008.0	1757.0	785.0	582.0	601.0	1016.0
MINIMUM	76.4	61.2	91.2	444.0	386.0	444.0	335.0	325.0	168.0	44.9	41.1	52.9	387.0
STD DEVIATION	159.60	371.50	551.47	371.75	385.57	399.31	211.74	173.24	373.91	196.88	138.80	127.78	156.46
SKENESS	1.207	0.962	1.269	0.008	0.484	2.303	-0.264	-0.534	0.957	0.522	1.254	1.163	-0.201
STD ERR SKEW	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.398	0.403
SER CORR COEFF	-0.185	0.116	-0.379	0.047	-0.238	-0.017	0.065	0.042	-0.165	0.191	0.244	-0.194	-0.163
COEFF OF VAR	0.460	0.537	0.492	0.329	0.351	0.435	0.259	0.224	0.525	0.579	0.641	0.525	0.224
MEAN LOGS	2.494	2.771	2.992	3.027	3.014	2.931	2.897	2.876	2.792	2.449	2.257	2.327	2.833
STD DEV LOGS	0.212	0.272	0.258	0.160	0.161	0.163	0.125	0.110	0.041	0.258	0.265	0.238	0.104
SKENESS LOGS	-0.725	-1.266	-1.820	-0.730	-0.467	0.443	-0.922	-1.233	-0.409	-0.537	0.085	-0.474	-0.597
STD ERR SKEW LGS	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.398	0.403
SER CORR LOGS	-0.127	-0.033	-0.225	-0.021	-0.195	-0.015	0.042	-0.009	-0.076	0.198	0.293	-0.049	-0.160
COEFF OF VAR LGS	0.085	0.098	0.086	0.053	0.053	0.056	0.043	0.038	0.086	0.117	0.117	0.102	0.037
% OF AVE FLOW	4.1	8.2	13.3	13.4	13.1	10.9	9.7	9.2	8.5	4.0	2.6	2.9	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1979)

0.99	77.8	80.2	121.8	373.5	385.0	403.2	334.2	336.3	145.1	46.6	45.4	49.2	352.2
0.95	127.9	177.6	301.9	543.6	536.5	484.2	460.4	462.5	234.8	86.3	67.2	80.6	442.8
0.90	162.5	255.4	448.6	651.4	632.8	538.9	535.6	538.2	298.9	118.9	83.1	103.0	495.3
0.80	212.2	375.4	670.4	796.7	764.3	619.1	613.9	625.2	394.6	165.1	107.8	136.3	566.1
0.50	330.7	671.4	1161.0	1112.9	1062.1	830.5	823.8	791.5	643.8	298.6	179.1	221.9	697.0
0.20	474.1	999.0	1574.4	1459.5	1417.0	1158.7	1008.9	931.7	995.7	496.7	301.2	339.8	835.6
0.10	555.0	1154.8	1714.4	1642.9	1522.1	1401.6	1096.8	989.4	1225.4	627.9	397.1	414.8	907.2
0.04	642.4	1294.9	1806.1	1833.7	1652.8	1738.7	1180.7	1038.2	1505.3	787.9	535.4	504.6	981.4
0.02	698.3	1368.6	1840.6	1922.0	2006.9	2012.6	1228.8	1063.0	1707.4	901.5	650.6	567.6	1027.7
0.01	747.4	1423.2	1859.9	2053.8	2148.0	2306.6	1267.7	1081.0	1901.3	1009.7	776.5	627.2	1067.9

## STATION 12119000 CEDAH RIVER AT RENTON, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1947	127.0	134.0	142.0	152.0	163.0	182.0	199.0	279.0	485.0
1948	140.0	145.0	153.0	159.0	167.0	185.0	210.0	259.0	409.0
1949	200.0	212.0	224.0	240.0	280.0	280.0	302.0	338.0	577.0
1950	184.0	202.0	202.0	214.0	230.0	247.0	274.0	323.0	408.0
1951	130.0	148.0	168.0	176.0	217.0	235.0	282.0	342.0	604.0
1952	82.0	87.0	87.0	110.0	133.0	133.0	163.0	210.0	291.0
1953	51.0	52.0	53.0	53.0	59.0	67.0	72.0	83.0	113.0
1954	115.0	127.0	136.0	144.0	165.0	177.0	198.0	239.0	376.0
1955	159.0	164.0	186.0	216.0	271.0	316.0	341.0	384.0	443.0
1956	136.0	189.0	214.0	259.0	334.0	346.0	416.0	524.0	659.0
1957	102.0	104.0	110.0	121.0	144.0	253.0	288.0	360.0	507.0
1958	42.0	44.0	45.0	47.0	65.0	94.0	109.0	125.0	204.0
1959	41.0	41.0	41.0	41.0	41.0	41.0	45.0	56.0	158.0
1960	72.0	72.0	73.0	76.0	82.0	150.0	243.0	362.0	532.0
1961	50.0	58.0	66.0	70.0	122.0	163.0	173.0	206.0	399.0
1962	60.0	61.0	72.0	85.0	96.0	111.0	127.0	158.0	277.0
1963	30.0	45.0	55.0	68.0	100.0	116.0	123.0	154.0	218.0
1964	44.0	49.0	58.0	58.0	68.0	77.0	84.0	104.0	177.0
1965	203.0	209.0	253.0	336.0	390.0	481.0	524.0	509.0	692.0
1966	64.0	65.0	71.0	74.0	103.0	128.0	167.0	176.0	233.0
1967	65.0	67.0	72.0	82.0	103.0	145.0	169.0	199.0	343.0
1968	61.0	65.0	68.0	80.0	91.0	103.0	107.0	130.0	210.0
1969	45.0	46.0	48.0	53.0	112.0	219.0	249.0	287.0	399.0
1970	109.0	111.0	113.0	121.0	136.0	218.0	262.0	287.0	349.0
1971	44.0	47.0	50.0	66.0	81.0	106.0	143.0	193.0	295.0
1972	165.0	168.0	176.0	181.0	231.0	274.0	305.0	361.0	559.0
1973	155.0	162.0	169.0	180.0	211.0	272.0	336.0	341.0	437.0
1974	90.0	93.0	104.0	110.0	112.0	142.0	164.0	195.0	238.0
1975	157.0	162.0	172.0	174.0	198.0	246.0	269.0	295.0	422.0
1976	157.0	160.0	166.0	176.0	201.0	274.0	355.0	358.0	505.0
1977	112.0	124.0	129.0	132.0	179.0	265.0	282.0	311.0	360.0
1978	83.0	84.0	85.0	87.0	94.0	131.0	159.0	195.0	301.0
1979	78.0	78.0	80.0	86.0	94.0	131.0	172.0	224.0	328.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1979)

MEAN	101.6	107.8	116.2	127.8	151.0	191.1	221.6	259.6	379.0
MAXIMUM	203.0	212.0	253.0	336.0	390.0	481.0	524.0	524.0	692.0
MINIMUM	30.0	41.0	41.0	41.0	41.0	41.0	45.0	56.0	113.0
STANDARD DEVIATION	51.04	54.18	60.45	70.00	78.40	93.10	105.02	111.97	147.96
SKEWNESS	0.426	0.422	0.570	1.017	1.056	0.895	0.715	0.368	0.266
STD ERROR OF SKEWNESS	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409
SERIAL CORR COEFF	0.374	0.389	0.347	0.245	0.194	0.095	0.105	0.114	0.004
COEFF OF VARIATION	0.502	0.503	0.520	0.548	0.519	0.487	0.474	0.431	0.390
MEAN LOGS	1.949	1.876	2.005	2.045	2.124	2.228	2.293	2.368	2.542
STD DEVIATION LOGS	0.235	0.231	0.235	0.236	0.235	0.227	0.230	0.219	0.188
SKEWNESS LOGS	-0.200	-0.060	-0.013	0.055	-0.062	-0.522	-0.705	-0.895	-0.624
STD ERR SKEWNESS LOGS	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409
SER CORR COEFF LOGS	0.388	0.397	0.379	0.338	0.296	0.171	0.148	0.114	0.039
COEFF OF VAR LOGS	0.121	0.117	0.117	0.115	0.106	0.102	0.100	0.092	0.074

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1979)

0.99	289.3	317.7	354.2	401.6	432.5	466.4	509.7	539.0	782.2
0.98	254.9	276.6	306.1	344.2	378.0	425.9	472.8	509.4	731.0
0.96	220.8	236.9	260.2	290.3	325.2	382.4	431.2	474.1	673.8
0.90	175.7	186.1	202.3	223.3	257.1	319.1	367.1	415.7	585.9
0.80	140.8	148.0	159.6	175.0	205.8	264.8	308.9	358.6	505.7
0.50	90.5	95.1	101.4	110.4	133.7	177.0	208.7	251.1	364.7
0.20	56.7	60.6	64.3	70.1	86.2	110.9	129.2	158.3	246.7
0.10	43.9	47.7	50.6	55.4	64.6	86.9	96.9	118.8	195.8
0.05	35.4	39.1	41.5	45.8	55.3	66.6	74.9	91.5	159.5
0.02	27.6	31.2	33.2	36.9	45.2	50.2	54.8	66.4	124.6
0.01	23.3	26.8	28.6	32.0	39.0	41.1	43.9	52.7	104.7

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1947-1979)									
P95	P90	P75	P70	P50	P25	P10			
97.0	150.0	300.0	360.0	600.0	970.0	1300.0			

## STATION 12119000 CEDAR RIVER AT RENTON, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE	REG. (R)
1907	2380.	2060.	1900.	1810.	1600.	1300.	1270.	1190.	1110.	5650.	11/15/06	R
1946	5060.	4640.	3530.	2430.	1700.	1300.	1280.	1190.	1100.	2860.	12/29/45	R
1947	2610.	2170.	1880.	1640.	1410.	1300.	1230.	1210.	1130.	5510.	12/15/46	R
1948	2550.	2000.	1700.	1500.	1350.	1080.	1020.	1000.	966.	2750.	02/26/48	R
1949	3520.	3400.	2810.	2180.	1830.	1440.	1350.	1270.	1220.	2780.	02/17/49	R
1950	6500.	6000.	4560.	2990.	2010.	1680.	1590.	1450.	1190.	4180.	03/04/50	R
1951	1660.	1520.	1220.	1060.	889.	859.	813.	792.	713.	2190.	02/04/52	R
1952	3970.	3580.	2930.	2310.	1840.	1400.	1180.	1050.	931.	4110.	02/01/53	R
1953	2310.	2080.	1610.	1320.	1040.	951.	902.	867.	820.	3250.	12/09/53	R
1954	2840.	2060.	1530.	1180.	1040.	991.	951.	902.	867.	3480.	02/08/55	R
1955	3040.	2820.	2280.	2150.	1830.	1630.	1420.	1290.	1140.	3640.	12/11/55	R
1956	3260.	3220.	2910.	2340.	1690.	1220.	1130.	1120.	1020.	3460.	12/18/56	R
1957	1910.	1610.	1350.	1280.	1180.	1090.	986.	848.	768.	2160.	01/17/58	R
1958	3280.	3220.	2810.	2040.	1740.	1580.	1580.	1400.	1230.	3520.	01/25/59	R
1959	5130.	4830.	3960.	2770.	2320.	1930.	1430.	1310.	1180.	5860.	12/15/59	R
1960	2820.	2700.	2550.	2150.	1820.	1550.	1430.	1340.	1250.	3180.	02/21/61	R
1961	2130.	1660.	1460.	1280.	1180.	987.	864.	805.	752.	2570.	12/24/61	R
1962	2260.	2140.	1940.	1530.	1230.	1100.	1040.	1010.	914.	2340.	01/03/63	R
1963	2680.	2490.	2180.	2030.	1770.	1360.	1170.	1120.	1090.	2960.	01/25/64	R
1964	4790.	4390.	3730.	2840.	2130.	1580.	1500.	1390.	1190.	5300.	01/31/65	R
1965	1360.	1290.	1160.	1060.	922.	878.	842.	797.	751.	1570.	01/07/66	R
1966	2840.	2580.	2250.	1980.	1730.	1550.	1430.	1280.	1050.	2960.	01/19/67	R
1967	2510.	2420.	2220.	1660.	1300.	1220.	1330.	1220.	1050.	2910.	01/21/68	R
1968	3180.	2940.	2490.	1950.	1390.	1330.	1160.	1030.	962.	3720.	01/07/69	R
1969	2130.	2130.	2110.	1770.	1440.	1160.	1070.	1040.	896.	2290.	01/25/70	R
1970	2320.	2170.	1900.	1690.	1530.	1370.	1370.	1250.	1150.	2730.	01/19/71	R
1971	5500.	4670.	4010.	3560.	2860.	2150.	1890.	1710.	1480.	6210.	03/06/72	R
1972	2980.	2810.	2370.	1950.	1580.	1240.	995.	866.	698.	3090.	12/27/72	R
1973	3130.	3030.	2910.	2520.	2100.	1650.	1490.	1410.	1300.	3190.	01/26/74	R
1974	3280.	2910.	2680.	2360.	1850.	1590.	1460.	1270.	1100.	3520.	01/18/75	R
1975	8200.	7570.	6240.	4300.	2880.	2300.	1950.	1690.	1340.	8800.	12/04/75	R
1976	1210.	997.	855.	678.	607.	568.	537.	506.	507.	1340.	01/18/77	R
1977	5330.	4800.	4140.	3710.	2750.	1890.	1500.	1270.	995.	5670.	12/03/77	R
1978	1690.	1620.	1460.	1220.	1160.	949.	830.	803.	743.	1840.	02/12/79	R

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1946-1979)

W R C SYSTEMATIC  
ESTIMATE RECORD

MEAN	3245.3	2956.7	2527.8	2047.9	1661.1	1373.0	1242.9	1145.9	1022.5
MINIMUM	8200.0	7570.0	6240.0	4300.0	2880.0	2300.0	1950.0	1710.0	1480.0
STANDARD DEVIATION	1529.17	1420.67	1128.82	789.40	527.40	359.54	306.15	262.07	212.87
SKENNESS	1.447	1.401	1.263	0.931	0.568	0.347	0.099	-0.103	-0.299
STD ERROR OF SKENNESS	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403
SERIAL CORR COEFF	-0.377	-0.361	-0.368	-0.388	-0.352	-0.349	-0.334	-0.354	-0.242
COEFF OF VARIATION	0.471	0.480	0.447	0.385	0.317	0.262	0.246	0.229	0.208
MEAN LOGS	3.471	3.428	3.364	3.260	3.198	3.122	3.081	3.047	2.999
STD DEVIATION LOGS	0.187	0.194	0.187	0.169	0.145	0.121	0.115	0.108	0.098
SKENNESS LOGS	0.280	0.196	0.002	-0.285	-0.562	-0.699	-0.778	-0.943	-0.919
STD ERR SKENNESS LOGS	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403
SER CORR COEFF LOGS	-0.472	-0.451	-0.449	-0.450	-0.400	-0.395	-0.367	-0.364	-0.250
COEFF OF VAR LOGS	0.054	0.057	0.056	0.052	0.045	0.039	0.037	0.036	0.033

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1979)

0.99	1184.0	1010.4	849.5	710.7	635.2	605.2	562.1	528.8	509.5	1371.8	1371.8
0.95	1506.1	1317.6	1138.7	975.1	869.2	799.8	740.5	699.2	654.9	1726.3	1726.3
0.90	1724.5	1525.9	1331.2	1145.5	1014.0	915.3	845.1	797.4	737.3	1962.7	1962.7
0.80	2045.5	1831.9	1608.5	1382.9	1207.5	1064.1	978.5	920.6	839.4	2305.3	2305.3
0.50	2896.4	2638.9	2310.5	1942.5	1628.1	1368.4	1245.3	1157.9	1033.6	3190.1	3190.1
0.20	4219.7	3880.6	3319.4	2657.9	2100.4	1681.3	151.1	1378.3	1212.2	4516.7	4516.7
0.10	5197.1	4767.2	4011.9	3099.7	2359.9	1840.9	1640.7	1480.2	1294.5	5467.8	5467.8
0.04	6548.4	6026.9	4910.4	3624.6	2604.4	2003.8	1770.5	1575.8	1371.9	6751.8	6751.8
0.02	7640.9	7018.5	5595.4	3994.0	2821.4	2103.6	1847.9	1629.8	1415.7	7768.3	7768.3
0.01	8808.2	8068.4	6293.0	4346.6	2982.5	2188.9	1912.8	1673.1	1450.9	8836.3	8836.3

## STATION 12119500 MAY CREEK NR RENTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1946	5.91	25.2	38.2	53.5	50.5	38.2	23.1	6.96	6.01	2.75	2.65	5.64	21.6
1947	4.95	18.2	51.0	28.0	44.6	18.3	18.9	5.98	4.30	5.54	3.65	3.75	16.5
1948	26.3	42.2	49.0	56.8	47.6	34.4	22.5	22.7	14.9	7.38	4.35	5.88	27.8
1949	5.39	31.9	49.0	23.2	66.1	28.8	14.8	9.13	4.22	3.02	2.87	2.89	19.8
1950	3.91	14.9	28.8	67.5	57.2	75.4	31.3	9.07	4.09	3.32	3.66	3.87	25.1
1955													
1956	8.24	43.8	87.1	76.9	21.2	41.2	19.2	6.07	5.10	3.31	2.73	2.58	26.6
1957	11.5	15.4	38.7	25.1	49.5	50.1	21.9	8.24	3.71	3.15	3.31	2.67	19.4
1958	3.71	5.43	19.4	44.2	37.2	15.2	16.3	6.87	2.94	1.95	1.86	2.12	13.0
1964	5.53	35.3	42.9	87.1	29.9	26.6	14.7	7.22	16.7	5.50	3.69	5.00	23.4

## STATION 12119600 MAY CREEK AT MOUTH, NEAR RENTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1964													
1965	6.14	32.9	68.2	54.8	58.0	17.5	19.5	13.6	6.82	4.70	4.69	6.05	24.1
1966	5.07	10.9	24.8	55.6	25.5	34.1	20.7	8.00	4.85	4.93	3.52	4.29	16.8
1967	4.65	12.9	55.4	76.9	35.1	29.3	23.5	13.0	5.82	3.75	3.04	3.87	22.3
1968	6.05	7.02	22.2	46.7	43.9	33.4	23.2	8.62	14.0	4.27	5.79	6.46	18.4
1969	11.3	26.0	76.8	62.1	55.2	18.5	20.2	13.2	10.2	5.86	4.15	7.30	25.8
1970	7.00	10.0	31.8	59.8	35.1	23.5	27.2	11.5	5.19	3.81	3.73	4.30	18.5
1971	5.66	14.5	56.9	61.2	43.4	63.7	31.7	9.21	9.68	7.05	3.62	5.73	26.0
1972	7.67	22.9	48.6	58.3									
1978													
1979	6.85	22.6	31.5	19.8	58.8	26.2	29.3	14.7	6.36	5.49	4.87	11.7	

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1964-1979)

MEAN	6.7	17.7	46.2	55.0	43.1	30.1	24.6	11.9	8.1	5.0	4.2	5.9	21.7
MAXIMUM	11.3	32.9	76.8	76.9	58.8	63.7	38.3	15.5	14.0	7.1	5.8	11.7	26.0
MINIMUM	4.6	7.0	22.2	19.8	25.5	17.5	12.9	8.0	4.9	3.8	3.0	3.7	16.8
STD DEVIATION	1.97	8.69	19.63	15.45	11.99	13.85	7.21	2.74	3.06	1.12	0.89	2.51	3.80
SKENNESS	1.755	0.521	0.236	-1.440	0.129	2.047	0.407	-0.327	0.807	0.782	0.712	1.695	-0.102
STD ERR SKEW	0.717	0.717	0.717	0.717	0.717	0.717	0.687	0.717	0.717	0.752	0.752	0.717	0.794
SER CORR CDLEFF	0.091	-0.329	-0.814	-0.263	-0.453	-0.252	0.372	-0.339	-0.013	-0.239	-0.319	0.167	-0.616
COEFF OF VAR	0.293	0.490	0.424	0.281	0.278	0.460	0.292	0.230	0.377	0.225	0.214	0.422	0.175
MEAN LOGS	0.813	1.200	1.627	1.718	1.619	1.447	1.374	1.065	0.884	0.688	0.612	0.744	1.331
STD DEV LOGS	0.113	0.223	0.196	0.168	0.125	0.167	0.132	0.106	0.159	0.095	0.091	0.161	0.078
SKENNESS LOGS	1.082	-0.116	-0.193	-2.338	-0.259	1.083	-0.444	-0.532	0.332	0.406	0.344	0.911	-0.217
STD ERR SKEW LOGS	0.717	0.717	0.717	0.717	0.717	0.717	0.687	0.717	0.717	0.752	0.752	0.717	0.794
SER CORR LOGS	0.183	-0.321	-0.821	-0.430	-0.430	-0.261	0.258	-0.407	-0.005	-0.262	-0.320	0.191	-0.826
COEFF OF VAR LOGS	0.139	0.186	0.121	0.098	0.077	0.116	0.096	0.099	0.179	0.138	0.148	0.216	0.058
% OF AVE FLOW	2.6	6.9	17.9	21.3	16.7	11.6	9.5	4.6	3.1	1.9	1.6	2.3	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1964-1979)

0.99	4.4	4.6	13.9	12.1	20.2	15.5	10.6	6.0	3.6	3.1	2.7	3.0	13.7
0.95	4.6	6.7	19.7	24.0	25.4	17.1	13.9	7.5	4.4	3.5	3.0	3.4	15.8
0.90	4.9	8.2	23.6	32.0	28.6	18.3	15.9	8.4	4.9	3.7	3.2	3.6	17.0
0.80	5.2	10.3	29.1	42.2	32.8	20.2	18.5	9.6	5.6	4.0	3.4	4.0	18.5
0.50	6.2	16.0	43.0	59.6	42.1	26.2	24.2	11.9	7.5	4.8	4.0	5.3	21.5
0.20	7.9	24.5	62.2	69.3	53.2	37.4	34.7	14.3	10.3	5.8	4.9	7.4	24.9
0.10	9.2	30.4	74.9	71.4	59.6	47.0	34.4	15.6	12.3	6.5	5.4	9.1	26.8
0.04	11.1	38.1	90.7	72.3	72.5	62.0	38.4	17.0	15.1	7.4	6.0	11.7	28.9
0.02	12.7	44.0	102.3	72.5	72.1	75.6	47.0	17.8	17.2	8.0	6.5	14.0	30.2
0.01	14.5	50.1	113.7	72.6	76.9	91.6	43.4	18.6	19.5	8.6	7.0	16.6	31.5

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1946-1979)			W R C	SYSTEMATIC
WATER YEAR	FLOW(CFS)	DATE	MEAN LOGS	STANDARD DEVIATION LOGS	ESTIMATE	RECORD	
1946	131.0	12-29-1945			2.3312	2.3312	
1947	198.0	12-14-1946			0.1982	0.1982	
1948	148.0	1- 2-1948			0.003	-0.402	
1949	401.0	2-17-1949					
1950	354.0	3- 4-1950					
1956	240.0	12-21-1955					
1957	194.0	2-26-1957					
1958	180.0	1-17-1958					
1965	295.0	11-30-1964	0.99		74.2	65.0	
1966	208.0	1- 6-1966	0.95		101.2	96.4	
1967	283.0	1-20-1967	0.90		119.5	117.6	
1968	156.0	1-21-1968	0.80		146.0	147.7	
1969	286.0	1- 7-1969	0.50		214.4	221.0	
1970	140.0	1-27-1970	0.20		314.8	316.7	
1971	210.0	12- 6-1970	0.10		384.8	376.0	
1973	238.0	1-26-1972	0.04		476.9	446.0	
1974	316.0	1-16-1974	0.02		547.7	494.8	
1975	294.0	2-20-1975	0.01		620.4	541.0	
1976	510.0	12- 3-1975					
1977	94.0	12-26-1976					
1978	77.0	9-22-1978					
1979	228.0	2-12-1979					

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1964				45.4	19.0	19.0	11.2	6.08	12.4	4.63	3.55	3.95	
1965	3.58	16.7	29.1	28.7	27.6	9.58	10.5	8.30	5.08	3.93	3.79	3.10	12.4
1966	3.44	6.20	12.4	28.2	13.4	22.0	14.6	8.04	4.30	3.44	2.65	3.11	10.1
1967	3.22	8.45	32.2	40.6	18.0	14.3	12.5	8.00	4.63	3.7	2.73	2.65	12.6
1968	4.06	11.3	25.0	25.0	26.5	19.9	13.9	6.70	8.20	3.52	4.43	5.02	11.0



## STATION 12119700 COAL CREEK NR BELLEVUE, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1964-1979)		W R C	
WATER YEAR	FLOW (CFS)	DATE	MEAN LOGS	STANDARD DEVIATION LOGS	ESTIMATE	SYSTEMATIC RECORD
1964	249.0	1- 1-1964			2.1978	2.1978
1965	134.0	11-30-1964			0.1595	0.1595
1966	130.0	1- 6-1966		SKWENESS LOGS	0.002	0.950
1967	163.0	1-19-1967				
1968	109.0	2- 3-1968				
1969	362.0	1- 6-1969				
1970	103.0	1-27-1970				
1971	159.0	12- 6-1970				
1972	258.0	3- 5-1972	0.99		67.1	86.8
1973	128.0	12-26-1972	0.95		86.2	96.6
1974	141.0	1-16-1974	0.90		98.5	103.8
1975	141.0	1-13-1975	0.80		115.8	115.3
1976	244.0	12- 3-1975	0.50		157.7	148.9
1977	99.0	8-25-1977	0.20		214.8	208.7
1978	139.0	12-11-1977	0.10		252.5	257.9
1979	145.0	2-12-1979	0.04		300.0	332.4
			0.02		335.4	397.9
			0.01		370.8	472.8

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1964-1979)

## STATION 12119800 VALLEY (NO BRANCH MERCER) CR NR BELLEVUE, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1949-1977)		W R C	
WATER YEAR	FLOW (CFS)	DATE	MEAN LOGS	STANDARD DEVIATION LOGS	ESTIMATE	SYSTEMATIC RECORD
1949	47.0	2-16-1949			1.6442	1.6442
1950	45.0	3- 4-1950			0.2190	0.2190
1951	241.0	2-10-1951		SKWENESS LOGS	0.035	1.264
1952	17.0	2- 4-1952				
1953	19.0	1-31-1953				
1954	33.0	1- 6-1954				
1955	27.0	2- 8-1955				
1956	66.0	12-20-1955				
1957	34.0	2-25-1957	0.99		13.8	21.7
1958	37.0	1-16-1958	0.95		19.3	23.8
1959	40.0	1-24-1959	0.90		23.1	25.7
1960	33.0	2-15-1960	0.80		28.8	28.9
1961	42.0	2-24-1961	0.50		43.9	39.7
1962	30.0	12-17-1961	0.20		67.3	63.5
1963	37.0	2- 3-1963	0.10		84.3	86.6
1964	42.0	1- 1-1964	0.04		107.2	127.1
1965	34.0	2- 5-1965	0.02		125.3	157.9
1966	44.0	1- 6-1966	0.01		144.3	220.1
1967	49.0	1-19-1967				
1970	39.0	1-14-1970				
1971	41.0	3-12-1971				
1972	85.0	3- 6-1972				
1973	51.0	12-26-1972				
1974	62.0	12- 7-1973				
1975	68.0	2-20-1975				
1976	85.0	12- 4-1975				
1977	62.0	3- 9-1977				

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1949-1977)

## STATION 12120000 MERCER CREEK NEAR BELLEVUE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945										3.45	3.25	6.07	
1955	15.5	37.1	59.5	60.5	25.4	37.7	18.6	11.0	11.1	5.75	5.57	5.05	24.7
1956	17.4	18.2	25.7	21.1	47.6	38.9	21.9	8.79	8.51	5.86	6.08	7.76	18.5
1957	10.9	13.2	29.0	56.3	47.2	22.9	20.6	15.8	5.34	5.22	5.50	5.39	21.8
1958	8.78	26.4	36.7	61.7	32.8	24.1	22.5	15.7	7.83	4.76	6.97	6.95	20.0
1959	13.0	30.7	43.0	30.6	36.4	23.5	21.4	20.3	6.76	5.32	4.25	6.59	24.1
1960	12.0	45.3	27.5	48.3	58.9	35.9	21.3	12.7	7.33	6.63	7.24	8.28	15.4
1961	12.8	17.5	33.5	27.6	16.0	23.1	23.1	12.0	8.72	6.90	5.49	6.31	16.9
1962	12.1	28.2	32.4	19.8	32.1	18.4	14.5	10.2	17.1	6.22	6.54	8.82	21.0
1963	12.0	37.8	33.5	55.3	23.7	26.3	23.2	12.3	7.05	6.59	7.43	6.25	17.9
1964	8.49	30.3	40.2	45.3	40.2	15.4	18.4	11.7	7.51	4.96	7.93	17.6	
1965	9.31	19.6	29.2	40.3	23.8	28.5	21.4	13.1	8.92	4.95	7.17	22.2	
1966	11.3	28.4	54.2	57.4	26.9	25.1	22.3	12.6	17.2	7.21	15.5	13.8	
1967	14.8	14.6	32.4	41.4	38.2	32.2	26.6	15.3	12.0	7.84	7.33	19.7	
1968	22.5	37.0	61.3	57.8	59.0	22.6	25.4	11.4	8.57	8.49	8.76	14.0	
1969	13.2	20.6	38.3	51.9	26.2	26.6	25.4	16.2	15.3	12.2	8.82	15.8	
1970	16.1	29.2	47.3	45.3	37.3	54.7	26.7	12.2	17.1	11.3	8.29	19.8	
1971	14.7	31.3	46.3	43.9	54.4	67.5	31.3	12.2	17.4	8.82	6.86	10.7	
1972	10.2	18.4	62.1	42.6	25.5	44.8	17.5	13.2	17.0	14.2	9.88	7.74	
1973	15.4	44.9	69.9	47.2	40.1	49.4	21.5	17.4	10.9	8.00	14.2	8.00	
1974	12.0	32.7	44.6	55.7	52.6	35.8	24.8	18.3	13.3	10.8	18.7	13.7	
1975	37.6	42.8	56.7	36.1	34.6	27.5	21.8	16.2	10.9	8.74	18.6	14.6	
1976	11.6	11.0	16.5	15.9	14.3	30.5	13.5	17.4	10.2	10.2	9.58	22.3	
1977	14.3	26.6	43.2	40.9	27.9	22.6	26.9	15.5	8.19	10.6	9.64	14.0	
1978	13.0	36.7	23.1	20.6	40.8	18.5	20.9	11.5					
1979													

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1979)

MEAN	14.1	28.3	41.1	42.6	35.9	31.4	21.6	13.6	11.0	7.7	8.1	10.5	22.2
MAXIMUM	37.6	45.3	69.9	61.7	59.0	67.5	31.3	20.3	17.4	14.2	18.7	22.3	29.8
MINIMUM	8.5	11.0	16.5	15.9	14.3	15.4	12.7	8.4	5.3	3.2	3.3	5.1	15.2
STD DEVIATION	5.85	10.00	13.90	13.85	12.61	12.52	4.37	3.14	3.90	2.71	4.05	4.94	4.31
SKWENESS	3.072	0.004	0.381	-0.536	0.298	1.375	-0.201	0.287	0.625	0.497	1.310	0.950	0.242
STD ERR SKEW	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472
SER CORR COEFF	-0.054	-0.244	0.025	-0.093	-0.153	0.580	-0.053	0.397	0.396	0.509	0.590	0.597	0.232
COEFF OF VAR	0.414	0.354	0.338	0.325	0.351	0.399	0.202	0.231	0.356	0.350	0.502	0.469	0.194
MEAN LOGS	1.126	1.421	1.589	1.602	1.527	1.468	1.326	1.122	1.014	0.862	0.861	0.981	1.338
STD DEV LOGS	0.135	0.172	0.154	0.171	0.164	0.157	0.094	0.102	0.151	0.159	0.200	0.192	0.085
SKWENESS LOGS	1.602	-0.625	-0.368	-1.064	-0.493	0.535	-0.842	-0.129	0.203	-0.369	0.356	0.408	-0.096
STD ERR SKEW LOGS	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472
SER CORR LOGS	0.034	-0.238	-0.063	-0.068	-0.131	0.517	-0.100	0.428	0.396	0.532	0.456	0.456	0.206
COEFF OF VAR LOGS	0.120	0.121	0.097	0.106	0.107	0.107	0.071	0.091	0.149	0.184	0.232	0.196	0.064
% OF AVE FLOW	5.3	10.6	15.5	16.0	13.5	11.8	8.1	5.1	4.1	2.9	3.0	4.0	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1979)

0.99	9.2	8.8	15.5	12.0	12.3	14.6	11.2	7.5	4.8	2.8	2.8	3.9	13.6
0.95	9.5	12.9	20.9	19.0	17.3	17.2	14.2	8.9	6.0	3.9	3.6	4.9	15.7
0.90	9.8	15.6	24.3	23.6	20.5	18.9	15.8	9.8	6.7	4.5	4.1	5.6	16.9
0.80	10.4	19.3	29.0	29.8	24.8	21.5	17.9	10.9	7.7	5.4	4.9	6.6	18.5
0.50	12.3	27.5	39.6	42.8	34.7	28.4	21.8	13.3	10.2	7.4	7.1	9.3	21.9
0.20	16.5	37.0	52.5	55.8	46.5	39.3	25.5	16.2	13.8	9.9	10.6	13.7	25.7
0.10	20.2	42.3	60.1	61.9	53.3	47.4	27.2	17.8	16.3	11.4	13.3	17.1	28.0
0.04	26.2	48.1	68.8	67.6	60.8	58.8	28.9	19.8	19.5	13.2	17.2	22.0	30.5
0.02	31.8	51.8	74.8	70.8	65.9	68.1	29.9	21.1	21.9	14.3	20.4	26.0	32.3
0.01	38.5	55.1	80.3	73.3	70.5	78.2	30.6	22.3	24.5	15.4	23.9	30.4	33.9

## STATION 12120000 MERCER CREEK NEAR BELLEVUE, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1957	4.4	4.5	4.7	5.0	5.3	5.3	5.9	6.8	8.8
1958	3.4	3.9	4.6	4.9	5.4	5.8	5.9	6.1	7.4
1959	2.5	2.7	2.8	2.9	3.1	3.3	3.7	4.3	5.7
1960	3.5	3.5	3.8	4.7	5.3	5.9	7.3	8.0	10.0
1961	3.6	3.6	3.8	4.5	4.6	5.2	6.1	6.4	8.6
1962	3.4	3.6	3.9	4.1	4.1	4.6	5.1	5.6	8.2
1963	3.9	3.9	4.0	4.2	5.3	6.1	6.5	7.1	8.8
1964	4.4	4.6	4.8	5.0	5.6	6.1	7.1	7.5	9.5
1965	4.3	4.4	4.7	5.0	5.9	6.6	6.6	6.8	8.1
1966	4.3	4.6	4.9	5.2	5.9	6.6	6.7	7.5	8.7
1967	4.3	4.3	4.5	4.7	4.9	5.3	5.9	6.7	8.8
1968	4.4	4.5	4.6	4.7	4.9	5.3	5.9	6.7	8.8
1969	5.3	5.5	5.6	5.8	6.2	7.6	11.0	12.0	15.0
1970	5.5	5.6	5.7	5.9	6.3	7.2	8.8	10.0	12.0
1971	6.0	6.1	6.4	6.4	7.4	8.2	8.6	9.1	11.0
1972	6.5	6.7	7.1	7.8	8.8	10.0	11.0	12.0	14.0
1973	4.5	4.5	4.6	4.7	6.0	8.2	11.0	12.0	13.0
1974	5.9	5.9	6.2	6.6	6.7	7.1	8.6	10.0	12.0
1975	7.1	7.2	7.3	7.5	7.7	8.3	9.0	10.0	13.0
1976	6.2	6.4	6.6	6.9	7.3	8.4	9.8	10.0	13.0
1977	6.7	7.1	7.3	8.1	8.7	11.0	11.0	12.0	13.0
1978	5.6	5.9	6.0	6.2	6.6	7.7	10.0	11.0	13.0
1979	6.5	6.6	6.9	7.4	8.7	9.1	9.7	11.0	13.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1957-1979)

MEAN	4.9	5.0	5.2	5.6	6.1	6.9	7.9	8.6	10.5
MAXIMUM	7.1	7.2	7.3	8.1	8.8	11.0	11.0	12.0	15.0
MINIMUM	2.5	2.7	2.8	2.9	3.1	3.3	3.7	4.3	5.7
STANDARD DEVIATION	1.26	1.27	1.27	1.34	1.49	1.82	2.16	2.37	2.53
SKWENESS	0.112	0.178	0.166	0.309	0.305	0.368	0.039	0.072	0.012
STD ERROR OF SKWENESS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481
SERIAL CORR COEFF	0.777	0.763	0.695	0.568	0.576	0.620	0.548	0.684	0.668
COEFF OF VARIATION	0.259	0.254	0.242	0.240	0.244	0.264	0.274	0.275	0.240
MEAN LOGS	0.674	0.687	0.707	0.734	0.772	0.823	0.880	0.919	1.010
STD DEVIATION LOGS	0.117	0.114	0.108	0.107	0.110	0.119	0.126	0.125	0.109
SKWENESS LOGS	-0.377	-0.266	-0.337	-0.318	-0.416	-0.429	-0.429	-0.351	-0.379
STD ERR SKWENESS LOGS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481
SER CORR COEFF LOGS	0.781	0.773	0.687	0.543	0.544	0.584	0.599	0.654	0.656
COEFF OF VAR LOGS	0.174	0.165	0.153	0.146	0.142	0.144	0.143	0.136	0.108

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1957-1979)

0.99	8.2	8.5	8.5	9.1	9.8	11.5	13.4	15.1	17.1
0.98	7.8	8.0	8.1	8.6	9.4	10.9	12.7	14.2	16.3
0.96	7.3	7.5	7.6	8.1	8.9	10.3	12.0	13.3	15.4
0.90	6.6	6.7	6.9	7.4	8.1	9.3	10.8	11.9	14.0
0.80	5.9	6.1	6.3	6.7	7.3	8.4	9.7	10.6	12.7
0.50	4.8	4.9	5.2	5.5	6.0	6.8	7.8	8.4	10.4
0.20	3.8	3.9	4.1	4.4	4.8	5.3	6.0	6.6	8.3
0.10	3.3	3.5	3.7	3.9	4.2	4.6	5.2	5.7	7.4
0.05	2.9	3.1	3.3	3.5	3.8	4.1	4.5	5.0	6.6
0.02	2.6	2.7	2.9	3.1	3.3	3.6	3.9	4.4	5.8
0.01	2.3	2.5	2.7	2.9	3.1	3.2	3.5	4.0	5.3

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1957-1979)

P95	P90	P75	P70	P50	P25	P10
5.1	6.1	8.5	9.4	15.0	27.0	48.0

## STATION 12120000 MERCER CREEK NEAR BELLEVUE, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA FLOW(CFS)	DATE	REG.(R)
1956	172.	150.	108.	79.	78.	64.	53.	47.	40.	242.	12/20/55	
1957	160.	140.	93.	71.	55.	43.	37.	34.	30.	180.	02/25/57	
1958	177.	125.	93.	77.	63.	54.	46.	39.	31.	238.	01/17/58	
1959	188.	129.	98.	70.	64.	51.	45.	40.	34.	220.	01/24/59	
1960	162.	116.	83.	61.	49.	41.	36.	31.	27.	210.	12/15/59	
1961	152.	119.	103.	69.	61.	54.	48.	47.	40.	192.	02/24/61	
1962	141.	87.	66.	48.	45.	33.	27.	26.	22.	168.	12/17/61	
1963	123.	101.	71.	49.	40.	34.	29.	26.	26.	150.	02/03/63	
1964	168.	108.	69.	59.	55.	47.	44.	39.	32.	244.	01/01/64	
1965	164.	112.	77.	70.	52.	48.	45.	39.	32.	193.	12/22/64	
1966	156.	106.	76.	69.	52.	37.	35.	31.	27.	187.	01/06/66	
1967	189.	129.	92.	70.	58.	57.	49.	43.	36.	254.	01/19/67	
1968	124.	89.	68.	61.	50.	41.	39.	37.	31.	175.	02/04/68	
1969	170.	150.	130.	91.	71.	64.	62.	54.	44.	248.	12/04/68	
1970	163.	101.	85.	81.	55.	47.	40.	37.	32.	189.	01/14/70	
1971	152.	127.	83.	61.	55.	49.	47.	46.	40.	202.	01/15/71	
1972	300.	229.	160.	127.	89.	69.	59.	54.	46.	402.	03/06/72	
1973	182.	154.	134.	112.	79.	55.	52.	45.	35.	243.	12/16/72	
1974	217.	195.	129.	96.	72.	62.	57.	55.	45.	315.	12/07/73	
1975	221.	172.	111.	81.	73.	57.	54.	50.	40.	340.	02/20/75	
1976	219.	178.	110.	69.	59.	54.	50.	44.	40.	274.	12/04/75	
1977	120.	86.	59.	47.	32.	23.	22.	20.	19.	216.	03/09/77	
1978	170.	133.	112.	68.	55.	45.	39.	35.	31.	306.	09/22/78	
1979	149.	95.	65.	48.	42.	33.	29.	30.	27.	346.	11/04/78	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1956-1979)

	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKENNESS	STD ERROR OF SKENNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKENNESS LOGS	STD ERR SKENNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
1956	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1957	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1958	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1959	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1960	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1961	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1962	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1963	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1964	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1965	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1966	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1967	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1968	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1969	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1970	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1971	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1972	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1973	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1974	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1975	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1976	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1977	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1978	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		
1979	172.5	300.0	120.0	38.48	1.614	0.472	0.472	0.275	2.101	0.089	0.742	0.472	0.093	0.040		

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1956-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
1956	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1957	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1958	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1959	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1960	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1961	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1962	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1963	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1964	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1965	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1966	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1967	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1968	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1969	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1970	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1971	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1972	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1973	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1974	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1975	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1976	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1977	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1978	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5
1979	117.5	126.6	132.8	141.7	164.7	198.3	221.8	253.0	277.3	302.5

STATION 12120500 JUANITA CREEK NEAR KIRKLAND, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1963													
1964	2.91	11.1	12.7	21.9	10.9	12.3	9.65	5.56	6.66	3.24	1.84	2.15	8.61
1965	3.02	8.43	16.1	22.9	23.1	9.49	11.0	6.90	3.71	2.79	2.93	1.85	3.36
1966	3.26	6.88	13.6	22.8	14.2	16.2	9.99	6.38	4.05	3.70	2.75	2.53	9.32
1967	3.85	9.37	23.3	30.4	17.6	13.6	10.9	7.36	4.61	3.08	2.91	2.79	8.85
1968	5.36	4.90	15.4	20.5	17.5	16.7	11.6	6.49	7.40	4.46	5.87	5.68	10.8
1969	8.62	14.3	32.3	26.9	23.9	10.4	10.8	7.28	7.05	3.35	3.35	7.49	13.0
1970	5.85	8.55	19.6	25.8	15.3	12.1	12.7	5.99	3.71	3.81	3.11	5.20	10.1
1971	6.54	10.1	21.3	24.4	15.3	24.4	13.4	7.26	5.43	4.99	3.25	4.88	11.8
1972	5.04	11.8	16.1	13.4	14.1	27.7	11.3	5.21	4.54	3.98	3.97	4.57	10.1
1973		7.47		18.4	12.4	14.4	6.66	5.68	6.25				
1974	4.55	20.7	47.5	29.3	20.7	26.1	17.7	7.60	4.83	3.95	4.91	3.44	12.0
1975	3.45	9.85	22.3	31.4	20.7	21.0	11.0	6.41	7.14	4.47	5.54	4.62	15.5
1976	12.8	42.4	35.4	25.8	15.6	14.1	11.2	9.16	5.12	3.38	7.63	7.06	7.24
1977	4.33	4.43	6.00	8.00	6.24	17.2	8.05	9.16	5.12	5.13	4.65	11.0	11.6
1978	6.25	15.0	26.1	21.2	13.4	9.85	13.0	8.79	4.92	4.10	2.55	3.33	8.20
1979	4.91	18.2	11.2	8.59	19.3	8.87	7.68	5.80	5.05				

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1979)

MEAN	5.4	12.7	21.3	22.0	16.2	15.9	11.0	6.8	5.4	3.8	3.8	4.6	10.5
MAXIMUM	12.8	42.4	47.5	31.4	23.9	27.7	17.7	9.2	7.4	5.1	7.6	11.0	15.5
MINIMUM	2.9	4.4	6.0	8.0	6.2	8.9	6.7	5.2	3.7	1.8	1.6	1.9	7.2
STD DEVIATION	2.57	9.09	10.68	7.01	4.58	6.00	2.57	1.14	1.24	0.87	1.60	2.37	2.16
SKEDNESS	1.919	2.558	1.100	-0.827	-0.227	0.823	0.752	0.735	0.388	-0.637	1.009	1.431	0.747
STD ERR SKEW	0.580	0.564	0.564	0.564	0.564	0.564	0.564	0.580	0.580	0.580	0.580	0.564	0.597
SER CORR COEFF	-0.067	-0.266	-0.310	0.114	-0.039	0.284	-0.430	0.004	-0.113	0.211	0.431	0.373	-0.273
COEFF OF VAR	0.477	0.715	0.502	0.319	0.282	0.377	0.233	0.169	0.232	0.227	0.418	0.518	0.205
MEAN LOGS	0.695	1.033	1.277	1.313	1.191	1.174	1.032	0.826	0.719	0.570	0.550	0.612	1.014
STD DEV LOGS	0.176	0.242	0.222	0.179	0.142	0.157	0.101	0.071	0.100	0.113	0.177	0.208	0.087
SKEDNESS LOGS	0.817	0.735	-0.336	-1.488	-1.330	0.324	-0.181	0.416	0.094	-1.412	0.052	0.298	0.210
STD ERR SKEW LGS	0.580	0.564	0.580	0.564	0.564	0.564	0.564	0.580	0.580	0.580	0.580	0.564	0.597
SER CORR LOGS	0.125	-0.397	-0.368	0.034	0.011	0.301	-0.455	-0.031	-0.127	0.276	0.465	0.537	-0.305
COEFF OF VAR LGS	0.253	0.235	0.174	0.136	0.120	0.134	0.098	0.086	0.140	0.198	0.322	0.340	0.086
% OF AVE FLOW	4.2	9.9	16.5	17.1	12.6	12.3	8.6	5.3	4.2	3.0	3.0	3.6	100.0

MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1979)

0.99	2.5	4.0	5.1	5.2	5.4	7.0	6.1	4.8	3.1	1.6	1.4	1.5	6.7
0.95	2.8	4.9	7.8	9.2	8.2	8.5	7.3	5.2	3.6	2.2	1.8	1.9	7.5
0.90	3.1	5.6	9.7	11.9	10.0	9.5	8.0	5.5	3.9	2.6	2.1	2.3	8.0
0.80	3.5	6.7	12.4	15.5	12.3	11.0	8.9	5.8	4.3	3.1	2.5	2.7	8.7
0.50	4.7	10.1	19.5	22.7	16.6	14.6	10.8	6.6	5.2	3.9	3.5	4.0	10.3
0.20	6.8	16.7	29.3	28.9	20.4	20.1	13.1	7.7	6.3	4.6	6.0	6.1	12.2
0.10	8.5	22.7	35.7	31.3	21.9	24.0	14.4	8.3	7.1	4.9	6.0	7.7	13.4
0.04	11.1	32.5	43.6	33.2	23.2	29.2	16.0	9.1	7.9	5.1	7.3	9.9	14.9
0.02	13.4	41.7	49.3	34.0	23.8	33.4	17.0	9.7	8.5	5.2	8.3	11.8	15.9
0.01	16.0	52.8	54.8	34.6	24.3	37.7	17.9	10.3	9.1	5.2	9.3	13.9	17.0

STATION 12120500 JUANITA CREEK NEAR KIRKLAND, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1965	2.3	2.4	2.4	2.6	2.7	2.9	3.1	3.1	4.1
1966	2.2	2.2	2.3	2.4	2.5	2.6	2.7	2.8	3.3
1967	2.0	2.1	2.1	2.2	2.3	2.6	2.7	3.1	3.7
1968	2.1	2.5	2.6	2.8	2.9	3.0	3.1	3.4	4.0
1969	3.2	3.3	3.4	3.5	3.9	4.7	5.2	5.4	6.3
1970	2.9	2.9	3.0	3.1	3.3	3.5	4.7	5.0	5.8
1971	2.7	2.7	2.7	2.8	3.0	3.3	3.5	3.8	4.6
1972	2.7	2.7	2.8	3.0	3.2	3.8	3.9	4.4	5.1
1976	2.6	2.7	2.8	3.0	3.2	4.1	4.0	4.3	5.5
1977	2.9	2.9	3.0	3.1	3.4	4.1	4.2	4.4	4.8
1978	2.4	2.4	2.4	2.4	2.5	3.0	4.2	5.3	6.2
1979	3.1	3.1	3.2	3.3	4.1	4.6	4.9	5.7	6.5

LOWEST MEAN FLOW STATISTICS (YEARS 1965-1979)

MEAN	2.6	2.7	2.7	2.9	3.1	3.5	3.9	4.2	5.0
MAXIMUM	3.2	3.3	3.4	3.5	4.1	4.7	5.2	5.7	6.5
MINIMUM	2.0	2.1	2.1	2.2	2.3	2.6	2.7	2.8	3.3
STANDARD DEVIATION	0.39	0.36	0.39	0.39	0.55	0.74	0.84	0.99	1.08
SKEWNESS	0.0	0.167	0.124	-0.125	0.453	0.351	0.072	0.019	-0.056
STD ERROR OF SKEWNESS	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637
SERIAL CORR COEFF	0.284	0.296	0.254	0.196	0.049	0.175	0.506	0.631	0.542
COEFF OF VARIATION	0.152	0.135	0.142	0.138	0.179	0.210	0.219	0.235	0.217
MEAN LOGS	0.409	0.421	0.431	0.451	0.483	0.537	0.576	0.614	0.688
STD DEVIATION LOGS	0.067	0.059	0.062	0.061	0.077	0.091	0.097	0.105	0.097
STD ERR SKEWNESS LOGS	-0.197	-0.093	-0.137	-0.361	0.124	0.117	-0.215	-0.240	-0.325
SER CORR COEFF LOGS	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637
COEFF OF VAR LOGS	0.339	0.344	0.292	0.215	0.101	0.268	0.574	0.675	0.578
	0.164	0.140	0.144	0.135	0.160	0.169	0.169	0.171	0.142

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1965-1979)

0.99	3.6	3.6	3.7	3.8	4.7	5.7	6.1	6.9	7.8
0.98	3.5	3.5	3.6	3.7	4.4	5.4	5.8	6.6	7.4
0.96	3.3	3.3	3.4	3.5	4.2	5.0	5.5	6.2	7.0
0.90	3.1	3.1	3.2	3.4	3.8	4.5	5.0	5.6	6.4
0.80	2.9	3.0	3.0	3.2	3.5	4.1	4.6	5.1	5.9
0.50	2.6	2.6	2.7	2.8	3.0	3.4	3.8	4.2	4.9
0.20	2.3	2.4	2.4	2.5	2.6	2.9	3.1	3.4	4.1
0.10	2.1	2.2	2.2	2.3	2.4	2.6	2.8	3.0	3.6
0.05	2.0	2.1	2.1	2.2	2.3	2.5	2.6	2.7	3.3
0.02	1.8	2.0	2.0	2.1	2.1	2.3	2.3	2.4	3.0
0.01	1.8	1.9	1.9	2.0	2.0	2.2	2.2	2.2	2.7

FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1965-1979)

P95	P90	P75	P70	P50	P25	P10
2.7	3.0	4.0	4.4	7.0	13.0	22.0

## STATION 12120500 JUANITA CREEK NEAR KIRKLAND, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE	REG. (R)
1964	58.	42.	28.	23.	22.	18.	16.	15.	13.	89.	01/01/64	
1965	64.	51.	37.	36.	28.	24.	21.	18.	15.	90.	02/05/65	
1966	74.	55.	42.	37.	27.	21.	19.	17.	14.	82.	01/05/66	
1967	88.	60.	43.	37.	31.	27.	24.	21.	18.	107.	01/19/67	
1968	68.	52.	37.	30.	25.	20.	20.	18.	15.	100.	12/25/67	
1969	72.	68.	53.	41.	35.	31.	29.	25.	20.	114.	12/03/68	
1970	67.	54.	46.	39.	29.	25.	21.	19.	16.	92.	01/27/70	
1971	76.	57.	40.	33.	26.	23.	22.	22.	18.	93.	01/15/71	
1972	80.	62.	46.	41.	31.	22.	19.	18.	16.	149.	01/20/72	
1973										170.	12/26/72	
1974										168.	01/16/74	
1975	116.	81.	55.	47.	43.	29.	28.	24.	20.	198.	12/21/74	
1976	164.	122.	76.	56.	55.	40.	36.	30.	25.	257.	12/04/75	
1977	44.	43.	30.	23.	18.	13.	12.	11.	9.	121.	03/08/77	
1978	101.	80.	65.	41.	32.	25.	21.	19.	16.	228.	12/10/77	
1979	70.	46.	28.	25.	20.	15.	13.	14.	12.	70.	11/04/78	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1964-1979)

W R C  
ESTIMATESYSTEMATIC  
RECORD

MEAN	81.6	62.4	44.7	36.4	30.1	23.8	21.5	19.4	16.2			
MAXIMUM	164.0	122.0	76.0	56.0	55.0	40.0	36.0	30.0	25.0			
MINIMUM	44.0	42.0	28.0	23.0	18.0	13.0	12.0	11.0	9.3			
STANDARD DEVIATION	29.60	20.94	13.85	9.24	9.56	6.84	6.35	4.85	3.88			
SKEWNESS	1.829	1.961	0.913	0.294	1.437	0.731	0.733	0.526	0.509			
STD ERROR OF SKEWNESS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597			
SERIAL CORR COEFF	-0.047	-0.076	-0.311	-0.181	-0.028	-0.307	-0.164	-0.193	-0.182			
COEFF OF VARIATION	0.363	0.336	0.310	0.254	0.317	0.288	0.295	0.250	0.239			
MEAN LOGS	1.890	1.777	1.632	1.547	1.461	1.360	1.315	1.274	1.199			
STD DEVIATION LOGS	0.138	0.125	0.130	0.114	0.126	0.126	0.128	0.110	0.106			
SKEWNESS LOGS	0.799	1.183	0.265	-0.327	0.561	-0.197	-0.123	-0.258	-0.326			
STD ERR SKEWNESS LOGS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597			
SER CORR COEFF LOGS	-0.178	-0.150	-0.358	-0.256	-0.156	-0.369	-0.221	-0.232	-0.224			
COEFF OF VAR LOGS	0.073	0.070	0.079	0.074	0.086	0.092	0.098	0.087	0.088			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1964-1979)

0.99	44.7	39.3	22.7	18.0	16.6	11.2	10.1	9.9	8.5	49.6	58.0
0.95	49.9	41.8	26.9	22.4	18.9	14.0	12.6	12.2	10.4	64.7	69.1
0.90	53.6	43.7	25.5	25.0	20.4	15.7	14.1	13.2	11.5	74.6	76.8
0.80	59.1	46.9	33.3	28.4	22.5	18.0	16.1	15.2	12.9	88.7	88.2
0.50	74.4	56.6	42.3	35.8	28.2	23.1	20.8	19.0	16.0	123.3	119.1
0.20	99.4	73.8	54.9	44.1	36.5	29.3	26.5	23.3	19.5	171.5	169.1
0.10	118.5	87.8	63.3	48.8	42.6	33.0	30.0	25.8	21.4	203.8	207.3
0.04	146.0	108.7	74.2	54.1	50.7	37.2	34.2	28.6	23.5	245.0	262.0
0.02	168.9	126.8	82.5	57.6	57.2	40.2	37.1	30.5	24.9	276.0	307.5
0.01	194.1	147.1	90.9	60.9	64.0	43.0	40.0	32.3	26.3	307.1	357.3

## STATION 12121000 ISSAQUAH CREEK NEAR ISSAQUAH, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1946	34.9	106	131	159	160	126	77.8	36.7	48.5	19.4	16.1	41.0	79.0
1947	33.0	91.6	205	116	138	170.6	75.4	30.7	37.9	34.9	18.9	20.2	71.7
1948	103	155	152	156	138	102	93.2	91.0	69.8	35.9	26.5	33.4	96.1
1949	56.8	109	150	170.5	169	95.5	58.4	42.5	42.4	19.0	15.0	15.0	68.0
1950	26.4	56.2	119	167	158	208	132	52.6	24.9	19.1	18.4	17.7	82.9
1951	47.4	116	145	171	252	91.5	43.5	39.1	25.1	16.2	14.4	14.8	80.2
1952	33.8	50.5	81.6	64.2	95.2	80.6	44.3	30.5	21.2	15.5	12.6	11.8	45.0
1953	12.2	13.1	17.3	145	119	56.8	61.6	58.4	55.3	25.2	18.8	15.2	49.4
1954	28.0	98.7	164	157	137	75.7	72.1	33.7	48.5	38.0	23.3	29.9	75.1
1955	21.4	52.4	74.0	85.9	109	66.9	113	70.3	43.0	38.6	26.2	20.0	59.7
1956	67.2	157	211	186	83.9	143	77.4	33.0	33.9	21.6	17.5	18.9	87.4
1957	55.5	58.5	130	69.5	143	140	69.0	39.9	29.5	21.6	18.4	14.8	65.5
1958	22.7	39.8	82.6	139	127	55.5	65.0	28.3	19.8	14.1	12.1	13.8	51.2
1959	19.1	77.7	129	185	90.7	81.0	92.2	66.7	40.9	26.0	16.7	39.8	72.1
1960	49.8	140	144	88.9	105	77.3	81.1	80.1	33.5	20.8	20.0	19.7	71.6
1961	32.2	150	77.7	124	216	144	100	85.5	35.1	25.2	17.8	20.2	84.7
1962	19.9	24.6	87.7	75.5	42.1	76.6	56.2	49.8	32.4	20.2	20.3	18.9	43.8
1963	31.5	83.8	121	83.2	105	65.2	96.5	47.1	38.1	29.6	20.0	18.8	61.3
1964	28.3	106	102	210	90.6	97.0	68.0	47.7	83.4	30.5	25.6	40.3	77.4

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1964)

MEAN	38.1	88.7	122.3	129.1	130.4	97.5	77.6	50.7	39.1	24.7	18.8	22.6	69.6
MAXIMUM	103.0	157.0	211.0	210.0	252.0	208.0	132.0	91.0	83.4	38.6	26.5	41.0	96.1
MINIMUM	12.2	13.1	17.3	64.2	42.1	55.5	43.5	28.3	19.8	14.1	12.1	11.8	43.8
STD DEVIATION	21.45	43.73	46.82	46.37	48.19	38.82	22.69	19.51	16.58	7.55	4.10	9.39	14.78
SKEWNESS	1.701	0.024	-0.081	0.003	0.846	1.465	0.591	0.841	1.320	0.622	0.506	1.019	-0.292
STD ERR SKEW	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.512	0.512	0.512	0.524
SER CORR COEFF	0.136	-0.084	-0.066	-0.476	-0.099	-0.033	-0.300	-0.012	0.049	0.150	0.108	-0.041	-0.053
COEFF OF VAR	0.564	0.493	0.383	0.359	0.369	0.398	0.292	0.385	0.524	0.306	0.219	0.415	0.212
MEAN LOGS	1.525	1.878	2.042	2.081	2.086	1.961	1.872	1.677	1.560	1.374	1.284	1.323	1.832
STD DEV LOGS	0.221	0.285	0.237	0.169	0.169	0.154	0.127	0.159	0.170	0.130	0.095	0.166	0.099
SKEWNESS LOGS	0.286	-1.237	-2.237	-0.338	-0.713	0.702	-0.054	0.379	0.399	0.181	-0.008	0.589	-0.667
STD ERR SKEW LOGS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.512	0.512	0.512	0.524
SER CORR LOGS	0.110	-0.069	-0.040	-0.472	-0.109	-0.027	-0.185	-0.058	0.114	0.157	0.127	0.057	-0.022
COEFF OF VAR LOGS	0.145	0.152	0.116	0.091	0.091	0.068	0.068	0.095	0.095	0.095	0.075	0.125	0.054
% OF AVE FLOW	4.5	10.6	14.6	15.4	15.5	11.6	9.2	6.0	4.7	2.9	2.2	2.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1964)

0.99	11.5	9.4	14.5	44.3	40.4	48.3	37.4	22.4	16.4	12.3	11.0	10.2	36.0
0.95	15.2	21.5	36.9	61.4	59.9	55.3	46.0	22.1	22.0	14.7	12.8	12.1	45.0
0.90	17.8	31.3	54.9	72.4	72.5	60.2	51.2	30.2	28.4	16.2	13.9	13.3	50.2
0.80	21.7	46.8	80.9	87.6	89.7	87.8	58.4	36.7	26.0	18.3	15.3	15.2	56.8
0.50	32.7	86.1	132.3	123.3	127.7	127.7	74.7	46.4	35.4	23.4	18.4	20.3	69.7
0.20	51.0	131.2	165.7	168.2	170.4	121.1	95.3	64.1	49.9	30.3	22.0	28.6	82.6
0.10	65.1	153.2	173.8	195.5	193.3	146.8	108.1	76.9	60.7	34.9	24.3	34.9	89.1
0.04	85.5	173.4	177.7	227.4	217.5	183.9	123.4	94.4	75.6	40.7	26.8	44.1	95.6
0.02	102.6	184.2	178.8	249.7	232.7	215.0	134.4	108.4	87.8	45.0	28.7	51.7	99.7
0.01	121.4	192.4	179.2	270.6	245.8	249.3	145.1	123.2	100.8	49.4	30.4	60.0	103.1



## STATION 12121000 ISSAQUAH CREEK NEAR ISSAQUAH, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1947	16.0	17.0	17.0	18.0	18.0	19.0	20.0	25.0	31.0
1948	14.0	14.0	15.0	15.0	16.0	18.0	22.0	25.0	31.0
1949	21.0	21.0	21.0	22.0	24.0	26.0	30.0	38.0	48.0
1950	13.0	13.0	13.0	13.0	14.0	15.0	16.0	18.0	21.0
1951	14.0	14.0	14.0	14.0	15.0	17.0	18.0	20.0	30.0
1952	12.0	12.0	12.0	13.0	14.0	14.0	15.0	17.0	24.0
1953	11.0	11.0	11.0	11.0	12.0	12.0	12.0	12.0	14.0
1954	14.0	14.0	14.0	14.0	15.0	17.0	19.0	21.0	33.0
1955	18.0	18.0	18.0	20.0	21.0	24.0	25.0	25.0	32.0
1956	18.0	18.0	18.0	19.0	20.0	21.0	26.0	30.0	42.0
1957	16.0	16.0	16.0	16.0	17.0	17.0	18.0	21.0	27.0
1958	14.0	14.0	14.0	14.0	15.0	16.0	18.0	19.0	24.0
1959	12.0	12.0	12.0	12.0	12.0	12.0	13.0	14.0	17.0
1960	13.0	13.0	13.0	13.0	14.0	15.0	17.0	19.0	24.0
1961	16.0	16.0	16.0	16.0	17.0	18.0	20.0	21.0	34.0
1962	12.0	13.0	13.0	13.0	14.0	15.0	19.0	20.0	23.0
1963	14.0	14.0	14.0	15.0	17.0	19.0	19.0	21.0	27.0
1964	17.0	17.0	17.0	17.0	18.0	17.0	20.0	23.0	29.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1964)

MEAN	14.8	14.9	15.2	15.7	16.7	18.0	19.7	22.2	29.1
MAXIMUM	21.0	21.0	21.0	22.0	24.0	26.0	30.0	38.0	48.0
MINIMUM	11.0	11.0	11.0	11.0	12.0	12.0	12.0	12.0	14.0
STANDARD DEVIATION	2.57	2.56	2.60	2.85	3.03	3.61	4.52	6.05	8.33
SKEWNESS	0.697	0.665	0.521	0.534	0.630	0.328	0.493	0.888	0.379
STD ERROR OF SKEWNESS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SERIAL CORR COEFF	0.090	0.089	0.162	0.139	0.124	0.163	0.138	0.083	-0.074
COEFF OF VARIATION	0.173	0.171	0.171	0.182	0.182	0.201	0.230	0.273	0.286
MEAN LOGS	1.165	1.169	1.175	1.188	1.215	1.247	1.283	1.331	1.446
STD DEVIATION LOGS	0.073	0.073	0.073	0.078	0.078	0.089	0.101	0.117	0.131
SKEWNESS LOGS	0.298	0.277	0.125	0.107	0.095	-0.287	-0.176	-0.088	-0.546
STD ERR SKEWNESS LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SER CORR COEFF LOGS	0.125	0.133	0.207	0.188	0.172	0.202	0.156	0.121	-0.066
COEFF OF VAR LOGS	0.063	0.062	0.063	0.066	0.064	0.071	0.079	0.068	0.090

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1964)

0.99	22.5	22.5	22.5	23.8	25.2	27.2	31.9	39.4	49.8
0.98	21.3	21.3	21.4	22.5	23.9	26.0	30.2	36.8	47.4
0.96	20.0	20.1	20.3	21.3	22.6	24.7	28.4	34.1	44.6
0.90	18.3	18.3	18.6	19.5	20.7	22.8	25.7	30.2	40.2
0.80	16.8	16.9	17.2	17.9	19.1	21.0	23.4	26.9	36.2
0.50	14.5	14.6	14.9	15.4	16.4	17.8	19.3	21.5	28.7
0.20	12.7	12.8	13.0	13.3	14.1	14.9	15.8	17.1	21.9
0.10	11.9	12.0	12.1	12.3	13.1	13.5	14.2	15.1	18.7
0.05	11.2	11.4	11.4	11.5	12.3	12.4	13.0	13.7	16.3
0.02	10.6	10.7	10.7	10.8	11.5	11.3	11.7	12.2	13.8
0.01	10.2	10.3	10.3	10.3	11.0	10.5	10.9	11.2	12.3

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1947-1964)

P95	P90	P75	P70	P50	P25	P10
15.0	17.0	24.0	27.0	47.0	91.0	150.0

STATION 12121000 ISSAQUAH CREEK NEAR ISSAQUAH, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW (CFS) DATE REG. (R)
1946	360.	304.	280.	261.	185.	165.	155.	146.	126.	452. 12/28/45
1947	630.	448.	310.	310.	238.	169.	165.	143.	116.	675. 12/14/46
1948	466.	340.	300.	250.	203.	164.	169.	150.	138.	540. 02/26/48
1949	792.	479.	352.	267.	190.	143.	131.	129.	109.	1120. 02/17/49
1950	625.	512.	345.	273.	234.	201.	179.	142.	109.	800. 03/04/50
1951	1700.	1170.	666.	386.	281.	219.	199.	173.	136.	2610. 02/09/51
1952	287.	214.	203.	150.	109.	92.	82.	80.	70.	342. 02/04/52
1953	462.	377.	308.	264.	202.	132.	110.	96.	82.	580. 01/31/53
1954	534.	432.	318.	230.	185.	167.	155.	143.	117.	781. 12/09/53
1955	532.	337.	223.	148.	117.	105.	96.	97.	88.	740. 02/08/55
1956	524.	433.	302.	255.	242.	218.	188.	165.	147.	1050. 12/11/55
1957	495.	416.	287.	243.	189.	144.	126.	124.	104.	596. 02/25/57
1958	494.	335.	241.	185.	161.	138.	119.	102.	85.	566. 01/17/58
1959	583.	432.	316.	214.	187.	161.	140.	127.	113.	680. 01/24/59
1960	773.	510.	364.	232.	210.	146.	139.	122.	107.	1130. 12/15/59
1961	494.	383.	343.	270.	222.	180.	162.	155.	138.	637. 11/24/60
1962	246.	194.	182.	147.	127.	85.	76.	76.	66.	296. 12/24/61
1963	334.	264.	216.	171.	136.	124.	112.	102.	94.	438. 02/03/63
1964	566.	377.	276.	225.	211.	162.	146.	132.	113.	750. 01/01/64

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1946-1964)

	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKEWNESS	STD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKEWNESS LOGS	STD ERR SKEWNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	573.7	1700.0	246.0	307.65	2.902	2.763	-0.089	0.536	2.718	0.180	0.860	0.524	-0.038	0.066		
	425.2	1170.0	194.0	205.74	2.763	0.524	0.484	0.339	2.594	0.168	0.782	0.524	-0.072	0.065		
	314.2	666.0	182.0	106.53	2.067	0.524	-0.080	0.484	2.478	0.128	0.780	0.524	-0.047	0.052		
	235.8	386.0	147.0	59.84	0.450	0.524	-0.036	0.339	2.359	0.113	0.741	0.524	-0.049	0.048		
	191.0	281.0	109.0	45.38	-0.213	0.524	-0.178	0.238	2.268	0.112	-0.560	0.524	-0.190	0.049		
	153.4	219.0	85.0	37.16	-0.023	0.524	-0.195	0.242	2.173	0.109	-0.663	0.524	-0.192	0.052		
	140.0	199.0	76.0	35.37	-0.124	0.524	-0.078	0.235	2.132	0.108	-0.537	0.524	-0.103	0.056		
	128.5	179.0	66.0	30.18	-0.230	0.524	-0.005	0.222	2.097	0.103	-0.537	0.524	-0.013	0.051		
	110.1	147.0	66.0	24.41	-0.082	0.524	-0.005	0.222	2.031	0.103	-0.537	0.524	-0.013	0.051		
	2.8354	2.8354	0.2104	0.0010	0.8830											

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1964)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
	259.1	296.2	323.6	366.5	493.0	721.1	911.8	1204.7	1465.6	1767.6
	199.7	228.8	249.8	281.9	373.7	531.8	659.2	848.8	1012.9	1198.5
	179.6	199.2	213.0	233.5	289.4	378.5	445.6	540.1	617.8	702.0
	118.2	146.2	162.9	184.7	231.6	285.2	315.7	349.9	372.9	394.2
	88.9	115.8	131.5	151.4	191.4	231.2	251.1	270.9	282.9	293.0
	72.2	93.2	105.4	121.2	153.1	185.9	202.6	219.8	230.4	239.5
	63.1	82.6	94.2	109.0	139.5	171.1	187.4	204.1	214.4	223.4
	55.8	70.1	89.7	102.2	127.7	154.7	168.9	184.0	193.6	202.0
	221.8	308.6	367.9	455.3	637.9	1029.0	1273.5	1598.6	1851.5	2113.0
	304.5	354.4	392.1	452.4	637.9	994.4	1309.1	1816.2	2287.6	2852.7

STATION 12121600 ISSAQUAH CREEK NR MOUTH, NR ISSAQUAH, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1964	51.4	231	219	472	204	212	146	98.6	179	64.6	54.5	82.0	168
1965	68.3	217	342	338	349	116	129	94.7	55.3	35.5	32.1	35.1	150
1966	50.2	83.8	123	284	164	204	144	86.2	52.9	56.4	29.1	29.3	110
1967	51.4	110	324	420	271	179	160	94.1	47.5	31.2	25.0	24.9	142
1968	44.7	58.8	210	282	245	194	185	74.9	120	40.0	53.5	64.6	133
1969	90.9	166	359	393	266	178	155	112	97.9	53.6	32.8	64.9	164
1970	58.2	195.1	199	335	189	150	209	111	50.3	38.7	29.7	38.7	125
1971	47.2	113	366	426	242	322	187	106	94.5	63.7	33.7	50.4	171
1972	83.0	193	280	373	432	420	220	107	100	77.0	40.7	50.3	197
1973	36.0	77.5	318	235	116	130	91.0	69.8	66.0	37.8	25.9	30.4	103
1974	44.9	223	374	389	319	311	192	129	102	69.5	40.6	27.5	185
1975	28.2	92.7	204	406	231	231	152	100	56.2	42.3	48.6	40.2	140
1976	151	277	520	381	239	199	159	85.4	61.3	43.2	56.4	46.5	185
1977	41.2	60.7	107	115	76.2	165	81.5	78.9	75.3	29.8	35.3	47.8	76.2
1978	61.3	203	367	179	172	137	187	122	56.0	43.3	35.0	85.5	137
1979	44.2	153	209	121	321	154	111	63.8	35.8	31.6	26.5	28.7	107

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1964-1979)

MEAN	59.5	147.2	282.6	321.8	244.8	206.4	156.8	95.8	78.1	47.2	37.5	46.7	143.3
MAXIMUM	151.0	277.0	520.0	472.0	432.0	420.0	220.0	129.0	179.0	77.0	56.4	85.5	197.0
MINIMUM	28.2	58.8	107.0	115.0	76.2	81.16	39.81	63.8	35.8	29.8	25.0	24.9	76.2
STD DEVIATION	29.32	69.52	108.12	109.64	89.28	1.496	-0.381	18.55	36.25	14.94	10.54	18.99	33.92
SKWENESS	2.258	0.342	0.273	-0.783	0.097	0.564	0.564	-0.024	1.527	0.699	0.725	0.884	-0.226
STD ERR SKEW	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
SER CORR COEFF	-0.400	-0.449	-0.750	0.323	-0.294	0.053	-0.286	-0.420	-0.114	-0.170	0.009	-0.063	-0.359
COEFF OF VAR	0.493	0.472	0.383	0.341	0.365	0.393	0.254	0.194	0.464	0.316	0.281	0.407	0.237
MEAN LOGS	1.738	2.118	2.417	2.475	2.356	2.288	2.180	1.974	1.855	1.655	1.558	1.637	2.144
STD DEV LOGS	0.173	0.219	0.185	0.190	0.187	0.151	0.123	0.087	0.101	0.133	0.117	0.169	0.111
SKWENESS LOGS	1.015	-0.162	-0.676	-1.331	-1.132	0.758	-0.931	-0.393	0.535	0.358	0.412	0.324	-0.774
STD ERR SKEW LOGS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
SER CORR LOGS	-0.481	-0.486	-0.691	0.405	-0.190	-0.038	-0.308	-0.433	-0.059	-0.214	-0.004	0.007	-0.350
COEFF OF VAR LOGS	0.100	0.104	0.077	0.077	0.079	0.066	0.056	0.044	0.097	0.080	0.075	0.103	0.052
% OF AVE FLOW	3.5	8.5	16.4	18.7	14.2	12.0	9.1	5.6	4.5	2.7	2.2	2.7	100.0

MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1964-1979)

0.99	29.2	38.2	79.0	72.5	59.6	105.0	65.1	55.8	32.1	24.1	21.0	19.3	66.7
0.95	32.4	56.0	120.7	128.1	100.2	119.0	89.3	66.3	38.7	28.2	24.0	23.7	87.0
0.90	34.9	68.2	148.2	166.0	127.4	129.0	103.6	72.3	43.3	30.9	25.9	26.8	98.9
0.80	39.0	88.2	186.5	216.2	144.9	144.0	121.9	79.9	50.2	34.8	28.7	31.1	113.9
0.50	51.2	133.1	274.2	327.9	245.7	185.8	158.1	95.3	69.1	44.3	35.5	42.5	143.9
0.20	74.0	201.6	376.6	430.5	326.6	255.2	192.8	111.7	100.3	58.0	45.1	59.8	173.4
0.10	93.4	248.5	433.6	474.2	364.3	309.2	209.2	120.4	124.5	67.4	51.6	72.3	187.9
0.04	123.7	308.9	494.9	511.0	398.8	387.4	224.8	129.9	159.5	79.8	60.2	89.4	202.3
0.02	151.2	354.4	534.1	529.2	417.5	453.4	233.7	136.0	189.0	89.5	66.7	103.2	210.9
0.01	183.3	400.2	568.7	542.2	431.9	526.6	240.8	141.4	221.6	99.4	73.5	117.7	218.1

## STATION 12121600 ISSAQUAH CREEK NR MOUTH, NR ISSAQUAH, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1965	39.0	40.0	42.0	45.0	50.0	55.0	66.0	67.0	90.0
1966	24.0	25.0	27.0	27.0	29.0	32.0	34.0	37.0	47.0
1967	24.0	24.0	24.0	26.0	27.0	29.0	31.0	39.0	47.0
1968	23.0	23.0	23.0	23.0	24.0	25.0	27.0	29.0	38.0
1969	30.0	30.0	31.0	31.0	35.0	41.0	48.0	54.0	73.0
1970	29.0	29.0	30.0	31.0	30.0	31.0	49.0	51.0	65.0
1971	24.0	24.0	25.0	27.0	29.0	32.0	34.0	36.0	46.0
1972	30.0	30.0	31.0	32.0	34.0	41.0	42.0	53.0	70.0
1973	29.0	29.0	30.0	31.0	35.0	40.0	42.0	46.0	61.0
1974	23.0	23.0	24.0	24.0	25.0	26.0	30.0	34.0	45.0
1975	25.0	25.0	25.0	26.0	26.0	27.0	31.0	36.0	56.0
1976	29.0	29.0	31.0	32.0	34.0	43.0	43.0	45.0	62.0
1977	32.0	32.0	32.0	33.0	36.0	42.0	46.0	46.0	51.0
1978	18.0	18.0	19.0	20.0	21.0	27.0	34.0	38.0	52.0
1979	29.0	29.0	30.0	32.0	35.0	39.0	44.0	49.0	62.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1965-1979)

MEAN	27.2	27.3	28.3	29.3	31.4	35.5	40.1	44.0	57.7
MAXIMUM	39.0	40.0	42.0	45.0	50.0	55.0	66.0	67.0	90.0
MINIMUM	18.0	18.0	19.0	20.0	21.0	25.0	27.0	29.0	38.0
STANDARD DEVIATION	4.97	5.11	5.39	5.84	6.99	8.41	10.10	9.84	13.43
SKEWNESS	0.526	0.689	0.815	1.096	1.122	0.701	1.083	0.717	0.876
STD ERROR OF SKEWNESS	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580
SERIAL CORR COEFF	-0.332	-0.296	-0.186	-0.231	-0.232	-0.136	-0.083	-0.232	-0.241
COEFF OF VARIATION	0.183	0.187	0.191	0.199	0.223	0.237	0.252	0.224	0.233
MEAN LOGS	1.428	1.430	1.444	1.460	1.488	1.539	1.591	1.634	1.750
STD DEVIATION LOGS	0.079	0.081	0.081	0.083	0.092	0.100	0.104	0.095	0.098
SKEWNESS LOGS	-0.139	-0.055	0.091	0.307	0.358	0.254	0.458	0.187	0.312
SER ERN SKEWNESS LOGS	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580
SER CORR COEFF LOGS	-0.339	-0.310	-0.206	-0.247	-0.249	-0.125	-0.048	-0.226	-0.228
COEFF OF VAR LOGS	0.056	0.056	0.056	0.057	0.062	0.065	0.065	0.058	0.056

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1965-1979)

0.99	40.2	41.1	43.5	47.0	53.3	61.8	73.6	73.7	99.9
0.98	38.5	39.1	41.2	44.0	49.5	57.3	67.4	68.9	92.7
0.96	36.6	37.1	38.8	41.1	45.7	52.9	61.4	64.0	85.4
0.90	33.8	34.1	35.4	37.0	40.6	46.8	53.4	57.2	75.6
0.80	31.3	31.5	32.5	33.7	36.6	41.9	47.3	47.7	67.7
0.50	26.9	26.9	27.7	28.5	30.3	34.2	38.3	42.7	55.6
0.20	23.0	23.0	23.7	24.5	25.6	28.4	31.8	35.7	46.5
0.10	21.1	21.2	21.9	22.7	23.6	25.9	29.1	32.7	42.6
0.05	19.7	19.8	20.5	21.4	22.2	24.1	27.2	30.4	39.7
0.02	18.1	18.3	19.1	20.1	20.7	22.2	25.3	28.1	36.9
0.01	17.2	17.3	18.2	19.3	19.8	21.1	24.2	26.6	35.2

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1965-1979)

P95	P90	P75	P70	P50	P25	P10
28.0	32.0	47.0	54.0	93.0	180.0	310.0

STATION 12121600 ISSAQUAH CREEK NR MOUTH, NR ISSAQUAH, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1964	1360.	897.	640.	514.	474.	361.	325.	293.	249.	1950. 01/01/64
1965	1350.	1160.	833.	620.	467.	371.	364.	315.	247.	1600. 01/29/65
1966	799.	731.	542.	423.	308.	231.	210.	172.	172.	876. 01/07/66
1967	1130.	795.	592.	467.	424.	375.	333.	295.	243.	1480. 12/13/66
1968	822.	652.	464.	388.	341.	297.	265.	230.	208.	1090. 12/25/67
1969	1600.	1440.	987.	635.	445.	388.	343.	306.	256.	1960. 01/05/69
1970	643.	599.	547.	526.	370.	292.	251.	231.	199.	824. 01/24/70
1971	1450.	1100.	706.	492.	466.	406.	350.	345.	280.	1710. 01/09/71
1972	1810.	1300.	891.	781.	602.	513.	421.	381.	319.	2260. 02/28/72
1973	833.	794.	682.	558.	414.	291.	235.	205.	163.	964. 12/26/72
1974	1020.	901.	688.	576.	496.	414.	373.	364.	304.	1160. 01/16/74
1975	994.	832.	731.	550.	436.	361.	339.	320.	235.	1390. 02/20/75
1976	2300.	1820.	1140.	713.	526.	400.	413.	369.	308.	2870. 12/03/75
1977	319.	273.	226.	195.	166.	126.	126.	121.	108.	398. 12/26/76
1978	1130.	979.	819.	540.	431.	364.	262.	232.	208.	1670. 12/15/77
1979	736.	627.	519.	395.	348.	253.	214.	207.	176.	836. 12/01/78

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1964-1979)

W R C SYSTEMATIC  
ESTIMATE RECORD

MEAN	1143.5	931.2	687.9	523.3	419.4	340.8	302.2	276.1	229.7	
MAXIMUM	2300.0	1820.0	1140.0	781.0	602.0	513.0	421.0	381.0	319.0	
MINIMUM	319.0	273.0	226.0	195.0	166.0	126.0	126.0	121.0	108.0	
STANDARD DEVIATION	491.69	371.61	219.12	138.09	99.77	93.29	79.75	72.17	58.36	
SKWENESS	0.720	0.764	0.082	-0.427	-0.803	-0.404	-0.481	-0.371	-0.280	
STD ERROR OF SKWENESS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	
SERIAL CORR COEFF	-0.454	-0.523	-0.532	-0.264	-0.209	-0.209	-0.257	-0.228	-0.322	
COEFF OF VARIATION	0.430	0.399	0.319	0.264	0.238	0.274	0.264	0.261	0.254	
MEAN LOGS	3.017	2.934	2.813	2.701	2.608	2.513	2.463	2.425	2.346	3.1146
STD DEVIATION LOGS	0.204	0.189	0.162	0.138	0.127	0.142	0.133	0.129	0.123	0.2116
SKWENESS LOGS	-0.755	-0.868	-1.366	-1.723	-1.958	-1.595	-1.316	-1.156	-1.007	-0.2116
STD ERR SKWENESS LOGS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.0010
SER CORR COEFF LOGS	-0.478	-0.513	-0.485	-0.249	-0.215	-0.190	-0.219	-0.198	-0.302	-0.7250
COEFF OF VAR LOGS	0.068	0.064	0.058	0.051	0.049	0.057	0.054	0.053	0.052	

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1964-1979)

0.99	271.4	239.8	193.5	167.3	142.2	107.4	108.1	105.1	94.2	419.2
0.95	440.5	384.1	316.1	268.1	226.3	171.4	160.8	151.0	130.4	584.2
0.90	555.9	480.3	394.8	329.8	276.6	210.9	192.6	178.5	151.8	697.3
0.80	720.0	614.2	498.8	407.7	338.4	261.3	233.1	213.5	179.1	864.0
0.50	1103.6	914.3	705.5	547.6	442.6	354.5	310.1	281.2	232.5	1301.9
0.20	1556.4	1245.8	886.8	649.1	509.3	426.6	375.6	341.9	282.3	1962.0
0.10	1806.4	1418.2	960.7	682.6	528.0	452.2	402.3	368.2	305.2	2431.2
0.04	2072.6	1592.8	1021.1	705.1	538.9	470.7	424.2	391.4	326.3	2675.7
0.02	2240.1	1697.7	1050.3	714.0	542.5	478.6	435.0	403.6	338.1	3542.3
0.01	2385.6	1785.5	1070.7	719.2	544.4	483.5	442.7	412.8	347.3	4045.8

## STATION 12121700 TIBBETTS CREEK NEAR ISSAQUAH, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1963													
1964	1.12	13.9	13.2	34.2	10.9	13.3	6.81	2.40	6.04	1.19	0.74	0.26	8.78
1965	1.62	9.96	20.4	16.9	17.1	4.88	6.10	3.43	0.95	0.31	0.32	0.26	6.80
1966	0.90	4.36	9.81	19.3	9.90	12.0	8.28	2.88	0.58	0.65	0.20	0.26	5.75
1967	0.60	5.05	27.2	28.7	11.1	9.11	8.21	3.35	0.86	0.27	0.10	0.13	7.92
1968	0.70	1.33	7.99	14.5	13.8	10.3	8.46	2.15	4.26	0.52	0.57	1.13	5.45
1971	1.84	8.63	16.1	20.7	34.4	18.4	9.87	2.88	2.81	1.69	0.40	0.73	11.0
1972	0.64	2.34	29.6	14.7	5.85	29.2	12.4	4.03	2.70	1.29	0.59	0.75	
1973	0.94	13.8	28.8	25.4	15.2	17.9	12.1	1.84	1.39				
1974	0.28	3.28	7.32	23.6	19.1	12.2	9.02	5.60	1.18	0.51	0.79	0.32	6.87
1975	6.32	10.6	31.8	17.8	12.8	8.88	6.94	2.82	1.18	0.58	0.83	0.99	8.47
1976													
1977	1.05	2.64											

## STATION 12121700 TIBBETTS CREEK NEAR ISSAQUAH, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1964	171.0	1- 1-1964
1965	105.0	11-30-1964
1966	136.0	2-11-1966
1967	174.0	1-19-1967
1968	53.0	1-20-1968
1972	282.0	3- 5-1972
1973	209.0	12-26-1972
1974	115.0	1-16-1974
1975	225.0	1-13-1975
1976	359.0	12- 2-1975
1977	74.0	6- 1-1977

## ANNUAL PEAK FLOW STATISTICS (YEARS 1964-1977)

W R C	ESTIMATE	SYSTEMATIC RECORD
MEAN LOGS	2.1782	2.1782
STANDARD DEVIATION LOGS	0.2481	0.2481
SKEWNESS LOGS	0.001	-0.371

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1964-1977)

0.99	39.9	34.2
0.95	58.9	55.7
0.90	72.5	71.1
0.80	93.2	94.4
0.50	150.7	156.1
0.20	243.8	245.6
0.10	313.4	305.2
0.04	409.8	379.5
0.02	487.3	433.5
0.01	569.4	486.3

## STATION 12123000 COTTAGE LAKE CR NEAR REDMOND, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1955													
1956	9.10	20.1	50.1	47.8	16.9	19.8	15.7	9.07	10.1	5.16	4.73	5.96	
1957	10.0	11.7	14.3	12.3	30.8	29.2	16.4	8.36		8.62	5.64	6.22	18.2
1958	7.56	9.75	15.1	21.1	27.6	15.2	14.2	7.87	7.36	6.10	6.07	6.78	13.1
1959	6.84	13.4	17.6	37.3	21.7	19.2	17.0	13.8	5.22	4.31	4.23	4.91	11.4
1960	7.85	18.3	24.9	18.8	31.8	13.7	11.9	12.8	9.45	5.65	5.48	6.70	14.6
1961	8.67	23.4	16.2	24.0	38.7	24.8	14.1	15.0	9.28	6.75	5.69	5.98	13.8
1962	7.53	9.38	16.3	18.0	10.8	20.2	11.3	10.2	8.48	6.62	6.43	6.43	11.0
1963	8.95	12.8	15.0	14.7	18.9	10.8	12.2	8.56	9.43	7.56	6.51	7.36	11.0
1964	7.98	18.1	18.7	35.1	19.0	18.7	15.8	10.00	11.7	6.74	6.13	7.27	14.6
1965	7.65	13.9	21.0	30.1	41.0	12.6	12.9	10.8	7.38	5.77	7.09	6.52	14.6

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1965)

MEAN	8.2	15.1	20.9	25.9	25.7	18.4	14.1	10.6	8.8	6.4	5.8	6.3	13.8
MAXIMUM	10.0	23.4	50.1	47.8	41.0	29.2	17.0	15.0	11.7	8.6	7.1	7.4	18.2
MINIMUM	6.8	9.4	14.3	12.3	10.8	10.8	11.3	7.9	5.9	4.3	4.2	4.9	11.0
STD DEVIATION	0.94	4.66	10.75	11.36	9.87	5.65	2.02	2.45	1.62	1.14	0.79	0.69	2.30
SKWENESS	0.575	0.504	2.681	0.746	0.206	0.572	-0.019	0.731	-0.117	0.069	-0.489	-0.308	0.400
STD ERR SKEW	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.637	0.637	0.637	0.687
SER CORR COEFF	0.115	-0.071	-0.338	-0.384	-0.175	-0.229	-0.055	0.336	-0.081	-0.444	0.346	0.233	-0.092
COEFF OF VAR	0.115	0.309	0.514	0.438	0.384	0.307	0.143	0.230	0.184	0.178	0.136	0.109	0.166
MEAN LOGS	0.912	1.160	1.287	1.377	1.379	1.247	1.147	1.017	0.938	0.801	0.760	0.798	1.135
STD DEV LOGS	0.049	0.134	0.163	0.186	0.181	0.134	0.063	0.096	0.084	0.080	0.062	0.048	0.072
SKWENESS LOGS	0.355	0.090	2.126	0.109	-0.498	-0.028	-0.158	0.480	-0.634	-0.479	-0.864	-0.635	0.069
STD ERR SKEW LOGS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.637	0.637	0.637	0.687
SER CORR LOGS	0.118	-0.065	-0.326	-0.378	0.151	-0.258	-0.040	0.348	-0.041	-0.419	0.295	0.201	-0.065
COEFF OF VAR LOGS	0.054	0.115	0.126	0.138	0.131	0.107	0.055	0.095	0.089	0.100	0.081	0.061	0.063
% OF AVE FLOW	4.9	9.1	12.6	15.6	15.5	11.1	8.5	6.4	5.3	3.9	3.5	3.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1965)

0.99	6.5	7.2	13.6	8.9	7.8	8.6	9.8	6.7	5.1	3.9	3.8	4.6	9.4
0.95	6.9	8.8	13.8	11.8	11.4	10.6	11.0	7.5	6.1	4.6	4.4	5.1	10.4
0.90	7.1	9.8	14.0	13.7	13.8	11.9	11.6	7.9	6.7	5.0	4.8	5.4	11.1
0.80	7.4	11.1	14.5	16.5	17.1	13.6	12.4	8.6	7.4	5.4	5.2	5.7	11.9
0.50	8.1	14.4	17.2	23.6	24.7	17.7	14.1	10.2	8.9	6.4	5.9	6.4	13.6
0.20	9.0	18.7	24.1	34.3	34.1	22.9	15.9	12.5	10.2	7.4	6.5	6.9	15.7
0.10	9.5	21.5	31.4	41.8	39.7	26.2	16.8	14.0	10.9	7.9	6.8	7.2	16.9
0.04	10.1	25.0	44.7	51.9	45.9	30.2	17.9	15.9	11.6	8.4	7.1	7.4	18.3
0.02	10.5	27.6	58.5	59.8	50.1	33.1	18.6	17.3	12.0	8.8	7.2	7.6	19.3
0.01	10.9	30.2	76.5	67.9	54.0	35.9	19.3	18.8	12.4	9.1	7.3	7.7	20.2

## STATION 12123000 COTTAGE LAKE CR NEAR REDMOND, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1957	4.8	5.0	5.1	5.2	5.5	5.9	6.1	6.7	7.9
1958	5.6	5.6	5.6	5.7	5.8	5.9	6.0	6.3	6.8
1959	3.9	3.9	4.0	4.1	4.2	4.2	4.4	4.8	5.6
1960	4.4	4.5	4.7	4.9	5.3	5.8	6.3	6.7	8.1
1961	4.7	4.7	4.7	4.8	4.9	5.5	5.7	6.2	7.9
1962	5.2	5.3	5.3	5.5	5.6	5.8	6.3	6.3	7.4
1963	2.8	3.1	3.9	4.8	6.0	6.2	6.6	6.7	7.7
1964	5.9	5.9	6.0	6.1	6.3	6.7	6.8	7.3	7.9
1965	5.1	5.2	5.5	5.7	5.9	6.2	6.6	6.9	8.2

## LOWEST MEAN FLOW STATISTICS (YEARS 1957-1965)

MEAN	4.7	4.8	5.0	5.2	5.5	5.8	6.0	6.4	7.5
MAXIMUM	5.9	5.9	6.0	6.1	6.3	6.7	6.8	7.3	8.2
MINIMUM	2.8	3.1	3.9	4.1	4.2	4.2	4.4	4.8	5.6
STANDARD DEVIATION	0.94	0.87	0.72	0.61	0.64	0.69	0.72	0.70	0.83
SKEWNESS	-0.977	-0.876	-0.326	-0.333	-1.055	-1.535	-1.583	-1.658	-1.827
STD ERROR OF SKEWNESS	0.717	0.717	0.717	0.717	0.717	0.717	0.717	0.717	0.717
SERIAL CORR COEFF	-0.454	-0.434	-0.304	-0.087	0.222	0.148	0.086	0.080	0.081
COEFF OF VARIATION	0.199	0.182	0.144	0.118	0.116	0.119	0.119	0.109	0.110
MEAN LOGS	0.664	0.674	0.693	0.713	0.738	0.759	0.777	0.806	0.872
STD DEVIATION LOGS	0.098	0.087	0.064	0.053	0.053	0.057	0.057	0.052	0.053
SKEWNESS LOGS	-1.484	-1.257	-0.534	-0.592	-1.310	-1.900	-1.843	-1.959	-1.997
STD ERR SKEWNESS LOGS	0.717	0.717	0.717	0.717	0.717	0.717	0.717	0.717	0.717
SER CORR COEFF LOGS	-0.437	-0.432	-0.328	-0.099	0.169	0.090	0.033	0.040	0.073
COEFF OF VAR LOGS	0.147	0.129	0.093	0.074	0.072	0.075	0.073	0.064	0.060

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1957-1965)

0.99	6.1	6.3	6.6	6.5	6.5	6.6	6.9	7.2	8.4
0.98	6.1	6.2	6.4	6.4	6.4	6.6	6.9	7.2	8.4
0.96	6.0	6.1	6.2	6.2	6.4	6.5	6.8	7.2	8.4
0.90	5.8	5.9	5.9	6.0	6.2	6.5	6.8	7.1	8.3
0.80	5.6	5.6	5.6	5.7	6.1	6.4	6.6	7.0	8.2
0.50	4.9	4.9	5.0	5.2	5.6	6.0	6.2	6.6	7.7
0.20	3.9	4.1	4.4	4.7	5.0	5.3	5.5	5.9	6.9
0.10	3.4	3.6	4.1	4.4	4.6	4.8	5.0	5.5	6.4
0.05	3.0	3.2	3.8	4.2	4.3	4.4	4.6	5.0	5.9
0.02	2.5	2.8	3.5	3.9	3.9	3.9	4.1	4.5	5.2
0.01	2.2	2.5	3.3	3.7	3.7	3.6	3.8	4.2	4.8

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1957-1965)

P95	P90	P75	P70	P50	P25	P10
5.2	5.7	7.1	7.5	11.0	17.0	26.0



STATION	DATE	ANNUAL PEAK-FLOW DATA
12123000	COTTAGE LAKE CR NEAR REDMOND, WASH.	HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

### HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1956-1965)

MEAN	69.4	63.0	51.8	42.8	36.9	29.6	25.9	23.8	20.2
MAXIMUM	120.0	112.0	88.0	66.0	64.0	51.0	40.0	35.0	29.0
MINIMUM	38.0	34.0	30.0	23.0	19.0	17.0	17.0	16.0	14.0
STANDARD DEVIATION	29.61	27.37	18.94	15.11	12.64	9.77	6.67	5.57	4.39

### HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1956-1965)

26.7	36.4	22.4	22.0	16.3	14.8	12.7	13.5	13.3	11.9	37.7
33.6	30.4	27.4	27.6	21.6	19.4	16.2	16.3	15.7	13.8	36.4
34.5	34.5	31.0	31.0	25.1	22.3	18.4	18.0	17.2	15.0	37.5
40.8	36.0	36.0	36.0	29.8	26.3	21.4	20.3	19.1	16.5	43.9
62.8	49.4	49.4	49.4	40.9	35.5	28.4	25.3	23.3	19.8	53.7
90.0	56.7	56.7	56.0	55.1	47.0	37.3	35.3	33.3	28.9	77.3
110.6	82.0	82.0	66.0	63.9	54.1	42.8	39.9	37.3	26.1	112.4
138.4	100.8	100.8	78.0	74.4	62.5	49.5	39.1	34.8	28.9	134.2
160.9	127.1	93.6	93.6	74.4	68.4	54.2	42.1	37.3	26.1	161.0
184.8	149.5	105.6	105.6	81.9	68.4	58.6	44.9	41.0	30.8	180.4
	171.5	117.9	117.9	89.1	74.1	58.6	42.1	37.3	32.7	215.4
										199.3

STATION 12123300 EVANS CREEK TRIBUTARY NEAR REDMOND, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1949-1969)			M R C		SYSTEMATIC RECORD
WATER YEAR	FLOW(CFS)	DATE	MEAN LOGS	STANDARD DEVIATION LOGS	SKEWNESS LOGS	ESTIMATE		
1949	21.0	1- 1-1949				1.3519		1.3519
1950	32.0	1-22-1950				0.2353		0.2353
1951	60.0	2- 9-1951				0.000		-0.950
1952	8.0	2- 4-1952						
1953	9.0	1-31-1953						
1954	32.0	1- 6-1954						
1955	21.0	2- 8-1955						
1956	28.0	12-11-1955						
1957	31.0	2-25-1957	0.99			6.4		4.4
1958	27.0	1-17-1958	0.95			9.2		8.2
1959	44.0	1-25-1959	0.90			11.2		10.9
1960	28.0	12-16-1959	0.80			14.3		14.9
1961	22.0	11-25-1960	0.50			22.5		24.5
1962	18.0	1- 5-1962	0.20			35.5		35.7
1963	6.0	2- 3-1963	0.10			45.0		41.6
1964	19.0	1- 1-1964	0.04			58.1		47.7
1965	23.0	1-29-1965	0.02			68.4		51.3
1966	19.0	1- 6-1966	0.01			79.3		54.2
1967	30.0	1-19-1967						
1968	23.0	12-25-1967						
1969	32.0	12- 3-1968						

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1949-1969)

## STATION 1212+000 EVANS CREEK (ABOVE MOUTH) NR REDMOND, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1955	16.0	41.4	68.7	67.2	29.3	42.5	24.9	13.8	9.65	7.81	8.09
1956	13.8	15.8	25.2	21.0	46.2	47.0	26.3	13.4	8.89	7.89	28.7
1957	10.3	13.4	18.1	42.0	45.0	25.7	21.7	12.8	8.56	7.73	20.1
1958	9.16	24.5	42.4	62.1	41.3	34.3	28.5	18.7	6.36	7.37	18.5
1959	11.5	26.6	37.5	30.6	47.7	23.4	23.3	22.7	7.19	10.3	22.7
1960	12.0	36.2	27.9	44.1	62.1	40.7	25.3	22.6	7.46	8.52	22.0
1961	10.9	13.7	28.2	32.8	17.6	26.0	17.2	15.4	8.89	7.34	25.4
1962	10.1	18.0	30.9	26.0	35.6	21.5	27.2	15.4	9.00	9.19	16.6
1963	10.9	22.6	31.4	53.2	29.7	31.7	22.1	15.4	8.77	7.08	18.2
1964	9.91	22.6	44.4	49.9	58.6	21.1	21.2	16.9	9.08	8.58	22.1
1965	10.5	16.3	24.6	54.8	29.6	29.6	15.3	10.8	7.55	8.76	23.2
1966	10.2	18.7	55.5	69.0	40.7	26.6	21.9	9.38	8.91	6.53	19.7
1967	9.55	11.3	30.6	44.1	41.3	33.2	14.1	19.7	7.25	5.85	23.9
1968	17.7	35.3	67.9	64.4	46.0	23.7	22.8	16.6	8.02	9.05	21.7
1969	12.1	17.4	32.9	56.0	34.1	28.3	29.7	11.6	8.03	13.2	27.7
1970	11.5	18.6	42.5	59.7	36.1	53.9	34.2	17.4	7.38	11.2	21.7
1971	10.7	15.8	37.7	41.3	51.3	76.3	32.7	12.1	9.24	8.74	25.9
1972	11.2	14.0	58.1	46.9	22.6	23.0	14.9	12.8	9.72	12.9	27.1
1973	8.44	21.2	69.0	66.4	48.0	61.6	26.6	9.38			
1974	8.64	17.4	28.5	59.6	46.4	38.6	22.7	11.5	9.77	9.62	23.5
1975	18.8	50.7	75.7	43.7	31.8	30.9	28.3	10.9	8.85	9.83	28.1
1976	6.61										
1977											

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## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1955-1977)

MEAN	11.4	21.7	42.3	49.3	39.7	35.2	25.2	16.2	12.0	8.4	7.9	23.1
MAXIMUM	18.8	50.7	75.7	69.0	62.1	76.3	34.2	22.7	20.8	9.8	12.3	28.7
MINIMUM	6.6	6.7	18.1	17.6	17.6	21.1	14.9	10.2	8.2	6.4	5.9	16.6
STD DEVIATION	2.91	10.58	17.20	13.91	11.04	14.39	4.66	2.96	3.19	0.93	1.67	3.53
SKEDNESS	1.248	1.353	0.650	-0.426	0.045	1.542	-0.181	0.587	1.836	-0.482	1.304	-0.084
STD ERR SKEW	0.491	0.491	0.501	0.501	0.501	0.501	0.501	0.512	0.512	0.512	0.512	0.524
SER CORR COEFF	-0.232	-0.352	-0.230	-0.009	-0.480	0.059	-0.065	0.261	-0.074	0.286	0.303	-0.004
COEFF OF VAR	0.256	0.487	0.407	0.282	0.278	0.409	0.185	0.183	0.266	0.110	0.211	0.153
MEAN LOGS	1.044	1.293	1.592	1.673	1.582	1.518	1.394	1.202	1.066	0.924	0.890	1.359
STD DEV LOGS	0.104	0.198	0.175	0.141	0.132	0.155	0.085	0.079	0.101	0.050	0.085	0.068
SKEDNESS LOGS	0.494	0.080	0.117	-1.025	-0.800	0.844	-0.816	-0.149	1.161	-0.718	0.827	-0.356
STD ERR SKEW LOGS	0.491	0.491	0.501	0.501	0.501	0.501	0.501	0.512	0.512	0.512	0.512	0.524
SER CORR LOGS	-0.260	-0.437	-0.197	0.003	-0.434	0.004	-0.144	0.170	-0.066	0.252	0.239	0.031
COEFF OF VAR LOGS	0.099	0.153	0.110	0.084	0.083	0.102	0.061	0.066	0.095	0.054	0.095	0.050
% OF AVE FLOW	4.1	7.8	15.2	17.7	14.3	12.6	9.0	5.8	4.3	3.0	2.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1955-1977)

0.99	6.9	7.0	15.9	17.5	15.9	18.0	14.0	10.2	8.2	6.1	5.6	15.2
0.95	7.7	9.4	20.4	25.5	21.8	20.2	17.2	11.7	8.7	6.8	5.9	17.4
0.90	8.3	11.0	23.5	30.5	25.4	21.8	19.0	12.6	9.0	7.2	6.2	18.6
0.80	9.0	13.4	27.8	36.8	30.1	24.3	21.2	13.7	9.6	7.7	6.6	20.1
0.50	10.9	19.5	38.8	49.7	39.7	31.4	25.4	16.0	11.1	8.5	7.6	23.0
0.20	13.4	28.8	54.8	62.1	49.5	43.5	29.3	18.6	13.8	9.3	9.0	26.1
0.10	15.2	35.4	65.9	67.8	54.4	53.1	31.1	20.1	15.9	9.6	10.1	27.7
0.04	17.5	42.3	80.5	73.2	59.2	52.9	32.9	21.7	18.9	9.9	11.5	29.4
0.02	19.2	51.2	91.7	76.1	62.1	79.6	33.9	22.8	21.4	10.1	12.6	30.5
0.01	21.0	58.4	103.4	78.5	64.5	93.4	34.7	23.9	24.1	10.3	13.7	31.5

STATION 12124000 EVANS CREEK (ABOVE MOUTH) NR REDMOND, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1957	7.2	7.3	7.4	7.6	7.8	8.0	8.6	9.2	11.0
1958	6.9	7.0	7.1	7.2	7.4	7.6	7.8	8.2	9.4
1959	5.8	5.8	5.9	5.9	6.1	6.2	6.5	6.9	8.1
1960	5.8	5.8	5.9	6.0	6.4	7.0	8.0	8.9	11.0
1961	6.5	6.5	6.6	6.8	7.1	7.8	8.5	8.9	12.0
1962	6.8	6.9	7.0	7.0	7.3	7.8	8.3	8.9	10.0
1963	7.2	7.2	7.2	7.6	8.5	8.7	9.1	9.3	10.0
1964	5.8	6.0	6.2	6.6	6.6	6.9	7.3	8.3	9.8
1965	6.4	6.9	7.2	7.5	8.1	8.6	9.3	9.4	12.0
1966	5.8	5.8	6.1	6.6	7.1	7.9	8.5	8.8	10.0
1967	5.8	6.0	6.1	6.2	6.3	6.8	7.4	7.9	9.3
1968	5.2	5.3	5.5	5.7	5.8	5.9	6.3	6.8	8.2
1969	5.7	5.8	5.9	6.2	6.7	8.2	8.9	9.9	13.0
1970	5.6	5.7	5.9	6.2	6.2	6.5	8.0	9.2	11.0
1971	4.5	4.7	4.9	5.1	6.2	6.9	7.2	8.3	9.9
1972	5.8	5.9	5.9	6.0	6.3	7.3	7.9	8.7	10.0
1973	6.4	6.6	6.8	6.9	7.6	7.8	9.2	9.8	11.0
1976	7.1	7.2	7.6	7.8	8.1	10.0	10.0	11.0	13.0

LOWEST MEAN FLOW STATISTICS (YEARS 1957-1976)

MEAN	6.1	6.2	6.4	6.6	7.0	7.6	8.2	8.8	10.5
MAXIMUM	7.2	7.3	7.6	7.8	8.5	10.0	10.0	11.0	13.0
MINIMUM	4.5	4.7	4.9	5.1	5.8	5.9	6.3	6.8	8.1
STANDARD DEVIATION	0.74	0.73	0.74	0.77	0.81	0.99	0.98	1.01	1.40
SKENNESS	-0.217	-0.189	-0.055	-0.036	0.394	0.579	-0.181	-0.168	0.240
STD ERROR OF SKENNESS	0.536	0.394	0.336	0.536	0.536	0.536	0.536	0.536	0.536
SERIAL CORR COEFF	0.438	0.394	0.432	0.461	0.269	0.030	0.075	0.150	-0.019
COEFF OF VARIATION	0.120	0.118	0.116	0.116	0.116	0.132	0.120	0.115	0.134
MEAN LOGS	0.784	0.793	0.803	0.816	0.841	0.874	0.908	0.942	1.017
STD DEVIATION LOGS	0.054	0.052	0.051	0.051	0.050	0.056	0.053	0.051	0.058
SKENNESS LOGS	-0.555	-0.447	-0.287	-0.251	0.253	0.182	-0.461	-0.584	-0.076
STD ERR SKENNESS LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SER CORR COEFF LOGS	0.417	0.381	0.431	0.468	0.287	0.027	0.058	0.125	-0.010
COEFF OF VAR LOGS	0.068	0.066	0.064	0.063	0.059	0.064	0.059	0.054	0.057

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1957-1976)

0.99	7.7	7.9	8.2	8.4	9.2	10.3	10.3	10.9	14.1
0.98	7.5	7.7	7.9	8.2	8.9	9.9	10.1	10.7	13.6
0.96	7.4	7.5	7.7	8.0	8.6	9.5	9.8	10.5	13.1
0.90	7.1	7.2	7.4	7.6	8.1	8.9	9.4	10.1	12.3
0.80	6.8	6.9	7.0	7.2	7.6	8.3	9.0	9.7	11.6
0.50	6.2	6.3	6.4	6.6	6.9	7.5	8.2	8.8	10.4
0.20	5.5	5.6	5.8	5.9	6.3	6.7	7.3	8.0	9.3
0.10	5.2	5.3	5.4	5.6	6.0	6.4	6.9	7.5	8.7
0.05	4.9	5.0	5.2	5.4	5.8	6.1	6.5	7.1	8.3
0.02	4.6	4.7	4.9	5.1	5.6	5.8	6.1	6.6	7.8
0.01	4.3	4.5	4.7	4.9	5.4	5.6	5.8	6.3	7.5

FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1957-1976)

P95	P90	P75	P70	P50	P25	P10
6.6	7.4	9.6	10.0	16.0	30.0	49.0

FLOW(CFS)	DATE	REG. (R)
100	10/1/10	100
200	10/2/10	200
300	10/3/10	300
400	10/4/10	400
500	10/5/10	500
600	10/6/10	600
700	10/7/10	700
800	10/8/10	800
900	10/9/10	900
1000	10/10/10	1000
1100	10/11/10	1100
1200	10/12/10	1200
1300	10/13/10	1300
1400	10/14/10	1400
1500	10/15/10	1500
1600	10/16/10	1600
1700	10/17/10	1700
1800	10/18/10	1800
1900	10/19/10	1900
2000	10/20/10	2000
2100	10/21/10	2100
2200	10/22/10	2200
2300	10/23/10	2300
2400	10/24/10	2400
2500	10/25/10	2500
2600	10/26/10	2600
2700	10/27/10	2700
2800	10/28/10	2800
2900	10/29/10	2900
3000	10/30/10	3000
3100	10/31/10	3100
3200	11/1/10	3200
3300	11/2/10	3300
3400	11/3/10	3400
3500	11/4/10	3500
3600	11/5/10	3600
3700	11/6/10	3700
3800	11/7/10	3800
3900	11/8/10	3900
4000	11/9/10	4000
4100	11/10/10	4100
4200	11/11/10	4200
4300	11/12/10	4300
4400	11/13/10	4400
4500	11/14/10	4500
4600	11/15/10	4600
4700	11/16/10	4700
4800	11/17/10	4800
4900	11/18/10	4900
5000	11/19/10	5000
5100	11/20/10	5100
5200	11/21/10	5200
5300	11/22/10	5300
5400	11/23/10	5400
5500	11/24/10	5500
5600	11/25/10	5600
5700	11/26/10	5700
5800	11/27/10	5800
5900	11/28/10	5900
6000	11/29/10	6000
6100	11/30/10	6100
6200	12/1/10	6200
6300	12/2/10	6300
6400	12/3/10	6400
6500	12/4/10	6500
6600	12/5/10	6600
6700	12/6/10	6700
6800	12/7/10	6800
6900	12/8/10	6900
7000	12/9/10	7000
7100	12/10/10	7100
7200	12/11/10	7200
7300	12/12/10	7300
7400	12/13/10	7400
7500	12/14/10	7500
7600	12/15/10	7600
7700	12/16/10	7700
7800	12/17/10	7800
7900	12/18/10	7900
8000	12/19/10	8000
8100	12/20/10	8100
8200	12/21/10	8200
8300	12/22/10	8300
8400	12/23/10	8400
8500	12/24/10	8500
8600	12/25/10	8600
8700	12/26/10	8700
8800	12/27/10	8800
8900	12/28/10	8900
9000	12/29/10	9000
9100	12/30/10	9100
9200	12/31/10	9200
9300	1/1/11	9300
9400	1/2/11	9400
9500	1/3/11	9500
9600	1/4/11	9600
9700	1/5/11	9700
9800	1/6/11	9800
9900	1/7/11	9900
10000	1/8/11	10000

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1956-1977)

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1956-1977)														
MEAN	125.8	114.8	93.7	75.8	63.1	52.5	45.7	42.6	35.6					
MAXIMUM	212.0	191.0	148.0	121.0	88.0	71.0	60.0	54.0	46.0					
MINIMUM	65.0	54.0	43.0	35.0	27.0	21.0	18.0	15.0	12.0					
STANDARD DEVIATION	39.42	34.49	25.99	19.70	14.20	11.88	9.52	8.18	6.38					
SKEWNESS	0.636	0.380	0.380	0.524	0.063	-0.098	-0.259	-0.257	-0.142					
STD ERROR OF SKEWNESS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524					
SERIAL CORR COEFF	0.329	0.352	0.403	0.340	0.213	0.075	0.111	0.061	-0.035					
COEFF OF VARIATION	0.313	0.300	0.277	0.260	0.225	0.226	0.260	0.192	0.179					
MEAN LOGS	2.800	2.041	1.956	1.865	1.789	1.709	1.640	1.622	1.545					
STD DEVIATION LOGS	0.134	0.134	0.117	0.117	0.103	0.104	0.094	0.088	0.081					
SKEWNESS LOGS	-0.213	-0.300	-0.171	-0.393	-0.584	-0.637	-0.676	-0.616	-0.496					
STD ERR SKEWNESS LOGS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524					
SER CORR COEFF LOGS	0.427	0.436	0.439	0.417	0.286	0.175	0.186	0.128	0.014					
COEFF OF VAR LOGS	0.066	0.066	0.063	0.063	0.058	0.061	0.057	0.054	0.052					
2.0965														
0.1368														
-0.2550														
2.0965														
0.1368														
-0.2550														

STATION 12124500 BEAR CREEK AT REDMOND, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945									33.9	20.2	18.0	25.9	
1946	35.5	99.1	131	165	176	146	79.0	36.4	40.7	27.2	18.4	24.5	81.1
1947	35.6	97.1	178	127	191	78.4	79.5	33.0	30.5	21.3	18.0	25.1	75.4
1948	51.2	117	139	181	166	111	96.6	113	74.1	38.2	34.1	38.7	96.5
1949	48.7	112	119	98.1	194	105	62.5	47.7	27.3	25.0	21.5	22.3	72.8
1950	35.5	58.3	96.6	191	213	250	99.1	57.5	32.2	23.0	22.5	21.7	91.1
1955										38.5	25.1	22.8	
1956	49.1	129	249	257	105	137	94.2	47.6	45.9	26.7	24.1	29.6	99.8
1957	49.9	60.0	83.9	73.0	182	182	106	50.5	32.4	24.2	25.8	20.9	73.5
1958	34.1	46.3	73.5	171	192	96.5	99.0	40.3	24.2	17.8	18.9	21.1	68.7

STATION 12124500 BEAR CREEK AT REDMOND, WASH.

ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1946	363.0	2- 6-1946
1947	460.0	2- 2-1947
1948	349.0	1- 4-1948
1949	555.0	2-22-1949
1950	654.0	3- 5-1950
1956	560.0	12-22-1955
1957	578.0	2-26-1957
1958	492.0	1-17-1958

## STATION 12125000 SAMMAMISH RIVER NEAR REDMOND, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1939													
1940	55.7	84.8	252	391	500	485	289	137	108	106	67.0	56.6	
1941	87.7	159	252	333	292	586	398	381	187	97.4	78.0	66.8	247
1942	133	194	477	460	440	227	194	156	125	77.4	58.6	87.4	170
1943	76.3	229	464	413	441	365	249	180	189	143	90.5	84.8	250
1944	127	127	150	212	208	270	222	208	191	112	79.0	65.1	261
1945	83.7	115	201	277	420	494	580	429	258	84.1	59.0	69.6	159
1946	105	288	496	629	611	590	463	273	172	129	72.1	86.6	261
1947	137	261	723	532	674	456	361	215	152	155	89.5	88.0	329
1948	203	537	552	737	606	625	484	423	343	106	68.0	69.6	311
1949	207	322	603	465	523	594	375	238	115	201	129.0	137	414
1950	99.4	176	323	706	837	1094	651	358	115	82.3	67.6	69.8	304
1951	122	340	725	827	1056	616	343	197	125	105	82.6	71.3	388
1952	105	158	339	341	446	368	283	173	109	70.8	50.1	57.6	374
1953	53.8	59.7	82.1	350	570	330	320	235	213	82.4	57.7	52.6	209
1954	128	259	602	729	700	538	370	215	169	128	76.6	73.4	205
1955	100	187	319	409	475	357	429	350	199	155	105	106	338
1956	163	439	878	1024	552	545	478	227	150	144	109	91.7	263
1957	127	236	359	363	450	720	469	227	150	97.8	73.1	76.9	392

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1939-1957)

MEAN	114.6	231.7	433.2	511.0	540.5	503.2	390.6	261.6	173.9	115.3	78.5	78.4	286.8
MAXIMUM	207.0	537.0	878.0	1024.0	1056.0	1094.0	651.0	429.0	343.0	201.0	129.0	137.0	414.0
MINIMUM	53.8	59.7	82.1	212.0	284.0	227.0	194.0	137.0	108.0	70.8	50.1	52.6	159.0
STD DEVIATION	43.59	122.20	217.99	217.70	184.75	198.96	119.26	91.89	57.87	34.23	20.17	20.07	78.24
SKEWNESS	0.811	0.996	0.348	0.873	1.270	1.310	0.338	0.624	1.524	0.896	1.032	1.512	0.045
STD ERR SKEW	0.536	0.536	0.536	0.536	0.524	0.524	0.524	0.536	0.536	0.536	0.536	0.536	0.550
SER CORR COEFF	0.368	0.153	-0.085	-0.072	0.379	0.309	-0.056	-0.382	-0.342	-0.056	-0.045	0.034	0.266
COEFF OF VAR	0.380	0.527	0.503	0.426	0.342	0.395	0.305	0.351	0.333	0.297	0.257	0.256	0.273
MEAN LOGS	2.030	2.306	2.572	2.673	2.711	2.672	2.572	2.393	2.221	2.045	1.882	1.882	2.441
STD DEV LOGS	0.165	0.241	0.244	0.181	0.140	0.165	0.139	0.150	0.131	0.124	0.106	0.102	0.125
SKEWNESS LOGS	-0.064	-0.412	-0.905	-0.118	0.222	0.032	-0.377	0.175	0.571	0.315	0.447	0.736	-0.420
STD ERR SKEW LOGS	0.536	0.536	0.536	0.536	0.524	0.524	0.524	0.536	0.536	0.536	0.536	0.536	0.550
SER CORR LOGS	0.299	0.165	-0.018	0.058	0.417	0.323	-0.014	-0.352	-0.351	-0.011	-0.019	0.131	0.254
COEFF OF VAR LOGS	0.081	0.105	0.103	0.068	0.052	0.062	0.054	0.063	0.059	0.060	0.056	0.054	0.051
% OF AVE FLOW	3.3	6.8	12.6	14.9	15.7	14.7	11.4	7.6	5.1	3.4	2.3	2.3	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1939-1957)

0.99	43.6	47.0	61.8	185.3	255.8	195.3	162.5	115.8	94.5	61.1	46.9	50.3	129.5
0.95	57.1	76.3	120.6	240.8	308.7	251.8	213.5	142.6	106.6	71.3	52.8	54.8	166.6
0.90	65.8	97.2	165.5	277.6	342.7	288.6	245.0	159.9	115.4	77.9	54.8	57.9	186.0
0.80	78.0	128.6	234.1	330.9	390.6	340.6	287.1	184.4	128.3	87.0	61.9	62.4	218.5
0.50	107.6	210.2	408.8	666.9	507.9	468.7	380.4	244.7	161.5	109.3	74.9	74.1	281.8
0.20	147.7	325.5	627.6	1066.4	671.6	646.8	489.9	329.4	211.9	140.2	92.9	91.7	353.4
0.10	173.8	400.7	749.6	806.4	782.6	766.2	553.1	387.0	248.3	161.1	105.1	104.2	393.4
0.04	206.4	492.7	877.4	991.9	926.1	918.8	624.5	461.6	298.1	188.1	120.9	121.1	437.6
0.02	230.5	558.6	955.9	1136.0	1035.5	1033.7	672.6	518.6	337.9	208.6	133.0	134.5	466.8
0.01	254.4	622.1	1022.3	1285.1	1147.2	1149.7	717.0	576.7	380.1	229.6	145.3	148.5	493.4

STATION 12125000 SAMMAMISH RIVER NEAR REDMOND, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1940	51.0	51.0	52.0	52.0	53.0	55.0	58.0	65.0	80.0
1941	62.0	63.0	66.0	66.0	67.0	64.0	74.0	81.0	111.0
1942	56.0	56.0	56.0	57.0	58.0	64.0	74.0	83.0	105.0
1943	76.0	76.0	76.0	76.0	76.0	80.0	84.0	94.0	123.0
1944	53.0	53.0	55.0	55.0	59.0	66.0	72.0	81.0	101.0
1945	56.0	56.0	56.0	57.0	58.0	63.0	69.0	73.0	93.0
1946	64.0	64.0	64.0	64.0	69.0	77.0	87.0	95.0	153.0
1947	72.0	72.0	72.0	72.0	76.0	88.0	100.0	116.0	139.0
1948	61.0	62.0	63.0	63.0	65.0	68.0	74.0	88.0	132.0
1949	117.0	117.0	118.0	119.0	124.0	127.0	151.0	163.0	219.0
1950	60.0	60.0	61.0	61.0	63.0	69.0	73.0	79.0	98.0
1951	62.0	63.0	64.0	66.0	71.0	76.0	82.0	93.0	135.0
1952	45.0	45.0	45.0	46.0	50.0	53.0	59.0	68.0	93.0
1953	49.0	50.0	50.0	51.0	52.0	53.0	54.0	56.0	64.0
1954	65.0	65.0	66.0	67.0	69.0	73.0	86.0	100.0	138.0
1955	91.0	94.0	96.0	97.0	100.0	103.0	103.0	108.0	130.0
1956	87.0	88.0	89.0	90.0	92.0	96.0	108.0	121.0	174.0
1957	63.0	64.0	65.0	67.0	69.0	74.0	79.0	88.0	120.0

LOWEST MEAN FLOW STATISTICS (YEARS 1940-1957)

MEAN	66.1	66.4	67.1	68.1	70.6	75.2	82.6	91.8	122.7
MAXIMUM	117.0	117.0	118.0	119.0	124.0	127.0	151.0	163.0	219.0
MINIMUM	45.0	45.0	45.0	46.0	50.0	53.0	54.0	56.0	64.0
STANDARD DEVIATION	17.55	17.61	17.90	18.06	18.59	18.74	22.60	24.59	36.13
SKEWNESS	1.651	1.620	1.593	1.588	1.656	1.372	1.675	1.402	0.988
STD ERROR OF SKEWNESS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SERIAL CORR COEFF	0.065	0.061	0.082	0.080	0.061	0.075	0.014	0.030	0.006
COEFF OF VARIATION	0.265	0.265	0.267	0.265	0.263	0.249	0.274	0.268	0.295
MEAN LOGS	1.808	1.810	1.814	1.821	1.837	1.865	1.904	1.950	2.072
STD DEVIATION LOGS	0.103	0.103	0.104	0.103	0.102	0.100	0.107	0.108	0.125
SKEWNESS LOGS	1.002	0.986	0.954	0.968	1.037	0.728	0.785	0.498	0.002
STD ERR SKEWNESS LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SER CORR COEFF LOGS	0.129	0.120	0.140	0.133	0.120	0.114	0.093	0.101	0.048
COEFF OF VAR LOGS	0.057	0.057	0.057	0.057	0.055	0.053	0.056	0.055	0.060

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1940-1957)

0.99	131.5	131.9	133.3	135.0	140.2	140.6	163.0	173.6	230.5
0.98	117.5	117.8	118.1	120.7	125.1	127.6	146.4	158.2	213.1
0.96	104.2	104.7	105.9	107.3	111.1	115.2	130.8	143.2	195.3
0.90	88.3	88.7	89.8	91.0	94.0	99.5	111.4	123.7	170.6
0.80	76.9	77.3	78.2	79.3	81.9	87.8	97.2	108.9	150.3
0.50	61.8	62.2	62.8	63.7	66.0	71.3	77.6	87.2	117.9
0.20	52.5	52.8	53.1	54.1	56.3	60.2	64.9	71.9	92.6
0.10	49.2	49.4	49.6	50.6	52.8	55.9	60.1	65.8	81.6
0.05	47.1	47.2	47.4	48.3	50.6	53.0	56.8	61.4	73.5
0.02	45.2	45.3	45.3	46.2	48.6	50.2	53.8	57.2	65.3
0.01	44.1	44.2	44.2	45.1	47.6	48.7	52.1	54.7	60.4

FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1940-1957)

P95	P90	P75	P70	P50	P25	P10
63.0	72.0	100.0	120.0	210.0	420.0	610.0



## STATION 12125000 SAMMAMISH RIVER NEAR REDMUND, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1940	689.	684.	675.	649.	590.	515.	477.	445.	407.	689. 03/09/40
1941	370.	370.	370.	358.	330.	310.	290.	270.	243.	370. 01/26/41
1942	672.	672.	672.	661.	569.	495.	463.	437.	366.	672. 12/24/41
1943	541.	532.	528.	506.	484.	443.	440.	411.	401.	541. 04/05/43
1944	307.	300.	298.	295.	290.	277.	261.	252.	226.	307. 02/17/44
1945	620.	611.	608.	594.	590.	551.	517.	483.	407.	620. 04/12/45
1946	704.	704.	698.	671.	632.	620.	610.	583.	521.	704. 01/11/46
1947	924.	916.	891.	826.	735.	641.	643.	600.	504.	924. 12/15/46
1948	860.	851.	842.	817.	747.	675.	660.	632.	590.	860. 01/10/48
1949	846.	837.	815.	760.	679.	581.	540.	548.	485.	846. 02/24/49
1950	1360.	1340.	1290.	1170.	1110.	982.	917.	823.	658.	1360. 03/06/50
1951	1490.	1470.	1400.	1250.	1040.	933.	867.	806.	644.	1520. 02/11/51
1952	517.	516.	505.	490.	447.	407.	388.	379.	326.	524. 02/04/52
1953	672.	669.	666.	640.	587.	483.	432.	395.	332.	683. 02/07/53
1954	855.	849.	827.	776.	752.	722.	686.	644.	533.	858. 01/08/54
1955	600.	587.	571.	535.	473.	441.	418.	417.	389.	602. 02/09/55
1956	1330.	1300.	1230.	1140.	1090.	959.	835.	757.	655.	1340. 01/07/56
1957										878. 03/10/57

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1940-1957)

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W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

MEAN	785.7	776.9	757.4	712.1	655.7	591.1	555.9	522.8	452.2	
MINIMUM	1490.0	1470.0	1400.0	1250.0	1110.0	982.0	917.0	823.0	658.0	
STANDARD DEVIATION	334.76	328.44	307.77	270.04	241.04	211.09	192.11	171.75	136.41	
SKWENESS	0.892	0.869	0.802	0.676	0.670	0.644	0.477	0.317	0.058	
STD ERROR OF SKWENESS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	
SERIAL CORR COEFF	0.302	0.301	0.296	0.278	0.219	0.195	0.211	0.280	0.277	
COEFF OF VARIATION	0.426	0.423	0.406	0.379	0.368	0.357	0.346	0.328	0.302	
MEAN LOGS	2.859	2.854	2.846	2.823	2.789	2.746	2.720	2.695	2.635	2.8652
STD DEVIATION LOGS	0.185	0.184	0.179	0.169	0.162	0.156	0.154	0.149	0.140	0.1809
SKWENESS LOGS	-0.105	-0.141	-0.196	-0.265	-0.182	-0.100	-0.219	-0.331	-0.508	-0.1720
STD ERR SKWENESS LOGS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	
SER CORR COEFF LOGS	0.274	0.273	0.262	0.243	0.184	0.175	0.186	0.256	0.248	
COEFF OF VAR LOGS	0.065	0.064	0.063	0.060	0.058	0.057	0.057	0.055	0.053	

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1940-1957)

0.99	260.3	255.5	253.9	249.7	245.7	234.8	216.9	205.1	180.7	278.3	264.0
0.95	354.9	350.4	348.6	341.2	326.8	305.0	286.3	273.1	243.0	369.6	362.3
0.90	417.4	413.1	410.6	400.1	378.7	349.8	330.2	315.7	281.3	430.0	426.9
0.80	506.7	502.3	498.1	482.2	451.0	412.1	390.8	373.7	332.4	516.4	518.5
0.50	728.2	722.4	710.3	676.3	622.0	560.1	535.5	505.1	445.5	735.2	742.0
0.20	1035.5	1024.4	994.0	925.7	844.4	754.8	709.8	664.6	569.3	1041.1	1044.3
0.10	1239.6	1222.8	1176.1	1080.5	984.5	879.2	809.8	759.2	639.3	1250.5	1240.2
0.04	1497.0	1470.8	1399.4	1265.3	1154.1	1032.0	950.9	868.4	715.7	1520.6	1482.4
0.02	1688.2	1653.5	1561.1	1395.9	1275.7	1143.0	1043.5	943.2	765.6	1725.4	1659.0
0.01	1878.8	1834.3	1718.9	1521.0	1393.6	1251.8	1132.3	1013.3	810.5	1933.1	1832.4

## STATION 12125200 SAMMAMISH RIVER NEAR WOODINVILLE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1965					910	303	301	254	131	71.1	79.2	76.1	
1966	103	213	320	722	429	495	330	225	118	116	54.6	74.1	266
1967	98.8	231	795	946	618	403	352	255	130	172.2	46.2	49.0	332
1968	105	162	406	689	594	506	466	219	269	109	105	155	314
1969	232	422	951	915	663	345	307	232	165	116	67.4	131	378
1970	145	186	481	770	556	363	446	262	126	71.5	73.0	96.4	297
1971	132	246	723	856	594	760	505	240	189	141	60.0	97.5	378
1972	132	359	583	740	840	1214	548	289	213	175	94.4	126	442
1973	104	167	663	700	336	321	209	160	129	97.1	65.4	76.2	253
1974	110	392	996	905	790	822	470	271	210	116	63.4	56.8	432
1975	76.0	222	455	909	678	639	333	266	118	102	90.4	90.7	330
1976	174	681	1078	780	517	451	394	235	148	101	124	118	400
1977	87.8	133	186	277	200	395	121	198	243	89.8	73.8	128	186
1978	133	334	773	555	442	339	369	330	164	109	72.4	189	317
1979	156	368	528	308	639	426	281	159	113	83.1	60.0	88.0	265

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1965-1979)

MEAN	127.8	294.0	638.4	719.4	587.1	518.8	368.5	239.7	164.4	104.7	75.3	103.5	327.9
MAXIMUM	232.0	681.0	1078.0	946.0	910.0	1214.0	548.0	330.0	269.0	175.0	125.0	189.0	442.0
MINIMUM	76.0	133.0	186.0	277.0	200.0	303.0	209.0	159.0	113.0	71.1	46.2	49.0	186.0
STD DEVIATION	40.47	145.76	263.55	210.97	187.46	248.29	101.67	45.14	49.58	27.69	20.57	37.83	72.80
SKENESS	1.337	1.469	0.093	-1.199	-0.270	1.844	0.150	-0.172	0.903	1.081	1.029	0.727	-0.127
STD ERR SKEW	0.597	0.597	0.597	0.597	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.597
SER CORR COEFF	-0.103	-0.505	-0.764	0.342	-0.194	0.055	-0.201	-0.598	-0.194	-0.067	-0.061	0.149	-0.350
COEFF OF VAR	0.317	0.496	0.413	0.293	0.319	0.479	0.276	0.188	0.302	0.265	0.273	0.366	0.222
MEAN LOGS	2.088	2.425	2.764	2.832	2.743	2.679	2.550	2.372	2.199	2.007	1.863	1.988	2.505
STD DEV LOGS	0.127	0.197	0.210	0.168	0.167	0.173	0.125	0.087	0.123	0.110	0.113	0.160	0.103
SKENESS LOGS	0.545	0.418	-0.922	-1.712	-1.367	1.089	-0.370	-0.730	0.586	0.344	0.418	-0.099	-0.705
STD ERR SKEW LGS	0.597	0.597	0.597	0.597	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.597
SER CORR LOGS	-0.125	-0.609	-0.660	0.302	-0.088	0.005	-0.278	-0.673	-0.168	-0.183	-0.062	0.178	-0.329
COEFF OF VAR LGS	0.061	0.081	0.076	0.059	0.061	0.064	0.049	0.036	0.056	0.055	0.060	0.080	0.041
% OF AVE FLOW	3.2	7.5	16.2	18.3	14.9	13.2	9.4	6.1	4.2	2.7	1.9	2.6	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1965-1979)

0.99	69.9	106.7	137.6	179.3	158.4	260.3	168.0	133.6	92.5	60.2	43.2	40.2	163.9
0.95	79.6	133.7	235.5	317.2	262.9	286.6	214.7	163.7	104.4	68.8	49.2	52.5	208.0
0.90	86.0	152.5	303.4	407.7	330.7	307.2	242.9	180.5	112.4	74.3	53.0	60.4	233.3
0.80	95.4	180.6	400.3	527.1	421.0	340.8	280.3	201.3	124.0	81.8	58.4	71.5	265.4
0.50	119.4	257.9	624.4	753.9	602.0	444.9	361.3	241.2	153.8	100.1	71.6	97.8	328.8
0.20	155.1	385.1	877.1	927.8	762.2	642.7	454.2	279.3	198.4	124.9	90.0	132.7	391.7
0.10	180.6	483.8	1008.8	966.8	827.8	814.1	507.0	297.7	230.4	141.4	102.6	152.1	454.6
0.04	215.1	625.9	1141.5	1027.1	881.5	1085.1	566.0	315.9	273.7	162.4	118.8	182.8	473.7
0.02	242.5	745.1	1220.5	1043.2	907.5	1332.8	605.4	326.8	308.1	178.3	131.3	202.9	473.7
0.01	271.4	876.4	1285.9	1052.7	925.7	1625.8	641.7	335.9	344.5	194.4	144.0	222.7	489.9

STATION 12125200 SAMMAMISH RIVER NEAR WOODINVILLE, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31													
YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS				
1966	54.0	55.0	56.0	56.0	62.0	74.0	74.0	80.0	108.0				
1967	43.0	44.0	45.0	47.0	54.0	64.0	64.0	70.0	103.0				
1968	40.0	41.0	42.0	42.0	43.0	47.0	53.0	83.0	94.0				
1969	60.0	61.0	64.0	69.0	78.0	103.0	121.0	133.0	180.0				
1970	54.0	57.0	59.0	61.0	63.0	72.0	95.0	112.0	132.0				
1971	49.0	51.0	54.0	58.0	69.0	70.0	77.0	105.0	114.0				
1972	48.0	48.0	51.0	54.0	59.0	76.0	84.0	105.0	143.0				
1973	71.0	74.0	75.0	77.0	82.0	94.0	107.0	117.0	145.0				
1974	59.0	59.0	59.0	60.0	62.0	67.0	76.0	86.0	103.0				
1975	50.0	51.0	52.0	53.0	54.0	58.0	64.0	76.0	116.0				
1976	65.0	65.0	67.0	70.0	78.0	91.0	92.0	98.0	136.0				
1977	60.0	61.0	63.0	69.0	84.0	102.0	107.0	107.0	117.0				
1978	25.0	31.0	32.0	35.0	43.0	75.0	94.0	102.0	143.0				
1979	56.0	57.0	58.0	65.0	72.0	89.0	104.0	125.0	165.0				

LOWEST MEAN FLOW STATISTICS (YEARS 1966-1979)

MEAN	52.4	54.0	55.5	58.3	64.5	77.3	87.1	98.2	128.5
MAXIMUM	71.0	74.0	75.0	77.0	84.0	103.0	121.0	133.0	180.0
MINIMUM	25.0	31.0	32.0	35.0	43.0	47.0	53.0	64.0	94.0
STANDARD DEVIATION	11.47	10.88	10.93	11.63	13.35	16.52	19.21	19.83	25.05
SKEWNESS	-0.828	-0.351	-0.458	-0.437	-0.158	0.040	0.006	0.090	0.611
STD ERROR OF SKEWNESS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597
SERIAL CORR COEFF	-0.110	-0.103	-0.108	-0.193	-0.290	-0.122	0.024	0.044	-0.011
COEFF OF VARIATION	0.219	0.201	0.197	0.200	0.207	0.214	0.221	0.202	0.195
MEAN LOGS	1.708	1.723	1.736	1.757	1.800	1.878	1.930	1.984	2.101
STD DEVIATION LOGS	0.112	0.095	0.094	0.094	0.094	0.096	0.100	0.090	0.083
SKEWNESS LOGS	-1.686	-1.019	-1.101	-0.916	-0.513	-0.452	-0.444	-0.299	0.279
STD ERR SKEWNESS LOGS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597
SER CORR COEFF LOGS	-0.142	-0.125	-0.123	-0.200	-0.292	-0.105	0.043	0.051	0.019
COEFF OF VAR LOGS	0.065	0.055	0.054	0.053	0.052	0.051	0.052	0.045	0.039

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1966-1979)

0.99	68.5	74.7	75.4	81.6	96.4	117.6	134.6	148.9	204.6
0.98	68.1	73.1	74.1	79.7	92.8	112.8	128.9	142.5	192.2
0.96	67.4	71.2	72.3	77.3	88.7	107.5	122.5	135.4	179.5
0.90	65.5	67.6	69.0	73.1	82.2	99.2	112.7	124.7	162.1
0.80	62.8	63.7	65.3	68.7	76.1	91.4	103.5	114.9	147.8
0.50	54.6	54.9	56.5	59.0	64.3	76.9	86.5	97.3	125.2
0.20	43.0	44.8	46.3	48.4	53.0	63.1	70.5	81.2	107.4
0.10	36.3	39.4	40.7	42.8	47.4	56.4	62.8	73.4	99.6
0.05	30.7	35.0	36.2	38.2	42.9	51.1	56.7	67.4	93.8
0.02	24.8	31.2	31.2	33.2	38.2	45.5	50.3	60.9	87.9
0.01	21.1	27.2	28.0	30.1	35.2	41.9	46.3	56.9	84.3

FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1966-1979)

P95	P90	P75	P70	P50	P25	P10
60.0	74.0	120.0	130.0	220.0	450.0	730.0

## STATION 12125200 SAMMAMISH RIVER NEAR WOODINVILLE, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE	REG. (R)
1966	1390.	1330.	1170.	968.	769.	596.	566.	508.	425.	1410.	01/07/66	
1967	1470.	1380.	1200.	1070.	972.	899.	792.	694.	572.	1480.	01/20/67	
1968	1060.	990.	908.	853.	735.	660.	621.	591.	485.	1080.	12/26/67	
1969	1740.	1660.	1550.	1290.	1060.	955.	852.	749.	600.	1760.	01/07/69	
1970	1460.	1350.	1240.	1100.	875.	727.	629.	568.	477.	1490.	01/27/70	
1971	1340.	1250.	1130.	999.	875.	812.	743.	746.	618.	1370.	12/07/70	
1972	2330.	2130.	1850.	1720.	1350.	1110.	945.	857.	717.	2390.	03/06/72	
1973	1710.	1640.	1460.	1190.	963.	734.	593.	511.	402.	1740.	12/28/72	
1974	1590.	1500.	1350.	1220.	1090.	1000.	890.	734.	555.	1640.	01/19/74	
1975	1350.	1280.	1250.	1080.	930.	815.	769.	681.	555.	1360.	01/14/75	
1976	2000.	1920.	1710.	1350.	1090.	939.	855.	775.	654.	2070.	12/04/75	
1977	658.	573.	518.	464.	399.	312.	294.	262.	283.	700.	03/09/77	
1978	1550.	1450.	1280.	1040.	822.	673.	601.	536.	475.	1580.	12/16/77	
1979	1120.	1040.	927.	788.	719.	549.	486.	487.	420.	1140.	02/13/79	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1966-1979)

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	MEAN	MINIMUM	STANDARD DEVIATION	STD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKEWNESS LOGS	STD ERR SKEWNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	1483.4	2330.0	573.0	0.109	-0.289	0.275	3.154	0.132	-1.058	0.597	-0.305	0.042	3.1637	3.1637
	2330.0	2130.0	573.0	0.139	-0.293	0.279	3.125	0.139	-1.293	0.597	-0.308	0.045	0.1294	0.1294
	568.0	573.0	518.0	0.137	-0.264	0.265	3.080	0.137	-1.401	0.597	-0.308	0.044	0.0010	-0.8800
	407.34	388.93	339.34	0.073	0.597	-0.135	3.017	0.124	-1.493	0.597	-0.305	0.042		
	0.121	-0.302	0.265	0.597	-0.135	0.269	2.941	0.124	-1.493	0.597	-0.305	0.042		
	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597		
	-0.304	-0.304	-0.265	-0.265	-0.135	0.269	2.941	0.124	-1.493	0.597	-0.305	0.042		
	0.279	0.279	0.271	0.271	0.269	0.269	2.941	0.124	-1.493	0.597	-0.305	0.042		
	3.154	3.125	3.080	3.017	2.941	2.868	2.868	2.868	2.868	2.868	2.868	2.868		
	0.132	0.139	0.137	0.131	0.124	0.139	0.139	0.139	0.139	0.139	0.139	0.139		
	-1.058	-1.293	-1.401	-1.493	-1.493	-1.475	-1.475	-1.475	-1.475	-1.475	-1.475	-1.475		
	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597		
	-0.305	-0.308	-0.264	-0.144	-0.085	-0.086	-0.086	-0.086	-0.086	-0.086	-0.086	-0.086		
	0.042	0.045	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044		

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1966-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
	562.8	803.8	946.9	1135.4	1503.2	1846.3	2001.8	2144.0	2221.8	2282.4
	477.5	720.3	868.6	1059.2	1426.7	1745.6	1877.3	1987.2	2041.9	2091.2
	428.8	652.8	789.2	963.1	1291.4	1563.5	1670.0	1754.6	1794.6	1821.9
	395.4	581.5	693.4	835.7	1071.2	1341.1	1437.8	1518.9	1595.9	1688.9
	339.3	501.8	597.9	717.7	935.1	1104.9	1167.6	1215.1	1236.4	1250.4
	255.2	395.5	481.3	590.8	795.1	961.5	1024.0	1072.1	1094.0	1108.5
	238.6	345.5	439.6	534.0	711.2	857.0	913.8	958.8	980.0	994.4
	225.9	306.7	354.2	414.6	533.4	646.2	699.1	749.3	777.8	800.8
	229.3	293.3	335.2	394.6	491.0	585.3	644.0	689.5	729.3	759.9
	893.3	995.3	1158.5	1457.8	1873.3	2135.7	2356.3	2566.3	2688.5	2816.2
	606.5	839.0	978.5	1158.5	1522.2	1880.6	2054.1	2222.5	2320.5	2400.8

## STATION 12125500 BEAR CREEK AT WOODINVILLE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1965				66.6	58.2	19.6	23.4	15.0	8.96	5.08	4.80	8.22	
1966	8.80	14.7	20.2	31.4	32.4	32.4	21.5	14.9	10.3	7.38	7.56	6.79	
1967	13.8	24.0	51.1	67.6	32.6	27.7	21.3	16.2	10.4	10.2	6.85	8.70	18.5
1968	16.0	12.5	41.1	46.5	33.2	34.0	24.3	13.5	15.8	7.53	5.64	7.51	23.8
1969	21.5	35.6	71.9	52.7	58.1	22.9	23.8	15.5	12.7	8.01	11.9	12.5	22.5
										8.64	3.16		

## STATION 12126000 NORTH CREEK NEAR ROTHELL, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945	13.1	48.2	59.7	74.4	104	70.7	35.1	14.5	15.0	5.83	6.09	9.71	
1946	11.5	33.0	63.1	59.8	108	33.5	27.1	11.4	10.3	9.38	6.42	7.60	37.8
1947	24.4	37.8	72.9	89.9	81.1	50.0	50.5	58.9	31.2	7.17	6.09	7.31	31.0
1948	19.0	50.2	59.9	38.6	121	50.9	26.1	22.9	9.14	11.0	10.8	13.9	44.3
1949	13.3	28.8	48.8	96.4	111	132	39.8	19.2	11.6	7.09	8.00	8.48	34.5
1950	19.5	51.2	85.9	104	109	53.1	23.6	19.1	9.73	8.72	9.09	8.57	43.6
1951	19.5	25.3	55.5	51.2	53.5	52.8	19.6	12.6	10.2	6.26	6.85	10.0	41.2
1952	17.74	9.99	16.1	69.1	37.2	30.6	31.5	17.8	20.0	7.47	7.39	7.09	26.8
1953	21.4	49.6	73.4	104	129	51.6	27.8	14.9	21.4	16.9	11.4	11.6	43.9
1954	10.9	51.5	67.2	51.6	54.0	37.0	45.5	29.3	17.0	15.4	7.54	8.20	32.8
1955	24.2	53.6	129	136	64.2	59.0	31.7	17.8	26.6	8.68	8.58	11.6	47.7
1956	25.5	31.6	41.6	39.8	99.7	104	47.8	19.3	13.1	9.43	9.03	8.17	37.0
1957	15.3	19.5	36.5	76.1	103	47.9	39.8	13.2	9.71	7.06	5.41	7.32	31.3
1958	13.3	33.8	43.4	115	64.5	51.4	39.6	31.5	19.0	8.32	6.40	10.3	36.3
1959	16.1	39.0	65.7	56.4	78.1	36.6	33.6	24.9	12.4	6.38	10.6	9.67	32.3
1960	17.7	75.9	48.9	78.2	110	76.2	35.9	40.2	12.6	9.13	7.05	8.81	42.9
1961	16.1	22.3	50.6	48.4	27.8	53.5	24.0	20.9	21.2	8.72	9.13	11.8	26.3
1962	15.2	40.0	48.8	43.9	61.6	34.2	42.1	18.9	13.6	11.2	8.25	9.19	28.7
1963	15.5	57.0	62.4	95.2	44.7	59.6	45.6	21.5	20.8	8.30	8.13	10.1	37.4
1964	10.2	31.1	59.2	101	101	32.8	36.6	20.9	9.86	8.52	8.46	8.88	35.3
1965	11.8	27.1	43.8	95.1	61.5	67.5	29.5	17.7	10.2	10.4	6.69	8.80	32.4
1966	14.0	34.9	103	137	63.5	51.9	34.5	21.6	9.40	6.44	6.39	7.50	40.9
1967	16.6	17.5	81.2	95.2	54.1	55.2	36.8	17.2	19.1	8.31	12.9	13.5	35.7
1968	31.4	55.1	129	103	97.2	35.4	38.4	21.7	14.0	9.66	8.29	20.8	46.8
1969	19.7	31.6	77.5	86.0	46.7	40.5	34.3	19.3	10.0	8.61	7.63	11.3	32.2
1970	19.0	30.0	77.5	128	69.0	112	48.0	19.2	15.9	11.1	7.80	12.8	45.8
1971	13.2	33.7	54.6	45.1	53.4	111	52.9	22.5	15.8	12.2	9.47	14.5	36.6
1972	13.5	25.4	89.2	84.6	40.5	42.5	23.5	17.1	14.8				
1973													

## STATION 12126000 NORTH CREEK NEAR BOTHERELL, WASH.

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1973)													
MEAN	16.7	37.3	65.6	82.3	76.7	58.3	35.8	21.6	15.1	9.2	8.1	10.2	36.4
MAXIMUM	31.4	75.9	129.0	137.0	129.0	132.0	52.9	58.9	31.2	16.9	12.9	20.8	47.7
MINIMUM	7.7	10.0	16.1	38.6	27.8	30.6	19.6	11.4	9.1	5.8	5.4	7.1	22.0
STD DEVIATION	5.26	14.47	25.23	28.95	28.74	26.41	8.83	9.39	5.59	2.55	1.76	2.93	6.70
SKEWNESS	0.871	0.559	0.961	0.164	0.162	1.498	0.129	2.701	1.164	1.507	0.939	1.908	-0.115
SER CORR SKEW	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.448
SER CORR COEFF	0.022	-0.145	0.060	-0.217	0.009	0.007	-0.092	-0.097	-0.163	0.273	-0.186	0.219	-0.216
COEFF OF VAR	0.314	0.388	0.385	0.352	0.375	0.453	0.247	0.434	0.370	0.278	0.217	0.286	0.184
MEAN LOGS	1.204	1.537	1.785	1.887	1.853	1.731	1.540	1.308	1.154	0.948	0.900	0.996	1.554
STD DEV LOGS	0.134	0.185	0.178	0.165	0.176	0.171	0.112	0.147	0.148	0.109	0.090	0.108	0.084
SKEWNESS LOGS	-0.013	-0.769	-0.891	-0.379	-0.401	0.745	-0.358	1.237	0.506	0.714	0.424	1.026	-0.552
SER CORR LOGS	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.448
SER CORR LOGS	-0.034	-0.121	0.060	-0.223	-0.015	-0.053	-0.060	-0.099	-0.119	0.187	-0.137	0.186	-0.149
COEFF OF VAR LOGS	0.111	0.120	0.100	0.087	0.095	0.099	0.072	0.112	0.129	0.116	0.100	0.109	0.054
% OF AVE FLOW	3.8	8.5	15.0	18.8	17.6	13.3	8.2	5.0	3.5	2.1	1.9	2.3	100.0
MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1973)													
0.99	7.8	10.2	18.2	28.8	24.7	26.7	17.8	12.5	7.3	5.6	5.2	6.7	21.2
0.95	9.6	15.8	28.5	39.8	35.1	30.9	22.2	13.4	8.6	6.2	5.8	7.2	25.4
0.90	10.8	19.5	35.3	46.8	41.8	33.9	24.7	14.1	9.4	6.6	6.2	7.5	27.7
0.80	12.3	24.7	44.5	56.5	51.2	38.4	28.1	15.3	10.6	7.1	6.6	8.0	30.7
0.50	16.0	36.4	64.7	78.9	73.2	51.2	35.2	19.0	13.9	8.6	7.8	9.5	36.4
0.20	20.7	49.6	86.4	106.5	100.7	73.3	43.2	26.0	18.8	10.8	9.4	12.0	42.2
0.10	23.7	56.7	97.5	123.0	117.2	91.0	47.6	32.0	22.4	12.4	10.4	13.9	45.2
0.06	27.4	64.1	108.5	142.0	136.6	117.3	52.6	41.3	27.4	14.6	11.7	16.5	48.2
0.04	30.1	68.7	115.1	155.0	149.6	139.9	55.9	46.7	31.4	16.3	12.7	18.8	50.1
0.02	32.7	72.7	120.5	167.1	161.9	165.5	58.9	59.4	35.8	18.1	13.7	21.2	51.8

## STATION 12126000 NORTH CREEK NEAR BOTHELL, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31										
YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	
1947	5.1	5.4	5.5	6.1	6.3	6.7	7.3	8.5	10.0	
1948	4.7	4.8	5.1	5.4	5.7	6.4	6.8	7.5	10.0	
1949	5.8	6.7	7.2	7.8	9.6	10.0	11.0	14.0	22.0	
1950	5.5	5.8	6.0	6.3	7.0	7.5	7.6	8.0	9.7	
1951	5.8	6.1	6.3	7.0	7.5	8.6	8.7	9.3	12.0	
1952	5.1	5.2	5.5	5.7	5.8	6.1	6.5	8.1	8.3	
1953	5.6	5.8	6.0	6.1	6.5	7.2	7.2	7.3	14.0	
1954	5.3	5.5	5.7	6.0	6.2	8.1	8.1	11.0	14.0	
1955	8.3	8.5	8.6	8.8	9.8	11.0	11.0	11.0	17.0	
1956	5.9	6.1	6.4	6.7	6.8	7.7	8.8	11.0	14.0	
1957	7.2	7.2	7.2	7.3	8.0	8.1	9.2	11.0	15.0	
1958	6.9	7.2	7.5	7.6	8.0	8.5	8.9	9.5	12.0	
1959	4.8	5.0	5.0	5.1	5.3	5.6	6.4	7.2	9.2	
1960	5.7	5.8	5.9	6.0	6.3	7.0	8.1	9.3	14.0	
1961	5.7	5.7	5.7	5.8	6.1	7.3	8.9	9.4	13.0	
1962	5.7	5.8	6.2	6.6	7.0	7.8	8.1	9.0	12.0	
1963	6.7	6.9	7.0	7.2	8.3	8.5	9.5	11.0	14.0	
1964	6.1	6.5	7.0	7.7	7.8	8.7	9.2	10.0	12.0	
1965	6.6	6.7	6.8	7.3	7.4	8.0	8.7	9.1	13.0	
1966	5.4	5.6	5.8	6.0	7.0	8.1	8.5	8.8	11.0	
1967	6.0	6.1	6.3	6.5	6.6	7.2	8.0	8.7	11.0	
1968	5.4	5.6	5.7	6.1	6.2	6.3	6.7	7.4	10.0	
1969	6.9	6.9	7.1	7.4	7.8	9.2	11.0	12.0	16.0	
1970	6.0	6.4	6.5	6.8	7.5	8.4	10.0	11.0	15.0	
1971	6.8	6.8	6.9	7.2	7.6	8.0	8.5	9.3	12.0	
1973	9.5	9.6	9.7	9.8	12.0	13.0	14.5	15.0	18.0	

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1973)

MEAN	6.1	6.3	6.5	6.8	7.3	8.0	8.7	9.7	12.9
MAXIMUM	9.5	9.6	9.7	9.8	12.0	13.0	14.0	15.0	22.0
MINIMUM	4.7	4.8	5.0	5.1	5.3	5.6	6.4	7.2	8.3
STANDARD DEVIATION	1.07	1.05	1.05	1.05	1.45	1.56	1.67	1.94	3.04
SKEWNESS	1.580	1.463	1.323	1.003	1.545	1.434	1.304	1.035	1.102
STD ERROR OF SKEWNESS	0.456	0.456	0.456	0.456	-0.456	-0.456	-0.456	-0.456	-0.456
SERIAL CORR COEFF	0.140	0.080	0.065	0.056	-0.008	-0.052	-0.040	-0.089	-0.160
COEFF OF VARIATION	0.175	0.167	0.161	0.155	0.198	0.196	0.191	0.199	0.235
MEAN LOGS	0.779	0.794	0.807	0.827	0.857	0.896	0.934	0.981	1.101
STD DEVIATION LOGS	0.070	0.068	0.066	0.064	0.079	0.079	0.078	0.082	0.097
SKEWNESS LOGS	1.054	0.919	0.807	0.535	0.912	0.717	0.680	0.538	0.410
STD ERR SKEWNESS LOGS	0.456	0.456	0.456	0.456	0.456	0.456	0.456	0.456	0.456
SER CORR COEFF LOGS	0.147	0.083	0.069	0.061	0.012	-0.032	-0.022	-0.070	-0.140
COEFF OF VAR LOGS	0.090	0.085	0.082	0.078	0.092	0.088	0.083	0.084	0.088

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1973)

0.99	9.8	9.9	9.9	10.0	12.3	13.2	14.2	16.0	22.6
0.98	9.1	9.2	9.3	9.5	11.3	12.2	13.2	14.9	20.9
0.96	8.4	8.5	8.7	8.9	10.4	11.3	12.2	13.8	19.2
0.90	7.5	7.7	7.9	8.2	9.2	10.0	10.9	12.3	16.9
0.80	6.8	7.0	7.2	7.6	8.3	9.1	9.9	11.1	15.1
0.50	5.9	6.1	6.3	6.6	7.0	7.7	8.4	9.4	12.4
0.20	5.2	5.4	5.6	5.9	6.2	6.7	7.4	8.1	10.4
0.10	5.0	5.2	5.4	5.6	5.8	6.4	7.0	7.6	9.6
0.05	4.9	5.0	5.2	5.4	5.6	6.1	6.7	7.2	9.0
0.02	4.8	4.9	5.0	5.2	5.4	5.8	6.4	6.9	8.4
0.01	4.7	4.8	4.9	5.0	5.3	5.7	6.2	6.6	8.0

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1947-1973)

P95	P90	P75	P70	P50	P25	P10
6.8	7.6	10.0	12.0	22.0	47.0	85.0





## STATION 12126500 SAMMAMISH RIVER AT ROTHELL, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1940	111	152	441	508	563	710	474	438	218	123	92.9	91.4	326
1941	139	229	332	440	367	291	272	197	155	118	72.8	118	225
1942	183	272	687	553	558	441	285	261	239	166	108	100	320
1943	107	336	593	537	582	439	561	381	217	129	100	88.1	338
1944	142	178	209	304	362	363	639	498	298	165	74.3	90.1	207
1945	111	189	242	363	605	646	639	488	229	113	110	119	330
1946	158	401	587	789	843	765	533	323	229	177	113	119	417
1947	167	344	849	667	928	535	444	257	185	124	89.8	98.0	388
1948	274	607	694	963	737	738	591	556	415	248	179	184	515
1949	259	397	718	551	764	745	430	391	211	105	85.9	93.5	382
1950	141	240	450	899	1052	1264	715	396	211	119	95.4	94.9	470
1951	193	461	907	1026	1351	731	396	256	143	101	76.6	82.8	474
1952	151	215	432	427	556	468	334	213	142	112	80.5	74.8	266
1953	171	356	768	506	481	400	398	288	248	142	95.8	95.9	260
1954	171	356	768	506	481	400	398	288	248	142	95.8	95.9	260
1955	136	307	464	517	614	680	455	269	243	194	140	148	448
1956	215	544	1152	1334	675	688	569	283	215	200	136	114	343
1957	188	305	446	447	681	944	588	286	185	126	103	115	502
1958	129	186	301	675	902	599	450	253	148	101	72.3	92.3	364
1959	117	280	582	1017	848	620	533	400	223	171	129	141	420
1960	193	394	791	624	781	496	533	368	236	150	121	129	393
1961	161	536	604	734	1031	958	577	450	224	157	113	107	470
1962	140	186	397	547	356	445	341	250	182	146	126	126	270
1963	165	269	519	505	564	405	460	290	185	151	107	103	309

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1940-1963)

MEAN	159.5	311.5	554.0	663.5	724.7	615.5	471.7	329.3	214.3	142.8	105.1	108.8	364.9
MAXIMUM	274.0	607.0	1152.0	1334.0	1351.0	1264.0	715.0	556.0	415.0	248.0	179.0	184.0	515.0
MINIMUM	77.8	93.1	131.0	304.0	356.0	291.0	272.0	197.0	182.0	93.2	72.3	74.8	207.0
STD DEVIATION	46.10	132.37	240.83	255.70	240.15	226.38	117.02	95.42	57.73	37.67	25.12	24.77	87.20
SKWENESS	0.824	0.621	0.448	0.969	0.610	1.034	-0.017	0.831	1.829	0.968	1.051	1.329	0.026
STD ERR SKEW	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472
SER CORR COEFF	0.195	0.078	-0.059	-0.123	0.244	0.165	-0.116	-0.244	-0.210	-0.038	-0.020	-0.020	0.143
COEFF OF VAR	0.289	0.425	0.435	0.385	0.331	0.368	0.248	0.290	0.269	0.264	0.239	0.228	0.239
MEAN LOGS	2.186	2.454	2.697	2.793	2.837	2.763	2.660	2.501	2.318	2.141	2.011	2.027	2.550
STD DEV LOGS	0.124	0.195	0.218	0.160	0.148	0.155	0.114	0.120	0.105	0.109	0.099	0.092	0.109
STD ERR SKEW LOGS	-0.083	-0.414	-0.880	0.250	-0.311	0.084	-0.521	0.392	0.754	0.352	0.362	0.713	-0.426
SER CORR LOGS	0.102	0.092	0.047	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472
SER CORR LOGS	0.102	0.092	0.009	-0.013	0.260	0.182	-0.054	-0.219	-0.195	-0.010	0.009	0.054	0.163
COEFF OF VAR LOGS	0.057	0.079	0.081	0.057	0.052	0.056	0.043	0.048	0.045	0.051	0.049	0.045	0.043
% OF AVE FLOW	3.6	7.1	12.6	15.1	16.5	14.0	10.7	7.5	4.9	3.2	2.4	2.5	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1940-1963)

0.99	77.6	87.5	113.5	282.4	287.5	258.1	224.4	180.7	135.7	82.3	64.1	72.8	183.3
0.95	95.3	129.4	196.2	346.4	380.7	327.7	286.0	208.0	148.1	94.0	72.2	78.9	228.3
0.90	106.1	157.4	254.3	391.8	439.2	367.7	322.4	225.6	156.6	101.4	77.3	82.9	254.8
0.80	120.8	197.2	338.1	454.0	518.6	428.2	369.5	250.4	169.1	111.6	84.4	88.8	289.1
0.50	154.0	293.4	535.8	611.6	698.9	576.0	467.5	311.5	201.9	136.4	101.1	103.8	360.8
0.20	195.4	417.6	765.4	842.0	918.7	780.5	572.6	397.6	251.4	170.2	123.5	125.6	439.2
0.10	220.8	493.9	888.2	1003.9	1049.7	917.4	629.0	456.4	287.2	192.7	138.3	140.9	492.0
0.04	251.0	583.5	1014.5	1219.4	1201.4	1092.3	689.1	533.1	335.8	221.5	156.9	161.2	528.6
0.02	272.5	645.7	1091.1	1387.8	1305.8	1224.1	727.5	592.1	374.4	243.2	170.8	176.9	559.0
0.01	293.2	704.2	1155.5	1563.0	1403.9	1357.3	761.6	652.7	415.2	265.2	184.9	193.3	586.4

## STATION 12126500 SAMMAWISH RIVER AT BOTHELL, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1941	82.0	83.0	85.0	86.0	87.0	92.0	99.0	108.0	148.0
1942	67.0	68.0	69.0	71.0	73.0	80.0	85.0	107.0	136.0
1943	97.0	97.0	98.0	99.0	100.0	102.0	104.0	118.0	155.0
1944	82.0	83.0	85.0	85.0	86.0	91.0	96.0	113.0	139.0
1945	63.0	64.0	67.0	69.0	72.0	77.0	86.0	92.0	121.0
1946	94.0	95.0	98.0	100.0	104.0	114.0	124.0	137.0	204.0
1947	99.0	99.0	102.0	105.0	109.0	116.0	125.0	142.0	175.0
1948	79.0	80.0	81.0	84.0	88.0	94.0	100.0	113.0	166.0
1949	149.0	149.0	152.0	152.0	160.0	172.0	200.0	213.0	279.0
1950	73.0	76.0	77.0	78.0	81.0	88.0	94.0	104.0	131.0
1951	82.0	83.0	86.0	89.0	90.0	94.0	101.0	119.0	171.0
1952	64.0	64.0	66.0	69.0	75.0	78.0	86.0	97.0	128.0
1953	67.0	67.0	69.0	70.0	72.0	76.0	80.0	81.0	95.0
1954	87.0	87.0	89.0	89.0	93.0	95.0	106.0	125.0	170.0
1955	120.0	121.0	124.0	130.0	135.0	142.0	141.0	146.0	178.0
1956	105.0	106.0	107.0	109.0	113.0	120.0	138.0	159.0	220.0
1957	92.0	92.0	94.0	98.0	99.0	104.0	112.0	124.0	167.0
1958	87.0	88.0	89.0	90.0	92.0	97.0	102.0	111.0	136.0
1959	64.0	65.0	66.0	67.0	70.0	76.0	82.0	92.0	118.0
1960	116.0	118.0	120.0	122.0	124.0	132.0	144.0	155.0	188.0
1961	107.0	108.0	111.0	111.0	116.0	124.0	128.0	137.0	187.0
1962	99.0	99.0	100.0	102.0	104.0	108.0	117.0	126.0	152.0
1963	104.0	105.0	106.0	110.0	114.0	124.0	131.0	137.0	159.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1941-1963)

MEAN	90.4	91.2	92.9	95.0	98.1	104.1	112.6	124.2	161.9
MAXIMUM	149.0	149.0	149.0	152.0	160.0	172.0	200.0	213.0	279.0
MINIMUM	63.0	64.0	66.0	67.0	70.0	76.0	77.0	81.0	95.0
STANDARD DEVIATION	21.06	20.98	20.80	21.43	22.32	23.97	27.13	28.18	38.84
SKWENESS	0.877	0.861	0.814	0.832	0.997	1.095	1.540	1.345	1.147
STD ERROR OF SKWENESS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481
SERIAL CORR COEFF	-0.012	0.005	-0.015	-0.004	0.017	0.038	0.008	-0.018	0.005
COEFF OF VARIATION	0.233	0.230	0.224	0.224	0.227	0.230	0.241	0.227	0.240
MEAN LOGS	1.945	1.949	1.958	1.968	1.982	2.007	2.041	2.084	2.198
STD DEVIATION LOGS	0.098	0.097	0.094	0.095	0.094	0.094	0.096	0.092	0.100
SKWENESS LOGS	0.265	0.258	0.248	0.291	0.339	0.550	0.766	0.507	0.228
STD ERR SKWENESS LOGS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481
SER CORR COEFF LOGS	0.024	0.044	0.018	0.030	0.055	0.088	0.071	0.031	0.041
COEFF OF VAR LOGS	0.050	0.050	0.048	0.048	0.047	0.047	0.047	0.044	0.045

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1941-1963)

0.99	155.5	155.8	156.5	161.5	170.0	183.5	206.6	215.1	279.6
0.98	144.5	144.9	145.9	150.2	157.2	168.8	187.9	198.6	259.9
0.96	133.4	134.0	135.2	138.9	144.5	154.4	170.0	182.3	240.0
0.90	118.4	119.0	120.5	123.5	127.6	135.6	147.4	160.9	212.8
0.80	106.2	107.0	108.6	111.1	114.4	121.1	130.5	144.2	190.8
0.50	87.3	88.2	90.0	91.8	94.4	99.7	106.8	119.3	156.4
0.20	72.8	73.6	75.4	77.1	79.7	84.5	91.0	101.2	129.8
0.10	66.6	67.4	69.1	70.7	73.5	78.3	84.9	93.8	118.3
0.05	62.0	62.8	64.5	66.1	69.1	73.9	80.7	88.5	109.8
0.02	57.4	58.1	59.8	61.4	64.8	69.6	76.8	83.3	101.3
0.01	54.6	55.3	57.0	58.6	62.2	67.1	74.6	80.2	96.1

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1941-1963)

P95	P90	P75	P70	P50	P25	P10
89.0	100.0	140.0	160.0	270.0	520.0	760.0

## STATION 12126500 SAMMAMISH RIVER AT 80THELL, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

ANNUAL PEAK-FLOW DATA  
FLOW (CFS) DATE REG. (R)

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	
1940	878.	867.	859.	813.	729.	652.	594.	580.	525.	878.
1941	735.	675.	585.	516.	467.	421.	386.	360.	321.	752.
1942	1010.	999.	963.	870.	735.	652.	601.	562.	473.	1030.
1943	840.	776.	753.	684.	610.	542.	573.	545.	523.	872.
1944	495.	428.	378.	373.	343.	342.	328.	318.	288.	510.
1945	872.	808.	774.	723.	680.	637.	637.	597.	504.	922.
1946	1050.	1030.	983.	910.	877.	832.	799.	746.	656.	1070.
1947	1250.	1210.	1100.	1030.	951.	811.	813.	750.	628.	1290.
1948	1210.	1200.	1190.	1130.	995.	854.	830.	788.	724.	1210.
1949	1490.	1440.	1270.	1170.	953.	775.	691.	695.	606.	1570.
1950	1630.	1610.	1530.	1390.	1300.	1190.	1090.	988.	791.	1630.
1951	1870.	1860.	1810.	1630.	1320.	1180.	1090.	1010.	802.	1900.
1952	745.	690.	672.	636.	565.	516.	486.	471.	408.	779.
1953	865.	847.	830.	791.	724.	607.	541.	496.	415.	889.
1954	1470.	1420.	1260.	1090.	1030.	997.	919.	863.	704.	1500.
1955	1070.	945.	813.	710.	608.	571.	539.	532.	501.	1100.
1956	1860.	1810.	1680.	1540.	1480.	1250.	1080.	972.	829.	1910.
1957	1500.	1440.	1230.	1120.	1050.	856.	737.	670.	568.	1530.
1958	1120.	1020.	991.	949.	904.	841.	724.	655.	524.	1160.
1959	1390.	1350.	1280.	1130.	1100.	937.	858.	786.	665.	1400.
1960	1260.	1160.	1100.	988.	833.	774.	737.	694.	601.	1310.
1961	1380.	1320.	1250.	1150.	1100.	984.	915.	840.	758.	1390.
1962	826.	777.	729.	653.	599.	508.	469.	456.	390.	850.
1963	888.	813.	746.	633.	563.	539.	531.	503.	465.	948.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1940-1963)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

MEAN	1154.3	1104.0	1032.3	942.9	855.7	763.7	706.2	661.5	569.5	
MINIMUM	1870.0	1850.0	1810.0	1630.0	1480.0	1250.0	1090.0	1010.0	829.0	
STANDARD DEVIATION	495.0	428.0	378.0	373.0	363.0	342.0	325.0	316.0	286.0	
SKWENESS	0.372	0.404	0.451	0.429	0.394	0.385	0.286	0.195	0.016	
STD ERROR OF SKWENESS	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	
SERIAL CORR COEFF	0.369	0.324	0.279	0.294	0.239	0.175	0.146	0.174	0.140	
COEFF OF VARIATION	0.315	0.335	0.336	0.332	0.333	0.319	0.304	0.288	0.266	
MEAN LOGS	3.041	3.018	2.989	2.950	2.908	2.861	2.829	2.802	2.740	
STD DEVIATION LOGS	0.142	0.153	0.155	0.152	0.151	0.144	0.138	0.132	0.123	
SKWENESS LOGS	-0.338	-0.417	-0.558	-0.465	-0.346	-0.315	-0.373	-0.443	-0.539	
STD ERR SKWENESS LOGS	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	
SER CORR COEFF LOGS	0.394	0.350	0.298	0.307	0.270	0.206	0.166	0.189	0.155	
COEFF OF VAR LOGS	0.047	0.051	0.052	0.052	0.052	0.050	0.049	0.047	0.045	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1940-1963)

0.99	473.9	413.7	368.7	351.5	330.5	311.3	294.8	283.7	254.1	533.5	490.9
0.95	622.9	562.5	515.2	480.7	442.5	409.3	386.8	371.2	330.9	664.3	644.3
0.90	715.3	656.0	607.4	561.7	512.9	470.2	443.4	424.5	376.8	746.7	739.0
0.80	840.0	783.0	731.9	671.4	608.6	552.7	519.3	495.2	436.8	860.2	866.3
0.50	1119.1	1068.9	1007.4	916.1	825.8	738.6	687.4	648.4	563.1	1127.9	1149.7
0.20	1452.5	1409.6	1323.0	1203.1	1089.1	963.0	884.7	822.5	700.2	1479.1	1485.1
0.10	1648.1	1607.5	1498.9	1367.2	1244.9	1095.8	998.6	920.2	774.0	1704.3	1680.2
0.04	1871.8	1831.5	1690.7	1550.3	1424.3	1248.8	1127.4	1028.0	853.0	1982.4	1901.9
0.02	2024.2	1982.3	1815.3	1672.1	1547.0	1353.9	1214.1	1099.2	903.6	2185.8	2052.1
0.01	2166.2	2121.3	1926.9	1783.2	1661.7	1452.2	1294.2	1163.8	948.4	2386.6	2191.3

## STATION 12127100 SWAMP CREEK AT KENMORE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1964	9.45	51.6	61.7	94.0	36.1	50.0	35.3	14.4	15.0	5.47	5.63	7.97	32.3
1965	7.05	24.5	44.2	103	96.7	25.6	31.1	15.7	5.79	4.27	4.98	5.19	31.4
1966	6.85	19.7	44.2	96.4	51.5	56.2	26.7	15.2	7.96	7.22	4.40	5.65	28.5
1967	9.58	31.8	101	140	55.7	54.3	31.1	19.0	7.46	4.75	3.57	6.75	38.9
1968	13.6	13.7	80.9	94.9	61.7	64.0	31.8	15.6	17.9	5.89	11.1	11.2	35.7
1969	23.6	50.5	131	90.2	104	30.6	36.3	19.2	12.9	6.40	4.19	17.2	43.5
1970	14.2	25.0	77.9	91.1	42.8	36.7	31.2	14.5	5.74	4.42	4.01	7.09	29.6
1971	14.4	24.4	92.1	126	57.9	115	45.1	15.8	11.3	8.28	5.46	11.5	44.1
1972	11.0	24.8	61.0	52.4	62.7	112	50.7	19.7	12.9	7.43	6.83	11.4	36.0
1973	8.56	20.8	93.2	83.5	32.5	39.8	15.9	12.6	10.7				
1974	11.7	64.2	126	120	92.1	112	50.6						
1975	7.37	24.7	64.1	74.3	72.7	55.4	32.7	23.1	9.65	6.00	8.98	5.28	31.8
1976	32.5	72.2	83.5	58.6	55.2	52.5	42.8	15.5	13.3	6.68	13.0	10.2	37.9
1977	8.77	11.2	16.4	22.7	18.1	57.0	17.0	30.0	15.9	6.43	10.2	17.1	19.6
1978	17.5	39.9	76.2	66.4	52.0	39.6	36.7	23.0	9.38	12.9	7.93	22.8	33.6
1979	12.7	39.0	41.4	27.1	79.5	33.2	39.0	11.0	5.65	6.04	5.48	7.54	25.2

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1964-1979)

MEAN	13.1	33.6	75.5	83.8	60.7	58.4	35.2	17.6	10.8	6.6	6.8	10.5	33.4
MAXIMUM	32.5	72.2	131.0	140.0	104.0	115.0	50.7	30.0	17.9	12.9	13.0	22.8	44.1
MINIMUM	6.9	11.2	16.4	22.7	18.1	25.6	15.9	11.0	5.6	4.3	3.6	5.2	19.6
STD DEVIATION	6.78	17.82	29.97	32.72	23.69	29.18	9.54	4.87	3.86	2.14	2.95	5.28	6.70
SKEWNESS	1.887	0.935	0.106	-0.328	0.258	1.207	-0.201	1.221	0.231	2.068	0.890	1.173	-0.265
STD ERR SKEW	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.560	0.580	0.597	0.597	0.597	0.597
SER CORR COEFF	-0.141	-0.475	-0.016	0.309	-0.256	0.076	-0.448	-0.159	-0.037	-0.094	0.330	0.207	-0.200
COEFF OF VAR	0.519	0.530	0.397	0.391	0.390	0.500	0.271	0.276	0.359	0.326	0.432	0.503	0.200
MEAN LOGS	1.073	1.471	1.836	1.880	1.747	1.722	1.530	1.232	1.004	0.801	0.800	0.975	1.515
STD DEV LOGS	0.189	0.229	0.218	0.221	0.194	0.198	0.132	0.112	0.165	0.122	0.178	0.203	0.093
SKEWNESS LOGS	0.879	0.019	-1.525	-1.369	-0.938	0.434	-1.052	0.551	-0.290	1.029	0.403	0.447	-0.891
STD ERR SKEW LOGS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.560	0.580	0.597	0.597	0.597	0.597
SER CORR LOGS	-0.038	-0.544	-0.057	0.315	-0.183	0.040	-0.471	-0.264	-0.042	-0.102	0.327	0.233	-0.197
COEFF OF VAR LOGS	0.176	0.155	0.119	0.118	0.111	0.115	0.087	0.091	0.164	0.152	0.223	0.208	0.062
% OF AVE FLOW	3.2	8.2	18.3	20.3	14.7	14.1	8.5	4.3	2.6	1.6	1.7	2.5	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1964-1979)

0.99	5.7	8.8	12.8	14.4	14.7	21.6	13.3	10.4	3.8	4.1	2.7	3.7	17.4
0.95	6.6	12.5	25.7	28.3	24.3	26.7	19.1	11.7	5.2	4.4	3.4	4.7	22.0
0.90	7.2	15.1	35.1	38.3	30.7	30.2	22.5	12.5	6.1	4.6	3.8	5.3	24.6
0.80	8.2	19.0	48.6	52.8	39.7	35.6	26.9	13.7	7.4	5.0	4.4	6.3	27.8
0.50	11.1	29.5	77.4	84.9	59.4	50.7	35.7	16.7	10.3	6.0	6.1	9.1	33.8
0.20	16.5	46.0	103.6	116.0	81.8	76.2	43.9	21.0	14.0	7.8	6.8	13.8	39.4
0.10	21.2	58.1	113.9	129.5	92.9	96.3	17.6	24.0	16.2	9.2	10.8	17.5	41.9
0.04	28.4	74.6	121.8	140.7	104.0	125.8	51.0	28.0	18.9	11.2	13.7	22.9	44.4
0.02	34.9	87.6	125.4	146.2	110.5	151.0	52.9	31.1	20.8	13.0	16.0	27.4	45.8
0.01	42.5	101.3	127.7	150.1	115.8	179.0	54.4	34.4	22.5	14.9	18.5	32.5	46.9

## STATION 12127100 SWAMP CREEK AT KENMORE, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1965	4.0	4.0	4.2	4.6	4.7	5.3	6.3	6.5	9.1
1966	3.1	3.3	3.7	3.7	4.0	4.9	4.6	4.9	6.4
1967	3.3	3.4	3.6	3.9	4.1	4.6	5.2	5.9	7.9
1968	3.3	3.3	3.3	3.3	3.6	4.1	4.9	5.6	8.0
1969	4.1	4.3	4.6	5.1	5.4	7.0	8.8	9.8	13.0
1970	3.3	3.6	3.9	4.0	4.1	4.5	7.3	8.4	12.0
1971	3.2	3.3	3.3	3.4	3.9	4.2	4.4	5.2	8.0
1972	4.0	4.0	4.2	4.5	5.0	6.8	7.7	8.7	11.0
1973	4.1	4.2	4.3	4.8	5.6	6.3	8.1	8.1	11.0
1976	3.9	3.9	4.2	4.4	4.8	6.6	7.4	9.3	12.0
1977	4.4	4.4	4.6	5.0	6.2	8.8	9.8	10.0	10.0
1978	2.8	2.8	2.9	3.3	4.1	5.3	8.2	11.0	15.0
1979	5.0	5.0	5.1	5.6	7.0	9.9	10.0	12.0	14.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1965-1979)

MEAN	3.7	3.8	4.0	4.3	4.8	6.0	7.1	7.9	10.6
MAXIMUM	5.0	5.0	5.1	5.6	7.0	9.9	10.0	12.0	15.0
MINIMUM	2.8	2.8	2.9	3.3	3.6	4.1	4.4	4.9	6.4
STANDARD DEVIATION	0.62	0.60	0.62	0.74	1.01	1.85	1.92	2.25	2.61
SKEWNESS	0.431	0.283	-0.079	0.153	0.945	0.927	0.030	0.328	0.105
STD ERROR OF SKEWNESS	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616
SERIAL CORR COEFF	-0.417	-0.497	-0.486	-0.424	-0.166	0.091	0.267	0.496	0.399
COEFF OF VARIATION	0.166	0.156	0.155	0.174	0.210	0.308	0.271	0.284	0.247
MEAN LOGS	0.566	0.576	0.596	0.625	0.674	0.760	0.834	0.882	1.011
STD DEVIATION LOGS	0.072	0.068	0.069	0.076	0.087	0.127	0.123	0.126	0.111
SKEWNESS LOGS	0.115	-0.062	-0.402	-0.083	0.623	0.504	-0.295	-0.076	-0.292
STD ERR SKEWNESS LOGS	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616
SER CORR COEFF LOGS	-0.420	-0.497	-0.483	-0.419	-0.141	0.137	0.252	0.422	0.401
COEFF OF VAR LOGS	0.126	0.118	0.116	0.122	0.129	0.167	0.148	0.142	0.110

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1965-1979)

0.99	5.5	5.4	5.4	6.3	8.2	12.6	12.4	14.7	17.6
0.98	5.2	5.2	5.3	6.0	7.6	11.3	11.7	13.6	16.7
0.96	4.9	4.9	5.1	5.7	7.0	10.0	10.9	12.5	15.6
0.90	4.6	4.6	4.8	5.3	6.1	8.5	9.7	11.0	14.1
0.80	4.2	4.3	4.5	4.9	5.5	7.3	8.7	9.7	12.8
0.50	3.7	3.8	4.0	4.2	4.6	5.6	6.9	7.6	10.4
0.20	3.2	3.3	3.5	3.6	4.0	4.5	5.4	6.0	8.3
0.10	3.0	3.1	3.2	3.4	3.7	4.0	4.7	5.2	7.3
0.05	2.8	2.9	3.0	3.1	3.5	3.7	4.2	4.7	6.6
0.02	2.7	2.7	2.8	2.9	3.4	3.4	3.6	4.2	5.8
0.01	2.5	2.6	2.6	2.8	3.3	3.3	3.3	3.8	5.4

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1965-1979)

P95	P90	P75	P70	P50	P25	P10
4.3	5.0	7.7	9.1	19.0	42.0	80.0





## STATION 12127600 MCALEER CREEK AT LAKE FOREST PARK, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1964-1974)				M R C SYSTEMATIC RECORD	
WATER YEAR	FLOW(CFS)	DATE	MEAN LOGS				ESTIMATE	RECORD
1964	82.0	1-1-1964	STANDARD DEVIATION LOGS				2.1504	2.1504
1965	109.0	2-5-1965	SKEWNESS LOGS				0.1427	0.1427
1966	129.0	1-5-1966					0.002	-0.245
1967	208.0	1-19-1967						
1968	161.0	1-14-1968						
1969	178.0	12-3-1968	ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES					
1970	93.0	1-26-1970	LOG-PEARSON III ANALYSIS (YEARS 1964-1974)					
1971	125.0	1-15-1971						
1972	214.0	3-5-1972					65.9	62.1
1973	132.0	12-26-1972					82.4	80.6
1974	200.0	1-16-1974					92.1	92.1
							107.2	107.7
							141.4	143.3
							186.4	187.0
							215.4	213.4
							251.4	244.2
							277.7	265.7
							303.8	286.1

## STATION 12128000 THORNTON CREEK NEAR SEATTLE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1946	18.1	29.7	30.7	36.2	45.0	34.4	25.8	13.7	11.6	4.97	10.1	17.3	
1961									14.8	10.1	5.72	13.9	23.0
1962	10.1	11.9	15.8	13.3	11.2	15.2	10.5	9.44	6.09	5.64	4.99	7.23	
1963	10.2	17.8	16.8	13.0	17.5	13.2	13.9	8.39	7.17	5.08	6.36	7.78	10.3
1964	10.5	20.3	15.3	23.5	13.1	15.6	11.7	8.52	15.1	6.72	5.94	6.58	11.4
1965	7.87	16.1	18.3	20.9	21.0	10.2	13.2	9.48	6.03	7.28	7.66	8.46	13.1
1966	8.05	13.1	18.0	20.5	16.3	16.8	12.4	9.76	7.65	5.57	6.15	6.92	11.8
1967	8.18	15.9	24.1	26.7	15.1	14.1	12.1	7.96	6.47	5.16	4.41	5.49	12.1
1968	10.1	7.96	19.0	19.2	17.5	17.0	10.7	6.91	9.21	4.54	8.78	8.21	11.6

## STATION 12128000 THORNTON CREEK NEAR SEATTLE, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1946	151.0	2-5-1946
1962	96.0	9-28-1962
1963	231.0	11-25-1962
1964	173.0	1-1-1964
1965	237.0	4-19-1965
1966	239.0	1-5-1966
1967	261.0	1-19-1967
1968	113.0	8-23-1968



## STATION 12128900 TYE RIVER NEAR SCENIC, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1967	337.0	12-13-1966
1968	402.0	10-27-1967
1969	334.0	5-30-1969
1970	330.0	6- 3-1970
1971	266.0	1-19-1971
1972	387.0	2-28-1972
1973	284.0	12-26-1972
1974	392.0	1-15-1974
1975	354.0	1-21-1975

## STATION 12130500 S. F. SKYKOMISH RIVER NEAR SKYKOMISH, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1929													
1930	183	154	411	212	1038	645	1189	1015	947	512	327	206	558
1931	343	386	282	560	638	750	823	1443	1068	440	238	195	600
1946													
1947	530	481	1185	799	809	817	1270	1973	1509	1102	390	253	902
1948	1074	1160	887	502	411	375	717	2021	2963	776	349	323	1005
1949	636	625	517	278	443	580	1086	2523	1942	1065	516	369	898
1950	784	1302	904	589	498	781	763	1566	3018	2023	770	338	1114

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## STATION 12130500 S. F. SKYKOMISH RIVER NEAR SKYKOMISH, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1930	2440.0	2- 5-1930
1931	3060.0	1-28-1931
1947	6410.0	12-11-1946
1948	8290.0	10-19-1947
1949	4850.0	5-13-1949
1950	12400.0	11-27-1949
1951	14000.0	2- 9-1951
1952	5500.0	10- 3-1951
1953	9020.0	1-31-1953
1954	4730.0	5-19-1954
1955	5750.0	6-11-1955
1956	9420.0	11-11-1955
1957	10800.0	12- 9-1956
1958	3380.0	6- 3-1958
1959	8320.0	11-18-1958
1960	20000.0	11-22-1959
1961	6620.0	1-15-1961
1962	5480.0	4- 6-1962
1963	13400.0	11-19-1962
1964	4220.0	6- 1-1964
1965	4540.0	12- 1-1964
1966	4800.0	5- 6-1966
1967	4480.0	12-13-1966
1968	9720.0	1-20-1968
1969	5420.0	1- 5-1969
1970	5080.0	6- 3-1970

## ANNUAL PEAK FLOW STATISTICS (YEARS 1930-1970)

MEAN LOGS	W R C	SYSTEMATIC
STANDARD DEVIATION LOGS	ESTIMATE	RECORD
SKWENESS LOGS		
	3.8131	3.8131
	0.2203	0.2203
	0.004	0.292

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1930-1970)

0.99	2001.2	2230.1
0.95	2825.0	2950.9
0.90	3395.4	3456.0
0.80	4242.9	4219.7
0.50	6500.6	6344.5
0.20	9984.3	9878.3
0.10	12459.1	12629.4
0.04	15813.6	16593.7
0.02	18448.2	19915.3
0.01	21192.0	23564.8

STATION 12130800 BULLBUCKER CREEK NR SKYKOMISH, WASH.

ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1971	30.0	1-19-1971
1972	31.0	7-12-1972
1973	34.0	5-10-1973
1974	41.0	1-15-1974
1975	36.0	2-21-1975

STATION 12131000 BECKLER RIVER NEAR SKYKOMISH, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1930	80.2	75.3	260	142	903	509	1030	796	628	215	76.1	66.5	394
1931	223	247	252	516	501	638	692	1138	720	220	83.9	108	445
1932	222	539	331	471	750	897	1004	1297	1477	579	148	100	649
1933	284	1739	774	501	170	323	543	1036	1809	1209	431	485	776
1946										658	143	92.5	
1947	338	321	1008	663	712	709	1026	1412	941	374	125	98.4	644
1948	783	778	648	368	310	282	591	1595	2057	544	195	189	695
1949	398	494	351	173	311	526	873	1977	1380	721	220	184	636

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STATION 12131000 BECKLER RIVER NEAR SKYKOMISH, WASH.

ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1930	2380.0	2- 5-1930
1931	4620.0	1-28-1931
1932	10000.0	2-26-1932
1933	10900.0	11-13-1932
1947	5790.0	12-11-1946
1948	6580.0	10-19-1947
1949	4140.0	5-13-1949
1950	9600.0	11-27-1949
1951	11800.0	2- 9-1951
1952	4500.0	10- 3-1951
1953	6430.0	1-31-1953
1954	3220.0	5-19-1954
1955	4360.0	6-11-1955
1956	7900.0	11- 4-1955
1957	6820.0	12- 9-1956
1958	2780.0	6- 3-1958
1959	6660.0	4-29-1959
1960	17100.0	12-15-1959
1961	6840.0	1-15-1961
1962	4280.0	1- 3-1962
1963	9290.0	11-19-1962
1964	3510.0	6- 1-1964
1965	4750.0	12- 1-1964
1966	3650.0	5- 6-1966
1967	4110.0	12-13-1966
1968	6980.0	10-27-1967
1969	5210.0	1- 5-1969
1970	3370.0	6- 3-1970

ANNUAL PEAK FLOW STATISTICS (YEARS 1930-1970)

W R C	ESTIMATE	SYSTEMATIC RECORD
MEAN LOGS	3.7533	3.7533
STANDARD DEVIATION LOGS	0.2060	0.2060
SKEWNESS LOGS	0.013	0.329

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1930-1970)

0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
1888.5	2601.8	3087.6	3800.2	5660.4	8443.5	10412.6	13026.7	15058.4	17158.1
2110.8	2721.7	3145.2	3779.9	5520.9	8366.5	10555.1	13681.8	16283.7	19128.1

## STATION 12132000 MILLER RIVER AT MILLER RIVER, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1911													
1912	87.0	1193	279	373	339	109	261	765	745	348	55.3	289	
1913	183	349	234	220	353	210	434	702	596	237	137	116	373
1914	381	433	157	366	165	392	540	640	990	627	170	175	387
1915	333	581	99.1	83.1	96.0	296	449	312	455	210			
1916	531	285	300	154	452	506	494	569	876	89.0	32.6	34.3	214
1917	64.2	276	136	169	308	108	327	675	1052	660	236	126	432
1919	508	345	945	461	225	182	472	589	567	865	220	79.1	356
1929				79.5	45.2	240	303	868	775	335	120	29.7	
1930	83.0	69.0	310	98.4	686	314	450	392	361	130	29.0	44.2	244
1931	287	144	130	496	245	385	381	586	448	98.9	29.1	102	278
1946										412	82.5	54.2	

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## STATION 12132700 S.F. SKYKOMISH RIVER TRIBUTARY AT BARING, WASH.

## ANNUAL PEAK FLOW STATISTICS (YEARS 1951-1970)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

WATER YEAR FLOW(CFS) DATE  
 1951 143.0 2-10-1951  
 1952 40.0 2-4-1952  
 1953 87.0 1-23-1953  
 1954 89.0 12-9-1953  
 1955 107.0 2-8-1955  
 1956 157.0 12-11-1955  
 1957 217.0 12-9-1956  
 1958 71.0 1-16-1958  
 1959 165.0 1-11-1959  
 1960 196.0 12-15-1959  
 1961 107.0 2-21-1961  
 1962 104.0 1-3-1962  
 1963 174.0 11-19-1962  
 1964 49.0 1-1-1964  
 1965 103.0 1-29-1965  
 1966 86.0 1-13-1966  
 1967 92.0 1-15-1967  
 1968 122.0 1-20-1968  
 1969 121.0 1-5-1969  
 1970 68.0 1-14-1970

MEAN LOGS  
 STANDARD DEVIATION LOGS  
 SKEWNESS LOGS

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
 LOG-PEARSON III ANALYSIS (YEARS 1951-1970)

0.99  
 0.95  
 0.90  
 0.80  
 0.50  
 0.20  
 0.10  
 0.04  
 0.02  
 0.01

38.0  
 51.3  
 60.1  
 72.9  
 105.4  
 152.5  
 184.9  
 227.1  
 259.4  
 292.3

33.3  
 48.9  
 59.2  
 73.8  
 108.7  
 153.4  
 180.6  
 212.5  
 234.5  
 255.1

## STATION 12133000 S.F. SKYKOMISH RIVER NEAR INDEX, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1903	697	2094	2526	3880	1069	1275	1826	3796	6264	2695	1003	1598	2398
1904	2415	2568	2547	2342	1004	1513	3711	3538	4091	2379	790	527	2288
1905	546	2592	2515	1571	1441	2685	2079	2381	2756	1096	811	1039	1792
1911								3553	4007	1940	642	1252	
1912	593	4695	2072	2890	2336	926	1799	4559	4368	1815	853	1343	2347
1914	2405	2947	1273	3312	1524	2658	3535	4331	3077	1403	500	934	2328
1915	1796	4196	919	749	780	1723	3264	1745	1048	657	421	334	1457
1916	2006	2277	2385	541	2593	3405	3153	4200	6302	4513	1500	793	2837
1917	484	1896	960	1296	2024	898	2279	4208	7455	6018	1463	680	2493
1918	615	1026	11030	5061	2833	1768	2833	3631	4747	1610	980	446	3002
1919	2128	2045	5110	3842	1324	1558	3347	4753	4117	2678	882	580	2710
1920	612	4050	3097	3587	1658	1627	1650	2549	3104	1548	634	2561	2219
1921	3590	2049	2373	2718	2718	2900	2546	4774	6378	2756	904	1590	3015
1922					560	683	1788	4450	4983	1317	596	773	
1923	1073	1338	2871	4382	884	1395	3256	4176	3890	2225	719	442	2232
1924	884	1646	2988	2161	5412	1835	3256	4750	2585	1060	536	491	2120
1925	2115	2483	4045	2847	3745	1562	3208	5337	3451	1419	558	351	2586
1926	750	1310	4793	2173	2111	1909	2139	2127	963	424	419	674	1650
1927	2499	1820	2121	1733	1714	1297	2351	4265	5665	2046	802	1716	2335
1928	3060	5742	2899	4566	1098	2701	2222	5076	2960	1310	474	407	2717
1929	1950	1067	976	595	454	1717	1830	4805	4564	1669	540	350	1717
1930	461	426	1612	770	3970	2085	3359	2645	2335	962	406	380	1598
1931	1281	1162	1009	2142	2039	2723	2624	3705	2808	961	404	597	1786
1932	1210	2457	1457	2211	3934	4061	3692	4341	4661	2349	812	581	2638
1933	1634	7910	3377	2792	780	1719	2645	4119	6860	4682	1693	1962	3352
1934	4326	3786	9440	5334	4264	4278	4244	3158	1627	839	498	588	3383
1935	2610	4132	2843	5093	2651	1630	1641	3688	4322	2072	635	491	2651
1936	528	938	1153	1881	695	1881	3867	7005	5017	1424	535	536	2141
1937	479	365	3032	595	897	1858	2464	4424	6309	2013	687	449	1973
1938	907	4910	3258	2158	802	1551	3725	4169	3352	1122	434	341	2237
1939	740	2399	3151	3524	1394	1986	3322	4827	3730	2364	755	506	2399
1940	1135	2055	3838	1611	3730	2448	2467	3538	1651	655	408	322	1868
1941	1232	1477	1974	1435	1068	1209	1640	2167	1414	646	383	1578	1352
1942	3035	2238	3155	819	1010	1209	2859	3298	3922	1563	557	360	2507
1943	642	3058	2608	1760	1709	2348	4336	3969	4933	3263	898	506	2501
1944	717	1151	2999	1376	1254	1553	2317	3516	2607	889	471	1297	1679
1945	1011	1637	2280	3605	2811	1460	1815	5027	3013	1197	480	1004	2109
1946	1786	2806	2322	2040	1432	1950	3129	6260	5552	2686	782	502	2609
1947	1695	1515	4331	2977	2932	2538	3750	4656	3413	1625	637	704	2564
1948	3539	3590	2778	1655	1559	1283	2383	5797	7130	2327	1095	944	2840
1949	1725	2374	1700	748	1569	2395	3395	5797	4740	2807	1142	952	2544
1950	2273	4104	3047	1942	1899	2558	3777	6758	7966	4926	1758	781	3259
1951	2945	3926	4321	2268	4844	1419	3059	4622	3614	1363	536	589	2775
1952	2682	2048	1386	873	1891	1123	2973	4563	3340	1728	587	376	1962
1953	267	316	892	6868	3375	1398	2410	4057	3860	3172	925	603	2343
1954	1410	2843	4652	2126	2778	1593	2564	4893	5477	5075	2007	1264	3059
1955	1534	3502	1948	1354	2188	913	1964	3710	6865	4643	1663	668	2575
1956	3383	5022	3373	1450	746	1429	4031	6929	6034	4032	948	885	3193
1957	2928	2625	5679	1029	1652	1887	3214	5694	3825	1403	622	403	2588
1958	603	1251	2600	2429	2522	1334	2522	5023	2642	832	434	714	1900
1959	1855	5603	4850	4146	1446	2055	4621	4491	5509	3096	831	2971	3460
1960	3875	6040	4051	1170	1897	1655	3841	3860	4943	1516	709	610	2710
1961	1519	3532	1778	3613	4435	2479	2617	4262	4727	1542	554	655	2625
1962	2033	1858	2821	4091	2006	1099	3445	2770	4017	2192	1169	788	2358
1963	1367	3795	3424	2129	3640	1662	2025	2841	2304	1096	560	632	2110
1964	1242	2701	2195	2628	1517	1803	2327	4034	6953	4088	2128	1468	2830
1965	1909	2035	3019	2768	1331	1661	3386	3853	3940	1930	852	766	2450
1966	1225	2227	1819	1923	1078	1892	3242	4552	4001	2269	777	394	2121
1967	1470	1965	4332	3921	2542	1651	1261	4094	6210	2447	679	437	2586
1968	3956	2706	4148	3967	4533	2393	2093	3568	4123	1664	879	1822	2982
1969	2230	3565	2245	2684	735	1406	3178	6251	5252	1437	600	1169	2590
1970	1890	1524	1638	2473	2147	1810	2361	3501	4797	1405	506	983	2082
1971	1084	2474	1796	3632	3912	1827	2188	6102	5248	4946	1526	885	2947
1972	1296	2962	1857	2459	4326	5672	3008	6653	6749	4838	1597	1748	3593
1973	943	1403	3969	2527	933	1231	1422	3113	2720	1131	528	586	1717
1974	1678	2287	3224	5136	1886	2232	2724	4215	8266	4997	1925	747	3285
1975	383	1860	3215	3281	1394	1605	1227	4466	5680	3722	1305	745	2416
1976	1932	4609	7806	3684	1921	1218	2270	5027	4403	3892	1917	900	3309
1977	616	2087	2181	1610	1515	1515	2742	2429	2505	769	727	1037	1646
1978	956	5274	6133	1408	1342	1981	2109	3018	3476	1439	801	1706	2476
1979	742	2137	1693	800	1886	3030	2207	4346	3211	1574	548	530	1891

## STATION 12133000 S.F. SKYKOMISH RIVER NEAR INDEX, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1903-1979)

MEAN	1640.8	2695.5	3071.4	2555.5	2070.2	1908.6	2704.8	4251.9	4337.0	2242.1	849.8	864.0	2439.2
MAXIMUM	4326.0	7910.0	11030.0	6868.0	5412.0	5672.0	4621.0	7005.0	8266.0	6018.0	2128.0	2971.0	3593.0
MINIMUM	267.0	316.0	892.0	595.0	454.0	683.0	1227.0	1745.0	963.0	424.0	383.0	322.0	1352.0
STD DEVIATION	985.40	1475.39	1817.13	1337.10	1150.62	826.62	764.70	1139.04	1660.78	1361.21	440.82	533.14	520.88
SKEWNESS	0.822	1.050	2.147	0.746	0.983	2.046	0.270	0.322	0.243	1.064	1.379	1.729	0.120
STD ERR SKEW	0.289	0.289	0.289	0.289	0.287	0.287	0.287	0.285	0.285	0.285	0.285	0.285	0.289
SER CORR COEFF	0.069	0.069	0.022	0.117	-0.023	-0.151	-0.166	0.149	0.023	0.166	0.222	0.012	0.089
COEFF OF VAR	0.601	0.547	0.592	0.523	0.556	0.433	0.283	0.268	0.383	0.607	0.519	0.617	0.214
MEAN LOGS	3.132	3.361	3.427	3.343	3.251	3.249	3.414	3.612	3.600	3.276	2.882	2.871	3.377
STD DEV LOGS	0.283	0.268	0.229	0.251	0.244	0.163	0.128	0.123	0.193	0.259	0.197	0.232	0.096
SKEWNESS LOGS	-0.292	-0.908	0.091	-0.477	-0.128	0.467	-0.380	-0.604	-0.996	0.007	0.640	0.519	-0.372
STD ERR SKEW LOGS	0.289	0.289	0.289	0.289	0.287	0.287	0.287	0.285	0.285	0.285	0.285	0.285	0.289
SER CORR LOGS	0.030	0.112	0.090	0.189	-0.023	-0.173	-0.162	0.115	0.028	0.086	0.241	0.101	0.091
COEFF OF VAR LOGS	0.090	0.080	0.067	0.075	0.075	0.050	0.038	0.034	0.054	0.079	0.068	0.081	0.028
% OF AVE FLOW	5.6	9.2	10.5	8.8	7.1	6.5	9.3	14.6	14.9	7.7	2.9	3.0	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1903-1979)

0.99	259.6	369.3	812.9	469.8	456.1	842.9	1203.1	1873.6	1037.6	472.3	328.8	263.6	1342.7
0.95	441.3	728.7	1139.1	791.2	691.7	1008.5	1549.5	2459.2	1726.7	707.9	395.4	336.2	1620.8
0.90	578.0	1004.7	1367.5	1024.8	854.5	1120.6	1759.2	2809.6	2191.9	878.6	443.0	388.7	1781.9
0.80	792.2	1428.6	1711.1	1377.7	1113.2	1285.2	2037.8	3264.7	2840.8	1141.5	516.1	470.2	1986.4
0.50	1397.9	2515.2	2849.8	2304.6	1802.3	1721.6	2643.9	4212.8	4281.5	1845.1	725.7	709.5	2415.5
0.20	2358.7	3844.0	4150.0	3612.1	2868.0	2403.3	3340.7	5221.5	5817.2	3116.0	1092.6	1142.8	2878.0
0.10	3046.9	4648.7	5270.7	4457.1	3633.8	2910.4	3737.1	5754.0	6580.0	4033.8	1392.7	1506.5	3130.7
0.04	3952.5	5451.4	6824.5	5477.8	4651.9	3617.6	4180.5	6313.3	7319.3	5368.4	1845.0	2065.9	3405.9
0.02	4643.8	5944.4	8079.6	6199.1	5441.9	4194.4	4476.7	6665.4	7744.0	6437.6	2240.8	2563.6	3586.0
0.01	5343.8	6361.5	9416.6	6886.0	6255.1	4815.7	4748.6	6973.4	8086.2	7580.8	2692.1	3138.1	3748.9

## STATION 12133000 S.F. SKYKOMISH RIVER NEAR INDEX, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1904	618.0	642.0	681.0	740.0	879.0	1260.0	1640.0	1720.0	2030.0
1905	356.0	371.0	409.0	439.0	474.0	533.0	575.0	728.0	1390.0
1915	400.0	400.0	400.0	400.0	453.0	639.0	752.0	1040.0	1510.0
1916	264.0	264.0	278.0	305.0	334.0	370.0	463.0	588.0	914.0
1917	332.0	349.0	349.0	365.0	416.0	610.0	884.0	1010.0	1130.0
1918	432.0	432.0	440.0	453.0	601.0	641.0	746.0	875.0	2610.0
1919	346.0	355.0	361.0	381.0	424.0	637.0	825.0	1070.0	1970.0
1920	333.0	350.0	385.0	390.0	479.0	564.0	680.0	958.0	1800.0
1921	417.0	428.0	450.0	482.0	580.0	792.0	1440.0	1760.0	1980.0
1923	346.0	355.0	367.0	409.0	570.0	656.0	842.0	1100.0	1980.0
1924	346.0	355.0	377.0	389.0	408.0	494.0	659.0	730.0	1360.0
1925	320.0	329.0	340.0	356.0	386.0	495.0	670.0	902.0	1440.0
1926	214.0	214.0	214.0	221.0	249.0	319.0	421.0	643.0	1300.0
1927	308.0	316.0	317.0	322.0	338.0	417.0	464.0	593.0	1080.0
1928	530.0	542.0	556.0	584.0	716.0	1120.0	1460.0	1880.0	2670.0
1929	304.0	319.0	334.0	352.0	389.0	437.0	668.0	778.0	904.0
1930	271.0	271.0	282.0	325.0	338.0	400.0	411.0	423.0	696.0
1931	282.0	297.0	314.0	325.0	350.0	381.0	475.0	701.0	825.0
1932	340.0	347.0	361.0	368.0	386.0	491.0	557.0	716.0	1160.0
1933	327.0	342.0	357.0	377.0	497.0	562.0	783.0	1270.0	2350.0
1934	600.0	600.0	624.0	679.0	922.0	1630.0	2020.0	2890.0	3610.0
1935	415.0	418.0	422.0	436.0	461.0	528.0	545.0	655.0	1390.0
1936	362.0	367.0	374.0	384.0	442.0	484.0	525.0	612.0	949.0
1937	320.0	323.0	328.0	344.0	362.0	410.0	433.0	466.0	929.0
1938	292.0	293.0	297.0	321.0	348.0	461.0	601.0	872.0	1970.0
1939	244.0	250.0	269.0	276.0	306.0	351.0	484.0	629.0	1310.0
1940	311.0	321.0	335.0	375.0	475.0	569.0	736.0	1050.0	1650.0
1941	279.0	284.0	290.0	311.0	322.0	341.0	414.0	587.0	902.0
1942	344.0	355.0	359.0	367.0	382.0	488.0	706.0	978.0	1300.0
1943	275.0	282.0	289.0	301.0	314.0	348.0	418.0	676.0	1420.0
1944	386.0	393.0	398.0	409.0	448.0	545.0	686.0	809.0	1270.0
1945	317.0	328.0	340.0	364.0	398.0	503.0	683.0	903.0	1250.0
1946	350.0	357.0	363.0	399.0	454.0	590.0	685.0	874.0	1470.0
1947	359.0	364.0	381.0	412.0	436.0	493.0	691.0	1020.0	1700.0
1948	449.0	456.0	472.0	510.0	553.0	656.0	936.0	1380.0	2110.0
1949	406.0	413.0	423.0	453.0	523.0	784.0	1250.0	1320.0	1380.0
1950	495.0	503.0	535.0	593.0	723.0	970.0	1310.0	1590.0	2170.0
1951	570.0	573.0	583.0	614.0	755.0	1170.0	1780.0	2050.0	2650.0
1952	325.0	333.0	351.0	385.0	439.0	506.0	784.0	1250.0	1320.0
1953	190.0	194.0	205.0	234.0	249.0	288.0	312.0	356.0	660.0
1954	367.0	379.0	391.0	412.0	492.0	735.0	856.0	1270.0	2100.0
1955	600.0	614.0	667.0	751.0	855.0	1350.0	1460.0	1580.0	1880.0
1956	465.0	479.0	520.0	548.0	642.0	900.0	1190.0	1750.0	2450.0
1957	455.0	460.0	463.0	527.0	601.0	856.0	1270.0	1850.0	2340.0
1958	333.0	336.0	348.0	364.0	387.0	414.0	506.0	667.0	1110.0
1959	324.0	339.0	351.0	389.0	397.0	465.0	598.0	933.0	1860.0
1960	539.0	544.0	562.0	621.0	771.0	1440.0	1410.0	2190.0	3100.0
1961	378.0	388.0	405.0	481.0	504.0	635.0	688.0	998.0	1570.0
1962	338.0	359.0	382.0	421.0	513.0	594.0	791.0	1140.0	1450.0
1963	475.0	497.0	538.0	627.0	715.0	880.0	1030.0	1220.0	1950.0
1964	360.0	364.0	383.0	409.0	466.0	544.0	583.0	763.0	1310.0
1965	670.0	683.0	742.0	856.0	1200.0	1620.0	1610.0	1780.0	2050.0
1966	406.0	410.0	425.0	498.0	660.0	769.0	941.0	1090.0	1380.0
1967	346.0	354.0	362.0	380.0	384.0	452.0	660.0	1000.0	1730.0
1968	317.0	318.0	323.0	360.0	437.0	548.0	911.0	1580.0	2210.0
1969	548.0	567.0	593.0	659.0	718.0	820.0	1330.0	1600.0	2050.0
1970	451.0	457.0	463.0	487.0	500.0	626.0	1010.0	1220.0	1290.0
1971	388.0	396.0	411.0	466.0	466.0	644.0	796.0	890.0	1320.0
1972	522.0	530.0	555.0	608.0	662.0	851.0	1190.0	1600.0	1770.0
1973	579.0	590.0	612.0	665.0	865.0	1090.0	1330.0	1300.0	1850.0
1974	356.0	358.0	368.0	393.0	414.0	520.0	624.0	906.0	1450.0
1975	316.0	325.0	318.0	332.0	348.0	474.0	703.0	1080.0	1800.0
1976	431.0	438.0	455.0	485.0	621.0	955.0	1120.0	1740.0	2840.0
1977	387.0	400.0	417.0	481.0	540.0	727.0	966.0	1160.0	1480.0
1978	405.0	410.0	431.0	459.0	511.0	680.0	813.0	826.0	1390.0
1979	540.0	562.0	597.0	647.0	700.0	983.0	1080.0	1110.0	1310.0

## STATION 12133000 S.F. SKYKOMISH RIVER NEAR INDEX, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1904-1979)

MEAN	389.1	397.2	414.1	445.8	514.8	674.4	861.1	1112.7	1646.5
MAXIMUM	670.0	683.0	742.0	856.0	1200.0	1630.0	2020.0	2890.0	3610.0
MINIMUM	190.0	194.0	205.0	221.0	249.0	288.0	312.0	356.0	660.0
STANDARD DEVIATION	103.37	105.38	113.31	130.10	179.94	304.27	376.53	479.20	589.77
SKWENESS	0.780	0.785	0.872	1.016	1.313	1.476	1.009	1.134	0.909
STD ERROR OF SKWENESS	0.295	0.295	0.295	0.295	0.295	0.295	0.295	0.295	0.295
SERIAL CORR COEFF	0.187	0.188	0.205	0.220	0.186	0.081	0.099	0.103	0.131
COEFF OF VARIATION	0.266	0.265	0.274	0.292	0.350	0.451	0.437	0.431	0.358
MEAN LOGS	2.576	2.585	2.602	2.632	2.689	2.792	2.897	3.009	3.190
STD DEVIATION LOGS	0.112	0.112	0.115	0.120	0.140	0.174	0.182	0.182	0.154
SKWENESS LOGS	0.119	0.100	0.159	0.306	0.400	0.554	0.190	-0.004	-0.068
SER CORR COEFF LOGS	0.295	0.295	0.295	0.295	0.295	0.295	0.295	0.295	0.295
COEFF OF VAR LOGS	0.237	0.238	0.258	0.286	0.250	0.176	0.163	0.147	0.186
	0.044	0.043	0.044	0.046	0.052	0.062	0.063	0.060	0.048

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1904-1979)

0.99	702.5	714.4	762.6	867.8	1134.7	1841.3	2210.9	2698.9	3466.3
0.98	650.6	662.4	703.6	791.1	1012.2	1577.9	1941.5	2408.9	3162.5
0.96	598.0	609.4	644.2	715.6	895.2	1338.8	1684.5	2122.8	2854.1
0.90	525.9	536.5	563.4	616.1	746.4	1053.4	1358.7	1745.2	2431.3
0.80	467.1	476.9	498.4	538.5	635.1	854.9	1116.8	1452.2	2086.6
0.50	374.5	382.5	397.1	422.9	477.7	597.7	778.7	1021.4	1555.1
0.20	302.4	308.7	319.6	338.7	370.4	440.3	553.2	718.1	1151.3
0.10	271.2	276.6	286.4	304.0	328.1	382.7	466.0	597.2	981.6
0.05	248.2	253.0	262.1	279.1	298.6	344.2	406.0	512.8	859.5
0.02	225.0	229.1	237.7	254.5	270.2	308.5	349.1	432.0	739.1
0.01	211.0	214.6	223.0	239.9	253.7	288.5	316.4	385.3	667.9

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1904-1979)

P95	P90	P75	P70	P50	P25	P10
420.0	540.0	920.0	1100.0	1700.0	3200.0	5100.0

## STATION 12133000 S.F. SKYKOMISH RIVER NEAR INDEX, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA	DATE	REG.(R)
1897	26000.	15200.	8800.	7320.	6430.	5110.	4340.	3710.	3060.	70000.	/	97
1903	10200.	8650.	7000.	4710.	4370.	4050.	4000.	3660.	2820.	32800.	01/03/03	
1904	9470.	8000.	5620.	4550.	3660.	2820.	2430.	2550.	2280.	12400.	11/30/03	
1905	24800.	17500.	11100.	7340.	5210.	4120.	3670.	3460.	2890.	10200.	11/22/04	
1912	24800.	16100.	9530.	5530.	4370.	4050.	3700.	3460.	3110.	26000.	11/19/11	
1915	11400.	9060.	6840.	5280.	4200.	3080.	2330.	1960.	1970.	24800.	01/06/14	
1916	13500.	11200.	9290.	7600.	6820.	5610.	5140.	4570.	4080.	15800.	11/03/14	
1917	12800.	11100.	9420.	8950.	8160.	7180.	6060.	5160.	3880.	14200.	10/31/15	
1918	40300.	27800.	21900.	17300.	13600.	8480.	6210.	5150.	4710.	14300.	11/09/16	
1919	23300.	18200.	10800.	8580.	5240.	4570.	4180.	3800.	3400.	26500.	12/18/17	
1920	26400.	17100.	10400.	6290.	4110.	3750.	3700.	3130.	2680.	33900.	12/14/18	
1921	17900.	14000.	8700.	7740.	7010.	5810.	4880.	4260.	3930.	22100.	11/15/19	
1922	19200.	15600.	11000.	7820.	6390.	4160.	3850.	3480.	3230.	55000.	02/11/21	
1923	31000.	19400.	11100.	8620.	5840.	3840.	3620.	3400.	3100.	25400.	12/12/21	
1924	19200.	15700.	11100.	6720.	5410.	4450.	4090.	3570.	3520.	50500.	01/06/23	
1925	18200.	11400.	6930.	5800.	4940.	3600.	3070.	2780.	2550.	22400.	02/12/24	
1926	17700.	10600.	8490.	7000.	5730.	4510.	4320.	3620.	2880.	22400.	02/02/25	
1927	17700.	10600.	8490.	7000.	5730.	4510.	4320.	3620.	2880.	21500.	12/23/25	
1928	28200.	17800.	11200.	7840.	6630.	5040.	4510.	4120.	3360.	1016/26	10/16/26	
1929	9490.	7940.	7170.	6080.	5200.	4720.	3950.	3400.	2530.	34300.	01/12/28	
1930	9690.	7480.	5820.	4460.	3790.	3250.	3100.	2990.	2550.	10500.	10/09/28	
1931	9470.	7440.	5460.	4410.	3800.	3170.	2990.	2710.	19400.	10900.	02/05/30	
1932	42400.	26100.	14600.	8920.	6530.	5170.	4900.	4820.	3920.	50000.	01/27/31	
1933	35900.	21400.	18600.	12000.	9090.	6190.	5330.	4660.	3660.	46900.	02/26/32	
1934	27200.	24500.	17100.	13900.	10500.	7730.	6530.	6000.	5160.	49200.	11/13/32	
1935	26200.	21900.	15100.	9740.	6000.	4390.	4020.	4100.	3250.	53200.	12/21/33	
1936	10400.	9700.	8320.	7810.	7210.	6600.	5510.	4480.	3440.	35400.	10/25/34	
1937	9070.	7900.	7200.	6460.	6310.	5430.	4590.	3860.	3010.	11800.	05/16/36	
1938	20500.	14600.	9130.	6160.	5170.	4550.	3820.	3240.	2820.	14400.	12/18/36	
1939	12900.	10800.	7720.	5130.	4860.	4320.	3990.	3760.	3190.	17200.	04/18/38	
1940	10200.	8900.	6300.	5200.	3940.	3160.	2840.	2730.	2710.	14500.	01/01/39	
1941	8490.	5850.	4360.	3490.	2440.	1940.	1790.	1630.	1650.	13000.	12/15/39	
1942	8480.	7130.	5650.	4880.	4650.	3670.	3380.	2940.	2310.	12600.	11/29/40	
1943	14300.	9270.	7310.	5720.	5530.	4900.	4520.	4400.	3420.	21200.	12/02/41	
1944	28400.	15300.	8570.	4910.	3640.	3200.	2830.	2560.	2190.	41900.	11/23/42	
1945	19200.	11500.	8940.	6100.	5070.	4090.	3350.	2920.	2970.	28200.	12/03/43	
1946	14400.	9670.	7400.	6900.	6500.	4090.	3350.	2920.	2970.	18400.	01/07/45	
1947	18400.	13500.	10700.	6860.	4840.	4530.	4000.	3670.	3580.	24700.	10/25/45	
1948	17900.	13900.	11400.	10300.	8880.	6600.	5400.	4490.	3660.	26900.	12/11/46	
1949	12600.	12400.	11400.	8720.	7180.	5920.	5100.	4490.	3660.	13800.	10/19/47	
1950	24200.	14800.	10300.	6860.	8170.	7100.	5880.	5100.	4290.	33700.	05/13/49	
1951	27000.	23400.	13700.	7740.	5050.	4430.	3940.	3540.	3540.	33300.	11/27/49	
1952	6790.	6680.	6150.	5720.	5130.	4250.	3730.	3230.	2630.	7600.	02/09/51	
1953	18000.	12800.	10300.	8910.	8210.	5150.	4050.	3680.	3780.	25100.	10/03/51	
1954	12500.	8800.	7950.	6640.	6310.	5760.	5260.	4570.	3770.	17800.	01/31/53	
1955	13100.	12700.	10800.	8190.	6990.	5930.	5210.	4390.	3430.	18900.	12/09/53	
1956	23300.	16200.	10600.	9220.	7950.	6660.	6110.	5320.	3910.	21900.	02/08/55	
1957	24300.	15600.	11300.	9180.	5840.	4970.	4290.	3800.	3350.	31900.	11/04/55	
1958	7830.	7670.	7360.	6260.	5130.	4210.	3440.	3010.	2800.	8520.	12/10/56	
1959	21300.	16300.	10300.	7910.	6710.	5620.	4960.	4500.	3920.	24400.	05/25/58	
1960	38200.	21600.	17100.	10000.	8050.	5760.	4720.	3830.	3250.	51800.	11/12/58	
1961	16600.	11800.	7410.	6090.	5660.	4580.	3890.	3750.	3690.	24200.	12/15/59	
1962	15800.	10700.	9910.	7030.	5220.	3740.	3460.	3120.	2970.	18200.	01/15/61	
1963	25000.	15600.	9180.	6130.	5060.	4170.	3620.	3300.	2830.	17800.	01/03/62	
1964	18400.	9630.	8820.	8150.	7290.	6540.	5520.	4680.	3700.	13800.	11/20/62	
1965	15900.	13400.	8160.	5770.	4800.	4480.	3920.	3330.	3280.	17900.	01/01/64	
1966	10600.	8850.	7530.	5400.	4640.	4320.	3980.	3650.	2880.	17900.	01/30/65	
1967	13700.	9110.	8620.	6970.	6210.	5420.	4300.	3590.	3320.	12200.	05/06/66	
1968	19000.	16300.	10900.	6510.	5430.	4680.	4410.	4050.	3740.	16800.	12/13/66	
1969	19500.	11900.	8360.	7890.	7470.	5910.	4970.	4260.	3320.	30100.	01/20/68	
1970	9390.	8440.	7510.	6020.	5140.	4190.	3590.	3180.	2920.	24000.	11/05/69	
1971	15600.	9560.	7730.	6730.	6190.	5720.	5470.	4700.	4110.	10800.	06/03/70	
1972	21700.	14900.	9590.	9320.	8280.	6940.	6170.	5760.	5250.	20100.	01/19/71	
1973	16800.	11000.	10300.	7140.	5160.	3330.	2680.	2370.	23500.	24900.	11/04/71	
1974	24900.	20000.	13200.	9900.	8350.	6800.	5880.	5130.	4410.	30800.	12/26/72	
1975	17900.	11900.	8070.	6940.	5950.	4680.	3850.	3300.	26100.	21500.	01/15/74	
1976	39500.	35800.	20600.	12900.	8640.	6580.	5440.	4740.	3750.	41000.	12/21/74	
1977	14100.	9300.	5630.	3960.	3170.	2870.	2590.	2320.	2260.	19400.	12/03/75	
1978	31200.	18900.	13500.	10200.	8150.	5850.	4390.	3620.	3060.	39500.	01/18/77	
1979	11000.	9330.	6370.	4850.	4550.	3950.	3340.	3260.	2710.	14700.	11/04/78	



STATION 12133000 S.F. SKYKOMISH RIVER NEAR INDEX, WASH.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1897-1979)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

MEAN	18928.5	13689.3	9778.5	7386.5	6065.6	4934.1	4286.8	3795.1	3270.9
MAXIMUM	42400.0	35800.0	21900.0	17300.0	13600.0	8480.0	6530.0	6000.0	5250.0
MINIMUM	6790.0	5850.0	4360.0	3490.0	2440.0	1940.0	1790.0	1630.0	1650.0
STANDARD DEVIATION	8576.36	5663.12	3469.59	2370.08	1844.14	1287.92	1041.36	880.07	682.60
SKWENESS	0.665	1.357	1.482	1.512	1.182	0.313	0.055	0.102	0.433
STD ERROR OF SKWENESS	0.289	0.289	0.289	0.289	0.289	0.289	0.289	0.289	0.289
SERIAL CORR COEFF	0.073	0.081	0.146	0.264	0.178	0.190	0.184	0.142	0.127
COEFF OF VARIATION	0.453	0.414	0.355	0.321	0.304	0.261	0.243	0.232	0.209
MEAN LOGS	4.234	4.104	3.967	3.849	3.764	3.678	3.618	3.567	3.505
STD DEVIATION LOGS	0.195	0.166	0.140	0.129	0.128	0.118	0.113	0.107	0.092
SKWENESS LOGS	0.022	0.329	0.436	0.310	-0.018	-0.485	-0.559	-0.599	-0.360
STD ERR SKWENESS LOGS	0.289	0.289	0.289	0.289	0.289	0.289	0.289	0.289	0.289
SER CORR COEFF LOGS	0.090	0.120	0.171	0.283	0.202	0.201	0.174	0.123	0.136
COEFF OF VAR LOGS	0.046	0.040	0.035	0.034	0.034	0.032	0.031	0.030	0.026

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1897-1979)

0.99	6068.9	5129.4	4858.9	3789.1	2919.5	2297.5	2012.3	1837.9	1845.6	7243.7	7221.5
0.95	8208.7	7033.5	5691.9	4454.1	3576.5	2939.9	2598.3	2354.9	2209.8	10116.6	10104.6
0.90	9648.6	7903.7	6242.1	4981.2	3983.8	3322.2	2941.6	2654.7	2419.8	12083.7	12078.4
0.80	11741.1	9166.5	7033.4	5481.7	4538.1	3820.4	3381.3	3035.1	2688.2	14978.9	14982.1
0.50	17121.8	12441.4	9053.7	6954.8	5616.8	4869.4	4273.4	3795.3	3241.3	22565.2	22581.0
0.20	25026.5	17394.6	12046.6	9017.3	7446.4	6015.9	5188.1	4557.2	3838.1	33943.7	33950.4
0.10	30547.7	20978.4	14178.7	10420.3	8468.4	6639.9	5655.5	4939.6	4163.6	41994.1	41975.1
0.04	37810.8	25858.8	17050.1	12241.4	9709.5	7314.0	6137.0	5326.1	4518.1	52670.0	52593.8
0.02	43413.9	29754.9	19321.6	13635.5	10604.1	7750.0	6433.3	5560.9	4750.0	60954.6	60817.5
0.01	49172.7	33878.4	21709.6	15063.4	11477.5	8140.3	6688.4	5760.8	4959.8	69502.7	69288.9

4.3530  
0.2111  
-0.0130

## STATION 12133500 TROUBLESOME CREEK NEAR INDEX, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1929													
1930	31.0	20.8	66.4	27.4	158	71.3	142	119	135	125	54.1	29.1	77.7
1931	86.3	56.9	45.8	119	56.2	88.7	117	193	208	88.8	42.1	38.4	96.3
1932	66.9	112	54.2	75.2	146	126	127	141	177	154	37.7	57.7	109
1933	91.2	309	115	117	29.9	48.5	96.8	154	279	237	134	148	147
1934	226	161	381	274	98.6	217	180	158	101	81.5	49.5	52.0	166
1935	149	291	195	287	94.6	61.8	58.1	156	202	147	56.7	50.6	146
1936	35.3	43.3	51.4	92.2	21.1	67.2	146	258	238	96.5	45.8	48.2	95.4
1937	33.1	11.7	236	17.9	103	202	250	200	194	132	51.9	34.2	131
1938	77.4	322	214	98.9	18.9	55.8	153	190	194	101	38.3	32.7	125
1939	74.0	112	148	130	32.0	71.5	127	211	181	174	59.5	37.7	114
1940	81.2	110	162	58.1	83.8	86.9	103	148	101	54.6	36.7	27.4	87.7
1941	116	70.4	88.4	58.9	40.3	53.8	71.3	105	83.3	55.4	32.8	106	73.6

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1929-1941)

MEAN	88.9	135.0	146.4	113.0	73.5	95.9	130.9	169.4	183.5	118.0	55.2	54.6	118.1
MAXIMUM	226.0	322.0	381.0	287.0	158.0	217.0	250.0	258.0	303.0	237.0	134.0	148.0	166.0
MINIMUM	31.0	11.7	45.8	17.9	18.9	48.5	58.1	105.0	83.3	54.6	32.8	27.4	73.6
STD DEVIATION	55.10	112.36	99.38	85.76	47.86	57.03	50.86	42.64	69.73	51.22	26.63	34.53	29.47
SKENNESS	1.481	0.823	1.184	1.310	0.528	1.565	0.961	0.537	0.165	0.964	2.457	2.112	0.298
STD ERR SKEW	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.616	0.616	0.616	0.637
SER CORR COEFF	0.300	-0.105	0.155	0.383	-0.438	-0.469	-0.005	0.129	0.116	-0.109	0.187	-0.026	0.522
COEFF OF VAR	0.619	0.832	0.679	0.759	0.651	0.595	0.388	0.252	0.380	0.434	0.482	0.632	0.258
MEAN LOGS	1.878	1.953	2.074	1.935	1.767	1.926	2.087	2.218	2.232	2.035	1.709	1.681	2.044
STD DEV LOGS	0.261	0.456	0.299	0.353	0.322	0.215	0.171	0.109	0.180	0.187	0.163	0.213	0.114
SKENNESS LOGS	0.002	-0.588	0.046	-0.413	-0.227	1.061	-0.254	-0.066	-0.067	-0.006	1.478	1.269	-0.069
STD ERR SKEW LOGS	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.616	0.616	0.616	0.637
SER CORR LOGS	0.277	0.048	0.1275	0.164	-0.394	-0.572	-0.090	0.141	0.187	-0.030	0.212	0.051	0.519
COEFF OF VAR LOGS	0.139	0.233	0.144	0.193	0.182	0.112	0.082	0.049	0.081	0.092	0.095	0.126	0.056
% OF AVE FLOW	6.5	9.9	10.7	8.3	5.4	7.0	9.6	12.4	13.4	8.6	4.0	4.0	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1929-1941)

0.99	18.7	5.0	24.5	10.2	9.2	39.2	45.6	90.4	56.5	39.8	31.8	24.2	59.4
0.95	28.1	13.6	38.6	20.7	16.5	44.4	62.3	108.2	82.0	53.4	33.4	26.5	71.5
0.90	35.0	22.3	49.2	29.5	22.3	48.6	73.2	118.9	98.6	62.5	34.9	28.4	78.9
0.80	45.6	38.7	66.3	44.3	31.6	55.4	88.3	133.2	121.8	75.5	37.6	31.8	88.8
0.50	75.5	99.4	118.0	90.9	60.2	77.5	124.3	165.0	176.1	108.5	46.8	43.4	110.9
0.20	125.3	220.5	211.4	172.4	109.9	122.5	170.8	203.6	243.1	157.8	66.4	68.4	137.9
0.10	163.3	316.7	287.6	233.7	148.3	164.1	199.9	226.9	282.8	188.1	84.3	92.4	154.3
0.04	216.5	448.1	400.4	316.2	201.8	234.7	234.7	254.4	328.2	230.0	114.1	134.2	173.7
0.02	259.8	549.4	496.3	379.8	244.7	301.6	259.4	273.7	358.9	261.9	142.5	175.9	187.4
0.01	306.1	651.2	602.7	444.5	289.8	385.1	283.2	292.2	387.3	294.3	177.2	228.9	200.6

## STATION 12133500 TROUBLESOME CREEK NEAR INDEX, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31											
YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS		
1931	21.0	21.0	24.0	26.0	34.0	38.0	46.0	56.0	52.0		
1932	14.0	15.0	16.0	20.0	22.0	47.0	49.0	60.0	65.0		
1933	18.0	19.0	23.0	24.0	27.0	35.0	63.0	76.0	112.0		
1934	36.0	37.0	40.0	51.0	83.0	121.0	140.0	163.0	175.0		
1935	18.0	18.0	20.0	24.0	33.0	44.0	49.0	58.0	89.0		
1936	12.0	12.0	12.0	13.0	15.0	35.0	40.0	44.0	49.0		
1937	10.0	10.0	11.0	11.0	11.0	21.0	26.0	32.0	62.0		
1938	14.0	14.0	14.0	15.0	20.0	32.0	44.0	67.0	127.0		
1939	14.0	14.0	14.0	15.0	20.0	32.0	47.0	59.0	80.0		
1940	20.0	20.0	22.0	26.0	35.0	43.0	57.0	71.0	84.0		
1941	20.0	21.0	22.0	26.0	27.0	30.0	36.0	47.0	63.0		

## LOWEST MEAN FLOW STATISTICS (YEARS 1931-1941)

MEAN	17.9	18.3	19.8	22.8	29.7	43.5	54.3	66.6	87.1		
MAXIMUM	36.0	37.0	40.0	51.0	83.0	121.0	140.0	163.0	175.0		
MINIMUM	10.0	10.0	11.0	11.0	11.0	21.0	26.0	32.0	49.0		
STANDARD DEVIATION	6.99	7.24	8.16	10.93	19.30	26.73	30.09	34.32	37.93		
SKWENESS	1.819	1.807	1.515	1.772	2.368	2.867	2.678	2.516	1.387		
STD ERROR OF SKWENESS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661		
SERIAL CORR COEFF	0.164	0.196	0.412	0.251	0.123	-0.012	0.119	0.078	0.164		
COEFF OF VARIATION	0.390	0.396	0.412	0.479	0.849	0.615	0.554	0.515	0.435		
MEAN LOGS	1.228	1.236	1.268	1.320	1.413	1.592	1.694	1.787	1.908		
STD DEVIATION LOGS	0.149	0.152	0.163	0.186	0.229	0.189	0.181	0.176	0.171		
SKWENESS LOGS	0.741	0.682	0.513	0.469	0.691	1.745	1.407	1.149	0.671		
STD ERR SKWENESS LOGS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661		
SER CORR COEFF LOGS	0.288	0.336	0.406	0.428	0.306	0.085	0.241	0.174	0.208		
COEFF OF VAR LOGS	0.122	0.123	0.129	0.141	0.162	0.119	0.107	0.099	0.089		

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1931-1941)

0.99	45.1	46.1	51.0	65.5	114.0	176.9	194.0	216.9	243.2		
0.98	38.9	39.9	44.2	55.9	91.7	133.9	153.1	176.1	206.9		
0.96	33.4	34.2	38.0	47.2	72.8	101.1	120.2	142.1	174.5		
0.90	26.8	27.5	30.5	36.8	52.2	69.4	86.3	105.4	136.4		
0.80	22.2	22.7	25.1	29.6	39.2	51.9	66.3	82.6	110.4		
0.50	16.2	16.5	17.9	20.2	24.3	34.7	45.0	56.7	77.4		
0.20	12.6	12.7	13.4	14.5	16.5	27.5	34.9	43.4	57.7		
0.10	11.3	11.4	11.7	12.4	13.8	25.7	32.0	39.2	50.7		
0.05	10.4	10.4	10.6	11.0	12.2	24.8	30.4	36.6	46.0		
0.02	9.6	9.6	9.7	9.7	10.7	24.0	29.1	34.5	41.8		
0.01	9.2	9.1	8.9	9.0	9.9	24.0	28.6	33.5	39.4		

## FLDW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "PPM" PERCENT OF THE TIME (YEARS 1931-1941)

P95	P90	P75	P70	P50	P25	P10
19.0	25.0	40.0	46.0	76.0	150.0	250.0

## STATION 12133500 TROUBLESOME CREEK NEAR INDEX, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE	REG.(R)
1930	504.	376.	242.	184.	152.	139.	137.	130.	117.	632.	02/05/30	
1931	724.	567.	356.	232.	215.	206.	174.	159.	138.	1100.	01/27/31	
1932	1700.	1040.	581.	324.	228.	179.	168.	166.	153.	2220.	02/26/32	
1933	1140.	769.	683.	439.	344.	270.	236.	210.	175.	1620.	11/13/32	
1934	1270.	897.	634.	511.	433.	341.	288.	270.	235.	2300.	12/21/33	
1935	1140.	960.	690.	456.	308.	273.	257.	247.	181.	1520.	10/24/34	
1936	439.	366.	310.	296.	286.	257.	229.	190.	143.	486.	05/16/36	
1937	670.	371.	303.	303.	303.	255.	239.	202.	740.	12/18/36		
1938	730.	607.	510.	376.	333.	281.	227.	182.	147.	940.	04/18/38	
1939	640.	579.	428.	250.	212.	204.	191.	175.	140.	720.	10/12/38	
1940	394.	358.	253.	224.	170.	146.	124.	113.	108.	438.	12/15/39	
1941	316.	255.	214.	179.	133.	112.	94.	87.	76.	575.	10/10/40	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1930-1941)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

MEAN	805.6	612.2	452.5	320.2	259.7	221.9	198.1	180.7	151.2			
MAXIMUM	1700.0	1040.0	690.0	511.0	433.0	341.0	288.0	270.0	235.0			
MINIMUM	316.0	255.0	214.0	179.0	133.0	112.0	94.0	87.0	76.0			
STANDARD DEVIATION	419.08	256.37	175.65	111.07	89.64	68.79	59.76	55.08	42.79			
SKEWNESS	0.917	0.368	-0.005	0.332	0.327	-0.069	-0.310	-0.030	0.287			
STD ERROR OF SKEWNESS	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637			
SERIAL CORR COEFF	0.439	0.351	0.453	0.443	0.587	0.588	0.716	0.632	0.470			
COEFF OF VARIATION	0.520	0.419	0.388	0.347	0.345	0.310	0.302	0.305	0.283			
MEAN LOGS	2.854	2.750	2.622	2.481	2.390	2.325	2.276	2.236	2.163			
STD DEVIATION LOGS	0.224	0.193	0.184	0.155	0.157	0.147	0.147	0.147	0.130			
SKEWNESS LOGS	0.112	-0.258	-0.366	-0.085	-0.272	-0.583	-0.822	-0.693	-0.602			
STD ERR SKEWNESS LOGS	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637			
SER CORR COEFF LOGS	0.517	0.392	0.465	0.558	0.644	0.611	0.732	0.688	0.568			
COEFF OF VAR LOGS	0.078	0.070	0.070	0.062	0.066	0.063	0.065	0.065	0.060			
										2.9774	2.9774	2.9774
										0.2497	0.2497	0.2497
										0.0	0.0	0.3290

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1941)

0.99	224.9	184.3	139.3	129.2	98.6	83.7	70.5	67.3	63.8	249.2	286.7
0.95	311.3	262.6	199.8	166.9	131.9	115.3	101.0	94.0	85.0	368.7	390.3
0.90	371.5	314.8	239.6	191.0	153.0	135.0	119.9	110.5	97.7	454.4	465.1
0.80	461.7	389.4	295.7	224.4	182.0	161.2	145.0	132.4	114.5	585.2	581.2
0.50	707.1	572.6	429.6	304.0	249.3	218.3	197.6	179.0	149.9	949.3	919.9
0.20	1097.6	819.5	601.7	408.7	333.5	282.2	252.2	229.2	188.0	1540.1	1522.6
0.10	1388.8	978.2	707.6	475.8	384.9	317.2	279.8	255.7	208.3	1983.3	2017.9
0.04	1792.4	1172.2	832.5	558.3	445.4	354.8	307.4	283.2	229.7	2597.4	2763.5
0.02	2118.4	1312.1	919.6	618.4	487.8	379.0	323.9	300.4	243.3	3091.7	3412.7
0.01	2465.8	1448.0	1002.0	677.4	528.0	400.4	337.7	315.2	255.2	3616.3	4148.0

## STATION 12134000 NORTH FORK SKYKOMISH RIVER AT INDEX, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1911	1503	2033	1020	617	223	664	929	1751	2003	1057	288	617	1062
1912	276	2532	891	1025	1028	376	820	2059	2269	994	392	766	1083
1913	541						1282	2123	2987	2081	645	766	
1914	1245	1374	541	1458	666	1333	1635	2050	1641	802	272	679	1143
1915	928	2031	394	342	372	874	1655	872	1640	320	168	163	1290
1916	1004	1054	994	456	1262	1366	1220	1763	2824	2189	796	572	1166
1917	246	1056	428	624	855	375	912	2057	3498	2773	820	358	1369
1918	327	641	4447	1952	841	713	1466	1745	2517	872	426	214	1369
1919	1171	959	2024	1418	593	650	1753	2550	2329	1764	426	303	1334
1920	284	2232	1362	1819	764	759	663	1357	1669	869	295	1562	1134
1921	1800	1074	1110	1199	1822	1280	1177	2498	3504	1618	478	1031	1545
1922	1447	1406	2724	251	165	245	785	2039	2352	583	266	416	1062
1930	276	224	861	363	1938	977	1648	1375	1308	502	178	198	811
1931	885	581	541	1380	910	1271	1344	2105	1778	550	210	416	998
1932	705	1202	733	997	1630	2160	2151	2630	2999	1652	462	305	1466
1933	1051	1662	1467	1176	358	684	1147	2089	3624	2838	951	1388	1704
1934	2277	1958	4581	2792	1077	2294	2172	1680	808	422	204	292	1723
1935	1275	2265	1484	2671	1325	862	862	2011	2275	1214	386	317	1406
1936	363	539	662	959	256	809	1796	3224	2665	796	258	286	1052
1937	259	128	1424	252	379	867	1203	2218	3054	993	316	208	944
1938	620	2018	1493	1000	368	735	1667	2034	1761	625	182	138	1055
1946										1658	426	252	
1947	948	871	1838	1311	1268	1074	1705	2315	1813	776	294	314	1211
1948	1796	1446	1218	699	647	523	1103	2806	3424	1123	531	591	1326

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## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1911-1948)

MEAN	922.9	1422.1	1465.3	1125.5	852.1	946.2	1352.0	2057.9	2332.3	1211.3	411.0	490.5	1209.3
MAXIMUM	2277.0	3662.0	4581.0	2792.0	1938.0	2294.0	2172.0	3224.0	3624.0	2838.0	951.0	1562.0	1723.0
MINIMUM	246.0	128.0	394.0	251.0	165.0	245.0	663.0	872.0	540.0	320.0	168.0	138.0	720.0
STD DEVIATION	579.52	849.92	1135.23	709.34	520.18	516.30	428.32	503.17	850.00	711.60	217.99	371.36	260.04
STANDARD ERROR	0.606	0.724	1.915	0.939	0.617	1.350	0.249	-0.020	-0.305	0.987	1.080	1.794	0.304
SKEWNESS	0.481	0.491	0.491	0.491	0.491	0.491	0.481	0.481	0.481	0.472	0.472	0.472	0.491
STD CORR SKEW	0.055	0.144	0.050	0.350	-0.379	-0.172	-0.240	-0.020	-0.090	-0.081	0.135	0.122	0.406
COEFF OF VAR	0.628	0.598	0.775	0.630	0.610	0.546	0.317	0.245	0.364	0.587	0.530	0.757	0.215
MEAN LOGS	2.869	3.053	3.069	2.960	2.840	2.918	3.109	3.299	3.330	3.013	2.560	2.598	3.073
STD DEV LOGS	0.313	0.345	0.288	0.305	0.305	0.233	0.144	0.118	0.204	0.256	0.219	0.278	0.095
SKEWNESS LOGS	-0.293	-1.243	0.599	-0.411	-0.431	-0.195	-0.285	-1.179	-1.478	-0.510	0.271	0.278	-0.272
STD ERR SKEW LOGS	0.481	0.491	0.491	0.491	0.491	0.491	0.481	0.481	0.481	0.472	0.472	0.472	0.491
STD CORR LOGS	-0.003	0.160	0.178	0.278	-0.373	0.421	-0.193	-0.020	-0.082	-0.143	0.086	0.154	0.342
COEFF OF VAR LOGS	0.109	0.113	0.094	0.103	0.107	0.080	0.046	0.036	0.061	0.085	0.085	0.107	0.031
% OF AVE FLOW	6.3	9.7	10.0	7.7	5.8	6.5	9.3	14.1	16.0	8.3	2.8	3.4	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1911-1948)

0.99	118.7	90.8	304.8	144.9	108.7	220.3	555.1	848.3	451.9	260.8	124.5	117.2	680.0
0.95	213.5	246.8	426.5	266.7	201.5	332.9	726.4	1185.5	858.6	390.6	165.1	154.8	811.3
0.90	287.8	390.0	517.8	362.0	274.3	412.1	833.1	1383.0	1145.0	484.2	193.6	183.1	887.9
0.80	408.0	634.6	664.6	514.8	390.8	530.3	977.8	1630.8	1585.7	627.9	236.4	228.8	966.7
0.50	765.1	1326.4	1121.4	956.8	727.5	842.6	1365.5	2099.1	2390.7	1031.0	354.9	372.8	1194.1
0.20	1365.3	2204.3	2014.1	1661.5	1260.9	1306.3	1704.7	2507.3	3152.2	1690.6	550.2	661.8	1425.1
0.10	1812.6	2656.9	2806.6	2160.2	1635.7	1627.0	1942.9	2680.9	3456.2	2188.0	701.1	926.1	1554.6
0.04	2417.6	3083.6	4078.3	2804.2	2116.5	2041.4	2419.6	2831.3	3695.3	2879.4	917.1	1362.8	1698.7
0.02	2889.8	3315.6	5250.0	3285.4	2473.6	2354.6	2410.6	2909.4	3805.7	3437.5	1096.9	1776.9	1795.0
0.01	3375.6	3491.6	6638.8	3763.5	2826.4	2670.1	2590.6	2967.7	3879.4	4030.7	1293.6	2280.3	1883.6

## STATION 12134000 NORTH FORK SKYKOMISH RIVER AT INDEX, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1912	110.0	144.0	166.0	191.0	237.0	419.0	379.0	489.0	873.0
1914	276.0	305.0	311.0	346.0	434.0	623.0	859.0	933.0	966.0
1915	144.0	147.0	159.0	181.0	213.0	318.0	340.0	495.0	770.0
1916	97.0	102.0	110.0	116.0	131.0	150.0	206.0	282.0	450.0
1917	130.0	132.0	140.0	155.0	218.0	389.0	519.0	543.0	594.0
1918	187.0	187.0	193.0	216.0	308.0	341.0	416.0	491.0	1290.0
1919	143.0	147.0	155.0	170.0	198.0	368.0	470.0	611.0	916.0
1920	115.0	134.0	140.0	159.0	219.0	277.0	332.0	502.0	895.0
1921	176.0	180.0	184.0	200.0	241.0	382.0	767.0	944.0	1060.0
1922	80.0	97.0	124.0	157.0	172.0	179.0	222.0	808.0	1050.0
1931	78.0	98.0	115.0	126.0	145.0	170.0	251.0	390.0	459.0
1932	174.0	174.0	181.0	186.0	201.0	288.0	350.0	431.0	618.0
1933	110.0	110.0	144.0	211.0	256.0	305.0	470.0	815.0	1320.0
1934	315.0	330.0	370.0	391.0	512.0	1040.0	1260.0	1610.0	2000.0
1935	120.0	138.0	143.0	162.0	178.0	235.0	241.0	304.0	715.0
1936	100.0	100.0	104.0	116.0	188.0	292.0	336.0	389.0	506.0
1937	84.0	86.0	92.0	101.0	123.0	182.0	198.0	221.0	427.0
1938	110.0	110.0	117.0	139.0	156.0	209.0	290.0	459.0	905.0
1948	201.0	201.0	204.0	221.0	253.0	298.0	436.0	717.0	964.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1912-1948)

MEAN	144.7	153.8	165.9	185.8	229.9	340.4	439.1	601.8	883.1
MAXIMUM	315.0	330.0	370.0	391.0	512.0	1040.0	1260.0	1610.0	2000.0
MINIMUM	78.0	86.0	92.0	101.0	123.0	150.0	198.0	221.0	427.0
STANDARD DEVIATION	64.53	66.66	69.57	73.67	98.54	202.36	265.25	322.32	379.39
SKEWNESS	1.466	1.665	1.466	1.665	1.926	1.725	2.011	1.807	1.365
STD ERROR OF SKEWNESS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524
SERIAL CORR COEFF	-0.168	-0.099	-0.017	0.136	0.059	-0.030	-0.139	0.040	0.211
COEFF OF VARIATION	0.446	0.433	0.419	0.397	0.429	0.595	0.604	0.536	0.430
MEAN LOGS	2.126	2.156	2.192	2.243	2.331	2.481	2.586	2.730	2.911
STD DEVIATION LOGS	0.171	0.162	0.153	0.150	0.160	0.202	0.215	0.207	0.177
SKEWNESS LOGS	0.685	0.873	1.013	0.777	0.809	0.895	0.829	0.338	0.133
STD ERR SKEWNESS LOGS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524
SER CORR COEFF LOGS	-0.102	-0.026	0.091	0.247	0.146	0.049	-0.102	0.091	0.252
COEFF OF VAR LOGS	0.081	0.075	0.070	0.067	0.069	0.081	0.083	0.076	0.061

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1912-1948)

	0.99	0.98	0.96	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01
0.99	405.6	427.8	451.1	471.3	495.9	525.2	559.1	598.0	642.2	691.9	748.1	811.6	883.1	964.0	1060.0
0.98	344.6	361.3	380.6	405.9	434.9	466.6	500.0	535.0	571.9	610.0	650.0	691.9	735.0	780.0	827.0
0.96	290.0	302.8	319.1	346.9	377.1	410.0	445.0	481.9	520.0	559.1	598.0	638.0	679.0	721.0	764.0
0.90	226.2	235.6	249.0	277.1	305.5	335.0	365.0	395.0	425.0	455.0	485.0	515.0	545.0	575.0	605.0
0.80	182.7	190.8	202.8	228.9	258.0	288.0	318.0	348.0	378.0	408.0	438.0	468.0	498.0	528.0	558.0
0.50	127.9	135.7	146.7	167.2	188.0	208.0	228.0	248.0	268.0	288.0	308.0	328.0	348.0	368.0	388.0
0.20	95.4	104.1	115.3	130.1	146.5	163.5	181.0	198.0	215.0	232.0	249.0	266.0	283.0	300.0	317.0
0.10	83.8	93.2	104.7	116.8	130.7	146.5	163.5	181.0	198.0	215.0	232.0	249.0	266.0	283.0	300.0
0.05	76.1	86.1	98.0	108.0	120.0	132.0	144.0	156.0	168.0	180.0	192.0	204.0	216.0	228.0	240.0
0.02	69.2	79.9	92.3	100.0	108.0	116.0	124.0	132.0	140.0	148.0	156.0	164.0	172.0	180.0	188.0
0.01	65.3	76.6	89.2	95.6	103.0	110.0	117.0	124.0	131.0	138.0	145.0	152.0	159.0	166.0	173.0

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1912-1948)

P95	P90	P75	P70	P50	P25	P10
170.0	220.0	380.0	450.0	810.0	1600.0	2600.0

## STATION 12134000 NORTH FORK SKYKOMISH RIVER AT INDEX, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1911	9160.	5320.	3310.	2580.	2140.	1880.	1680.	1480.	1140.	15300. 11/21/10
1912	13200.	11100.	6810.	4140.	2650.	2230.	1820.	1560.	1330.	16900. 11/19/11
1914	9820.	6590.	4300.	2490.	2090.	1940.	1820.	1700.	1490.	11800. 01/06/14
1915	6400.	5720.	3760.	2740.	2040.	1500.	1180.	996.	957.	10200. 11/02/14
1916	6400.	5170.	4150.	3470.	3130.	2550.	2310.	2030.	1800.	7500. 10/31/15
1917	7660.	5170.	4470.	4300.	3900.	3350.	2820.	2370.	1760.	8750. 11/09/16
1918	16600.	12200.	8930.	6730.	5250.	3380.	2500.	2050.	2030.	26300. 12/18/17
1919	8770.	6840.	4230.	3450.	2820.	2630.	2370.	2140.	1740.	13800. 12/14/18
1920	15000.	9120.	5770.	3520.	2230.	1860.	1560.	1300.	16800.	11/15/19
1921	9470.	7590.	4920.	4320.	3810.	3170.	2610.	2220.	1970.	11300. 02/11/21
1922	15500.	8840.	6070.	4200.	3260.	2520.	1900.	1490.	1100.	6200. 02/05/30
1930	5160.	3830.	2910.	2090.	1840.	1630.	1470.	1280.	1470.	12900. 01/27/31
1931	8300.	6160.	3990.	2570.	2210.	2020.	1760.	1640.	1490.	28000. 02/26/32
1932	18600.	11200.	6220.	3890.	3100.	2820.	2680.	2700.	2220.	23900. 11/13/32
1933	14100.	9410.	8080.	5150.	4160.	3400.	2880.	2530.	2000.	28400. 12/21/33
1934	16200.	11400.	7600.	6600.	5200.	3860.	3300.	3030.	2620.	21000. 10/24/34
1935	16200.	12200.	7870.	5230.	3200.	2290.	2130.	2150.	1730.	6550. 05/16/36
1936	4750.	4370.	3740.	3670.	3460.	3090.	2680.	2150.	1630.	8180. 12/18/36
1937	4570.	4150.	3690.	3190.	3050.	2660.	2260.	1890.	1470.	16400. 04/18/38
1938	8380.	6400.	3720.	2610.	2290.	2150.	1860.	1580.	1320.	13800. 12/11/46
1947	7440.	5080.	3960.	2740.	2340.	2250.	1960.	1780.	1610.	13400. 10/19/47
1948	7250.	6560.	5390.	5050.	4200.	3180.	2600.	2140.	1610.	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1911-1948)

	MEAN	MINIMUM	STANDARD DEVIATION	STANDARD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKEWNESS LOGS	STD ERR SKEWNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
0.99	10407.7	7491.8	5176.8	3851.4	3107.7	2561.8	2205.9	1938.9	1619.5	4.1363	0.2001	-0.0380	4.1363	4.1363
0.95	18600.0	12200.0	8930.0	6730.0	5250.0	3860.0	3300.0	3030.0	2620.0	0.2001	0.0		0.2001	0.2001
0.90	4570.0	3830.0	2910.0	2090.0	1840.0	1500.0	1180.0	996.0	957.0	0.0			0.0	-0.0380
0.80	2748.36	1742.92	1283.68	985.46	650.15	515.15	472.36	394.15	394.15					
0.50	0.443	0.513	0.799	0.846	0.800	0.232	0.150	0.377	0.429					
0.20	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491					
0.10	0.149	0.120	0.158	0.336	0.314	0.284	0.341	0.381	0.491					
0.05	0.423	0.367	0.337	0.333	0.317	0.294	0.234	0.244	0.244					
0.02	3.979	3.847	3.692	3.564	3.473	3.395	3.332	3.275	3.197					
0.01	0.189	0.159	0.139	0.140	0.133	0.113	0.106	0.109	0.105					
0.005	-0.045	0.105	0.405	0.233	0.291	-0.181	-0.440	-0.389	-0.034					
0.002	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491					
0.001	0.204	0.144	0.154	0.340	0.337	0.285	0.321	0.322	0.239					
0.0005	0.047	0.041	0.038	0.039	0.038	0.033	0.032	0.033	0.033					

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1911-1948)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.05	0.02	0.01
0.99	3418.7	3086.5	2569.7	1830.9	1557.8	1311.0	1129.3	980.0	890.6	4687.6
0.95	4638.1	3893.1	3020.3	2205.3	1844.5	1598.5	1399.6	1215.5	1055.4	6416.3
0.90	5450.1	4416.5	3316.4	2446.2	2028.9	1771.3	1557.8	1354.3	1153.0	7585.2
0.80	6618.3	5156.7	3740.6	2785.1	2288.4	2000.0	1761.7	1534.6	1284.3	9289.1
0.50	9561.7	6983.8	4816.2	3617.2	2926.0	2501.6	2185.0	1914.0	1576.1	13688.1
0.20	13750.3	9544.2	6394.0	4781.6	3820.5	3094.5	2642.7	2333.0	1930.5	20170.3
0.10	16595.4	11277.9	7508.9	5572.5	4429.9	3443.5	2891.0	2564.7	2144.8	24701.4
0.05	20253.0	13512.5	9000.7	6596.9	5221.6	3846.6	3159.4	2819.0	2398.2	30660.1
0.02	23016.6	15209.5	10173.9	7379.4	5828.1	4124.6	3333.5	2986.2	2576.9	35253.6
0.01	25810.3	16934.8	11401.5	8179.1	6449.6	4386.6	3489.7	3137.9	2748.3	39464.8

## STATION 12134500 SKYKOMISH RIVER NEAR GOLD BAR, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1929	4030	1690	1673	1089	791	2688	2887	7670	7329	2725	983	594	2860
1930	803	678	2612	1376	6097	3398	5430	4354	3941	1736	722	662	2622
1931	2236	1891	1774	4056	3092	4240	4360	6213	4846	1645	712	1153	3017
1932	2023	3862	4507	3226	5572	6400	6049	6975	7984	4293	1518	1137	4283
1933	2735	11930	5307	4407	1415	2700	4013	6297	10960	8080	2989	3366	5358
1934	6658	5895	14490	8835	3709	6841	6979	5259	2600	1391	754	976	5385
1935	4158	6704	4568	8245	3996	2705	2758	5878	6753	3385	1235	917	4278
1936	1003	1631	2023	3397	1230	2994	5986	10700	7776	2339	888	926	3412
1937	789	534	4822	945	1502	2989	3925	6700	9627	3243	1136	719	3084
1938	1757	7504	5094	3507	1460	2548	6002	6345	5188	1848	690	535	3543
1939	1424	3898	5125	5463	2139	3007	5109	7646	6089	3948	1260	830	3840
1940	2001	3439	6119	2706	3707	4055	4034	5403	2595	990	659	515	3019
1941	2237	2479	3386	2336	1767	2020	2567	3425	2169	971	612	2542	2210
1942	4893	3439	4896	1395	1696	1975	4284	4983	5931	2511	918	612	3135
1943	1095	4667	4205	2765	2570	3534	6493	6155	7498	5090	1347	773	3849
1944	1251	1804	4785	2303	2030	2315	3638	5474	4029	1388	696	2147	2681
1945	1805	2980	3573	6042	4533	2469	2951	8358	4903	1896	849	1777	3507
1946	3068	4365	3639	3367	2445	3152	4793	9618	8551	4403	1310	806	4135
1947	2903	2857	6932	4743	4779	3865	5824	7457	5617	2568	1039	1176	4144
1948	5977	5626	4528	2745	2590	2114	3771	8863	11060	3594	1882	1765	4542
1949	2798	3843	2764	1353	3143	3608	5162	10620	7549	4666	1972	1691	4100
1950	3826	6723	5246	3471	3506	5030	4289	6865	11900	7671	2845	1274	5225
1951	4568	6019	6740	3552	8108	2315	4617	6964	5558	2132	843	1015	4339
1952	4440	3213	2192	1383	3101	1775	4593	7172	5430	2850	991	646	3146
1953	488	607	1673	11030	5227	2318	3848	6376	6020	5090	1608	1121	3782
1954	2648	4728	7437	3535	4595	2553	3844	7310	8428	7841	3304	2220	4873
1955	2591	5938	3207	2204	3465	1469	3099	5590	10590	7304	2741	1150	4106
1956	5516	7903	5362	2475	1348	2378	6177	10720	9534	6326	1620	1586	5086
1957	5020	4320	9154	1852	2793	2965	4761	8818	5737	1291	654	635	4095
1958	1076	2157	4229	3883	3895	2037	3907	7988	4237	1291	1006	1226	3043
1959	3204	8915	7779	6557	2255	3203	7553	7079	8835	5035	1422	4942	5570
1960	6565	10200	6737	2053	3258	2685	4845	6354	6628	2547	1215	1064	4507
1961	2650	5809	3005	5906	7330	3916	4101	6819	7693	2431	891	1121	4277
1962	3361	2995	4755	6471	3175	1666	5360	4346	6252	3405	1810	1333	3746
1963	2166	6048	5578	3492	5903	2638	3253	4561	3689	1811	986	1056	3411
1964	2197	4685	3713	4351	2410	2585	3620	6465	11190	8364	3606	2450	4639
1965	3200	3346	4740	4510	4989	2800	5165	5968	6152	3140	1470	1252	3884
1966	1973	3579	2669	3132	1703	2956	5178	7214	6452	3711	1236	680	3398
1967	2557	3194	7107	6253	4018	2607	1955	6299	9655	3869	1165	769	4124
1968	6443	4235	6633	6377	4082	3406	3340	5852	6721	2759	1459	2986	4829
1969	3639	5674	3652	4173	1201	2516	4969	9862	8537	2345	947	1998	4137
1970	3084	2535	2726	3915	3368	2747	3631	5393	7603	2316	855	1774	3322
1971	1880	4094	3011	6045	6418	2719	3548	9693	8491	8199	2615	1486	4842
1972	2113	4756	3010	3870	6764	9565	4984	10860	11000	8209	2660	2881	5884
1973	1485	2399	6512	4019	1433	1950	2305	5196	4607	1949	886	1073	2832
1974	2882	3779	5151	8406	3295	3949	4522	6885	13610	8413	3389	1350	5484
1975	624	3262	5234	5116	2276	2556	1908	7060	8408	5934	2082	1193	3851
1976	3302	7723	12670	5932	2269	1855	3477	7993	7142	6416	3107	1525	5360
1977	1026	2545	3448	3599	2555	2388	4437	4025	4152	1279	1321	1779	2708
1978	1719	8290	10070	3384	2466	3475	3384	5022	5761	2797	1282	2995	4100
1979	1212	3657	2710	1158	3075	5113	3541	7163	5351	2674	879	855	3113



## STATION 12134500 SKYKOMISH RIVER NEAR GOLD BAR, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1929-1979)

MEAN	2805.9	4414.6	4924.9	4026.8	3421.4	3146.2	4335.8	6907.9	7034.5	3775.4	1471.9	1432.4	3975.2
MAXIMUM	6658.0	11930.0	14490.0	11040.0	8108.0	9565.0	7553.0	10860.0	13610.0	8413.0	3606.0	4942.0	5884.0
MINIMUM	488.0	534.0	1673.0	945.0	791.0	1469.0	1908.0	3425.0	2169.0	971.0	612.0	515.0	2210.0
STD DEVIATION	1600.33	2414.09	2595.66	2182.31	1785.49	1412.87	1240.23	1801.34	2559.36	2266.49	817.61	862.50	887.10
SKWENESS	0.842	0.921	1.641	0.997	0.877	2.534	0.319	0.564	0.356	0.880	1.243	1.876	0.223
STD ERR SKEW	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
SEK CORR COEFF	0.141	0.130	-0.039	0.146	-0.089	-0.079	-0.166	0.174	0.013	0.138	0.188	-0.052	0.130
COEFF OF VAR	0.570	0.547	0.527	0.542	0.522	0.449	0.286	0.261	0.364	0.600	0.555	0.602	0.223
MEAN LOGS	3.373	3.570	3.641	3.540	3.476	3.467	3.619	3.825	3.816	3.502	3.112	3.094	3.588
STD DEV LOGS	0.271	0.283	0.212	0.250	0.233	0.156	0.131	0.114	0.173	0.261	0.215	0.226	0.099
SKWENESS LOGS	-0.446	-1.074	0.110	-0.383	-0.200	1.002	-0.511	-0.122	-0.673	0.049	0.561	0.470	-0.223
STD ERR SKEW LOGS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
SEK CORR LOGS	0.081	0.160	0.066	0.204	-0.100	-0.052	-0.141	0.198	0.090	0.109	0.224	0.069	0.158
COEFF OF VAR LOGS	0.079	0.079	0.058	0.071	0.067	0.045	0.036	0.030	0.045	0.074	0.069	0.073	0.028
% OF AVE FLOW	5.9	9.3	10.3	8.4	7.2	6.6	9.1	14.5	14.7	7.9	3.1	3.0	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1929-1979)

0.99	453.6	504.2	1460.1	772.8	792.2	1659.9	1843.6	3554.1	2134.7	802.7	502.3	444.2	2197.9
0.95	787.9	1087.1	1988.7	1266.4	1199.6	1828.9	2430.9	4308.9	3173.1	1192.6	624.2	569.2	2627.7
0.90	1037.6	1553.8	2352.5	1623.3	1486.0	1926.9	2787.1	4765.0	3845.5	1475.5	711.6	658.5	2880.4
0.80	1423.0	2284.7	2892.2	2162.7	1913.4	2160.0	3256.9	5372.0	4769.7	1912.6	846.2	796.1	3209.3
0.50	2472.6	4169.1	4334.9	3593.8	3042.8	2762.8	4263.0	6718.1	6444.1	1358.3	1235.7	1193.4	3910.0
0.20	4024.0	6461.9	6579.6	5669.0	4717.9	3843.3	5380.9	8338.8	9219.2	5251.6	1926.6	1895.3	4706.8
0.10	5062.6	7670.7	8225.1	7051.9	5875.0	4736.0	5994.5	9308.6	10522.3	6869.8	2497.4	2472.0	5161.7
0.04	6350.7	8865.1	10476.2	8770.8	7368.6	6091.6	6659.5	10444.2	11915.4	9167.5	3364.8	3343.3	5675.7
0.02	7281.5	9553.9	12274.5	10019.3	8495.6	7285.9	7090.6	11236.8	12400.7	11058.8	4128.6	4105.7	6023.2
0.01	8183.1	10105.9	14174.8	11235.7	9630.2	8655.6	7476.5	11991.5	13578.0	13101.4	5003.4	4974.1	6346.0

## STATION 12134500 SKYKOMISH RIVER NEAR GOLD BAR, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1930	398.0	402.0	447.0	539.0	563.0	679.0	682.0	714.0	1180.0
1931	428.0	445.0	504.0	532.0	585.0	661.0	858.0	1240.0	1440.0
1932	555.0	590.0	614.0	633.0	672.0	902.0	1040.0	1270.0	1950.0
1933	705.0	707.0	720.0	759.0	998.0	1090.0	1490.0	2290.0	4060.0
1934	1070.0	1100.0	1220.0	1310.0	1690.0	2770.0	3470.0	4660.0	5890.0
1935	636.0	643.0	645.0	658.0	683.0	834.0	863.0	1050.0	2280.0
1936	538.0	554.0	573.0	597.0	776.0	899.0	994.0	1150.0	1650.0
1937	425.0	435.0	448.0	483.0	526.0	632.0	689.0	754.0	1470.0
1938	443.0	447.0	455.0	511.0	560.0	742.0	999.0	1460.0	3110.0
1939	368.0	402.0	454.0	461.0	488.0	565.0	783.0	1080.0	2150.0
1940	530.0	540.0	553.0	617.0	782.0	967.0	1260.0	1780.0	2720.0
1941	445.0	447.0	455.0	496.0	515.0	555.0	662.0	932.0	1490.0
1942	532.0	545.0	558.0	587.0	611.0	754.0	1110.0	1530.0	2040.0
1943	433.0	445.0	454.0	499.0	506.0	580.0	694.0	1100.0	2260.0
1944	576.0	589.0	611.0	636.0	694.0	854.0	1100.0	1310.0	2060.0
1945	480.0	492.0	506.0	538.0	589.0	755.0	1280.0	1490.0	2080.0
1946	570.0	587.0	624.0	669.0	793.0	1060.0	1210.0	1490.0	2420.0
1947	546.0	551.0	581.0	644.0	695.0	788.0	1150.0	1790.0	2850.0
1948	717.0	731.0	731.0	804.0	896.0	1080.0	1510.0	2300.0	3420.0
1949	840.0	857.0	873.0	936.0	1130.0	1440.0	2140.0	2210.0	3400.0
1950	864.0	876.0	947.0	1060.0	1290.0	1710.0	2260.0	2710.0	3740.0
1951	830.0	845.0	862.0	929.0	1220.0	1900.0	2810.0	3220.0	4140.0
1952	479.0	505.0	549.0	617.0	707.0	816.0	1250.0	2030.0	2120.0
1953	385.0	409.0	420.0	433.0	454.0	545.0	572.0	644.0	1160.0
1954	649.0	666.0	690.0	734.0	865.0	1280.0	1550.0	2240.0	3490.0
1955	1030.0	1050.0	1140.0	1280.0	1390.0	2320.0	2340.0	2550.0	3100.0
1956	825.0	845.0	906.0	946.0	1110.0	1590.0	2040.0	2890.0	3970.0
1957	814.0	833.0	877.0	952.0	1080.0	1490.0	2130.0	3140.0	3860.0
1958	516.0	528.0	544.0	569.0	607.0	652.0	812.0	1100.0	1780.0
1959	499.0	513.0	528.0	586.0	608.0	718.0	967.0	1500.0	3010.0
1960	948.0	954.0	977.0	1080.0	1340.0	2450.0	2340.0	3650.0	5210.0
1961	634.0	641.0	676.0	824.0	866.0	1100.0	1170.0	1690.0	2650.0
1962	620.0	639.0	676.0	715.0	863.0	996.0	1280.0	1850.0	2390.0
1963	770.0	797.0	848.0	994.0	1190.0	1420.0	1650.0	1950.0	3070.0
1964	635.0	644.0	682.0	716.0	825.0	934.0	1010.0	1290.0	2250.0
1965	1220.0	1230.0	1310.0	1450.0	1930.0	2720.0	2690.0	2980.0	3380.0
1966	681.0	686.0	721.0	819.0	1160.0	1290.0	1560.0	1790.0	2240.0
1967	587.0	594.0	613.0	646.0	669.0	790.0	1110.0	1680.0	2850.0
1968	552.0	552.0	573.0	627.0	769.0	951.0	1540.0	2590.0	3530.0
1969	905.0	927.0	969.0	1080.0	1170.0	1310.0	2200.0	2630.0	3300.0
1970	651.0	656.0	674.0	701.0	750.0	996.0	1660.0	2000.0	2130.0
1971	580.0	588.0	603.0	649.0	767.0	1100.0	1390.0	1540.0	2230.0
1972	811.0	835.0	884.0	984.0	1100.0	1430.0	1990.0	2620.0	2970.0
1973	914.0	938.0	968.0	1070.0	1360.0	1710.0	2190.0	2990.0	2990.0
1974	519.0	528.0	569.0	642.0	667.0	873.0	1090.0	1570.0	2480.0
1975	491.0	500.0	545.0	543.0	569.0	806.0	1240.0	1890.0	2970.0
1976	675.0	688.0	721.0	776.0	1010.0	1530.0	1790.0	2890.0	4470.0
1977	629.0	634.0	666.0	813.0	903.0	1180.0	1590.0	1910.0	2430.0
1978	664.0	669.0	687.0	727.0	830.0	1130.0	1430.0	1440.0	2350.0
1979	780.0	810.0	871.0	928.0	1110.0	1630.0	1830.0	1870.0	2150.0

## STATION 12134500 SKYKOMISH RIVER NEAR GOLD BAR, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1930-1979)

MEAN	648.3	661.5	694.0	756.0	878.7	1159.5	1469.3	1911.7	2743.4
MAXIMUM	1220.0	1230.0	1310.0	1450.0	1930.0	2770.0	3470.0	4660.0	5950.0
MINIMUM	385.0	402.0	420.0	433.0	459.0	545.0	572.0	644.0	1160.0
STANDARD DEVIATION	190.49	192.62	207.70	233.86	321.34	542.38	628.47	804.68	976.60
SKEWNESS	0.899	0.904	1.045	1.035	1.121	1.434	0.964	1.004	0.980
STD ERROR OF SKEWNESS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337
SERIAL CORR COEFF	0.296	0.285	0.273	0.254	0.246	0.131	0.188	0.149	0.191
COEFF OF VARIATION	0.294	0.291	0.299	0.309	0.366	0.468	0.428	0.421	0.356
MEAN LOGS	2.795	2.804	2.824	2.860	2.918	3.025	3.130	3.244	3.412
STD DEVIATION LOGS	0.122	0.121	0.122	0.126	0.149	0.181	0.182	0.184	0.152
SKEWNESS LOGS	0.295	0.324	0.446	0.445	0.363	0.519	0.037	-0.208	-0.089
STD ERR SKEWNESS LOGS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337
SER CORR COEFF LOGS	0.383	0.371	0.362	0.346	0.320	0.245	0.256	0.197	0.235
COEFF OF VAR LOGS	0.044	0.043	0.043	0.044	0.051	0.060	0.058	0.057	0.045

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1979)

0.99	1272.9	1297.6	1402.1	1560.6	2010.5	3268.7	3617.8	4406.4	5714.1
0.98	1159.4	1181.0	1266.0	1404.5	1785.4	2790.3	3216.9	3994.0	5224.9
0.96	1047.6	1066.6	1134.8	1254.4	1570.8	2356.7	2824.5	3572.0	4725.8
0.90	900.3	916.3	965.8	1062.0	1298.8	1840.7	2311.5	2989.8	4038.1
0.80	785.6	799.7	837.7	916.8	1096.2	1483.0	1917.5	2516.2	3477.3
0.50	614.6	626.8	653.1	709.0	811.0	1021.5	1344.9	1741.1	2597.6
0.20	490.3	501.8	524.4	565.2	617.9	740.4	946.8	1234.9	1926.3
0.10	439.0	450.4	472.9	507.9	542.1	638.1	789.2	1011.2	1642.6
0.05	402.2	413.7	436.6	467.7	489.3	569.7	679.6	853.6	1437.9
0.02	366.0	377.6	401.5	428.8	438.7	506.5	574.8	702.0	1235.8
0.01	344.5	356.2	380.9	406.1	409.3	471.0	514.3	614.4	1116.0

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1930-1979)

P95	P90	P75	P70	P50	P25	P10
700.0	900.0	1600.0	1800.0	2800.0	5200.0	8300.0

STATION 12134500 SKYKOMISH RIVER NEAR GOLD BAR, WASH.													
HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30													
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW (CFS)	DATE	ANNUAL PEAK-FLOW DATA	
												REG. (R)	
1929	15900.	125600.	115500.	99300.	83200.	75700.	63100.	54200.	40600.	188000.	10/09/28		
1930	134000.	108000.	86600.	67000.	58500.	52800.	49900.	47800.	41300.	158000.	02/05/30		
1931	249000.	164000.	108000.	74700.	64900.	57600.	52900.	49600.	45300.	351000.	01/28/31		
1932	556000.	364000.	208000.	129000.	97000.	79500.	76500.	76600.	62400.	833000.	02/26/32		
1933	516000.	322000.	277000.	173000.	136000.	101000.	85800.	75400.	59500.	725000.	11/13/32		
1934	494000.	387000.	262000.	212000.	160000.	122000.	100000.	94100.	81400.	887000.	12/21/33		
1935	459000.	380000.	249000.	158000.	95500.	70100.	64900.	65800.	52200.	624000.	10/24/34		
1936	169000.	152000.	128000.	121000.	111000.	101000.	84700.	69200.	53700.	194000.	05/16/36		
1937	139000.	123000.	113000.	99100.	94300.	82600.	70500.	59500.	47000.	253000.	12/18/36		
1938	357000.	243000.	142000.	97500.	79100.	70300.	59400.	50800.	44800.	472000.	04/18/38		
1939	220000.	183000.	126000.	83400.	77000.	69000.	63800.	59800.	50200.	289000.	01/01/39		
1940	175000.	142000.	100000.	82200.	62600.	51400.	45100.	43700.	43600.	260000.	12/15/39		
1941	134000.	91100.	69800.	57500.	40700.	32200.	28300.	27700.	27000.	216000.	11/28/40		
1942	144000.	118000.	90800.	73800.	69500.	55400.	50900.	44800.	35700.	211000.	12/02/41		
1943	240000.	146000.	113000.	87700.	84300.	75100.	69000.	66900.	52200.	350000.	11/23/42		
1944	470000.	248000.	137000.	74000.	56800.	49700.	44100.	40200.	34900.	716000.	12/03/43		
1945	346000.	197000.	155000.	104000.	84400.	67500.	54800.	48100.	49100.	474000.	01/07/45		
1946	265000.	168000.	119000.	104000.	99700.	92300.	81400.	69400.	55300.	345000.	10/25/45		
1947	300000.	209000.	168000.	110000.	77700.	72800.	63500.	58200.	56700.	402000.	12/11/46		
1948	291000.	206000.	170000.	159000.	135000.	102000.	83400.	68900.	53600.	453000.	10/19/47		
1949	197000.	194000.	178000.	137000.	113000.	93200.	80500.	71100.	58900.	223000.	11/23/48		
1950	387000.	240000.	166000.	134000.	124000.	106000.	89000.	77400.	66300.	565000.	11/27/49		
1951	484000.	408000.	235000.	131000.	84500.	71600.	68900.	62400.	55600.	656000.	02/10/51		
1952	110000.	107000.	97900.	90100.	81400.	66700.	59100.	51300.	42000.	133000.	10/03/51		
1953	310000.	203000.	163000.	141000.	129000.	81800.	63700.	58500.	59800.	406000.	01/31/53		
1954	203000.	152000.	125000.	103000.	98200.	87900.	80400.	69700.	58100.	275000.	12/09/53		
1955	204000.	197000.	167000.	127000.	108000.	91300.	80400.	68000.	53300.	306000.	02/08/55		
1956	374000.	263000.	165000.	144000.	125000.	104000.	95100.	82900.	61400.	469000.	12/11/55		
1957	421000.	264000.	184000.	148000.	94100.	76500.	65100.	58600.	52700.	591000.	12/10/56		
1958	127000.	125000.	119000.	100000.	81700.	66600.	54500.	47400.	44400.	141000.	01/17/58		
1959	364000.	282000.	174000.	127000.	107000.	90600.	79700.	72300.	62500.	421000.	11/12/58		
1960	616000.	350000.	282000.	168000.	135000.	98700.	79400.	64700.	54300.	788000.	11/23/59		
1961	290000.	196000.	123000.	97600.	91100.	74000.	62400.	60100.	59600.	404000.	01/15/61		
1962	261000.	167000.	156000.	113000.	84500.	60200.	53000.	48700.	46800.	296000.	01/03/62		
1963	402000.	252000.	147000.	97500.	81300.	67200.	58600.	53400.	45700.	720000.	11/20/62		
1964	169000.	156000.	143000.	131000.	117000.	105000.	89600.	75700.	59800.	244000.	01/01/64		
1965	263000.	220000.	130000.	90800.	75000.	69300.	61000.	51700.	51200.	304000.	11/30/64		
1966	168000.	140000.	119000.	85400.	73600.	69100.	63500.	58500.	46000.	191000.	05/06/66		
1967	249000.	156000.	145000.	109000.	96600.	84100.	66800.	55800.	51900.	290000.	12/13/66		
1968	314000.	264000.	176000.	104000.	87600.	75200.	71000.	64500.	60500.	492000.	01/20/68		
1969	327000.	195000.	135000.	127000.	119000.	94200.	79100.	67800.	52700.	419000.	01/05/69		
1970	148000.	148000.	118000.	94000.	81100.	65600.	56100.	49500.	45600.	169000.	06/03/70		
1971	260000.	156000.	122000.	106000.	98400.	91600.	88600.	76200.	67000.	341000.	12/21/70		
1972	337000.	226000.	156000.	151000.	135000.	114000.	102000.	94500.	86500.	397000.	02/28/72		
1973	263000.	182000.	168000.	117000.	83800.	54100.	43900.	36700.	38700.	347000.	12/26/72		
1974	392000.	322000.	214000.	164000.	138000.	113000.	97500.	85000.	73400.	468000.	01/15/74		
1975	292000.	181000.	126000.	108000.	93000.	88800.	73600.	60400.	51900.	426000.	12/21/74		
1976	645000.	586000.	337000.	210000.	141000.	103000.	89200.	77600.	59700.	766000.	12/03/75		
1977	264000.	165000.	97100.	64900.	51500.	47600.	42600.	37800.	36800.	347000.	01/18/77		
1978	504000.	307000.	216000.	167000.	132000.	94200.	71600.	59500.	50600.	628000.	12/02/77		
1979	204000.	172000.	113000.	79700.	74900.	65300.	55300.	54100.	44800.	247000.	11/04/78		

STATION 12134500 SKYKOMISH RIVER NEAR GOLD BAR, WASH.

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1929-1979)

[illegible]

## STATION 12135000 WALLACE RIVER AT GOLD BAR, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1929			89.4	48.3	30.0	139	125	203	244	52.0	19.1	16.6	
1930	71.4	32.6	138	76.4	279	163	163	129	117	33.0	32.0	45.4	104
1931	166	95.8	105	240	117	177	192	147	154	41.6	14.9	116	130
1932	149	177	140	170	225	385	263	224	222	140	41.0	56.1	182
1933	186	615	234	256	60.3	128	151	224	307	163	41.4	161	211
1946										95.9	25.0	24.3	
1947	153	164	305	220	205	144	238	169	193	51.3	25.3	53.0	160
1948	231	292	230	156	142	185	171	335	294	81.2	106	106	187
1949	103	195	121	176	131	185	196	294	138	138	53.3	62.5	143
1950	199	229	201	181	227	240	196	244	364	160	73.6	42.1	196
1951	168	232	266	162	265	128	187	203	103	26.5	14.6	51.4	150
1952	244	124	100	75.5	139	96.7	180	233	159	66.7	30.0	26.5	123
1953	17.2	31.2	132	171	183	119	199	228	192	87.6	33.3	54.4	146
1954	154	213	350	171	223	107	142	205	287	154	91.7	121	185
1955	92.3	263	168	109	158	60.2	172	260	394	257	83.9	37.8	171
1956	228	263	248	152	63.5	105	260	301	284	105	26.3	72.4	174
1957	242	215	359	174	148	180	267	298	148	61.0	30.4	19.2	171
1958	82.7	147	183	214	230	110	209	193	30.7	12.8	49.3	128	
1959	200	379	311	332	117	155	330	273	226	88.0	38.2	227	223
1960	240	402	264	132	143	105	170	304	172	37.6	62.0	62.0	174
1961	192	269	147	121	411	193	209	219	114	35.0	13.1	34.2	169
1962	157	129	250	363	136	78.2	263	161	162	63.9	96.7	77.5	162
1963	91.5	252	258	134	220	108	169	121	103	76.5	37.7	47.2	134
1964	95.9	277	220	233	127	133	194	289	389	201	126	136	201
1965	145	180	235	310	271	123	193	190	134	50.5	45.0	73.4	162
1966	83.7	148	122	171	89.3	163	205	225	186	120	33.5	22.1	131
1967	131	198	308	346	200	126	92.8	258	245	60.5	16.5	19.5	167
1968	253	140	291	234	242	134	189	209	193	61.7	84.1	168	181
1969	166	227	178	268	60.2	110	167	169	199	82.7	27.9	131	162
1970	137	153	163	202	186	124	145	179	145	57.3	27.4	145	139
1971	139	196	163	419	317	145	141	320	282	179	35.4	55.9	199
1972	120	301	201	184	321	437	207	376	271	217	52.7	123	234
1973	46.9	130	326	174	74.0	111	124	192	150	46.1	19.5	76.6	123
1974	176	189	274	332	147	210	223	291	375	214	70.9	36.7	212
1975	16.5	176	224	286	119	120	74.4	318	239	105	70.6	42.9	150
1976	167	365	438	292	113	86.1	185	301	235	143	85.5	55.0	206
1977	55.7												
1978	93.3	265	381	138	127	149	137	162	102			94.8	

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1929-1978)

MEAN	144.3	219.0	225.6	210.9	174.2	149.3	187.3	238.0	211.8	99.8	46.6	74.1	167.4
MAXIMUM	253.0	615.0	438.0	479.0	411.0	437.0	330.0	376.0	394.0	257.0	126.0	227.0	234.0
MINIMUM	16.5	31.2	89.4	48.3	30.0	60.2	74.4	121.0	84.0	26.5	12.2	16.6	104.0
STD DEVIATION	64.16	109.04	86.52	102.58	84.12	74.69	50.70	63.01	85.05	61.26	30.26	49.31	31.63
SKWENESS	-0.147	1.391	0.413	0.583	0.660	2.502	0.384	0.085	0.614	0.904	0.912	1.209	0.128
STD ERR SKEW	0.393	0.398	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.388	0.403
SER CORR COEFF	-0.097	0.063	0.509	-0.058	-0.247	-0.020	-0.035	0.102	-0.095	0.136	-0.009	-0.057	-0.203
COEFF OF VAR	0.445	0.498	0.383	0.486	0.483	0.500	0.271	0.265	0.402	0.614	0.649	0.665	0.189
MEAN LOGS	2.094	2.281	2.320	2.266	2.185	2.138	2.256	2.361	2.291	1.920	1.578	1.779	2.216
STD DEV LOGS	0.281	0.254	0.176	0.242	0.240	0.169	0.126	0.121	0.178	0.270	0.290	0.289	0.084
SKWENESS LOGS	-1.735	-1.414	-0.317	-0.811	-0.811	1.027	-0.820	-0.437	-0.131	0.032	-0.013	-0.051	-0.276
STD ERR SKEW LOGS	0.393	0.398	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.393	0.388	0.403
SER CORR LOGS	-0.172	0.200	0.230	0.084	-0.319	0.026	-0.067	0.121	-0.082	0.152	0.035	-0.006	-0.171
COEFF OF VAR LOGS	0.134	0.111	0.076	0.107	0.110	0.079	0.056	0.051	0.078	0.141	0.184	0.163	0.038
% OF AVE FLOW	7.3	11.1	11.4	10.6	8.8	7.5	9.5	12.0	10.7	5.0	2.4	3.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1929-1978)

0.99	13.2	28.0	74.0	38.0	30.9	74.6	77.6	109.7	72.4	19.9	7.9	12.5	100.9
0.95	34.6	61.4	103.6	66.8	55.4	88.6	105.6	140.4	98.1	30.1	12.6	19.9	117.9
0.90	52.8	87.7	122.8	87.7	73.2	88.8	122.3	158.8	115.0	37.6	16.1	25.5	127.7
0.80	81.4	126.7	149.7	118.9	99.6	94.7	147.9	182.8	138.9	49.2	21.6	34.4	140.2
0.50	148.3	218.4	213.6	197.1	164.8	128.6	187.5	197.1	164.8	82.9	37.9	60.5	165.9
0.20	209.2	311.1	295.7	297.7	245.4	183.9	231.1	291.5	276.9	140.1	66.4	105.6	193.8
0.10	231.5	351.2	346.3	356.4	290.4	230.9	252.6	323.2	323.2	184.6	88.9	140.8	209.3
0.04	247.0	384.4	406.4	422.4	337.0	304.0	273.9	358.0	358.0	288.3	121.4	190.9	226.3
0.02	253.2	400.5	448.6	465.2	370.4	348.8	286.5	360.8	441.2	300.6	146.3	232.1	237.5
0.01	256.8	411.7	488.8	503.3	396.4	366.6	296.9	401.5	448.2	357.7	177.6	276.5	247.8

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1930	11.0	11.0	11.0	12.0	16.0	17.0	25.0	35.0	52.0
1931	9.6	9.6	9.8	10.0	11.0	15.0	27.0	43.0	75.0
1932	11.0	11.0	12.0	12.0	14.0	22.0	55.0	72.0	100.0
1933	18.0	18.0	19.0	22.0	35.0	42.0	49.0	83.0	133.0
1948	16.0	17.0	20.0	20.0	24.0	33.0	42.0	71.0	120.0
1949	33.0	34.0	34.0	38.0	47.0	63.0	96.0	99.0	114.0
1950	19.0	21.0	22.0	24.0	33.0	56.0	81.0	100.0	135.0
1951	11.0	11.0	12.0	15.0	26.0	56.0	78.0	107.0	152.0
1952	11.0	11.0	12.0	14.0	13.0	17.0	22.0	44.0	90.0
1953	9.8	10.0	11.0	11.0	13.0	20.0	24.0	26.0	47.0
1954	18.0	19.0	19.0	20.0	30.0	31.0	53.0	66.0	115.0
1955	35.0	35.0	37.0	42.0	55.0	91.0	101.0	104.0	137.0
1956	21.0	22.0	24.0	26.0	34.0	48.0	103.0	142.0	163.0
1957	14.0	14.0	14.0	17.0	21.0	26.0	53.0	91.0	148.0
1958	12.0	12.0	14.0	16.0	19.0	23.0	30.0	40.0	79.0
1959	10.0	10.0	10.0	10.0	12.0	16.0	28.0	39.0	93.0
1960	19.0	19.0	19.0	21.0	25.0	53.0	90.0	126.0	168.0
1961	11.0	11.0	12.0	13.0	17.0	37.0	51.0	61.0	122.0
1962	5.8	6.2	6.8	7.9	11.0	21.0	26.0	40.0	78.0
1963	26.0	27.0	31.0	44.0	52.0	72.0	77.0	81.0	103.0
1964	20.0	21.0	22.0	26.0	33.0	41.0	43.0	57.0	76.0
1965	48.0	50.0	57.0	70.0	84.0	120.0	131.0	129.0	156.0
1966	16.0	16.0	18.0	20.0	22.0	37.0	52.0	62.0	86.0
1967	18.0	18.0	19.0	20.0	22.0	37.0	40.0	67.0	106.0
1968	11.0	12.0	12.0	13.0	18.0	18.0	30.0	69.0	106.0
1969	18.0	18.0	20.0	22.0	38.0	60.0	79.0	107.0	143.0
1970	19.0	19.0	22.0	23.0	26.0	31.0	69.0	91.0	110.0
1971	15.0	16.0	17.0	17.0	24.0	40.0	60.0	82.0	109.0
1972	20.0	20.0	22.0	26.0	34.0	42.0	56.0	91.0	139.0
1973	29.0	30.0	30.0	33.0	45.0	59.0	74.0	84.0	124.0
1974	13.0	13.0	14.0	17.0	18.0	22.0	41.0	99.0	99.0
1975	13.0	13.0	13.0	14.0	18.0	26.0	34.0	63.0	114.0
1976	16.0	17.0	19.0	21.0	32.0	57.0	54.0	86.0	141.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1930-1976)

MEAN	17.5	17.9	19.1	21.7	28.1	40.6	56.8	76.4	113.1
MAXIMUM	48.0	50.0	57.0	70.0	84.0	120.0	131.0	142.0	168.0
MINIMUM	5.8	6.2	6.8	7.9	11.0	15.0	22.0	26.0	47.0
STANDARD DEVIATION	8.62	8.95	9.89	12.41	15.51	23.44	27.18	28.53	30.47
SKEWNESS	1.802	1.814	2.043	2.200	1.691	1.510	0.805	0.319	-0.218
STD. ERROR OF SKEWNESS	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409
SERIAL CORR. COEFF.	0.123	0.136	0.136	0.124	0.150	0.034	0.097	0.145	0.133
COEFF. OF VARIATION	0.493	0.499	0.517	0.573	0.553	0.578	0.479	0.373	0.269
MEAN LOGS	1.201	1.211	1.238	1.283	1.393	1.546	1.706	1.851	2.036
STD. DEVIATION LOGS	0.189	0.190	0.193	0.208	0.218	0.233	0.233	0.177	0.132
SKEWNESS LOGS	0.385	0.425	0.489	0.572	0.279	0.244	-0.037	-0.553	-0.979
STD. ERR. SKEWNESS LOGS	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409
SER. CORR. COEFF. LOGS	0.195	0.229	0.219	0.227	0.242	0.151	0.157	0.219	0.166
COEFF. OF VAR. LOGS	0.157	0.157	0.156	0.162	0.157	0.151	0.123	0.096	0.065

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1976)

0.99	49.2	51.5	56.7	71.0	88.1	134.7	154.8	154.9	176.6
0.98	42.3	44.0	48.1	58.9	74.7	113.4	136.1	144.6	171.4
0.96	35.9	37.2	40.3	48.3	62.4	93.9	117.9	133.3	164.8
0.90	28.1	29.0	31.1	36.2	47.7	70.8	94.3	116.0	153.1
0.80	22.6	23.2	24.7	28.2	37.4	54.8	76.4	100.6	140.6
0.50	15.4	15.8	16.7	18.4	24.2	34.4	51.0	73.6	114.0
0.20	11.0	11.2	11.8	12.8	16.1	22.3	33.8	51.1	86.3
0.10	9.3	9.5	10.1	10.8	13.2	18.0	27.3	41.3	72.3
0.05	8.2	8.4	8.9	9.5	11.3	15.1	22.8	34.2	61.5
0.02	7.1	7.3	7.8	8.4	9.5	12.6	18.6	27.4	50.4
0.01	6.5	6.7	7.2	7.7	8.5	11.1	16.2	23.4	43.6

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1930-1976)

P95	P90	P75	P70	P50	P25	P10
21.0	30.0	64.0	74.0	120.0	210.0	340.0





## STATION 12135500 OLNEY CREEK NEAR GOLD BAR, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1947-1968)									
WATER YEAR	FLOW(CFS)	DATE										
1947	4020.0	10-25-1946										
1948	1080.0	10- 2-1947										
1949	1030.0	11-23-1948										
1950	1070.0	10- 9-1949										
1951	3530.0	2- 9-1951										
1953	1750.0	1-23-1953										
1954	720.0	10-31-1953										
1955	1210.0	11-16-1954										
1956	1090.0	12-11-1955										
1957	1080.0	10-15-1956										
1958	846.0	0- 0-1958										
1959	1480.0	11-12-1958										
1960	994.0	12-15-1959										
1961	790.0	2-21-1961										
1962	762.0	1- 7-1962										
1963	853.0	11-19-1962										
1964	690.0	1- 1-1964										
1965	755.0	1-29-1965										
1966	441.0	1-13-1966										
1967	561.0	3-23-1967										
1968	572.0	1-20-1968										

W R C	ESTIMATE	SYSTEMATIC RECORD
3.0074	3.0074	3.0074
0.2353	0.2353	0.2353
0.0	0.0	1.243

MEAN LOGS  
STANDARD DEVIATION LOGS  
SKEWNESS LOGS

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1947-1968)

288.3	471.1
417.2	523.1
507.9	567.5
644.6	644.7
1017.1	911.8
1604.8	1508.1
2036.8	2102.3
2626.3	3167.7
3095.1	4260.9
3587.7	5685.4

## STATION 12136000 OLNEY CREEK NEAR STARTUP, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1923	59.0	43.8	104	161	38.6	68.7	108	87.9	83.3	17.3	7.63	11.5	66.5
1924	35.0	67.6	132	126	179	42.0	87.0	68.2	52.3	15.1	22.7	41.2	71.7
1925	157	125	169	164	137	81.7	107	86.4	52.1	11.5	11.3	7.24	92.2
1926	88.5	81.2	229	102	131	64.9	37.0	70.6	24.6	8.94	17.9	44.8	74.9
1929					112	112	83.7	126	112	23.3	10.3	10.6	
1930	33.2	20.0	97.3	49.3	169	95.6	108	62.6	55.0	14.7	6.80	28.8	60.9
1931	87.0	55.2	63.0	154	60.8	122	112	54.3	96.8	23.0	7.71	86.2	76.9
1932	91.7	119	88.2	114	141	258	164	105	90.9	68.1	25.7	30.5	108
1933	122	315	158	145	37.4	113	93.1	135	143	70.0	26.7	107	122

## STATION 12136000 OLNEY CREEK NEAR STARTUP, WASH.

ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1923	1450.0	1-10-1923
1924	1520.0	2-12-1924
1925	1450.0	12-10-1924
1926	1600.0	10-27-1925
1930	1730.0	2- 1-1930
1931	945.0	9-13-1931
1932	2400.0	2-26-1932
1933	2100.0	11-16-1932

STATION 12136500 MAY CREEK NEAR GOLD BAR, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1929	42.3	19.0	15.8	9.40	5.98	18.8	23.4	72.2	73.9	21.8	2.95	2.28	25.8
1930	4.91	8.38	29.7	12.9	58.4	29.1	45.1	35.1	46.6	12.1	1.70	5.92	23.8
1931	34.7	21.4	26.5	58.2	30.6	40.1	47.1	58.3	61.6	18.7	2.30	23.9	35.3
1932	26.2	35.6	26.6	30.4	34.2	73.1	52.1	62.1	72.8	47.2	11.8	8.14	40.0
1933	32.0	142	65.1	42.4	10.2	17.4	27.0	54.5	89.0	58.9	19.5	30.9	49.2
1934	50.3	46.1	117	72.5	29.9	44.7	44.0	35.3	10.7	4.53	2.29	11.6	39.3
1935	27.0	68.0	45.3										
1946	62.3	52.7	29.5	38.4	22.7	28.4	39.5	77.5	71.0	40.4	7.13	4.61	39.6
1947	43.5	36.8	73.7	52.1	53.9	37.7	64.2	59.6	65.1	18.7	4.52	15.3	43.7

ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1929	138.0	10-9-1928
1930	116.0	2-1-1930
1931	219.0	1-28-1931
1932	330.0	2-26-1932
1933	475.0	12-2-1932
1934	525.0	12-21-1933
1946	428.0	10-25-1945
1947	726.0	10-25-1946

## STATION 12137500 SULTAN RIVER NEAR STARTUP, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1935	1077	1561	1127	1809	832	612	995	916	860	523	209	243	864
1936	288	512	600	975	355	750	1281	1728	1124	343	129	237	694
1937	235	120	1573	143	368	806	1084	1209	1518	392	195	136	650
1938	621	1904	1222	803	284	573	1500	951	1482	172	168.4	165.9	721
1939	604	1053	1514	1303	408	652	1089	1417	1032	661	153	174	842
1940	714	844	1401	584	967	994	739	741	381	113	107	72.1	630
1941	907	723	891	657	370	393	386	730	381	134	75.0	782	537
1942	1154	743	1066	349	458	538	863	887	1241	445	103	58.7	660
1943	401	1341	1065	536	700	726	978	985	870	570	172	119	704
1944	460	477	1190	617	405	608	745	978	550	166	103	670	581
1945	526	928	751	1545	954	586	691	1346	515	262	89.6	502	724
1946	1200	1065	879	835	562	776	1111	1447	1421	648	209	152	860
1947	683	800	1797	1353	1320	820	1190	877	926	364	156	305	880
1948	1418	1076	1136	607	736	543	904	1630	1310	418	324	447	904
1949	545	1032	539	219	710	892	1081	1529	912	738	324	447	746
1950	1022	1380	1289	780	911	1277	1025	1316	1767	940	545	276	1044
1951	1144	1328	1502	844	2389	423	980	908	566	202	179	123	865
1952	1232	720	447	384	766	430	883	1159	866	457	179	123	644
1953	93.6	176	662	3143	1031	538	883	1052	816	566	229	395	799
1954	990	1099	1839	799	1196	502	845	1136	1378	929	499	517	976
1955	608	1618	806	487	902	260	749	1353	1741	1128	472	216	859
1956	1567	1624	1526	683	279	514	1176	1482	1220	645	190	443	948
1957	1325	962	2077	251	729	776	1194	1270	778	365	194	116	838
1958	390	666	1060	1037	991	465	898	853	506	170	89.5	390	623
1959	987	1981	1533	1517	483	733	1923	1178	1141	539	264	1407	1141
1960	1313	2202	1446	631	762	570	881	1290	906	301	373	319	915
1961	951	1320	763	1471	1982	955	839	988	696	249	105	325	879
1962	784	612	1211	1553	655	349	1138	759	839	423	463	402	767
1963	519	1409	1401	659	1235	546	786	600	489	348	160	212	692
1964	505	1313	986	1079	576	592	871	1332	1578	1082	747	663	944
1965	727	1036	1060	1258	1193	493	417	968	803	529	179	263	741

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## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1935-1965)

MEAN	806.1	1084.7	1172.8	932.0	832.9	636.2	957.1	1129.5	952.1	478.1	237.3	351.6	795.9
MINIMUM	1567.0	2202.0	2077.0	3143.0	2389.0	1277.0	1923.0	1129.5	1767.0	1128.0	747.0	1407.0	1141.0
STD DEVIATION	93.6	120.0	447.0	143.0	279.0	286.0	386.0	600.0	284.0	113.0	68.4	58.7	537.0
SKWENESS	378.28	495.59	397.39	600.12	470.25	210.62	297.99	285.97	401.66	271.23	168.58	273.44	141.37
STD ERR SKEW	0.145	0.228	0.195	1.746	1.656	0.972	0.937	0.203	0.399	0.866	1.409	2.094	0.306
SER CORR COEFF	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421
COEFF OF VAR	-0.008	0.110	-0.140	-0.080	0.019	-0.005	0.057	0.114	-0.058	0.206	0.049	-0.062	0.203
MEAN LOGS	2.845	2.973	3.042	2.886	2.855	2.781	2.960	3.039	2.938	2.608	2.284	2.433	2.894
STD DEV LOGS	0.264	0.274	0.161	0.287	0.231	0.142	0.140	0.113	0.200	0.265	0.280	0.328	0.078
SKWENESS LOGS	-1.344	-1.704	-0.618	-0.487	0.121	-0.152	-0.618	-0.279	-0.472	-0.336	0.395	-0.203	-0.092
STD ERR SKEW LOGS	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421
SER CORR LOGS	-0.056	0.040	-0.113	-0.040	0.132	0.017	0.108	0.146	-0.003	0.140	0.134	0.0	0.242
COEFF OF VAR LOGS	0.093	0.047	0.053	0.099	0.081	0.051	0.047	0.037	0.068	0.101	0.123	0.135	0.027
% OF AVE FLOW	8.4	11.3	12.3	9.7	8.6	6.7	10.0	11.8	10.0	5.0	2.5	3.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1935-1965)

0.99	98.0	107.0	394.9	131.2	218.4	271.9	374.0	564.8	254.3	84.7	51.7	41.7	511.1
0.95	216.6	270.9	565.2	238.6	304.8	347.8	510.6	697.7	384.3	140.8	71.8	74.9	581.6
0.90	310.4	407.8	673.2	350.9	395.2	395.2	594.5	777.1	471.8	182.2	86.8	101.3	622.4
0.80	453.6	619.9	820.0	450.3	465.1	460.0	705.5	881.6	596.7	245.6	110.7	144.6	675.0
0.50	797.6	1112.1	1145.2	810.6	709.1	609.4	943.0	1107.1	897.7	419.1	184.2	277.8	785.9
0.20	1160.9	1562.4	1515.4	1352.7	1116.8	797.9	1202.8	1366.6	1283.5	681.3	325.6	514.8	911.5
0.10	1325.5	1729.0	1719.2	1717.7	1424.8	914.4	1512.5	1517.4	1517.4	862.2	449.5	700.7	983.5
0.04	1467.4	1847.4	1938.9	2170.4	1856.0	1053.8	1889.9	1683.8	1788.7	1093.2	646.3	963.2	1065.3
0.02	1538.9	1895.3	2079.7	2496.7	2207.4	1152.8	1583.4	1797.6	1974.3	1265.0	826.0	1176.1	1121.0
0.01	1590.1	1924.1	2204.5	2811.7	2584.4	1248.2	1665.6	1903.2	2147.3	1435.6	1037.4	1402.4	1173.1

STATION 12137500 SULTAN RIVER NEAR STARTUP, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1966	357	877	683	876	421	765	1014	1117	899	596	386	319	694
1967	431	896	1866	1723	955	654	443	1215	1240	849	221	227	895
1968	874	669	1378	1454	1579	779	721	987	1075	386	323	720	910
1969	901	1191	929	1018	405	433	937	1447	987	464	326	455	793
1970	771	578	737	1012	906	609	861	736	754	327	292	426	666
1971	517	975	780	1583	1264	652	737	1490	1219				

ANNUAL PEAK-FLDW DATA

FLOW(CFS)	DATE	REG.(R)
4550.	01/13/66	R
9800.	12/13/66	R
14600.	01/20/68	R
14600.	01/04/69	R
5250.	04/09/70	R
13200.	01/19/71	R
17200.	03/04/72	R
12400.	12/26/72	R
10300.	01/15/74	R

## STATION 12137500 SULTAN RIVER NEAR STARTUP, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1936	80.0	84.0	88.0	104.0	178.0	209.0	225.0	266.0	383.0
1937	90.0	92.0	97.0	100.0	109.0	173.0	177.0	180.0	337.0
1938	80.0	82.0	87.0	104.0	124.0	149.0	176.0	282.0	637.0
1939	55.0	56.0	57.0	60.0	65.0	66.0	86.0	155.0	374.0
1940	87.0	89.0	93.0	105.0	137.0	154.0	258.0	384.0	590.0
1941	54.0	57.0	60.0	65.0	72.0	86.0	97.0	123.0	318.0
1942	51.0	51.0	52.0	57.0	67.0	99.0	183.0	325.0	413.0
1943	48.0	48.0	49.0	52.0	59.0	72.0	90.0	179.0	478.0
1944	74.0	76.0	80.0	91.0	106.0	127.0	191.0	304.0	444.0
1945	51.0	52.0	55.0	63.0	79.0	99.0	170.0	351.0	479.0
1946	62.0	64.0	69.0	76.0	85.0	150.0	235.0	321.0	553.0
1947	102.0	105.0	117.0	127.0	146.0	153.0	205.0	364.0	628.0
1948	88.0	88.0	91.0	105.0	139.0	226.0	265.0	428.0	626.0
1949	107.0	109.0	111.0	126.0	167.0	245.0	461.0	506.0	557.0
1950	117.0	127.0	139.0	157.0	200.0	368.0	486.0	572.0	737.0
1951	127.0	127.0	133.0	147.0	212.0	397.0	514.0	693.0	897.0
1952	62.0	63.0	67.0	83.0	91.0	107.0	149.0	253.0	477.0
1953	61.0	62.0	63.0	65.0	73.0	100.0	127.0	140.0	274.0
1954	95.0	99.0	100.0	109.0	150.0	190.0	323.0	447.0	618.0
1955	146.0	149.0	161.0	188.0	213.0	480.0	522.0	747.0	934.0
1956	125.0	130.0	159.0	187.0	210.0	286.0	481.0	709.0	934.0
1957	92.0	92.0	97.0	117.0	141.0	182.0	351.0	493.0	768.0
1958	83.0	84.0	90.0	102.0	141.0	182.0	351.0	493.0	768.0
1959	67.0	68.0	70.0	73.0	83.0	107.0	183.0	260.0	412.0
1960	121.0	124.0	129.0	142.0	191.0	355.0	558.0	742.0	908.0
1961	94.0	98.0	101.0	116.0	141.0	266.0	354.0	607.0	607.0
1962	51.0	52.0	57.0	67.0	80.0	163.0	208.0	439.0	439.0
1963	120.0	127.0	149.0	175.0	298.0	390.0	412.0	542.0	542.0
1964	96.0	97.0	102.0	117.0	140.0	178.0	192.0	254.0	356.0
1965	196.0	200.0	217.0	266.0	349.0	655.0	682.0	681.0	805.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1936-1965)

MEAN	89.4	91.7	98.0	111.6	140.7	212.1	282.7	376.5	560.4
MAXIMUM	196.0	200.0	217.0	266.0	349.0	655.0	682.0	742.0	934.0
MINIMUM	48.0	48.0	49.0	52.0	59.0	66.0	86.0	123.0	274.0
STANDARD DEVIATION	33.41	34.53	39.19	47.82	69.03	136.47	159.46	176.93	182.18
SKEWNESS	1.163	1.108	1.123	1.329	1.277	1.578	0.890	0.645	0.535
STD ERROR OF SKEWNESS	0.427	0.427	0.427	0.427	0.427	0.427	0.427	0.427	0.427
SERIAL CORR COEFF	0.311	0.306	0.295	0.310	0.172	0.237	0.281	0.216	0.200
COEFF OF VARIATION	0.374	0.377	0.400	0.429	0.491	0.643	0.564	0.470	0.325
MEAN LOGS	1.924	1.935	1.940	2.013	2.102	2.253	2.386	2.528	2.726
STD DEVIATION LOGS	0.155	0.157	0.165	0.174	0.201	0.251	0.251	0.251	0.142
SKEWNESS LOGS	0.211	0.188	0.245	0.258	0.219	0.361	0.035	-0.225	-0.041
STD ERR SKEWNESS LOGS	0.427	0.427	0.427	0.427	0.427	0.427	0.427	0.427	0.427
SER CORR COEFF LOGS	0.333	0.327	0.327	0.342	0.255	0.368	0.282	0.162	0.151
COEFF OF VAR LOGS	0.080	0.081	0.084	0.086	0.096	0.112	0.102	0.084	0.052

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1936-1965)

0.99	203.1	209.2	236.2	282.3	400.2	800.4	913.4	972.5	1127.9
0.98	181.5	187.0	209.0	247.9	345.6	655.2	780.4	869.2	1034.5
0.96	160.6	165.5	183.0	215.1	294.5	528.0	655.6	765.0	939.3
0.90	133.5	137.5	149.8	173.9	231.4	385.1	501.1	623.8	808.3
0.80	112.9	116.1	125.0	143.5	185.8	287.7	390.0	511.5	701.5
0.50	83.0	85.1	89.9	101.3	124.4	173.0	242.3	343.2	533.7
0.20	62.1	63.3	66.1	73.2	85.4	109.3	151.2	224.4	404.7
0.10	53.7	54.6	56.7	62.4	70.8	87.6	118.4	177.8	349.8
0.05	47.8	48.5	50.2	55.0	60.9	73.7	96.9	145.9	309.9
0.02	42.1	42.6	44.0	47.9	51.7	61.2	77.3	116.1	270.3
0.01	38.8	39.1	40.4	43.8	46.5	54.4	66.6	99.3	246.6

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1936-1965)

P95	P90	P75	P70	P50	P25	P10
98.0	140.0	270.0	320.0	560.0	1000.0	1600.0

## STATION 12137500 SULTAN RIVER NEAR STARTUP, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30											
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE REG.(R)
1935	12000.	8400.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1936	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1937	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1938	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1939	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1940	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1941	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1942	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1943	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1944	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1945	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1946	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1947	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1948	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1949	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1950	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1951	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1952	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1953	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1954	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1955	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1956	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1957	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1958	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1959	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1960	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1961	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1962	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1963	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1964	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34
1965	13360.	8840.	5540.	3460.	2080.	1630.	1500.	1520.	1200.	27000.	10/24/34

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1935-1965)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1935-1965)											
MEAN	9248.7	5821.6	3637.7	2522.9	1885.5	1519.8	1334.1	1197.9	1042.7		
MAXIMUM	23400.0	15400.0	8120.0	4120.0	3390.0	2230.0	1760.0	1560.0	1390.0		
MINIMUM	3690.0	2640.0	1880.0	1410.0	1090.0	933.0	833.0	742.0	671.0		
STANDARD DEVIATION	4551.32	2683.59	1443.60	726.57	503.35	307.05	242.40	212.16	170.20		
SKWENESS	1.145	1.541	1.278	0.678	1.186	0.152	-0.316	-0.211	-0.119		
STD ERROR OF SKWENESS	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421		
SERIAL CORR COEFF	0.075	-0.097	-0.054	-0.115	0.049	0.200	0.286	0.313	0.192		
COEFF OF VARIATION	0.492	0.461	0.397	0.288	0.267	0.202	0.182	0.177	0.163		
MEAN LOGS	3.918	3.725	3.531	3.385	3.262	3.173	3.118	3.071	3.012		
STD DEVIATION LOGS	0.209	0.188	0.161	0.123	0.110	0.091	0.084	0.081	0.074		
SKWENESS LOGS	0.042	0.147	0.320	0.134	0.233	-0.397	-0.701	-0.616	-0.577		
STD ERR SKWENESS LOGS	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421		
SER CORR COEFF LOGS	0.051	-0.085	-0.057	-0.137	0.080	0.227	0.319	0.341	0.229		
COEFF OF VAR LOGS	0.053	0.050	0.046	0.036	0.034	0.029	0.027	0.026	0.024		

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1935-1965)

0.99	2745.9	2032.6	1567.0	1294.8	1056.8	863.3	760.3	704.3	645.8	4956.7	4500.9
0.95	3775.7	2853.7	1914.1	1542.9	1223.9	1033.7	923.1	843.0	758.6	6923.3	6680.2
0.90	4479.9	3071.0	2144.3	1698.0	1328.2	1131.5	1013.8	921.0	821.0	8269.2	8168.2
0.80	5517.3	3678.3	2476.7	1910.9	1471.4	1255.8	1125.8	1016.0	897.7	10249.4	10330.9
0.50	8248.0	5253.9	3330.8	2411.7	1808.5	1509.6	1340.9	1201.3	1045.5	15433.9	15779.0
0.20	12389.4	7617.4	4606.4	3070.9	2253.9	1779.6	1547.1	1382.6	1189.9	23200.0	23315.1
0.10	15355.3	9306.2	5519.8	3496.9	2543.2	1924.9	1647.7	1473.1	1262.2	28688.6	28229.1
0.04	19332.6	11574.9	6753.6	4027.7	2905.4	2081.6	1747.6	1564.8	1335.7	35960.4	34288.8
0.02	22452.3	13360.8	7731.5	4419.4	3174.0	2183.1	1807.5	1620.9	1381.0	41598.6	38680.4
0.01	25700.3	15227.8	8760.6	4809.1	3445.3	2274.3	1858.0	1669.0	1420.0	47412.4	42963.7

## STATION 1213R000 SULTAN RIVER NEAR SULTAN, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1912	226	1806	923	1047	928	263	529	936	761	458	304	328	706
1913	698	1336	837	633	782	568	934	1298	1316	940	304	574	850
1914	992	1056	455	1194	780	990	978	1298	806	289	123	593	753
1915	845	1358	485	499	633	508	1089	524	367	233	95.4	94.1	558
1916	998	1060	1037	348	1245	1373	1000	1049	1109	936	304	376	901
1917	203	1014	440	679	903	332	1019	1504	2112	1204	342	212	827
1918	270	493	4501	1820	929	803	938	901	781	266	386	106	1022
1919	860	902	1833	1325	643	695	1362	1336	811	469	149	156	881
1920	354	2001	1195	1763	437	749	667	781	784	270	131	1312	886
1921	1272	764	1086	1182	1681	1089	1002	1217	1317	572	233	695	1004
1922	1046	1318	1915	1227	195	313	916	1561	1098	286	177	375	776
1923	757	468	1349	1810	378	554	916	944	824	367	112	108	718
1924	372	756	1237	993	2013	708	708	841	549	196	161	207	695
1925	1322	1206	1573	1403	1400	629	994	1149	669	272	132	66.5	899
1926	408	685	1848	857	1025	720	550	628	232	70.0	118	381	625
1927	919												
1929		189	830	365	1663	747	737	1301	1118	337	126	76.8	559
1930	238				557	802	878	668	675	238	75.2	185	559
1931	760	436	466	1250		986	986	698	811	149	5.40	415	627

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1912-1931)

MEAN	696.7	991.1	1293.5	1020.9	952.5	694.5	891.7	1007.2	896.7	419.6	182.1	347.8	780.4
MAXIMUM	1322.0	2001.0	4501.0	1820.0	2013.0	1373.0	1362.0	1561.0	2112.0	1204.0	386.0	1312.0	1022.0
MINIMUM	203.0	189.0	440.0	227.0	195.0	263.0	529.0	524.0	232.0	70.0	5.4	66.5	558.0
STD DEVIATION	367.16	486.17	961.91	511.27	502.34	292.78	203.61	309.73	418.75	307.30	104.83	307.12	142.54
SKEWNESS	0.070	0.431	2.468	0.064	0.647	0.530	0.064	0.282	1.313	1.513	0.542	1.969	0.006
STD ERR SKEW	0.536	0.550	0.550	0.550	0.550	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.550
SER CORR COEFF	-0.252	0.168	0.052	-0.044	-0.171	-0.317	-0.131	-0.179	0.026	0.194	0.507	0.186	0.274
COEFF OF VAR	0.527	0.491	0.744	0.501	0.527	0.422	0.228	0.308	0.467	0.732	0.576	0.883	0.183
MEAN LOGS	2.771	2.936	3.028	2.942	2.914	2.802	2.949	2.983	2.907	2.326	2.150	2.400	2.885
STD DEV LOGS	0.276	0.257	0.270	0.270	0.259	0.197	0.105	0.138	0.213	0.300	0.411	0.365	0.081
SKEWNESS LOGS	-0.496	-0.998	0.351	-0.808	-0.696	-0.439	-0.615	-0.184	-0.718	-0.042	-2.496	0.086	-0.291
STD ERR SKEW LOGS	0.456	0.550	0.550	0.550	0.550	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.550
SER CORR LOGS	-0.204	0.300	0.178	-0.085	-0.089	-0.259	-0.118	-0.147	-0.006	0.153	0.547	0.061	0.293
COEFF OF VAR LOGS	0.099	0.089	0.089	0.089	0.089	0.070	0.036	0.046	0.073	0.119	0.191	0.152	0.028
% OF AVE FLOW	7.4	10.5	13.8	10.9	10.1	7.4	9.5	10.7	9.5	4.5	1.9	3.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1912-1931)

0.99	107.5	144.4	294.4	144.1	152.2	190.7	445.3	440.8	200.6	66.0	3.7	37.6	477.3
0.95	191.4	284.1	408.7	278.1	277.1	284.9	562.2	561.9	330.0	107.1	21.1	64.4	556.0
0.90	254.7	390.2	492.9	380.6	370.2	348.0	637.0	637.0	419.5	138.3	43.3	86.3	600.9
0.80	353.0	550.7	626.1	538.5	511.9	438.0	716.2	738.9	548.4	188.1	86.5	123.5	658.0
0.50	621.1	949.7	1027.6	950.3	879.2	655.4	890.1	971.0	856.2	337.4	198.5	248.1	774.9
0.20	1015.0	1426.7	1775.8	1490.2	1369.7	935.4	1068.2	1258.7	1230.5	601.0	276.9	507.3	900.8
0.10	1275.6	1680.0	2414.2	1805.5	1665.4	1106.6	1159.8	1433.8	1442.4	810.5	293.1	742.2	969.8
0.04	1594.9	1934.7	3405.0	2150.1	1999.6	1306.7	1254.4	1640.7	1672.3	1112.7	299.5	1119.6	1045.3
0.02	1822.7	2084.8	4291.1	2370.3	2220.7	1444.7	1313.1	1786.2	1819.5	1364.0	300.8	1464.4	1095.0
0.01	2040.9	2207.7	5316.2	2562.8	2419.8	1574.1	1364.0	1925.2	1949.1	1636.9	301.3	1868.1	1140.2

## STATION 1213R000 SULTAN RIVER NEAR SULTAN, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1913	120.0	125.0	134.0	148.0	253.0	316.0	316.0	398.0	537.0
1914	167.0	175.0	188.0	216.0	277.0	417.0	417.0	515.0	706.0
1915	83.0	84.0	86.0	90.0	104.0	137.0	269.0	398.0	561.0
1916	71.0	73.0	77.0	78.0	85.0	94.0	139.0	189.0	295.0
1917	90.0	91.0	95.0	102.0	137.0	255.0	277.0	321.0	498.0
1918	109.0	116.0	125.0	130.0	157.0	206.0	265.0	320.0	695.0
1919	79.0	81.0	83.0	87.0	98.0	243.0	241.0	307.0	505.0
1920	57.0	72.0	88.0	97.0	117.0	137.0	169.0	269.0	542.0
1921	54.0	55.0	57.0	63.0	78.0	144.0	295.0	425.0	653.0
1922	110.0	113.0	131.0	157.0	186.0	187.0	215.0	519.0	775.0
1923	92.0	95.0	104.0	115.0	147.0	219.0	254.0	289.0	412.0
1924	52.0	53.0	56.0	65.0	92.0	106.0	124.0	218.0	383.0
1925	69.0	69.0	72.0	77.0	91.0	130.0	169.0	269.0	443.0
1926	32.0	32.0	33.0	34.0	39.0	64.0	88.0	144.0	365.0
1930	41.0	41.0	43.0	49.0	71.0	95.0	129.0	157.0	276.0
1931	41.0	41.0	44.0	48.0	61.0	93.0	149.0	248.0	357.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1913-1931)

MEAN	79.2	82.3	88.5	97.3	124.6	177.7	225.9	326.4	500.2
MAXIMUM	167.0	175.0	188.0	216.0	277.0	417.0	515.0	654.0	775.0
MINIMUM	32.0	32.0	33.0	34.0	39.0	64.0	88.0	144.0	276.0
STANDARD DEVIATION	35.30	37.10	40.84	47.30	66.51	94.88	104.03	136.61	150.98
SKEWNESS	0.934	0.939	0.877	1.068	1.196	1.187	1.317	0.867	0.288
STD ERROR OF SKEWNESS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
SERIAL CORR COEFF	0.474	0.464	0.404	0.357	0.492	0.382	0.382	0.353	0.365
COEFF OF VARIATION	0.446	0.451	0.461	0.486	0.535	0.534	0.461	0.418	0.302
MEAN LOGS	1.859	1.874	1.903	1.941	2.041	2.196	2.314	2.479	2.680
STD DEVIATION LOGS	0.194	0.198	0.205	0.210	0.223	0.222	0.194	0.182	0.135
SKEWNESS LOGS	-0.073	-0.151	-0.176	-0.087	0.063	0.190	0.014	-0.075	-0.200
STD ERR SKEWNESS LOGS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
SER CORR COEFF LOGS	0.545	0.549	0.499	0.462	0.464	0.419	0.415	0.404	0.396
COEFF OF VAR LOGS	0.104	0.106	0.108	0.109	0.109	0.101	0.084	0.073	0.050

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1913-1931)

0.99	199.4	205.7	225.4	261.1	372.8	553.1	583.4	780.4	942.4
0.98	177.7	184.1	201.5	230.7	321.9	471.9	516.0	700.4	876.4
0.96	156.2	162.4	177.4	200.9	273.7	396.7	450.3	620.5	807.1
0.90	127.6	133.2	145.0	161.6	213.4	305.0	364.7	513.5	707.8
0.80	105.4	110.2	119.4	131.5	169.3	240.0	299.5	429.1	623.4
0.50	72.6	75.7	81.1	87.9	109.4	154.5	205.6	302.6	483.5
0.20	49.7	51.1	54.1	58.2	71.3	101.7	141.4	211.8	369.6
0.10	40.6	41.4	43.4	46.7	57.1	82.5	116.3	175.3	319.2
0.05	34.3	34.6	36.0	38.9	47.7	69.7	99.0	149.7	282.0
0.02	28.4	28.2	29.1	31.6	38.9	58.0	82.6	125.1	244.4
0.01	24.9	24.6	25.2	27.4	34.1	51.4	73.3	110.9	221.7

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1913-1931)

P	P95	P90	P75	P70	P50	P25	P10
90.0	130.0	250.0	300.0	540.0	970.0	1600.0	



## STATION 1213R000 SULTAN RIVER NEAR SULTAN, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE	REG. (R)
1912	9500.	7300.	4320.	2770.	1960.	1380.	1300.	1190.	924.	14000.	11/18/11	
1913	4810.	3540.	2190.	1900.	1530.	1370.	1250.	1140.	1000.			
1914	6650.	5570.	3400.	2000.	1350.	1140.	1040.	1010.	939.			
1915	6650.	3790.	2710.	1720.	1360.	1140.	933.	811.	814.			
1916	4650.	3720.	2810.	2080.	1650.	1380.	1300.	1210.	1120.	8150.	12/08/15	
1917	5640.	3240.	2540.	2270.	2180.	1890.	1670.	1480.	1170.	8700.	11/09/16	
1918	15600.	12100.	10100.	6320.	5270.	3360.	2490.	2060.	1680.	20600.	12/18/17	
1919	8450.	6140.	4240.	2540.	1890.	1600.	1450.	1290.	1210.	13200.	12/04/18	
1920	13100.	7200.	4410.	3050.	2020.	1620.	1620.	1400.	1130.	15400.	09/14/20	
1921	10800.	8640.	4460.	2560.	1810.	1620.	1490.	1340.	1310.	14400.	02/11/21	
1922	14800.	9410.	5410.	3990.	2650.	1990.	1460.	1150.	890.	24600.	12/12/21	
1923	10000.	6120.	4810.	3330.	2850.	1620.	1390.	1130.	1080.	15600.	01/06/23	
1924	11900.	7990.	4130.	3680.	2320.	1510.	1480.	1270.	1070.	21200.	02/12/24	
1925	6180.	5610.	4450.	2800.	1950.	1850.	1570.	1490.	1270.	13700.	12/10/24	
1926	6980.	4650.	2670.	1940.	1420.	1260.	1150.	989.		10600.	12/23/25	
1927										11100.	10/16/26	
1930	4420.	3250.	2970.	1990.	1580.	1200.	1090.	987.	893.	7190.	02/01/30	
1931	6130.	4250.	3340.	1960.	1310.	1080.	1070.	996.	885.	10300.	01/27/31	
1932										22500.	02/27/32	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1912-1932)

	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKEWNESS	STD. ERROR OF SKEWNESS	SERIAL CORR. COEFF.	COEFF. OF VARIATION	MEAN LOGS	STD. DEVIATION LOGS	SKEWNESS LOGS	STD. ERR. SKEWNESS LOGS	SER. CORR. COEFF. LOGS	COEFF. OF VAR. LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
0.99	8603.5	6089.4	4056.5	2782.4	2095.3	1598.2	1403.7	1241.4	1080.8							
0.95	15600.0	12100.0	10100.0	6320.0	5270.0	3360.0	2490.0	2060.0	1680.0							
0.90	4420.0	3240.0	2190.0	1720.0	1310.0	1080.0	933.0	811.0	814.0							
0.80	3575.96	2499.10	1814.39	1118.99	925.43	526.86	351.21	277.68	211.68							
0.50	0.708	0.930	2.430	2.170	2.759	2.487	1.778	1.506	1.410							
0.20	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550							
0.10	0.472	0.416	0.416	0.408	0.141	0.266	0.405	0.353	0.282							
0.05	0.421	0.410	0.410	0.402	0.442	0.330	0.250	0.224	0.196							
0.02	0.390	0.372	0.372	0.349	0.294	0.187	0.136	0.085	0.079							
0.01	0.177	0.172	0.158	0.144	0.147	0.118	0.098	0.090	0.079							
0.00	0.221	0.225	0.195	1.532	1.404	0.770	0.604	0.550	0.550							
0.00	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550							
0.00	0.423	0.423	0.416	0.426	0.333	0.417	0.514	0.441	0.315							
0.00	0.045	0.046	0.044	0.042	0.045	0.037	0.031	0.029	0.026							
0.99	3298.2	2400.1	2110.5	1622.1	1294.6	1076.7	919.6	823.0	781.6							
0.95	4101.6	3022.1	2334.9	1737.9	1347.5	1121.0	996.7	898.2	829.1							
0.90	4771.2	3435.4	2504.0	1831.2	1397.8	1160.4	1049.5	947.3	861.9							
0.80	5626.0	4032.5	2771.9	1985.0	1469.4	1227.4	1127.0	1017.2	910.4							
0.50	7834.4	5566.2	3565.8	2461.8	1811.0	1446.2	1329.5	1190.4	1036.6							
0.20	11142.8	7846.4	4989.4	3347.7	2480.5	1860.5	1633.9	1434.9	1356.0							
0.10	13511.6	9469.6	6167.2	4093.8	3086.5	2207.7	1851.7	1601.8	1356.0							
0.05	16704.9	11648.5	7958.1	5241.8	4072.1	2735.6	2145.4	1818.8	1531.1							
0.02	19229.1	13364.5	9537.9	6264.0	4994.2	3199.6	2377.8	1985.1	1667.7							
0.01	21877.9	15100.2	11352.1	7446.9	6105.2	3730.1	2622.2	2155.7	1809.5							
0.99	5723.9	5699.9	5723.9	5699.9	5723.9	5699.9	5723.9	5699.9	5723.9							
0.95	7359.3	7359.3	7359.3	7359.3	7359.3	7359.3	7359.3	7359.3	7359.3							
0.90	8426.8	8426.8	8426.8	8426.8	8426.8	8426.8	8426.8	8426.8	8426.8							
0.80	9925.8	9925.8	9925.8	9925.8	9925.8	9925.8	9925.8	9925.8	9925.8							
0.50	13573.8	13573.8	13573.8	13573.8	13573.8	13573.8	13573.8	13573.8	13573.8							
0.20	18532.2	18532.2	18532.2	18532.2	18532.2	18532.2	18532.2	18532.2	18532.2							
0.10	21796.0	21796.0	21796.0	21796.0	21796.0	21796.0	21796.0	21796.0	21796.0							
0.05	25901.9	25901.9	25901.9	25901.9	25901.9	25901.9	25901.9	25901.9	25901.9							
0.02	28950.3	28950.3	28950.3	28950.3	28950.3	28950.3	28950.3	28950.3	28950.3							
0.01	31993.0	31993.0	31993.0	31993.0	31993.0	31993.0	31993.0	31993.0	31993.0							

## STATION 12141000 WOODS CREEK NEAR MONROE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1946													
1947	56.9	222	358	283	273	115	209	56.6	47.5	56.5	21.5	19.8	19.8
1948	138	436	341	310	265	201	232	201	116	48.5	38.6	24.6	140
1949	109	246	282	133	335	203	232	17.1	29.0	23.5	17.6	49.2	198
1950	55.6	204	300	309	458	440	255	115	46.4	26.1	20.1	19.2	130
1951	78.2	297	300	340	347	231	185.3	67.2	33.5	17.5	13.7	20.6	186
1952	120	132	257	131	178	213	104	54.1	35.4	27.4	17.9	17.6	151
1953	14.7	19.6	46.0	352	225	179	209	119	130	36.9	21.3	14.4	107
1954	87.2	203	429	325	359	147	132	67.3	239	85.4	47.3	55.0	180
1955	54.2	332	264	246	236	188	281	136	78.9	44.1	44.1	29.3	164
1956	127	339	548	504	207	245	155	68.8	92.6	42.5	27.0	27.3	199
1957	138	223	307	183	345	315	175	66.5	48.2	27.2	21.9	19.2	155
1958	31.6	105	232	277	338	28.7	177	58.3	28.2	20.7	14.7	17.8	120
1959	45.4	229	260	463	228	233	212	14.2	90.0	51.3	28.0	65.5	170
1960	202	455	341	221	260	92.2	120	188	61.6	25.1	25.6	29.9	169
1961	65.7	381	166	224	476	274	179	142	47.7	28.7	19.9	21.1	166
1962	48.4	85.2	433	314	124	201	117	108	103	24.4	28.9	34.9	136
1963	52.6	222	249	189	168	120	173	67.7	38.8	33.3	26.1	26.0	113
1964	37.5	227	392	414	191	355	255	147	124	41.1	33.0	45.8	189
1965	71.5	149	351	471	514	137	133	96.0	39.4	25.2	26.7	26.3	168
1966	31.9	88.8	139	296	235	253	117	68.9	45.8	60.4	22.4	22.9	115
1967	44.0	150	427	525	322	224	126	96.9	37.8	24.1	16.3	18.4	167
1968	119	127	412	316	163	184	177	99.2	101	37.0	53.5	119	159
1969	162	261	474	365	266	119	120	92.4	51.9	37.5	24.8	46.5	168
1970	87.4	149	268	280	194	131	167	79.7	34.7	24.1	18.9	27.0	121
1971													
1972	63.6	150	270	641	341	375	173	90.7	71.7	55.9	24.0	31.7	190

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1946-1972)

MEAN	81.7	217.3	313.8	324.5	281.9	213.6	167.1	100.6	70.9	38.4	25.9	32.8	155.0
MAXIMUM	202.0	455.0	548.0	641.0	514.0	440.0	281.0	201.0	239.0	87.7	53.5	119.0	199.0
MINIMUM	14.7	19.6	46.0	131.0	124.0	99.2	85.3	54.1	28.2	17.5	13.7	14.4	107.0
STD DEVIATION	46.8	109.61	110.01	124.29	100.78	86.26	53.39	39.97	47.16	18.52	10.03	21.81	28.74
SKWENESS	0.893	0.551	-0.207	0.700	0.717	1.011	0.460	1.053	2.075	1.446	1.413	2.785	-0.227
STD ERR SKEW	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.456	0.456	0.455	0.464
SER CORR COEFF	-0.042	0.244	-0.027	-0.221	-0.146	-0.022	-0.338	-0.045	0.093	0.236	0.067	-0.011	-0.206
COEFF OF VAR	0.569	0.504	0.351	0.383	0.357	0.404	0.320	0.397	0.665	0.483	0.387	0.665	0.185
MEAN LOGS	1.841	2.268	2.459	2.480	2.424	2.298	2.201	1.973	1.780	1.543	1.386	1.456	2.183
STD DEV LOGS	0.264	0.285	0.214	0.172	0.155	0.169	0.141	0.162	0.241	0.185	0.150	0.211	0.084
SKWENESS LOGS	-0.414	-1.629	-2.287	-0.349	-0.043	0.157	-0.097	0.404	0.660	0.647	0.660	1.229	-0.448
STD ERR SKEW LOGS	0.454	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.456	0.456	0.455	0.464
SER CORR LOGS	-0.069	0.148	-0.181	-0.217	-0.103	-0.241	-0.315	-0.085	-0.019	0.116	0.084	0.039	-0.169
COEFF OF VAR LOGS	0.143	0.126	0.087	0.070	0.064	0.074	0.064	0.082	0.136	0.120	0.108	0.145	0.039
% OF AVE FLOW	4.4	11.6	16.8	17.4	15.1	11.4	8.9	5.4	3.8	2.1	1.4	1.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1972)

0.99	14.1	19.8	45.4	108.4	114.4	84.0	73.0	44.2	21.7	15.9	12.9	14.3	91.2
0.95	23.9	51.0	106.9	151.4	146.9	105.5	92.4	53.3	27.1	18.9	14.8	15.7	108.3
0.90	31.2	77.5	153.5	179.2	167.7	121.4	104.6	59.4	31.1	21.0	16.1	16.9	117.9
0.80	42.3	119.3	218.5	217.9	196.7	142.6	121.2	68.3	37.4	24.3	18.1	19.0	130.1
0.50	72.3	219.5	340.0	308.9	268.1	194.6	159.8	91.6	56.7	33.4	23.4	26.0	154.5
0.20	116.6	316.4	414.3	423.7	358.6	272.4	209.2	127.3	93.6	49.0	32.0	40.7	179.8
0.10	146.3	354.3	431.4	493.5	418.5	328.7	240.1	153.3	126.2	61.6	38.6	54.8	193.1
0.04	183.3	382.6	439.2	575.4	492.9	400.3	277.5	174.5	174.5	80.2	47.9	78.9	207.1
0.02	210.2	394.7	441.2	632.2	547.6	455.8	304.3	218.1	227.0	96.3	55.6	102.8	216.1
0.01	236.4	402.3	442.0	685.9	601.7	513.1	330.4	248.9	284.8	114.5	64.0	132.9	224.1

## STATION 12141000 WOODS CREEK NEAR MONROE, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1948	16.0	16.0	16.0	17.0	19.0	22.0	24.0	29.0	52.0
1949	26.0	27.0	28.0	29.0	35.0	36.0	41.0	60.0	82.0
1950	14.0	14.0	15.0	15.0	16.0	18.0	20.0	21.0	33.0
1951	16.0	16.0	17.0	17.0	17.0	19.0	22.0	27.0	51.0
1952	12.0	12.0	13.0	13.0	14.0	15.0	16.0	20.0	34.0
1953	13.0	13.0	13.0	13.0	13.0	14.0	15.0	17.0	21.0
1954	17.0	17.0	17.0	18.0	20.0	20.0	26.0	40.0	69.0
1955	31.0	32.0	33.0	35.0	41.0	48.0	51.0	56.0	90.0
1956	26.0	27.0	27.0	28.0	29.0	32.0	43.0	56.0	79.0
1957	19.0	19.0	20.0	22.0	24.0	26.0	29.0	40.0	54.0
1958	16.0	16.0	16.0	17.0	19.0	20.0	22.0	24.0	34.0
1959	12.0	12.0	13.0	13.0	14.0	15.0	17.0	19.0	29.0
1960	25.0	25.0	26.0	27.0	28.0	33.0	42.0	55.0	81.0
1961	17.0	17.0	18.0	19.0	20.0	24.0	30.0	30.0	65.0
1962	17.0	17.0	18.0	19.0	20.0	20.0	22.0	25.0	41.0
1963	17.0	17.0	17.0	18.0	23.0	25.0	29.0	35.0	55.0
1964	20.0	21.0	22.0	22.0	25.0	26.0	26.0	29.0	36.0
1965	24.0	24.0	26.0	27.0	29.0	30.0	39.0	48.0	72.0
1966	19.0	21.0	22.0	22.0	24.0	25.0	26.0	27.0	35.0
1967	19.0	19.0	19.0	20.0	21.0	23.0	26.0	34.0	43.0
1968	14.0	14.0	14.0	14.0	15.0	19.0	19.0	19.0	48.0
1969	25.0	25.0	26.0	27.0	31.0	38.0	48.0	63.0	90.0
1970	19.0	19.0	20.0	20.0	22.0	25.0	38.0	32.0	54.0
1971	16.0	17.0	17.0	17.0	18.0	21.0	22.0	25.0	38.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1948-1971)

MEAN	18.8	19.0	19.7	20.4	22.4	24.8	28.4	35.0	53.6
MAXIMUM	31.0	32.0	33.0	35.0	41.0	48.0	51.0	63.0	90.0
MINIMUM	12.0	12.0	13.0	13.0	13.0	14.0	15.0	17.0	21.0
STANDARD DEVIATION	5.02	5.25	5.44	5.82	7.00	8.27	10.25	14.04	20.46
SKEWNESS	0.742	0.802	0.792	0.792	0.954	1.106	0.852	0.721	0.419
STD ERROR OF SKEWNESS	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472
SERIAL CORR COEFF	0.091	0.103	0.083	0.092	0.077	0.059	0.083	-0.041	0.045
COEFF OF VARIATION	0.266	0.275	0.276	0.286	0.313	0.333	0.361	0.401	0.382
MEAN LOGS	1.261	1.265	1.280	1.293	1.331	1.373	1.428	1.511	1.697
STD DEVIATION LOGS	0.112	0.115	0.115	0.120	0.130	0.136	0.150	0.169	0.172
SKEWNESS LOGS	0.260	0.290	0.349	0.265	0.275	0.358	0.312	0.244	-0.184
STD ERR SKEWNESS LOGS	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472
SER CORR COEFF LOGS	0.107	0.117	0.104	0.114	0.134	0.130	0.126	-0.009	0.028
COEFF OF VAR LOGS	0.089	0.091	0.090	0.093	0.098	0.099	0.105	0.112	0.101

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1948-1971)

0.99	34.9	36.1	37.7	39.4	45.6	53.2	64.6	86.2	118.5
0.98	32.1	33.0	34.4	36.0	41.3	47.7	57.6	76.0	107.9
0.96	29.3	30.0	31.2	32.6	37.2	42.4	50.8	66.3	97.1
0.90	25.5	26.0	27.0	28.2	31.7	35.7	42.1	54.0	82.0
0.80	22.6	22.9	23.7	24.7	27.4	30.5	35.6	44.8	69.7
0.50	18.0	18.2	18.7	19.4	21.1	23.2	26.3	32.0	50.4
0.20	14.6	14.7	15.2	15.5	16.6	18.1	20.0	23.3	35.9
0.10	13.2	13.2	13.7	13.9	14.7	16.0	17.5	19.9	29.8
0.05	12.2	12.2	12.7	12.7	13.4	14.6	15.7	17.6	25.5
0.02	11.1	11.1	11.6	11.6	12.1	13.2	14.0	15.3	21.3
0.01	10.5	10.5	11.0	10.9	11.3	12.4	13.0	14.1	18.8

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1948-1971)

P95	P90	P75	P70	P50	P25	P10
18.0	23.0	37.0	46.0	100.0	210.0	360.0

## STATION 12141000 WOODS CREEK NEAR MONROE, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30											
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	ANNUAL PEAK-FLOW DATA DATE REG. (R)
1947	940.	892.	670.	537.	462.	327.	337.	290.	243.	1020.	01/24/47
1948	1310.	1050.	836.	615.	438.	399.	376.	338.	298.	1590.	11/11/47
1949	1160.	973.	773.	575.	384.	288.	249.	258.	217.	1360.	02/22/49
1950	1310.	1040.	762.	724.	590.	480.	421.	386.	331.	1710.	02/26/50
1951	1120.	901.	637.	462.	375.	360.	352.	321.	267.	1260.	02/10/51
1952	732.	573.	468.	326.	262.	204.	194.	194.	180.	764.	12/22/51
1953	676.	557.	492.	426.	390.	291.	259.	244.	201.	740.	01/23/53
1954	1120.	906.	794.	663.	469.	397.	378.	334.	264.	1250.	12/06/53
1955	1000.	866.	647.	528.	389.	338.	307.	277.	258.	1310.	11/17/54
1956	1200.	1030.	907.	684.	481.	358.	308.	271.	244.	1450.	12/21/55
1957	1200.	1100.	779.	571.	441.	334.	304.	291.	264.	830.	12/16/56
1958	1130.	827.	532.	383.	346.	322.	295.	255.	213.	905.	01/17/58
1959	1130.	947.	729.	522.	467.	373.	338.	315.	273.	1350.	01/24/59
1960	2040.	1580.	1210.	752.	587.	418.	369.	334.	264.	2220.	11/21/59
1961	932.	827.	708.	572.	488.	381.	323.	282.	264.	1050.	11/24/60
1962	1420.	1110.	810.	673.	575.	382.	297.	272.	219.	1660.	01/07/62
1963	844.	686.	564.	504.	354.	293.	245.	215.	189.	926.	11/26/62
1964	750.	680.	551.	507.	448.	415.	362.	351.	311.	1030.	12/07/63
1965	2090.	1570.	1120.	864.	659.	491.	443.	377.	289.	2260.	01/29/65
1966	605.	578.	492.	437.	336.	280.	274.	236.	189.	625.	01/07/66
1967	961.	794.	754.	655.	533.	479.	430.	378.	299.	1030.	01/16/67
1968	1570.	1350.	906.	557.	492.	379.	306.	274.	235.	2060.	12/25/67
1969	1300.	1200.	923.	605.	519.	446.	387.	350.	276.	1460.	01/05/69
1970	694.	619.	540.	436.	323.	298.	252.	225.	199.	782.	01/27/70
1971	2080.	1620.	1300.	1080.	740.	543.	461.	413.	325.	2350.	01/30/71
1972										1990.	02/28/72
1973										1160.	12/26/72
1974										1580.	01/15/74
1975										1570.	01/18/75
1976										1920.	12/03/75
1977										584.	01/18/77
1978										2200.	12/02/77

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1947-1978)

	MEAN	MINIMUM	STANDARD DEVIATION	SKWENESS	STD. ERROR OF SKWENESS	SERIAL CORR. COEFF.	COEFF. OF VARIATION	MEAN LOGS	STD. DEVIATION LOGS	SKWENESS LOGS	STD. ERR. SKWENESS LOGS	SER. CORR. COEFF. LOGS	COEFF. OF VAR. LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	1160.6	2090.0	422.21	1.034	0.664	-0.352	0.364	3.039	0.150	0.305	0.464	-0.327	0.049		
	963.0	1620.0	314.06	0.739	0.464	-0.250	0.326	2.962	0.139	0.142	0.464	-0.201	0.047		
	757.8	1300.0	218.58	0.904	0.464	-0.223	0.288	2.863	0.120	0.269	0.464	-0.172	0.042		
	586.3	1080.0	160.17	1.221	0.464	-0.257	0.273	2.754	0.113	0.245	0.464	-0.243	0.041		
	469.9	740.0	129.53	1.221	0.464	-0.296	0.254	2.659	0.110	-0.038	0.464	-0.232	0.041		
	379.0	558.0	86.65	0.534	0.464	-0.297	0.229	2.568	0.102	-0.323	0.464	-0.278	0.040		
	337.5	478.0	73.66	0.317	0.464	-0.328	0.218	2.478	0.098	-0.327	0.464	-0.314	0.036		
	306.6	413.0	61.52	0.165	0.464	-0.352	0.201	2.403	0.090	-0.322	0.464	-0.314	0.034		
	257.2	344.0	47.38	0.015	0.464	-0.253	0.184	2.403	0.082	-0.264	0.464	-0.232	0.034		
	3.1073	0.1699	-0.0220					3.1073	0.1699	-0.0220				3.1073	0.1699
														-0.02330	-0.02330

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1978)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
	531.1	641.1	713.1	816.0	1075.7	1453.6	1718.7	2070.9	2346.2	2632.7
	451.2	549.6	612.2	699.5	909.9	1196.3	1386.2	1627.4	1808.5	1990.9
	404.8	473.0	516.2	576.3	720.8	917.5	1048.3	1215.1	1340.9	1468.1
	325.2	377.3	409.9	454.9	561.3	703.1	795.8	912.4	995.3	1086.4
	250.6	299.3	328.8	368.2	456.4	564.5	630.3	704.4	763.7	816.9
	202.9	246.4	271.8	304.8	374.1	451.1	494.0	541.6	573.1	602.0
	185.5	223.4	243.5	274.0	333.6	399.2	435.6	472.9	502.4	526.7
	176.7	229.9	259.0	295.4	353.9	417.5	458.5	495.8	524.3	542.5
	157.2	182.9	197.6	216.4	255.0	297.0	320.2	345.8	362.9	378.2
	512.0	671.0	774.7	921.4	1282.0	1780.3	2111.9	2532.3	2846.5	3161.6
	482.1	656.1	768.6	925.8	1295.8	1786.0	2091.2	2459.0	2721.1	2974.1

## STATION 121+1300 MIDDLE FORK SNOQUALMIE RIVER NEAR TANNER, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1961					2263	1275	1537	1990	1898	650	221	385	
1962	1142	1141	1657	2042	805	549	1683	1288	1637	997	687	474	1178
1963	917	1944	1782	1058	1937	783	1225	1417	1098	592	307	282	1105
1964	641	1673	1146	1633	920	967	1306	2187	3627	2295	1218	986	1550
1965	1055	1305	1878	2220	1721	789	1627	1622	1573	830	424	493	1292
1966	771	1122	926	1136	640	1116	1670	2224	1928	1195	378	206	1112
1967	841	1207	2295	2405	1397	829	601	1868	2434	901	306	225	1276
1968	1879	1296	2501	2147	2250	1061	1093	1681	1867	697	570	1241	1521
1969	1233	1661	1252	1600	387	870	1428	2677	2161	713	275	709	1352
1970	882	753	967	1617	1213	868	1230	1468	1812	604	238	683	1025
1971	753	1489	1050	2151	1913	816	961	2636	2314	2157	650	523	1449
1972	834	1766	1214	1548	2512	2836	1471	3060	2969	2065	711	1033	1832
1973	437	831	1950	1095	432	617	801	1458	1373	554	236	319	845
1974	832	1235	1795	2651	990	1265	1399	1984	4012	2370	992	405	1665
1975	169	1168	1937	2287	796	873	627	2172	2470	1641	756	424	1282
1976	1223	2411	3997	2325	882	597	1101	2010	1804	1463	881	476	1603
1977	380	947	1236	1154	787	784	1328	1247	1269	468	369	655	883
1978	550	2577	3373	856	750	956	950	1383	1297	597	417	964	1224
1979	317	1243	1115	427	1194	1596	1148	1914	1366	782	240	274	966

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1961-1979)

MEAN	825.3	1431.6	1781.7	1686.2	1252.1	1023.5	1220.3	1909.8	2047.8	1134.3	519.8	566.2	1281.1
MAXIMUM	1879.0	2577.0	3997.0	2651.0	2512.0	2836.0	1683.0	3060.0	4012.0	2370.0	1218.0	1241.0	1832.0
MINIMUM	169.0	753.0	926.0	427.0	387.0	549.0	601.0	1247.0	1098.0	448.0	221.0	206.0	845.0
STD DEVIATION	402.62	498.51	839.42	627.58	655.94	508.04	327.14	504.85	788.21	654.89	290.76	300.55	276.59
SKENNESS	0.767	1.012	1.433	-0.322	0.616	2.771	-0.426	0.684	1.250	0.918	0.970	0.885	0.279
STD ERR SKEW	0.536	0.536	0.536	0.536	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.536
SER CORR COEFF	0.095	-0.399	-0.174	0.164	-0.207	-0.245	-0.086	-0.061	-0.152	-0.013	-0.160	-0.148	-0.383
COEFF OF VAR	0.488	0.348	0.471	0.372	0.524	0.496	0.268	0.264	0.385	0.577	0.559	0.531	0.216
MEAN LOGS	2.859	3.133	3.212	3.189	3.038	2.976	3.069	3.267	3.284	2.992	2.655	2.696	3.098
STD DEV LOGS	0.248	0.144	0.163	0.202	0.238	0.163	0.132	0.112	0.153	0.235	0.235	0.229	0.095
SKENNESS LOGS	-0.962	0.266	0.593	-1.299	-0.157	1.352	-0.974	0.208	0.515	0.475	0.283	0.076	-0.131
STD ERR SKEW LOGS	0.536	0.536	0.536	0.536	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.536
SER CORR LOGS	-0.036	-0.412	-0.139	0.319	-0.297	-0.332	-0.142	-0.067	-0.107	-0.043	-0.195	-0.064	-0.397
COEFF OF VAR LOGS	0.087	0.046	0.057	0.063	0.078	0.055	0.043	0.034	0.047	0.079	0.088	0.085	0.031
% OF AVE FLOW	5.4	9.3	11.6	11.0	8.1	6.6	7.9	12.4	13.3	7.4	3.4	3.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1961-1979)

0.99	130.6	669.6	736.0	346.9	286.0	569.4	469.8	1055.6	968.9	336.4	143.9	150.2	738.0
0.95	248.7	807.3	880.6	631.4	432.4	605.4	663.3	1228.9	1138.8	435.1	194.4	211.3	867.7
0.90	336.6	896.6	982.1	829.3	536.0	636.7	779.9	1337.0	1253.7	506.3	230.2	254.1	944.2
0.80	468.2	1023.1	1135.4	1106.8	691.5	691.0	930.3	1485.1	1422.3	616.6	285.0	318.3	1044.0
0.50	791.5	1337.6	1563.4	1706.2	1108.2	871.6	1230.9	1833.2	1867.5	939.9	440.3	493.6	1258.8
0.20	1176.7	1785.7	2283.2	2285.8	1740.3	1236.7	1519.5	2291.8	2559.5	1522.1	705.3	772.7	1507.6
0.10	1382.5	2094.5	2852.2	2539.3	1218.5	1565.1	1654.7	2588.7	3072.2	2008.1	915.7	980.4	1652.3
0.04	1591.3	2499.2	3686.6	2756.5	2770.7	2099.3	1782.1	2959.6	3785.0	2751.9	1223.3	1267.4	1818.3
0.02	1715.7	2811.5	4398.6	2866.3	3219.0	2599.9	1854.1	3234.1	4365.0	3410.3	1484.4	1498.4	1932.3
0.01	1818.6	3133.3	5193.9	2945.6	3675.9	3204.2	1911.5	3507.8	4988.6	4167.0	1774.0	1743.9	2039.4

STATION 121+1300 MIDDLE FORK SNOQUALMIE RIVER NEAR TANNER, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1962	142.0	143.0	155.0	174.0	213.0	297.0	366.0	575.0	755.0
1963	239.0	255.0	280.0	373.0	421.0	514.0	636.0	699.0	956.0
1964	165.0	167.0	182.0	186.0	214.0	266.0	293.0	395.0	699.0
1965	412.0	416.0	442.0	507.0	659.0	919.0	989.0	1040.0	1260.0
1966	198.0	203.0	205.0	247.0	348.0	425.0	493.0	593.0	731.0
1967	178.0	181.0	186.0	198.0	240.0	252.0	342.0	535.0	929.0
1968	149.0	150.0	157.0	178.0	225.0	262.0	409.0	686.0	996.0
1969	238.0	251.0	260.0	300.0	382.0	409.0	526.0	892.0	1100.0
1970	172.0	175.0	192.0	204.0	218.0	295.0	526.0	611.0	772.0
1971	150.0	153.0	158.0	172.0	217.0	352.0	458.0	538.0	785.0
1972	225.0	235.0	250.0	311.0	462.0	654.0	709.0	923.0	1060.0
1973	260.0	260.0	273.0	303.0	401.0	528.0	704.0	704.0	902.0
1974	133.0	136.0	150.0	170.0	173.0	235.0	319.0	462.0	731.0
1975	130.0	132.0	138.0	144.0	155.0	248.0	389.0	619.0	1050.0
1976	197.0	203.0	216.0	236.0	335.0	613.0	940.0	1340.0	1340.0
1977	162.0	166.0	175.0	216.0	248.0	412.0	543.0	634.0	791.0
1978	182.0	184.0	186.0	203.0	240.0	372.0	437.0	476.0	749.0
1979	212.0	220.0	234.0	263.0	300.0	493.0	566.0	555.0	734.0

LOWEST MEAN FLOW STATISTICS (YEARS 1962-1979)

MEAN	196.9	201.7	213.7	243.6	295.8	406.3	525.4	659.8	902.2
MAXIMUM	412.0	416.0	442.0	507.0	659.0	919.0	989.0	1040.0	1340.0
MINIMUM	130.0	132.0	138.0	144.0	155.0	235.0	293.0	395.0	672.0
STANDARD DEVIATION	66.08	67.58	71.86	89.71	122.61	167.14	173.92	180.07	198.58
SKENNESS	2.141	1.965	1.991	1.680	1.587	1.728	0.989	0.785	0.849
STD ERROR OF SKENNESS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SERIAL CORR COEFF	-0.141	-0.163	-0.160	-0.205	-0.139	-0.177	-0.1335	-0.278	-0.219
COEFF OF VARIATION	0.336	0.335	0.336	0.364	0.415	0.411	0.331	0.273	0.220
MEAN LOGS	2.276	2.286	2.311	2.364	2.441	2.580	2.699	2.805	2.946
STD DEVIATION LOGS	0.124	0.126	0.125	0.140	0.161	0.158	0.139	0.114	0.091
STD ERR SKENNESS LOGS	1.123	0.999	1.042	0.880	0.613	0.631	0.167	0.291	0.555
SER CORR COEFF LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
COEFF OF VAR LOGS	-0.146	-0.171	-0.164	-0.206	-0.141	-0.167	-0.340	-0.278	-0.228
	0.054	0.055	0.054	0.059	0.066	0.061	0.051	0.041	0.031

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1962-1979)

0.99	456.1	462.7	493.6	595.7	767.7	1044.8	1095.5	1245.1	1563.7
0.98	394.9	402.7	428.6	514.6	662.5	902.3	993.2	1141.0	1442.0
0.96	340.2	348.6	370.2	441.6	566.5	772.5	892.1	1037.9	1322.7
0.90	276.4	284.6	301.4	355.4	451.5	616.8	758.0	900.8	1166.3
0.80	233.2	240.5	254.4	296.1	371.0	507.9	653.1	792.9	1045.2
0.50	179.2	184.2	194.9	220.5	285.9	365.8	495.9	630.1	866.2
0.20	148.3	151.0	160.2	175.5	201.1	278.1	381.3	509.8	737.8
0.10	137.9	139.4	148.2	159.5	177.2	245.9	334.1	459.6	685.5
0.05	131.5	132.0	140.6	149.2	161.3	224.3	300.2	423.4	648.4
0.02	125.9	125.5	134.0	146.5	163.3	204.4	267.0	367.5	612.2
0.01	123.1	122.0	130.6	134.8	146.5	193.2	247.2	366.0	591.1

FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "PM" PERCENT OF THE TIME (YEARS 1962-1979)

	P95	P90	PT5	P70	P50	P25	P10
250.0	330.0	550.0	620.0	920.0	1600.0	2400.0	

## STATION 12141300 MIDDLE FORK SNOQUALMIE RIVER NEAR TANNER, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30										ANNUAL PEAK-FLOW DATA		
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW (CFS)	DATE	REG. (R)
1961										14000.	02/21/61	
1962	9730.	5760.	5330.	3610.	2860.	1920.	1690.	1570.	1420.	11600.	11/03/62	
1963	11200.	8350.	4770.	3130.	2580.	2150.	1870.	1700.	1500.	22800.	11/19/62	
1964	6080.	5370.	4330.	3300.	3900.	3310.	2780.	2390.	1940.	9520.	11/26/63	
1965	12000.	10400.	6700.	4110.	2870.	2080.	2100.	1820.	1680.	15800.	01/29/65	
1966	6050.	4890.	3930.	2680.	2260.	2100.	1970.	1840.	1510.	6860.	05/06/66	
1967	9730.	5870.	4490.	3400.	2650.	2470.	2170.	1900.	1630.	10900.	12/13/66	
1968	13800.	11500.	7140.	3960.	3330.	2650.	2370.	2160.	1910.	18000.	01/20/68	
1969	15300.	9320.	5120.	3310.	3120.	2460.	2120.	1870.	1540.	21200.	01/05/69	
1970	5300.	4660.	4090.	2810.	2000.	1650.	1510.	1370.	1190.	8070.	04/09/70	
1971	9010.	5110.	3830.	2520.	2490.	2390.	2050.	1910.	15100.	12300.	01/19/71	
1972	12300.	8360.	4820.	4300.	3670.	3100.	2750.	2560.	15100.	15100.	02/28/72	
1973	10500.	6050.	5560.	3570.	2490.	1590.	1320.	1100.	1150.	16400.	12/26/72	
1974	12600.	9630.	6090.	4950.	4080.	3270.	2820.	2470.	2200.	16400.	01/15/74	
1975	15200.	11300.	6360.	3890.	2780.	2550.	2120.	1770.	1670.	24900.	01/18/75	
1976	19400.	17300.	10200.	6890.	4530.	3420.	2990.	2590.	1970.	23700.	12/03/75	
1977	8180.	5630.	3290.	1890.	1580.	1440.	1310.	1170.	1160.	11800.	01/18/77	
1978	20000.	13000.	7920.	5990.	4400.	3080.	2340.	1930.	1590.	30200.	12/02/77	
1979	7420.	6480.	3870.	2460.	2030.	1720.	1600.	1550.	1340.	9360.	11/08/78	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1961-1979)

	HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1961-1979)										W R C ESTIMATE	SYSTEMATIC RECORD
MEAN	11322.2	8276.7	5481.1	3827.2	3002.8	2413.9	2123.3	1887.8	1670.6			
MAXIMUM	20000.0	17300.0	10200.0	6890.0	4530.0	3420.0	2990.0	2730.0	2560.0			
MINIMUM	5300.0	4660.0	3290.0	1890.0	1580.0	1440.0	1310.0	1100.0	1150.0			
STANDARD DEVIATION	4258.93	3438.92	1715.79	1213.80	840.33	630.77	513.03	458.34	360.63			
SKEWNESS	0.600	1.150	1.309	1.017	0.346	0.140	0.015	0.148	0.799			
STD. ERROR OF SKEWNESS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536			
SERIAL CORR. COEFF	-0.190	-0.100	-0.285	-0.526	-0.631	-0.543	-0.505	-0.530	-0.322			
COEFF OF VARIATION	0.376	0.415	0.313	0.317	0.280	0.261	0.242	0.283	0.216			
MEAN LOGS	4.024	3.886	3.721	3.563	3.461	3.368	3.314	3.263	3.214			
STD DEVIATION LOGS	0.167	0.167	0.125	0.134	0.125	0.117	0.110	0.110	0.091			
SKEWNESS LOGS	-0.153	0.484	0.561	0.018	-0.240	-0.223	-0.398	-0.418	0.244			
STD ERR SKEWNESS LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536			
SER CORR COEFF LOGS	-0.199	-0.127	-0.327	-0.583	-0.622	-0.541	-0.498	-0.526	-0.353			
COEFF OF VAR LOGS	0.041	0.043	0.034	0.038	0.036	0.035	0.033	0.034	0.028			
HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1961-1979)												
0.99	4142.6	3602.8	3032.1	1791.2	1410.2	1192.9	1064.7	943.2	1042.8	5649.8	5602.7	
0.95	5529.7	4319.6	3441.1	2205.1	1769.6	1473.5	1324.7	1176.3	1176.0	7455.5	7431.6	
0.90	6425.3	4807.8	3713.6	2464.4	1988.1	1642.6	1478.2	1313.7	1257.7	8643.5	8633.1	
0.80	7678.6	5528.8	4107.7	2820.5	2279.6	1866.6	1677.5	1491.9	1368.2	10338.2	10344.0	
0.50	10681.9	7457.3	5120.6	3654.9	2924.2	2357.7	2074.0	1865.9	1621.8	14561.1	14588.7	
0.20	14655.1	10510.4	6631.6	4742.4	3690.6	2936.1	2560.0	2276.2	1945.8	20509.0	20520.1	
0.10	17195.1	12806.8	7713.1	5437.0	4141.9	3274.7	2815.7	2501.5	2150.7	24530.0	24499.8	
0.04	20307.7	16037.2	9175.0	6292.8	4662.1	3663.8	3095.9	2747.2	2402.0	29690.3	29573.9	
0.02	22561.9	18693.2	10335.6	6917.5	5019.7	3930.7	3279.8	2907.7	2585.2	33587.5	33382.8	
0.01	24766.0	21572.4	11559.3	7533.3	5355.7	4181.1	3446.6	3052.8	2765.6	37528.3	37215.4	

## STATION 12141500 MIDDLE FORK SNOQUALMIE R NR NORTH BEND, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1907													
1908	278	819	1125	593	507	631	997	1506	2041	895	298	485	
1909	686	1064	933	1366	845	2344	1712	1876	1075	554	256	340	966
1910	552			1205	842		719	1399	1345	799	403	214	
1911	1843	2065	539	526	202	544	856	1962	1607	745	356	727	929
1912	369	3037	1392	1841	1365	429	1002	1406	2652	1595	529	672	1219
1913	685	1563	1038	1039	1096	1002	1406	1681	1324	576	240	460	1136
1914	1717	1413	808	1708	846	1296	1546	852	598	448	228	196	762
1915	909	2086	429	548	542	842	1490	1748	2596	2072	735	497	1511
1916	1372	1613	1464	602	1730	2148	1570	2039	3379	2645	697	344	1272
1917	247	1185	686	953	1343	533	1255	2039	3379	2645	697	344	1272
1918	371	703	5015	2813	1384	1026	1541	1748	2125	760	763	254	1548
1919	1387	1182	2324	2208	703	954	1593	2042	1645	975	349	325	1314
1920	462	2120	1492	2232	709	929	1042	1331	1525	678	312	1325	1179
1921	1662	1079	1404	1650	2068	1436	1369	1969	2513	1141	414	959	1467
1922	1137	1519	2649	378	356	435	1117	2500	2590	675	284	588	1190
1923	690	790	1734	2588	540	906	1555	1925	1946	1057	330	209	1195
1925	1398	1511	2052	1644	1548	771	1543	2151	1350	576	241	173	1245
1926	479	834	2521	1155	1160	1051	965	1052	580	310	320	550	915
1930	237	245	1250	604	2344	1157	1447	1400	1189	489	194	211	887
1931	1023	785	575	1402	1126	1618	1488	1661	1532	426	190	457	1022
1932	1092	1467	976	1380	1764	2216	1773	1974	2225	1307	394	351	1408

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1907-1932)

MEAN	885.5	1354.0	1520.3	1354.0	1096.2	1113.4	1349.2	1727.2	1791.9	936.1	376.6	467.5	1175.8
MAXIMUM	1843.0	3037.0	5015.0	2813.0	2344.0	2344.0	1773.0	2500.0	3379.0	2645.0	763.0	1325.0	1548.0
MINIMUM	237.0	245.0	429.0	378.0	202.0	429.0	719.0	852.0	580.0	310.0	173.0	173.0	762.0
STD DEVIATION	519.14	637.00	1047.57	707.31	573.59	577.39	298.80	398.53	726.44	587.54	173.71	284.07	227.26
SKWENESS	0.430	0.826	2.096	0.481	0.507	0.994	-0.716	-0.460	0.272	1.736	1.290	1.521	-0.058
STD ERR SKEW	0.501	0.512	0.512	0.501	0.501	0.512	0.512	0.524	0.512	0.512	0.512	0.491	0.536
SER CORR COEFF	-0.259	0.320	0.162	0.064	-0.081	-0.203	-0.079	0.006	0.283	0.207	0.407	0.306	0.136
COEFF OF VAR	0.586	0.470	0.689	0.522	0.523	0.519	0.421	0.423	0.405	0.4628	0.461	0.608	0.193
MEAN LOGS	2.864	3.080	3.103	3.068	2.973	2.994	3.118	3.225	3.214	2.906	2.538	2.603	3.062
STD DEV LOGS	0.288	0.236	0.264	0.253	0.266	0.220	0.108	0.113	0.202	0.236	0.179	0.283	0.087
SKWENESS LOGS	-0.288	-1.114	0.241	-0.371	-0.753	0.082	-1.061	-1.156	-0.832	0.524	0.624	0.300	-0.411
STD ERR SKEW LOGS	0.501	0.512	0.512	0.501	0.501	0.512	0.512	0.524	0.512	0.512	0.512	0.491	0.536
SER CORR LOGS	-0.155	0.335	0.235	-0.048	-0.052	-0.186	-0.017	-0.019	0.223	0.161	0.343	0.178	0.136
COEFF OF VAR LOGS	0.101	0.076	0.085	0.082	0.089	0.074	0.035	0.035	0.063	0.081	0.071	0.093	0.028
% OF AVE FLOW	6.3	9.7	10.9	9.7	7.8	8.0	9.7	12.4	12.8	6.7	2.7	3.3	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1907-1932)

0.99	136.3	224.1	344.4	258.0	163.3	312.0	611.7	744.9	422.4	281.5	160.1	123.3	682.4
0.95	203.6	337.4	488.1	423.5	306.5	432.8	819.9	1022.6	693.5	360.2	189.8	167.7	812.3
0.90	237.4	580.4	592.9	543.5	414.9	516.6	939.7	1183.6	878.3	417.2	210.8	199.5	886.4
0.80	423.7	802.4	756.6	725.5	580.9	641.7	1088.9	1384.3	1139.9	506.0	242.5	248.5	980.3
0.50	755.5	1325.5	1237.7	1210.9	1013.1	978.8	1371.1	1761.4	1742.9	768.4	331.0	389.6	1170.2
0.20	1288.0	1901.9	2095.7	1920.9	1585.7	1507.5	1622.8	2089.7	2434.0	1247.7	480.2	635.5	1370.1
0.10	1672.7	2186.2	2798.9	2397.5	1925.8	1896.9	1734.0	2230.0	2803.9	1652.9	598.2	834.1	1476.9
0.04	2182.1	2455.3	3852.0	2993.6	2306.0	2430.7	1834.2	2352.3	3186.7	2279.9	771.5	1128.7	1591.2
0.02	2573.0	2605.1	4763.0	3428.9	2550.1	2857.7	1888.5	2416.3	3421.2	2840.9	919.5	1381.9	1644.9
0.01	2970.4	2722.1	5788.6	3854.9	2768.6	3309.1	1930.4	2444.3	3620.4	3491.2	1085.1	1665.6	1730.8



## STATION 12141500 MIDDLE FORK SNOQUALMIE R NR NORTH BEND, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1911	116.0	116.0	124.0	148.0	183.0	226.0	336.0	456.0	889.0
1912	200.0	200.0	231.0	292.0	362.0	494.0	491.0	524.0	794.0
1913	255.0	255.0	283.0	295.0	352.0	525.0	534.0	596.0	842.0
1915	169.0	171.0	169.0	189.0	210.0	270.0	270.0	333.0	764.0
1916	150.0	154.0	159.0	172.0	196.0	210.0	287.0	354.0	540.0
1917	177.0	180.0	187.0	196.0	230.0	364.0	476.0	636.0	708.0
1918	202.0	206.0	213.0	222.0	316.0	331.0	425.0	511.0	1250.0
1919	184.0	185.0	192.0	201.0	233.0	438.0	516.0	647.0	1070.0
1920	186.0	197.0	222.0	223.0	280.0	301.0	361.0	512.0	874.0
1921	196.0	201.0	207.0	220.0	258.0	377.0	673.0	845.0	976.0
1922	247.0	242.0	263.0	285.0	316.0	341.0	385.0	828.0	1090.0
1923	146.0	203.0	210.0	234.0	283.0	415.0	399.0	519.0	661.0
1926	182.0	103.0	106.0	111.0	122.0	156.0	191.0	305.0	603.0
1931	137.0	143.0	146.0	147.0	164.0	196.0	256.0	390.0	535.0
1932	156.0	156.0	162.0	171.0	183.0	242.0	330.0	426.0	760.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1911-1932)

MEAN	178.2	181.5	190.9	207.1	245.9	325.7	402.6	538.8	823.7
MAXIMUM	255.0	255.0	263.0	295.0	362.0	525.0	673.0	845.0	1250.0
MINIMUM	102.0	103.0	106.0	111.0	122.0	156.0	191.0	305.0	535.0
STANDARD DEVIATION	42.36	42.98	46.15	54.60	71.42	111.05	122.15	154.57	207.80
SKEWNESS	0.028	-0.071	-0.161	0.197	0.095	0.277	0.437	0.688	0.470
STD ERROR OF SKEWNESS	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580
SERIAL CORR COEFF	0.234	0.225	0.230	0.257	0.232	0.145	0.110	0.323	0.396
COEFF OF VARIATION	0.238	0.237	0.242	0.264	0.290	0.341	0.303	0.287	0.252
MEAN LOGS	2.239	2.246	2.268	2.301	2.372	2.488	2.585	2.715	2.903
STD DEVIATION LOGS	0.109	0.110	0.113	0.119	0.134	0.155	0.138	0.124	0.110
SKEWNESS LOGS	-0.605	-0.685	-0.697	-0.418	-0.471	-0.288	-0.473	0.003	-0.018
STD ERR SKEWNESS LOGS	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580
SER CDPR COEFF LOGS	0.236	0.215	0.220	0.257	0.264	0.180	0.218	0.303	0.422
COEFF OF VAR LOGS	0.049	0.049	0.050	0.052	0.056	0.062	0.053	0.045	0.038

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1911-1932)

0.99	277.9	279.5	296.6	348.4	433.3	654.7	720.4	1006.2	1434.3
0.98	266.9	269.4	285.7	330.5	409.6	605.9	679.9	931.0	1340.1
0.96	254.4	257.5	273.0	310.7	383.3	554.4	635.1	854.0	1242.4
0.90	234.3	238.2	252.1	280.6	343.3	480.3	567.0	747.1	1104.8
0.80	215.0	219.1	231.5	253.2	306.8	417.2	505.1	659.2	989.3
0.50	177.7	181.5	190.9	204.0	241.4	312.9	394.6	518.8	800.3
0.20	141.7	144.3	150.8	159.9	183.6	229.0	297.6	408.4	646.7
0.10	124.0	125.9	130.9	139.3	156.9	192.6	253.0	360.4	578.3
0.05	110.2	111.4	115.4	123.5	136.7	166.1	219.6	325.1	527.2
0.02	95.6	96.0	99.0	107.2	116.1	139.8	185.6	289.5	474.9
0.01	86.5	86.5	88.9	97.1	103.7	124.2	165.1	267.9	442.9

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "PPM" PERCENT OF THE TIME (YEARS 1911-1932)

	P95	P90	P75	P70	P50	P25	P10
210.0	270.0	440.0	510.0	830.0	1500.0	2400.0	

## STATION 12141500 MIDDLE FORK SNOQUALMIE R NR NORTH BEND, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA	DATE	REG. (R)
1909	5590.	4600.	3500.	2830.	2260.	1830.	1610.	1390.	1260.	8100.	06/01/09	
1910	8350.	5620.	4020.	2520.	2070.	1950.	1490.	1260.	958.	26700.	11/23/09	
1911	18000.	13500.	8250.	4960.	3310.	2300.	2160.	1930.	1550.	22800.	11/18/11	
1912	8170.	6960.	4580.	2780.	1910.	1680.	1590.	1490.	1410.	4910.	02/16/13	
1913	7680.	6400.	4030.	2890.	2090.	1520.	1160.	1000.	1010.	11100.	10/10/13	
1915	7230.	5750.	4380.	3190.	2940.	3290.	2200.	2150.	1990.	8170.	04/03/15	
1916	5220.	4710.	3940.	3700.	3210.	2740.	2360.	2180.	1870.	9450.	03/09/16	
1917	15400.	12500.	9170.	7130.	6060.	4150.	3150.	2610.	2370.	6620.	06/26/17	
1918	9790.	7560.	5130.	3990.	2380.	2310.	2010.	1840.	1650.	23200.	12/18/17	
1919	7400.	6670.	4360.	3760.	2470.	2040.	1920.	1690.	1420.	15200.	12/14/18	
1920	9440.	8120.	5420.	3390.	2740.	2330.	2050.	1880.	1910.	10200.	11/15/19	
1921	14600.	11200.	6240.	5080.	3340.	2560.	2100.	1770.	1310.	12300.	12/30/20	
1922	10200.	8010.	6160.	4420.	3790.	2230.	1830.	1690.	1740.	22000.	12/12/21	
1923	9210.	6910.	5480.	3080.	2280.	2210.	1900.	1800.	1630.	14200.	12/24/22	
1924	6700.	5400.	3350.	2640.	1920.	1630.	1500.	1330.	10500.	22000.	02/12/24	
1925	5490.	3750.	2250.	1710.	1620.	1620.	1570.	1420.	7900.	11700.	12/11/24	
1926	6710.	4080.	2980.	1880.	1760.	1640.	1590.	1480.	9150.	10500.	01/05/26	
1930	19600.	11200.	6610.	4270.	3110.	2540.	2340.	2300.	1960.	7900.	02/01/30	
1931										25600.	01/28/31	
1932											02/26/32	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1909-1932)

	MEAN	MINIMUM	STANDARD DEVIATION	SKWENESS	STD ERROR OF SKWENESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKWENESS LOGS	STD ERR SKWENESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W	R	C	ESTIMATE	SYSTEMATIC RECORD
0.99	9710.0	19600.0	4312.94	1.242	0.879	-0.093	0.444	3.952	0.173	0.674	0.536	-0.009	0.044					
0.95	7365.6	13500.0	2896.44	0.536	0.536	-0.012	0.393	3.837	0.164	0.284	0.536	0.110	0.043					
0.90	5063.3	9170.0	1700.37	0.536	0.536	-0.011	0.336	3.683	0.136	0.490	0.536	0.085	0.037					
0.80	3666.7	7130.0	1203.49	0.536	0.536	0.146	0.328	3.545	0.129	0.429	0.536	0.200	0.036					
0.50	2844.4	6060.0	997.83	2.104	1.478	0.351	0.344	3.434	0.105	0.363	0.536	0.453	0.032					
0.20	2257.8	4150.0	620.90	1.839	0.958	0.275	0.341	3.279	0.101	0.196	0.536	0.229	0.031					
0.10	1952.2	3150.0	470.60	0.958	0.330	0.241	0.328	3.237	0.101	0.102	0.536	0.229	0.031					
0.05	1767.8	2610.0	402.66	0.536	0.330	0.228	0.328	3.185	0.101	0.102	0.536	0.229	0.031					
0.02	1570.4	2370.0	359.86	0.536	0.330	0.228	0.328	3.185	0.101	0.102	0.536	0.229	0.031					
0.01	1409.1	2148.0	315.0	0.536	0.330	0.228	0.328	3.185	0.101	0.102	0.536	0.229	0.031					

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1909-1932)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.05	0.02	0.01
MEAN	4328.6	5063.0	5581.3	6368.0	8571.9	12291.1	15239.1	19571.3	23276.9	27425.3
MINIMUM	3098.0	3819.7	4297.9	4987.6	6756.1	9385.8	11461.2	13784.9	15776.0	17869.3
STANDARD DEVIATION	2608.9	3020.9	3294.3	3689.2	4703.3	6217.2	7302.4	8771.2	9938.5	11170.2
SKWENESS	2050.2	2298.6	2469.1	2721.1	3391.4	4436.1	5209.8	6284.0	7157.4	8096.0
STD ERROR OF SKWENESS	1748.2	1868.5	1962.9	2115.1	2571.6	3382.7	4040.9	5021.5	5869.4	6827.0
SERIAL CORR COEFF	1497.4	1596.0	1669.2	1828.9	2103.8	2630.9	3032.6	3600.4	4068.7	4577.3
COEFF OF VARIATION	1141.9	1312.9	1419.0	1560.4	1888.4	2308.8	2575.2	2902.4	3141.0	3376.5
MEAN LOGS	941.6	1024.4	1127.9	1262.3	1547.5	1868.8	2104.6	2301.1	2516.4	2787.3
STD DEVIATION LOGS	848.5	912.4	966.1	1024.3	1127.9	1262.3	1404.6	1547.5	1704.1	1868.8
SKWENESS LOGS	3972.6	4565.3	5061.0	5661.3	6280.5	7047.6	7900.9	8853.6	9853.6	10896.6
STD ERR SKWENESS LOGS	4094.1	4561.2	5061.3	5661.3	6280.5	7047.6	7900.9	8853.6	9853.6	10896.6
SER CORR COEFF LOGS	4094.1	4561.2	5061.3	5661.3	6280.5	7047.6	7900.9	8853.6	9853.6	10896.6
COEFF OF VAR LOGS	4094.1	4561.2	5061.3	5661.3	6280.5	7047.6	7900.9	8853.6	9853.6	10896.6

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1930	119	130	511	243	980	449	539	473	398	115	45.0	76.6	335
1931	492	291	260	675	398	682	577	539	520	122	52.4	225	403
1932	467	542	408	537	626	1071	946	884	906	483	144	171	598
1933	393	1457	751	833	203	465	544	845	1136	682	226	521	673
1934	866	668	1856	1310	432	743	519	424	135	135	67.3	135	609
1935	906	787	717	1072	499	403	387	564	602	302	139	110	542
1936	160	413	407	718	243	519	792	1248	804	230	76.5	176	483
1937	123	85.4	870	124	297	468	659	858	1090	260	144	98.9	424
1938	351	1127	775	582	201	357	874	636	359	409	47.7	44.2	455
1939	206	620	936	784	320	453	634	837	167	70.3	81.1	107	514
1940	371	560	887	362	612	665	542	583	216	57.4	57.4	47.5	414
1941	386	435	548	393	238	234	285	478	319	96.8	54.8	574	337
1942	648	478	731	259	286	327	536	599	852	279	87.6	57.1	429
1943	138	939	883	394	554	482	718	713	666	344	118.6	101	503
1944	297	300	740	365	325	362	558	789	664	140	53.5	501	410
1945	245	567	508	750	563	382	491	1062	484	168	100	424	475
1946	481	818	654	573	423	492	674	988	590	212	100	97.3	557
1947	496	560	1131	740	702	510	823	88.3	590	202	174	174	552
1948	678	1106	735	460	422	293	698	1126	1119	347	291	304	615
1949	369	732	414	193	507	571	698	1150	685	454	196	157	510
1961						535	627	714	524	155	57.5	155	482
1962	523	479	715	865	363	243	709	510	568	318	281	197	482
1963	300	721	748	421	686	314	523	456	394	247	125	149	421
1964	315	751	549	668	380	412	533	846	1219	692	439	405	601
1965	365	568	742	920	771	329	637	587	461	222	146	243	497
1966	352	475	429	543	275	472	666	798	599	424	120	78.3	437
1967	405	605	999	1054	572	389	284	747	771	244	238	462	518
1968	760	488	996	853	917	428	479	682	705	221	238	462	601
1969	578	736	603	732	201	408	625	1013	765	249	90.2	401	535
1970	413	377	498	713	545	391	523	540	536	182	89.6	359	429
1971	364	589	480	938	834	397	444	1054	875	717	177	208	588
1972	374	788	537	651	1125	1250	682	1170	998	733	181	369	736
1973	171	392	972	577	219	275	353	523	493	162	63.6	145	363
1974	431	574	805	1105	453	670	620	877	1338	725	263	92.3	665
1975	50.9	528	768	919	439	428	279	854	802	564	307	163	510
1976	518	962	1556	996	343	428	480	785	645	491	323	157	627
1977	153	388	485	500	325	332	480	785	439	142	141	262	358
1978	270	969	1205	450	365	383	388	524	398	179	190	452	481
1979	151	546	465	222	582	654	516	714	461	286	72.5	87.0	395

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## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1930-1979)

MEAN	386.5	619.8	744.1	644.6	479.6	473.9	571.1	752.2	668.9	314.6	142.2	219.5	502.2
MAXIMUM	906.0	1457.0	1856.0	1310.0	1125.0	1250.0	946.0	1248.0	1338.0	733.0	439.0	574.0	736.0
MINIMUM	50.9	854.4	260.0	124.0	201.0	234.0	279.0	424.0	145.0	70.3	45.0	44.2	335.0
STD DEVIATION	202.74	274.02	317.92	283.71	227.19	205.49	152.43	224.80	281.08	195.48	93.09	150.39	98.60
SKWENESS	0.722	0.784	1.547	0.180	1.033	2.103	0.158	0.516	0.503	0.934	1.318	0.899	0.291
STD ERR SKEW	0.383	0.383	0.383	0.383	0.383	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.383
SER CORR COEFF	0.151	-0.155	-0.040	0.310	-0.088	-0.060	0.007	0.097	-0.128	0.053	0.126	-0.041	0.082
COEFF OF VAR	0.525	0.442	0.427	0.440	0.474	0.434	0.267	0.299	0.420	0.462	0.655	0.685	0.196
MEAN LOGS	2.519	2.743	2.838	2.758	2.636	2.645	2.740	2.858	2.784	2.416	2.072	2.240	2.693
STD DEV LOGS	0.267	0.233	0.172	0.232	0.200	0.159	0.125	0.129	0.203	0.275	0.264	0.307	0.086
SKWENESS LOGS	-0.872	-1.466	0.147	-0.955	0.108	0.733	-0.709	0.085	-0.775	-0.054	0.326	-0.015	-0.107
STD ERR SKEW LOGS	0.383	0.383	0.383	0.383	0.383	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.383
SER CORR LOGS	0.001	-0.053	0.045	0.205	-0.146	-0.060	-0.007	0.100	-0.096	-0.006	0.137	0.015	0.088
COEFF OF VAR LOGS	0.106	0.085	0.061	0.084	0.076	0.060	0.046	0.045	0.073	0.114	0.127	0.137	0.032
% OF AVE FLOW	6.4	10.3	12.4	10.7	8.0	7.9	9.5	12.5	11.1	5.2	2.4	3.6	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1979)

0.99	54.1	94.0	285.5	116.1	153.7	230.2	243.6	367.9	158.5	58.2	33.2	33.4	306.1
0.95	105.5	195.0	364.5	211.5	205.9	263.5	325.7	443.4	257.7	91.1	46.0	54.3	353.7
0.90	144.8	270.6	416.6	280.4	241.2	287.1	374.7	493.9	325.4	115.3	55.5	70.3	381.5
0.80	205.2	381.0	681.5	381.4	293.1	322.8	438.2	560.6	421.5	153.2	70.2	96.0	417.6
0.50	360.6	627.1	681.4	622.7	429.2	422.3	568.8	717.5	645.1	262.1	114.2	174.1	494.5
0.20	558.8	861.2	957.7	902.5	635.5	588.4	703.6	923.8	907.0	444.8	194.7	315.0	582.6
0.10	671.2	957.8	1150.6	1049.9	783.7	718.6	772.6	1050.9	1050.4	584.6	282.3	429.0	631.5
0.04	790.48	1035.1	1405.3	1198.3	983.4	908.3	842.9	1222.1	1201.9	780.7	365.0	596.0	691.7
0.02	865.3	1071.3	1602.8	1286.4	1069.3	886.0	886.0	1343.7	1296.7	939.8	473.7	736.7	731.5
0.01	929.0	1095.7	1807.0	1359.0	1305.6	1248.4	922.7	1464.3	1378.5	1109.4	561.7	891.1	768.9

## STATION 12142000 N.F. SNOQUALMIE RIVER NR SNOQUALMIE FALLS, WA.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31									
YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1931	34.0	34.0	36.0	37.0	40.0	54.0	70.0	128.0	212.0
1932	42.0	42.0	46.0	46.0	51.0	70.0	128.0	172.0	299.0
1933	82.0	83.0	86.0	99.0	125.0	146.0	165.0	277.0	488.0
1934	113.0	116.0	127.0	134.0	152.0	281.0	368.0	488.0	641.0
1935	50.0	50.0	50.0	53.0	58.0	77.0	87.0	102.0	184.0
1936	51.0	53.0	56.0	63.0	101.0	110.0	123.0	151.0	251.0
1937	54.0	55.0	57.0	62.0	76.0	98.0	115.0	115.0	221.0
1938	56.0	57.0	60.0	66.0	73.0	108.0	120.0	194.0	429.0
1939	33.0	34.0	35.0	36.0	41.0	46.0	53.0	90.0	218.0
1940	55.0	57.0	58.0	62.0	76.0	90.0	140.0	215.0	378.0
1941	38.0	38.0	40.0	42.0	43.0	50.0	58.0	74.0	174.0
1942	41.0	42.0	43.0	45.0	51.0	71.0	144.0	233.0	300.0
1943	43.0	43.0	44.0	47.0	53.0	62.0	70.0	120.0	325.0
1944	72.0	73.0	76.0	84.0	91.0	99.0	134.0	201.0	300.0
1945	47.0	48.0	51.0	61.0	69.0	81.0	142.0	240.0	323.0
1946	56.0	56.0	58.0	62.0	69.0	103.0	165.0	214.0	394.0
1947	62.0	64.0	64.0	69.0	76.0	94.0	113.0	231.0	432.0
1948	59.0	59.0	61.0	67.0	79.0	122.0	150.0	228.0	390.0
1949	120.0	120.0	122.0	128.0	145.0	201.0	305.0	319.0	380.0
1962	43.0	44.0	46.0	49.0	56.0	98.0	116.0	185.0	286.0
1963	101.0	104.0	113.0	154.0	177.0	205.0	234.0	254.0	344.0
1964	74.0	77.0	81.0	90.0	111.0	131.0	136.0	180.0	265.0
1965	167.0	172.0	188.0	218.0	296.0	351.0	385.0	391.0	485.0
1966	74.0	75.0	79.0	93.0	120.0	135.0	184.0	227.0	305.0
1967	66.0	67.0	69.0	74.0	77.0	92.0	125.0	219.0	356.0
1968	46.0	46.0	49.0	54.0	61.0	71.0	119.0	234.0	353.0
1969	74.0	75.0	80.0	90.0	129.0	200.0	256.0	330.0	456.0
1970	67.0	70.0	74.0	76.0	81.0	99.0	208.0	277.0	424.0
1971	51.0	51.0	54.0	59.0	81.0	121.0	197.0	241.0	326.0
1972	80.0	83.0	88.0	112.0	149.0	167.0	234.0	358.0	429.0
1973	82.0	84.0	89.0	99.0	122.0	191.0	237.0	264.0	401.0
1974	50.0	50.0	52.0	57.0	59.0	68.0	110.0	184.0	284.0
1975	40.0	40.0	42.0	43.0	50.0	67.0	104.0	202.0	374.0
1976	67.0	69.0	72.0	80.0	119.0	232.0	233.0	358.0	492.0
1977	67.0	69.0	73.0	90.0	93.0	146.0	202.0	223.0	297.0
1978	48.0	48.0	49.0	52.0	66.0	113.0	164.0	180.0	295.0
1979	62.0	63.0	68.0	79.0	114.0	182.0	238.0	239.0	312.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1931-1979)

MEAN	63.9	65.2	68.5	76.5	92.7	125.2	165.7	225.4	343.9
MAXIMUM	167.0	172.0	188.0	218.0	296.0	351.0	385.0	488.0	641.0
MINIMUM	33.0	33.0	35.0	36.0	40.0	46.0	53.0	74.0	174.0
STANDARD DEVIATION	26.78	27.59	30.19	36.47	49.06	67.26	78.48	86.16	96.65
SKWENESS	1.994	1.989	2.096	2.008	2.179	1.508	1.085	0.802	0.706
STD. ERROR OF SKWENESS	0.388	0.388	0.388	0.388	0.388	0.388	0.388	0.388	0.388
SERIAL CORR COEFF	0.102	0.107	0.110	0.119	0.139	0.072	0.024	0.031	-0.036
COEFF OF VARIATION	0.419	0.423	0.441	0.476	0.529	0.537	0.474	0.382	0.281
MEAN LOGS	1.776	1.784	1.804	1.846	1.921	2.045	2.174	2.321	2.520
STD DEVIATION LOGS	0.155	0.157	0.161	0.176	0.195	0.211	0.204	0.175	0.123
SKWENESS LOGS	0.762	0.735	0.787	0.670	0.542	0.352	-0.132	-0.553	-0.211
STD ERR SKWENESS LOGS	0.388	0.388	0.388	0.388	0.388	0.388	0.388	0.388	0.388
SER CORR COEFF LOGS	0.141	0.142	0.150	0.162	0.178	0.181	0.089	0.052	-0.050
COEFF OF VAR LOGS	0.087	0.088	0.089	0.095	0.102	0.103	0.094	0.076	0.049

STATION 12142000 N.F. SNOQUALMIE RIVER NR SNOQUALMIE FALLS, WA.

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1931-1979)

0.99	166.0	170.1	185.3	218.2	282.9	389.8	425.4	453.7	611.8
0.98	142.4	146.0	157.6	184.8	238.0	329.7	378.8	423.8	573.1
0.96	121.2	124.2	133.0	155.0	198.0	275.2	332.4	390.9	531.9
0.90	96.2	98.5	104.4	120.3	151.4	210.3	270.6	340.8	472.4
0.80	79.0	80.8	85.0	96.7	119.7	165.4	222.2	295.6	421.0
0.50	57.1	58.2	60.6	67.1	80.1	107.9	150.7	217.1	334.2
0.20	44.0	44.6	46.3	49.6	56.7	73.3	100.8	151.2	261.6
0.10	39.3	39.7	41.3	43.4	48.4	60.8	81.2	122.4	228.9
0.05	36.2	36.5	37.9	39.3	42.9	52.5	67.7	101.6	204.3
0.02	33.4	33.6	35.0	35.6	37.9	44.9	55.0	81.4	179.3
0.01	31.9	31.9	33.3	33.5	35.1	40.6	47.8	69.6	164.0

FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1931-1979)

P95	P90	P75	P70	P50	P25	P10
70.0	96.0	190.0	220.0	360.0	640.0	1000.0

STATION 12142000 N.F. SNOQUALMIE RIVER NR SNOQUALMIE FALLS, WA.												
HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30												
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA		
										FLOW (CFS)	DATE	REG. (R)
1930	2640.	1650.	1550.	1140.	931.	698.	643.	602.	548.	4930.	02/01/30	
1931	2890.	2110.	1540.	1030.	823.	683.	659.	632.	566.	4430.	01/28/31	
1932	5900.	3860.	2320.	1650.	1350.	1190.	1090.	1050.	850.	15800.	02/26/32	
1933	4870.	3650.	2370.	1840.	1590.	1160.	1090.	878.	719.	10100.	11/17/32	
1934	4590.	3990.	2860.	2590.	2050.	1650.	1290.	1240.	1010.	10300.	11/02/33	
1935	9580.	6030.	3160.	2150.	1400.	1060.	888.	944.	756.	13400.	10/25/34	
1936	2560.	1890.	1570.	1420.	1270.	1180.	974.	862.	736.	3540.	05/16/36	
1937	2400.	1870.	1530.	1230.	1090.	981.	878.	772.	604.	4340.	12/06/36	
1938	5630.	3930.	2200.	1380.	1160.	978.	867.	734.	662.	10100.	04/17/38	
1939	3570.	2540.	2000.	1230.	1060.	904.	792.	730.	666.	5230.	12/07/38	
1940	2690.	1960.	1450.	1200.	920.	778.	648.	637.	632.	4070.	11/07/39	
1941	2260.	1770.	1240.	989.	671.	553.	481.	466.	390.	6640.	11/28/40	
1942	2540.	1600.	1380.	1160.	935.	728.	664.	588.	487.	4070.	12/19/41	
1943	5400.	3200.	1790.	1290.	1140.	929.	770.	709.	668.	12000.	11/23/42	
1944	6910.	4140.	2230.	1260.	824.	689.	614.	555.	525.	11400.	12/03/43	
1945	5800.	2720.	1800.	1260.	1060.	832.	694.	638.	631.	13400.	01/07/45	
1946	3910.	2510.	1610.	1320.	1060.	993.	919.	795.	717.	8420.	10/25/45	
1947	5130.	3730.	2900.	1840.	1330.	992.	914.	849.	771.	8720.	12/11/46	
1948	3500.	2300.	1970.	1670.	1410.	1140.	950.	792.	659.	6640.	10/19/47	
1949	2350.	2130.	1850.	1440.	1190.	1010.	865.	825.	694.	5230.	11/23/48	
1950										11000.	11/27/49	
1951										13200.	02/09/51	
1952										4400.	02/04/52	
1953										6340.	01/23/53	
1954										9520.	12/09/53	
1956										12200.	12/11/55	
1957										6860.	12/09/56	
1959										7220.	11/12/58	
1960										13700.	11/22/59	
1961										7460.	02/21/61	
1962	4050.	2590.	2220.	1610.	1230.	832.	714.	669.	591.	5370.	01/07/62	
1963	3960.	2730.	1590.	1110.	991.	845.	715.	652.	578.	9700.	11/19/62	
1964	2680.	1910.	1570.	1470.	1330.	1110.	945.	830.	694.	4560.	11/26/63	
1965	4620.	4290.	2670.	1690.	1210.	887.	876.	761.	688.	6590.	01/29/65	
1966	1990.	1640.	1370.	968.	811.	768.	709.	669.	579.	2660.	12/04/65	
1967	3960.	2440.	2070.	1490.	1160.	1070.	952.	850.	691.	4630.	12/13/66	
1968	5540.	4320.	2820.	1580.	1330.	1060.	942.	851.	772.	7900.	01/20/68	
1969	6150.	4230.	2310.	1300.	1150.	912.	817.	731.	629.	9420.	01/05/69	
1970	2300.	1930.	1660.	1230.	872.	667.	638.	592.	565.	3870.	04/09/70	
1971	4050.	2170.	1720.	1500.	1290.	972.	893.	788.	786.	5740.	01/19/71	
1972	5180.	3480.	2080.	1950.	1630.	1290.	1090.	1120.	1030.	8600.	11/04/71	
1973	4370.	2540.	2360.	1750.	1260.	818.	660.	551.	510.	6950.	12/26/72	
1974	4690.	3810.	2450.	1870.	1460.	1120.	984.	915.	885.	5620.	01/15/74	
1975	5840.	4300.	2460.	1570.	1010.	893.	767.	715.	667.	10100.	01/18/75	
1976	7400.	6220.	3720.	2600.	1730.	1380.	1210.	1040.	799.	10200.	12/03/75	
1977	3550.	2450.	1480.	840.	580.	604.	546.	497.	488.	5320.	01/18/77	
1978	6660.	3890.	2580.	2070.	1560.	1140.	910.	770.	632.	10500.	12/02/77	
1979	2860.	2560.	1540.	1000.	824.	647.	641.	642.	544.	4180.	11/08/78	

## STATION 12142000 N.F. SNOQUALMIE RIVER NR SNOQUALMIE FALLS, WA.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1930-1979)

W R C  
ESTIMATESYSTEMATIC  
RECORD

MEAN	4341.3	3028.7	2052.4	1491.8	1178.7	951.1	834.2	761.6	668.7
MAXIMUM	9580.0	6220.0	3720.0	2600.0	2050.0	1650.0	1290.0	1240.0	1030.0
MINIMUM	1990.0	1600.0	1240.0	840.0	671.0	553.0	466.0	390.0	390.0
STANDARD DEVIATION	1711.41	1165.53	569.70	412.66	299.12	229.65	182.91	169.34	134.59
SKEWNESS	0.825	0.939	0.857	0.978	0.616	0.663	0.377	0.755	0.720
STD ERROR OF SKEWNESS	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383
SERIAL CORR COEFF	0.028	0.089	0.075	0.114	0.108	0.077	0.129	0.115	0.074
COEFF OF VARIATION	0.394	0.385	0.278	0.277	0.254	0.241	0.219	0.222	0.201
MEAN LOGS	3.605	3.452	3.297	3.159	3.058	2.966	2.811	2.872	2.817
STD DEVIATION LOGS	0.170	0.160	0.116	0.115	0.110	0.104	0.096	0.094	0.086
SKEWNESS LOGS	0.010	0.268	0.323	0.290	-0.095	-0.045	-0.156	0.125	0.002
STD ERR SKEWNESS LOGS	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383
SER CORR COEFF LOGS	0.071	0.111	0.102	0.064	0.068	0.078	0.135	0.114	0.098
COEFF OF VAR LOGS	0.047	0.046	0.035	0.036	0.036	0.035	0.033	0.033	0.031

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1979)

0.99	1623.4	1292.6	1136.8	824.8	622.0	525.0	474.4	457.8	413.5	2580.4	2520.2
0.95	2116.9	1590.5	1312.1	954.6	747.6	621.3	560.5	524.5	473.3	3488.2	3457.2
0.90	2439.4	1766.7	1423.5	1036.6	823.3	679.2	611.2	564.9	508.6	4092.6	4079.4
0.80	2897.0	2068.5	1578.6	1150.3	924.0	756.1	677.4	619.0	555.0	4962.2	4970.8
0.50	4028.0	2785.1	1953.1	1422.6	1147.3	926.6	819.4	740.8	655.9	7193.6	7193.6
0.20	5606.0	3838.0	2465.8	1791.4	1416.3	1132.6	983.2	892.2	775.2	10282.7	10297.1
0.10	6655.9	4581.7	2808.6	2035.7	1577.6	1256.6	1077.9	985.9	846.0	12366.7	12366.7
0.04	8020.3	5574.6	3247.6	2346.4	1766.9	1402.7	1186.2	1098.9	928.6	15155.7	14985.2
0.02	9039.7	6353.5	3579.7	2580.0	1894.3	1505.5	1260.3	1179.9	986.3	17233.1	16934.6
0.01	10068.0	7166.3	3916.8	2816.0	2025.7	1603.9	1329.7	1258.8	1041.2	19336.7	18881.5

## STATION 12142200 CALLIGAN CREEK NR SNOQUALMIE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1964													
1965	32.1	36.8	82.8	107	78.8	30.4	59.4	67.8	42.9	10.2	5.06	44.0	47.7
1966	32.5	36.4	36.7	37.5	18.4	33.1	76.5	85.3	59.4	40.2	2.84	21.4	38.4
1967	32.7	55.2	93.4	104	64.0	30.6	18.1	79.2	77.2	11.6	0.11	0.00	47.5
1968	42.1	53.7	108	79.9	82.4	35.5	41.8	79.8	66.1	14.2	17.0	48.1	55.6
1969	52.3	65.6	55.6	73.8	10.5	22.7	68.3	111	84.7	21.9	0.73	29.6	49.9
1970	43.5	33.2	48.0	64.9	51.3	33.5	45.4	53.8					

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1965	985.0	1-29-1965
1966	203.0	5- 6-1966
1967	340.0	1-15-1967
1968	876.0	12-25-1967
1969	720.0	1- 5-1969
1970	181.0	1-19-1970

## STATION 12142300 HANCOCK CREEK NR SNOQUALMIE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1964													
1965	32.2	46.8	80.6	85.1	78.4	33.8	68.1	71.5	43.3	11.0	10.3	48.0	48.5
1966	40.6	43.5	42.0	44.9	23.9	46.3	77.7	99.4	64.0	44.3	7.47	23.1	45.1
1967	35.8	59.9	103	112	84.9	38.3	24.6	100	89.1	12.8	2.49	5.72	53.9
1968	58.8	58.5	107	93.5	95.9	44.2	50.5	90.9	69.6	16.1	24.7	54.0	63.5
1969	60.2	71.6	63.5	64.8	15.9	31.8	71.2	114	78.7	22.2	5.00	37.3	53.2
1970	38.8	37.3	52.4	72.7	57.7	45.2	54.3	66.0	50.3	11.0	6.46	34.6	43.8
1971	51.4	68.7	57.3	91.3	87.3	34.9	47.4	132	116	69.9	9.23		

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1965	548.0	1-29-1965
1966	277.0	5- 6-1966
1967	394.0	12-13-1966
1968	910.0	12-25-1967
1969	646.0	1- 5-1969
1970	208.0	1- 9-1970
1971	298.0	1-19-1971
1972	421.0	2-28-1972
1973	310.0	12-26-1972
1974	469.0	1-15-1974
1975	742.0	1-17-1975
1976	586.0	12- 3-1975
1977	388.0	1-18-1977
1978	535.0	12- 2-1977
1979	370.0	3- 6-1979

## ANNUAL PEAK FLOW STATISTICS (YEARS 1965-1979)

W R C	SYSTEMATIC
ESTIMATE	RECORD
2.6433	2.6433
0.1734	0.1734
0.0	-0.003

MEAN LOGS  
STANDARD DEVIATION LOGS  
SKEWNESS LOGSANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1965-1979)

173.7	173.6
228.1	228.0
263.7	263.6
314.3	314.3
439.8	439.9
615.4	615.5
733.6	733.5
884.7	884.3
998.4	997.7
1113.2	1112.2



## STATION 12143000 N.F. SNOQUALMIE RIVER NEAR NORTH BEND, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1907													
1908	189	672	770	466	353							320	
1909	358	664	576	917	594	420	657	959	1357	477	197	159	
1910	373		1173	773	630	1636	1241	1169	577	527	174	229	620
1911	973	1367	713	511	242	379	438	954	769	202	81.2	82.8	
1912	203	1765	760	1001	823	223	466	1018	734	374	247	407	605
1913	377	944			575				1232	714	190	404	666
1914	861	849	312	979	754	1039	1002	934	804	283	186.6	310	683
1915	601	1106	352	520	472	654	986	657	403	294	112	91.9	520
1916	691	840	954	380	1113	1414	933	990	1234	975	286	245	520
1917	129	731	476	653	977	1325	850	1203	1858	1171	271	143	728
1918	195	393	2891	1600	861	652	825	871	755	208	389	115	728
1919	685	670	1246	1180	469	493	1017	1050	706	358	130	155	682
1920	287	1184	882	1236	410	522	638	771	788	255	110	721	650
1921	911	661	800	1064	1073	898	702	1165	1244	484	149	439	812
1922	551	907	1522	251	210	264	702	1261	1261	277	131	363	666
1923	459	459	947	1345	416	566	930	1026	999	372	123	80.4	649
1925	815	958	1240	1094	1073	522	952	1085	652	193	96.1	77.9	728
1926	235	624	1705	822	826	714	549	610	306	125	135	300	578
1929							560	1428	1276	334	107	78.0	
1930	157	184	651	351	1242	971	751	649	567	180	69.7	101	450
1931	569	408	366	898	612	701	854	751	669	189	83.2	306	552
1932	626	756	599	759	928	1548	1511	1396	1370	695	197	241	884
1933	840	2246	1075	1159	281	693	756	1154	1529	827	283	695	963
1934	1159	1043	2555	1859	662	954	775	642	212	119	76.6	166	857
1935	1051	1269	1087	1493	797	621	668	877	834	466	200	156	699
1936	222	603	704	1140	372	769	1152	1671	1060	319	115	242	634
1937	167	125	1202	229	428	792	1026	1319	1551	374	216	168	636
1938	497	1813	1126	907	333	555	1210	1003	498	143	71.6	70.5	686
1961	704	1270	696	1057	1475	856	1443	1147	764	214	75.7	203	786
1962	724	667	972	1271	518	334	993	742	789	428	400	267	676
1963	407	941	1014	584	936	464	749	643	556	352	174	181	580
1964	388	1032	774	933	568	596	781	1178	1733	875	576	563	890
1965	510	734	1063	1335	1092	482	855	833	618	277	184	325	690
1966	462	596	587	704	393	645	952	1102	795	566	159	112	591
1967	485	757	1306	1427	819	555	388	1102	992	588	81.3	82.7	684
1968	887	680	1218	1288	930	630	718	984	981	312	329	614	837
1969	764	993	862	1014	297	529	893	1399	919	337	164	523	737
1970	562	518	718	1044	792	564	738	828	755	230	109	497	611
1971	551	870	750	1379	1211	580	636	1475	1220	971	234		

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1907-1971)

MEAN	542.8	872.9	995.9	962.5	708.3	678.8	842.6	1031.9	933.2	414.5	177.8	273.1	699.5
MAXIMUM	1159.0	2246.0	2891.0	1859.0	1475.0	1636.0	1511.0	1671.0	1858.0	1171.0	576.0	721.0	963.0
MINIMUM	129.0	125.0	312.0	229.0	210.0	223.0	388.0	610.0	212.0	119.0	69.7	70.5	450.0
STD DEVIATION	272.18	430.39	529.76	387.93	331.16	319.34	230.57	272.14	387.65	257.12	106.44	179.82	113.17
SKWENESS	0.330	1.194	1.950	-0.040	0.425	1.533	0.462	0.383	0.472	1.382	1.790	0.931	0.192
STD ERR SKEW	0.383	0.388	0.388	0.388	0.383	0.388	0.388	0.388	0.383	0.378	0.374	0.378	0.403
SER CORR COEFF	0.151	0.115	0.057	0.164	-0.238	-0.141	0.014	-0.152	-0.169	0.046	0.015	0.184	0.273
COEFF OF VAR	0.501	0.493	0.532	0.403	0.468	0.470	0.274	0.264	0.435	0.620	0.599	0.659	0.162
MEAN LOGS	2.670	2.885	2.949	2.939	2.799	2.791	2.909	2.999	2.929	2.587	2.188	2.341	2.839
STD DEV LOGS	0.255	0.241	0.208	0.218	0.221	0.189	0.124	0.116	0.202	0.248	0.228	0.299	0.071
SKEWNESS LOGS	-0.590	-1.133	0.104	-1.098	-0.339	0.099	-0.525	-0.187	-0.794	0.249	0.438	-0.060	-0.267
STD ERR SKEW LOGS	0.383	0.388	0.388	0.388	0.383	0.388	0.388	0.388	0.383	0.378	0.374	0.378	0.403
SER CORR LOGS	0.168	0.095	0.170	0.051	-0.215	-0.167	0.044	-0.151	-0.196	-0.046	0.045	0.159	0.270
COEFF OF VAR LOGS	0.096	0.083	0.070	0.074	0.079	0.068	0.043	0.039	0.069	0.097	0.104	0.128	0.025
% DF AVE FLOW	6.4	10.4	11.8	11.4	8.4	8.0	10.0	12.2	11.1	4.9	2.1	3.2	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1907-1971)

0.99	93.2	137.1	302.9	184.7	170.0	231.7	374.2	519.3	221.8	103.6	53.9	42.9	456.4
0.95	163.2	267.9	410.4	335.8	260.3	305.8	487.4	634.7	361.2	143.5	69.7	68.9	520.8
0.90	214.6	365.1	484.0	443.1	322.9	355.4	555.2	704.5	456.1	172.2	81.0	90.4	557.2
0.80	292.6	509.2	592.7	597.3	414.6	427.6	644.0	797.4	590.6	216.5	98.4	123.2	602.9
0.50	495.8	850.9	881.2	950.0	648.1	613.6	831.6	1003.6	902.4	343.7	148.4	220.8	695.6
0.20	774.5	1228.3	1325.5	1328.7	972.6	889.4	1036.4	1251.3	1264.2	564.4	236.4	392.1	794.2
0.10	948.3	1413.8	1648.6	1513.4	1103.8	1084.4	1147.3	1399.1	1460.7	741.6	308.3	527.3	847.8
0.04	1151.3	1588.6	2037.9	1687.6	1493.1	1433.7	1266.5	1571.8	1666.8	1002.5	416.4	721.1	906.2
0.02	1290.1	1685.2	2437.0	1794.6	1629.9	1546.0	1343.1	1691.9	1794.6	1225.2	510.6	881.3	944.6
0.01	1418.6	1760.4	2804.3	1860.5	1811.2	1755.9	1411.3	1806.1	1904.4	1473.4	617.5	1054.4	979.4

## STATION 12143000 N.F. SNOQUALMIE RIVER NEAR NORTH HEND, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1911	56.0	56.0	62.0	71.0	75.0	78.0	118.0	224.0	503.0
1912	83.0	83.0	87.0	93.0	104.0	171.0	243.0	249.0	437.0
1915	59.0	59.0	61.0	64.0	74.0	109.0	211.0	309.0	452.0
1916	71.0	73.0	76.0	80.0	92.0	99.0	163.0	212.0	341.0
1917	81.0	83.0	87.0	87.0	113.0	179.0	213.0	332.0	415.0
1918	88.0	90.0	94.0	111.0	116.0	143.0	226.0	266.0	607.0
1919	79.0	80.0	81.0	84.0	102.0	207.0	226.0	266.0	467.0
1920	76.0	80.0	83.0	83.0	105.0	134.0	227.0	266.0	432.0
1921	71.0	72.0	74.0	77.0	92.0	139.0	289.0	407.0	514.0
1922	117.0	119.0	129.0	141.0	147.0	190.0	366.0	597.0	597.0
1923	89.0	93.0	98.0	109.0	125.0	190.0	230.0	359.0	359.0
1926	56.0	56.0	57.0	58.0	61.0	74.0	118.0	303.0	303.0
1930	59.0	60.0	60.0	63.0	75.0	88.0	112.0	250.0	250.0
1931	54.0	54.0	55.0	57.0	62.0	80.0	104.0	281.0	281.0
1932	65.0	66.0	68.0	72.0	79.0	111.0	186.0	400.0	400.0
1933	100.0	100.0	101.0	113.0	174.0	196.0	228.0	415.0	752.0
1934	119.0	122.0	134.0	146.0	173.0	349.0	487.0	849.0	849.0
1935	54.0	55.0	56.0	58.0	64.0	90.0	107.0	126.0	260.0
1936	85.0	87.0	91.0	94.0	145.0	157.0	177.0	215.0	384.0
1937	86.0	87.0	89.0	94.0	114.0	139.0	162.0	161.0	301.0
1938	101.0	103.0	109.0	120.0	129.0	180.0	288.0	288.0	648.0
1962	57.0	57.0	59.0	63.0	71.0	128.0	152.0	254.0	396.0
1963	136.0	142.0	158.0	214.0	249.0	286.0	319.0	345.0	474.0
1964	99.0	100.0	106.0	115.0	139.0	164.0	176.0	243.0	367.0
1965	241.0	251.0	273.0	322.0	413.0	488.0	530.0	533.0	663.0
1966	104.0	106.0	111.0	123.0	151.0	172.0	239.0	293.0	399.0
1967	96.0	98.0	102.0	107.0	111.0	127.0	166.0	277.0	463.0
1968	57.0	57.0	60.0	65.0	70.0	81.0	137.0	276.0	447.0
1969	121.0	123.0	129.0	140.0	190.0	285.0	356.0	450.0	629.0
1970	80.0	85.0	94.0	97.0	102.0	151.0	300.0	380.0	453.0
1971	65.0	68.0	70.0	75.0	99.0	148.0	260.0	331.0	462.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1911-1971)

MEAN	87.3	89.1	93.8	103.2	123.1	165.6	218.0	289.5	461.5
MAXIMUM	241.0	251.0	273.0	322.0	413.0	488.0	530.0	629.0	849.0
MINIMUM	54.0	54.0	55.0	57.0	61.0	74.0	81.0	118.0	250.0
STANDARD DEVIATION	36.20	37.95	42.23	52.77	68.71	87.55	101.34	114.62	142.24
SKEWNESS	2.696	2.738	2.738	2.754	2.797	2.063	1.549	1.030	0.882
STD ERROR OF SKEWNESS	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421
SERIAL CORR COEFF	0.106	0.099	0.097	0.080	0.086	-0.023	-0.011	0.149	0.092
COEFF OF VARIATION	0.415	0.426	0.450	0.511	0.558	0.529	0.465	0.396	0.308
MEAN LOGS	1.915	1.922	1.942	1.976	2.046	2.173	2.299	2.430	2.645
STD DEVIATION LOGS	0.145	0.148	0.155	0.170	0.186	0.195	0.186	0.172	0.130
SKEWNESS LOGS	1.068	1.055	1.072	1.148	0.990	0.572	0.204	-0.194	0.118
STD ERR SKEWNESS LOGS	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421
SER CORR COEFF LOGS	0.110	0.103	0.110	0.106	0.100	0.037	0.078	0.237	0.129
COEFF OF VAR LOGS	0.076	0.077	0.080	0.086	0.091	0.090	0.081	0.071	0.049

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1911-1971)

	0.99	0.98	0.96	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01
0.99	228.1	236.7	260.8	321.2	404.7	507.7	637.3	809.7	909.7	1011.4	1111.4	1211.4	1311.4	1411.4	1511.4
0.98	193.4	200.2	218.6	262.8	329.7	426.4	501.6	580.9	637.3	701.6	775.9	849.7	923.5	997.3	1071.1
0.96	163.0	168.3	182.1	213.7	266.4	354.1	433.2	522.9	580.9	654.2	728.5	802.8	877.1	951.4	1025.7
0.90	128.4	131.9	141.0	160.2	197.4	270.1	343.2	422.9	480.9	554.2	628.5	702.8	777.1	851.4	925.7
0.80	105.4	108.0	114.2	128.5	153.8	213.5	283.9	354.2	402.8	477.1	551.4	625.7	699.9	774.2	848.5
0.50	77.5	78.8	82.2	88.0	103.7	142.9	196.2	259.5	297.1	354.2	428.5	502.8	577.1	651.4	725.7
0.20	61.9	62.6	64.6	68.0	77.2	101.5	138.4	185.7	213.5	260.8	318.1	375.4	432.7	490.0	547.3
0.10	56.7	57.2	58.9	61.6	68.5	86.9	116.3	153.0	185.7	232.0	288.3	344.6	400.9	457.2	513.5
0.05	53.4	53.8	55.2	57.8	63.1	77.3	101.1	137.4	166.3	213.5	260.8	318.1	375.4	432.7	490.0
0.02	50.6	50.9	52.2	54.6	58.5	68.5	86.7	114.7	143.6	185.7	232.0	288.3	344.6	400.9	457.2
0.01	49.2	49.3	50.6	52.9	56.1	63.6	78.5	101.4	125.7	166.3	213.5	260.8	318.1	375.4	432.7

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1911-1971)

P	P95	P90	P75	P70	P50	P25	P10
99.0	130.0	270.0	310.0	520.0	910.0	1400.0	



## STATION 12143000 N.F. SNOQUALMIE RIVER NEAR NORTH BEND, WASH.

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1909-1978)										
0.99	1973.0	1738.8	1563.4	1205.3	1048.0	857.7	778.2	723.1	650.3	2828.9
0.95	2614.9	2160.3	1812.0	1378.2	1144.3	948.6	864.2	797.0	716.6	3933.0
0.90	3041.9	2436.4	1972.3	1486.8	1211.4	1008.0	917.9	843.5	756.9	4617.4
0.80	3657.4	2830.5	2198.2	1643.9	1311.2	1092.4	991.7	907.6	811.2	5744.3
0.50	5220.0	3821.1	2755.0	2022.1	1577.9	1302.2	1165.2	1059.2	934.7	8662.3
0.20	7482.7	5250.9	3539.8	2547.3	1992.5	1600.2	1394.2	1260.8	1090.2	12340.1
0.10	9048.2	6244.9	4076.8	2902.4	2297.4	1805.0	1542.7	1392.4	1187.4	14879.7
0.04	11094.8	7554.7	4777.3	3361.3	2717.9	2072.8	1728.7	1557.7	1305.8	17207.3
0.02	12666.1	8569.7	5315.9	3711.4	3057.4	2279.3	1866.6	1680.7	1391.4	19014.8
0.01	14275.8	9618.6	5869.7	4069.0	3420.1	2491.9	2004.4	1804.0	1475.4	20708.7

## STATION 12143300 S F SNOQUALMIE R TRIBUTARY NEAR NORTH BEND, WASH.

ANNUAL PEAK FLOW DATA				ANNUAL PEAK FLOW STATISTICS (YEARS 1951-1970)				W R C		SYSTEMATIC RECORD
WATER YEAR	FLOW(CFS)	DATE		MEAN LOGS	STANDARD DEVIATION LOGS	SKEWNESS LOGS	ESTIMATE			
1951	33.0	2-10-1951								
1952	10.0	10-19-1951								
1953	35.0	1-31-1953								
1954	30.0	12-9-1953								
1955	31.0	11-18-1954								
1956	21.0	12-11-1955								
1957	32.0	12-9-1956								
1958	12.0	4-19-1958								
1959	31.0	11-12-1958		0.99			7.3		5.3	
1960	44.0	11-22-1959		0.95			10.1		9.1	
1961	21.0	2-21-1961		0.90			12.1		11.7	
1962	17.0	1-3-1962		0.80			15.0		15.5	
1963	28.0	11-19-1962		0.50			22.5		24.2	
1964	33.0	1-1-1964		0.20			33.9		34.1	
1965	25.0	1-29-1965		0.10			42.0		39.3	
1966	7.4	3-30-1966		0.04			52.8		44.4	
1967	15.0	1-15-1967		0.02			61.2		47.5	
1968	31.0	12-25-1967		0.01			69.8		50.1	
1969	28.0	12-3-1968								
1970	12.0	1-22-1970								

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1951-1970)

## STATION 12143310 SF SNOQUALMIE R TRIBUTARY NO.9 NR NORTH BEND, WASH.

ANNUAL PEAK FLOW DATA				ANNUAL PEAK FLOW STATISTICS (YEARS 1962-1972)				W R C		SYSTEMATIC RECORD
WATER YEAR	FLOW(CFS)	DATE		MEAN LOGS	STANDARD DEVIATION LOGS	SKEWNESS LOGS	ESTIMATE			
1962	15.0	1-3-1962								
1963	16.0	11-19-1962								
1964	31.0	1-1-1964								
1965	19.0	1-29-1965								
1966	9.9	5-6-1966								
1967	8.7	1-15-1967								
1968	21.0	1-20-1968								
1969	29.0	1-5-1969								
1970	9.5	1-22-1970								
1971	24.0	9-2-1971								
1972	24.0	2-28-1972								

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1962-1972)

## STATION 12143400 SF SNUQUALMIE R AB ALICE CR NR GAKCIA, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1961	233	518	183	454	591	328	404	590	494	117	44.2	72.5	333
1962	217	274	396	483	238	125	459	360	366	166	97.9	78.6	272
1963	220	463	417	305	479	204	293	355	192	98.3	62.4	45.8	260
1964	115	379	231	312	182	222	347	611	948	519	212	192	355
1965	203	262	442	467	405	224	435	441	385	138	66.1	72.0	296
1966	133	225	194	267	131	253	520	621	440	219	61.3	38.3	259
1967	183	251	531	532	346	171	171	528	586	157	47.8	39.8	298
1968	344	307	609	507	601	293	262	442	509	106	107	234	348
1969	265	378	265	281	175	193	416	773	517	135	49.3	106	288
1970	165	163	173	319	265	236	326	517	514	117	45.0	101	245
1971	162	303	188	451	426	235	268	796	685	495	111	89.4	350
1972	170	413	278	368	619	715	356	849	750	382	94.5	173	430
1973	86.9	198	547	314	104	204	204	395	261	93.8	41.4	44.8	204
1974	112	227	361	630	240	275	429	631	1208	615	170.4	58.9	414
1975	32.0	228	522	478	188	204	173	636	647	335	129	79.1	305
1976	244	564	1115	551	218	147	327	682	510	324	141	81.7	410
1977	91.4	220	272	260	213	182	378	302	245	164.1	61.2	136	201
1978	125	580	776	161	179	272	282	400	323	106	65.5	165	286
1979	71.9	253	254	87.7	254	392	337	607	329	135	45.6	51.0	234

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1961-1979)

MEAN	167.0	326.6	408.1	380.4	302.9	255.4	336.2	555.6	513.7	227.5	87.0	97.8	304.6
MAXIMUM	344.0	580.0	1115.0	630.0	619.0	715.0	520.0	849.0	1208.0	615.0	212.0	234.0	430.0
MINIMUM	32.0	163.0	173.0	87.7	77.0	125.0	171.0	302.0	192.0	64.1	41.4	38.3	201.0
STD DEVIATION	76.80	127.43	240.10	141.05	170.10	128.54	96.32	157.65	253.24	166.76	48.03	56.57	67.23
SKWENESS	0.393	0.844	1.594	-0.258	0.740	2.755	-0.096	0.172	1.326	1.203	1.281	1.108	0.377
STD ERR SKW	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524
SER CORR COEFF	0.226	-0.324	-0.083	0.248	-0.228	-0.175	-0.212	-0.010	-0.146	-0.024	-0.103	-0.186	-0.378
COEFF OF VAR	0.460	0.390	0.588	0.371	0.561	0.503	0.287	0.284	0.493	0.733	0.552	0.578	0.221
MEAN LOGS	2.169	2.485	2.550	2.542	2.414	2.372	2.508	2.727	2.665	2.260	1.885	1.927	2.474
STD DEV LOGS	0.241	0.161	0.230	0.206	0.256	0.168	0.137	0.129	0.203	0.290	0.217	0.238	0.096
SKWENESS LOGS	-1.104	0.362	0.435	-1.497	-0.219	1.144	-0.720	-0.302	0.145	0.539	0.550	0.299	-0.048
STD ERR SKW LOGS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524
SER CORR LOGS	0.109	-0.297	-0.031	0.477	-0.320	-0.232	-0.241	-0.008	-0.153	-0.042	-0.123	-0.103	-0.399
COEFF OF VAR LOGS	0.111	0.065	0.090	0.081	0.106	0.071	0.055	0.047	0.076	0.128	0.115	0.123	0.039
% OF AVE FLOW	4.6	8.9	11.2	10.4	8.3	7.0	9.2	15.2	14.0	6.2	2.4	2.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDANCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1961-1979)

0.99	26.5	142.1	123.1	71.7	59.7	132.1	131.6	251.3	164.3	50.2	29.4	26.7	176.4
0.95	51.5	172.5	159.6	137.9	94.8	144.1	181.2	320.2	219.0	67.7	36.7	36.1	206.2
0.90	70.1	192.8	185.7	184.9	120.1	153.7	211.4	362.2	256.4	81.0	41.9	42.8	223.9
0.80	97.6	222.3	225.8	250.9	158.9	169.5	251.0	418.2	311.5	102.5	49.9	53.0	247.2
0.50	163.2	298.6	341.8	390.4	264.8	218.9	334.1	541.7	457.6	171.2	73.3	82.3	298.2
0.20	236.4	414.1	546.0	515.7	428.1	313.4	421.5	687.0	682.8	311.3	114.7	132.8	394.9
0.10	273.0	497.7	713.3	565.4	543.9	395.7	466.6	771.5	847.1	440.7	148.9	173.3	394.9
0.04	307.8	611.7	965.1	604.1	696.8	526.4	512.9	867.8	1071.5	656.5	200.9	233.0	437.0
0.02	327.3	702.9	1184.8	621.8	811.9	645.7	541.4	933.4	1250.5	862.4	246.7	283.9	466.4
0.01	342.6	799.4	1434.3	633.5	929.8	787.3	565.7	994.4	1439.5	1113.9	299.1	340.8	494.4

STATION 12143400 SF SNOQUALMIE R AB ALICE CR NR GARCIA, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1962	36.0	36.0	37.0	39.0	43.0	57.0	67.0	109.0	160.0
1963	49.0	50.0	52.0	63.0	67.0	83.0	102.0	130.0	197.0
1964	35.0	35.0	37.0	37.0	40.0	46.0	53.0	69.0	134.0
1965	94.0	97.0	103.0	119.0	146.0	187.0	190.0	198.0	250.0
1966	41.0	41.0	42.0	47.0	57.0	67.0	77.0	97.0	133.0
1967	34.0	34.0	35.0	37.0	38.0	45.0	57.0	103.0	190.0
1968	29.0	29.0	31.0	33.0	40.0	43.0	67.0	122.0	201.0
1969	44.0	45.0	47.0	51.0	65.0	89.0	121.0	163.0	224.0
1970	31.0	33.0	37.0	37.0	38.0	51.0	89.0	107.0	125.0
1971	29.0	30.0	31.0	33.0	41.0	63.0	76.0	101.0	149.0
1972	45.0	46.0	49.0	57.0	62.0	79.0	115.0	193.0	223.0
1973	53.0	56.0	56.0	61.0	67.0	104.0	116.0	128.0	216.0
1974	27.0	28.0	28.0	31.0	33.0	41.0	49.0	70.0	126.0
1975	25.0	25.0	27.0	28.0	31.0	43.0	61.0	110.0	226.0
1976	41.0	42.0	44.0	49.0	65.0	100.0	108.0	183.0	326.0
1977	41.0	41.0	42.0	48.0	54.0	73.0	101.0	124.0	164.0
1978	30.0	30.0	30.0	32.0	37.0	55.0	76.0	88.0	153.0
1979	46.0	46.0	49.0	52.0	65.0	79.0	100.0	99.0	147.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1962-1979)

MEAN	40.6	41.2	43.0	47.4	54.9	72.5	90.3	121.9	185.8
MAXIMUM	94.0	97.0	103.0	119.0	146.0	187.0	190.0	196.0	326.0
MINIMUM	25.0	25.0	27.0	28.0	31.0	41.0	49.0	69.0	125.0
STANDARD DEVIATION	15.60	16.16	17.31	20.83	26.21	34.85	33.91	38.72	52.77
SKEWNESS	2.504	2.574	2.609	2.549	2.614	2.216	1.433	0.823	1.050
STD ERROR OF SKEWNESS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SERIAL CORR COEFF	-0.066	-0.083	-0.085	-0.119	-0.132	-0.132	-0.276	-0.276	-0.156
COEFF OF VARIATION	0.385	0.392	0.403	0.439	0.477	0.481	0.376	0.318	0.284
MEAN LOGS	1.586	1.592	1.609	1.648	1.707	1.824	1.930	2.066	2.254
STD DEVIATION LOGS	0.135	0.137	0.139	0.151	0.163	0.172	0.151	0.133	0.117
SKEWNESS LOGS	1.243	1.301	1.338	1.252	1.169	0.914	0.380	0.219	0.442
STD ERR SKEWNESS LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SER CORR COEFF LOGS	-0.051	-0.074	-0.079	-0.126	-0.158	-0.241	-0.253	-0.275	-0.207
COEFF OF VAR LOGS	0.085	0.086	0.086	0.092	0.095	0.094	0.078	0.065	0.052

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1962-1979)

	0.99	0.98	0.96	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01
0.99	103.7	107.3	114.6	134.6	164.8	216.4	210.1	250.0	365.0						
0.98	87.8	90.4	96.0	111.7	135.8	180.2	186.1	226.8	331.1						
0.96	74.1	75.9	80.1	92.3	111.2	148.8	163.2	204.0	298.2						
0.90	58.5	59.6	62.5	70.9	84.2	113.5	134.4	173.8	255.7						
0.80	48.3	49.0	51.1	57.2	67.1	90.5	113.1	150.3	223.1						
0.50	36.2	36.6	38.0	41.4	47.4	62.9	83.2	115.2	175.9						
0.20	29.6	30.0	31.1	33.2	37.1	47.6	63.2	89.7	142.5						
0.10	27.5	28.0	29.0	30.6	33.8	42.4	55.4	79.2	129.1						
0.05	26.3	26.8	27.8	29.0	31.8	39.1	50.0	71.7	119.5						
0.02	25.2	25.8	26.8	27.8	30.1	36.2	44.8	64.3	110.3						
0.01	24.7	25.3	26.3	27.1	29.3	34.7	41.8	59.9	104.9						

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1962-1979)

P95	P90	P75	P70	P50	P25	P10
45.0	60.0	110.0	130.0	210.0	380.0	650.0

## STATION 12143400 SF SNOQUALMIE R AB ALICE CR NR GARCIA, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30												
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW(CFS)	DATE	ANNUAL PEAK-FLOW DATA REG.(R)
1961	2220.	1370.	907.	747.	681.	565.	503.	495.	474.	3010.	02/21/61	
1962	1790.	1130.	1070.	837.	655.	467.	400.	364.	361.	2660.	04/06/62	
1963	2970.	2150.	1200.	760.	602.	529.	462.	424.	373.	7090.	11/19/62	
1964	1470.	1350.	1230.	1120.	1020.	859.	703.	611.	477.	1920.	11/26/63	
1965	2940.	2550.	1620.	976.	681.	528.	462.	438.	411.	3980.	01/29/65	
1966	1500.	1260.	1050.	763.	630.	587.	541.	479.	383.	1720.	05/06/66	
1967	1670.	1080.	1030.	743.	630.	565.	494.	435.	476.	1960.	12/13/66	
1968	3230.	2590.	1680.	997.	760.	600.	517.	476.	476.	4400.	01/20/68	
1969	2200.	1310.	1050.	925.	895.	680.	576.	492.	380.	3040.	01/05/69	
1970	1220.	1100.	946.	785.	662.	521.	455.	403.	365.	1440.	01/22/70	
1971	1800.	1180.	1000.	889.	806.	746.	669.	568.	509.	2070.	01/19/71	
1972	2890.	1960.	1200.	1070.	991.	816.	680.	708.	638.	3280.	02/28/72	
1973	2320.	1600.	1430.	954.	683.	459.	360.	297.	297.	3610.	12/26/72	
1974	3660.	2610.	1600.	1440.	1220.	959.	821.	725.	613.	5540.	01/15/74	
1975	3140.	2190.	1370.	865.	774.	677.	556.	454.	418.	5380.	01/18/75	
1976	5320.	4540.	2890.	1830.	1160.	883.	755.	649.	523.	6190.	12/02/75	
1977	1700.	1180.	700.	505.	416.	357.	320.	296.	281.	2480.	01/18/77	
1978	4060.	1800.	1800.	1310.	998.	694.	520.	432.	377.	5980.	12/02/77	
1979	1410.	1200.	803.	667.	657.	518.	462.	424.	343.	1850.	11/07/78	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1961-1979)

W R C  
ESTIMATESYSTEMATIC  
RECORD

MEAN	2500.5	1848.9	1293.5	957.0	786.7	634.2	544.2	484.8	426.5			
MAXIMUM	5320.0	4540.0	2890.0	1830.0	1220.0	959.0	821.0	725.0	638.0			
MINIMUM	1220.0	1080.0	700.0	505.0	418.0	357.0	320.0	296.0	281.0			
STANDARD DEVIATION	1071.13	885.39	493.76	304.98	207.59	161.03	133.83	121.69	96.04			
SKWENESS	1.077	1.684	1.966	1.465	0.644	0.465	0.418	0.535	0.766			
STD ERROR OF SKWENESS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524			
SERIAL CORR COEFF	-0.173	-0.186	-0.296	-0.454	-0.425	-0.362	-0.365	-0.432	-0.286			
COEFF OF VARIATION	0.428	0.479	0.382	0.319	0.264	0.245	0.246	0.251	0.225			
MEAN LOGS	3.363	3.229	3.088	2.963	2.882	2.789	2.723	2.673	2.620	3.5023		3.5023
STD DEVIATION LOGS	0.177	0.180	0.143	0.127	0.114	0.109	0.108	0.109	0.095	0.2126		0.2126
SKWENESS LOGS	0.300	0.796	0.791	0.493	-0.024	-0.076	-0.126	-0.056	0.263	0.0		0.1060
STD ERR SKWENESS LOGS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524			
SER CORR COEFF LOGS	-0.188	-0.202	-0.373	-0.522	-0.439	-0.380	-0.372	-0.452	-0.314			
COEFF OF VAR LOGS	0.053	0.056	0.046	0.043	0.039	0.040	0.040	0.041	0.036			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1961-1979)

0.99	981.0	425.4	689.3	517.7	412.6	335.3	290.1	259.9	261.6	1017.9		1057.7
0.95	1226.2	952.3	773.1	593.3	494.5	402.3	348.5	310.3	296.0	1421.0		1442.5
0.90	1390.9	1044.5	832.5	643.1	544.4	462.9	383.5	340.8	317.2	1697.6		1707.5
0.80	1631.4	1187.6	922.4	714.5	611.4	496.9	429.8	381.3	346.0	2105.5		2100.6
0.50	2261.3	1603.0	1171.8	895.8	762.5	617.1	531.5	471.7	412.9	3178.9		3151.6
0.20	3225.9	2337.6	1582.5	1161.8	949.5	763.0	652.4	581.6	499.3	4799.6		4786.6
0.10	3930.3	2942.4	1900.5	1349.8	1064.3	850.9	724.1	648.1	554.5	5953.0		5984.7
0.04	4895.8	3859.9	2358.3	1601.4	1201.5	954.6	807.5	728.6	622.9	7489.9		7623.0
0.02	5670.9	4667.6	2742.8	1799.3	1299.1	1027.5	865.4	781.8	672.9	8687.7		8931.2
0.01	6494.5	5593.4	3166.9	2006.5	1393.4	1097.2	920.3	834.8	722.6	9927.9		10313.1

## STATION 12143500 S.F. SNOQUALMIE RIVER NR GARCIA, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CURIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1910													
1911	521	650	168	212	71.4	111	279	570	438	135	38.6	30.0	279
1912	72.7	1081	240	279	259	65.3	265	712	433	111	41.2	141	306
1913	120	409	189	369	307	108	299	690	717	274	73.9	100	303
1914	418	294	149	415	171	402	514	616	333	111	72.5	89.7	296
1915	209	573	97.6	58.8	86.7	268	553	206	104	76.9	40.2	38.1	192

## STATION 12143700 BOXLEY CREEK NEAR CEDAR FALLS, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1946	1.76	9.77	21.8	24.4	15.0	9.28	7.90	47.0	129	82.4	40.2	3.46	33.3
1947	2.91	2.64	72.3	64.5	62.0	34.3	28.9	31.1	20.0	13.3	6.24	9.67	28.2
1948	0.95	78.4	70.5	70.7	43.3	31.0	11.7	11.5	56.9	72.2	26.1	5.56	39.9
1949	1.87	2.24	19.7	14.0	4.10	5.60	9.37	63.7	76.4	51.9	47.4	23.4	23.4
1950	1.18	4.29	64.9	79.1	45.7	79.5	68.3	62.4	74.2	67.3	45.8	28.9	51.9
1951	13.0	38.1	80.0	72.8	79.5	36.4	13.6	18.0	60.8	38.4	10.1	2.04	38.3
1952	0.68	1.61	13.9	10.7	6.17	9.39	6.48	13.4	20.0	12.8	6.09	1.78	8.61
1953	0.78	0.34	0.25	0.46	10.3	42.1	14.5	21.0	33.1	35.0	27.9	7.59	23.3
1954	0.97	0.52	38.6	79.1	54.2	71.0	46.9	61.3	86.0	84.5	49.4	9.83	48.6
1955	1.62	0.65	5.97	26.5	46.1	33.1	11.7	8.41	53.8	89.0	74.8	40.3	32.6
1956	12.7	31.0	76.9	62.1	25.1	8.04	4.03	49.5	83.1	81.7	58.7	29.8	43.7
1957	4.85	4.81	46.5	55.5	18.6	7.95	7.01	21.7	33.7	26.5	13.9	5.51	20.6
1958	1.84	0.63	0.97	7.47	18.4	19.4	13.0	31.4	29.5	20.3	7.97	1.84	12.7
1959	0.52	34.6	72.5	47.3	42.5	24.7	26.5	35.2	35.8	37.2	32.4	19.7	34.1
1960	34.5	38.9	46.8	22.8	8.48	9.37	9.56	17.1	37.1	35.1	13.9	2.34	23.1
1961	0.69	0.89	19.4	11.2	32.5	54.3	35.2	26.4	40.4	38.9	16.0	2.50	23.2
1962	0.55	0.23	0.60	21.1	19.9	3.86	1.21	20.2	30.6	36.0	25.2	8.61	14.0
1963	2.30	1.97	36.7	54.8	27.8	19.8	6.12	5.99	7.63	11.3	8.53	5.17	16.0
1964	2.40	1.05	7.03	21.9	36.5	28.0	19.5	23.6	50.8	49.0	40.4	18.5	24.9
1965	4.99	3.88	15.0	20.3	37.3	32.5	11.6	13.3	19.4	20.9	16.4	4.77	16.6
1966	0.85	0.28	0.29	1.62	3.21	2.54	1.16	13.3	31.4	19.8	9.95	3.02	9.42
1967	0.64	0.17	8.17	61.0	60.2	24.0	10.6	6.99	26.5	43.5	25.9	6.61	22.7
1968	1.08	9.81	41.2	62.4	46.4	45.2	28.9	21.5	29.9	34.5	13.8	6.00	28.4
1969	16.2	17.7	21.0	18.7	10.2	2.79	3.42	13.8	64.3	48.0	22.1	6.26	20.4
1970	2.69	2.70	1.01	0.89	15.1	10.9	9.52	11.7	21.2	13.6	2.97	0.91	7.59
1971	0.44	0.24	1.76	6.06	72.9	43.2	11.9	28.6	69.2	54.8	42.7	20.6	29.0
1972	5.51	5.46	14.8	9.18	20.0	77.9	41.7	28.3	56.0	51.6	30.9	10.3	29.4
1973	1.65	0.50	0.59	35.8	20.3	3.53	2.72	15.8	41.1	41.7	26.3	6.99	16.4
1974	1.25	0.55	4.18	32.4	77.3	21.8	17.7	48.8	99.1	78.6	48.5	17.8	37.1
1975	3.24	0.80	1.37	29.3	41.0	12.6	5.41	9.04	71.5	65.5	30.8	4.14	22.8
1976	3.32	14.4	83.5	48.0	35.3	13.7	5.86	45.2	73.6	43.5	24.2	16.0	34.0
1977	2.97	0.76	0.50	0.52	1.88	3.13	6.01	20.5	21.9	15.1	5.47	1.87	6.75
1978	1.22	3.03	94.5	22.9	8.17	3.66	5.88	24.4	25.2	11.0	4.47	0.72	17.3
1979	0.54	1.92	2.30	3.74	2.60	8.51	22.5	44.1	43.9	20.5	9.70	3.99	13.7

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1979)

MEAN	3.9	9.3	29.0	32.4	33.6	24.5	15.6	27.5	48.6	42.5	24.8	9.1	25.1
MAXIMUM	34.5	78.4	94.5	79.1	103.0	79.5	68.3	63.7	129.0	89.0	74.8	40.3	51.9
MINIMUM	0.4	0.2	0.3	0.5	1.9	2.5	1.2	6.0	7.6	11.0	3.0	0.7	6.8
STD DEVIATION	6.58	16.69	30.50	25.57	25.33	21.67	14.58	16.48	27.00	23.71	17.31	9.35	11.57
SKENESS	3.557	2.739	0.797	0.462	0.847	1.192	1.988	0.822	0.982	0.472	0.948	1.776	0.453
STD ERR SKEW	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.398	0.403
SER CORR COEFF	-0.156	-0.044	-0.075	-0.024	-0.100	-0.003	-0.178	-0.178	0.055	0.250	0.281	0.091	0.109
COEFF OF VAR	1.686	1.803	1.052	0.788	0.755	0.885	0.934	0.600	0.555	0.558	0.698	1.025	0.462
MEAN LOGS	0.289	1.034	0.997	1.260	1.356	1.199	1.040	1.359	1.619	1.552	1.275	0.759	1.348
STD DEV LOGS	0.466	0.738	0.821	0.616	0.450	0.444	0.376	0.277	0.258	0.276	0.351	0.436	0.226
SKENESS LOGS	0.889	0.380	-0.579	-1.315	-0.855	-0.248	-0.069	-0.235	-0.473	-0.467	-0.447	-0.009	-0.607
STD ERR SKEW LOGS	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.398	0.403
SER CORR LOGS	-0.183	0.082	-0.157	-0.022	-0.066	-0.081	-0.179	-0.283	0.035	0.139	0.110	-0.008	0.050
COEFF OF VAR LOGS	1.612	1.921	0.824	0.469	0.332	0.370	0.362	0.264	0.139	0.178	0.275	0.575	0.168
% OF AVE FLOW	1.3	3.1	9.6	10.8	11.2	8.1	5.2	9.1	16.2	14.1	8.2	3.0	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1979)

0.99	0.3	0.1	0.1	0.2	1.1	1.2	1.4	4.7	8.5	6.7	2.2	0.6	5.3
0.95	0.5	0.2	0.3	1.2	3.3	2.7	2.6	7.7	14.5	11.7	4.5	1.1	8.7
0.90	0.6	0.3	0.8	2.7	5.7	4.2	3.6	10.0	19.0	15.4	6.5	1.6	11.1
0.80	0.8	0.6	2.2	6.6	10.2	6.8	5.3	13.5	25.7	21.2	9.8	2.5	14.7
0.50	1.7	2.2	11.9	24.6	26.3	16.5	11.1	23.4	43.5	37.2	20.0	5.7	23.5
0.20	4.4	9.7	50.2	59.7	55.1	37.6	22.6	39.3	69.1	51.4	37.6	13.4	34.8
0.10	8.2	22.7	96.7	82.0	75.2	56.9	33.0	50.8	85.8	78.0	50.6	20.7	41.6
0.04	16.9	58.6	181.5	104.8	99.5	68.5	48.8	66.2	106.0	98.9	58.4	33.1	49.3
0.02	28.2	111.2	262.8	177.7	116.1	112.4	62.8	78.0	114.2	114.2	81.1	44.8	54.4
0.01	46.0	201.5	358.1	127.7	131.3	141.4	78.5	90.2	134.2	129.3	94.4	58.9	59.1



## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1947	1.6	1.7	1.7	1.8	2.1	2.7	4.5	8.8	32.0
1948	0.6	0.6	0.7	0.8	0.9	1.2	2.6	5.2	11.0
1949	1.5	1.5	1.6	1.6	1.7	2.0	2.9	5.8	7.6
1950	0.9	0.9	1.0	1.0	1.1	1.6	3.3	7.6	24.0
1951	11.0	11.0	11.0	11.0	13.0	18.0	25.0	31.0	44.0
1952	0.4	0.4	0.4	0.4	0.5	0.7	1.3	3.1	5.7
1953	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.4	1.5
1954	0.3	0.3	0.3	0.4	0.4	0.6	1.4	4.8	15.0
1955	0.6	0.6	0.6	0.6	0.6	0.8	1.5	4.2	13.0
1956	4.9	5.0	5.4	5.8	7.9	9.8	24.0	37.0	36.0
1957	1.8	1.8	1.8	1.9	2.5	4.7	8.8	18.0	23.0
1958	0.4	0.4	0.5	0.5	0.6	0.7	1.1	1.9	4.8
1959	0.3	0.3	0.4	0.4	0.5	1.0	2.4	5.1	13.0
1960	6.4	6.5	6.9	7.6	8.5	8.9	13.0	21.0	27.0
1961	0.4	0.4	0.4	0.5	0.5	0.7	1.2	3.4	8.0
1962	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.7	6.3
1963	0.8	0.8	0.9	0.9	1.2	2.1	3.6	7.4	17.0
1964	0.9	0.9	0.9	1.0	1.0	1.4	2.2	3.4	5.8
1965	2.6	2.7	2.9	3.2	3.4	3.9	5.6	10.0	16.0
1966	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.7	1.4
1967	0.0	0.0	0.0	0.0	0.1	0.3	0.7	1.7	6.8
1968	0.0	0.0	0.1	0.2	0.5	1.4	4.3	10.0	18.0
1969	2.0	2.0	2.1	2.2	2.7	6.5	11.0	13.0	14.0
1970	0.6	0.6	0.6	0.6	0.8	0.9	1.4	1.7	4.2
1971	0.1	0.1	0.2	0.2	0.2	0.3	0.4	0.6	1.9
1972	2.4	2.4	2.5	2.6	2.9	5.2	8.1	8.7	12.0
1973	0.3	0.3	0.3	0.3	0.4	0.5	0.8	2.4	10.0
1974	0.3	0.3	0.4	0.4	0.5	0.6	1.1	3.0	11.0
1975	0.3	0.4	0.4	0.5	0.6	0.8	1.7	4.5	14.0
1976	2.6	2.6	2.7	2.8	3.2	3.2	4.9	12.0	31.0
1977	0.4	0.4	0.4	0.4	0.5	0.5	0.6	0.8	1.7
1978	1.1	1.1	1.1	1.2	1.6	1.2	1.6	2.8	8.1
1979	0.4	0.4	0.4	0.4	0.5	0.6	1.0	1.3	1.9

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1979)

MEAN	1.5
MAXIMUM	11.0
MINIMUM	0.0
STANDARD DEVIATION	2.27
SKENNESS	3.045
STD ERROR OF SKENNESS	0.421
SERIAL CORR COEFF	-0.160
COEFF OF VARIATION	1.501
MEAN LOGS	-0.132
STD DEVIATION LOGS	0.498
SKENNESS LOGS	0.446
STD ERR SKENNESS LOGS	0.421
SER CORR COEFF LOGS	-0.152
COEFF OF VAR LOGS	-3.625

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1979)

0.99	16.0	16.3	16.0	13.9	20.6	28.1	44.7	52.7	57.6
0.98	10.5	10.6	10.6	9.8	13.3	18.1	29.8	39.7	49.2
0.96	6.7	6.7	6.8	6.7	8.3	11.4	19.2	28.9	40.7
0.90	3.4	3.4	3.5	3.7	4.2	5.7	10.1	17.5	29.6
0.80	1.9	1.9	2.0	2.1	2.3	3.2	5.7	10.9	21.3
0.50	0.7	0.7	0.7	0.7	0.8	1.2	2.0	4.2	10.3
0.20	0.3	0.3	0.3	0.3	0.3	0.5	0.8	1.6	4.4
0.10	0.2	0.2	0.2	0.1	0.2	0.3	0.5	0.9	2.7
0.05	0.1	0.1	0.1	0.1	0.2	0.2	0.4	0.6	1.7
0.02	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	1.0
0.01	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.7

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1947-1979)						
P95	P90	P75	P70	P50	P25	P10
0.6	1.1	4.2	6.1	17.0	38.0	66.0



STATION 12144+000 S.F. SNOQUALMIE RIVER AT NORTH BEND, WASH.  
MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1907													
1908	121	417	596	361	304					497	171	176	
1909	220	526	416	518	423	378	475	705	807	312	168	109	
1910	184		508	341	288	1117	717	609		128	109	152	419
1911	574	929	708	388	213	348	412	708	566	213	84.8	76.8	428
1912	144	973	435	739	690	311	450	842	553	223	151	185	473
1913	201	622			530	391			849	412	157	178	
1914	527	499	321	732	476	693	763	710	506	258	117	163	480
1915	321	760	271	286	292	428	659	354	258	181	110	106	334
1916	450	644	660	342	680	961	797	967	1124	798	310	184	659
1917	141	431	358	498	603	313	665	996	1382	866	225	126	549
1918	125	210	2045	1253	745	577	776	763	670	232	246	118	648
1919	448	546	1080	1070	633	544	792	979	817	350	136	122	627
1920	164	775	580	954	666	498	535	584	548	227	122	395	502
1921	629	446	586	965	1103	985	821	1061	1099	486	158	315	719
1922	420	555	1287	279	178	190	503	1081	1040	359	136	160	518
1923	201	306	625	1297	446	484	797	930	931	340	136	96.2	551
1924	192	325	664	625	1283	552	544	797	392	163	106	121	476
1925	441	604	995	973	1116	622	816	995	573	223	108	83.8	626
1926	140	328	993	607	667	690	610	515	220	100	130	210	433
1930	100	92.4	428	262	822	550	687	577	477	224	101	81.5	363
1931	288	273	213	477	484	713	823	794	575	279	115	149	431
1932	333	572	394	681	830	1353	1171	1101	1017	519	259	160	698
1933	402	1622	990	1061	382	549	662	922	1247	625	238	421	761
1934	843	986	2267	1579	771	997	438	592	299	145	169	170	807
1935	632	939	792	1233	718	564	448	733	648	363	165	107	615
1936	126	255	323	708	291	576	827	1267	959	341	157	132	497
1937	118	938.7	699	216	359	580	723	984	1141	423	215	153	473
1938	216	1194	919	784	349	459	954	906	552	195	100	90.0	560
1945													
1946	404	685	584	678	458	583	729	1128	1009	264	134	292	
1947	373	481	1308	852	810	643	829			521	207	136	594
1948	746	1074	762	647	562	471	577	1127	557	278	156	218	601
1949	337	613	569	311	510	622	801	1271	1250	424	235	201	672
1950	463	753	706	617	724	1023			844	480	235	148	562
1951	382	949	477	828	1153	752	735	907					
1952	350	440	712	822	436	291	722	588	744	249	136	155	618
1962	341	750	768	590	812	424	560	552	569	302	209	166	467
1963	211	687	493	744	526	554	677	984	314	218	140	111	462
1964	371	466	778	863	811	474	693	690	1387	781	405	395	648
1965	371	496	778	863	811	474	693	690	539	243	153	147	520
1966	228	383	382	527	329	493	789	934	656	383	154	100	447
1967	290	445	1000	1145	779	475	353	788	810	294	138	103	551
1968	492	515	1015	951	1095	609	579	693	643	261	234	371	620
1969	441	612	625	702	279	431	729	1126	795	353	150	217	540
1970	301	291	400	650	549	454	636	811	764	223	110	178	446
1971	249	496	432	997	1011	535	562	1206	1053	789	260	207	647
1972	327	728	630	863	1203	1516	755	1266	1144	731	237	321	809
1973	175	316	932	658	332	362	406	640	1498	235	129	115	401
1974	213	471	781	1251	783	842	803	1024	1763	940	355		

STATION 12144000 S.F. SNOQUALMIE RIVER AT NORTH BEND, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1907-1974)

MEAN	327.6	589.0	722.9	737.5	627.7	607.5	686.8	861.1	773.9	371.3	172.5	177.9	553.6
MAXIMUM	843.0	1622.0	2267.0	1579.0	1283.0	1516.0	1171.0	1271.0	1763.0	940.0	405.0	421.0	809.0
MINIMUM	100.0	92.4	213.0	218.0	178.0	190.0	353.0	354.0	220.0	100.0	84.8	76.8	334.0
STD DEVIATION	172.47	296.09	404.39	315.90	284.06	269.87	158.28	235.19	342.32	206.98	68.66	87.50	115.01
SKENESS	0.946	1.081	2.056	0.424	0.542	1.530	0.163	0.016	0.605	1.260	1.403	1.422	0.356
STD ERR SKEW	0.347	0.350	0.350	0.350	0.347	0.350	0.357	0.357	0.384	0.347	0.343	0.347	0.365
SER CORR COEFF	0.128	0.221	0.150	0.259	0.027	-0.193	-0.149	0.073	-0.062	0.039	0.054	-0.026	0.202
COEFF OF VAR	0.527	0.503	0.559	0.428	0.453	0.444	0.230	0.262	0.442	0.557	0.398	0.492	0.208
MEAN LOGS	2.456	2.711	2.806	2.824	2.751	2.747	2.825	2.919	2.843	2.511	2.208	2.207	2.734
STD DEV LOGS	0.233	0.246	0.212	0.207	0.210	0.176	0.106	0.122	0.209	0.225	0.155	0.189	0.091
SKENESS LOGS	-0.105	-0.961	0.301	-0.563	-0.331	0.203	-0.622	-0.641	-0.525	0.226	0.568	0.546	-0.104
SER CORR SKEW LOGS	0.347	0.350	0.350	0.350	0.347	0.350	0.357	0.357	0.354	0.347	0.343	0.347	0.365
SER CORR LOGS	0.150	0.238	0.225	0.210	0.019	-0.197	-0.149	0.066	-0.027	0.010	0.145	-0.038	0.196
COEFF OF VAR LOGS	0.095	0.091	0.075	0.073	0.076	0.064	0.038	0.042	0.074	0.030	0.070	0.086	0.033
% OF AVE FLOW	4.9	8.8	10.9	11.1	9.4	9.1	10.3	12.9	11.6	5.6	2.6	2.7	100.0

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MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1907-1974)

0.99	78.6	94.3	229.7	181.4	163.0	230.9	339.9	379.9	189.4	106.1	81.7	69.8	328.0
0.95	116.2	178.5	300.1	284.1	243.8	293.6	430.4	499.9	295.6	143.3	95.4	84.7	382.0
0.90	142.7	240.9	349.0	354.1	299.0	335.4	483.0	571.4	368.1	169.4	104.9	95.1	413.7
0.80	182.4	334.1	422.4	454.5	378.9	395.8	549.9	664.0	472.6	208.9	118.8	110.9	455.1
0.50	288.5	562.3	624.5	696.8	579.0	551.4	685.0	855.4	727.0	318.3	156.1	154.9	544.0
0.20	450.4	833.3	955.8	1002.8	851.8	783.2	823.4	1056.3	1053.6	498.4	215.1	228.7	646.9
0.10	565.5	977.9	1210.9	1184.6	1027.2	948.4	894.4	1160.9	1250.6	637.3	259.5	287.0	706.9
0.04	717.9	1124.6	1575.4	1390.8	1240.9	1170.1	967.8	1269.6	1477.2	835.4	322.0	372.3	775.7
0.02	835.7	1211.9	1876.6	1529.0	1394.0	1344.6	1013.2	1337.3	1631.0	999.8	373.5	445.1	823.0
0.01	956.8	1284.2	2210.0	1655.4	1541.9	1527.3	1052.6	1396.0	1773.0	1178.9	429.3	526.3	867.6

## STATION 12144000 S.F. SNOQUALMIE RIVER AT NORTH BEND, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31									
YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1911	71.0	71.0	71.0	71.0	75.0	80.0	95.0	133.0	286.0
1912	89.0	89.0	89.0	93.0	100.0	124.0	162.0	163.0	299.0
1915	88.0	88.0	96.0	98.0	101.0	134.0	159.0	210.0	312.0
1916	81.0	86.0	88.0	93.0	102.0	108.0	131.0	155.0	223.0
1917	115.0	116.0	117.0	121.0	132.0	159.0	202.0	255.0	318.0
1918	91.0	93.0	92.0	95.0	113.0	121.0	146.0	168.0	438.0
1919	90.0	90.0	92.0	95.0	106.0	167.0	178.0	211.0	374.0
1920	92.0	95.0	97.0	100.0	118.0	119.0	136.0	185.0	336.0
1921	95.0	95.0	96.0	99.0	112.0	141.0	231.0	313.0	362.0
1922	130.0	131.0	133.0	139.0	155.0	182.0	217.0	311.0	489.0
1923	98.0	102.0	104.0	108.0	122.0	140.0	142.0	185.0	252.0
1924	84.0	87.0	89.0	92.0	93.0	104.0	125.0	147.0	286.0
1925	80.0	80.0	81.0	84.0	92.0	103.0	128.0	179.0	297.0
1926	65.0	65.0	66.0	68.0	71.0	80.0	90.0	125.0	241.0
1931	68.0	69.0	74.0	77.0	80.0	86.0	111.0	156.0	191.0
1932	83.0	85.0	88.0	95.0	102.0	131.0	141.0	192.0	303.0
1933	107.0	107.0	108.0	113.0	134.0	165.0	221.0	315.0	572.0
1934	155.0	157.0	165.0	171.0	193.0	268.0	340.0	465.0	665.0
1935	75.0	85.0	87.0	98.0	127.0	145.0	150.0	156.0	277.0
1936	84.0	88.0	89.0	91.0	101.0	111.0	126.0	148.0	220.0
1937	87.0	88.0	89.0	94.0	98.0	106.0	112.0	121.0	237.0
1938	96.0	97.0	99.0	107.0	117.0	151.0	182.0	224.0	488.0
1947	102.0	105.0	110.0	114.0	117.0	133.0	176.0	259.0	439.0
1948	121.0	121.0	123.0	129.0	141.0	185.0	209.0	285.0	442.0
1949	141.0	144.0	154.0	158.0	192.0	213.0	257.0	270.0	375.0
1950	105.0	109.0	112.0	127.0	145.0	176.0	252.0	304.0	441.0
1962	110.0	110.0	114.0	119.0	130.0	143.0	163.0	217.0	292.0
1963	127.0	130.0	134.0	149.0	156.0	181.0	206.0	237.0	335.0
1964	85.0	85.0	88.0	89.0	95.0	109.0	123.0	151.0	252.0
1965	190.0	197.0	213.0	246.0	285.0	349.0	371.0	381.0	471.0
1966	84.0	95.0	102.0	112.0	135.0	145.0	159.0	185.0	253.0
1967	87.0	88.0	90.0	92.0	97.0	109.0	136.0	199.0	333.0
1968	82.0	82.0	86.0	92.0	103.0	118.0	152.0	221.0	346.0
1969	137.0	139.0	145.0	154.0	174.0	221.0	267.0	309.0	409.0
1970	83.0	86.0	87.0	94.0	106.0	148.0	222.0	233.0	270.0
1971	89.0	89.0	91.0	94.0	103.0	133.0	150.0	179.0	279.0
1972	119.0	120.0	126.0	149.0	155.0	191.0	247.0	376.0	455.0
1973	132.0	135.0	137.0	144.0	165.0	222.0	239.0	250.0	398.0
1974	86.0	87.0	89.0	93.0	102.0	116.0	135.0	164.0	267.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1911-1974)

MEAN	100.3	102.2	105.4	111.7	124.2	149.2	179.2	224.0	346.7
MAXIMUM	190.0	197.0	213.0	246.0	285.0	349.0	371.0	465.0	665.0
MINIMUM	65.0	65.0	66.0	68.0	71.0	80.0	90.0	121.0	191.0
STANDARD DEVIATION	25.85	26.46	28.73	33.21	39.70	53.01	63.09	78.31	103.78
SKEWNESS	1.479	1.567	1.762	2.010	1.994	1.732	1.163	1.093	1.014
STD ERROR OF SKEWNESS	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378
SERIAL CORR COEFF	0.007	0.037	0.039	0.052	0.115	0.064	0.098	0.119	0.200
COEFF OF VARIATION	0.258	0.259	0.272	0.297	0.320	0.355	0.352	0.350	0.299
MEAN LOGS	1.989	1.997	2.010	2.033	2.077	2.151	2.230	2.327	2.523
STD DEVIATION LOGS	0.101	0.101	0.105	0.112	0.121	0.137	0.143	0.142	0.123
SKEWNESS LOGS	0.815	0.835	0.945	0.982	0.827	0.575	0.355	0.393	0.350
STD ERR SKEWNESS LOGS	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378
SER CORR COEFF LOGS	0.090	0.134	0.134	0.155	0.230	0.180	0.378	0.177	0.203
COEFF OF VAR LOGS	0.051	0.051	0.052	0.055	0.058	0.064	0.064	0.061	0.049

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1911-1974)

	0.99	191.8	196.0	209.9	234.1	267.7	336.8	397.3	498.1	692.3
0.98	173.1	176.7	187.5	207.1	236.7	297.6	354.7	444.1	592.3	628.0
0.96	155.4	158.5	166.7	182.3	208.0	261.0	313.8	392.4	565.2	583.3
0.90	133.2	135.7	141.2	152.3	173.0	215.5	261.5	326.6	483.3	420.3
0.80	116.9	119.1	122.9	131.2	148.0	182.5	222.3	277.4	420.3	327.6
0.50	94.5	96.2	98.5	103.5	114.9	137.4	166.4	207.8	327.6	261.4
0.20	79.9	83.3	86.6	94.0	108.0	128.1	160.4	234.4	327.6	234.4
0.10	74.4	77.8	80.6	86.4	96.8	112.9	141.6	215.2	327.6	215.2
0.05	70.6	72.1	74.1	81.3	89.1	102.3	128.6	196.4	327.6	196.4
0.02	67.2	68.7	70.9	76.7	81.8	92.0	116.0	160.7	327.6	160.7
0.01	65.3	66.7	69.1	74.1	77.7	86.0	108.7	185.3	327.6	185.3

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1911-1974)

	P95	P90	P75	P70	P50	P25	P10
	110.0	130.0	230.0	270.0	450.0	720.0	1100.0

## STATION 12144000 S.F. SNOQUALMIE RIVER AT NORTH BEND, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1909	1960.	1550.	1250.	1100.	922.	783.	672.	602.	560.	2040. 06/01/09
1911	4440.	2640.	1530.	1310.	962.	761.	660.	593.	488.	4440. 11/21/10
1912	4740.	3930.	2450.	1550.	1030.	740.	720.	634.	634.	6650. 11/18/11
1914	2450.	2270.	1540.	1020.	806.	753.	690.	649.	2750.	2750. 01/07/14
1915	2050.	1780.	1220.	984.	762.	571.	485.	438.	451.	2670. 11/03/14
1916	2630.	2150.	1650.	1310.	1170.	1050.	1000.	1010.	892.	3150. 06/16/17
1917	2010.	1880.	1620.	1520.	1400.	1260.	1130.	987.	805.	2200. 12/18/17
1918	5100.	4330.	3640.	2940.	2540.	1760.	1370.	1190.	1050.	6780. 12/14/18
1919	4500.	3520.	2600.	1770.	1210.	1090.	939.	877.	856.	5820. 11/15/19
1920	2770.	2620.	1670.	1520.	1170.	911.	811.	748.	671.	3570. 12/30/20
1921	3940.	3150.	2180.	1480.	1280.	1110.	1080.	1050.	1030.	4410. 12/12/21
1922	6460.	4910.	2870.	2100.	1430.	1070.	886.	756.	608.	6780. 01/07/23
1923	4080.	3710.	2780.	1870.	1620.	1070.	897.	834.	868.	5500. 02/12/24
1924	5040.	3000.	1980.	1630.	1300.	989.	869.	806.	746.	6460. 12/12/24
1925	3720.	3100.	2340.	1670.	1300.	1190.	1050.	936.	923.	4540. 12/23/25
1926	2360.	1790.	1260.	1130.	1010.	812.	759.	741.	680.	3160. 02/19/30
1930	1730.	1460.	1210.	937.	792.	684.	682.	657.	579.	2810. 01/28/31
1931	2350.	1670.	1180.	897.	874.	785.	738.	652.	652.	7600. 02/26/32
1932	5360.	4060.	2510.	1960.	1630.	1440.	1330.	1260.	1040.	7100. 11/13/32
1933	5980.	3530.	3210.	2210.	1800.	1390.	1270.	1060.	883.	7430. 12/22/33
1934	5990.	5210.	3770.	3160.	2480.	2000.	1630.	1520.	1300.	7620. 05/16/36
1935	6300.	3800.	2890.	1990.	1310.	1090.	994.	920.	850.	2420. 06/18/38
1936	2000.	1670.	1470.	1400.	1310.	1230.	1040.	920.	776.	5410. 10/25/45
1937	1900.	1650.	1460.	1220.	1140.	1060.	956.	851.	697.	5200. 12/11/46
1938	4330.	3060.	2220.	1490.	1300.	1130.	989.	827.	798.	4320. 11/24/48
1945	3240.	2220.	1580.	1190.	1160.	1090.	998.	871.	792.	5190. 02/21/61
1947	4900.	4070.	3170.	1980.	1390.	1110.	1020.	923.	871.	4040. 12/24/61
1948	3110.	2230.	1910.	1720.	1230.	1020.	873.	773.	4320.	9280. 11/20/62
1949	2160.	2020.	1900.	1540.	1290.	1130.	988.	904.	758.	3080. 01/01/64
1950	3750.	2540.	1770.	1320.	1160.	1030.	940.	890.	845.	8350. 01/29/65
1961	3140.	1960.	1720.	1420.	1120.	911.	690.	619.	617.	2280. 05/06/66
1962	4790.	2910.	1740.	1230.	1020.	911.	812.	752.	669.	3720. 12/13/66
1963	2050.	1480.	1710.	1590.	1470.	1250.	1060.	959.	819.	6270. 12/25/67
1964	5300.	4430.	2910.	1790.	1270.	910.	852.	779.	728.	5560. 01/05/69
1965	2080.	1750.	1490.	1110.	947.	881.	813.	741.	634.	2380. 01/23/70
1966	3120.	2130.	1890.	1390.	1190.	1130.	1010.	934.	874.	3870. 02/28/72
1967	5220.	4030.	2620.	1590.	1310.	1140.	1060.	936.	857.	5540. 12/26/72
1968	4490.	2820.	1740.	1290.	1260.	1010.	895.	800.	684.	7390. 01/15/74
1969	1960.	1640.	1430.	1120.	969.	810.	742.	674.	645.	8780. 12/01/75
1970	1960.	1890.	1630.	1590.	1370.	1140.	1030.	917.	925.	1600. 12/01/75
1971	2990.	5830.	3770.	2480.	1860.	1460.	1270.	1160.	1270.	3620. 01/18/77
1972	5830.	3770.	2480.	2200.	1650.	822.	675.	592.	578.	12400. 12/02/77
1973	3750.	2610.	2400.	1650.	1230.	822.	675.	592.	578.	
1974										
1975										
1976										
1977										
1978										

## STATION 12144000 S.F. SHOQUALMTE RIVER AT NORTH BEND, WASH.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1909-1978)

	MEAN	3715.5	2793.8	2063.1	1572.0	1287.5	1063.5	943.9	862.0	776.5		W R C • ESTIMATE	SYSTEMATIC RECORD
MAXIMUM		6460.0	5210.0	3770.0	3160.0	2540.0	2000.0	1630.0	1520.0	1300.0			
MINIMUM		1730.0	1460.0	1180.0	937.0	762.0	571.0	485.0	438.0	451.0			
STANDARD DEVIATION		1441.43	1023.53	678.77	472.90	371.00	274.67	219.04	204.33	174.60			
SKEWNESS		0.263	0.594	0.799	1.462	1.711	1.189	0.743	0.888	0.759			
STD ERROR OF SKEWNESS		0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365			
SERIAL CORR COEFF		0.127	0.129	0.272	0.383	0.321	0.346	0.349	0.243	0.122			
COEFF OF VARIATION		0.388	0.366	0.329	0.301	0.288	0.258	0.232	0.237	0.225			
MEAN LOGS		3.536	3.418	3.293	3.180	3.095	3.014	2.964	2.924	2.880		3.6705	
STD DEVIATION LOGS		0.177	0.157	0.137	0.119	0.112	0.107	0.100	0.101	0.096		0.2067	
SKEWNESS LOGS		-0.140	0.155	0.292	0.533	0.638	0.204	-0.127	-0.065	0.053		-0.0280	
STD ERR SKEWNESS LOGS		0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365			
SER CORR COEFF LOGS		0.113	0.147	0.276	0.421	0.412	0.403	0.347	0.238	0.150			
COEFF OF VAR LOGS		0.050	0.046	0.042	0.038	0.036	0.036	0.034	0.035	0.033			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1909-1978)

	0.99	1276.9	1176.8	1007.3	889.5	770.0	603.7	526.4	482.6	457.5		1499.6
0.95		1730.0	1468.6	1199.4	1006.7	855.7	698.3	624.3	569.6	529.0		2114.8
0.90		2026.5	1658.4	1323.6	1084.0	913.1	756.9	682.4	621.7	572.0		2533.1
0.80		2445.9	1927.5	1499.0	1194.8	996.2	836.9	758.7	690.4	629.2		3143.8
0.50		3468.7	2595.7	1932.9	1476.0	1210.2	1023.3	924.3	841.6	756.7		4715.6
0.20		4853.5	3541.9	2547.1	1887.3	1528.3	1266.0	1118.4	1022.2	912.4		7002.5
0.10		5754.5	4189.2	2968.6	2177.2	1755.0	1421.8	1232.1	1129.9	1007.3		8575.9
0.04		6873.0	5030.7	3519.1	2584.2	2060.3	1615.1	1363.4	1256.0	1120.4		10613.2
0.02		7692.1	5675.1	3942.9	2868.1	2301.6	1757.3	1454.0	1344.0	1200.6		12160.0
0.01		8499.8	6334.6	4378.8	3185.8	2595.3	1898.5	1539.5	1427.9	1278.1		13728.0

STATION 12144500 SNOQUALMIE RIVER NEAR SNOQUALMIE, WASH.  
MONTHLY AND ANNUAL MEAN DISCHARGES, IN CURIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1898													
1899	2217	3608	3222	5269	4803	1803	2967	4480	4708	2035	691	1035	
1900				3794	2756	3823	2575	3057	6932				
1903	840	2711	3729	5141	1292	1459	1958	4143	5291	2238	745	2439	2672
1904	2240	3252	3241	3328	1380	1965	4215	3304	3593	1780	585	1059	
1926										536	585	1059	
1927	2852	2302	2740	2448	2776	2051	2784	4729	5294	2033	830	2366	2764
1936												938	
1939	2355	6126	5288	5286	1969	2623	4678	4163	4156	2013	764	3937	3615
1959	3931	6958	4782	1635	2612	2184	3140	4119	3537	1212	829	861	2978
1961	2188	4586	2422	4065	5545	3208	3511	4242	3466	1191	483	789	2952
1962	2295	2386	3607	4272	1927	1367	3419	2765	3035	1802	1325	974	2435
1963	1780	3932	3795	2391	3991	1850	2624	2635	2031	1316	679	594	2288
1964	1295	3616	2635	3656	2238	2322	2925	4381	6792	3989	2263	1991	3173
1965	2069	2629	4233	4870	4208	1939	3279	3226	2746	1398	816	1009	2693
1966	1562	2252	2036	2664	1541	2428	3554	4335	3367	2176	684	429	2257
1967	1742	2515	4913	5276	3203	2052	1478	3723	4269	1513	585	478	2646
1968	3344	2691	5325	4600	4911	2554	2638	3525	3661	1351	1208	2342	3174
1969	2658	3535	3238	3905	1215	1981	3250	5304	4134	1466	624	1507	2744
1970	1935	1710	2391	3695	2765	2117	2894	3221	3376	1144	556	1438	2265
1971	1658	2995	2602	4949	4529	2351	2434	5526	4815	4039	1263	1133	3164
1972	1880	3787	3051	3929	5813	6735	3477	6055	5578	3821	1272	1964	3939
1973	991	1923	4868	3147	1216	1533	1821	2964	2674	1099	551	718	1967
1974	1678	2857	4205	5991	2899	3336	3430	4437	7568	4393	1790	797	3620
1975	455	2437	4102	5157	2228	2257	1559	4499	4691	2868	1470	942	2730
1976	2482	4894	8886	5311	2285	1602	2651	4311	3614	2832	1757	1014	3481
1977	890	1966	2577	2428	1723	1852	3025	2768	2486	861	809	1392	1896
1978	1294	5272	7147	2265	2028	2282	2337	3192	2587	1168	933	2193	2727
1979	854	2714	2729	1162	3135	3438	2719	3992	2585	1534	477	538	2149

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1898-1979)

MEAN	1899.4	3346.2	3910.6	3870.5	2884.2	2427.4	2897.8	4007.9	4066.6	1992.6	950.0	1342.2	2797.8
MAXIMUM	3931.0	6958.0	8886.0	5991.0	5813.0	6735.0	4678.0	6053.0	7568.0	4393.0	2263.0	3937.0	3939.0
MINIMUM	455.0	1710.0	2036.0	1162.0	1215.0	1367.0	1478.0	2635.0	2031.0	536.0	477.0	429.0	1896.0
STD DEVIATION	813.14	1332.00	1543.91	1299.75	1365.65	1072.72	739.83	892.02	1443.15	1053.03	467.05	812.48	545.91
SKENNESS	0.465	1.261	0.598	-0.372	0.744	2.824	0.143	0.353	0.919	1.083	1.315	1.512	0.307
STD ERR SKEW	0.464	0.464	0.464	0.456	0.456	0.456	0.456	0.448	0.448	0.456	0.464	0.456	0.481
SER CORR COEFF	0.188	0.122	-0.214	-0.010	-0.140	-0.233	-0.205	-0.098	-0.171	0.032	-0.040	-0.231	-0.295
COEFF OF VAR	0.428	0.398	0.405	0.336	0.474	0.442	0.255	0.223	0.355	0.528	0.487	0.605	0.195
MEAN LOGS	3.234	3.496	3.564	3.558	3.414	3.357	3.447	3.597	3.585	3.245	2.940	3.061	3.439
STD DEV LOGS	0.214	0.158	0.156	0.176	0.206	0.148	0.119	0.097	0.148	0.221	0.189	0.242	0.085
SKENNESS LOGS	-0.862	0.531	0.630	-1.143	0.045	1.345	-0.705	-0.075	0.262	0.048	0.621	0.256	-0.091
STD ERR SKEW LOGS	0.464	0.464	0.464	0.456	0.456	0.456	0.456	0.448	0.448	0.456	0.464	0.456	0.481
STD CORR LOGS	0.070	-0.041	-0.234	0.061	-0.181	-0.319	-0.211	-0.109	-0.135	-0.031	-0.083	-0.116	-0.307
SER CORR LOGS	0.066	0.045	0.044	0.050	0.060	0.044	0.034	0.027	0.041	0.068	0.064	0.079	0.025
COEFF OF VAR LOGS	5.7	10.0	11.6	11.5	8.6	7.2	8.6	11.9	12.1	5.9	2.9	4.0	100.0
% OF AVE FLOW													

MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1898-1979)

0.99	404.6	1552.6	1877.9	1020.4	875.1	1436.1	1291.6	2294.4	1862.4	546.8	387.4	349.4	1717.1
0.95	689.0	1828.9	2176.3	1669.8	1196.9	1518.9	1701.8	2693.5	2256.6	765.5	463.8	419.6	1978.8
0.90	887.0	2016.8	2382.5	2096.3	1416.2	1590.2	1944.3	2930.8	2513.0	917.3	517.9	572.7	1978.8
0.80	1171.5	2293.8	2690.2	2267.6	1738.4	1712.7	2256.3	3249.3	2877.1	1143.6	600.2	715.7	2330.7
0.50	1838.3	3032.0	3525.5	3897.3	2583.1	2113.6	2891.7	3923.8	3785.9	1751.3	833.1	1123.9	2755.1
0.20	2611.5	4194.0	4793.2	5094.8	3857.6	2899.8	3541.6	4728.8	5087.4	2697.4	1232.2	1825.4	3243.3
0.10	3026.1	5063.8	5902.2	5643.5	4767.1	3586.7	3872.0	5205.2	5988.2	3388.5	1552.8	2384.4	3526.1
0.04	3453.9	6283.2	7368.2	6140.7	5983.7	4674.7	4208.1	5759.4	7172.2	4329.3	2029.2	3204.1	3850.1
0.02	3714.7	7282.8	8587.9	6408.3	6936.0	5669.1	4413.3	6144.4	8088.3	5076.6	2440.5	3900.7	4072.3
0.01	3935.1	8364.2	9923.2	6612.7	7926.0	6644.6	4586.6	6510.0	9034.3	5862.3	2904.4	4674.2	4281.2



## STATION 12144500 SNOQUALMIE RIVER NEAR SNOQUALMIE, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1904	388.0	401.0	494.0	570.0	645.0	1170.0	1680.0	1830.0	2300.0
1960	524.0	517.0	610.0	727.0	727.0	1210.0	1880.0	2370.0	2940.0
1961	88.0	336.0	420.0	498.0	582.0	832.0	951.0	1070.0	2000.0
1962	328.0	353.0	375.0	408.0	472.0	623.0	743.0	1130.0	1530.0
1963	560.0	584.0	584.0	758.0	883.0	1040.0	1250.0	1350.0	1840.0
1964	293.0	389.0	416.0	436.0	496.0	566.0	638.0	866.0	1380.0
1965	961.0	946.0	1070.0	1230.0	1500.0	1880.0	2000.0	2040.0	2580.0
1966	374.0	417.0	443.0	527.0	706.0	808.0	959.0	1150.0	1480.0
1967	253.0	337.0	403.0	412.0	425.0	506.0	642.0	1060.0	1780.0
1968	331.0	371.0	387.0	409.0	478.0	528.0	769.0	1250.0	1890.0
1969	552.0	571.0	593.0	651.0	807.0	1090.0	1410.0	1760.0	2350.0
1970	474.0	477.0	496.0	517.0	539.0	667.0	1140.0	1320.0	1540.0
1971	385.0	394.0	406.0	429.0	513.0	736.0	975.0	1160.0	1720.0
1972	592.0	599.0	627.0	726.0	838.0	995.0	1340.0	1900.0	2460.0
1973	664.0	668.0	676.0	734.0	905.0	1290.0	1380.0	1480.0	2180.0
1974	386.0	392.0	411.0	449.0	455.0	550.0	699.0	968.0	1520.0
1975	390.0	394.0	408.0	416.0	440.0	573.0	797.0	1280.0	2150.0
1976	502.0	515.0	536.0	572.0	733.0	1180.0	1220.0	1800.0	2640.0
1977	507.0	515.0	529.0	609.0	680.0	929.0	1180.0	1320.0	1650.0
1978	453.0	457.0	463.0	554.0	650.0	755.0	944.0	1010.0	1590.0
1979	583.0	585.0	609.0	645.0	814.0	1030.0	1290.0	1260.0	1710.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1904-1979)

MEAN	456.7	491.8	523.6	576.1	675.1	902.8	1132.7	1403.0	1957.6
MAXIMUM	961.0	996.0	1070.0	1230.0	1500.0	1880.0	2000.0	2370.0	2940.0
MINIMUM	88.0	336.0	375.0	408.0	425.0	506.0	638.0	866.0	1380.0
STANDARD DEVIATION	176.50	152.57	156.74	188.04	244.26	336.81	392.43	405.74	437.71
SKENNESS	0.756	1.875	2.225	2.214	1.979	1.151	0.714	0.923	0.679
STD ERROR OF SKENNESS	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
SERIAL CORR COEFF	-0.160	-0.208	-0.233	-0.212	-0.157	-0.190	-0.077	-0.085	-0.062
COEFF OF VARIATION	2.622	0.310	0.299	0.326	0.362	0.373	0.346	0.289	0.224
MEAN LOGS	0.264	0.118	0.110	0.120	0.136	0.154	0.148	0.119	0.094
STD DEVIATION LOGS	-1.706	0.959	1.271	1.177	0.865	0.272	0.130	0.491	0.370
STD ERR SKENNESS LOGS	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
SER CORR COEFF LOGS	-0.057	-0.189	-0.245	-0.227	-0.168	-0.150	-0.083	-0.110	-0.086
COEFF OF VAR LOGS	0.078	0.044	0.041	0.044	0.048	0.053	0.049	0.038	0.029

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1904-1979)

	0.99	0.98	0.96	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01
MEAN	714.0	706.1	692.9	659.8	612.1	553.7	480.4	409.1	375.8	307.8	225.3	166.1	111.8	83.1	83.1
STD	1066.7	938.7	821.6	680.9	582.2	453.7	345.1	265.9	205.9	155.9	105.9	75.9	50.9	35.9	35.9
COEFF OF VAR	1.494	1.330	1.188	1.047	0.947	0.827	0.727	0.654	0.598	0.505	0.469	0.454	0.454	0.429	0.429

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1904-1979)

P	P95	P90	P75	P70	P50	P25	P10
570.0	570.0	740.0	1300.0	1500.0	2200.0	3500.0	5300.0



## STATION 12145500 RAGING RIVER NEAR FALL CITY, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1946	101	378	224	293	291	237	148	53.1	99.4	17.3	13.0	93.3	158
1947	84.9	236	387	254	226	141	171	38.0	78.9	52.5	16.2	17.1	141
1948	266	347	256	306	293	179	164	166	117	47.0	42.5	39.8	187
1949	92.3	314	307	112	328	230	110	97.8	26.2	21.3	14.1	13.1	138
1950	101	224	334	283	410	389	255	99.6	44.9	18.1	22.6	26.4	183
1964				448	191	209	184	129	158	33.9	45.0	96.7	
1965	74.4	245	305	363	194	74.9	119	76.6	28.1	17.5	16.7	17.1	137
1966	49.0	119	142	290	318	210	169	87.5	43.0	52.1	17.7	14.6	115
1967		151	339	433	256	181	129	71.6	28.9	13.2	7.04	13.2	140
1968	67.8	111	263	285	276	188	195	74.2	125	24.0	36.8	66.1	142
1969	105	169	278	279	156	176	162	99.8	83.1	44.7	17.2	63.2	136
1970	66.2	92.2	207	317	150	127	247	79.6	27.0	16.8	12.5	23.6	114
1971	69.9	169	289	458	229	252	146	125	80.1	50.0	15.1	26.6	159
1972	120	275	315	434	476	341	220	87.8	70.6	68.3	18.9	57.0	206
1973	32.2	86.6	307	189	40.4	116	83.4	62.0	61.5				
1974	44.0	281	403	435	330	336	207						
1975	12.4	130	253	384	241	216	149	101	41.2	23.4	35.1	28.0	134
1976	167	260	472	351	201	175	150	68.8	51.5	34.9	51.2	43.3	169
1977	34.6	85.1	124	127	53.7	170	83.0	87.1	63.1	18.6	26.7	57.0	177.8
1978	60.3	252	353	141	135	110	150	109	34.0	21.4	20.9	95.3	123
1979	34.5	224	209	112	327	138	115	47.8	20.2	20.1	10.9	14.7	104

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1979)

MEAN	82.1	207.4	288.4	299.7	245.8	199.8	159.8	88.1	64.1	31.2	22.8	43.4	142.4
MAXIMUM	266.0	378.0	472.0	458.0	470.0	389.0	255.0	156.0	158.0	68.3	51.2	96.7	206.0
MINIMUM	12.4	85.1	12.0	112.0	53.7	74.9	83.0	38.0	20.2	13.2	7.0	13.1	17.8
STD DEVIATION	56.16	88.71	84.49	113.16	103.21	79.38	46.93	30.05	37.79	15.81	12.56	28.74	31.30
SKWENESS	2.020	0.204	0.021	-0.319	0.197	0.904	0.368	0.733	1.001	0.895	1.077	0.708	0.130
STD ERR SKEW	0.512	0.512	0.512	0.501	0.501	0.501	0.501	0.512	0.512	0.512	0.512	0.512	0.536
SER CORR COEFF	-0.039	0.038	-0.559	0.266	-0.140	-0.027	-0.324	-0.199	-0.159	-0.222	0.019	-0.246	-0.009
COEFF OF VAR	0.684	0.428	0.293	0.378	0.420	0.397	0.294	0.341	0.590	0.507	0.552	0.663	0.220
MEAN LOGS	1.829	2.274	2.440	2.439	2.344	2.269	2.185	1.920	1.736	1.445	1.300	1.540	2.143
STD DEV LOGS	0.288	0.205	0.142	0.199	0.226	0.173	0.133	0.152	0.256	0.210	0.226	0.306	0.100
SKWENESS LOGS	-0.440	-0.391	-0.933	-0.934	-1.222	-0.174	-0.378	-0.352	0.068	0.372	0.253	0.021	-0.632
STD ERR SKEW LOGS	0.512	0.512	0.512	0.501	0.501	0.501	0.501	0.512	0.512	0.512	0.512	0.512	0.536
SER CORR LOGS	-0.041	-0.077	-0.509	0.319	-0.049	-0.073	-0.330	-0.142	-0.123	-0.303	-0.007	-0.167	0.005
COEFF OF VAR LOGS	0.157	0.090	0.058	0.062	0.096	0.076	0.061	0.079	0.147	0.145	0.174	0.199	0.047
% OF AVE FLOW	4.7	12.0	16.6	17.3	14.2	11.5	9.2	5.1	3.7	1.8	1.3	2.5	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1979)

0.99	11.7	54.8	103.8	69.9	42.7	70.0	69.2	33.7	14.3	10.3	6.5	6.8	73.3
0.95	21.0	82.3	149.4	116.7	81.8	94.7	89.9	45.3	20.9	13.3	8.8	10.9	91.7
0.90	28.1	101.0	177.5	148.5	110.1	110.7	102.5	52.5	25.7	15.3	10.4	14.1	102.3
0.80	39.3	127.8	214.2	193.3	151.2	133.3	119.3	62.4	33.1	18.4	12.8	19.1	115.7
0.50	70.8	193.9	289.4	294.7	244.8	187.8	156.1	85.0	54.1	27.0	19.5	34.6	142.4
0.20	118.9	281.5	364.0	406.4	342.0	260.1	198.8	112.3	89.3	41.3	30.7	62.6	189.4
0.10	151.9	336.4	399.9	463.7	381.2	306.5	223.3	128.5	116.4	52.5	39.4	85.5	183.2
0.04	193.6	401.9	434.4	520.7	427.7	363.4	250.7	147.1	134.9	68.8	51.9	119.3	197.2
0.02	224.0	448.0	458.3	554.4	449.1	404.6	289.1	186.5	186.5	82.4	62.4	148.1	205.9
0.01	253.9	491.7	470.3	582.0	465.2	444.8	286.1	171.7	220.8	97.5	73.8	180.0	213.4

## STATION 12145500 RAGING RIVER NEAR FALL CITY, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1947	13.0	13.0	13.0	14.0	14.0	16.0	18.0	36.0	48.0
1948	11.0	11.0	11.0	12.0	12.0	14.0	27.0	37.0	54.0
1949	23.0	23.0	25.0	28.0	32.0	40.0	44.0	61.0	82.0
1950	8.8	8.9	9.1	9.5	11.0	13.0	16.0	18.0	38.0
1951	21.0	22.0	24.0	27.0	32.0	34.0	54.0	62.0	88.0
1952	12.0	12.0	12.0	13.0	15.0	15.0	19.0	19.0	33.0
1953	11.0	12.0	13.0	14.0	15.0	16.0	28.0	28.0	43.0
1954	4.4	4.5	4.9	6.0	6.9	9.1	11.0	15.0	33.0
1955	9.9	11.0	11.0	12.0	17.0	25.0	32.0	43.0	70.0
1956	13.0	13.0	14.0	15.0	15.0	18.0	39.0	46.0	59.0
1957	10.0	11.0	11.0	11.0	12.0	14.0	17.0	18.0	34.0
1958	9.5	9.8	11.0	14.0	15.0	19.0	24.0	38.0	60.0
1959	14.0	14.0	15.0	16.0	17.0	21.0	34.0	42.0	52.0
1960	13.0	14.0	14.0	15.0	16.0	25.0	28.0	31.0	55.0
1961	20.0	20.0	21.0	23.0	27.0	36.0	41.0	40.0	44.0
1962	11.0	11.0	11.0	12.0	13.0	17.0	25.0	34.0	49.0
1963	13.0	13.0	13.0	14.0	18.0	21.0	25.0	34.0	51.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1979)

MEAN	12.8	13.1	13.7	15.0	17.1	21.0	27.6	35.4	52.5
MAXIMUM	23.0	23.0	25.0	28.0	32.0	40.0	54.0	62.0	88.0
MINIMUM	4.4	4.5	4.9	6.0	6.9	9.1	11.0	15.0	33.0
STANDARD DEVIATION	4.67	4.67	5.17	5.81	6.91	8.53	11.68	13.64	15.92
SKENNESS	0.856	0.826	1.041	1.205	1.309	1.072	0.728	0.380	0.883
STD ERROR OF SKENNESS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SERIAL CORR COEFF	-0.188	-0.239	-0.298	-0.330	-0.337	-0.270	-0.315	-0.461	-0.422
COEFF OF VARIATION	0.365	0.356	0.378	0.387	0.405	0.406	0.422	0.385	0.303
MEAN LOGS	1.079	1.092	1.109	1.149	1.202	1.291	1.405	1.516	1.703
STD DEVIATION LOGS	0.165	0.162	0.164	0.161	0.164	0.167	0.185	0.181	0.127
SKENNESS LOGS	-0.629	-0.726	-0.379	0.013	0.211	0.248	-0.074	-0.482	0.256
STD ERR SKENNESS LOGS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SER CORR COEFF LOGS	-0.079	-0.153	-0.220	-0.278	-0.324	-0.256	-0.231	-0.431	-0.428
COEFF OF VAR LOGS	0.152	0.148	0.148	0.140	0.136	0.129	0.132	0.120	0.074

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1979)

0.99	24.3	24.1	27.8	33.4	40.6	51.3	67.0	74.6	105.0
0.98	22.9	22.8	25.8	30.2	36.1	45.3	60.0	69.1	95.5
0.96	21.3	21.4	23.6	27.0	31.7	39.6	53.1	63.3	86.2
0.90	18.9	19.2	20.5	22.6	26.0	32.3	43.8	53.5	73.8
0.80	16.6	17.0	17.7	19.2	21.8	26.9	36.5	46.9	64.2
0.50	12.5	12.9	13.1	14.1	15.7	19.3	25.6	33.9	49.8
0.20	8.9	9.2	9.4	10.3	11.5	14.1	17.8	23.4	39.3
0.10	7.3	7.5	7.8	8.8	9.9	12.1	14.7	18.9	35.0
0.05	6.1	6.3	6.6	7.7	8.8	10.7	12.5	15.7	31.9
0.02	4.9	5.0	5.5	6.6	7.7	9.3	10.4	12.6	28.8
0.01	4.2	4.3	4.8	6.0	7.0	8.6	9.2	10.8	27.0

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "PM" PERCENT OF THE TIME (YEARS 1947-1979)

P95	P90	P75	P70	P50	P25	P10
13.0	16.0	32.0	41.0	86.0	180.0	330.0

## STATION 12145500 RAGING RIVER NEAR FALL CITY, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	DATE	REG. (R)
1946	788.	686.	546.	487.	379.	321.	301.	297.	266.	1380.	12/28/45	
1947	1280.	1200.	958.	650.	511.	336.	329.	285.	240.	1650.	12/11/46	
1948	1200.	911.	679.	522.	430.	336.	354.	301.	276.	1850.	10/19/47	
1949	1380.	940.	651.	527.	474.	326.	258.	275.	235.	2200.	02/17/49	
1950	1510.	1070.	786.	692.	529.	440.	410.	375.	317.	2050.	03/04/50	
1951										3430.	02/09/51	
1953										1600.	01/31/53	
1954										2200.	12/09/53	
1955										2400.	02/08/55	
1956										2500.	12/11/55	
1957										1380.	12/09/56	
1958										1290.	01/17/58	
1959										2150.	11/12/58	
1960										2930.	11/22/59	
1961										2300.	11/24/60	
1962										1240.	12/24/61	
1963										1430.	02/03/63	
1965	1630.	1470.	1000.	650.	496.	360.	361.	310.	236.	2040.	01/29/65	
1966	823.	760.	578.	451.	301.	247.	235.	220.	187.	1110.	01/07/66	
1967	1260.	856.	624.	491.	399.	390.	355.	308.	250.	1600.	12/13/66	
1968	1010.	732.	517.	406.	369.	308.	277.	260.	221.	1210.	01/20/68	
1969	1590.	1370.	864.	500.	358.	318.	253.	229.	207.	1980.	01/05/69	
1970	866.	662.	531.	339.	277.	232.	220.	220.	192.	1230.	01/14/70	
1971	1720.	1020.	779.	576.	484.	384.	337.	312.	260.	2120.	01/09/71	
1972	2120.	1530.	1020.	702.	597.	517.	445.	404.	345.	2470.	01/20/72	
1973										1120.	12/26/72	
1974										1310.	02/01/74	
1975	1340.	991.	744.	542.	418.	327.	314.	285.	236.	1920.	01/17/75	
1976	2120.	1830.	1100.	700.	480.	436.	388.	340.	282.	3380.	12/03/75	
1977	441.	340.	253.	191.	172.	140.	123.	123.	112.	764.	11/25/76	
1978	944.	829.	745.	567.	450.	314.	254.	225.	191.	1680.	12/15/77	
1979	750.	621.	578.	420.	355.	249.	214.	218.	184.	1320.	02/06/79	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1946-1979)

W R C  
ESTIMATESYSTEMATIC  
RECORD

MEAN	1265.1	969.9	721.4	533.6	421.2	334.2	302.2	277.1	235.4			
MAXIMUM	2120.0	1830.0	1100.0	702.0	597.0	517.0	445.0	404.0	345.0			
MINIMUM	441.0	340.0	253.0	191.0	172.0	140.0	123.0	123.0	112.0			
STANDARD DEVIATION	465.62	372.13	212.70	126.00	98.16	83.60	79.35	65.56	53.88			
SKWENESS	0.287	0.644	-0.061	-0.924	-0.703	-0.020	-0.276	-0.264	-0.105			
STD ERROR OF SKWENESS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536			
SERIAL CORR COEFF	-0.065	-0.309	-0.354	-0.184	-0.069	-0.133	-0.007	0.115	0.102			
COEFF OF VARIATION	0.368	0.376	0.295	0.236	0.233	0.250	0.263	0.237	0.229			
MEAN LOGS	3.071	2.965	2.837	2.712	2.611	2.509	2.464	2.429	2.360			
STD DEVIATION LOGS	0.175	0.172	0.148	0.130	0.121	0.122	0.131	0.116	0.109			
SKWENESS LOGS	-0.658	-0.543	-1.307	-2.206	-1.764	-1.324	-1.271	-1.320	-1.124			
STD ERR SKWENESS LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536			
SER CORR COEFF LOGS	-0.081	-0.286	-0.331	-0.194	-0.114	-0.154	-0.017	0.093	0.101			
COEFF OF VAR LOGS	0.057	0.058	0.052	0.048	0.046	0.049	0.053	0.048	0.046			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1979)

0.99	381.3	315.0	229.9	170.1	154.5	129.9	111.4	113.4	104.8	778.1	768.5	
0.95	567.5	455.6	356.7	282.9	234.9	187.5	163.3	169.4	141.9	986.6	981.9	
0.90	888.4	546.3	435.6	351.0	282.3	221.5	194.4	189.4	163.3	1119.5	1117.6	
0.80	855.4	671.4	538.2	434.1	340.3	264.1	234.0	221.8	189.9	1304.6	1305.7	
0.50	1231.6	956.7	738.6	568.6	440.6	343.3	309.4	284.5	239.8	1747.6	1752.5	
0.20	1665.5	1296.0	914.2	644.8	510.1	409.0	374.4	336.1	283.4	2340.1	2341.9	
0.10	1905.6	1490.0	986.8	662.6	532.2	435.1	401.3	372.0	302.2	2725.4	2720.3	
0.04	2163.8	1705.5	1047.3	671.2	545.6	435.1	401.3	372.0	302.2	3187.3	3187.3	
0.02	2328.9	1847.6	1077.3	673.6	552.1	466.8	435.1	381.8	327.6	3528.1	3528.1	
0.01	2474.5	1976.2	1098.7	674.6	555.3	474.1	443.3	387.6	334.2	3912.5	3864.0	

## STATION 12146000 PATTERSON CREEK NEAR FALL CITY, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	DCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1947													
1948	37.3	76.1	55.3	73.0	68.5	30.3	35.6	13.5	19.0	10.1	8.57	10.8	43.1
1949	19.3	57.9	51.5	32.0	94.5	39.0	25.4	21.5	29.6	14.5	13.3	16.5	31.6
1950	14.5	30.7	50.2	88.6	83.1	88.9	49.2	27.1	13.8	11.8	11.6	12.7	40.0
1955													
1956	32.1	80.1	101	88.1	40.4	61.2	32.1	17.2	16.5	12.3	8.93	9.47	41.8
1957	28.9	32.0	48.6	26.9	74.0	61.2	33.7	17.0	12.6	9.90	9.27	13.6	29.8
1958	12.3	14.2	29.9	65.8	59.4	33.0	37.5	13.2	9.07	7.36	6.97	8.92	24.6
1959	10.9	36.0	57.5	60.7	46.4	46.4	38.1	26.7	15.6	12.9	9.25	13.5	32.8
1960	19.3	57.7	79.5	45.0	57.4	33.3	39.5	34.1	13.6	9.63	9.60	10.1	34.0
1961	16.4	72.1	37.0	58.5	87.9	50.5	39.0	36.1	14.2	10.5	8.84	11.0	36.4
1962	16.2	20.3	48.6	43.1	21.8	35.2	19.7	17.8	11.1	8.63	9.11	10.7	21.9
1963	12.6	30.1	41.4	30.5	48.9	26.9	34.7	15.4	12.7	10.2	8.61	8.25	23.2
1964	12.4	43.4	47.8	81.5	41.0	45.8	29.4	19.5	35.3	12.4	11.6	14.0	32.8
1965	13.1	40.5	69.0	68.5	75.5	35.1	24.8	15.9	12.2	11.3	11.3	11.3	33.6
1966	13.0	18.5	34.6	64.5	38.0	36.6	30.1	17.8	12.5	11.2	9.24	10.0	24.7
1967	14.0	24.9	74.3	96.7	46.6	39.0	35.0	20.9	13.7	10.2	9.35	8.66	32.8
1968	13.4	16.5	48.9	60.4	51.4	42.1	43.7	19.0	27.3	11.5	11.9	13.8	29.9
1969	24.0	46.1	91.1	77.1	58.0	27.3	29.1	22.5	13.5	11.3	10.1	17.3	35.5
1970	13.5	22.4	50.4	77.1	39.2	34.5	46.2	21.0	12.0	9.95	9.77	12.2	29.0
1971	13.0	23.4	64.0	75.8	47.9	69.0	36.8	24.0	18.1	14.5	10.5	12.3	34.1
1972													

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1947-1972)

MEAN	17.6	39.1	56.9	64.9	56.8	44.0	35.5	22.6	16.4	11.0	9.8	11.6	32.2
MAXIMUM	37.3	80.1	101.0	96.7	94.5	88.9	49.2	43.8	35.3	14.5	13.3	17.3	43.1
MINIMUM	10.9	14.2	29.9	26.9	21.8	26.9	19.7	13.2	9.1	7.4	7.0	8.3	21.9
STD DEVIATION	7.38	20.76	18.84	20.78	19.24	15.96	6.91	7.84	6.70	1.77	1.43	2.50	5.93
SKWENESS	1.636	0.788	0.925	-0.544	0.414	1.387	-0.193	1.328	1.811	0.287	0.674	0.698	0.018
STD ERR SKEW	0.524	0.524	0.524	0.524	0.524	0.512	0.512	0.512	0.512	0.501	0.501	0.501	0.524
SER CORR COEFF	0.233	0.121	-0.292	-0.149	-0.031	0.129	-0.376	-0.010	-0.065	-0.199	-0.112	-0.079	0.117
COEFF OF VAR	0.419	0.531	0.331	0.320	0.338	0.363	0.195	0.346	0.408	0.161	0.145	0.215	0.184
MEAN LOGS	1.217	1.535	1.734	1.786	1.730	1.620	1.542	1.333	1.189	1.036	0.988	1.057	1.500
STD DEV LOGS	0.153	0.230	0.138	0.166	0.155	0.142	0.091	0.137	0.147	0.177	0.062	0.091	0.083
SKWENESS LOGS	1.165	0.101	0.209	-1.038	-0.515	0.685	-0.937	0.593	1.177	-0.223	0.192	0.280	-0.393
STD ERR SKEW LOGS	0.524	0.524	0.524	0.524	0.524	0.512	0.512	0.512	0.512	0.501	0.501	0.501	0.524
SER CORR LOGS	0.240	0.106	-0.284	-0.160	-0.119	0.075	-0.344	-0.013	-0.027	-0.173	-0.082	-0.091	0.119
COEFF OF VAR LOGS	0.126	0.150	0.080	0.093	0.090	0.088	0.059	0.103	0.124	0.068	0.063	0.066	0.055
% OF AVE FLOW	4.6	10.1	14.7	16.8	14.7	11.4	9.2	5.9	4.3	2.8	2.5	3.0	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1972)

0.99	9.8	10.4	27.1	19.0	20.5	23.0	18.7	11.9	9.4	7.2	7.1	7.3	19.3
0.95	10.6	14.6	32.7	29.7	28.4	26.1	23.6	13.6	10.1	8.2	7.8	8.2	22.7
0.90	11.2	17.5	36.3	36.5	33.4	28.3	26.3	14.7	10.7	8.8	8.1	8.8	24.7
0.80	12.2	21.9	41.3	45.8	40.2	31.5	29.7	16.4	11.6	9.5	8.6	9.5	27.1
0.50	15.4	34.0	53.6	65.2	55.3	40.2	35.9	20.9	14.5	10.9	9.7	11.3	32.1
0.20	21.4	53.4	70.6	84.6	72.9	54.0	41.6	27.7	19.8	12.5	11.0	13.5	37.2
0.10	26.4	68.0	82.0	93.8	82.8	64.4	44.2	32.8	24.4	13.3	11.7	15.0	40.0
0.04	34.3	96.8	102.4	102.4	93.8	79.2	46.6	39.7	31.4	14.2	12.6	16.8	43.0
0.02	41.4	104.7	108.0	107.3	101.0	91.3	47.9	45.3	37.6	14.9	13.2	18.1	44.9
0.01	46.7	122.3	119.4	111.1	107.5	104.6	49.0	51.3	44.8	15.4	13.8	19.3	46.6

## STATION 12146000 PATTERSON CREEK NEAR FALL CITY, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1948	7.6	7.6	7.7	7.9	8.3	9.2	9.7	11.0	14.0
1949	11.0	12.0	12.0	12.0	13.0	13.0	14.0	16.0	21.0
1950	8.0	8.1	8.4	8.7	9.1	9.5	10.0	11.0	12.0
1957	7.6	8.0	8.1	8.3	8.5	9.3	10.0	11.0	14.0
1958	8.4	8.4	8.5	8.6	8.8	9.1	9.3	9.8	11.0
1959	6.6	6.7	6.8	6.8	6.9	7.1	7.5	7.9	9.0
1960	8.6	8.7	8.9	9.1	9.2	9.5	11.0	12.0	15.0
1961	8.5	8.5	8.6	8.8	9.0	9.5	9.7	10.0	15.0
1962	8.5	8.6	8.6	8.8	8.8	9.2	9.9	11.0	13.0
1963	7.6	7.7	7.7	7.9	8.4	9.2	9.9	11.0	13.0
1964	7.7	7.8	7.9	8.0	8.2	8.3	8.6	9.1	11.0
1965	9.1	9.2	9.5	10.0	11.0	11.0	12.0	13.0	18.0
1966	11.0	11.0	11.0	11.0	11.0	11.0	12.0	12.0	14.0
1967	8.7	8.8	8.8	9.0	9.0	9.4	10.0	11.0	12.0
1968	8.2	8.2	8.4	8.4	8.6	9.0	9.3	10.0	12.0
1969	8.9	8.9	8.9	9.2	9.8	11.0	12.0	13.0	18.0
1970	9.9	9.9	9.9	9.9	10.0	10.0	11.0	13.0	14.0
1971	8.7	8.7	8.7	8.8	9.5	9.8	10.0	11.0	12.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1948-1971)

MEAN	8.6	8.7	8.8	9.0	9.3	9.6	10.3	11.2	13.7
MAXIMUM	11.0	12.0	12.0	12.0	13.0	13.0	14.0	16.0	21.0
MINIMUM	6.6	6.7	6.8	6.8	6.9	7.1	7.5	7.9	9.0
STANDARD DEVIATION	1.14	1.24	1.21	1.20	1.35	1.27	1.51	1.83	2.97
SKEWNESS	0.844	1.292	1.230	0.968	1.201	0.803	0.708	0.814	0.971
STD ERROR OF SKEWNESS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SERIAL CORR COEFF	-0.012	-0.092	-0.075	-0.035	0.002	0.047	-0.018	0.032	-0.063
COEFF OF VARIATION	0.132	0.142	0.138	0.134	0.132	0.147	0.164	0.032	0.217
MEAN LOGS	0.930	0.936	0.941	0.949	0.964	0.981	1.008	1.043	1.127
STD DEVIATION LOGS	0.056	0.059	0.057	0.056	0.060	0.056	0.063	0.069	0.090
SKEWNESS LOGS	0.454	0.836	0.775	0.489	0.641	0.192	0.220	0.206	0.416
STD ERR SKEWNESS LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SER CORR COEFF LOGS	-0.002	-0.075	-0.060	-0.024	0.020	-0.024	-0.002	0.049	-0.024
COEFF OF VAR LOGS	0.060	0.063	0.061	0.059	0.062	0.057	0.062	0.067	0.080

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1948-1971)

0.99	12.0	12.8	12.7	12.6	13.5	13.2	14.6	16.4	23.1
0.98	11.4	12.0	12.0	12.0	12.8	12.6	13.9	15.6	21.4
0.96	10.9	11.3	11.3	11.4	12.0	12.1	13.2	14.8	19.8
0.90	10.1	10.3	10.4	10.5	11.3	11.3	12.3	13.6	17.6
0.80	9.5	9.6	9.7	9.9	10.3	10.7	11.5	12.6	15.9
0.50	8.4	8.5	8.6	8.8	9.1	9.5	10.1	11.0	13.2
0.20	7.6	7.7	7.8	8.0	8.2	8.6	9.0	9.6	11.2
0.10	7.3	7.4	7.5	7.6	7.8	8.1	8.5	9.0	10.4
0.05	7.0	7.2	7.3	7.3	7.5	7.8	8.1	8.6	9.8
0.02	6.8	7.0	7.1	7.1	7.3	7.4	7.7	8.1	9.2
0.01	6.6	6.9	6.9	6.9	7.1	7.2	7.5	7.8	8.8

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "PM" PERCENT OF THE TIME (YEARS 1948-1971)

P95	P90	P75	P70	P50	P25	P10
8.8	9.6	12.0	13.0	22.0	40.0	71.0





## STATION 12147000 GRIFFIN CREEK NEAR CARNATION, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945	18.2	117	64.4	76.5	87.6	84.6	38.4	11.6	22.6	4.82	3.51	15.8	45.1
1946	18.2	77.5	105	99.5	89.2	37.3	67.2	14.1	20.5	13.9	5.37	5.62	45.6
1947	66.4	123	88.9	119	102	55.6	48.5	58.9	39.2	17.9	14.6	17.0	62.4
1948	26.8	117	75.1	39.8	101	62.0	23.9	20.9	7.40	4.64	3.28	4.12	40.0
1949	14.1	64.0	74.3	87.0	117	114	59.1	33.0	8.72	4.85	4.56	4.77	48.4
1950	24.4	94.1	88.5	87.2	104	45.5	22.9	17.1	11.1	4.22	3.28	4.46	41.8
1951	25.3	36.1	87.5	35.5	51.4	49.9	19.6	13.6	9.94	13.2	3.21	2.90	29.0
1952	3.17	3.98	7.38	10.3	57.9	37.4	46.9	38.2	39.6	7.77	3.25	3.27	29.1
1953	14.7	56.3	111	84.6	87.5	37.6	27.9	12.8	46.3	18.5	6.44	13.2	42.8
1954	7.70	51.7	59.5	50.3	67.9	45.5	70.1	46.8	20.0	20.1	12.2	7.45	38.0
1955	60.2	114	157	124	38.9	98.2	40.8	13.1	15.5	6.73	3.59	5.10	56.7
1956	39.7	55.5	64.0	35.9	104	81.7	53.3	19.6	12.2	6.59	5.52	4.55	39.8
1957	8.34	32.6	57.6	97.0	83.4	40.3	55.1	14.8	4.71	2.05	1.49	2.30	33.0
1958	6.35	62.9	101	142	56.1	70.4	49.8	47.4	24.9	9.11	3.48	12.2	48.9
1959	31.4	112	102	54.1	64.5	34.8	41.8	47.6	14.8	4.18	3.63	4.20	42.7
1960	15.1	99.8	49.7	65.3	129	82.6	79.7	51.5	12.5	5.72	2.92	4.21	49.3
1961	15.2	33.3	84.1	87.6	24.2	59.2	29.5	24.7	16.4	5.14	4.93	5.62	32.7
1962	14.9	50.7	79.4	45.4	57.8	33.4	53.7	19.0	10.8	9.65	4.92	3.88	31.8
1963	8.81	75.7	72.8	115	50.0	70.1	43.8	28.7	57.6	10.2	7.90	18.0	46.5
1964	14.7	53.6	101	124	113	27.5	34.9	22.3	6.50	3.84	3.62	3.82	42.0
1965	7.08	30.5	44.8	94.5	44.9	45.3	34.1	19.8	7.48	10.1	3.40	2.83	28.7
1966	7.03	36.6	118	123	69.5	42.5	34.3	21.9	6.53	2.65	1.62	2.17	38.8
1967	8.52	24.6	107	78.6	64.6	47.4	70.0	23.3	42.8	6.90	6.72	18.8	41.5
1968	37.7	63.8	102	98.5	66.6	38.6	30.1	27.1	18.5	9.04	3.60	10.9	42.1
1969	21.8	29.9	58.6	86.3	46.4	31.1	51.4	19.6	6.39	3.80	3.20	4.57	30.2

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1970)

MEAN	20.7	64.6	82.4	86.1	75.1	54.9	45.1	26.7	19.3	8.3	4.8	7.3	41.1
MAXIMUM	66.4	123.0	157.0	142.0	129.0	114.0	79.7	58.9	57.6	20.1	14.6	18.8	62.4
MINIMUM	3.2	4.0	7.4	35.5	24.2	27.5	19.6	11.6	4.7	2.1	1.5	2.2	28.7
STD DEVIATION	16.07	34.07	29.60	30.18	27.31	22.69	16.10	13.79	14.53	4.94	2.94	5.24	8.55
SKWENESS	1.624	0.342	-0.048	-0.181	0.211	1.091	0.388	1.021	1.302	1.076	2.197	1.157	0.482
STD ERR SKEW	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464
SER CORR COEFF	0.104	0.327	-0.398	-0.292	-0.061	-0.043	-0.326	-0.076	-0.054	0.116	-0.059	-0.116	0.044
COEFF OF VAR	0.777	0.527	0.359	0.350	0.363	0.413	0.357	0.517	0.752	0.596	0.613	0.716	0.208
MEAN LOGS	1.203	1.729	1.872	1.904	1.845	1.708	1.626	1.376	1.180	0.847	0.623	0.770	1.605
STD DEV LOGS	0.321	0.318	0.245	0.176	0.174	0.166	0.163	0.209	0.306	0.257	0.219	0.284	0.090
SKWENESS LOGS	0.006	-1.834	-2.966	-0.796	-0.645	0.485	-0.294	0.413	0.315	-0.019	0.506	0.497	-0.036
STD ERR SKEW LOGS	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464	0.464
SER CORR LOGS	0.089	0.213	-0.253	-0.315	-0.101	-0.083	-0.244	-0.134	-0.016	-0.008	-0.053	-0.061	0.044
COEFF OF VAR LOGS	0.267	0.184	0.131	0.093	0.094	0.097	0.100	0.132	0.259	0.303	0.351	0.369	0.056
% OF AVE FLOW	4.2	13.0	16.6	17.4	15.2	11.1	9.1	5.4	3.9	1.7	1.0	1.5	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1970)

0.99	2.9	4.1	7.6	24.8	23.0	24.1	16.3	9.0	3.5	1.8	1.6	1.6	24.7
0.95	4.7	12.5	24.0	38.0	34.0	28.8	22.2	11.4	5.1	2.6	2.0	2.2	28.5
0.90	6.2	20.5	38.1	46.6	41.1	32.0	25.9	13.1	6.3	3.3	2.3	2.7	30.8
0.80	8.6	33.6	58.5	58.4	50.9	36.8	31.0	15.7	8.3	4.3	2.7	3.4	33.8
0.50	16.0	66.1	93.0	84.6	73.1	49.5	43.0	23.0	14.6	7.0	4.0	5.6	40.3
0.20	29.8	96.0	166.9	113.6	98.6	69.5	58.1	35.2	27.0	11.6	6.3	10.0	47.9
0.10	41.2	106.5	168.5	128.9	112.7	84.6	67.4	44.9	38.1	15.0	8.2	14.0	52.5
0.04	58.4	113.4	168.8	144.6	128.0	105.7	78.2	59.0	55.8	19.7	11.0	20.5	57.8
0.02	73.2	116.0	168.9	154.2	137.8	123.1	85.8	71.0	72.1	23.5	13.5	26.7	61.4
0.01	89.6	117.4	168.9	162.4	146.4	141.9	93.0	84.3	91.4	27.6	16.3	34.1	64.9

## STATION 12147000 GRIFFIN CREEK NEAR CARNATION, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1947	4.5	4.6	4.8	4.8	5.1	5.5	6.0	8.8	12.0
1948	3.4	3.4	3.5	3.7	4.2	5.8	7.1	9.6	15.0
1949	9.9	9.9	10.0	11.0	14.0	14.0	16.0	19.0	27.0
1950	2.6	2.8	2.8	2.9	3.0	3.5	4.0	4.6	8.1
1951	3.8	3.9	4.0	4.1	4.2	4.4	4.6	5.4	13.0
1952	2.8	2.8	2.9	3.0	3.1	3.5	3.9	5.2	8.9
1953	2.5	2.6	2.7	2.7	2.8	3.0	3.1	3.3	4.9
1954	2.4	2.4	2.5	2.7	3.0	3.1	4.0	7.0	18.0
1955	4.4	4.6	4.9	5.3	6.2	6.9	9.1	9.5	17.0
1956	5.3	5.5	5.8	6.0	6.9	8.3	11.0	14.0	26.0
1957	3.0	3.1	3.2	3.4	3.4	3.7	5.0	7.1	9.8
1958	4.0	4.0	4.1	4.1	4.5	4.9	5.3	5.9	9.0
1959	1.3	1.3	1.3	1.4	1.4	1.6	1.9	2.2	4.6
1960	2.5	2.6	3.1	3.2	3.4	4.2	6.7	11.0	20.0
1961	2.6	2.6	2.7	2.9	3.1	3.7	3.8	5.0	15.0
1962	2.4	2.5	2.7	2.8	2.8	3.5	3.8	5.2	11.0
1963	3.1	3.1	3.2	3.3	4.2	4.4	5.2	6.4	11.0
1964	2.7	2.7	3.0	3.1	3.5	4.0	4.6	6.1	9.1
1965	4.7	4.8	5.5	5.6	6.8	8.3	12.0	13.0	23.0
1966	2.9	2.9	3.2	3.2	3.5	3.5	3.7	4.0	7.1
1967	2.1	2.1	2.2	2.4	2.5	2.9	4.0	5.2	7.7
1968	1.2	1.3	1.3	1.3	1.4	1.8	2.1	2.7	6.3
1969	3.0	3.1	3.1	3.2	4.0	6.1	7.9	12.0	22.0
1970	2.2	2.3	2.5	2.8	3.1	3.7	7.4	9.9	14.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1970)

MEAN	3.3	3.4	3.5	3.7	4.2	4.8	5.9	7.6	13.3
MAXIMUM	9.9	9.9	10.0	11.0	14.0	14.0	16.0	19.0	27.0
MINIMUM	1.2	1.3	1.3	1.3	1.4	1.6	1.9	2.2	4.6
STANDARD DEVIATION	1.73	1.73	1.78	1.93	2.52	2.62	3.33	4.04	6.52
SKEWNESS	2.534	2.452	2.218	2.495	2.770	2.130	1.553	1.124	0.712
STD ERROR OF SKEWNESS	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472
SERIAL CORR COEFF	0.021	0.033	0.013	0.022	-0.007	0.027	0.020	-0.004	-0.097
COEFF OF VARIATION	0.524	0.515	0.502	0.521	0.605	0.549	0.563	0.532	0.490
MEAN LOGS	0.476	0.486	0.507	0.526	0.567	0.629	0.716	0.823	1.073
STD DEVIATION LOGS	0.190	0.188	0.190	0.191	0.210	0.205	0.223	0.230	0.218
SKEWNESS LOGS	0.380	0.412	0.218	0.312	0.451	0.343	0.236	-0.102	-0.095
STD ERR SKEWNESS LOGS	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472
SER CORR COEFF LOGS	0.095	0.106	0.076	0.093	0.055	0.041	0.024	-0.023	-0.064
COEFF OF VAR LOGS	0.400	0.386	0.375	0.363	0.371	0.327	0.311	0.280	0.203

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1970)

	P99	P98	P95	P90	P75	P70	P50	P25	P10
0.99	9.4	9.5	9.6	10.3	10.3	13.3	14.4	18.7	22.0
0.98	8.0	8.2	8.3	8.9	8.9	11.2	12.2	15.9	19.2
0.96	6.8	6.9	7.2	7.6	7.6	9.2	10.3	13.3	16.5
0.90	5.3	5.4	5.7	6.0	6.0	7.0	7.9	10.2	13.0
0.80	4.3	4.4	4.6	4.8	4.8	5.5	6.3	8.0	10.4
0.50	2.9	3.0	3.2	3.3	3.3	3.6	4.1	5.1	6.7
0.20	2.1	2.1	2.2	2.3	2.3	2.4	2.8	3.4	4.3
0.10	1.7	1.8	1.9	1.9	1.9	2.0	2.4	2.7	3.4
0.05	1.5	1.6	1.6	1.7	1.7	1.8	2.1	2.3	2.7
0.02	1.3	1.4	1.4	1.5	1.5	1.8	1.9	2.2	2.7
0.01	1.2	1.3	1.2	1.3	1.3	1.4	1.6	1.7	2.2
									3.6

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1947-1970)

P95	P90	P75	P70	P50	P25	P10
3.1	3.8	7.9	10.0	26.0	55.0	100.0

## STATION 12147000 GRIFFIN CREEK NEAR CARNATION, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW (CFS) DATE REG. (R)
1946	193.	176.	143.	133.	117.	90.	86.	87.	78.	209. 02/06/46
1947	284.	253.	204.	166.	138.	106.	109.	94.	79.	306. 12/15/46
1948	420.	300.	247.	203.	150.	118.	123.	108.	95.	522. 10/19/47
1949	367.	256.	185.	143.	103.	99.	78.	84.	69.	393. 02/17/49
1950	355.	274.	190.	172.	152.	124.	113.	101.	87.	462. 03/04/50
1951	536.	410.	245.	150.	111.	101.	103.	94.	74.	738. 02/10/51
1952	233.	182.	152.	103.	90.	63.	60.	56.	49.	248. 12/22/51
1953	182.	170.	146.	128.	122.	81.	68.	62.	53.	200. 01/23/53
1954	315.	239.	194.	164.	124.	104.	97.	86.	67.	343. 01/06/54
1955	242.	190.	132.	94.	72.	67.	66.	60.	61.	257. 02/08/55
1956	348.	321.	238.	194.	179.	154.	135.	117.	102.	393. 02/12/55
1957	372.	311.	212.	170.	126.	97.	79.	76.	68.	382. 02/25/57
1958	323.	245.	180.	136.	109.	95.	81.	72.	61.	347. 01/17/58
1959	405.	325.	218.	167.	146.	124.	108.	98.	83.	473. 01/24/59
1960	620.	433.	297.	179.	163.	110.	96.	85.	69.	658. 11/21/59
1961	330.	267.	204.	156.	131.	105.	97.	92.	86.	388. 11/25/60
1962	490.	392.	239.	148.	136.	92.	70.	65.	54.	800. 01/07/62
1963	234.	197.	167.	124.	93.	79.	68.	61.	54.	243. 12/01/62
1964	254.	196.	145.	132.	116.	98.	92.	82.	72.	302. 01/02/64
1965	761.	615.	363.	234.	170.	126.	116.	99.	75.	1000. 01/29/65
1966	300.	273.	211.	154.	102.	74.	64.	59.	49.	401. 01/06/66
1967	306.	267.	204.	156.	125.	122.	106.	90.	72.	385. 12/13/66
1968	547.	461.	285.	166.	131.	96.	84.	79.	67.	855. 12/25/67
1969	500.	432.	284.	171.	124.	112.	92.	84.	68.	600. 01/05/69
1970	182.	174.	153.	136.	95.	78.	65.	59.	51.	210. 12/25/69
1972										404. 01/20/72
1973										332. 12/26/72
1974										258. 01/24/74
1975										365. 01/17/75
1976										428. 12/03/75
1977										149. 01/18/77
1978										270. 12/15/77
1979										320. 02/12/79

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## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1946-1979)

	W R C ESTIMATE	SYSTEMATIC RECORD
MEAN	2.5734	2.5734
MAXIMUM	0.1922	0.1922
MINIMUM	0.0360	0.3340
STANDARD DEVIATION		
SKENNESS		
STD ERROR OF SKENNESS		
SERIAL CORR COEFF		
COEFF OF VARIATION		
MEAN LOGS		
STD DEVIATION LOGS		
SKENNESS LOGS		
STD ERR SKENNESS LOGS		
SER CORR COEFF LOGS		
COEFF OF VAR LOGS		

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
MEAN	147.5	147.5	137.9	115.7	89.6	69.3	57.9	51.5	47.1	42.5
MAXIMUM	185.4	185.4	163.7	135.3	107.6	84.7	68.0	60.3	55.0	48.9
MINIMUM	210.4	210.4	180.9	147.5	117.8	93.5	74.7	65.6	60.9	52.7
STANDARD DEVIATION	246.1	246.1	205.8	164.1	130.7	104.5	82.7	72.6	67.4	57.7
SKENNESS	336.1	336.1	270.3	202.9	156.4	126.5	99.4	88.1	81.1	68.4
STD ERROR OF SKENNESS	466.5	466.5	367.8	253.6	183.0	148.8	117.9	106.7	96.1	81.1
SERIAL CORR COEFF	557.3	557.3	438.4	286.1	196.8	160.2	128.3	117.9	104.5	88.6
COEFF OF VARIATION	677.1	677.1	534.6	326.5	211.5	172.1	139.9	131.1	113.9	97.3
MEAN LOGS	769.9	769.9	611.6	356.2	220.7	179.5	147.6	140.3	120.1	103.4
STD DEVIATION LOGS	865.8	865.8	693.2	385.6	228.9	185.9	154.8	149.2	125.8	109.1

## STATION 12147500 NORTH FORK TOLT RIVER NEAR CARNATION, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1953	50.5	69.0	221	1160	588	304	409	445	362	191	91.5	111	332
1954	328	459	919	465	554	301	354	398	520	315	198	282	424
1955	194	506	398	315	456	178	315	550	731	496	222	109	376
1956	505	760	747	465	247	320	549	624	520	249	103	182	440
1957	509	504	766	222	370	448	522	484	320	159	112	62.0	373
1958	120	307	440	554	303	257	388	286	159	80.1	48.7	98.7	269
1959	301	799	817	838	376	463	709	599	495	237	114	563	526
1960	536	800	687	329	437	340	436	573	373	142	148	138	411
1961	333	592	380	562	770	476	489	459	248	118	67.1	108	381
1962	370	345	571	703	335	258	502	375	338	180	174	154	359
1963	195	454	581	361	459	265	424	283	242	195	115	126	307
1964	215	517	388	677	550	363	432	429	393	189	175	260	357
1968	363	479	508	565	166	308	441	548	381	173	82.6	257	357
1969	305	268	357	491	462	314	373	298	218	126	126	229	291
1970	287	381	421	785	621	384	380	591	495	340	125	160	413
1971	239	543	445	537	785	898	533	646	487	367	130	205	483
1972	116	234	597	414	212	247	263	305	280	123	71.0	117	249
1973	325	431	601	785	436	516	493	534	632	350	141	80.1	444
1974	324.8	348	534	674	383	350	250	494	426	228	185	108	336
1975	121	645	1065	794	347	259	430	503	376	245	198	126	444
1976	177	590	323	364	228	265	409	381	249	135	142	185	256
1977	177	590	323	364	228	265	409	381	249	135	142	185	256
1978	177	590	323	364	228	265	409	381	249	135	142	185	256
1979	157	394	383	239	480	495	392	389	236	170	66.4	76.1	288

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1953-1979)

MEAN	266.2	464.8	566.7	551.4	437.8	360.3	427.2	455.8	376.8	214.6	127.9	177.4	367.4
MAXIMUM	536.0	800.0	1055.0	1160.0	785.0	898.0	709.0	646.0	731.0	496.0	222.0	563.0	526.0
MINIMUM	50.5	69.0	221.0	222.0	166.0	178.0	250.0	283.0	159.0	80.1	48.7	62.0	249.0
STD DEVIATION	137.80	183.72	207.38	227.24	161.52	147.68	101.56	116.69	145.96	100.39	49.14	111.40	75.37
SKEDNESS	0.349	0.106	0.608	0.774	0.458	2.338	0.604	-0.079	0.637	1.211	0.197	2.104	0.228
STD ERR SKEW	0.481	0.481	0.472	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.491
SER CORR COEFF	-0.011	0.025	-0.471	-0.040	-0.026	-0.143	-0.144	-0.021	0.236	0.204	0.054	-0.160	-0.289
COEFF OF VAR	0.518	0.395	0.366	0.412	0.369	0.410	0.238	0.256	0.387	0.468	0.384	0.628	0.205
MEAN LOGS	2.354	2.623	2.725	2.706	2.611	2.530	2.619	2.644	2.544	2.290	2.073	2.186	2.556
STD DEV LOGS	0.280	0.227	0.163	0.183	0.172	0.147	0.105	0.118	0.172	0.191	0.182	0.229	0.090
SKEDNESS LOGS	-0.945	-1.874	-0.221	-0.184	-0.514	0.952	-0.315	-0.397	-0.162	0.229	-0.426	0.567	-0.145
STD ERR SKEW LOGS	0.481	0.481	0.472	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.491
SER CORR LOGS	-0.154	-0.065	-0.504	0.014	-0.082	-0.132	-0.155	-0.056	0.186	0.146	-0.007	-0.096	-0.297
COEFF OF VAR LOGS	0.119	0.087	0.060	0.068	0.066	0.044	0.044	0.044	0.088	0.088	0.088	0.105	0.035
% OF AVE FLOW	6.0	10.5	12.8	12.5	9.9	8.1	9.7	10.3	8.5	4.8	2.9	4.0	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1953-1979)

0.99	32.9	66.0	209.0	180.3	140.5	195.7	224.4	217.3	132.9	75.5	39.3	56.2	217.0
0.95	67.8	148.6	280.2	248.8	202.0	215.8	273.9	274.5	179.3	97.4	56.7	70.7	253.5
0.90	95.2	211.4	325.8	293.9	241.7	230.7	303.0	308.6	209.5	112.3	68.2	81.3	274.9
0.80	138.0	301.9	399.1	357.9	296.5	254.0	340.9	353.3	251.8	134.2	84.1	97.7	302.6
0.50	249.5	488.8	538.2	514.5	422.1	321.5	421.0	448.7	354.0	191.9	121.8	146.1	361.7
0.20	391.2	634.7	730.1	726.2	572.8	439.0	510.8	555.5	490.3	281.2	169.1	234.4	429.4
0.10	470.2	881.3	849.7	863.3	659.8	533.7	561.1	615.1	577.8	346.6	197.6	309.1	468.3
0.04	552.5	710.6	993.3	1032.7	757.2	674.6	617.2	680.9	685.4	436.4	230.5	424.8	512.6
0.02	602.6	721.1	1095.4	1156.0	822.0	796.3	654.5	724.3	763.5	508.6	253.0	528.4	542.8
0.01	644.6	726.8	1193.7	1277.0	881.0	933.9	688.8	763.8	839.9	585.3	274.0	648.8	571.1

## STATION 12147500 NORTH FORK TOLT RIVER NEAR CARNATION, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1954	51.0	51.0	52.0	54.0	69.0	81.0	121.0	158.0	243.0
1955	107.0	110.0	119.0	130.0	160.0	210.0	223.0	222.0	305.0
1956	90.0	91.0	95.0	100.0	108.0	142.0	223.0	310.0	405.0
1957	48.0	50.0	57.0	67.0	74.0	97.0	153.0	209.0	332.0
1958	50.0	51.0	53.0	55.0	61.0	72.0	89.0	108.0	178.0
1959	39.0	40.0	41.0	42.0	47.0	53.0	71.0	88.0	159.0
1960	92.0	95.0	99.0	101.0	109.0	156.0	236.0	319.0	397.0
1961	71.0	74.0	74.0	78.0	87.0	130.0	154.0	154.0	266.0
1962	52.0	52.0	54.0	56.0	62.0	84.0	121.0	207.0	207.0
1963	74.0	74.0	79.0	95.0	110.0	146.0	160.0	168.0	221.0
1969	90.0	90.0	92.0	101.0	126.0	162.0	189.0	220.0	295.0
1970	60.0	62.0	67.0	72.0	74.0	87.0	152.0	199.0	229.0
1971	53.0	53.0	54.0	55.0	66.0	95.0	120.0	149.0	195.0
1972	75.0	77.0	82.0	93.0	121.0	134.0	158.0	212.0	306.0
1973	85.0	86.0	89.0	95.0	107.0	135.0	149.0	165.0	232.0
1974	53.0	54.0	56.0	63.0	65.0	72.0	97.0	135.0	187.0
1975	44.0	44.0	47.0	47.0	52.0	63.0	80.0	129.0	233.0
1976	61.0	62.0	65.0	69.0	89.0	145.0	143.0	191.0	274.0
1977	68.0	69.0	72.0	86.0	90.0	119.0	142.0	149.0	202.0
1978	57.0	57.0	59.0	63.0	74.0	109.0	146.0	150.0	210.0
1979	75.0	75.0	78.0	83.0	100.0	126.0	157.0	185.0	209.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1954-1979)

MEAN	66.4	67.3	70.7	76.4	88.1	115.1	146.0	176.1	251.7
MAXIMUM	107.0	110.0	119.0	130.0	160.0	210.0	252.0	319.0	405.0
MINIMUM	39.0	40.0	41.0	42.0	47.0	53.0	71.0	86.0	159.0
STANDARD DEVIATION	18.46	18.88	20.03	22.53	28.19	39.07	48.77	58.30	67.51
SKEWNESS	0.549	0.613	0.609	0.498	0.767	0.435	0.606	1.049	0.994
STD ERROR OF SKEWNESS	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
SERIAL CORR COEFF	0.018	0.008	0.007	0.004	0.034	-0.017	0.141	-0.004	0.110
COEFF OF VARIATION	0.278	0.240	0.283	0.295	0.320	0.339	0.334	0.327	0.268
MEAN LOGS	1.807	1.812	1.853	1.865	1.925	2.036	2.141	2.230	2.387
STD DEVIATION LOGS	0.119	0.120	0.121	0.129	0.137	0.154	0.148	0.137	0.110
SKEWNESS LOGS	0.117	0.164	0.166	-0.056	0.071	-0.297	-0.197	0.132	0.509
STD ERR SKEWNESS LOGS	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
SER CORR COEFF LOGS	0.016	0.003	-0.003	-0.002	0.048	0.025	0.142	0.022	0.091
COEFF OF VAR LOGS	0.065	0.066	0.066	0.069	0.071	0.075	0.069	0.061	0.046

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1954-1979)

0.99	124.3	127.4	134.3	144.5	177.9	229.1	290.5	364.2	481.6
0.98	114.6	117.1	123.4	133.7	162.5	212.3	268.3	331.4	437.9
0.96	104.8	106.8	112.4	122.6	147.1	194.6	245.1	298.9	395.5
0.90	91.4	92.8	97.6	107.1	126.2	168.9	212.3	255.3	340.8
0.80	80.6	81.7	85.8	94.2	109.5	147.0	184.7	220.9	299.1
0.50	63.7	64.4	67.6	73.5	83.8	110.6	139.9	168.7	238.7
0.20	50.8	51.4	53.8	57.2	64.4	81.2	104.2	130.1	196.4
0.10	45.2	45.9	48.0	50.0	56.3	68.4	88.8	114.0	179.4
0.05	41.2	41.8	43.7	44.8	50.4	59.1	77.6	102.4	167.4
0.02	37.1	37.8	39.5	39.5	44.5	49.8	66.4	91.0	155.8
0.01	34.6	35.4	36.9	36.3	41.0	44.2	59.7	84.2	149.0

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1954-1979)

P95	P90	P75	P70	P50	P25	P10
70.0	95.0	170.0	190.0	290.0	450.0	690.0

STATION 121+7500 NORTH FORK TOLT RIVER NEAR CARNATION, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1953	4200.	2350.	1750.	1470.	1320.	880.	689.	620.	543.	5850. 01/23/53
1954	3610.	1950.	1420.	1160.	943.	760.	663.	620.	520.	5310. 12/09/53
1955	2480.	1680.	1010.	836.	769.	669.	606.	546.	465.	4640. 02/07/55
1956	3700.	2200.	1220.	1060.	849.	820.	716.	631.	536.	7360. 12/11/55
1957	2290.	1680.	1340.	1150.	788.	847.	619.	509.	502.	3610. 12/09/56
1958	1510.	1300.	904.	709.	583.	547.	499.	464.	417.	2250. 01/16/58
1959	3100.	2410.	1620.	1160.	928.	843.	837.	730.	678.	4360. 11/20/58
1960	5560.	3000.	2030.	1240.	821.	682.	609.	534.	534.	9560. 12/15/59
1961	2990.	2110.	1340.	913.	772.	684.	583.	554.	4130.	4130. 02/21/61
1962	2670.	1720.	1480.	1130.	912.	665.	558.	515.	463.	3920. 01/07/62
1963	2460.	1380.	1160.	756.	673.	602.	471.	431.	7030.	7030. 11/19/62
1968	4500.	2830.	1670.	996.	712.	652.	570.	487.	428.	4210. 12/25/67
1969	1680.	1180.	942.	771.	612.	500.	466.	435.	386.	6540. 01/05/69
1970	2680.	1460.	1280.	1160.	957.	708.	618.	566.	546.	2870. 10/01/69
1971	2690.	1930.	1400.	1290.	1100.	895.	782.	728.	657.	4580. 01/19/71
1972	1980.	1400.	1300.	1030.	785.	519.	430.	379.	347.	5480. 11/04/71
1973	2240.	2010.	1370.	1220.	925.	724.	649.	596.	582.	3310. 12/26/72
1974	3610.	2480.	1520.	1070.	697.	620.	559.	518.	460.	01/24/74
1975	4830.	3470.	2160.	1610.	1130.	998.	855.	746.	608.	01/17/75
1976	1900.	1470.	916.	564.	499.	409.	367.	344.	340.	6160. 12/02/75
1977	2930.	2120.	1550.	1210.	978.	697.	590.	517.	433.	2790. 01/18/77
1978	1650.	1560.	1000.	700.	621.	502.	473.	445.	400.	5560. 12/02/77
1979										2490. 12/24/78

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HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1953-1979)

MEAN	2966.4	1985.9	1376.0	1053.9	844.5	689.2	607.7	548.1	492.3	W R C ESTIMATE	SYSTEMATIC RECORD
MAXIMUM	5560.0	3470.0	2160.0	1610.0	1320.0	998.0	855.0	746.0	678.0		
MINIMUM	1510.0	1180.0	904.0	564.0	454.0	409.0	367.0	344.0	340.0		
STANDARD DEVIATION	1086.79	593.48	337.08	257.18	209.20	147.04	124.90	107.86	92.75		
SKEWNESS	0.802	0.869	0.630	0.027	0.336	0.155	0.209	0.165	0.266		
STD ERROR OF SKEWNESS	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491		
SERIAL CORR COEFF	-0.062	-0.054	-0.200	-0.371	-0.256	-0.319	-0.300	-0.252	-0.212		
COEFF OF VARIATION	0.366	0.299	0.245	0.244	0.248	0.213	0.206	0.197	0.188		
MEAN LOGS	3.445	3.281	3.126	3.009	2.914	2.829	2.775	2.731	2.685	3.6517	3.6517
STD DEVIATION LOGS	0.156	0.125	0.105	0.113	0.110	0.096	0.092	0.088	0.083	0.1597	0.1597
SKEWNESS LOGS	0.121	0.293	0.064	-0.583	-0.304	-0.365	-0.343	-0.323	-0.109	0.0	-0.0300
STD ERR SKEWNESS LOGS	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491		
SER CORR COEFF LOGS	-0.074	-0.083	-0.248	-0.390	-0.294	-0.324	-0.303	-0.250	-0.210		
COEFF OF VAR LOGS	0.045	0.038	0.034	0.037	0.038	0.034	0.033	0.032	0.031		

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1953-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
MEAN	1250.4	1041.0	770.7	501.7	428.9	381.1	345.8	320.9	306.4	1906.5
MAXIMUM	1565.8	1219.7	902.6	641.9	528.3	459.3	412.7	379.3	352.0	2441.8
MINIMUM	1770.0	1333.8	982.8	724.3	587.4	504.6	451.3	412.9	378.6	2796.2
STANDARD DEVIATION	2058.4	1493.4	1090.6	830.3	664.7	562.7	500.6	453.7	412.9	3291.0
SKEWNESS	2762.6	1881.2	1334.5	1048.0	830.0	682.9	602.4	543.7	485.6	4492.8
STD ERROR OF SKEWNESS	3162.6	2417.2	1638.9	1276.5	1017.8	813.2	712.6	638.8	568.4	6111.1
SERIAL CORR COEFF	4435.2	2778.0	1827.5	1396.4	1124.3	884.4	772.9	690.8	615.9	7184.0
COEFF OF VARIATION	5301.9	3242.5	2054.9	1522.0	1247.3	962.1	838.8	747.8	670.0	8536.6
MEAN LOGS	5960.2	3955.5	2217.9	1601.1	1323.8	1013.0	882.0	785.2	706.9	9542.9
STD DEVIATION LOGS	6629.8	3955.1	2376.6	1670.2	1397.6	1059.1	921.2	819.1	741.4	10464.0

## STATION 12147600 SOUTH FORK TOLT RIVER NEAR INDEX, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1960			128	44.2	62.9	56.6	79.2	111	82.6	19.4	22.5	20.3	
1961	64.5	86.4	48.6	106	143	53.2	68.6	84.7	52.0	13.3	5.79	21.1	61.7
1962	66.1	53.6	95.4	106	40.8	18.5	69.5	63.9	69.8	34.3	32.5	23.3	57.9
1963	31.0	78.3	60.7	39.9	84.2	30.5	60.9	48.0	44.0	28.4	11.5	22.8	46.3
1964	39.4	80.9	46.0										
1968	56.4	56.4	101	80.8	115	43.1	47.5	73.0	84.6	23.8	25.3	50.4	
1969	58.0	74.8	47.1	71.2	9.41	35.1	61.6	128	91.3	25.6	6.39	56.9	55.7
1970	40.0	41.7	40.5	83.2	53.8	42.9	61.8	66.7	63.7	21.3	6.39	48.8	47.4
1971	44.2	67.6	52.4	105	88.7	35.9	48.8	116	97.6	73.5	17.5	27.3	64.4
1972	42.6	86.3	65.0	69.8	113	93.4	71.2	140	115	76.8	15.5	48.1	77.8
1973	14.6	47.8	122	61.5	20.0	28.1	42.9	66.8	160.6	17.0	5.33	24.6	42.8
1974	66.8	64.9	86.6	128	59.1	72.8	59.8	96.7	160	81.3	29.2	13.3	76.7
1975	6.61	69.5	92.0	94.5	38.0	38.8	28.6	106	100	47.1	37.4	15.1	56.3
1976	70.9	113	165	84.7	33.8	21.0	51.8	92.8	78.4	50.3	33.7	14.9	67.8
1977	19.5	45.0	56.5	49.8	35.9	28.9	70.6	66.2	43.8	15.8	15.3	23.1	39.2
1978	28.6	121	119	46.2	44.7	50.6	47.1	64.8	47.4	20.9	20.6	54.7	55.4
1979	15.1	50.3	37.4	21.5	53.8	64.5	46.5	76.1	47.8	27.8	5.59	7.06	37.7

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1960-1979)

MEAN	40.5	71.1	81.4	74.5	62.3	44.6	58.5	87.5	77.4	36.0	18.2	29.5	56.2
MINIMUM	70.9	121.0	165.0	128.0	143.0	93.4	89.1	140.0	160.0	81.3	37.4	56.9	77.8
MAXIMUM	6.6	41.7	37.4	21.5	9.4	18.5	28.6	48.0	43.8	13.3	5.3	7.1	37.7
STD DEVIATION	21.23	23.05	36.90	29.36	37.10	19.98	15.22	26.47	31.22	22.86	11.04	16.40	12.74
SKWENESS	-0.023	0.826	0.707	-0.015	0.802	1.003	0.133	0.553	1.219	1.117	0.344	0.614	0.241
STD ERR SKEW	0.580	0.564	0.550	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.597
SER CORR COEFF	-0.414	-0.560	-0.221	0.117	-0.102	-0.180	0.083	0.061	0.156	0.122	0.009	0.224	-0.324
COEFF OF VAR	0.524	0.324	0.454	0.394	0.596	0.448	0.260	0.302	0.403	0.634	0.608	0.556	0.227
MEAN LOGS	1.529	1.831	1.869	1.833	1.711	1.610	1.752	1.924	1.859	1.484	1.167	1.402	1.739
STD DEV LOGS	0.301	0.137	0.197	0.203	0.300	0.191	0.121	0.130	0.164	0.253	0.308	0.258	0.100
SKWENESS LOGS	-1.036	0.223	0.087	-0.975	-0.812	0.017	-0.695	0.081	0.351	0.525	-0.304	-0.277	-0.139
STD ERR SKEW LOGS	0.580	0.564	0.550	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.597
SER CORR LOGS	-0.422	-0.594	-0.187	0.197	-0.187	-0.115	0.039	0.106	0.209	0.075	-0.136	0.178	-0.341
COEFF OF VAR LOGS	0.196	0.075	0.106	0.111	0.175	0.119	0.069	0.068	0.088	0.170	0.264	0.184	0.057
% OF AVE FLOW	5.9	10.4	11.9	10.9	9.1	6.5	8.6	12.8	11.4	5.3	2.7	4.3	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1960-1979)

0.99	4.1	34.4	26.4	16.8	6.9	14.7	25.8	42.5	33.0	9.9	2.4	5.6	31.4
0.95	9.2	41.3	35.4	28.5	14.4	19.8	34.1	51.6	40.3	12.9	4.3	9.1	37.3
0.90	13.4	45.7	41.5	36.5	20.4	23.2	39.0	57.3	45.2	15.0	5.8	11.6	40.7
0.80	20.1	51.9	50.3	47.8	30.0	28.1	45.4	65.1	52.3	18.5	8.2	15.5	45.3
0.50	38.1	67.0	73.4	73.4	56.4	40.7	58.4	83.6	70.7	29.0	15.2	26.0	55.2
0.20	61.0	88.0	108.1	101.4	92.8	59.0	71.7	107.9	98.5	48.7	26.9	41.9	66.7
0.10	73.5	102.2	132.8	115.6	114.8	71.7	78.5	123.6	118.7	65.9	35.6	52.9	73.4
0.04	86.2	120.4	165.9	129.5	139.3	88.4	85.5	143.1	146.3	93.1	47.2	67.3	81.2
0.02	93.7	134.2	191.9	137.6	155.2	101.1	89.8	157.5	168.4	117.9	56.1	78.0	86.5
0.01	99.8	148.3	218.9	144.2	169.2	114.2	93.4	171.7	191.8	147.1	65.3	88.9	91.5

## STATION 12147600 SOUTH FORK TOLT RIVER NEAR INDEX, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31										
YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	
1961	4.9	5.0	5.1	5.7	7.4	17.0	18.0	23.0	43.0	
1962	2.3	2.3	2.4	2.9	3.8	8.5	13.0	19.0	32.0	
1963	7.7	8.2	9.0	11.0	15.0	22.0	24.0	28.0	40.0	
1969	5.4	5.6	6.1	7.2	9.0	11.0	28.0	36.0	46.0	
1970	3.4	3.7	4.4	4.8	5.7	8.0	21.0	31.0	33.0	
1971	2.8	2.8	3.0	3.4	5.4	13.0	23.0	29.0	39.0	
1972	6.6	7.0	7.9	11.0	16.0	20.0	26.0	39.0	48.0	
1973	5.7	5.8	6.3	7.6	11.0	18.0	26.0	30.0	45.0	
1974	3.6	3.7	3.8	4.1	4.6	6.2	14.0	23.0	35.0	
1975	4.4	4.5	5.1	5.1	6.3	9.4	13.0	25.0	44.0	
1976	5.5	5.6	6.0	6.7	11.0	26.0	26.0	38.0	56.0	
1977	4.9	5.1	5.5	8.2	8.7	14.0	20.0	23.0	32.0	
1978	2.4	2.4	2.6	2.9	4.4	11.0	17.0	17.0	32.0	
1979	3.5	3.6	4.0	5.1	11.0	20.0	27.0	27.0	31.0	

## LOWEST MEAN FLOW STATISTICS (YEARS 1961-1979)

MEAN	4.5	4.7	5.1	6.1	8.5	14.6	21.1	27.7	39.7
MAXIMUM	7.7	8.2	9.0	11.0	16.0	26.0	28.0	39.0	56.0
MINIMUM	2.3	2.3	2.4	2.9	3.8	6.2	13.0	17.0	31.0
STANDARD DEVIATION	1.60	1.72	1.92	2.66	3.87	6.00	5.38	6.71	7.61
SKEWNESS	0.371	0.455	0.489	0.699	0.672	0.391	-0.376	0.273	0.601
STD ERROR OF SKEWNESS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597
SERIAL CORR COEFF	-0.141	-0.155	-0.166	-0.184	-0.190	-0.249	0.038	0.168	0.084
COEFF OF VARIATION	0.356	0.369	0.377	0.434	0.455	0.411	0.254	0.242	0.192
MEAN LOGS	0.627	0.640	0.676	0.749	0.889	1.128	1.311	1.431	1.592
STD DEVIATION LOGS	0.161	0.167	0.171	0.190	0.199	0.188	0.120	0.107	0.081
SKEWNESS LOGS	-0.247	-0.260	-0.289	-0.019	0.041	-0.197	-0.630	-0.200	0.313
STD ERR SKEWNESS LOGS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597
SER CORR COEFF LOGS	-0.171	-0.189	-0.205	-0.234	-0.244	-0.201	0.058	0.203	0.029
COEFF OF VAR LOGS	0.257	0.261	0.253	0.254	0.224	0.166	0.092	0.075	0.051

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1961-1979)

0.99	9.4	9.9	10.9	15.5	22.8	34.4	34.2	46.1	63.0
0.98	8.6	9.1	10.0	13.7	20.1	31.1	32.7	43.6	59.2
0.96	7.9	8.3	9.1	12.0	17.4	27.7	31.1	40.8	55.3
0.90	6.7	7.1	7.8	9.8	14.0	23.1	28.5	36.8	49.9
0.80	5.8	6.1	6.6	8.1	11.4	19.4	25.9	33.2	45.6
0.50	4.3	4.4	4.8	5.6	7.7	13.6	21.0	27.2	38.7
0.20	3.1	3.2	3.4	3.9	5.3	9.4	16.4	22.0	33.3
0.10	2.6	2.6	2.8	3.2	4.3	7.6	14.2	19.6	30.9
0.05	2.2	2.3	2.4	2.7	3.7	6.4	12.6	17.7	29.2
0.02	1.9	1.9	2.0	2.3	3.0	5.3	10.6	15.8	27.5
0.01	1.7	1.7	1.7	2.0	2.7	4.6	9.5	14.6	26.4

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "PP" PERCENT OF THE TIME (YEARS 1961-1979)

P95	P90	P75	P70	P50	P25	P10
6.5	9.5	18.0	21.0	35.0	69.0	120.0





## STATION 12148000 SOUTH FORK TOLT RIVER NR CANNATION, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1953	21.4	40.2	136	675	245	139	205	211	171	81.9	32.7	48.2	167
1954	185	249	473	195	287	124	189	206	278	143	86.8	128	211
1955	94.6	280	182	132	246	65.0	192	305	390	252	95.4	48.7	189
1956	307	384	352	191	30.2	154	300	350	284	129	43.9	102	224
1957	289	275	428	174.6	187	215	276	262	163	72.6	54.1	28.7	192
1958	177.6	177	247	284	242	108	208	146	69.7	28.2	16.7	60.6	138
1959	195	535	404	495	222	288	478	283	239	115	43.8	345	301
1960	287	487	405	139	192	183	216	292	181	56.3	72.3	85.1	214
1961	185	279	167	295	428	233	285	236	116	46.8	28.9	78.7	195
1962	245	208	327	340	126	91.2	59.6	206	89.6	267	148	80.7	184
1963	109	273	304	161	260	129	220	139	127	98.8	47.1	57.5	160

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1953-1963)

MEAN	181.4	288.1	311.4	271.1	229.6	153.6	237.1	239.6	191.7	117.3	60.9	96.7	197.7
MAXIMUM	307.0	535.0	473.0	675.0	428.0	288.0	478.0	350.0	390.0	267.0	148.0	345.0	301.0
MINIMUM	21.4	40.2	136.0	74.6	30.2	65.0	59.6	139.0	69.7	28.2	16.7	28.7	138.0
STD DEVIATION	95.87	138.85	114.67	178.46	86.14	62.26	101.37	66.01	97.01	78.47	37.84	86.89	42.47
SKWENESS	-0.220	0.300	-0.270	1.347	0.731	0.586	0.989	-0.034	0.766	1.110	1.300	2.737	1.320
STD ERR SKEW	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661
SER CORR COEFF	-0.197	0.201	-0.623	-0.132	-0.338	-0.172	-0.122	0.204	0.472	-0.019	-0.282	-0.165	-0.278
COEFF OF VAR	0.528	0.482	0.368	0.658	0.384	0.405	0.427	0.275	0.506	0.669	0.618	0.899	0.215
MEAN LOGS	2.168	2.391	2.461	2.354	2.330	2.153	2.333	2.363	2.230	1.981	1.712	1.887	2.288
STD DEV LOGS	0.345	0.299	0.184	0.275	0.180	0.182	0.219	0.128	0.228	0.297	0.266	0.280	0.088
SKWENESS LOGS	-1.563	-1.922	-0.702	0.105	-0.713	-0.236	-1.487	-0.542	-0.155	-0.112	-0.077	1.060	0.580
STD ERR SKEW LOGS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661
SER CORR LOGS	-0.200	0.166	-0.595	-0.118	-0.289	-0.131	-0.103	0.142	0.362	0.049	-0.235	-0.220	-0.304
COEFF OF VAR LOGS	0.125	0.075	0.075	0.117	0.077	0.085	0.094	0.054	0.102	0.150	0.155	0.148	0.038
% OF AVE FLOW	7.6	12.1	13.1	11.4	9.7	6.5	10.0	10.1	8.1	4.9	2.6	4.1	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1953-1963)

0.99	10.2	21.2	87.6	54.3	66.1	49.9	40.4	103.9	47.3	18.5	12.0	28.5	132.2
0.95	31.2	62.6	134.0	81.1	100.5	69.5	80.7	136.6	70.1	30.5	18.6	33.5	144.2
0.90	51.3	100.1	164.6	101.0	122.9	82.3	110.0	156.3	86.1	39.6	23.4	37.6	152.0
0.80	85.8	160.5	207.1	132.1	154.1	100.5	151.9	182.2	109.8	54.1	30.9	44.6	163.1
0.50	179.6	302.1	303.7	223.4	224.3	144.5	242.7	237.0	172.3	97.0	52.0	68.9	190.2
0.20	282.6	422.8	415.5	383.8	304.6	203.1	326.3	297.0	255.2	170.7	86.5	125.0	228.1
0.10	326.7	461.9	476.9	512.6	348.4	240.4	359.4	329.4	227.8	112.5	162.8	162.8	253.7
0.04	361.7	486.1	542.4	701.1	394.8	285.9	386.4	384.2	413.8	308.2	148.2	289.7	286.8
0.02	377.5	494.5	584.0	860.6	424.1	318.5	398.6	386.6	477.6	373.5	176.8	402.7	312.0
0.01	387.8	499.0	620.3	1036.6	449.6	350.3	406.8	406.4	542.4	443.2	207.0	553.2	337.8

## STATION 1214000 SOUTH FORK TOLT RIVER NM CARNATION, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31										
YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	
1954	14.0	18.0	18.0	20.0	27.0	30.0	49.0	72.0	113.0	
1955	41.0	43.0	46.0	50.0	56.0	93.0	100.0	102.0	145.0	
1956	32.0	33.0	35.0	37.0	46.0	59.0	120.0	161.0	211.0	
1957	25.0	25.0	26.0	29.0	35.0	45.0	78.0	109.0	177.0	
1958	22.0	22.0	23.0	25.0	28.0	35.0	44.0	54.0	94.0	
1959	13.0	13.0	13.0	14.0	16.0	19.0	28.0	40.0	85.0	
1960	25.0	26.0	28.0	29.0	36.0	69.0	117.0	155.0	205.0	
1961	23.0	23.0	23.0	25.0	30.0	52.0	67.0	76.0	132.0	
1962	17.0	17.0	18.0	20.0	23.0	35.0	49.0	61.0	115.0	
1963	26.0	26.0	26.0	26.0	47.0	72.0	87.0	140.0	143.0	

## LOWEST MEAN FLOW STATISTICS (YEARS 1954-1963)

MEAN	24.2	24.6	25.6	27.5	34.4	50.9	73.9	97.0	142.0
MAXIMUM	41.0	43.0	46.0	50.0	56.0	93.0	120.0	161.0	211.0
MINIMUM	13.0	13.0	13.0	14.0	16.0	19.0	28.0	40.0	85.0
STANDARD DEVIATION	7.95	8.55	9.42	10.06	12.23	22.63	31.87	43.38	43.70
SKEWNESS	0.881	1.003	1.067	1.217	0.393	0.497	0.187	0.344	0.467
STD ERROR OF SKEWNESS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SERIAL CORR COEFF	0.079	0.079	0.069	0.107	0.075	-0.206	-0.046	-0.148	-0.023
COEFF OF VARIATION	0.329	0.348	0.368	0.366	0.356	0.444	0.431	0.467	0.308
MEAN LOGS	1.363	1.368	1.383	1.415	1.510	1.665	1.828	1.945	2.134
STD DEVIATION LOGS	0.141	0.147	0.155	0.152	0.162	0.207	0.207	0.206	0.134
SKEWNESS LOGS	-0.024	0.073	0.098	0.168	-0.376	-0.405	-0.471	-0.202	0.028
STD ERR SKEWNESS LOGS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SER CORR COEFF LOGS	0.018	0.016	0.0	0.053	0.030	-0.178	-0.031	-0.088	0.001
COEFF OF VAR LOGS	0.104	0.108	0.112	0.107	0.107	0.125	0.113	0.106	0.063

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1954-1963)

	0.99	0.98	0.96	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01
0.99	48.9	52.4	56.9	61.2	69.6	121.6	172.1	247.2	280.8						
0.98	46.8	47.5	51.2	55.0	64.5	110.8	157.8	221.4	257.7						
0.96	40.7	42.6	45.7	48.9	59.2	99.4	142.5	195.3	234.3						
0.90	35.0	36.2	38.3	40.9	51.4	83.2	120.1	159.9	202.3						
0.80	30.4	31.0	32.6	34.8	44.6	69.5	101.0	131.8	176.4						
0.70	25.1	25.3	26.0	25.8	33.2	47.7	69.8	89.5	135.9						
0.60	17.6	17.5	17.9	19.3	23.9	31.3	45.7	59.4	104.9						
0.50	15.2	15.2	15.4	16.7	19.8	24.6	35.9	47.5	91.7						
0.40	13.5	13.5	13.6	14.9	16.9	20.0	29.0	39.3	82.1						
0.30	11.8	11.8	11.8	13.1	14.0	15.7	22.6	31.6	72.5						
0.20	10.8	10.8	10.8	12.0	12.3	13.2	18.9	27.2	66.8						

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1954-1963)

P95	P90	P75	P70	P50	P25	P10
27.0	38.0	70.0	82.0	140.0	240.0	390.0

STATION 1214R000 SOUTH FORK TOLT RIVER NR CARNATION, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW (CFS) DATE REG. (R)
1953	2150.	1130.	940.	859.	739.	483.	361.	320.	275.	3160. 01/23/53
1954	2240.	1150.	790.	647.	514.	387.	316.	316.	261.	3180. 12/09/53
1955	1780.	1180.	622.	474.	365.	324.	242.	242.	242.	3230. 02/08/55
1956	2370.	1300.	672.	578.	428.	419.	354.	314.	258.	5900. 12/11/55
1957	1350.	969.	815.	684.	440.	360.	333.	267.	259.	2290. 12/10/56
1958	906.	760.	509.	379.	305.	275.	258.	240.	215.	1130. 01/17/58
1959	2740.	1840.	1120.	807.	579.	486.	487.	429.	405.	5000. 11/12/58
1960	3720.	1930.	1350.	818.	750.	511.	399.	339.	285.	6500. 12/15/59
1961	2200.	1460.	862.	534.	370.	340.	310.	287.	223.	3420. 02/21/61
1962	1670.	1270.	927.	683.	508.	344.	310.	287.	223.	2480. 01/07/62
1963	1630.	917.	718.	431.	366.	335.	278.	253.	227.	3260. 11/19/62

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1953-1963)

W R C SYSTEMATIC  
ESTIMATE RECORD

195

MEAN	2068.7	1264.2	847.7	627.2	496.8	394.5	343.6	305.9	266.8	
MAXIMUM	3720.0	1930.0	1350.0	859.0	750.0	511.0	487.0	429.0	405.0	
MINIMUM	906.0	760.0	509.0	374.0	305.0	275.0	258.0	240.0	215.0	
STANDARD DEVIATION	749.97	362.56	236.48	162.16	143.09	72.79	61.13	50.93	51.77	
SKEWNESS	0.790	0.752	0.632	-0.047	0.838	0.303	1.158	1.296	2.068	
STD ERROR OF SKEWNESS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	
SERIAL CORR COEFF	0.212	0.306	0.198	-0.218	0.087	0.071	-0.043	-0.033	-0.098	
COEFF OF VARIATION	0.363	0.287	0.279	0.259	0.288	0.184	0.178	0.166	0.194	
MEAN LOGS	3.289	3.046	2.913	2.783	2.681	2.589	2.530	2.481	2.420	
STD DEVIATION LOGS	0.163	0.122	0.118	0.118	0.121	0.080	0.074	0.068	0.075	
SKEWNESS LOGS	-0.420	0.172	0.125	-0.407	0.328	-0.075	0.578	0.766	1.549	3.5135
STD ERR SKEWNESS LOGS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.2100
SER CORR COEFF LOGS	0.176	0.230	0.122	-0.278	0.051	0.036	-0.069	-0.022	-0.097	0.0
COEFF OF VAR LOGS	0.049	0.039	0.041	0.042	0.045	0.031	0.029	0.028	0.031	-0.6960

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1953-1963)

0.99	727.1	658.1	445.4	297.7	268.9	249.9	245.7	229.2	212.7	1059.5	834.3
0.95	1008.7	779.8	528.3	377.0	312.1	285.3	264.4	242.5	217.0	1472.9	1354.8
0.90	1188.2	856.1	579.8	424.4	337.7	305.9	276.4	251.4	221.0	1755.7	1712.8
0.80	1434.5	961.1	650.3	486.3	378.3	332.6	293.2	268.2	228.2	2171.8	2226.1
0.50	1997.7	1209.7	814.7	618.4	472.2	389.4	333.6	296.4	252.0	3262.2	3448.8
0.20	2680.6	1539.8	1028.9	766.2	602.2	454.3	388.4	342.1	295.9	4900.2	4936.9
0.10	3082.0	1754.9	1166.3	848.4	649.8	491.8	424.7	373.1	330.9	6061.5	5782.9
0.04	3539.7	2024.6	1336.3	939.0	802.8	534.7	470.6	413.3	381.5	7604.6	6705.1
0.02	3849.6	2224.7	1461.0	998.6	888.8	564.1	505.1	443.9	423.6	8804.5	7298.8
0.01	4136.5	2424.8	1584.7	1052.8	976.5	591.7	539.7	475.1	469.7	10044.7	7623.9

## STATION 12148000 SOUTH FORK TULT RIVER NR CARMATION, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1970	64.7	65.9	75.7	86.2	85.8	79.5	110	104	85.4	45.8	40.0	57.4	74.9
1971	99.5	146	159	327	307	73.9	71.7	73.0	150	111	41.9	73.7	135
1972	161	256	191	218	287	326	130	217	182	125	52.9	196	195
1973	81.1	66.6	117	206	70.3	72.8	72.3	61.4	37.8	35.2	34.9	47.2	75.5
1974	66.7	76.6	170	356	173	74.7	121	235	282	106	42.7	65.4	167
1975	58.6	137	122	241	191	74.3	70.4	71.0	55.9	59.7	42.9	87.2	101
1976	106	393	481	333	46.1	60.2	65.8	55.7	41.6	60.7	32.4	38.9	147
1977	97.4	55.2	50.0	53.3	34.9	35.9	62.5	81.9	58.5	33.3	29.5	33.2	52.3
1978	47.3	230	433	99.4	75.2	33.5	31.1	47.3	40.9	36.8	38.0	124	103
1979	118	65.9	108	73.2	87.8	120	62.3	118	45.1	36.4	35.0	44.3	76.4

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1970-1979)

MEAN	90.0	149.2	190.7	194.3	139.8	95.1	79.7	106.4	97.9	65.0	39.7	76.7	110.7
MAXIMUM	161.0	393.0	481.0	356.0	307.0	326.0	130.0	235.0	282.0	125.0	52.9	196.0	195.0
MINIMUM	47.3	55.2	50.0	53.3	34.9	33.5	31.1	47.3	37.8	33.3	29.5	33.2	52.3
STD DEVIATION	33.82	111.72	146.98	115.86	95.37	84.85	30.16	66.84	81.93	35.46	7.44	49.81	44.21
SKEWNESS	0.883	1.324	1.447	0.075	0.432	2.703	0.457	1.386	1.559	0.887	0.574	1.796	0.603
STD ERR SKEW	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SER CORR COEFF	-0.113	-0.411	-0.597	0.070	0.222	-0.061	0.051	-0.379	-0.178	0.042	0.016	-0.279	-0.327
COEFF OF VAR	0.376	0.749	0.771	0.581	0.682	0.890	0.386	0.626	0.834	0.546	0.187	0.549	0.399
MEAN LOGS	1.928	2.075	2.180	2.215	2.034	1.883	1.870	1.963	1.879	1.758	1.592	1.820	2.013
STD DEV LOGS	0.160	0.301	0.305	0.305	0.301	0.276	0.180	0.237	0.311	0.225	0.080	0.239	0.176
SKEWNESS LOGS	0.111	0.547	0.389	-0.437	0.060	1.170	-0.612	0.822	0.463	0.527	0.245	0.821	-0.059
STD ERR SKEW LOGS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SER CORR LOGS	-0.165	-0.481	-0.781	0.177	0.233	0.090	0.174	-0.416	-0.094	0.050	0.061	-0.281	-0.354
COEFF OF VAR LOGS	0.083	0.145	0.140	0.138	0.146	0.146	0.096	0.121	0.166	0.128	0.050	0.131	0.088
% OF AVE FLOW	6.8	11.2	14.3	15.0	10.5	7.2	6.0	8.0	7.4	4.9	3.0	5.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1970-1979)

0.99	37.0	31.4	36.1	25.6	23.4	30.0	23.6	36.0	22.6	21.0	26.4	25.7	39.4
0.95	46.7	42.7	51.7	47.7	36.7	34.4	35.2	43.2	28.4	26.6	29.3	30.9	52.5
0.90	53.0	51.4	63.6	64.9	46.9	38.2	42.8	48.7	33.1	30.6	31.1	34.9	61.1
0.80	62.0	65.6	83.0	92.6	63.2	44.7	53.3	57.6	41.0	36.8	33.4	41.3	73.3
0.50	84.1	111.7	144.5	172.5	112.5	67.7	77.3	85.3	68.4	54.8	38.8	61.3	103.4
0.20	115.2	207.7	288.6	399.0	202.4	121.8	105.8	180.5	131.9	87.0	45.5	101.3	145.0
0.10	136.4	298.2	381.4	587.7	276.2	178.7	121.8	190.7	192.8	113.8	45.7	131.7	172.7
0.04	163.8	451.6	585.8	801.2	385.9	285.6	139.4	273.8	320.0	158.8	54.8	198.0	207.7
0.02	184.6	600.0	738.3	955.4	479.7	400.7	150.8	352.8	449.0	190.9	58.4	255.5	233.8
0.01	205.8	783.4	945.4	1084.5	584.2	556.2	161.0	449.3	620.7	232.5	62.0	325.8	259.9

STATION 12148000 SOUTH FORK TOLT RIVER NR CARNATION, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1971	38.0	39.0	39.0	39.0	40.0	41.0	46.0	55.0	69.0
1972	38.0	38.0	38.0	40.0	41.0	52.0	67.0	92.0	87.0
1973	48.0	48.0	49.0	49.0	50.0	53.0	84.0	98.0	103.0
1974	34.0	34.0	34.0	34.0	35.0	35.0	35.0	38.0	47.0
1975	41.0	41.0	41.0	42.0	43.0	52.0	54.0	56.0	82.0
1976	39.0	39.0	39.0	40.0	41.0	51.0	54.0	58.0	66.0
1977	24.0	28.0	28.0	29.0	31.0	34.0	42.0	49.0	49.0
1978	21.0	23.0	25.0	27.0	28.0	30.0	31.0	33.0	46.0
1979	26.0	26.0	27.0	27.0	31.0	37.0	38.0	39.0	53.0

LOWEST MEAN FLOW STATISTICS (YEARS 1971-1979)

MEAN	34.3	35.1	35.6	36.3	37.8	42.8	50.1	56.9	66.9
MAXIMUM	48.0	48.0	49.0	49.0	50.0	53.0	84.0	98.0	103.0
MINIMUM	21.0	23.0	25.0	27.0	28.0	30.0	31.0	33.0	46.0
STANDARD DEVIATION	8.90	8.07	7.78	7.58	7.05	9.22	16.91	23.37	20.27
SKEWNESS	-0.229	-0.124	0.154	0.110	0.214	-0.049	1.032	1.058	0.643
STD ERROR OF SKEWNESS	0.717	0.717	0.717	0.717	0.717	0.717	0.717	0.717	0.717
SERIAL CORR COEFF	0.498	0.482	0.410	0.410	0.346	0.175	0.135	0.324	0.132
COEFF OF VARIATION	0.259	0.230	0.219	0.209	0.187	0.215	0.337	0.511	0.303
MEAN LOGS	1.522	1.535	1.541	1.552	1.570	1.622	1.680	1.726	1.808
STD DEVIATION LOGS	0.121	0.105	0.097	0.092	0.082	0.096	0.139	0.166	0.128
SKEWNESS LOGS	-0.582	-0.483	-0.206	-0.176	-0.095	-0.190	0.466	0.604	0.319
STD ERR SKEWNESS LOGS	0.717	0.717	0.717	0.717	0.717	0.717	0.717	0.717	0.717
SER CORR COEFF LOGS	0.572	0.573	0.512	0.504	0.423	0.203	0.149	0.331	0.143
COEFF OF VAR LOGS	0.079	0.068	0.063	0.060	0.052	0.059	0.083	0.096	0.071

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1971-1979)

0.99	56.2	55.1	56.5	56.8	56.9	67.9	112.0	152.4	137.0
0.98	53.8	52.7	53.7	54.0	54.2	64.4	99.5	131.0	124.0
0.96	50.9	50.1	50.6	51.0	51.4	60.8	87.8	111.5	111.3
0.90	46.4	46.0	46.1	46.6	47.2	55.3	72.9	88.3	94.7
0.80	42.2	42.1	42.1	42.7	43.6	50.5	62.0	72.1	82.0
0.50	34.1	34.9	35.1	35.8	37.3	42.2	46.6	51.2	63.3
0.20	26.6	28.2	28.9	29.8	31.8	34.8	36.4	38.3	50.0
0.10	23.0	24.9	26.0	27.0	29.2	31.4	32.4	33.6	44.5
0.05	20.2	22.3	23.8	24.8	27.1	28.8	29.6	30.5	40.7
0.02	17.3	19.6	21.5	22.6	25.0	26.0	26.9	27.6	36.9
0.01	15.5	18.0	20.0	21.1	23.7	24.3	25.4	25.9	34.7

FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1971-1979)

P95	P90	P75	P70	P50	P25	P10
34.0	36.0	47.0	53.0	69.0	94.0	230.0

STATION 1214R000 SOUTH FORK TOLT RIVER NR CARNATION, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE	REG. (R)
1953										3160.	01/23/53	
1954										3180.	12/09/53	
1955										3230.	02/08/55	
1956										5900.	12/11/55	
1957										2290.	12/10/56	
1958										1130.	01/17/58	
1959										5000.	11/12/58	
1960										6500.	12/15/59	
1961										3420.	02/21/61	
1962										2480.	01/07/62	
1963										3260.	11/19/62	
1970	292.	261.	193.	137.	120.	110.	101.	97.	92.	996.	04/13/70	R
1971	766.	727.	710.	671.	539.	314.	283.	236.	183.	902.	06/25/71	R
1972	846.	699.	693.	575.	442.	367.	292.	260.	239.	973.	07/13/72	R
1973	644.	624.	510.	346.	256.	166.	135.	119.	103.	708.	12/27/72	R
1974	718.	712.	702.	690.	447.	317.	238.	206.	215.	772.	06/06/74	R
1975	650.	620.	577.	412.	305.	230.	193.	175.	139.	688.	01/28/75	R
1976	704.	672.	654.	654.	576.	450.	411.	336.	244.	752.	12/02/75	R
1977	229.	194.	144.	123.	99.	85.	69.	64.	56.	515.	11/03/76	R
1978	884.	756.	610.	565.	499.	351.	261.	214.	153.	1280.	12/02/77	R
1979	575.	410.	310.	192.	146.	106.	104.	99.	96.	616.	03/08/79	R

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1970-1979)

	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	STDEV	STD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKEWNESS LOGS	SER CORR SKEWNESS LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	630.8	884.0	229.0	216.42	0.687	-1.017	-0.448	0.343	2.767	0.196	-1.503	-0.351	0.071		
	569.6	756.0	194.0	205.08	0.687	-1.111	-0.347	0.483	2.718	0.209	-1.431	-0.378	0.077		
	512.1	710.0	144.0	217.43	0.687	-0.876	-0.369	0.425	2.656	0.254	-1.260	-0.321	0.096		
	436.5	690.0	123.0	225.78	0.687	-0.347	-0.620	0.517	2.566	0.293	-0.784	-0.317	0.114		
	342.9	576.0	99.0	180.97	0.687	-0.183	-0.755	0.528	2.462	0.287	-0.652	-0.346	0.117		
	249.6	450.0	85.0	128.01	0.687	0.036	-0.708	0.513	2.334	0.261	-0.460	-0.379	0.112		
	180.6	336.0	64.0	107.88	0.687	0.432	-0.608	0.517	2.260	0.250	-0.429	-0.427	0.104		
	152.0	244.0	56.0	85.86	0.687	0.336	-0.565	0.475	2.207	0.210	-0.498	-0.464	0.098		
	2.9002	2.9002	0.1146	0.2070	0.687	0.687	-0.500	0.436	2.140	0.210	-0.498	-0.464	0.098	2.9002	2.9002
	0.1146	0.1146	0.2070	0.2070	0.687	0.687	-0.500	0.436	2.140	0.210	-0.498	-0.464	0.098	0.1146	0.1146
	0.2070	0.2070	0.2070	0.2070	0.687	0.687	-0.500	0.436	2.140	0.210	-0.498	-0.464	0.098	0.2070	0.2070

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1970-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
	129.6	242.0	320.0	428.0	651.7	848.7	925.8	985.5	1012.6	1030.4
	107.2	205.1	274.7	373.0	583.9	779.7	860.3	925.3	956.2	977.3
	70.2	147.3	206.7	296.2	509.8	739.5	847.1	943.4	993.8	1031.2
	52.8	106.8	149.5	217.3	401.4	655.0	808.5	980.3	1092.4	1191.8
	45.7	87.6	120.1	171.2	311.0	510.4	636.8	849.5	1024.3	1178.9
	43.7	74.7	97.6	132.5	225.9	360.8	449.5	558.3	636.0	710.8
	40.8	66.7	85.4	113.7	188.7	297.5	370.1	460.4	526.0	590.0
	37.6	58.4	72.7	104.7	167.0	252.6	307.3	373.1	419.7	464.1
	35.4	54.0	68.3	93.2	143.5	228.7	288.5	348.6	396.1	435.4
	33.3	52.3	66.7	88.4	135.0	215.0	270.0	325.0	365.0	405.0
	31.3	50.3	64.7	84.7	127.0	202.0	255.0	305.0	345.0	385.0
	29.3	48.3	62.7	82.7	125.0	200.0	250.0	300.0	340.0	380.0
	27.3	46.3	60.7	80.7	123.0	198.0	248.0	298.0	338.0	378.0
	25.3	44.3	58.7	78.7	121.0	196.0	246.0	296.0	336.0	376.0
	23.3	42.3	56.7	76.7	119.0	194.0	244.0	294.0	334.0	374.0
	21.3	40.3	54.7	74.7	117.0	192.0	242.0	292.0	332.0	372.0
	19.3	38.3	52.7	72.7	115.0	190.0	240.0	290.0	330.0	370.0
	17.3	36.3	50.7	70.7	113.0	188.0	238.0	288.0	328.0	368.0
	15.3	34.3	48.7	68.7	111.0	186.0	236.0	286.0	326.0	366.0
	13.3	32.3	46.7	66.7	109.0	184.0	234.0	284.0	324.0	364.0
	11.3	30.3	44.7	64.7	107.0	182.0	232.0	282.0	322.0	362.0
	9.3	28.3	42.7	62.7	105.0	180.0	230.0	280.0	320.0	360.0
	7.3	26.3	40.7	60.7	103.0	178.0	228.0	278.0	318.0	358.0
	5.3	24.3	38.7	58.7	101.0	176.0	226.0	276.0	316.0	356.0
	3.3	22.3	36.7	56.7	99.0	174.0	224.0	274.0	314.0	354.0
	1.3	20.3	34.7	54.7	97.0	172.0	222.0	272.0	312.0	352.0

STATION 12148100 SO FK TOLT RIVER TRIB NR CARNATION, WASH.

ANNUAL PEAK FLOW DATA		ANNUAL PEAK FLOW STATISTICS (YEARS 1955-1974)			W R C		SYSTEMATIC RECORD
WATER YEAR	FLOW (CFS)	DATE	MEAN LOGS	STANDARD DEVIATION LOGS	ESTIMATE		
1955	114.0	2- 8-1955			2.0936		2.0936
1956	163.0	12-11-1955			0.1859		0.1859
1957	97.0	2-26-1957			0.0		-0.076
1958	96.0	1-16-1958					
1959	195.0	1-24-1959					
1960	242.0	12-15-1959					
1961	82.0	2-21-1961					
1962	114.0	1- 3-1962					
1963	106.0	11-19-1962					
1964	69.0	1- 1-1964					
1965	218.0	1-29-1965	0.99		45.8		44.8
1966	53.0	12- 4-1965	0.95		61.4		60.8
1967	92.0	1-15-1967	0.90		71.7		71.4
1968	189.0	12-25-1967	0.80		86.5		86.7
1969	158.0	1- 4-1969	0.50		124.0		124.7
1970	81.0	9- 7-1970	0.20		177.8		178.1
1971	173.0	1-19-1971	0.10		214.7		213.9
1972	227.0	3- 5-1972	0.04		282.4		259.5
1973	100.0	12-26-1972	0.02		298.8		293.6
1974	132.0	1-24-1974	0.01		335.7		327.8

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1955-1974)



STATION 1214R500 TOLT RIVER NEAR CARNATION, WASH.  
MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1928													
1929	679	333	344	246	163	671	574	882	785	228	162	90.6	433
1930	166	155	606	404	1256	581	587	509	411	148	82.9	100	413
1931	462	395	421	794	512	848	671	417	460	189	95.1	293	463
1932	470	674	582										
1938	343	1417	990	841	362	504	1058	625	275	121	84.2	77.3	558
1939	255	1017	1172	1207	581	642	731	829	805	424	138	167	665
1940	450	664	1029	534	869	898	609	560	216	128	97.2	72.9	510
1941	451	589	689	560	329	289	289	468	361	145	93.1	529	399
1942	787	529	916	398	485	496	563	624	867	295	145	94.2	517
1943	329	1029	1085	543	740	646	866	736	582	296	136	113	590
1944	335	376	862	519	481	482	712	894	458	162	125	587	499
1945	356	755	711	1086	706	657	715	1102	424	173	113	412	605
1946	553	1097	839	869	719	800	782	888	909	378	151	131	675
1947	536	752	1460	1084	1044	654	979	509	613	268	142	219	686
1948	891	1333	1024	687	710	509	709	1208	942	339	409	398	763
1949	465	1101	689	355	730	816	794	1078	551	397	196	226	615
1950	663	900	1036	859	1070	1189	886	917	1064	506	302	193	797
1951	686	1050	1112	882	1534	522	601	598	375	134	80.3	135	636
1952	853	722	547	417	728	500	718	831	585	300	129	103	535
1953	80.7	123	432	2058	928	524	711	753	606	300	135	165	567
1954	522	846	1648	810	975	487	598	626	887	504	301	460	720
1955	333	892	709	572	860	333	702	996	1177	802	358	177	657
1956	896	1317	1274	831	420	623	996	1078	894	405	155	310	767
1957	903	819	1354	361	688	774	693	805	525	248	175	93.8	637
1958	203	545	792	994	918	438	719	485	244	120	174.9	167	472
1959	538	1478	1405	1533	679	823	1275	1022	809	381	166	954	922
1960	933	1485	1332	554	765	580	739	987	604	211	233	227	720
1961	569	1076	654	997	1372	822	894	764	372	177	107	184	660
1962	649	602	1076	1252	548	435	634	628	495	466	358	269	620
1963	372	916	1038	635	856	463	764	488	416	327	168	204	551
1964	291	825	593	942	617	554	632	897	1204	604	485	524	680
1965	538	653	987	1217	1252	571	555	462	311	175	186	351	601
1966	451	642	595	775	502	522	638	593	495	451	207	215	507
1967	524	728	1193	1463	879	557	638	593	521	451	135	124	608
1968	570	599	1164	1036	918	626	762	774	710	281	322	508	688
1969	647	864	939	1070	368	616	705	779	598	439	282	376	643
1970	457	417	591	754	653	469	601	491	353	195	127	321	451
1971	498	652	736	1476	1186	625	548	756	725	505	188	258	677
1972	442	956	734	872	1315	1472	779	984	769	569	204	457	794
1973	232	355	938	764	328	379	379	403	352	173	110	167	383
1974	434	828	983	1415	802	788	747	892	1015	502	211	156	731
1975	122	555	832	1144	708	536	368	653	507	288	243	222	514
1976	519	1355	1897	1375	534	413	593	632	461	339	274	232	709
1977	244	376	474	514	305	404	564	566	363	195	195	248	371
1978	257	949	1491	611	481	380	409	546	286	191	114	558	520
1979	301	542	665	377	733	732	545	546	280	223	114	132	431

STATION 12148500 TOLT RIVER NEAR CARNATION, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1928-1979)

MEAN	483.8	786.6	927.0	859.7	746.9	614.4	688.1	727.8	592.0	309.0	187.1	264.0	599.1
MAXIMUM	933.0	1485.0	1897.0	2058.0	1536.0	1472.0	1275.0	1208.0	1204.0	802.0	485.0	954.0	922.0
MINIMUM	80.7	123.0	344.0	246.0	163.0	289.0	269.0	403.0	216.0	120.0	74.9	72.9	371.0
STD DEVIATION	212.62	334.38	342.95	385.14	308.92	216.10	188.49	213.71	258.15	153.11	93.94	178.93	125.02
SKWENESS	0.391	0.264	0.630	0.776	0.539	1.811	0.510	0.354	0.666	0.990	1.270	1.648	0.129
STD ERR SKEW	0.350	0.350	0.350	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.350	0.354
SER CORR COEFF	0.046	0.155	-0.161	0.016	-0.045	-0.106	0.187	0.167	-0.053	0.059	0.085	-0.081	0.082
COEFF OF VAR	0.439	0.425	0.370	0.448	0.414	0.352	0.274	0.294	0.436	0.495	0.502	0.678	0.209
MEAN LOGS	2.635	2.847	2.937	2.890	2.833	2.766	2.821	2.843	2.732	2.440	2.224	2.338	2.768
STD DEV LOGS	0.226	0.228	0.166	0.203	0.198	0.137	0.125	0.130	0.193	0.212	0.202	0.270	0.093
SKWENESS LOGS	-1.028	-1.281	-0.260	-0.305	-0.716	0.474	-0.643	-0.083	-0.078	0.081	0.313	0.258	-0.332
STD ERR SKEW LOGS	0.350	0.350	0.350	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.350	0.354
SER CORR LOGS	-0.066	0.144	-0.079	0.120	-0.071	-0.108	0.178	0.116	-0.033	0.009	0.169	-0.012	0.089
COEFF OF VAR LOGS	0.080	0.056	0.056	0.070	0.070	0.046	0.044	0.046	0.070	0.087	0.091	0.115	0.034
% OF AVE FLOW	6.7	10.9	12.9	12.0	10.4	8.6	9.6	10.1	8.2	4.3	2.6	3.7	100.0

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MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1928-1979)

0.99	88.6	131.1	331.8	235.4	186.7	313.8	296.3	361.8	187.4	91.2	63.3	57.8	337.3
0.95	162.0	256.4	450.1	345.8	296.5	364.4	393.0	423.7	257.5	124.9	81.5	82.2	403.6
0.90	214.7	348.1	526.1	420.4	370.5	397.8	450.9	474.3	304.3	148.1	94.0	100.1	441.9
0.80	291.5	481.6	631.6	528.0	475.2	446.1	526.2	542.9	371.9	182.3	112.7	128.2	491.1
0.50	471.4	784.5	879.9	795.2	718.8	569.6	682.7	700.1	542.1	273.5	163.7	211.8	593.0
0.20	672.7	1093.3	1197.5	1157.9	1006.8	753.4	847.9	897.5	744.0	414.1	245.9	363.4	704.2
0.10	774.9	1232.9	1394.1	1391.0	1167.1	884.8	934.3	1019.5	947.7	516.2	308.5	489.2	765.4
0.04	874.6	1355.1	1628.5	1675.2	1339.2	1062.2	1024.1	1166.1	1157.2	655.0	397.2	679.9	832.5
0.02	931.9	1417.9	1793.9	1874.2	1448.5	1202.8	1080.2	1270.5	1314.9	765.1	470.4	846.6	876.7
0.01	978.0	1463.8	1952.3	2076.7	1544.3	1351.0	1128.8	1371.6	1473.6	880.8	550.1	1035.7	916.9

## STATION 12148500 TOLT RIVER NEAR CARNATION, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1930	72.0	72.0	73.0	76.0	98.0	122.0	133.0	144.0	220.0
1931	68.0	69.0	71.0	73.0	78.0	90.0	109.0	153.0	259.0
1939	64.0	65.0	67.0	69.0	74.0	80.0	87.0	116.0	236.0
1940	101.0	102.0	105.0	114.0	133.0	148.0	202.0	270.0	438.0
1941	63.0	65.0	65.0	70.0	73.0	84.0	99.0	113.0	218.0
1942	77.0	77.0	79.0	82.0	91.0	113.0	186.0	265.0	313.0
1943	79.0	80.0	81.0	85.0	94.0	105.0	117.0	163.0	359.0
1944	88.0	89.0	91.0	95.0	107.0	114.0	144.0	208.0	305.0
1945	91.0	92.0	94.0	100.0	110.0	122.0	166.0	305.0	395.0
1946	97.0	97.0	98.0	102.0	110.0	132.0	187.0	305.0	443.0
1947	98.0	100.0	106.0	115.0	122.0	128.0	149.0	240.0	457.0
1948	104.0	105.0	106.0	112.0	133.0	176.0	201.0	299.0	433.0
1949	180.0	181.0	183.0	192.0	237.0	354.0	371.0	402.0	563.0
1950	99.0	100.0	103.0	110.0	134.0	205.0	263.0	323.0	453.0
1951	104.0	105.0	109.0	117.0	150.0	237.0	297.0	412.0	600.0
1952	53.0	53.0	56.0	61.0	72.0	77.0	100.0	169.0	320.0
1953	63.0	63.0	65.0	66.0	71.0	87.0	101.0	107.0	191.0
1954	80.0	80.0	81.0	85.0	107.0	121.0	186.0	245.0	395.0
1955	172.0	174.0	180.0	189.0	238.0	326.0	360.0	359.0	503.0
1956	132.0	135.0	150.0	160.0	175.0	226.0	403.0	511.0	681.0
1957	94.0	95.0	100.0	111.0	123.0	154.0	251.0	347.0	560.0
1958	74.0	74.0	77.0	81.0	93.0	111.0	139.0	171.0	293.0
1959	61.0	62.0	64.0	65.0	72.0	82.0	114.0	139.0	266.0
1960	126.0	129.0	134.0	137.0	153.0	242.0	375.0	514.0	663.0
1961	118.0	118.0	120.0	126.0	137.0	180.0	211.0	243.0	439.0
1962	79.0	79.0	82.0	89.0	99.0	138.0	152.0	188.0	343.0
1963	130.0	132.0	138.0	167.0	196.0	260.0	293.0	360.0	419.0
1964	97.0	101.0	106.0	119.0	145.0	176.0	187.0	241.0	305.0
1965	190.0	198.0	206.0	245.0	416.0	469.0	512.0	514.0	614.0
1966	116.0	119.0	124.0	131.0	148.0	171.0	194.0	247.0	321.0
1967	116.0	117.0	130.0	150.0	189.0	202.0	218.0	283.0	382.0
1968	100.0	100.0	101.0	107.0	124.0	129.0	150.0	212.0	321.0
1969	148.0	151.0	152.0	158.0	205.0	281.0	322.0	379.0	526.0
1970	140.0	141.0	146.0	151.0	159.0	285.0	352.0	367.0	410.0
1971	102.0	102.0	104.0	107.0	119.0	154.0	188.0	236.0	319.0
1972	144.0	149.0	153.0	164.0	182.0	215.0	259.0	344.0	470.0
1973	147.0	149.0	155.0	161.0	173.0	209.0	297.0	300.0	397.0
1974	90.0	92.0	93.0	100.0	103.0	112.0	143.0	189.0	256.0
1975	110.0	111.0	114.0	115.0	121.0	133.0	153.0	203.0	365.0
1976	126.0	127.0	132.0	142.0	159.0	232.0	224.0	274.0	372.0
1977	150.0	154.0	166.0	160.0	187.0	215.0	229.0	235.0	304.0
1978	104.0	105.0	106.0	109.0	123.0	164.0	202.0	211.0	301.0
1979	119.0	119.0	123.0	130.0	154.0	187.0	224.0	264.0	324.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1930-1979)

MEAN	106.2	107.6	111.1	118.7	139.2	176.0	215.1	267.7	389.6
MAXIMUM	190.0	198.0	206.0	245.0	416.0	469.0	512.0	514.0	681.0
MINIMUM	53.0	53.0	56.0	61.0	71.0	80.0	87.0	107.0	191.0
STANDARD DEVIATION	32.97	34.02	35.36	39.88	61.10	82.13	95.59	104.36	120.96
SKWENESS	0.653	0.686	0.661	0.872	2.367	1.403	1.042	0.725	0.678
STD ERROR OF SKWENESS	0.361	0.361	0.361	0.361	0.361	0.361	0.361	0.361	0.361
SERIAL CORR COEFF	0.257	0.262	0.266	0.249	0.163	0.191	0.166	0.113	0.174
COEFF OF VARIATION	0.310	0.316	0.318	0.336	0.439	0.467	0.444	0.390	0.310
MEAN LOGS	2.006	2.011	2.025	2.051	2.112	2.204	2.293	2.395	2.571
STD DEVIATION LOGS	0.134	0.136	0.137	0.143	0.163	0.188	0.186	0.173	0.134
SKWENESS LOGS	-0.023	-0.009	0.007	0.066	0.545	0.262	0.119	-0.202	0.011
STD ERR SKWENESS LOGS	0.361	0.361	0.361	0.361	0.361	0.361	0.361	0.361	0.361
SER CORR COEFF LOGS	0.346	0.353	0.353	0.352	0.307	0.319	0.237	0.162	0.183
COEFF OF VAR LOGS	0.067	0.068	0.068	0.070	0.077	0.085	0.081	0.072	0.052

STATION 12148500 TOLT RIVER NEAR CARNATION, WASH.

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEAKSON III ANALYSIS (YEARS 1930-1979)

0.99	207.1	212.5	221.3	245.9	357.7	476.8	553.7	590.2	762.7
0.98	190.6	195.2	202.9	223.8	309.8	414.0	487.5	538.0	700.9
0.96	173.8	177.6	184.3	201.7	265.8	355.1	423.8	484.2	638.1
0.90	150.6	153.3	158.8	172.0	212.5	282.1	342.4	409.6	552.0
0.80	131.6	133.6	138.1	148.3	174.8	229.1	281.2	348.2	481.9
0.50	101.5	102.6	105.8	112.1	125.1	157.1	194.8	251.7	371.8
0.20	78.2	78.7	81.1	85.2	93.9	110.7	136.6	178.6	287.1
0.10	68.1	68.5	70.6	74.0	82.3	93.1	114.0	148.1	250.9
0.05	60.8	61.1	63.0	65.9	74.5	81.2	96.4	126.3	224.5
0.02	53.5	53.7	55.3	57.9	67.2	69.9	83.7	105.2	188.2
0.01	49.1	49.3	50.8	53.2	63.0	63.5	75.2	92.9	182.3

FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1930-1979)

P95	P90	P75	P70	P50	P25	P10
110.0	140.0	260.0	310.0	470.0	740.0	1200.0



STATION 12148500 TOLT RIVER NEAR CARNATION, WASH.											
HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1929-1979)											
	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01	
	1536.6	2074.9	2435.1	2955.8	4282.2	6203.3	7529.0	10577.0	11925.3		
	1287.4	1633.5	1860.0	2182.9	2990.5	4143.7	4936.5	6764.6	7578.2		
	1003.8	1264.7	1427.6	1650.2	2164.9	2819.4	3227.5	3719.8	4072.3		
	771.8	994.4	1128.6	1305.6	1686.0	2114.9	2354.7	2619.1	2793.5		
	634.7	804.9	907.9	1044.6	1343.1	1649.9	1849.6	2115.6	2268.2		
	559.8	699.9	782.3	888.6	1109.9	1349.3	1479.0	1614.9	1709.5		
	516.4	640.9	713.5	806.8	998.8	1203.9	1313.8	1431.5	1507.1		
	484.8	595.8	659.8	741.1	890.9	1077.9	1168.4	1264.0	1324.6		
	441.8	541.0	597.7	659.1	811.8	957.3	1032.4	1110.3	1159.1		
	2113.1	2980.7	3575.6	4451.4	6742.2	10159.8	12562.8	15730.4	18174.3		
	2016.4	2928.8	3553.5	4467.6	6814.6	10186.3	12468.3	15376.4	17544.7		
										19723.4	

STATION 12148700 STOSSEL CREEK NEAR CARNATION, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)											
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	ANNUAL
1957											
1958	3.20	17.0	40.8	38.0	34.7	16.4	18.3	5.83	2.59	1.25	2.12
1959	2.82	28.5	38.7	55.0	26.0	30.1	23.5	21.3	15.1	4.81	0.91
1960	14.9	43.4	46.4	24.4	35.8	16.4	17.1	24.9	7.33	2.09	6.39
1961	7.88	43.0	22.1	30.6	49.9	28.7	24.6	18.0	5.08	2.49	2.05
1962	4.56	9.96	34.9	39.8	11.0	20.7	12.0	9.69	7.48	2.15	1.57
1963	4.63	14.8	23.2	16.2	22.6	13.2	20.6	8.35	5.45	4.81	1.88
											1.76
											11.4

ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1958	173.0	12-29-1957
1959	297.0	1-24-1959
1960	311.0	11-21-1959
1961	142.0	11-24-1960
1962	414.0	1- 7-1962
1963	76.0	2- 4-1963

STATION 12149000 SNOQUALMIE RIVER NEAR CARNATION, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1929													
1930	761	792	3935	1923	6781	3850	3471	6357	5959	1926	693	521	
1931	2763	2227	1874	5287	3418	3508	4044	3428	3000	963	492	547	2484
1932	2826	4403	3530	5758	5541	4718	4846	4279	3496	1196	509	1247	2985
1933	3080	12800	6645	6958	3283	9979	6797	5623	5452	3324	1341	1191	4594
1934	5760	6712	14530	9550	4003	4362	4056	5725	7741	4000	1424	3024	5188
1935	4434	6381	5319	8530	3974	5282	4244	3178	1567	1067	773	1106	4823
1936	994	2681	3199	6055	3207	3282	3626	3626	3584	2126	1001	779	3827
1937	871	667	5688	1291	3233	4228	4934	7847	5570	1881	7116	963	3445
1938	1909	8851	6019	4814	2065	2946	5962	4585	2780	1040	583	431	3509
1939	1196	3942	6105	6376	3516	3711	4112	5031	4906	2811	902	851	3624
1940	2325	3509	6277	3019	4840	5089	4043	4422	1803	840	626	517	3091
1941	2012	2925	3894	2941	2001	1933	2230	3077	2250	966	523	3032	3214
1942	4309	3401	5929	2222	2848	2646	3677	4117	6035	2206	899	576	3224
1943	1069	6979	6000	3110	3772	3638	5546	4921	4881	2713	1023	791	3689
1944	1818	2101	5123	2511	2858	2721	3869	5224	3263	1153	734	2563	2815
1945	1664	3402	3883	6161	4860	3740	4144	6588	3626	1472	615	2574	3551
1946	3309	6693	4861	4861	3862	3415	4601	6333	6233	3081	1028	811	4166
1947	3059	4081	8690	6198	5674	3833	5674	4235	3994	1846	899	1614	4737
1948	5811	8282	5634	4632	3981	3207	5631	7372	7372	2740	2015	1933	4137
1949	2739	5494	4164	2118	4264	4546	4747	7191	4541	3087	1528	1228	3798
1950	3520	5279	5427	4749	5545	7093	5235	5872	7850	4410	2133	1109	4844
1951	4281	6642	7502	5203	9219	3012	5300	4955	3524	1376	578	719	4200
1952	4374	3424	3362	2098	4030	2686	4392	5578	3884	2327	790	593	3124
1953	479	619	1756	11140	6169	3012	4713	5302	4703	2955	1126	871	3533
1954	2518	5133	9176	5017	6044	3181	3962	4856	6254	4221	2030	2150	4535
1955	1843	4716	3518	3172	4684	2212	4208	5676	7871	5629	2226	1125	3894
1956	5444	7885	7906	4544	2279	3817	5704	7103	6273	3698	1138	1436	4777
1957	4722	4558	8388	2116	3674	4287	4929	5701	3452	1534	910	576	3742
1958	1026	2625	4547	5209	4974	2446	4022	4152	2246	895	517	1170	2805
1959	3067	8931	7641	8424	3323	4211	6793	5985	5272	2617	1019	5128	5202
1960	5248	9342	6965	2845	4241	3137	6492	6040	4627	1544	1197	1236	4256
1961	3153	3694	3495	5885	8219	5149	5244	5661	4282	1518	1613	1086	4258
1962	3209	3759	5475	6360	2996	2435	4685	3947	3847	2404	1628	1170	4500
1963	2225	5454	5724	3734	5406	2794	3987	3411	2688	1795	967	893	3239
1964	1786	5426	4063	6002	3845	3695	4226	5677	8603	4991	2992	2829	4491
1965	2914	3765	6382	7093	6898	3054	4248	4139	3348	1734	1106	1432	3825
1966	2181	3214	3067	4444	2840	3531	4830	5440	4260	2969	1072	800	3208
1967	2304	3645	7172	8027	4954	3177	2258	4672	5097	1807	763	2899	3708
1968	3854	3510	7102	6482	6579	3726	3938	4635	4737	1642	1536	2842	4212
1969	3613	4932	5106	6441	2585	3250	4701	6572	5171	2123	1028	2010	3970
1970	2790	2488	3784	5487	4049	3055	4176	4065	3903	1440	745	1890	3152
1971	2332	4048	4213	7557	6529	3860	3521	6729	5883	4778	1553	1506	4365
1972	2488	5389	4715	6044	8296	3780	5196	7578	6846	4784	1640	2586	5439
1973	1368	2577	6839	4707	1860	2319	2518	3671	3321	1391	1391	816	2674
1974	2192	4197	6394	8595	4827	5208	4886	5857	8983	5126	2045	1036	4933
1975	629	3033	5335	7597	3839	3605	2511	5849	5536	3345	1897	1372	3718
1976	3368	6846	12630	8261	3315	2473	3871	5508	4376	3336	2056	1859	4807
1977	1115	2521	3350	3369	2231	2777	3350	3705	3187	1196	1077	1200	2529
1978	1745	6828	10610	3652	4928	3084	3111	4188	3051	1465	1170	3069	3753
1979	1372	3822	4258	1911	3928	4793	3880	5064	3101	1910	7705	787	3030

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1929-1979)

MEAN	2677.4	4756.5	5744.8	5196.7	4330.6	3848.7	4338.1	5221.3	4727.2	2425.4	1141.5	1434.1	3816.8
MAXIMUM	5811.0	12800.0	14530.0	11140.0	9210.0	9979.0	6797.0	7847.0	8983.0	5629.0	2982.0	5128.0	5439.0
MINIMUM	479.0	619.0	1756.0	1291.0	1860.0	1933.0	2230.0	3072.0	1567.0	840.0	492.0	231.0	231.0
STU DEV	1373.33	2418.44	2454.22	2251.69	1728.25	1555.21	983.76	1187.80	1777.67	1255.21	556.04	921.83	771.31
STU DEVIATION	1.3733	2.4184	2.4542	2.2517	1.7283	1.5552	0.9838	1.1878	1.7777	1.2552	0.5560	0.9219	0.7713
SKENESS	0.552	0.870	1.399	0.324	0.854	2.483	0.146	0.181	0.518	0.894	1.184	1.740	0.125
STU ERR	0.337	0.337	0.337	0.337	0.337	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.337
SKENESS	0.337	0.337	0.337	0.337	0.337	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.337
STU CORR	0.165	0.070	0.141	0.157	0.022	0.001	0.019	0.070	-0.075	0.158	0.184	-0.037	0.058
STU CORR COEFF	0.165	0.070	0.141	0.157	0.022	0.001	0.019	0.070	-0.075	0.158	0.184	-0.037	0.058
COEFF OF VAR	0.513	0.508	0.427	0.433	0.399	0.404	0.427	0.427	0.376	0.458	0.487	0.643	0.292
MEAN LOGS	3.362	3.612	3.723	3.469	3.404	3.560	3.626	3.706	3.463	3.330	3.012	3.084	3.570
STU DEV LOGS	0.256	0.267	0.180	0.214	0.172	0.142	0.105	0.102	0.171	0.221	0.198	0.246	0.090
SKENESS LOGS	-0.653	-1.233	-0.182	-0.629	-0.004	1.047	-0.741	-0.270	-0.375	0.097	0.304	0.428	-0.284
STU ERR SKENESS	0.337	0.337	0.337	0.337	0.337	0.333	0.333	0.333	0.333	0.333	0.333	0.337	0.337
STU CORR SKENESS	0.337	0.337	0.337	0.337	0.337	0.333	0.333	0.333	0.333	0.333	0.333	0.337	0.337
STU CORR COEFF SKENESS	0.062	0.051	-0.095	0.120	-0.039	-0.012	0.002	0.071	-0.035	0.108	0.198	0.069	0.025
STU CORR COEFF LOGS	0.076	0.074	0.048	0.058	0.048	0.040	0.029	0.027	0.047	0.066	0.060	0.059	0.025
COEFF OF VAR LOGS	0.076	0.074	0.048	0.058	0.048	0.040	0.029	0.027	0.047	0.066	0.060	0.059	0.025
* OF AVE FLOW	5.8	10.4	12.5	11.3	9.4	8.4	9.5	11.4	10.3	5.3	2.5	3.1	100.0

## STATION 12149000 SNOQUALMIE RIVER NEAR CARNATION, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1929-1979)

0.99	443.3	582.7	1908.2	1188.5	1599.4	2185.8	2120.5	2819.0	1576.2	677.2	394.8	389.7	2211.4
0.95	792.0	1260.3	2619.4	1919.0	2095.0	2375.9	2715.6	3402.9	2207.7	937.4	506.5	515.4	2616.5
0.90	1050.0	1794.5	3685.9	2423.6	2418.9	2520.8	3058.8	3746.3	2615.5	1118.2	583.2	606.5	2850.6
0.80	1441.2	2613.8	3746.3	3152.2	2878.8	2751.1	3492.1	4192.5	3182.1	1388.4	697.0	748.4	3151.0
0.50	2455.7	4624.8	5354.6	4915.3	4015.1	3432.4	4348.7	5139.7	4505.2	2119.2	1004.5	1166.6	3775.5
0.20	3821.7	6861.0	7518.7	7125.4	5598.0	4637.7	5192.6	6207.9	6159.7	3272.3	1495.7	1925.3	4461.5
0.10	4855.6	7936.1	8916.1	8419.0	6659.2	5619.2	5609.3	6812.4	7157.3	4125.9	1866.4	2561.1	4842.2
0.04	5610.2	8916.4	10638.1	9865.0	8012.6	7089.4	602.7	7490.1	8317.7	5301.7	2388.0	3536.4	5263.1
0.02	6249.9	9438.8	11890.2	10818.2	9029.4	8368.0	6273.9	7944.9	9117.4	6246.1	2816.2	4400.6	5542.4
0.01	6832.6	9431.2	13117.1	11677.9	10053.3	9819.1	6483.9	8364.8	9868.2	7248.0	3279.3	5394.4	5798.0



## STATION 12149000 SNOQUALMIE RIVER NEAR CARNATION, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1930	430.0	450.0	459.0	463.0	512.0	582.0	647.0	686.0	1400.0
1931	415.0	446.0	451.0	454.0	467.0	506.0	599.0	911.0	1460.0
1932	415.0	446.0	458.0	474.0	485.0	641.0	913.0	1180.0	2130.0
1933	560.0	591.0	604.0	662.0	943.0	1070.0	1330.0	2020.0	3250.0
1934	595.0	646.0	745.0	821.0	901.0	1670.0	2150.0	2940.0	4140.0
1935	618.0	629.0	633.0	648.0	689.0	846.0	949.0	1000.0	1610.0
1936	441.0	453.0	469.0	505.0	680.0	766.0	894.0	1060.0	1750.0
1937	546.0	571.0	590.0	630.0	681.0	737.0	789.0	1560.0	1560.0
1938	475.0	485.0	498.0	560.0	605.0	809.0	928.0	1380.0	2900.0
1939	396.0	416.0	439.0	449.0	475.0	523.0	612.0	820.0	1670.0
1940	532.0	538.0	562.0	627.0	802.0	835.0	1150.0	1570.0	2540.0
1941	420.0	452.0	470.0	509.0	517.0	548.0	635.0	786.0	1300.0
1942	446.0	458.0	471.0	490.0	517.0	692.0	1110.0	1650.0	2000.0
1943	416.0	438.0	442.0	496.0	519.0	574.0	682.0	1030.0	2400.0
1944	612.0	644.0	658.0	683.0	733.0	811.0	1050.0	1440.0	2150.0
1945	526.0	528.0	546.0	599.0	651.0	744.0	1110.0	1510.0	2070.0
1946	453.0	463.0	486.0	540.0	583.0	843.0	1290.0	1550.0	2830.0
1947	623.0	662.0	693.0	741.0	786.0	804.0	993.0	1750.0	3000.0
1948	640.0	655.0	673.0	731.0	819.0	1140.0	1390.0	1980.0	2960.0
1949	1120.0	1150.0	1160.0	1250.0	1580.0	1880.0	2150.0	2280.0	3050.0
1950	672.0	698.0	738.0	809.0	996.0	1290.0	1830.0	2210.0	2980.0
1951	650.0	670.0	687.0	725.0	977.0	1560.0	2130.0	2880.0	4170.0
1952	416.0	431.0	452.0	476.0	528.0	563.0	835.0	1470.0	2260.0
1953	423.0	423.0	430.0	441.0	451.0	525.0	558.0	604.0	1030.0
1954	556.0	569.0	588.0	634.0	759.0	953.0	1330.0	1750.0	2780.0
1955	1020.0	1050.0	1110.0	1240.0	1810.0	1970.0	1960.0	2120.0	2850.0
1956	874.0	898.0	939.0	1010.0	1100.0	1450.0	2600.0	3350.0	4380.0
1957	620.0	657.0	689.0	775.0	850.0	1090.0	1590.0	2460.0	3440.0
1958	486.0	501.0	508.0	529.0	574.0	652.0	771.0	976.0	1640.0
1959	446.0	456.0	459.0	470.0	511.0	566.0	814.0	1050.0	1970.0
1960	788.0	801.0	823.0	835.0	987.0	1580.0	2400.0	3110.0	3870.0
1961	480.0	627.0	683.0	759.0	848.0	1190.0	1200.0	1480.0	2810.0
1962	496.0	511.0	519.0	537.0	608.0	833.0	983.0	1490.0	2210.0
1963	424.0	446.0	509.0	723.0	939.0	1220.0	1520.0	1710.0	2380.0
1964	558.0	582.0	616.0	633.0	727.0	846.0	928.0	1230.0	1880.0
1965	1610.0	1680.0	1800.0	1950.0	2420.0	2770.0	2820.0	2880.0	3700.0
1966	642.0	710.0	724.0	824.0	1010.0	1090.0	1300.0	1570.0	2110.0
1967	614.0	637.0	688.0	730.0	776.0	866.0	1030.0	1540.0	2450.0
1968	452.0	466.0	489.0	527.0	642.0	695.0	963.0	1530.0	2360.0
1969	655.0	673.0	701.0	769.0	982.0	1390.0	1760.0	2180.0	3090.0
1970	668.0	673.0	706.0	741.0	779.0	1060.0	1650.0	1910.0	2300.0
1971	522.0	525.0	535.0	563.0	681.0	972.0	1300.0	1560.0	2250.0
1972	866.0	870.0	922.0	1040.0	1190.0	1340.0	1740.0	2540.0	3290.0
1973	884.0	898.0	906.0	996.0	1140.0	1630.0	1830.0	1950.0	2850.0
1974	341.0	346.0	359.0	400.0	412.0	574.0	809.0	1180.0	1940.0
1975	520.0	530.0	560.0	569.0	607.0	768.0	1010.0	1550.0	2720.0
1976	800.0	810.0	839.0	886.0	1110.0	1610.0	1650.0	2290.0	3360.0
1977	685.0	695.0	712.0	829.0	882.0	1170.0	1450.0	1590.0	2060.0
1978	594.0	598.0	607.0	635.0	741.0	1030.0	1270.0	1360.0	2100.0
1979	642.0	662.0	697.0	757.0	1020.0	1290.0	1630.0	1740.0	2290.0

## STATION 12149000 SNOQUALMIE RIVER NEAR CARNATION, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1930-1979)

MEAN	601.7	624.3	651.0	702.9	819.6	1031.3	1300.6	1672.0	2513.8
MAXIMUM	1610.0	1680.0	1800.0	1950.0	2420.0	2770.0	2820.0	3350.0	4380.0
MINIMUM	341.0	346.0	359.0	400.0	412.0	506.0	558.0	604.0	1030.0
STANDARD DEVIATION	219.80	225.70	240.29	265.20	360.87	456.75	546.12	653.01	773.06
SKEWNESS	2.429	2.508	2.586	2.679	2.348	1.455	0.886	0.683	0.481
STD ERROR OF SKEWNESS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337
SERIAL CORR COEFF	0.164	0.180	0.175	0.191	0.183	0.173	0.206	0.179	0.136
COEFF OF VARIATION	0.365	0.362	0.369	0.377	0.440	0.443	0.420	0.391	0.308
MEAN LOGS	2.758	2.774	2.792	2.824	2.882	2.977	3.078	3.190	3.380
STD DEVIATION LOGS	0.130	0.129	0.131	0.135	0.158	0.175	0.175	0.174	0.138
SKEWNESS LOGS	1.094	1.082	1.064	0.972	0.802	0.400	0.109	-0.251	-0.304
STD ERR SKEWNESS LOGS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337
SER CORR COEFF LOGS	0.234	0.249	0.251	0.269	0.272	0.279	0.265	0.205	0.138
COEFF OF VAR LOGS	0.047	0.046	0.047	0.048	0.055	0.059	0.058	0.055	0.041

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1979)

	0.99	1445.2	1482.3	1561.8	1700.7	2187.2	2728.3	3209.1	3659.3	4663.3
0.98	1243.6	1278.6	1345.4	1466.9	1864.4	2364.8	2844.5	3345.0	3958.1	4358.1
0.96	1064.5	1097.1	1152.7	1257.6	1576.7	2027.6	2490.9	3018.9	4031.9	4358.1
0.90	856.6	885.8	928.4	1012.4	1241.2	1614.7	2033.8	2561.0	3555.2	4358.1
0.80	716.5	742.7	776.7	845.2	1013.4	1319.3	1686.7	2180.8	3140.4	4358.1
0.50	542.8	564.5	587.7	634.4	727.1	923.5	1188.7	1575.5	2435.6	4358.1
0.20	443.9	462.4	479.3	511.2	558.6	671.6	846.6	1111.5	1846.6	4358.1
0.10	410.5	427.8	442.4	468.3	499.1	576.9	711.9	917.3	1583.0	4358.1
0.05	389.6	406.0	419.1	440.8	460.3	512.6	618.3	778.8	1387.2	4358.1
0.02	371.8	387.3	399.1	416.7	425.3	452.3	528.6	644.1	1189.2	4358.1
0.01	362.6	377.6	388.6	403.8	406.2	417.9	477.1	565.7	1069.8	4358.1

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1930-1979)

P95	P90	P75	P70	P50	P25	P10
650.0	840.0	1700.0	2000.0	3100.0	4900.0	7300.0

## STATION 12149000 SNOQUALMIE RIVER NEAR CARNATION, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

ANNUAL PEAK-FLOW DATA

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW (CFS)	DATE	REG. (R)
1930	13000.	11000.	9200.	7860.	6480.	5050.	4700.	4400.	4070.	14800.	12/14/29	
1931	25500.	18200.	12800.	8360.	6130.	5260.	5130.	4980.	4360.	27400.	01/28/31	
1932	36500.	31100.	18500.	15100.	12000.	9870.	8460.	7750.	6520.	59500.	02/27/32	
1933	36000.	29100.	25200.	17700.	14000.	10100.	9330.	7610.	6260.	59000.	11/13/32	
1934	38800.	29600.	23300.	20200.	15800.	12500.	10400.	9750.	7930.	48700.	11/03/33	
1935	35600.	30600.	22500.	14200.	8400.	7250.	6770.	6740.	5490.	47100.	10/25/34	
1936	14300.	11300.	9850.	9070.	8050.	7350.	6240.	5790.	4520.	16100.	05/16/36	
1937	14700.	11500.	9390.	7780.	6860.	6290.	6000.	5510.	4540.	17200.	04/15/37	
1938	32800.	23400.	15400.	10900.	7370.	7770.	6700.	5670.	5180.	38800.	04/18/38	
1939	20800.	16700.	12200.	8610.	7280.	6330.	5570.	5040.	4830.	22900.	12/08/38	
1940	17800.	15500.	11200.	8600.	6650.	5300.	4890.	4760.	4620.	18900.	12/16/39	
1941	18300.	11500.	8260.	6540.	4700.	3900.	3330.	3120.	2840.	20000.	11/29/40	
1942	17200.	13900.	9630.	7820.	6330.	5090.	4610.	4190.	3700.	19700.	12/19/41	
1943	26800.	18900.	11300.	8430.	7560.	6620.	5570.	5080.	4880.	30300.	11/24/42	
1944	33200.	23400.	13800.	8290.	5430.	4660.	4210.	3820.	3690.	48400.	12/03/43	
1945	25100.	19000.	13600.	9980.	6600.	5540.	5280.	4970.	4920.	32000.	01/08/45	
1946	21100.	15500.	10700.	9570.	7740.	6350.	5970.	5460.	5220.	23500.	10/26/45	
1947	24800.	24400.	20100.	13200.	7740.	7590.	7200.	6490.	5850.	32600.	12/11/46	
1948	22500.	17000.	13600.	10500.	8930.	7400.	7060.	6170.	5270.	24800.	10/19/47	
1949	16700.	14100.	10900.	8730.	7380.	6360.	5750.	5670.	4740.	20200.	11/24/48	
1950	24400.	20600.	13300.	11500.	8740.	7260.	6510.	6690.	6250.	30100.	03/04/50	
1951	47400.	37200.	24200.	14200.	9620.	8260.	8030.	7190.	5990.	52200.	02/10/51	
1952	11700.	9410.	8430.	7010.	5970.	5190.	4740.	4310.	3920.	14300.	02/04/52	
1953	26700.	21500.	15800.	14600.	13500.	8700.	6830.	6330.	5800.	32400.	02/01/53	
1954	26400.	20200.	15600.	12200.	9770.	7780.	6830.	6420.	5480.	35700.	12/10/53	
1955	23200.	16000.	11500.	9190.	8120.	7200.	6520.	5890.	5050.	25300.	02/08/55	
1956	33600.	20700.	12600.	10700.	8830.	8500.	7380.	6570.	5560.	40800.	12/12/55	
1957	23000.	18000.	16400.	13300.	8650.	6590.	6160.	5090.	4930.	27500.	12/10/56	
1958	14200.	11600.	8700.	6880.	5670.	5200.	4920.	4480.	4210.	15400.	01/17/58	
1959	27800.	24000.	16200.	12800.	9960.	8740.	8520.	7320.	6740.	31200.	01/24/59	
1960	40800.	32000.	25500.	15400.	12600.	8970.	7270.	6370.	5460.	49400.	11/23/59	
1961	22400.	18900.	13100.	9580.	8240.	7270.	6610.	6230.	5880.	20200.	02/22/61	
1962	18100.	15900.	14300.	10400.	8690.	6130.	5380.	4910.	4400.	20400.	01/07/62	
1963	31200.	19000.	12700.	9310.	7400.	6560.	5690.	5220.	4600.	37800.	11/20/62	
1964	14600.	11500.	10200.	9770.	9030.	7670.	6530.	5910.	5340.	17400.	01/02/64	
1965	35500.	32000.	20900.	13600.	9980.	7210.	6980.	6190.	5380.	41600.	01/29/65	
1966	11100.	9910.	8560.	6520.	5520.	5280.	4950.	4700.	4290.	12400.	05/07/66	
1967	19400.	15400.	12900.	9770.	8080.	7820.	6990.	6090.	5100.	22700.	12/14/66	
1968	34600.	28700.	19000.	11300.	9440.	7720.	6870.	6080.	5670.	43400.	12/26/67	
1969	36400.	29000.	17900.	10700.	7270.	6690.	5950.	5130.	4850.	50600.	01/05/69	
1970	12300.	10800.	10400.	8540.	6340.	5640.	4710.	4450.	4320.	13400.	01/23/70	
1971	17000.	13700.	12000.	11500.	9480.	7080.	6330.	5750.	5780.	21100.	01/20/71	
1972	33200.	26500.	16500.	15200.	12400.	9730.	8410.	8130.	7480.	41800.	02/28/72	
1973	20000.	16400.	15600.	11800.	8800.	6010.	4800.	4130.	3760.	24500.	12/26/72	
1974	33500.	25500.	17000.	13900.	10300.	7930.	6380.	6600.	6000.	37600.	01/16/74	
1975	41600.	33500.	25500.	17900.	12000.	7770.	6680.	5370.	5100.	48300.	01/18/75	
1976	49600.	44400.	28400.	19000.	13100.	11000.	9450.	8160.	6420.	52100.	12/03/75	
1977	15600.	13200.	8440.	5200.	4110.	3800.	3510.	3410.	3410.	18400.	01/18/77	
1978	35200.	28800.	18700.	16700.	12900.	8910.	7170.	6130.	5080.	47600.	12/02/77	
1979	15600.	13700.	9850.	6970.	6390.	4990.	4820.	4810.	4150.	16500.	03/07/79	

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1930-1979)

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1979)										
	MEAN	25872.2-0	20378.4	14680.2	11019.6	8666.0	7056.4	6302.8	5737.6	5142.6
MAXIMUM	49800.0	44400.0	28400.0	20200.0	15800.0	12500.0	10400.0	9750.0	7930.0	
MINIMUM	11100.0	9410.0	8260.0	5200.0	4490.0	3900.0	3330.0	3120.0	2840.0	
STANDARD DEVIATION	9807.68	7961.30	5087.37	3383.37	2520.33	1771.66	1467.86	1280.70	1013.94	
SKWENESS	0.424	0.781	0.875	0.741	0.809	0.694	0.601	0.547	0.360	
STD ERROR OF SKWENESS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	
SERIAL CORR COEFF	-0.060	-0.040	0.028	0.060	0.082	0.084	0.141	0.152	0.053	
COEFF OF VARIATION	0.379	0.391	0.345	0.307	0.291	0.233	0.203	0.223	0.197	
MEAN LOGS	4.381	4.278	4.143	4.023	3.921	3.835	3.788	3.748	3.703	4.4572
STD DEVIATION LOGS	0.171	0.167	0.143	0.131	0.123	0.108	0.102	0.097	0.087	0.4572
SKWENESS LOGS	-0.172	0.083	0.298	0.066	0.098	-0.024	-0.154	-0.159	-0.316	-0.0930
STD ERR SKWENESS LOGS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	
SER CORR COEFF LOGS	-0.109	-0.078	-0.017	-0.029	0.032	0.066	0.122	0.132	0.058	
COEFF OF VAR LOGS	0.039	0.039	0.033	0.033	0.031	0.028	0.027	0.026	0.024	

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1979)

## STATION 12150500 CHERRY CREEK NEAR DUVALL, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945													
1946	12.4	111	85.9	116	107	70.7	35.5	12.9	36.5	5.60	4.51	10.1	50.6
1947	18.2	114	153	115	165	41.6	76.3	13.6	27.4	17.2	3.65	3.95	61.5
1948	68.4	182	132	131	104	64.0	66.5	63.5	41.3	13.0	3.69	6.79	75.6
1961										18.3	1.94	2.40	
1962	17.6	36.2	143	122	38.1	82.2	40.5	36.5	28.5	2.99	1.94	7.54	47.2
1963	22.9	68.7	89.5	71.3	77.1	43.0	70.8	24.4	18.4	5.35	5.43	5.30	42.9
1964	14.3	123	101	157	70.0	103	81.6	48.1	62.0	21.8	4.62	5.30	66.8
										11.4	9.14	21.8	

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1946	512.0	2-27-1946
1947	918.0	2-2-1947
1948	689.0	10-19-1947
1962	920.0	1-7-1962
1963	255.0	1-3-1963
1964	463.0	1-1-1964

## STATION 12150800 SNOHOMISH RIVER NEAR MONROE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1963													
1964	5042	12450	10490	14110	14910	6705	9368	9547	7498	4455	2361	2529	11370
1965	7553	9118	15220	14880	17610	8148	10420	14940	23530	15290	7885	6348	9735
1966	4912	8872	8026	10510	6030	7175	11090	12080	10790	5530	3037	3358	8236
1967	5890	8862	19580	19990	12480	8655	12340	14620	12240	7765	2827	1898	15100
1968	12380	9760	17960	16710	16890	9527	5430	13360	17090	6936	2074	1559	11190
1969	9441	13810	12760	14120	5304	6738	11390	12390	15300	5158	3567	7572	10020
1970	7715	6588	8859	12420	9922	7554	10060	10910	12530	5265	2296	4646	8095
1971	5068	10270	9915	19010	17330	9313	9008	18900	16460	4275	1926	4366	11490
1972	5649	13180	10860	12940	18390	25700	12420	20450	19360	14930	4744	6202	13670
1973	3461	5931	17630	11780	4606	6112	6131	10400	9326	3927	1811	2473	6996
1974	6349	10760	15410	21890	10890	12310	11890	15040	24730	14940	6285	2801	12790
1975	1495	8013	13790	16750	8122	8078	5340	14850	16080	10250	4523	3114	9221
1976	8761	19360	29580	18170	8630	6619	9991	16040	13290	11040	6224	3667	12650
1977	2823	6024	8430	9265	5831	7248	10370	9748	8645	2960	2999	4621	6577
1978	4456	18380	25040	8186	7195	8177	8366	10520	9530	4485	3082	7646	9593
1979	3271	9283	9175	4401	10610	12280	9209	13440	9225	5441	1839	1984	7489

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1963-1979)

MEAN	5891.6	10666.3	14547.8	14070.7	10734.6	9312.5	9525.7	13875.6	14087.3	8072.2	3648.1	4011.8	9951.4
MAXIMUM	12380.0	19360.0	29580.0	21890.0	18390.0	25700.0	12420.0	20450.0	24730.0	15290.0	7885.0	7646.0	13670.0
MINIMUM	1495.0	5931.0	8026.0	4401.0	4606.0	6112.0	5340.0	9547.0	7498.0	2960.0	1811.0	1559.0	6577.0
STD DEVIATION	2771.60	3948.71	6216.91	4657.18	4636.01	4580.04	2201.57	3295.21	5051.93	4451.31	1797.02	1926.33	2135.27
SKENNESS	0.719	1.061	1.168	0.564	0.550	0.550	-0.278	0.530	0.788	0.722	1.064	0.738	0.088
STD ERR SKEW	0.564	0.564	0.564	0.564	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SER CORR COEFF	0.083	-0.573	-0.378	0.222	-0.140	-0.140	-0.460	-0.171	-0.256	-0.080	-0.141	-0.212	-0.428
COEFF OF VAR	0.470	0.370	0.427	0.331	0.437	0.492	0.231	0.237	0.359	0.551	0.493	0.480	0.215
MEAN LOGS	3.720	4.002	4.130	4.120	3.990	3.939	3.966	4.131	4.124	3.847	3.517	3.556	3.988
STD DEV LOGS	-0.226	0.152	0.172	0.175	0.196	0.148	0.152	0.151	0.179	0.235	0.201	0.210	0.096
SKEWNESS LOGS	-0.717	0.335	0.491	-1.371	-0.048	2.207	-1.159	0.151	0.179	0.285	0.411	0.027	+0.258
STD ERR SKEW LOGS	0.564	0.564	0.564	0.564	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SER CORR LOGS	-0.092	-0.643	-0.395	0.418	-0.263	-0.204	-0.420	-0.202	-0.211	-0.100	-0.133	-0.122	-0.431
COEFF OF VAR LOGS	0.061	0.038	0.042	0.042	0.049	0.038	0.029	0.025	0.037	0.061	0.057	0.059	0.024
% OF AVE FLOW	5.0	9.0	12.3	11.9	9.1	7.9	8.0	11.7	11.9	6.8	3.1	3.4	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1963-1979)

0.99	1199.4	4858.4	6204.7	3560.2	3367.1	6383.2	4052.5	8045.4	6149.9	2238.8	1293.0	1183.1	5592.0
0.95	2033.1	5856.4	7464.7	6053.9	4625.1	6434.0	5593.1	9290.5	7615.1	3022.3	1629.7	1634.3	6669.2
0.90	2622.5	6513.9	8326.9	7697.8	5470.2	6515.6	6481.1	10055.8	8551.5	3578.9	1863.6	1943.0	7298.1
0.80	3484.0	7457.9	9605.1	9911.2	6694.2	7622.1	7608.7	11082.6	9876.2	4430.0	2215.2	2397.7	8111.2
0.50	5588.2	9860.7	13048.3	14409.8	9811.9	7761.0	9717.6	13439.9	13154.0	6844.8	3593.2	5824.3	9824.3
0.20	8210.2	13402.9	18554.9	18439.7	14308.5	10568.5	11557.2	16434.9	17779.7	10967.8	4791.0	5401.1	11740.6
0.10	9718.1	15914.3	22731.1	20097.2	17392.4	13475.5	12343.3	18319.2	20938.0	14242.8	6040.2	6691.7	12819.6
0.04	11369.8	19281.0	28645.4	21454.7	17384.4	18689.8	13028.9	20620.4	25040.7	19035.9	7844.7	8417.1	14025.4
0.02	12435.2	21932.4	33537.1	22112.7	24417.7	24003.0	13386.9	22290.2	28180.7	23105.7	9362.2	9766.6	14833.0
0.01	13377.8	24708.9	38865.1	22572.4	27497.0	30876.2	13655.7	23930.5	31393.6	27623.5	11036.1	11168.2	15577.6

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1964	1490.0	1500.0	1610.0	1630.0	1920.0	2260.0	2420.0	3130.0	5010.0
1965	3690.0	3830.0	4120.0	4720.0	5640.0	6890.0	6930.0	7180.0	9130.0
1966	1900.0	1930.0	1970.0	2210.0	2700.0	3090.0	3450.0	4020.0	5530.0
1967	1550.0	1600.0	1690.0	1800.0	1870.0	2140.0	2650.0	3930.0	6480.0
1968	1150.0	1170.0	1200.0	1290.0	1560.0	1790.0	2940.0	4910.0	7180.0
1969	1840.0	1910.0	1970.0	2210.0	2670.0	3490.0	4910.0	6010.0	8370.0
1970	1670.0	1700.0	1810.0	1830.0	1890.0	2420.0	3950.0	4770.0	5680.0
1971	1320.0	1330.0	1370.0	1450.0	1730.0	2580.0	3250.0	3730.0	5930.0
1972	1900.0	1940.0	2040.0	2280.0	2680.0	4490.0	4620.0	6640.0	8120.0
1973	2210.0	2300.0	2340.0	2600.0	2990.0	4510.0	4620.0	6450.0	7520.0
1974	1150.0	1180.0	1260.0	1400.0	1520.0	1840.0	2380.0	3400.0	5510.0
1975	1200.0	1220.0	1300.0	1320.0	1410.0	1930.0	2670.0	4300.0	7370.0
1976	1780.0	1810.0	1850.0	1980.0	2510.0	3720.0	3980.0	6190.0	8920.0
1977	1870.0	1880.0	1970.0	2270.0	2470.0	3810.0	3910.0	4530.0	5610.0
1978	1450.0	1460.0	1490.0	1570.0	1820.0	2550.0	3340.0	3550.0	5520.0
1979	1970.0	1990.0	2070.0	2220.0	2920.0	3630.0	4520.0	4490.0	5990.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1964-1979)

MEAN	1758.7	1796.9	1878.7	2048.7	2393.7	3076.9	3775.6	4732.5	6741.9
MAXIMUM	3690.0	3830.0	4120.0	4720.0	5640.0	6890.0	6930.0	7180.0	9130.0
MINIMUM	1150.0	1170.0	1200.0	1290.0	1410.0	1790.0	2380.0	3130.0	5010.0
STANDARD DEVIATION	605.65	635.41	684.37	817.65	1012.94	1278.40	1173.31	1201.54	1350.79
SKEWNESS	2.244	2.286	2.474	2.473	2.315	1.876	1.198	0.732	0.538
STD ERROR OF SKEWNESS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
SERIAL CORR COEFF	-0.036	-0.053	-0.050	-0.061	-0.061	-0.028	-0.028	-0.028	-0.028
COEFF OF VARIATION	0.344	0.354	0.364	0.399	0.423	0.415	0.311	0.254	0.200
MEAN LOGS	3.226	3.235	3.253	3.287	3.352	3.460	3.559	3.663	3.821
STD DEVIATION LOGS	0.127	0.129	0.130	0.140	0.151	0.156	0.127	0.107	0.085
SKEWNESS LOGS	1.057	1.101	1.240	1.231	1.063	0.787	0.390	0.345	0.355
STD ERR SKEWNESS LOGS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
SER CORR COEFF LOGS	-0.025	-0.046	-0.046	-0.061	-0.015	-0.015	-0.0205	-0.322	-0.289
COEFF OF VAR LOGS	0.039	0.040	0.040	0.043	0.045	0.045	0.036	0.029	0.022

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1964-1979)

0.99	4105.7	4292.0	4627.2	5402.7	6524.8	8115.9	7770.8	8650.3	10971.3
0.98	3556.6	3697.8	3947.7	4551.7	5494.1	6940.9	7010.3	7952.9	10256.0
0.96	3064.9	3169.6	3353.0	3816.2	4597.5	5889.3	6274.4	7262.7	9536.1
0.90	2488.3	2555.8	2675.2	2990.2	3656.6	4656.6	5324.0	6345.0	8558.6
0.80	2095.1	2141.7	2227.7	2453.4	2916.6	3815.2	4600.9	5623.4	7770.9
0.50	1600.7	1627.5	1668.1	1817.0	2114.7	2750.2	3554.5	4534.0	6544.1
0.20	1314.2	1334.7	1394.1	1476.2	1671.6	2118.6	2821.0	3729.2	5601.9
0.10	1216.0	1236.0	1299.3	1367.2	1524.2	1894.1	2525.9	3393.1	5197.4
0.05	1153.8	1174.2	1242.0	1301.5	1432.2	1747.0	2317.6	3150.7	4900.9
0.02	1100.1	1121.5	1195.1	1247.7	1353.5	1614.1	2115.2	2910.3	4602.9
0.01	1072.0	1094.3	1171.9	1221.1	1312.7	1541.1	1996.4	2766.9	4422.8

## FLOW DURATION DATA

OAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1964-1979)

P95	P90	P75	P70	P50	P25	P10
2000.0	2600.0	4700.0	5400.0	7400.0	13000.0	19000.0

## STATION 12150800 SNOHOMISH RIVER NEAR MONROE, WASH.

MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30										ANNUAL PEAK-FLOW DATA		
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW (CFS)	DATE	REG. (R)
1964	38800.	31200.	28800.	27000.	24600.	21500.	18300.	16200.	13500.	47400.	01/01/64	
1965	62500.	59200.	43800.	31000.	23000.	16800.	16300.	14500.	13100.	67800.	01/03/65	
1966	30000.	27700.	23600.	17400.	14900.	13800.	13300.	12400.	11000.	34100.	05/07/66	
1967	48300.	39800.	36200.	27300.	21000.	20300.	18100.	15600.	13400.	54900.	12/13/66	
1968	70700.	63300.	46800.	28100.	23600.	19400.	17600.	15800.	14500.	73100.	12/26/67	
1969	66100.	60200.	39900.	23800.	21600.	17500.	15300.	13600.	12000.	72100.	01/05/69	
1970	30200.	26400.	24500.	20000.	14800.	11900.	11300.	10600.	10800.	32700.	01/23/70	
1971	48400.	37900.	32300.	31300.	25400.	18300.	16900.	15000.	15500.	60300.	01/19/71	
1972	64700.	57600.	38600.	36900.	30200.	23500.	20100.	20800.	19200.	68300.	02/28/72	
1973	47200.	43300.	41400.	31500.	22800.	15100.	12000.	10400.	9880.	61300.	12/26/72	
1974	70900.	65000.	46600.	36100.	26000.	20800.	18300.	16800.	16900.	72500.	01/17/74	
1975	61900.	54000.	36500.	25800.	18500.	16700.	14000.	12600.	12100.	67700.	01/18/75	
1976	110000.	97200.	67900.	46200.	32700.	25300.	22800.	19900.	15800.	115000.	12/04/75	
1977	45900.	35700.	23000.	14200.	11700.	10700.	9940.	9150.	8970.	58200.	01/18/77	
1978	77700.	67500.	47700.	39400.	31400.	22200.	17500.	14900.	12600.	83200.	12/03/77	
1979	41900.	37600.	26700.	17900.	14900.	12100.	11900.	11900.	10100.	44400.	03/07/79	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1964-1979)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

MEAN	57200.0	50225.0	37668.7	28368.7	22318.7	17868.7	15852.5	14384.4	13084.4			
MAXIMUM	110000.0	97200.0	67900.0	48200.0	32700.0	25300.0	22800.0	20800.0	19200.0			
MINIMUM	30000.0	26400.0	23000.0	14200.0	11700.0	10700.0	9940.0	9150.0	8970.0			
STANDARD DEVIATION	20313.37	18724.09	11698.24	8674.77	6344.14	4328.98	3228.61	2774.78				
SKWENESS	0.989	0.884	0.923	0.252	-0.015	-0.096	0.036	0.378	0.602			
STD ERROR OF SKWENESS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564			
SERIAL CORR COEFF	-0.192	-0.254	-0.409	-0.488	-0.569	-0.573	-0.574	-0.523	-0.325			
COEFF OF VARIATION	0.355	0.373	0.310	0.306	0.278	0.243	0.223	0.224	0.212			
MEAN LOGS	4.733	4.674	4.558	4.433	4.331	4.239	4.190	4.148	4.108			
STD DEVIATION LOGS	0.151	0.159	0.131	0.140	0.130	0.112	0.100	0.098	0.091			
STD ERR SKWENESS LOGS	0.005	0.004	0.012	-0.426	-0.539	-0.488	-0.381	-0.139	0.163			
SER CORR COEFF LOGS	-0.182	-0.238	-0.424	-0.489	-0.554	-0.559	-0.559	-0.530	-0.355			
COEFF OF VAR LOGS	0.032	0.034	0.029	0.032	0.030	0.026	0.024	0.024	0.022			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1964-1979)

0.99	24037.7	20569.1	18401.3	11570.9	9549.6	8706.7	8472.6	8101.4	8091.5	26633.8		
0.95	30462.9	26041.9	22244.4	15357.4	12601.6	10993.0	10329.2	9590.6	9186.6	28774.5		
0.90	34567.0	29488.2	24665.8	17691.3	14446.2	12340.1	11411.1	10471.9	9850.1	35763.2		
0.80	40284.2	34596.6	28011.7	20817.3	16472.1	14082.3	12803.5	11626.1	10739.0	40158.4		
0.50	54021.5	46918.5	35960.0	27700.6	22031.3	17709.3	15699.2	14119.2	12745.7	46210.2		
0.20	72466.9	64090.7	46557.9	35683.6	27699.5	21621.1	18853.3	17024.9	15249.2	60445.9		
0.10	84508.3	75660.4	53471.6	40232.4	30778.0	23730.5	20581.7	18712.9	16802.3	79086.6		
0.04	99574.6	90508.8	62141.9	45312.8	34086.5	25994.8	22467.9	20658.1	18679.7	90986.2		
0.02	110715.0	101740.7	68575.8	48696.2	36213.5	27452.5	23703.2	21995.0	20030.2	105681.1		
0.01	121402.4	113123.2	75003.5	51791.7	38105.9	28752.7	24821.2	23252.8	21347.8	116413.2		
										126994.8		
										117336.7		

## STATION 12152500 PILCHUCK RIVER NEAR GRANITE FALLS, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1911									173	91.0	53.4	239	
1943	316.2	463.4	546.3	508.0	517.7	421.1	397.8	306.1	261.3	125.7	81.7	137.0	343.9
1944	542.0	660.0	866.0	1016.0	775.0	739.0	553.0	454.0	452.0	301.0	185.0	304.0	422.0
1945	44.0	72.7	245.0	178.0	264.0	256.0	273.0	170.0	120.0	45.6	32.6	39.4	245.0
1946	156.64	175.59	194.88	222.52	141.04	137.44	90.26	85.42	103.88	63.89	47.29	84.60	52.82
1947	-0.223	-0.926	0.177	0.647	-0.114	0.948	0.352	0.312	0.421	1.516	1.441	0.642	-0.502
1948	0.580	0.580	0.597	0.597	0.500	0.580	0.580	0.580	0.580	0.564	0.564	0.564	0.597
1949	-0.333	0.258	-0.004	-0.293	0.200	0.246	-0.120	-0.136	0.290	0.330	0.244	-0.073	-0.007
1950	0.495	0.379	0.357	0.438	0.272	0.326	0.227	0.279	0.398	0.508	0.579	0.618	0.154
1951	2.425	2.615	2.710	2.654	2.697	2.604	2.589	2.470	2.384	2.052	1.857	2.052	2.531
1952	0.300	0.256	0.166	0.205	0.132	0.134	0.099	0.124	0.177	0.208	0.216	0.289	0.070
1953	-1.338	-2.120	-0.385	-0.491	-0.939	0.440	0.002	-0.179	-0.027	0.071	0.795	-0.120	-0.785
1954	0.580	0.580	0.597	0.597	0.580	0.580	0.580	0.580	0.564	0.564	0.564	0.564	0.597
1955	-0.295	0.164	0.059	-0.263	0.123	0.274	-0.070	-0.130	0.219	0.270	0.274	-0.218	0.051
1956	0.124	0.098	0.061	0.077	0.049	0.052	0.038	0.050	0.074	0.101	0.116	0.141	0.028
1957	7.7	11.4	13.4	12.4	12.7	10.3	9.7	7.5	6.4	3.1	2.0	3.4	100.0
1958													

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1911-1958)

MEAN	316.2	463.4	546.3	508.0	517.7	421.1	397.8	306.1	261.3	125.7	81.7	137.0	343.9
MAXIMUM	542.0	660.0	866.0	1016.0	775.0	739.0	553.0	454.0	452.0	301.0	185.0	304.0	422.0
MINIMUM	44.0	72.7	245.0	178.0	264.0	256.0	273.0	170.0	120.0	45.6	32.6	39.4	245.0
STD DEVIATION	156.64	175.59	194.88	222.52	141.04	137.44	90.26	85.42	103.88	63.89	47.29	84.60	52.82
SKEWNESS	-0.223	-0.926	0.177	0.647	-0.114	0.948	0.352	0.312	0.421	1.516	1.441	0.642	-0.502
STD ERR SKEW	0.580	0.580	0.597	0.597	0.500	0.580	0.580	0.580	0.580	0.564	0.564	0.564	0.597
SER CORR COEFF	-0.333	0.258	-0.004	-0.293	0.200	0.246	-0.120	-0.136	0.290	0.330	0.244	-0.073	-0.007
COEFF OF VAR	0.495	0.379	0.357	0.438	0.272	0.326	0.227	0.279	0.398	0.508	0.579	0.618	0.154
MEAN LOGS	2.425	2.615	2.710	2.654	2.697	2.604	2.589	2.470	2.384	2.052	1.857	2.052	2.531
STD DEV LOGS	0.300	0.256	0.166	0.205	0.132	0.134	0.099	0.124	0.177	0.208	0.216	0.289	0.070
SKEWNESS LOGS	-1.338	-2.120	-0.385	-0.491	-0.939	0.440	0.002	-0.179	-0.027	0.071	0.795	-0.120	-0.785
STD ERR SKEW LOGS	0.580	0.580	0.597	0.597	0.580	0.580	0.580	0.580	0.564	0.564	0.564	0.564	0.597
SER CORR LOGS	-0.295	0.164	0.059	-0.263	0.123	0.274	-0.070	-0.130	0.219	0.270	0.274	-0.218	0.051
COEFF OF VAR LOGS	0.124	0.098	0.061	0.077	0.049	0.052	0.038	0.050	0.074	0.101	0.116	0.141	0.028
% DF AVE FLOW	7.7	11.4	13.4	12.4	12.7	10.3	9.7	7.5	6.4	3.1	2.0	3.4	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1911-1958)

0.99	28.4	47.5	189.7	130.8	201.7	216.7	228.9	146.3	93.2	38.0	30.3	22.6	213.1
0.95	70.1	126.7	263.1	200.2	282.8	252.1	267.2	181.9	123.6	51.8	36.0	36.9	252.4
0.90	105.5	192.6	310.1	247.3	331.7	275.3	290.2	203.6	143.5	61.3	40.2	47.7	273.7
0.80	162.5	291.6	375.1	314.9	394.8	308.6	320.7	232.6	172.0	75.3	46.9	64.7	299.5
0.50	309.1	498.4	525.0	479.1	521.4	393.1	388.3	297.4	242.6	112.2	67.3	114.2	347.1
0.20	474.6	646.5	709.8	691.1	644.4	517.0	470.3	375.8	341.3	168.4	106.0	197.9	390.5
0.10	552.5	686.5	820.1	820.1	702.8	604.6	518.8	422.6	407.5	209.0	139.8	261.9	410.8
0.04	620.9	707.7	947.4	970.0	758.4	721.8	578.4	477.3	492.0	263.7	193.8	351.0	430.3
0.02	655.9	714.0	1034.6	1072.7	790.2	814.1	578.4	515.4	555.4	306.8	243.5	422.9	441.6
0.01	681.2	716.9	1116.0	1168.4	815.9	910.6	659.4	551.6	619.2	351.9	302.7	499.1	450.9



## STATION 12152500 PILCHUCK RIVER NEAR GRANITE FALLS, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1944	33.0	33.0	34.0	36.0	37.0	42.0	52.0	83.0	128.0
1945	31.0	31.0	33.0	35.0	43.0	48.0	60.0	123.0	185.0
1946	46.0	46.0	46.0	48.0	51.0	61.0	87.0	119.0	200.0
1947	48.0	49.0	50.0	51.0	55.0	60.0	65.0	107.0	177.0
1948	40.0	41.0	41.0	44.0	51.0	71.0	94.0	137.0	189.0
1949	78.0	80.0	85.0	92.0	106.0	141.0	163.0	193.0	239.0
1950	44.0	45.0	47.0	52.0	64.0	110.0	128.0	188.0	188.0
1951	41.0	41.0	42.0	44.0	50.0	79.0	103.0	147.0	209.0
1952	28.0	28.0	29.0	30.0	32.0	36.0	42.0	63.0	127.0
1953	28.0	28.0	29.0	30.0	32.0	36.0	46.0	55.0	85.0
1954	44.0	45.0	45.0	47.0	55.0	73.0	91.0	145.0	211.0
1955	66.0	66.0	68.0	74.0	97.0	166.0	177.0	180.0	237.0
1956	57.0	57.0	58.0	60.0	70.0	87.0	157.0	200.0	267.0
1957	36.0	36.0	37.0	40.0	44.0	51.0	80.0	122.0	190.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1944-1957)

MEAN	44.3	44.7	46.0	48.7	56.2	76.4	94.9	128.7	188.0
MAXIMUM	78.0	80.0	85.0	92.0	106.0	166.0	177.0	200.0	267.0
MINIMUM	28.0	28.0	29.0	29.0	32.0	36.0	42.0	55.0	85.0
STANDARD DEVIATION	14.46	14.82	15.64	17.25	22.11	38.54	43.85	43.85	48.38
SKEWNESS	1.115	1.136	1.339	1.381	1.280	1.320	0.738	-0.019	-0.611
STD ERROR OF SKEWNESS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597
SERIAL CORR COEFF	0.170	0.182	0.156	0.193	0.248	0.289	0.394	0.304	0.276
COEFF OF VARIATION	0.327	0.332	0.340	0.354	0.393	0.505	0.462	0.341	0.257
MEAN LOGS	1.627	1.630	1.642	1.665	1.722	1.838	1.935	2.082	2.258
STD DEVIATION LOGS	0.133	0.135	0.135	0.140	0.156	0.198	0.201	0.167	0.131
SKEWNESS LOGS	0.481	0.459	0.629	0.591	0.548	0.565	0.061	-0.808	-1.353
STD ERR SKEWNESS LOGS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597
SER CORR COEFF LOGS	0.264	0.281	0.262	0.308	0.360	0.399	0.431	0.324	0.259
COEFF OF VAR LOGS	0.082	0.083	0.082	0.084	0.091	0.108	0.104	0.080	0.058

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1944-1957)

0.99	95.9	97.4	104.0	112.6	140.4	239.6	257.4	234.9	271.8
0.98	85.6	87.0	91.8	99.1	122.3	200.6	225.7	223.8	267.5
0.96	75.8	77.0	80.4	86.6	105.5	166.2	195.1	210.7	261.3
0.90	63.4	64.3	66.3	71.1	85.0	126.2	156.0	189.2	248.6
0.80	54.2	54.9	56.2	60.0	70.5	99.4	126.8	168.0	232.8
0.50	41.3	41.7	42.5	44.8	51.1	66.0	85.6	127.3	193.4
0.20	32.6	32.7	33.6	35.1	38.8	46.6	58.2	89.6	146.1
0.10	29.2	29.2	30.3	31.4	34.2	39.8	47.7	72.3	121.0
0.05	26.8	26.7	28.0	28.9	31.0	35.3	40.6	59.6	101.2
0.02	24.5	24.4	25.8	26.5	28.1	31.2	33.8	47.0	80.6
0.01	23.2	23.0	24.6	25.2	26.4	28.9	30.0	39.7	68.2

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1944-1957)

P95	P90	P75	P70	P50	P25	P10
46.0	58.0	130.0	150.0	250.0	420.0	720.0

## STATION 12152500 PILCHUCK RIVER NEAR GRANITE FALLS, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW(CFS)	DATE	REG.(R)
1944	2850.	1930.	1060.	668.	465.	381.	369.	340.	339.	4170.	05/24/44	
1945	4480.	2420.	1820.	1240.	786.	646.	580.	550.	506.	8070.	01/07/45	
1946	6550.	3460.	1870.	1300.	966.	680.	627.	581.	571.	10500.	10/25/45	
1947	2890.	2350.	1560.	1160.	949.	699.	688.	627.	542.	6970.	10/25/46	
1948	2350.	1390.	1140.	862.	732.	653.	635.	565.	521.	5380.	10/19/47	
1949	2740.	1550.	1200.	937.	769.	590.	524.	486.	459.	4560.	02/17/49	
1950	4020.	2870.	1730.	1390.	1030.	714.	764.	718.	633.	5420.	02/24/50	
1951	4380.	3330.	1910.	1110.	853.	714.	650.	583.	510.	6760.	02/09/51	
1952	1680.	1200.	1060.	757.	524.	426.	392.	382.	365.	3420.	10/19/51	
1953	3620.	2030.	1510.	1240.	1090.	755.	626.	566.	474.	5600.	01/23/53	
1954	2570.	1650.	1340.	1230.	930.	795.	721.	655.	537.	3950.	01/05/54	
1955	2630.	1450.	1160.	975.	683.	615.	591.	524.	495.	5530.	11/16/54	
1956	2520.	1920.	1420.	1220.	801.	752.	737.	635.	561.	4600.	10/26/55	
1957	2810.	2060.	1510.	1280.	865.	654.	633.	575.	557.	4480.	12/16/56	
1958										3520.	01/17/58	
1959										5840.	11/12/58	
1960										7640.	12/15/59	
1961										5860.	02/21/61	
1962										5590.	01/07/62	
1963										3670.	11/19/62	
1964										4170.	01/01/64	
1965										7510.	01/29/65	
1966										4060.	01/08/66	
1967										3290.	02/03/67	
1968										5160.	12/25/67	
1969										6720.	01/04/69	
1970										2240.	01/14/70	
1971										5990.	01/19/71	
1972										4880.	03/05/72	
1973										3510.	12/26/72	
1974										4420.	01/14/74	
1975										6410.	01/14/74	
1976										8510.	01/15/76	
1977										3330.	01/18/77	
1978										7440.	12/02/77	
1979										2940.	03/06/79	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1944-1979)

	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKEWNESS	STD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKEWNESS LOGS	STD ERR SKEWNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	3292.1	6550.0	1680.0	1233.59	1.500	0.597	0.110	0.375	3.493	0.148	0.546	0.036	0.042		3.7035	3.7035
	2143.6	3460.0	1200.0	681.40	0.770	0.597	0.095	0.318	3.312	0.135	0.177	0.597	0.041		0.1469	0.1469
	1436.4	1910.0	1060.0	287.79	0.207	0.597	-0.011	0.200	3.149	0.086	-0.039	0.597	0.054		-0.0160	-0.0160
	1097.8	1390.0	668.0	220.79	-0.739	0.597	-0.150	0.201	3.031	0.096	-1.020	0.597	-0.157			
	818.8	1090.0	465.0	179.88	-0.547	0.597	-0.158	0.192	2.902	0.106	-1.055	0.597	-0.172			
	655.6	818.0	381.0	125.59	-1.086	0.597	-0.187	0.192	2.808	0.095	-1.510	0.597	-0.103			
	609.8	764.0	369.0	116.29	-0.986	0.597	-0.077	0.191	2.777	0.094	-1.383	0.597	-0.057			
	556.2	718.0	340.0	100.81	-0.849	0.597	-0.129	0.181	2.738	0.088	-1.324	0.597	-0.103			
	505.0	633.0	339.0	78.24	-0.873	0.597	0.037	0.155	2.698	0.073	-1.270	0.597	0.054			
															3.7035	3.7035
															0.1469	0.1469
															-0.0160	-0.0160

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1944-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
	1621.5	1885.4	2063.9	2325.8	3016.9	4088.8	4881.5	5981.8	6876.1	7836.8
	1037.1	1250.2	1385.8	1574.7	2030.4	2652.0	3065.4	3591.8	4387.7	4387.7
	876.2	1009.0	1087.4	1189.8	1411.5	1671.3	1824.3	2001.9	2125.0	2241.7
	547.7	707.8	797.9	908.7	1115.2	1299.0	1479.0	1652.6	1842.8	1954.2
	378.6	503.8	575.5	664.5	832.4	981.8	1047.8	1107.4	1164.7	1164.7
	308.6	418.3	479.3	552.1	677.3	769.9	802.9	827.5	858.3	858.3
	295.6	393.5	447.8	513.1	627.2	715.7	747.2	775.6	786.0	786.0
	284.9	370.2	417.0	472.9	570.7	647.2	676.9	700.7	712.3	712.3
	290.6	360.4	397.6	441.3	516.4	574.9	597.8	616.5	625.7	625.7
	2236.4	2865.3	3272.6	3801.1	5083.9	6727.3	7760.4	9013.6	9914.4	10790.2
	2290.1	2891.3	3272.6	3801.1	5056.5	6717.7	7789.0	9116.7	10090.2	11052.8

## STATION 12153000 LITTLE PILCHUCK C NEAR LAKE STEVENS, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1947	6.67	39.2	71.7	55.0	50.2	26.3	45.4	6.73	7.04	3.35	2.06	2.56	26.2
1948	13.9	102	82.8	62.7	67.9	41.3	43.5	45.9	24.6	6.55	3.83	4.76	41.5
1949	32.9	53.9	85.9	30.0	88.4	49.9	20.2	21.8	2.66	2.55	2.34	2.37	32.4
1950	5.78	30.6	70.4	64.3	105	82.9	41.3	12.1	4.05	2.12	1.85	1.76	34.7
1951	7.50	51.9	65.1	84.8	59.4	68.4	14.4	10.4	2.72	1.38	1.29	1.78	30.7
1952	1.70	2.09	5.67	51.9	51.9	36.6	41.8	17.9	24.2	3.87	1.49	1.48	19.8
1953	12.8	45.8	113	78.0	78.0	43.8	27.5	10.7	31.2	12.2	5.23	7.66	35.3
1954	5.51	81.3	66.0	86.5	84.4	41.1	40.0	24.2	17.6	15.3	4.92	2.55	35.6
1955	29.8	63.3	82.2	92.8	47.4	46.2	19.4	7.37	16.9	3.17	1.75	2.33	34.4
1956	29.2	47.1	78.4	44.3	93.8	71.5	30.3	12.2	6.00	3.17	1.78	1.70	34.6
1957	2.93	14.6	38.5	57.9	89.3	36.6	42.2	6.26	2.86	1.71	1.09	1.82	24.2
1958	3.31	24.2	52.0	108	65.0	56.6	41.2	21.5	11.1	2.17	1.23	4.05	32.4
1959	29.7	107	80.6	61.2	60.8	18.7	23.2	27.9	8.19	1.93	2.68	2.85	35.3
1960	12.2	92.9	32.2	31.7	113	60.6	31.9	29.5	4.69	2.71	1.50	1.61	33.9
1961	4.50	13.2	77.4	73.5	22.2	38.4	17.6	23.5	30.9	2.83	3.21	2.48	26.0
1962	3.58	30.2	43.2	37.7	42.6	27.7	40.5	15.2	4.51	3.55	2.67	2.54	21.0
1963	4.11	48.2	75.8	94.2	48.6	70.5	54.3	27.2	22.3	4.45	1.80	2.85	38.1
1964	6.24	28.0	76.2	112	92.4	19.0	17.5	12.9	3.67	1.78	1.80	2.39	30.8
1965	2.44	7.31	19.9	55.6	42.4	52.3	19.7	13.8	9.05	13.1	2.79	1.82	20.0
1966	5.04	26.8	92.2	109	79.7	49.4	22.2	17.9	4.06	1.27	0.67	1.59	34.0
1967	8.21	17.0	91.0	69.1	28.7	39.1	22.2	20.1	10.7	1.86	3.39	6.02	27.8
1968	29.9	55.3	118	74.5	68.9	18.4	24.5	14.4	5.37	4.60	1.51	4.79	34.9
1969	9.82	27.2	59.6	67.9	50.7	23.1	32.4	21.9	4.58	1.64	1.39	2.28	25.1

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1947-1970)

MEAN	11.6	43.9	68.6	69.5	65.2	44.3	31.6	18.3	11.3	4.2	2.3	2.9	31.0
MAXIMUM	32.9	107.0	118.0	112.0	113.0	82.9	54.3	45.9	31.2	15.3	5.2	7.7	41.5
MINIMUM	1.7	2.1	5.7	30.0	22.2	18.4	14.4	6.3	2.7	1.3	0.7	1.5	19.8
STD DEVIATION	10.57	29.45	27.12	23.54	23.86	18.16	11.22	9.11	9.36	3.91	1.18	1.61	6.14
SKWENESS	1.161	0.789	-0.536	0.206	0.270	0.378	0.128	1.187	1.050	2.009	1.094	1.607	-0.424
STD ERR SKEW	0.481	0.481	0.481	0.481	0.491	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481
SER CORR COEFF	0.056	0.148	-0.230	-0.139	-0.179	-0.088	-0.241	-0.049	-0.028	0.172	0.094	-0.068	-0.231
COEFF OF VAR	0.908	0.670	0.395	0.339	0.366	0.410	0.354	0.498	0.829	0.922	0.510	0.546	0.198
MEAN LOGS	0.903	1.517	1.777	1.816	1.784	1.608	1.472	1.212	0.913	0.507	0.314	0.420	1.482
STD DEV LOGS	0.384	0.394	0.285	0.160	0.175	0.193	0.164	0.218	0.356	0.303	0.217	0.201	0.093
SKWENESS LOGS	-1.342	-2.449	-0.668	-0.558	-0.668	-0.405	-0.303	-0.201	0.313	0.990	-0.026	0.863	-0.752
STD ERR SKEW LOGS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481
SER CORR LOGS	0.099	-0.016	-0.222	-0.131	-0.167	-0.110	-0.287	-0.077	-0.100	0.085	-0.018	-0.015	-0.220
COEFF OF VAR LOGS	0.425	0.260	0.160	0.088	0.098	0.120	0.112	0.180	0.390	0.599	0.691	0.478	0.063
% OF AVE FLOW	3.1	11.7	18.3	18.6	17.5	11.8	8.5	4.9	3.0	1.1	0.6	0.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1970)

0.99	1.2	1.7	4.9	24.0	19.7	12.7	11.3	4.7	1.5	1.1	0.6	1.2	16.5
0.95	2.0	5.7	16.0	33.9	29.3	18.6	15.4	6.9	2.3	1.3	0.9	1.4	20.5
0.90	2.7	9.7	26.3	40.2	35.6	22.6	18.1	8.5	3.0	1.5	1.1	1.5	22.8
0.80	3.8	17.2	42.4	48.7	44.2	28.2	21.7	10.7	4.1	1.8	1.4	1.8	25.7
0.50	7.7	40.0	75.6	67.7	63.5	41.8	30.2	16.6	7.8	2.9	2.1	2.5	31.2
0.20	16.6	70.2	95.8	89.6	85.8	59.2	40.9	25.0	16.0	5.5	3.1	3.8	36.4
0.10	25.4	85.7	100.0	101.9	98.0	70.0	47.5	30.7	23.9	8.2	3.9	4.9	39.0
0.04	40.8	99.8	101.7	115.4	111.1	82.6	55.2	37.9	37.3	13.4	4.9	6.7	41.5
0.02	55.9	107.2	102.1	124.1	119.5	91.3	60.6	43.3	50.3	18.9	5.7	8.3	43.0
0.01	74.8	112.6	102.2	132.0	126.8	99.6	65.7	48.7	66.2	26.4	6.5	10.2	44.3

## STATION 12153000 LITTLE PILCHUCK C NEAR LAKE STEVENS, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1948	1.7	1.8	1.8	1.9	2.0	2.3	2.4	3.3	5.8
1949	2.0	2.1	2.2	2.3	3.0	3.4	4.6	8.9	17.0
1950	1.6	1.6	1.7	1.7	1.9	2.4	2.3	2.4	3.6
1951	1.5	1.5	1.5	1.5	1.5	1.8	1.9	2.3	4.8
1954	1.0	1.0	1.0	1.0	1.2	1.3	1.9	4.7	10.0
1955	1.6	2.1	2.3	2.5	3.2	5.4	5.9	6.2	12.0
1956	2.0	2.0	2.1	2.1	2.3	2.8	4.6	8.0	13.0
1957	1.1	1.2	1.4	1.6	1.7	1.9	2.2	3.9	6.6
1958	1.2	1.3	1.3	1.4	1.6	1.7	1.9	2.3	4.1
1959	0.6	0.6	0.6	0.8	1.0	1.3	1.5	1.7	2.5
1960	0.4	0.5	0.6	1.1	1.2	1.4	2.0	3.6	9.5
1961	1.1	1.1	1.3	1.4	1.5	2.0	2.4	3.2	8.8
1962	1.2	1.3	1.3	1.3	1.4	1.5	1.7	2.1	4.4
1963	1.6	1.7	1.7	1.9	2.4	2.6	2.7	3.0	10.0
1964	1.6	1.6	1.8	1.8	2.1	2.6	2.6	3.1	4.5
1965	1.9	1.8	1.9	2.1	2.4	2.9	3.8	4.4	10.0
1966	1.3	1.3	1.4	1.4	1.6	1.8	1.9	2.0	3.0
1967	1.2	1.3	1.2	1.4	1.7	1.9	2.8	4.7	7.4
1968	0.4	0.4	0.4	0.5	0.6	0.9	1.2	1.6	4.5
1969	0.7	0.7	1.0	1.0	1.3	2.2	3.4	4.6	11.0
1970	0.9	0.9	1.1	1.2	1.3	1.6	3.1	3.9	6.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1948-1970)

MEAN	1.3	1.3	1.4	1.5	1.8	2.2	2.7	3.8	7.5
MAXIMUM	2.0	2.1	2.3	2.5	3.2	5.4	5.9	8.9	17.0
MINIMUM	0.4	0.4	0.4	0.5	0.6	0.9	0.9	1.6	2.5
STANDARD DEVIATION	0.48	0.51	0.52	0.51	0.64	0.96	1.18	1.94	3.81
SKENNESS	-0.293	-0.178	-0.165	0.067	0.685	1.969	1.324	1.354	0.746
STD ERROR OF SKENNESS	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
SERIAL CORR COEFF	0.547	0.546	0.490	0.397	0.278	0.083	0.106	0.045	-0.206
COEFF OF VARIATION	0.382	0.387	0.366	0.334	0.364	0.441	0.435	0.511	0.505
MEAN LOGS	0.058	0.081	0.116	0.155	0.217	0.305	0.398	0.533	0.823
STD DEVIATION LOGS	0.207	0.202	0.192	0.164	0.164	0.168	0.173	0.205	0.227
SKENNESS LOGS	-1.119	-0.936	-1.057	-0.919	-0.449	0.443	0.446	0.331	-0.118
STD ERR SKENNESS LOGS	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
SER CORR COEFF LOGS	0.506	0.529	0.441	0.371	0.293	0.187	0.046	-0.004	-0.199
COEFF OF VAR LOGS	3.548	2.484	1.654	1.060	0.759	0.552	0.434	0.384	0.276

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1948-1970)

	P95	P90	P75	P70	P50	P25	P10
0.99	2.3	2.6	2.6	2.7	3.5	5.6	7.2
0.98	2.3	2.5	2.5	2.6	3.3	4.9	6.2
0.96	2.1	2.3	2.4	2.4	3.0	4.2	5.3
0.90	1.9	2.1	2.1	2.2	2.6	3.4	4.2
0.80	1.7	1.8	1.9	2.0	2.3	2.8	3.5
0.50	1.2	1.3	1.4	1.5	1.7	2.0	2.4
0.20	0.8	0.8	0.9	1.1	1.2	1.4	1.8
0.10	0.6	0.6	0.7	0.9	1.0	1.3	1.5
0.05	0.5	0.5	0.6	0.7	0.8	1.1	1.4
0.02	0.3	0.4	0.4	0.6	0.7	1.0	1.2
0.01	0.3	0.3	0.3	0.5	0.6	0.9	1.1

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1948-1970)

P95	P90	P75	P70	P50	P25	P10
1.4	1.8	3.4	4.7	17.0	43.0	81.0

## STATION 12153000 LITTLE PILCHUCK C NEAR LAKE STEVENS, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

ANNUAL PEAK-FLOW DATA  
FLOW(CFS) DATE REG.(R)

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1947	192.	179.	143.	112.	93.	66.	57.	48.	199.
1948	280.	245.	196.	145.	108.	95.	79.	66.	322.
1949	250.	200.	179.	132.	104.	77.	68.	57.	284.
1950	277.	243.	178.	160.	130.	102.	81.	65.	312.
1951	195.	184.	155.	108.	94.	81.	75.	72.	225.
1953	127.	109.	103.	95.	75.	52.	46.	37.	137.
1954	254.	237.	214.	174.	121.	103.	94.	85.	279.
1955	317.	291.	219.	195.	155.	100.	80.	71.	382.
1956	253.	213.	164.	119.	105.	92.	85.	75.	339.
1957	250.	223.	166.	128.	100.	82.	77.	72.	288.
1958	186.	162.	146.	107.	92.	77.	65.	58.	200.
1959	286.	233.	187.	122.	112.	90.	81.	75.	324.
1960	570.	417.	308.	192.	144.	100.	92.	80.	625.
1961	271.	224.	197.	156.	116.	85.	71.	61.	306.
1962	301.	275.	180.	127.	100.	77.	68.	54.	325.
1963	148.	121.	92.	70.	53.	50.	45.	38.	160.
1964	190.	166.	154.	114.	95.	88.	78.	66.	215.
1965	490.	376.	254.	179.	133.	104.	93.	78.	539.
1966	116.	107.	92.	83.	64.	52.	53.	45.	143.
1967	190.	167.	147.	134.	111.	101.	95.	84.	211.
1968	419.	343.	224.	134.	117.	83.	65.	58.	486.
1969	243.	183.	167.	125.	102.	90.	81.	61.	259.
1970	211.	193.	145.	116.	85.	71.	60.	44.	233.
1971									412.
1972									216.
1973									97.
1974									215.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1947-1974)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

MEAN	262.1	223.0	174.2	130.8	104.0	83.5	74.4	67.7	55.0
MAXIMUM	570.0	417.0	308.0	192.0	144.0	104.0	95.0	85.0	66.0
MINIMUM	116.0	107.0	92.0	70.0	53.0	50.0	45.0	41.0	34.0
STANDARD DEVIATION	108.41	78.60	49.74	30.46	21.84	16.52	15.04	13.44	10.10
SKEWNESS	1.413	0.842	0.656	0.162	-0.499	-0.721	-0.308	-0.630	-0.796
STD ERROR OF SKEWNESS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481
SERIAL CORR COEFF	-0.133	-0.182	-0.075	-0.136	-0.179	-0.345	-0.313	-0.355	-0.270
COEFF OF VARIATION	0.414	0.352	0.286	0.233	0.210	0.199	0.202	0.198	0.184
MEAN LOGS	2.387	2.323	2.224	2.105	2.007	1.912	1.863	1.822	1.732
STD DEVIATION LOGS	0.167	0.153	0.127	0.106	0.102	0.096	0.093	0.094	0.088
SKEWNESS LOGS	0.233	-0.133	-0.374	-0.510	-1.175	-1.098	-0.643	-0.881	-1.022
STD ERR SKEWNESS LOGS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481
SER CORR COEFF LOGS	-0.112	-0.148	-0.080	-0.112	-0.176	-0.306	-0.262	-0.306	-0.247
COEFF OF VAR LOGS	0.070	0.066	0.057	0.050	0.051	0.050	0.050	0.052	0.051

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1974)

0.99	106.6	89.6	78.3	66.1	48.7	41.2	40.0	35.0	29.2	98.3	94.2
0.95	133.1	116.4	100.5	82.6	64.9	53.6	49.4	44.3	36.9	131.3	129.1
0.90	150.6	133.3	113.9	92.2	74.1	60.6	54.7	49.6	41.2	153.1	152.2
0.80	175.8	156.8	131.8	104.6	85.4	69.2	61.4	56.1	46.4	184.4	185.0
0.50	240.2	212.0	170.5	129.9	106.2	85.0	74.6	68.4	55.9	263.2	265.8
0.20	335.0	283.5	214.9	156.8	123.8	98.6	87.6	79.8	64.1	375.5	376.4
0.10	402.1	328.5	240.2	171.0	131.1	104.4	94.2	85.1	67.8	452.0	449.0
0.04	491.8	383.3	268.5	186.2	131.5	109.6	100.9	90.2	71.0	550.9	539.6
0.02	562.2	422.6	287.4	195.8	140.7	114.4	105.0	93.0	72.8	606.0	606.1
0.01	635.6	460.9	304.8	204.4	143.2	114.4	108.5	95.4	74.2	702.2	672.0

## STATION 12156400 MUNSON CREEK NEAR MARYSVILLE, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1949-1969)									
WATER YEAR	FLOW (CFS)	DATE	MEAN LOGS									
1949	22.0	2-22-1949	STANDARD DEVIATION LOGS									
1950	50.0	3-21-1950	SKEWNESS LOGS									
1951	15.0	11-27-1950										
1952	11.0	3-11-1952										
1953	17.0	2- 3-1953										
1954	36.0	1- 6-1954										
1955	22.0	12-31-1954										
1956	32.0	12-20-1955										
1957	28.0	2-24-1957										
1958	17.0	1-16-1958										
1959	24.0	1-24-1959										
1960	40.0	11-21-1959										
1961	27.0	11-20-1960										
1962	26.0	1- 7-1962										
1963	14.0	1- 3-1963										
1964	23.0	1- 1-1964										
1965	34.0	1-29-1965										
1966	27.0	1- 8-1966										
1967	22.0	12- 4-1966										
1968	42.0	12-25-1967										
1969	21.0	2- 8-1969										

W R C	ESTIMATE	SYSTEMATIC RECORD
1.3885	1.3885	1.3885
0.1663	0.1663	0.1663
0.0	0.0	-0.143

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1949-1969)

0.99	10.0	9.6
0.95	13.0	12.8
0.90	15.0	14.9
0.80	17.7	17.8
0.50	24.5	24.7
0.20	33.8	33.8
0.10	40.0	39.7
0.04	47.8	46.9
0.02	53.7	52.1
0.01	59.6	57.2

## STATION 12157000 QUILCEDA CREEK NEAR MARYSVILLE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1946													
1947													
1948													
1949													
1950													
1951													
1952													
1953													
1954													
1955													
1956													
1957													
1958													
1959													
1960													
1961													
1962													
1963													
1964													
1965													
1966													
1967													
1968													
1969													
1975													
1976													
1977													

## STATION 12157000 QUILCEDA CREEK NEAR MARYSVILLE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1946-1977)

MEAN	11.5	30.5	50.1	51.4	49.9	36.9	25.8	16.6	12.2	7.3	5.3	6.0	25.2
MAXIMUM	29.8	70.7	76.2	96.4	84.2	60.3	36.9	38.8	23.8	13.5	8.5	11.4	31.0
MINIMUM	4.7	5.8	8.5	26.1	19.5	16.5	16.1	8.8	5.5	3.6	3.3	4.2	15.2
STD DEVIATION	6.98	16.91	17.46	18.01	16.80	12.42	6.46	6.19	5.69	2.64	1.40	2.02	4.39
SKWENESS	1.632	0.664	-0.697	0.634	0.295	0.020	0.005	2.040	0.912	1.196	0.861	1.934	-0.771
STD ERR SKEW	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.472	0.472	0.472	0.481
SER CORR COEFF	0.057	0.210	-0.171	-0.041	-0.114	-0.179	-0.032	-0.070	-0.062	0.086	-0.051	0.379	-0.001
COEFF OF VAR	0.605	0.554	0.349	0.350	0.337	0.337	0.250	0.373	0.468	0.361	0.265	0.337	0.174
MEAN LOGS	1.003	1.413	1.661	1.686	1.673	1.541	1.399	1.195	1.043	0.840	0.708	0.759	1.394
STD DEV LOGS	0.218	0.270	0.217	0.154	0.157	0.160	0.113	0.145	0.192	0.144	0.111	0.120	0.083
SKWENESS LOGS	0.887	-0.556	-2.048	-0.146	-0.536	-0.533	-0.284	0.380	0.415	0.540	0.230	1.536	-1.038
STD ERR SKEW LOGS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.472	0.472	0.472	0.481
SER CORR LOGS	0.096	0.198	-0.184	-0.045	-0.093	-0.199	-0.023	-0.057	-0.090	0.081	-0.039	0.348	0.004
COEFF OF VAR LOGS	0.218	0.191	0.131	0.092	0.094	0.104	0.081	0.121	0.184	0.171	0.157	0.159	0.059
% OF AVE FLOW	3.8	10.1	16.5	16.9	16.4	12.2	8.5	5.5	4.0	2.4	1.7	2.0	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1977)

0.99	4.3	4.8	7.4	20.4	17.7	12.8	12.9	7.9	4.5	3.7	2.9	4.1	13.8
0.95	5.1	8.5	16.8	26.6	24.7	18.0	16.0	9.4	5.6	4.2	3.4	4.2	17.3
0.90	5.6	11.3	23.9	30.6	29.2	21.3	17.8	10.4	6.4	4.6	3.7	4.3	19.2
0.80	6.5	15.7	33.9	36.0	35.2	25.8	20.2	11.8	7.6	5.2	4.1	4.6	21.5
0.50	9.3	27.4	53.5	48.9	48.6	35.9	25.3	15.3	10.7	6.7	5.1	5.4	25.6
0.20	14.8	44.1	67.3	65.5	64.1	47.6	31.3	20.6	15.8	9.0	6.3	6.9	29.1
0.10	19.7	54.8	71.2	76.0	72.8	54.3	34.7	24.3	19.7	10.7	7.1	8.3	30.7
0.04	27.7	67.7	73.3	88.7	82.4	61.6	38.5	29.3	25.4	13.1	8.2	10.4	32.1
0.02	35.2	76.6	74.0	97.9	88.7	66.5	41.1	33.2	30.0	14.9	8.9	12.3	32.8
0.01	44.3	85.0	74.3	106.7	94.4	70.8	43.5	37.3	35.2	17.0	9.7	14.6	33.4

## STATION 12157000 QUILCEDA CREEK NEAR MARYSVILLE, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1948	4.4	4.4	4.4	4.6	4.8	5.3	5.5	6.3	7.9
1949	4.4	4.5	4.8	4.9	6.3	7.2	8.8	12.0	19.0
1950	4.4	4.4	4.6	4.6	5.1	5.3	5.9	6.4	7.1
1951	3.5	3.6	3.4	3.7	3.7	4.6	5.3	6.2	8.8
1952	2.8	2.9	2.9	3.0	3.1	3.4	3.8	4.3	6.4
1953	3.8	3.8	3.8	3.9	4.0	4.1	4.2	4.3	5.0
1954	3.4	3.5	3.5	3.5	3.8	4.0	4.6	6.2	9.8
1955	5.3	5.3	5.5	5.7	6.2	7.7	8.3	8.5	12.0
1956	4.6	4.7	4.8	4.9	5.1	5.6	6.8	8.9	13.0
1957	3.7	3.7	3.8	4.0	4.1	4.4	4.9	6.1	8.4
1958	4.2	4.4	4.4	4.5	4.7	4.8	5.3	5.9	7.6
1959	2.7	2.7	2.8	3.0	3.1	3.7	4.4	4.9	5.9
1960	3.0	3.2	3.7	3.9	4.5	5.9	6.8	7.5	11.0
1961	3.1	3.2	3.4	3.6	3.9	4.9	5.2	5.8	9.2
1962	3.3	3.4	3.7	3.9	4.1	4.6	4.7	5.2	7.5
1963	4.3	4.3	4.5	4.8	5.0	5.1	5.3	5.7	11.0
1964	4.3	4.4	4.9	4.9	5.4	5.7	5.8	6.3	7.9
1965	4.8	5.0	5.1	5.1	5.4	5.6	6.1	6.3	9.3
1966	4.4	4.4	4.6	4.7	5.1	5.1	5.3	5.5	6.3
1967	4.0	4.1	4.2	4.4	4.5	4.9	5.4	6.9	9.0
1968	3.2	3.3	3.3	3.4	3.5	4.1	4.6	5.3	7.6
1969	4.7	4.7	4.7	5.0	6.0	6.9	8.2	9.6	13.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1948-1969)

MEAN	3.9	4.0	4.1	4.3	4.6	5.1	5.7	6.6	9.2
MAXIMUM	5.3	5.3	5.5	5.7	6.3	7.7	8.8	12.0	19.0
MINIMUM	2.7	2.7	2.8	3.0	3.1	3.4	3.8	4.3	5.0
STANDARD DEVIATION	0.71	0.70	0.72	0.73	0.93	1.10	1.34	1.81	3.09
SKEWNESS	-0.115	-0.126	-0.107	-0.139	0.169	0.783	1.076	1.556	1.579
STD ERROR OF SKEWNESS	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491
SERIAL CORR COEFF	0.297	0.276	0.268	0.211	0.163	0.028	0.047	0.071	-0.119
COEFF OF VARIATION	0.182	0.176	0.175	0.170	0.202	0.213	0.236	0.277	0.336
MEAN LOGS	0.586	0.595	0.609	0.624	0.655	0.701	0.745	0.803	0.944
STD DEVIATION LOGS	0.082	0.079	0.079	0.076	0.089	0.090	0.096	0.108	0.132
SKEWNESS LOGS	-0.393	-0.420	-0.435	-0.446	-0.207	0.257	0.526	0.826	0.548
STD ERR SKEWNESS LOGS	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491
SER CORR COEFF LOGS	0.307	0.276	0.243	0.196	0.162	0.063	0.088	0.126	-0.088
COEFF OF VAR LOGS	0.140	0.133	0.129	0.122	0.136	0.128	0.129	0.135	0.140

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1948-1969)

0.99	5.7	5.7	5.8	6.0	7.1	8.5	10.3	13.1	20.1
0.98	5.5	5.5	5.6	5.8	6.7	7.9	9.4	11.7	17.9
0.96	5.2	5.3	5.4	5.6	6.4	7.4	8.5	10.4	15.8
0.90	4.9	4.9	5.1	5.2	5.9	6.6	7.5	8.9	13.2
0.80	4.5	4.6	4.7	4.9	5.4	6.0	6.6	7.7	11.2
0.50	3.9	4.0	4.1	4.3	4.6	5.0	5.4	6.1	8.6
0.20	3.3	3.4	3.5	3.7	3.8	4.2	4.6	5.1	6.8
0.10	3.0	3.1	3.2	3.3	3.5	3.9	4.3	4.8	6.1
0.05	2.8	2.9	3.0	3.1	3.2	3.6	4.0	4.5	5.6
0.02	2.5	2.6	2.7	2.8	2.9	3.4	3.8	4.3	5.2
0.01	2.4	2.4	2.5	2.6	2.7	3.2	3.7	4.1	4.9

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1948-1969)

P95	P90	P75	P70	P50	P25	P10
4.3	4.9	7.0	8.0	16.0	35.0	59.0



## STATION 12157000 QUILCEDA CREEK NEAR MARYSVILLE, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE	REG. (R)
1947	113.	106.	89.	71.	57.	45.	43.	38.	32.	121.	12/11/46	
1948	125.	104.	91.	75.	57.	57.	52.	52.	46.	135.	02/26/48	
1949	123.	109.	88.	74.	59.	59.	50.	50.	45.	155.	02/22/49	
1950	128.	119.	93.	80.	72.	63.	58.	54.	43.	143.	02/26/50	
1951	130.	118.	97.	78.	67.	58.	55.	55.	45.	144.	03/13/51	
1952	112.	90.	78.	59.	48.	45.	42.	41.	34.	128.	12/22/51	
1953	82.	75.	67.	52.	41.	31.	32.	29.	25.	104.	02/03/53	
1954	186.	151.	116.	94.	69.	67.	64.	58.	46.	199.	01/06/54	
1955	194.	161.	142.	105.	72.	61.	58.	54.	47.	229.	12/31/54	
1956	184.	174.	142.	108.	75.	68.	60.	59.	51.	215.	12/20/55	
1957	167.	154.	108.	86.	75.	62.	60.	59.	51.	193.	02/24/57	
1958	151.	127.	108.	88.	72.	62.	51.	46.	37.	162.	01/17/58	
1959	187.	149.	108.	78.	73.	64.	60.	55.	44.	206.	01/24/59	
1960	215.	190.	145.	99.	84.	67.	65.	56.	45.	240.	11/21/59	
1961	169.	146.	134.	110.	80.	75.	61.	56.	47.	195.	11/20/60	
1962	167.	146.	107.	82.	75.	51.	41.	38.	32.	180.	01/07/62	
1963	84.	70.	56.	44.	38.	37.	33.	32.	30.	96.	01/03/63	
1964	108.	102.	92.	74.	62.	54.	52.	45.	40.	130.	12/07/63	
1965	282.	250.	183.	142.	113.	93.	81.	66.	49.	306.	01/29/65	
1966	108.	96.	84.	66.	50.	42.	44.	38.	29.	150.	03/18/66	
1967	119.	102.	89.	76.	70.	66.	60.	48.	48.	135.	02/18/67	
1968	173.	160.	119.	81.	77.	58.	47.	43.	37.	191.	12/25/67	
1969	136.	132.	114.	107.	82.	68.	62.	58.	45.	149.	12/10/68	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1947-1969)

	MEAN	MINIMUM	STANDARD DEVIATION	SKENNESS	STD ERROR OF SKENNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKENNESS LOGS	STD ERR SKENNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	150.8	282.0	133.3	107.4	183.0	107.4	84.3	70.7	59.6	53.9	50.0	41.4	41.4		
	282.0	82.0	70.0	56.0	44.0	38.0	31.0	29.0	25.0	22.0	20.0	18.0	16.0		
	46.15	41.35	28.34	20.78	17.03	13.70	11.70	9.95	7.65	6.65	5.65	4.65	3.65		
	0.905	0.911	0.706	0.601	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481		
	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481		
	0.016	0.061	0.129	0.007	0.022	-0.008	-0.001	-0.071	-0.022	-0.001	-0.071	-0.022	-0.001		
	0.306	0.310	0.264	0.246	0.241	0.230	0.217	0.199	0.185	0.172	0.169	0.165	0.165		
	2.160	2.105	2.017	1.913	1.837	1.763	1.721	1.689	1.609	1.542	1.481	1.481	1.481		
	0.130	0.132	0.115	0.110	0.111	0.107	0.099	0.095	0.088	0.088	0.088	0.088	0.088		
	0.030	0.012	-0.184	-0.437	-0.677	-0.785	-0.952	-0.956	-0.999	-0.956	-0.999	-0.999	-0.999		
	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481		
	0.080	0.133	0.171	0.072	0.079	0.025	0.052	-0.034	-0.019	-0.034	-0.019	-0.019	-0.019		
	0.060	0.063	0.057	0.057	0.060	0.061	0.057	0.056	0.055	0.056	0.055	0.055	0.055		

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1969)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.05	0.02	0.01
	72.4	88.4	98.4	112.2	144.2	185.9	212.4	245.0	268.8	292.2
	62.9	77.3	86.3	98.6	127.4	164.7	185.4	217.5	238.7	259.6
	54.2	66.4	73.7	83.4	104.8	139.1	151.5	162.3	174.2	185.5
	42.0	52.5	58.7	66.7	83.4	101.6	111.5	122.3	129.4	135.7
	33.5	43.2	48.9	56.1	70.7	85.5	93.0	100.6	105.6	109.4
	28.5	36.9	41.7	47.8	59.8	71.9	77.3	82.9	86.3	89.1
	25.4	32.5	38.9	43.8	53.7	63.9	69.3	74.9	78.4	81.5
	22.0	27.8	31.0	34.9	41.4	48.4	51.1	53.7	55.1	56.2
	85.1	103.1	114.1	129.1	163.5	207.0	234.2	267.1	290.8	313.9
	88.3	104.6	114.8	128.8	162.1	206.4	235.3	271.6	298.6	325.6

## STATION 12158300 DEER CREEK NEAR SILVERTON, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1965	193.0	11-30-1964
1966	106.0	10- 6-1965
1967	204.0	12-16-1966
1968	304.0	10-27-1967
1969	213.0	12- 3-1968
1970	115.0	1-22-1970
1971	185.0	1- 9-1971
1972	234.0	3- 5-1972
1973	174.0	12-26-1972

## STATION 12159500 S.F. STILLAGUAMISH RIVER NR SILVERTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1911	787	1015	681	358	86.7	250	334	674	533	323	93.2	260	452
1912	125	1126	380	572	495	127	244	553	371	239	190	188	382
1913	180		209	89.2	122	189	389	741	744	588	253	178	
1914	240			784	298	544		418	540	207	74.0	331	
1915	381	680	129	196	216	354	575	264	154	116	39.8	143.4	262
1916	493	427	666	170	612	643	633	693	770	628	217	185	511
1917	128	501	206	247	380	126	510	762	991	789	253	189	423

## STATION 12161000 S.F. STILLAGUAMISH R. NR. GRANITE FALLS, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1928													
1929	1217	668	724	349	183	1007	945	1566	1317	375	117	153	721
1930	256	203	1168	458	2234	980	1081	808	796	253	156	99.6	702
1931	917	616	739	1888	943	1603	1428	1021	1232	340	111	738	964
1932	863	1436	1295	1361	2306	2219	1915	1431	1351	1000	295	319	1311
1933	1014	3328	1581	1581	560	1259	1131	1570	2014	1189	454	1139	1408
1934	1596	1326	3917	2641	1006	1819	969	1067	436	367	161	496	1325
1935	1172	2197	1512	2931	1080	898	751	1107	1025	610	253	368	1160
1936	382	720	842	1396	642	1142	1582	2118	1373	458	171	310	929
1937	247	162	2104	243	589	1136	1573	1474	1908	481	267	148	862
1938	871	2477	1812	1175	450	821	1632	1222	586	205	77.7	78.4	952
1939	857	1379	1693	1926	675	902	1319	1631	1166	831	201	210	1086
1940	853	1127	2021	888	1439	1456	1010	901	318	140	142	98.8	865
1941	1116	1053	1272	968	580	514	454	988	427	146	97.7	902	711
1942	1384	1162	1536	513	673	737	1057	1033	1413	584	146	91.7	861
1943	431	1779	1468	771	1048	1065	1511	1158	994	703	217	161	939
1944	650	657	1324	960	653	798	959	1236	615	207	131	907	759
1945	755	1431	907	2037	1320	1037	915	1598	767	300	110	640	983
1946	1268	1583	1386	1575	1129	1199	1461	1741	1628	684	230	200	1174
1947	1191	1322	2140	1573	1652	982	1452	1042	1056	450	209	416	1120
1948	1878	1411	1684	1040	1078	694	1208	1932	1560	486	533	800	1192
1949	821	1490	928	386	1148	1291	1440	2013	1162	902	426	562	1045
1950	1360	2114	1918	1292	1855	1960	1530	1568	2007	1028	646	352	1466
1951	1557	1788	2112	1387	3216	746	1055	1176	683	264	136	375	1194
1952	1609	1043	799	697	1178	599	1216	1465	1045	509	221	177	878
1953	164	297	944	4093	1545	785	1131	1357	1074	700	356	601	1087
1954	1316	1594	2441	1307	1915	752	1159	1402	1681	1150	679	687	1336
1955	750	2174	1211	777	1212	454	1214	1597	2079	1425	590	288	1144
1956	2097	2224	1737	1193	450	856	1401	1665	1543	812	268	558	1235
1957	1729	1236	2668	1466	1387	1209	1455	1494	931	454	259	149	1119
1958	504	848	1505	1592	1422	654	1115	941	591	210	114	417	821
1959	1132	2506	2057	2129	764	1178	2350	1302	1235	568	375	1566	1430
1960	1609	2750	1712	1020	1214	846	1224	1698	1104	382	423	413	1197
1961	1231	1782	1047	1998	2704	1275	1042	1172	778	303	165	421	1149
1962	1097	882	1846	1945	831	551	1311	1006	999	447	567	531	1003
1963	673	1802	1878	948	1636	758	1037	826	536	371	210	266	906
1964	926	1998	1493	1663	855	914	1175	1664	1901	1196	836	810	1286
1965	847	1326	1502	1797	1839	716	1321	1339	845	469	347	328	1051
1966	783	1370	986	1389	665	1279	1262	1398	1178	765	255	171	960
1967	1128	1220	2500	2329	1394	1025	616	1403	1416	539	187	281	1171
1968	2280	1066	2019	2049	2061	1234	1035	1228	1376	482	448	924	1349
1969	1193	1546	1438	1290	436	877	1380	1772	1066	527	198	941	1061
1970	800	929	1085	1463	1243	816	1178	949	808	414	172	726	879
1971	765	1447	1275	2418	1729	1300	1021	1815	1500	1170	395	519	1278
1972	661	1501	1033	1296	2140	2937	1442	1901	1472	1375	365	902	1416
1973	257	900	2385	1198	531	769	689	1507	909	329	159	349	793
1974	1143	1520	2046	2623	1140	1755	1329	1697	1913	1229	509	327	1440
1975	154	1672	1648	882	882	829	541	1534	1197	722	546	237	961
1976	1734	2470	3401	1935	794	751	1096	1786	1340	980	649	422	1451
1977	388	600	1130	1057	774	948	1233	1175	852	330	438	645	797
1978	627	2321	2516	1068	876	1003	752	975	647	307	357	1173	1051
1979	323	1097	768	394	1326	1432	979	1081	758	581	138	308	761

## STATION 12161000 S.F. STILLAGUAMISH R. NR. GRANITE FALLS, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1928-1979)

MEAN	991.7	1442.2	1635.4	1432.0	1204.0	1073.9	1197.7	1373.5	1149.5	602.9	299.9	479.5	1073.3
MAXIMUM	2280.0	3328.0	3917.0	4093.0	3216.0	2937.0	2350.0	2118.0	2079.0	1425.0	836.0	1566.0	1466.0
MINIMUM	154.0	162.0	724.0	243.0	183.0	454.0	454.0	808.0	318.0	140.0	77.7	78.4	702.0
STD DEVIATION	501.63	664.88	659.74	741.92	625.61	454.37	333.07	333.43	448.37	339.07	182.63	323.21	219.26
SKEWNESS	0.406	0.426	1.143	0.986	1.023	1.890	0.543	0.218	0.300	0.847	0.974	1.139	0.125
STD ERR SKEW	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.330	0.330	0.333
SER CORR COEFF	0.042	0.038	-0.090	0.100	-0.066	0.069	0.075	0.041	-0.026	0.172	0.257	0.039	0.114
COEFF OF VAR	0.506	0.461	0.403	0.518	0.520	0.423	0.278	0.243	0.390	0.562	0.609	0.674	0.204
MEAN LOGS	2.920	3.099	3.191	3.031	3.022	3.000	3.061	3.125	3.024	2.712	2.500	2.580	3.022
STD DEV LOGS	0.276	0.261	0.170	0.256	0.258	0.160	0.130	0.108	0.188	0.252	0.263	0.313	0.091
SKEWNESS LOGS	-0.988	-1.499	0.022	-0.771	-0.500	0.524	-0.631	-0.160	-0.632	-0.170	0.082	-0.2886	-0.193
STD ERR SKEW LOGS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.330	0.330	0.333
SER CORR LOGS	-0.055	0.104	-0.052	0.168	-0.110	0.087	0.066	0.046	0.020	0.145	0.293	0.183	0.147
COEFF OF VAR LOGS	0.094	0.084	0.054	0.083	0.079	0.053	0.042	0.034	0.062	0.093	0.110	0.121	0.030
% OF AVE FLOW	7.7	11.2	12.7	11.1	9.3	8.3	9.3	10.7	8.9	4.7	2.3	3.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1928-1979)

0.99	124.5	169.6	613.1	226.9	241.6	488.8	482.4	727.5	317.5	124.1	63.6	61.2	628.3
0.95	256.7	388.6	797.9	418.6	398.0	578.0	663.1	877.1	481.9	192.8	94.0	109.9	737.6
0.90	360.3	563.3	918.6	561.5	509.5	638.8	771.7	966.6	594.2	242.3	116.1	146.1	801.4
0.80	521.0	829.0	1090.1	777.9	675.3	728.5	912.2	1084.6	740.6	317.6	150.4	209.8	883.8
0.50	934.6	1450.5	1514.7	1330.7	1100.0	968.2	1197.9	1342.3	1105.9	523.5	249.0	393.1	1058.1
0.20	1447.8	2062.3	2109.0	2046.0	1679.9	1346.8	1484.3	1645.6	1531.9	843.0	417.2	701.8	1254.8
0.10	1727.1	2316.1	2509.4	2463.3	2045.3	1631.1	1625.4	1823.9	1773.1	1071.6	548.9	932.3	1366.6
0.04	2012.3	2517.7	3022.3	2921.3	2478.7	2030.6	1764.7	2029.7	2037.2	1374.7	738.2	1244.8	1492.8
0.02	2182.4	2610.8	3409.2	3215.8	2780.2	2358.8	1847.0	2171.7	2208.6	1608.7	895.7	1489.1	1578.1
0.01	2322.7	2672.7	3800.3	3475.2	3063.9	2714.4	1915.4	2305.5	2361.4	1844.5	1067.3	1740.9	1657.4

## STATION 12161000 S.F. STILLAGUAMISH R. NR. GRANITE FALLS, WASH.

YEAR	LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31												
	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS				
1930	72.0	73.0	79.0	84.0	94.0	121.0	152.0	177.0	330.0				
1931	69.0	68.0	71.0	71.0	79.0	108.0	172.0	263.0	467.0				
1932	86.0	88.0	91.0	96.0	106.0	182.0	378.0	470.0	687.0				
1933	131.0	134.0	140.0	154.0	250.0	522.0	338.0	560.0	861.0				
1934	166.0	218.0	237.0	237.0	288.0	522.0	746.0	929.0	1200.0				
1935	89.0	92.0	96.0	104.0	122.0	244.0	275.0	325.0	490.0				
1936	109.0	115.0	124.0	137.0	210.0	277.0	301.0	354.0	509.0				
1937	109.0	109.0	114.0	132.0	151.0	199.0	213.0	222.0	422.0				
1938	92.0	94.0	99.0	107.0	143.0	194.0	226.0	346.0	798.0				
1939	56.0	58.0	60.0	66.0	74.0	77.0	105.0	187.0	480.0				
1940	112.0	116.0	120.0	134.0	177.0	195.0	317.0	470.0	722.0				
1941	79.0	80.0	84.0	87.0	99.0	113.0	127.0	148.0	391.0				
1942	74.0	74.0	76.0	80.0	88.0	117.0	209.0	384.0	501.0				
1943	78.0	78.0	79.0	84.0	92.0	110.0	132.0	249.0	577.0				
1944	108.0	109.0	117.0	129.0	149.0	169.0	240.0	411.0	563.0				
1945	74.0	76.0	78.0	87.0	105.0	131.0	194.0	424.0	639.0				
1946	76.0	77.0	83.0	95.0	105.0	175.0	305.0	340.0	649.0				
1947	128.0	134.0	152.0	163.0	174.0	198.0	239.0	417.0	814.0				
1948	128.0	129.0	134.0	145.0	165.0	295.0	348.0	523.0	759.0				
1949	191.0	192.0	195.0	207.0	278.0	408.0	559.0	659.0	819.0				
1950	155.0	168.0	179.0	204.0	253.0	476.0	610.0	727.0	954.0				
1951	148.0	150.0	156.0	173.0	248.0	477.0	602.0	874.0	1150.0				
1952	103.0	106.0	112.0	118.0	129.0	156.0	206.0	326.0	613.0				
1953	78.0	78.0	80.0	84.0	95.0	142.0	169.0	213.0	372.0				
1954	139.0	143.0	147.0	159.0	229.0	287.0	435.0	596.0	843.0				
1955	198.0	202.0	217.0	300.0	368.0	648.0	691.0	757.0	1030.0				
1956	168.0	178.0	211.0	233.0	276.0	361.0	715.0	890.0	1170.0				
1957	126.0	128.0	135.0	162.0	198.0	249.0	446.0	616.0	984.0				
1958	111.0	111.0	114.0	126.0	147.0	164.0	215.0	291.0	521.0				
1959	89.0	89.0	90.0	93.0	109.0	133.0	216.0	291.0	548.0				
1960	168.0	175.0	182.0	209.0	256.0	432.0	648.0	622.0	1050.0				
1961	133.0	136.0	145.0	154.0	182.0	331.0	373.0	430.0	765.0				
1962	80.0	81.0	84.0	96.0	110.0	206.0	274.0	368.0	596.0				
1963	142.0	152.0	170.0	259.0	323.0	448.0	484.0	544.0	666.0				
1964	132.0	134.0	138.0	157.0	198.0	233.0	245.0	301.0	443.0				
1965	277.0	286.0	326.0	406.0	586.0	750.0	801.0	801.0	1010.0				
1966	134.0	137.0	146.0	172.0	262.0	308.0	346.0	448.0	675.0				
1967	130.0	132.0	147.0	148.0	170.0	206.0	265.0	432.0	713.0				
1968	109.0	111.0	120.0	142.0	177.0	232.0	325.0	583.0	740.0				
1969	150.0	155.0	161.0	184.0	270.0	387.0	497.0	644.0	893.0				
1970	140.0	140.0	148.0	158.0	270.0	387.0	385.0	591.0	684.0				
1971	115.0	115.0	116.0	121.0	152.0	216.0	374.0	450.0	606.0				
1972	170.0	172.0	186.0	228.0	367.0	418.0	488.0	667.0	820.0				
1973	148.0	150.0	153.0	169.0	242.0	411.0	501.0	589.0	787.0				
1974	110.0	113.0	121.0	134.0	148.0	171.0	259.0	364.0	559.0				
1975	105.0	107.0	111.0	118.0	135.0	228.0	282.0	470.0	884.0				
1976	116.0	118.0	123.0	134.0	194.0	389.0	428.0	575.0	794.0				
1977	160.0	162.0	170.0	234.0	252.0	358.0	443.0	492.0	628.0				
1978	142.0	144.0	147.0	156.0	202.0	276.0	409.0	457.0	664.0				
1979	138.0	139.0	146.0	163.0	220.0	321.0	427.0	536.0	624.0				

## STATION 12161000 S.F. STILLAGUMWISH R. NR. GRANITE FALLS, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1930-1979)

MEAN	122.8	125.8	133.8	151.9	192.7	275.8	362.7	480.5	709.3
MAXIMUM	277.0	286.0	326.0	406.0	586.0	750.0	801.0	929.0	1200.0
MINIMUM	56.0	58.0	60.0	66.0	74.0	77.0	105.0	148.0	330.0
STANDARD DEVIATION	40.43	42.25	48.57	64.01	93.52	143.22	172.60	194.02	211.88
SKEWNESS	1.123	1.107	1.345	1.579	1.696	1.172	0.784	0.493	0.477
STD ERROR OF SKEWNESS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337
SERIAL CORR COEFF	0.333	0.321	0.269	0.231	0.255	0.266	0.270	0.236	0.225
COEFF OF VARIATION	0.329	0.336	0.363	0.422	0.485	0.519	0.476	0.404	0.299
MEAN LOGS	2.067	2.077	2.101	2.148	2.241	2.386	2.511	2.644	2.832
STD DEVIATION LOGS	0.140	0.142	0.150	0.168	0.196	0.221	0.212	0.188	0.132
SKEWNESS LOGS	-0.016	-0.006	0.094	0.260	0.148	-0.006	-0.172	-0.363	-0.204
STD ERR SKEWNESS LOGS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337
SER CORR COEFF LOGS	0.406	0.393	0.355	0.339	0.353	0.416	0.332	0.232	0.215
COEFF OF VAR LOGS	0.068	0.069	0.072	0.078	0.087	0.093	0.084	0.071	0.047

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1979)

0.99	245.6	255.5	289.0	373.4	522.1	782.4	947.7	1041.8	1316.4
0.98	225.2	233.8	261.2	329.1	455.5	690.3	843.5	961.7	1226.3
0.96	204.5	211.7	233.7	287.0	392.2	592.1	739.3	875.5	1131.5
0.90	176.1	181.6	197.2	233.6	312.4	466.8	599.9	749.0	995.3
0.80	153.0	157.3	168.4	193.9	253.6	373.4	490.5	639.1	879.0
0.50	116.9	119.4	125.4	138.4	172.2	243.5	328.7	455.8	685.5
0.20	89.1	90.6	94.1	101.1	118.8	158.7	216.0	310.0	526.8
0.10	77.3	78.4	81.2	86.6	98.5	126.8	172.0	248.5	456.3
0.05	68.7	69.5	72.0	76.6	84.6	105.4	142.0	204.9	404.0
0.02	60.2	60.8	63.0	67.0	71.5	85.5	113.8	163.0	351.1
0.01	55.1	55.6	57.7	61.5	64.1	74.4	98.0	139.0	319.1

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1930-1979)

P95	P90	P75	P70	P50	P25	P10
140.0	190.0	380.0	450.0	750.0	1300.0	2200.0

STATION 12161000 S.F. STILLAGUAMISH R. NR. GHANTEE FALLS, WASH.												
HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30												
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW(CFS)	DATE	REG.(R)
1929	7400.	4410.	2800.	1950.	1670.	1530.	1360.	1220.	909.	13800.	10/09/28	
1930	5640.	4170.	3880.	2570.	2120.	1870.	1400.	1290.	1150.	9790.	02/01/30	
1931	9160.	5660.	4860.	2970.	2050.	1690.	1660.	1520.	1350.	14500.	01/27/31	
1932	26800.	15500.	8330.	4710.	3610.	2870.	2410.	2160.	1830.	32400.	02/26/32	
1933	11800.	7830.	6770.	4630.	3690.	2660.	2410.	1930.	1630.	22800.	11/13/32	
1934	10100.	7770.	5880.	5260.	4300.	3410.	2740.	2520.	2120.	19600.	12/21/33	
1935	23600.	15000.	9240.	5350.	3080.	2330.	2220.	2120.	1680.	24300.	01/24/35	
1936	4960.	3500.	2750.	2380.	2090.	1740.	1630.	1630.	1410.	7620.	05/16/36	
1937	8110.	5200.	3730.	3000.	2190.	1700.	1670.	1530.	1230.	17200.	12/06/36	
1938	11400.	8100.	4330.	3000.	2530.	2200.	1980.	1640.	1450.	17200.	04/18/38	
1939	8340.	7010.	5150.	3270.	2490.	1770.	1770.	1570.	1400.	15100.	10/12/38	
1940	5860.	4660.	3340.	2160.	2090.	1720.	1460.	1450.	1370.	11500.	12/15/39	
1941	4890.	3440.	2340.	1690.	1360.	1190.	1190.	1160.	939.	9790.	10/10/40	
1942	5900.	3920.	2850.	2230.	1700.	1370.	1380.	1160.	1020.	8340.	12/19/41	
1943	9790.	5520.	3740.	2670.	2060.	1720.	1440.	1330.	1310.	14200.	11/23/42	
1944	10800.	6860.	3790.	2100.	1380.	1180.	1060.	985.	994.	21400.	12/03/43	
1945	12500.	6830.	3700.	3700.	2100.	1730.	1570.	1440.	1340.	20700.	01/07/45	
1946	13100.	8170.	4380.	3030.	2310.	1770.	1770.	1600.	1510.	16500.	10/25/45	
1947	9690.	7390.	4660.	3490.	2790.	2130.	1990.	1860.	1620.	22600.	10/25/46	
1948	9500.	6040.	3990.	2490.	2180.	1880.	1700.	1530.	1360.	19500.	10/19/47	
1949	5620.	3570.	3020.	2530.	2190.	1830.	1680.	1620.	1340.	9810.	10/07/48	
1950	13000.	7670.	4890.	3940.	2710.	2190.	1960.	2040.	1810.			
1951	25400.	19500.	10500.	5430.	3570.	2740.	2470.	2190.	1790.	27600.	02/09/51	
1952	5400.	3980.	3420.	2270.	1640.	1410.	1270.	1160.	1070.	8720.	01/30/52	
1953	11700.	7460.	5500.	4880.	4410.	2960.	2220.	1910.	1670.	16300.	01/31/53	
1954	9180.	6330.	3750.	3170.	2810.	2240.	1980.	1910.	1590.	13000.	12/09/53	
1955	6760.	5350.	3840.	3250.	2230.	1910.	1750.	1600.	1340.	16300.	02/08/55	
1956	15400.	9650.	5810.	5030.	3100.	2480.	2080.	1850.	1470.	20600.	12/11/55	
1957	11200.	7990.	5620.	4350.	2760.	2050.	1940.	1560.	1530.	25000.	12/09/56	
1958	4820.	4480.	2820.	2150.	1760.	1570.	1510.	1380.	1210.	11100.	12/25/57	
1959	16600.	10800.	5720.	3750.	2840.	2370.	2010.	1860.	1660.	22100.	11/12/58	
1960	16400.	9740.	8340.	4780.	3730.	2510.	2050.	1830.	1570.	24800.	12/15/59	
1961	15400.	9330.	5300.	3250.	2720.	2400.	2050.	1730.	1730.	20300.	02/21/61	
1962	11000.	5790.	4910.	3730.	2790.	1930.	1630.	1510.	1260.	13200.	01/03/62	
1963	7830.	5900.	4560.	2640.	2340.	2120.	1750.	1590.	1350.	18000.	11/20/62	
1964	9180.	5370.	3380.	2720.	2300.	1930.	1810.	1640.	1430.	14600.	11/26/63	
1965	11000.	9400.	4960.	3440.	2550.	1900.	1850.	1640.	1490.	14300.	11/30/64	
1966	6600.	4330.	3010.	2220.	1540.	1460.	1350.	1330.	1220.	8740.	01/13/66	
1967	10900.	6420.	5460.	3760.	2840.	2540.	2210.	2020.	1630.	12800.	12/13/66	
1968	10300.	7760.	4950.	3530.	2880.	2270.	2070.	1890.	1790.	16800.	01/20/68	
1969	10700.	7280.	4110.	2550.	1950.	1870.	1670.	1390.	1220.	14200.	01/04/69	
1970	6550.	3280.	3010.	2500.	1830.	1440.	1380.	1280.	1160.	10000.	11/04/69	
1971	10600.	6750.	4690.	4030.	3110.	2100.	1910.	1760.	1670.	16200.	01/19/71	
1972	13100.	7970.	5240.	4850.	3570.	2740.	2310.	2180.	1980.	20400.	03/05/72	
1973	10500.	6660.	5800.	4330.	3920.	2800.	2520.	2180.	1850.	15100.	12/26/72	
1974	10900.	10300.	6300.	4430.	3120.	2440.	2210.	1980.	1820.	13600.	01/14/74	
1975	8760.	6310.	4050.	2780.	2040.	1680.	1670.	1530.	1270.	18200.	11/21/74	
1976	17900.	14600.	8470.	5640.	3860.	3190.	2780.	2440.	1900.	23600.	12/02/75	
1977	10700.	6060.	3240.	1830.	1450.	1280.	1170.	1130.	1100.	16800.	01/18/77	
1978	12400.	6970.	5500.	4300.	3370.	2540.	2050.	1750.	1440.	18800.	11/01/77	
1979	7120.	6130.	3700.	2380.	1980.	1410.	1310.	1240.	1040.	12500.	11/04/78	

STATION 12161000 S.F. STILLAGUAMISH R. NR. GRANITE FALLS, WASH.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1929-1979)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

MEAN	10829.2	7257.4	4827.6	3412.9	2568.4	2047.5	1819.6	1651.3	1441.4
MAXIMUM	26800.0	19500.0	10500.0	5640.0	4410.0	3410.0	2780.0	2520.0	2120.0
MINIMUM	4820.0	3280.0	2340.0	1830.0	1380.0	1180.0	1060.0	985.0	909.0
STANDARD DEVIATION	4828.41	3247.55	1752.93	1056.24	745.02	508.39	400.70	350.94	287.22
SKEWNESS	1.570	1.776	1.274	0.487	0.559	0.560	0.321	0.371	0.211
STD ERROR OF SKEWNESS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
SERIAL CORR COEFF	-0.037	-0.080	0.030	0.053	0.078	0.044	0.080	0.112	0.060
COEFF OF VARIATION	0.446	0.447	0.363	0.309	0.290	0.248	0.220	0.213	0.199
MEAN LOGS	3.998	3.826	3.659	3.513	3.392	3.298	3.250	3.208	3.150
STD DEVIATION LOGS	0.177	0.171	0.146	0.134	0.126	0.107	0.097	0.093	0.088
SKEWNESS LOGS	0.277	0.446	0.366	0.090	-0.021	0.015	-0.172	-0.088	-0.196
STD ERR SKEWNESS LOGS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
SER CORR COEFF LOGS	-0.009	-0.024	0.063	0.021	0.059	0.043	0.082	0.119	0.078
COEFF OF VAR LOGS	0.044	0.045	0.040	0.038	0.037	0.032	0.030	0.029	0.028

4.1980  
0.1460  
-0.0840  
-0.25104.1980  
0.1460  
-0.0840  
-0.2510

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1929-1979)

0.99	4204.0	3046.5	2283.4	1624.9	1250.9	1122.5	1027.2	968.9	856.7
0.95	5275.9	3691.0	2720.1	1978.5	1526.2	1325.9	1217.2	1130.4	1001.6
0.90	5994.6	4129.1	3007.3	2202.8	1699.7	1449.3	1329.1	1225.7	1085.7
0.80	7041.7	4775.3	3419.2	2511.3	1932.6	1614.5	1475.0	1350.4	1194.2
0.50	9772.3	6500.6	4465.2	3243.0	2468.0	1986.2	1787.7	1620.0	1422.5
0.20	13927.1	9224.5	6003.2	4215.3	3147.2	2445.4	2147.0	1934.9	1678.6
0.10	16943.3	11268.0	7091.7	4847.2	3571.7	2727.3	2354.3	2119.3	1823.6
0.04	21057.9	14135.9	8549.4	5637.0	4085.9	3064.5	2590.6	2332.4	1986.7
0.02	24345.9	16488.4	9696.7	6221.3	4455.8	3304.7	2751.8	2479.6	2096.5
0.01	27827.2	19033.6	10897.6	6803.5	4816.3	3537.1	2902.5	2618.6	2198.4

7071.7  
9005.7  
10226.0  
11907.1  
15850.6  
20961.3  
24194.9  
28139.0  
30989.0  
33774.36789.4  
8871.4  
10173.8  
11947.8  
15999.5  
21004.0  
24028.4  
27576.4  
30049.0  
32395.3



## STATION 12162500 S.F. STILLAGUAMISH R AB JIM CR NR ARLNGTN, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1937	318	215	3245	393	1058	1867	2548	2177	2736	679	410	230	1324
1938	1272	3850	2834	1963	835	1290	2578	1852	774	679	410	230	1324
1939	1308	2209	2817	3096	1185	1470	1994	2270	1781	1229	301	337	1488
1940	1255	1640	2818	1394	2220	2197	1556	1367	509	214	218	149	1293
1941	1560	1613	1922	1452	882	768	668	1420	669	222	147	1306	1054
1942	1855	1852	2295	876	1095	1152	1614	1539	2109	819	225	142	1282
1943	671	2816	2431	1326	1775	1559	2237	1752	1376	950	292	224	1446
1944	903	944	1935	1496	1078	1305	1425	1782	958	294	205	1284	1134
1945	1057	2103	1377	2596	1905	1539	1451	2308	989	414	170	991	1438
1946	2017	2586	1949	2208	1783	1930	2119	2224	2296	982	318	282	1723
1947	1739	2030	3163	2416	2468	1592	2341	1455	1636	697	301	614	1699
1948	2771	2795	3026	1868	1941	1217	1908	2952	2249	824	808	1266	1968
1949	1444	2285	1591	707	1784	2118	2112	2811	1609	1235	639	731	1586
1950	1936	3253	3036	1995	2926	2983	2459	2257	2886	1418	895	486	2203
1951	2138	2627	3236	2538	4224	1321	1721	1724	1050	383	169	469	1785
1952	2385	1864	1272	1148	1823	1027	1902	2057	1491	719	320	305	1332
1953	259	453	1473	5733	2469	1313	1843	2071	1615	930	500	818	1621
1954	1882	2313	3446	2206	3054	1241	1801	1987	2401	1563	999	1070	2032
1955	993	3383	1914	1391	1975	830	1930	2387	2999	2085	911	444	1764
1956	3025	3306	2831	2075	827	1355	2123	2321	2190	1088	346	832	1863
1957	2601	1839	4081	753	2246	2011	2366	2332	1364	654	391	198	1735
1958	761												

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1937-1958)

MEAN	1552.3	2165.5	2533.0	1906.2	1883.5	1527.9	1937.9	2049.8	1699.4	842.7	414.3	587.6	1592.4
MAXIMUM	3025.0	3850.0	4081.0	5733.0	4224.0	2983.0	2578.0	2952.0	2999.0	2085.0	999.0	1306.0	2203.0
MINIMUM	259.0	215.0	1272.0	393.0	827.0	768.0	668.0	1367.0	509.0	214.0	145.0	142.0	1054.0
STD DEVIATION	762.38	938.49	808.95	1141.52	853.52	514.43	448.88	427.35	735.79	483.12	271.02	404.28	298.72
SKEWNESS	0.154	-0.329	0.143	1.879	0.959	1.114	-0.967	0.213	0.166	0.790	1.115	0.621	0.104
STD ERR SKEW	0.491	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
SER CORR COEFF	-0.010	-0.098	-0.047	-0.076	0.313	0.105	0.357	0.283	0.037	0.292	0.442	-0.070	0.444
COEFF OF VAR	0.491	0.433	0.319	0.312	0.453	0.337	0.232	0.208	0.433	0.573	0.654	0.688	0.188
MEAN LOGS	3.122	3.268	3.381	3.212	3.233	3.162	3.272	3.302	3.185	2.848	2.537	2.658	3.195
STD DEV LOGS	0.279	0.298	0.148	0.257	0.198	0.141	0.128	0.092	0.215	0.281	0.266	0.332	0.083
SKEWNESS LOGS	-1.189	-2.032	-0.385	-0.402	-0.088	0.111	-2.234	-0.244	-0.636	-0.470	0.381	-0.117	-0.300
STD ERR SKEW LOGS	0.491	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501
SER CORR LOGS	-0.098	-0.152	0.002	-0.074	0.303	0.089	0.236	0.280	0.091	0.207	0.423	-0.004	0.476
COEFF OF VAR LOGS	0.089	0.091	0.044	0.080	0.061	0.044	0.039	0.028	0.068	0.099	0.105	0.125	0.026
% OF AVE FLOW	8.1	11.3	13.3	10.0	9.9	8.0	10.1	10.7	8.9	4.4	2.2	3.1	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1937-1958)

0.99	175.9	154.3	991.2	346.9	573.9	702.4	627.5	1177.4	385.9	126.0	98.7	71.8	960.1
0.95	388.8	470.6	1327.0	578.7	797.7	861.8	1038.5	1394.0	625.5	225.1	135.2	126.0	1123.6
0.90	560.0	759.9	1536.6	748.0	948.4	963.2	1285.5	1520.0	791.4	300.3	162.0	169.0	1217.1
0.80	827.0	1225.4	1820.2	1005.6	1166.6	1104.4	1585.0	1682.6	1031.1	417.6	204.3	239.9	1336.1
0.50	1501.2	2295.9	2456.4	1594.9	1721.0	1444.0	2065.4	2024.2	1611.6	741.9	331.4	481.4	1589.3
0.20	2680.9	3153.7	3214.0	2701.1	2514.9	1904.1	2332.4	2405.5	2339.2	1228.8	568.1	868.7	1843.8
0.10	2668.7	3409.4	3655.4	3373.1	3055.0	2207.8	2393.6	2620.0	2764.6	1552.9	770.1	1199.2	1988.2
0.04	3031.9	3555.3	4156.8	4208.4	3748.7	2592.0	2422.6	2859.8	3239.4	1957.7	1084.0	1680.8	2146.2
0.02	3230.3	3602.2	4495.7	4814.6	4272.0	2879.2	2430.4	3020.4	3551.9	2250.0	1365.3	2083.2	2250.2
0.01	3382.4	3625.1	4809.6	5404.2	4799.9	3167.7	2433.7	3168.6	3833.4	2532.7	1691.3	2521.2	2344.8

STATION 12162500 S.F. STILLAGUAMISH R AB JIM CK NR ARLNGTN, WASH

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1938	162.0	167.0	175.0	183.0	230.0	314.0	345.0	512.0	1170.0
1939	117.0	119.0	121.0	127.0	140.0	143.0	179.0	278.0	717.0
1940	196.0	200.0	213.0	225.0	271.0	304.0	488.0	704.0	1080.0
1941	114.0	116.0	124.0	135.0	149.0	170.0	194.0	223.0	599.0
1942	114.0	117.0	119.0	123.0	133.0	178.0	323.0	570.0	736.0
1943	118.0	119.0	121.0	128.0	142.0	167.0	319.0	373.0	861.0
1944	156.0	164.0	171.0	183.0	208.0	233.0	328.0	562.0	780.0
1945	122.0	122.0	127.0	136.0	163.0	196.0	301.0	668.0	925.0
1946	112.0	114.0	124.0	140.0	160.0	254.0	434.0	602.0	943.0
1947	159.0	166.0	204.0	217.0	235.0	281.0	338.0	508.0	1160.0
1948	201.0	202.0	206.0	221.0	268.0	438.0	520.0	797.0	1150.0
1949	325.0	329.0	335.0	363.0	502.0	737.0	875.0	1090.0	1340.0
1950	219.0	238.0	254.0	288.0	372.0	659.0	844.0	1000.0	1350.0
1951	210.0	213.0	222.0	246.0	346.0	662.0	829.0	1200.0	1620.0
1952	114.0	117.0	126.0	134.0	158.0	198.0	281.0	474.0	920.0
1953	139.0	140.0	143.0	148.0	166.0	242.0	269.0	332.0	553.0
1954	228.0	231.0	235.0	249.0	346.0	413.0	599.0	856.0	1220.0
1955	330.0	338.0	364.0	470.0	680.0	932.0	997.0	1490.0	1490.0
1956	304.0	312.0	336.0	361.0	423.0	550.0	1060.0	1710.0	1710.0
1957	164.0	167.0	181.0	223.0	275.0	341.0	635.0	874.0	1410.0

LOWEST MEAN FLOW STATISTICS (YEARS 1938-1957)

MEAN	180.2	184.6	195.1	215.0	268.4	370.7	502.9	697.6	1086.7
MAXIMUM	330.0	338.0	364.0	470.0	680.0	932.0	1060.0	1300.0	1710.0
MINIMUM	112.0	114.0	119.0	123.0	133.0	143.0	179.0	223.0	553.0
STANDARD DEVIATION	71.26	73.16	77.61	94.88	142.82	223.82	279.88	314.16	333.22
SKWENESS	1.054	1.011	0.986	1.298	1.501	1.186	0.759	0.381	0.186
STD ERROR OF SKWENESS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SERIAL CORR COEFF	0.497	0.507	0.501	0.524	0.492	0.522	0.596	0.469	0.497
COEFF OF VARIATION	0.395	0.396	0.398	0.441	0.532	0.604	0.557	0.450	0.307
MEAN LOGS	2.227	2.237	2.260	2.298	2.379	2.502	2.638	2.797	3.015
STD DEVIATION LOGS	0.159	0.160	0.162	0.174	0.205	0.242	0.241	0.214	0.140
SKWENESS LOGS	0.566	0.529	0.473	0.580	0.585	0.458	0.141	-0.441	-0.347
STD ERR SKWENESS LOGS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SER CORR COEFF LOGS	0.494	0.497	0.487	0.535	0.535	0.560	0.494	0.319	0.413
COEFF OF VAR LOGS	0.071	0.071	0.072	0.076	0.086	0.097	0.092	0.077	0.046

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1938-1957)

	0.99	0.98	0.96	0.90	0.75	0.50	0.25	0.10	0.05	0.01
0.99	457.0	467.3	491.6	593.6	976.8	1392.6	1677.3	1681.1	2020.2	
0.98	396.5	406.1	428.4	507.6	728.3	1136.0	1418.9	1531.9	1890.5	
0.96	341.0	349.7	369.8	429.8	597.9	913.3	1180.9	1373.9	1751.0	
0.90	273.6	281.0	297.9	337.3	448.8	662.4	893.1	1147.3	1545.4	
0.80	226.0	232.1	246.3	273.3	349.9	499.2	691.0	956.1	1365.0	
0.50	162.9	167.0	176.9	190.9	228.9	304.7	429.0	649.7	1055.8	
0.20	123.3	125.8	132.4	140.8	159.8	197.4	271.3	419.5	795.3	
0.10	108.6	110.4	115.6	122.6	135.7	161.0	215.1	326.7	678.4	
0.05	98.6	100.0	104.2	110.5	120.0	137.6	178.2	262.8	591.6	
0.02	89.3	90.2	93.4	99.3	105.8	116.7	144.8	203.2	503.9	
0.01	84.1	84.7	87.3	93.0	98.0	105.3	126.4	169.9	451.0	

FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1938-1957)

P	P95	P90	P75	P70	P50	P25	P10
180.0	250.0	580.0	680.0	1200.0	2000.0	3200.0	

STATION 12162500 S.F. STILLAGUAMISH R AB JIM CR NR ARLNGTN, WASH

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA FLOW (CFS)	DATE	REG. (R)
1937	12500.	6810.	5480.	4620.	3400.	2470.	2520.	2340.	1950.	20700.	04/17/38	
1938	17100.	12000.	6480.	4680.	3980.	3100.	3100.	2310.	2310.	17500.	10/12/38	
1939	11500.	9790.	7320.	4890.	3870.	3020.	2760.	2450.	2170.	13100.	12/15/39	
1940	7540.	6280.	4730.	3790.	2930.	2440.	2170.	2150.	2050.	13500.	10/10/40	
1941	7290.	4830.	3430.	3180.	2200.	1900.	1780.	1740.	1400.	11100.	12/19/41	
1942	8830.	6020.	4250.	3130.	2500.	2010.	1680.	1690.	2070.	17500.	10/31/42	
1943	13100.	7670.	5210.	3810.	3090.	2770.	2330.	2170.	1510.	21800.	12/03/43	
1944	16000.	9350.	5220.	3920.	3080.	2560.	2320.	2110.	2000.	23200.	01/07/45	
1945	18700.	9770.	7730.	5300.	3740.	2730.	2550.	2270.	2270.	22600.	10/25/46	
1946	19900.	12200.	6810.	4970.	3740.	2730.	2550.	2270.	2270.	22600.	10/25/46	
1947	15500.	10300.	6740.	5010.	4090.	3150.	2970.	2780.	2870.	25900.	11/19/47	
1948	13300.	7900.	5520.	4290.	3630.	3000.	3020.	2860.	2280.	13700.	11/23/48	
1949	8230.	5190.	4110.	3530.	3040.	2560.	2520.	2390.	1960.	20900.	12/28/49	
1950	17400.	11300.	7390.	5620.	4050.	3300.	3060.	3120.	2680.	27700.	02/09/51	
1951	23600.	19800.	12000.	6680.	4870.	3950.	3650.	3230.	2680.	12700.	01/30/52	
1952	8200.	6070.	5120.	3520.	2440.	2030.	1870.	1800.	1610.	20300.	01/31/53	
1953	15300.	9860.	7300.	6740.	6320.	4310.	3260.	2870.	2510.	18900.	12/09/53	
1954	13200.	9110.	6110.	5060.	4370.	3530.	3180.	3010.	2500.	23400.	02/08/55	
1955	10500.	7940.	5750.	4920.	3480.	2810.	2670.	2380.	2050.	26600.	12/11/55	
1956	19300.	12800.	8280.	7180.	4530.	3790.	3260.	2860.	2320.			
1957	17000.	12200.	8570.	6640.	4230.	3080.	2950.	2410.	2400.			

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HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1938-1957)

MEAN	13999.45	9390.0	6359.5	4784.8	3611.0	2891.0	2642.9	2406.2	2135.2	W R C ESTIMATE	SYSTEMATIC RECORD
MAXIMUM	23600.0	19800.0	12000.0	7180.0	6320.0	4310.0	3650.0	3230.0	2820.0		
MINIMUM	7290.0	4830.0	3430.0	2920.0	1990.0	1760.0	1600.0	1470.0	1400.0		
STANDARD DEVIATION	4573.66	3406.64	1901.51	1263.62	999.97	678.90	555.06	481.02	389.02		
SKEWNESS	0.169	1.307	1.175	0.383	0.704	0.275	-0.257	-0.176	-0.366		
STD ERROR OF SKEWNESS	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501		
SERIAL CORR COEFF	0.201	0.080	0.178	0.276	0.137	0.079	0.237	0.310	0.209		
COEFF OF VARIATION	4.122	3.948	3.786	3.665	3.442	3.449	3.412	3.372	3.322		
MEAN LOGS	0.151	0.150	0.124	0.116	0.121	0.104	0.097	0.092	0.084		
STD DEVIATION LOGS	-0.362	0.172	0.167	-0.058	-0.169	-0.221	-0.633	-0.606	-0.729		
SKEWNESS LOGS	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	4.2802	4.2802
STD ERR SKEWNESS LOGS	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.1164	0.1164
SER CORR COEFF LOGS	0.239	0.150	0.267	0.287	0.191	0.103	0.261	0.316	0.217	0.0	-0.6360
COEFF OF VAR LOGS	0.037	0.038	0.033	0.032	0.034	0.030	0.028	0.027	0.025		

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1938-1957)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
MEAN	5390.5	4154.3	3253.7	2462.2	1760.8	1549.8	1387.2	1316.7	1209.3	1022.0
MAXIMUM	7236.2	5117.3	3871.1	2972.9	2174.6	1869.7	1725.0	1612.8	1473.4	12269.8
MINIMUM	8394.1	5739.3	4259.2	3283.9	2426.1	2059.1	1918.1	1780.8	1620.5	13524.2
STANDARD DEVIATION	9968.8	6617.0	4794.5	3700.9	2762.0	2308.9	2161.5	1991.6	1801.8	15216.2
SKEWNESS	13532.1	8778.7	6064.3	4639.1	3509.4	2839.2	2644.6	2408.1	2148.6	19065.3
STD DEVIATION LOGS	17832.2	11809.8	7756.9	5794.1	4409.8	3451.0	3129.6	2825.3	2478.3	23988.0
SKEWNESS LOGS	20365.4	13868.5	8862.4	6498.8	4947.4	3802.9	3375.3	3037.0	2637.8	26256.0
STD ERR SKEWNESS LOGS	23269.0	16532.0	10251.0	7337.2	5575.0	4202.7	3626.2	3253.9	2795.0	26604.9
SER CORR COEFF LOGS	25247.9	18563.1	11283.5	7930.7	6011.5	4474.1	3780.7	3387.9	3065.4	30065.1
COEFF OF VAR LOGS	27091.4	20635.7	12316.7	8502.2	6423.7	4727.1	3913.5	3503.6	2967.0	35559.1

9052.7

11754.9

13349.1

15402.5

19610.8

23988.0

26256.0

26604.9

30065.1

31330.1

STATION 12164000 JIM CREEK NEAR ARLINGTON, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1939	6.4	6.5	6.8	7.1	7.5	8.4	10.0	16.0	57.0
1940	13.0	14.0	14.0	15.0	17.0	18.0	30.0	53.0	87.0
1941	4.3	8.0	9.0	10.0	11.0	13.0	13.0	14.0	48.0
1942	9.0	9.4	9.7	10.0	13.0	18.0	34.0	50.0	72.0
1943	10.0	11.0	11.0	12.0	13.0	17.0	20.0	30.0	97.0
1944	6.3	6.4	6.8	7.5	8.8	13.0	20.0	38.0	68.0
1945	9.3	9.4	10.0	11.0	12.0	14.0	22.0	53.0	90.0
1946	9.6	9.7	10.0	11.0	12.0	16.0	22.0	46.0	88.0
1947	16.0	16.0	17.0	19.0	20.0	23.0	26.0	58.0	101.0
1948	17.0	18.0	19.0	20.0	25.0	40.0	53.0	73.0	97.0
1949	30.0	31.0	34.0	37.0	44.0	67.0	79.0	105.0	159.0
1950	14.0	15.0	16.0	18.0	23.0	33.0	45.0	52.0	82.0
1951	7.3	7.8	8.6	9.9	16.0	28.0	38.0	65.0	106.0
1954	13.0	13.0	14.0	15.0	19.0	33.0	40.0	68.0	110.0
1955	24.0	25.0	26.0	30.0	41.0	88.0	93.0	91.0	131.0
1956	19.0	19.0	20.0	22.0	29.0	42.0	85.0	112.0	149.0
1957	12.0	13.0	13.0	15.0	19.0	23.0	40.0	63.0	106.0

LOWEST MEAN FLOW STATISTICS (YEARS 1939-1957)

MEAN	13.2	13.7	14.4	15.9	19.4	29.1	39.7	58.1	96.9
MAXIMUM	30.0	31.0	34.0	37.0	44.0	88.0	93.0	112.0	159.0
MINIMUM	6.3	6.4	6.8	7.1	7.5	8.4	10.0	14.0	48.0
STANDARD DEVIATION	6.45	6.65	7.22	8.03	10.44	20.97	24.47	27.15	29.55
SKEWNESS	1.351	1.332	1.474	1.434	1.313	1.804	1.886	0.383	0.542
STD ERROR OF SKEWNESS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SERIAL CORR COEFF	0.354	0.353	0.365	0.362	0.452	0.416	0.523	0.423	0.314
COEFF OF VARIATION	0.489	0.486	0.501	0.506	0.537	0.537	0.616	0.468	0.305
MEAN LOGS	1.077	1.094	1.115	1.155	1.236	1.379	1.523	1.708	1.967
STD DEVIATION LOGS	0.194	0.194	0.196	0.199	0.215	0.269	0.269	0.248	0.136
SKEWNESS LOGS	0.446	0.387	0.493	0.466	0.340	0.526	-0.095	-1.051	-0.307
STD ERR SKEWNESS LOGS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SER CORR COEFF LOGS	0.394	0.382	0.416	0.430	0.556	0.647	0.504	0.287	0.337
COEFF OF VAR LOGS	0.180	0.178	0.176	0.172	0.174	0.195	0.177	0.145	0.069

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1939-1957)

0.99	39.0	39.9	43.6	48.4	61.7	127.8	134.9	123.7	178.7
0.98	33.2	34.1	36.9	40.9	52.1	101.0	115.3	117.6	167.2
0.96	27.9	28.8	30.8	34.1	43.4	78.5	96.6	109.9	154.9
0.90	21.6	22.4	23.6	26.2	33.0	54.4	73.3	96.5	136.8
0.80	17.2	17.9	18.8	20.7	25.9	39.5	56.3	82.9	121.0
0.50	11.6	12.1	12.5	13.8	16.8	22.7	33.7	56.3	94.2
0.20	8.2	8.5	8.8	9.7	11.3	14.1	19.9	33.3	71.7
0.10	6.9	7.2	7.5	8.2	9.3	11.3	15.0	23.8	61.5
0.05	6.1	6.3	6.6	7.2	8.0	9.6	11.8	17.4	54.0
0.02	5.3	5.4	5.8	6.3	6.8	8.0	9.1	11.8	46.4
0.01	4.9	5.0	5.4	5.8	6.2	7.2	7.6	8.9	41.8

FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1939-1957)

P95	P90	P75	P70	P50	P25	P10
13.0	19.0	57.0	76.0	150.0	270.0	460.0

## STATION 12164000 JIM CREEK NEAR ARLINGTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1938	144	588	431	320	163	185	325	197	42.6	15.0	9.23	7.89	202
1939	322	322	401	557	305	230	192	144	148	73.7	17.2	19.5	208
1940	132	231	394	243	386	380	210	142	28.1	12.7	14.7	12.1	182
1941	118	252	310	235	115	95.8	74.2	151	81.4	23.6	13.1	90.9	130
1942	149	250	393	260	225	181	187	181	280	61.0	21.4	13.0	176
1943	48.8	397	399	260	347	152	209	152	102	54.9	18.0	10.7	178
1944	108	115	196	250	210	176	191	191	66.0	20.1	14.4	10.9	139
1945	116	367	192	409	255	275	258	204	94.0	19.7	14.1	10.9	190
1946	323	447	270	413	355	380	259	169	193	82.9	23.8	22.1	244
1947	206	302	472	375	342	207	288	82.7	141	65.2	28.4	73.6	215
1948	270	420	414	294	331	209	285	358	186	75.2	70.5	111.6	252
1949	236	385	385	132	380	341	232	260	163	69.3	34.5	33.8	213
1950	131	343	526	427	443	471	169	166	163	57.9	37.1	27.6	262
1951	215	345	429	427	443	275	169	140	58.9	11.7	31.1	21.6	210
1953	22.5	44.4	180	595	349	275	211	161	149	55.0	39.5	65.0	172
1954	220	309	623	391	491	228	275	159	230	126	96.1	119	271
1955	68.5	404	337	316	325	169	323	228	239	175	81.5	32.9	224
1956	315	424	509	496	168	303	227	147	201	59.3	22.2	56.4	245
1957	350	251	561	212	408	367	263						

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1938-1957)

MEAN	172.0	326.1	390.6	338.8	324.4	254.4	238.0	179.6	137.6	58.6	31.4	51.9	206.3
MAXIMUM	350.0	588.0	623.0	595.0	565.0	471.0	344.0	358.0	280.0	175.0	96.1	119.0	271.0
STD DEVIATION	22.5	44.4	180.0	132.0	115.0	95.8	74.2	82.7	28.1	17.7	9.2	7.9	130.0
SKEWNESS	0.426	-0.384	-0.157	0.436	0.051	0.623	-0.547	1.671	0.265	1.338	1.510	0.564	-0.210
STD ERR SKEW	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.536	0.536	0.536	0.536	0.536	0.536
SER CORR COEFF	0.119	-0.048	0.005	0.155	0.219	0.167	0.148	-0.042	0.022	0.316	0.450	0.012	0.325
COEFF OF VAR	0.553	0.375	0.314	0.371	0.355	0.381	0.270	0.328	0.536	0.713	0.814	0.775	0.193
MEAN LOGS	2.155	2.466	2.568	2.500	2.480	2.375	2.357	2.235	2.064	1.556	1.389	1.564	2.306
STD DEV LOGS	0.302	0.248	0.155	0.171	0.177	0.170	0.148	0.132	0.282	0.339	0.302	0.395	0.088
SKEWNESS LOGS	-1.056	-2.295	-0.858	-0.425	-0.867	-0.264	-1.980	0.189	-0.686	-0.320	0.640	-0.143	-0.652
STD ERR SKEW LOGS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.536	0.536	0.536	0.536	0.536	0.536
SER CORR LOGS	-0.096	-0.085	0.076	0.182	0.138	0.144	0.167	-0.161	-0.021	0.379	0.448	0.081	0.349
COEFF OF VAR LOGS	0.140	0.101	0.060	0.068	0.071	0.072	0.063	0.059	0.218	0.218	0.218	0.252	0.038
% DF AVE FLOW	6.9	13.0	15.6	13.5	13.0	10.2	9.5	7.2	5.5	2.3	1.3	2.1	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1938-1957)

0.99	17.1	34.3	129.7	112.3	91.6	88.5	67.0	88.5	18.7	6.1	6.7	4.0	114.7
0.95	38.5	92.7	190.8	158.5	142.3	121.2	115.5	106.0	35.7	11.7	8.9	7.9	140.1
0.90	56.3	141.1	229.2	188.3	175.4	142.3	146.0	117.2	48.9	16.3	10.7	11.3	154.4
0.80	84.8	212.6	280.4	220.4	220.8	171.7	184.6	132.7	69.4	23.8	13.5	17.2	172.2
0.50	181.0	354.9	388.9	325.0	320.4	241.3	252.2	176.1	124.8	47.2	22.7	31.5	206.9
0.20	257.6	445.8	501.9	442.4	428.0	330.9	296.3	221.0	202.2	89.2	42.6	79.2	241.0
0.10	310.0	466.9	558.7	512.1	483.3	386.7	308.7	254.8	250.2	119.5	61.8	115.8	258.0
0.04	362.8	476.6	615.3	591.9	538.8	453.3	315.8	297.8	305.6	162.4	95.1	172.0	275.2
0.02	393.7	479.1	648.8	646.2	572.0	500.4	318.1	330.1	342.8	196.3	128.2	220.9	285.6
0.01	418.8	480.1	676.7	696.7	599.7	545.6	319.3	362.7	376.7	231.4	169.8	275.9	294.5

## STATION 1216+000 JIM CREEK NEAR ARLINGTON, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW (CFS) DATE REG. (R)
1938	2650.	1880.	1060.	736.	606.	526.	469.	392.	343.	3340. 12/28/37
1939	1440.	1150.	934.	739.	637.	504.	441.	402.	336.	2040. 01/01/39
1940	1070.	983.	741.	529.	472.	391.	365.	352.	315.	1620. 03/30/40
1941	1360.	799.	552.	486.	338.	304.	269.	242.	192.	2470. 11/29/40
1942	1310.	922.	634.	458.	407.	328.	295.	268.	238.	1680. 06/15/42
1943	1400.	981.	624.	560.	475.	411.	395.	356.	295.	1680. 11/15/42
1944	1100.	733.	464.	329.	284.	237.	220.	209.	203.	1570. 12/03/43
1945	1500.	1100.	828.	670.	419.	371.	332.	307.	293.	2750. 01/07/45
1946	2900.	1880.	1190.	869.	647.	460.	440.	403.	387.	4050. 10/25/45
1947	1840.	1290.	970.	730.	604.	446.	439.	400.	349.	3690. 10/25/46
1948	1510.	914.	717.	558.	505.	434.	421.	365.	333.	2960. 10/19/47
1949	1690.	1060.	824.	644.	536.	389.	360.	335.	320.	3030. 10/04/48
1950	2790.	2180.	1260.	885.	671.	561.	534.	498.	432.	4730. 12/28/49
1951	2120.	1750.	1110.	663.	562.	510.	463.	417.	359.	2820. 02/10/51
1953	1400.	941.	818.	730.	677.	474.	387.	343.	284.	1940. 01/31/53
1954	2340.	1400.	1040.	809.	645.	542.	505.	458.	389.	3520. 12/09/53
1955	1720.	1340.	848.	582.	425.	411.	388.	348.	312.	2600. 12/31/54
1956	1740.	1190.	1030.	814.	599.	532.	529.	451.	386.	2920. 10/29/55
1957										3650. 12/09/56
1958										2260. 12/25/57
1959										3590. 11/12/58
1960										4530. 11/22/59
1961										3300. 02/22/61
1962										2220. 01/03/62
1963										2480. 11/19/62
1964										2440. 01/01/64
1965										4360. 01/29/65
1966										2530. 01/08/66
1967										1840. 02/03/67
1968										3630. 12/25/67
1969										3530. 01/04/69

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1938-1969)

	W R C	SYSTEMATIC
	ESTIMATE	RECORD

MEAN	1771.1	1249.6	869.1	655.1	528.3	435.1	402.9	363.7	320.3	
MAXIMUM	2900.0	2180.0	1260.0	885.0	677.0	561.0	534.0	498.0	432.0	
MINIMUM	1070.0	733.0	464.0	329.0	284.0	237.0	220.0	209.0	192.0	
STANDARD DEVIATION	563.37	416.10	223.09	150.73	118.75	89.04	86.71	74.89	63.71	
SKEWNESS	0.492	0.469	-0.047	-0.381	-0.551	-0.564	-0.435	-0.367	-0.506	
STD ERROR OF SKEWNESS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	
SERIAL CORR COEFF	0.141	0.226	0.431	0.4261	0.363	0.375	0.259	0.230	0.292	
COEFF OF VARIATION	0.318	0.333	0.257	0.230	0.225	0.205	0.215	0.206	0.199	
MEAN LOGS	3.229	3.076	2.924	2.804	2.711	2.629	2.594	2.551	2.496	
STD DEVIATION LOGS	0.131	0.136	0.119	0.111	0.108	0.108	0.103	0.097	0.095	
SKEWNESS LOGS	0.454	0.501	-0.558	-0.998	-0.961	-1.087	-0.972	-0.917	-1.007	
STD ERR SKEWNESS LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	
SER CORR COEFF LOGS	0.229	0.270	0.466	0.262	0.362	0.356	0.277	0.253	0.310	
COEFF OF VAR LOGS	0.040	0.044	0.041	0.039	0.040	0.037	0.040	0.038	0.038	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1938-1969)

0.99	931.3	647.1	398.3	295.1	243.4	211.9	193.1	183.0	162.2	1315.6	1259.0
0.95	1077.0	747.8	515.0	394.9	322.5	277.2	252.5	234.5	208.3	1636.9	1610.2
0.90	1172.7	814.8	584.4	452.6	388.0	314.0	286.3	263.6	234.2	1838.6	1827.9
0.80	1309.7	911.6	674.4	525.0	425.1	359.2	328.3	299.6	266.0	2115.6	2122.8
0.50	1656.5	1160.6	861.9	663.8	534.7	442.8	408.2	367.9	325.2	2764.6	2792.5
0.20	2163.6	1533.2	1062.5	790.8	635.9	515.5	480.9	430.6	377.6	3608.3	3617.0
0.10	2521.0	1800.8	1169.4	848.5	682.3	546.9	513.9	459.4	400.9	4145.2	4115.9
0.04	2998.5	2163.4	1282.7	901.6	725.6	574.8	544.4	486.6	422.1	4804.3	4702.7
0.02	3373.4	2452.0	1354.7	931.1	749.9	589.7	561.5	501.9	433.8	5283.7	5113.0
0.01	3765.4	2756.9	1418.1	954.3	769.3	601.1	575.0	514.3	442.9	5754.9	5503.7

3.4413  
0.1378  
-0.0170

## STATION 12164500 S.F. STILLAGUAMISH RIVER NR ARLINGTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1929				702	451	1935	1657	2554	1913	567	244	174	
1930	379	357	2038	939	3609	1786	1710	1322	1208	371	155	425	1175
1931	1484	1100	1306	3255	1660	3021	2446	1438	1861	499	182	1369	1642
1932	1399	2147	2174	2836	3279	4519	3246	2223	2022	1416	433	424	2173
1933	1443	5396	3525	3068	1314	2531	1909	2680	3236	1737	655	1449	2415
1934	2439	2471	5729	4193	1741	2750	1635	1517	612	464	196	649	2043
1935	1553	4160	2857	4842	2196	1905	1469	1823	1501	895	392	559	2012
1936	582	1252	1363	3118	1399	2280	2679	3498	2181	653	266	483	1647

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1930	14600.0	2- 1-1930
1931	19700.0	1-27-1931
1932	39000.0	2-26-1932
1933	32600.0	11-13-1932
1934	26400.0	12-21-1933
1935	33100.0	1-24-1935
1936	11200.0	5-16-1936

## STATION 12165000 SQUIRE CREEK NEAR DARRINGTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1950	271	319	426	213	548	104	167	231	361	247	136	62.3	
1951	254	160	125	83.6	183	83.0	188	230	193	178.9	31.0	66.6	218
1952	19.7	39.3	136	639	275	104	153	230	205	127	46.5	30.9	143
1953	206	251	357	204	336	150	184	232	174	174	72.6	107	174
1954	126	245	168	95.1	143	174.5	174	220	268	249	121	94.3	220
1955	350	344	260	184	59.0	117	221	301	304	261	128	58.8	166
1956	307	169	368	58.7	211	182	198	253	195	96.2	65.6	130	214
1957	82.5	104	198	248	234	110	156	214	154	48.1	29.1	29.1	176
1958	172	435	320	281	101	146	366	215	248	151	60.9	242	228
1959	320	501	292	176	199	119	194	266	219	105	67.6	65.9	210
1960	209	262	171	380	418	200	149	203	223	93.4	86.6	202	202
1961	163	155	265	293	117	61.8	191	156	205	117	95.2	99.5	160
1962	122	320	312	165	299	97.2	134	156	121	61.6	31.6	49.4	154
1963	186	342	240	277	146	134	143	248	328	292	190	167	225
1964	135	235	191	197	282	111	182	218	187	124	70.2	38.0	163
1965	119	206	150	180	86.9	174	174	209	213	149	53.9	25.0	145
1966	165	174	439	306	190	158	93.6	218	301	166	66.6	59.4	195
1967	423	187	272	333	317	178	131	179	263	128	76.6	139	219
1968	180	245	205	186	72.8	134	221	300	265	115	43.1	164	178

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1950-1969)

MEAN	200.5	247.0	257.6	236.8	222.0	128.3	180.0	223.7	236.6	150.8	73.5	88.4	185.6
MAXIMUM	423.0	501.0	439.0	639.0	548.0	200.0	366.0	301.0	361.0	292.0	190.0	242.0	228.0
MINIMUM	19.7	39.3	125.0	58.7	59.0	61.8	93.6	156.0	121.0	48.1	21.2	25.0	136.0
STD DEVIATION	99.66	111.93	94.92	128.91	126.30	38.50	55.05	39.25	61.95	69.67	41.90	56.19	30.93
SKENNESS	0.524	0.491	0.443	1.631	0.963	0.185	2.088	0.293	0.231	0.659	1.234	1.234	-0.091
STD ERR SKEW	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.512	0.512	0.512	0.512	0.524
SER CORR COEFF	-0.077	0.201	-0.333	-0.212	-0.297	-0.086	0.016	0.058	-0.106	0.107	-0.118	-0.170	-0.248
COEFF OF VAR	0.497	0.453	0.368	0.544	0.569	0.300	0.306	0.175	0.262	0.462	0.570	0.635	0.167
MEAN LOGS	2.233	2.339	2.382	2.316	2.276	2.088	2.239	2.343	2.359	2.133	1.805	1.867	2.263
STD DEV LOGS	0.292	0.246	0.184	0.240	0.262	0.138	0.119	0.077	0.118	0.208	0.236	0.273	0.074
SKENNESS LOGS	-1.819	-1.478	-1.120	-0.482	-0.294	-0.432	0.498	-0.250	-0.404	-0.225	0.057	0.012	-0.252
STD ERR SKEW LGS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.512	0.512	0.512	0.512	0.524
SER CORR LOGS	-0.145	0.099	-0.264	-0.181	-0.267	-0.058	0.070	0.113	-0.109	0.064	-0.129	-0.121	-0.232
COEFF OF VAR LGS	0.131	0.105	0.069	0.104	0.115	0.066	0.053	0.033	0.050	0.097	0.131	0.146	0.033
% OF AVE FLOW	8.9	11.0	11.5	10.5	9.9	5.7	8.0	10.0	10.5	6.7	3.3	3.9	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1950-1969)

0.99	16.2	33.2	96.6	47.3	40.7	53.1	101.7	141.2	112.0	41.2	18.4	17.1	119.3
0.95	45.1	72.3	127.7	77.8	66.7	70.2	115.4	162.6	141.8	60.0	26.3	26.2	136.7
0.90	70.6	102.4	167.7	99.7	85.7	80.7	127.4	178.8	157.7	77.8	31.9	32.9	148.5
0.80	111.3	147.3	175.7	132.3	114.8	94.7	137.0	190.3	183.0	91.3	40.3	43.3	159.0
0.50	207.0	249.8	242.9	216.3	194.6	125.4	169.5	222.1	232.8	138.3	63.5	73.5	188.4
0.20	292.0	349.1	332.3	332.0	316.3	160.8	216.2	256.5	288.6	204.1	100.7	124.9	226.6
0.10	321.6	390.3	389.7	405.7	401.1	180.9	248.8	275.4	319.7	247.7	128.6	164.9	243.0
0.04	341.1	423.3	460.5	493.7	510.6	203.2	292.1	296.2	354.0	302.2	167.2	222.0	253.8
0.02	348.5	438.6	512.0	555.3	592.9	214.0	325.8	309.9	376.6	342.4	194.4	269.0	253.8
0.01	352.7	448.9	562.6	613.7	675.3	231.5	360.9	322.5	397.2	382.0	231.5	319.8	263.7



## STATION 12165000 SQUIRE CREEK NEAR DARRINGTON, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1952	13.0	14.0	16.0	20.0	27.0	31.0	49.0	85.0	113.0
1953	7.3	7.3	7.6	8.3	11.0	21.0	30.0	33.0	66.0
1954	21.0	23.0	25.0	28.0	39.0	57.0	98.0	117.0	145.0
1955	32.0	34.0	40.0	54.0	63.0	78.0	103.0	119.0	139.0
1956	43.0	35.0	40.0	47.0	58.0	78.0	118.0	153.0	186.0
1957	29.0	29.0	30.0	31.0	34.0	61.0	110.0	145.0	180.0
1958	12.0	13.0	16.0	21.0	23.0	29.0	39.0	56.0	82.0
1959	14.0	15.0	16.0	18.0	21.0	26.0	40.0	60.0	107.0
1960	33.0	34.0	36.0	40.0	54.0	93.0	137.0	159.0	198.0
1961	28.0	29.0	32.0	39.0	46.0	66.0	84.0	137.0	198.0
1962	16.0	18.0	21.0	25.0	32.0	58.0	70.0	92.0	116.0
1963	21.0	22.0	26.0	38.0	57.0	86.0	99.0	106.0	128.0
1964	17.0	17.0	20.0	21.0	27.0	34.0	40.0	50.0	80.0
1965	41.0	43.0	48.0	59.0	72.0	148.0	151.0	161.0	175.0
1966	12.0	13.0	15.0	20.0	36.0	51.0	66.0	84.0	113.0
1967	20.0	20.0	22.0	23.0	25.0	35.0	48.0	82.0	120.0
1968	22.0	23.0	25.0	30.0	56.0	62.0	94.0	145.0	151.0
1969	36.0	40.0	42.0	48.0	61.0	67.0	107.0	127.0	151.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1952-1969)

MEAN	22.7	23.9	26.5	31.7	41.2	61.1	81.4	103.2	132.6
MAXIMUM	41.0	43.0	48.0	59.0	72.0	148.0	151.0	161.0	198.0
MINIMUM	7.3	7.3	7.6	8.3	11.0	21.0	30.0	33.0	66.0
STANDARD DEVIATION	9.89	10.28	11.16	13.89	17.55	31.76	36.43	39.81	37.34
SKENNESS	0.323	0.345	0.341	0.461	0.098	1.133	0.252	-0.062	0.025
STD ERROR OF SKENNESS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SERIAL CORR COEFF	0.017	0.023	0.050	0.013	0.028	-0.105	-0.176	-0.137	-0.064
COEFF OF VARIATION	0.435	0.431	0.421	0.438	0.420	0.520	0.447	0.386	0.282
MEAN LOGS	1.314	1.335	1.383	1.457	1.571	1.732	1.865	1.977	2.105
STD DEVIATION LOGS	0.206	0.205	0.203	0.211	0.214	0.227	0.213	0.194	0.132
SKENNESS LOGS	-0.427	-0.501	-0.664	-0.687	-0.772	-1.110	-0.327	-0.809	-0.596
STD ERR SKENNESS LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SER CORR COEFF LOGS	0.086	0.089	0.115	0.087	0.084	0.037	-0.106	-0.125	-0.077
COEFF OF VAR LOGS	0.157	0.154	0.147	0.145	0.136	0.131	0.114	0.098	0.063

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1952-1969)

	0.99	0.98	0.96	0.90	0.80	0.50	0.20	0.10	0.05	0.02	0.01
MEAN	53.4	48.8	43.9	38.4	32.4	25.4	16.7	11.6	9.4	7.9	6.1
MAXIMUM	56.9	53.1	48.8	42.1	36.1	25.4	16.7	11.6	9.4	7.9	6.1
MINIMUM	69.1	64.4	59.1	50.9	43.4	30.3	19.5	15.0	11.9	8.9	7.3
STANDARD DEVIATION	88.3	82.8	76.4	66.3	56.8	39.6	25.3	19.3	15.1	11.2	9.0
SKENNESS	174.6	153.1	132.1	104.8	84.0	54.4	34.8	27.4	22.4	17.8	15.3
STD ERROR OF SKENNESS	203.6	183.7	163.2	134.7	111.3	75.2	48.9	38.5	31.3	24.6	20.8
SERIAL CORR COEFF	205.4	194.2	181.1	159.7	139.1	100.7	66.9	52.2	41.6	31.6	25.9
COEFF OF VARIATION	225.2	214.5	202.3	183.1	165.0	131.2	85.1	73.9	62.3	55.3	55.3

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED	PERCENT OF THE TIME (YEARS 1952-1969)
P95	P10
29.0	350.0
P90	P25
42.0	220.0
P75	P50
77.0	140.0
P70	P80
89.0	80.0

## STATION 12165000 SQUIRE CREEK NEAR DARRINGTON, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1951	3860.	3000.	1720.	917.	590.	465.	445.	388.	311.	6440. 02/10/51
1952	877.	587.	459.	318.	240.	230.	212.	191.	175.	1480. 10/03/51
1953	2020.	1360.	868.	740.	707.	473.	355.	295.	258.	3290. 01/11/53
1954	1510.	1050.	572.	498.	419.	340.	308.	260.	236.	2460. 12/19/53
1955	700.	573.	437.	365.	307.	289.	273.	245.	201.	1610. 02/07/55
1956	2970.	1710.	1140.	906.	537.	394.	330.	290.	228.	4450. 11/03/55
1957	1660.	1250.	853.	591.	379.	309.	287.	245.	224.	3760. 12/09/56
1958	864.	754.	457.	342.	273.	245.	230.	202.	197.	2120. 12/25/57
1959	2600.	1670.	899.	635.	514.	387.	331.	310.	280.	3840. 11/20/58
1960	3030.	1840.	1510.	863.	655.	453.	376.	335.	274.	4490. 01/15/61
1961	2760.	1600.	938.	613.	459.	406.	338.	315.	280.	3040. 01/03/62
1962	1760.	1050.	779.	593.	424.	294.	251.	227.	186.	2940. 11/19/62
1963	1540.	1090.	669.	457.	320.	361.	306.	276.	221.	3480. 10/22/63
1964	1880.	1380.	758.	471.	375.	336.	310.	284.	232.	2860. 11/30/64
1965	2190.	1380.	753.	496.	337.	256.	249.	226.	209.	2900. 10/06/65
1966	875.	554.	386.	288.	230.	213.	202.	200.	178.	1900. 12/13/66
1967	2100.	1230.	1030.	694.	487.	389.	335.	303.	244.	2910. 10/27/67
1968	1630.	1190.	751.	558.	420.	344.	315.	309.	285.	3580. 01/04/69
1969	1170.	845.	508.	388.	349.	294.	269.	244.	199.	2150.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1951-1969)

	MEAN	MINIMUM	STANDARD DEVIATION	SKEWNESS	STD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKEWNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	1894.5	3860.0	856.56	0.584	0.524	-0.216	-0.320	3.233	0.209	-0.315	-0.288	-0.065	3.4695	3.4695
	3860.0	700.0	573.02	1.547	0.524	0.524	-0.161	2.727	0.189	0.524	0.524	0.0	0.1599	0.1599
	1244.8	3000.0	564.9	1.217	0.466	0.524	-0.292	2.727	0.189	0.524	0.524	0.0	0.1599	0.1599
	806.7	1720.0	564.9	1.217	0.466	0.524	-0.292	2.727	0.189	0.524	0.524	0.0	0.1599	0.1599
	428.5	707.0	428.5	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	340.9	473.0	340.9	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	273.1	388.0	273.1	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	154.7	166.6	154.7	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	1251.7	1608.7	1251.7	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	1608.7	1608.7	1608.7	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	1839.0	1839.0	1839.0	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	2164.4	2164.4	2164.4	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	2948.0	2948.0	2948.0	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	4019.0	4019.0	4019.0	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	4725.8	4725.8	4725.8	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	5582.2	5582.2	5582.2	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	6219.8	6219.8	6219.8	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034
	6943.1	6943.1	6943.1	0.557	0.524	0.524	-0.211	0.203	0.200	0.200	0.200	0.034	0.034	0.034

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1951-1969)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.05	0.02	0.01
	499.3	742.9	908.9	1149.4	1751.7	2575.8	3107.8	3758.3	4226.1	4679.4
	424.9	562.3	654.3	787.7	1130.7	1636.5	1992.2	2463.3	2829.4	3208.0
	310.6	389.2	442.4	520.2	725.7	1043.8	1278.1	1601.6	1862.8	2141.9
	230.3	297.3	339.9	398.7	537.2	717.4	831.5	970.6	1119.1	1269.2
	197.0	245.9	276.2	317.5	412.1	531.4	605.3	694.0	757.3	818.6
	182.9	221.3	243.8	273.2	335.7	406.4	446.5	491.5	521.8	549.8
	166.6	193.5	208.9	228.8	270.4	316.0	341.8	370.5	389.8	407.6
	154.7	173.7	183.0	199.2	230.2	266.2	287.3	311.7	328.6	344.6
	1235.4	1600.6	1835.6	2164.4	2948.0	4019.0	4725.8	5582.2	6219.8	6943.1

## STATION 12165500 N F STILLAGUAMISH R NR DARRINGTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1950													
1951	871	1134	1454	742	1760	478	816	787	466	621	286	140	732
1952	702	512	468	356	788	296	759	787	467	165	63.1	134	459
1953	48.3	88.2	457	2210	977	418	539	614	436	235	91.9	70.4	533
1954	553	840	1264	716	1248	497	943	751	701	298	122	197	678
1955	336	1054	556	378	614	232	713	749	882	505	231	232	529
1956	884	1267	1002	710	236	482	890	972	809	422	121	210	668
1957	859	557	1400	251	701	670	747	710	380	172	92.3	54.6	549

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1951	15500.0	2-10-1951
1952	4320.0	1-30-1952
1953	11800.0	1-31-1953
1954	7290.0	12-20-1953
1955	7750.0	2- 7-1955
1956	17500.0	11- 3-1955
1957	16000.0	12- 9-1956

## STATION 12166500 DEER CREEK AT USO, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1917													
1918	183	408	2165	1111	634	618	535	564	374	103	182	120	579
1919	651	700	1087	850	470	430	832	711	350	126	41.0	44.3	526
1920	127	982	783	1149	281	555	453	502	386	75.2	65.8	886	520
1921	919	562	745	776	1021	512	554	667	654	160	71.4	384	582
1922	792	1046	1062	262	194	235	623	1037	715	109	123	314	544
1923	448	294	1023	1151	255	371	623	651	463	103	40.8	86.4	462
1924	186	495	835	672	1307	232	446	366	168	61.4	82.2	194	417
1925	860	782	1136	1064	978	443	676	895	324	75.0	58.2	32.1	609
1926	251	463	1257	575	735	474	308	418	94.5	101	338	419	319
1927	854	609	805	661	680	429	492	857	613	126	77.6	318	544
1928	769	1145	449	1173	349	731	549	545	253	77.9	32.7	35.2	510
1929	595	531	422	210	98.0	572	526	824	497	88.8	49.6	31.1	372
1930									195	53.2	24.8	114	331
1950	98.0	75.9	592	250	1270	537	501	335		419	258		199

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1917-1950)

MEAN	517.9	622.5	950.8	763.4	636.3	472.6	547.5	644.0	391.3	114.8	86.3	210.3	493.5
MAXIMUM	919.0	1145.0	2165.0	1173.0	1307.0	731.0	832.0	1037.0	715.0	419.0	258.0	886.0	609.0
MINIMUM	98.0	75.9	422.0	210.0	98.0	232.0	308.0	335.0	94.5	30.3	24.8	31.1	331.0
STD DEVIATION	313.62	305.46	447.57	360.25	407.74	141.30	126.28	216.12	191.80	93.69	64.36	224.22	86.21
SKEWNESS	-0.145	0.186	1.637	-0.389	0.411	-0.223	0.493	0.248	0.233	2.951	1.796	2.119	-0.583
STD ERR SKEW	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.597	0.597	0.580	0.616
SER CORR COEFF	-0.366	-0.208	0.525	-0.147	-0.151	0.283	-0.327	-0.556	-0.013	-0.337	-0.407	0.124	0.140
COEFF OF VAR	0.606	0.491	0.471	0.472	0.641	0.299	0.231	0.336	0.490	0.816	0.746	1.066	0.175
MEAN LOGS	2.606	2.722	2.939	2.819	2.698	2.653	2.727	2.785	2.533	1.977	1.845	2.112	2.687
STD DEV LOGS	0.352	0.305	0.190	0.271	0.344	0.148	0.103	0.153	0.255	0.260	0.282	0.455	0.081
SKEWNESS LOGS	-0.614	-1.824	0.151	-0.964	-0.633	-0.990	-0.515	-0.295	-0.332	0.704	0.457	0.090	-0.844
STD ERR SKEW LOGS	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.597	0.597	0.580	0.616
SER CORR LOGS	-0.399	-0.063	0.626	0.041	-0.160	0.236	-0.301	-0.574	-0.43	-0.290	-0.449	0.112	0.223
COEFF OF VAR LOGS	0.135	0.112	0.065	0.096	0.127	0.056	0.038	0.055	0.101	0.131	0.153	0.216	0.030
% OF AVE FLOW	8.7	10.4	16.0	12.8	10.7	7.9	9.2	10.8	6.6	1.9	1.4	3.5	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1917-1950)

0.99	43.1	44.9	329.1	101.5	55.3	161.2	281.7	249.0	61.8	32.2	19.3	12.1	281.4
0.95	94.1	131.2	430.7	205.2	119.5	237.7	350.2	331.9	115.6	40.5	26.3	23.7	344.0
0.90	137.7	209.6	499.2	285.6	173.9	285.2	390.0	384.3	155.7	46.7	31.6	34.1	378.4
0.80	211.6	336.8	599.1	409.6	265.3	347.7	440.9	455.8	216.3	56.8	40.2	53.3	420.4
0.50	438.4	643.9	859.2	726.8	541.6	475.8	544.8	620.1	369.6	88.4	66.7	127.3	498.7
0.20	808.1	921.8	1251.8	1120.5	982.6	601.8	654.2	823.0	563.4	152.1	118.7	311.1	570.2
0.10	1064.9	1018.9	1533.5	1335.9	1283.7	661.5	712.1	945.3	673.5	210.5	165.3	500.7	603.3
0.04	1385.2	1083.2	1913.4	1557.3	1654.5	717.9	773.3	1088.2	791.5	307.7	240.5	837.4	634.9
0.02	1615.1	1107.4	2213.4	1690.5	1917.5	749.8	812.3	1187.3	865.7	400.6	310.3	1171.8	653.1
0.01	1834.9	1121.0	2527.7	1801.2	2166.8	775.2	846.7	1280.9	929.8	514.3	393.6	1589.3	667.8

## STATION 1216A500 DEER CREEK AT OSO, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1919	31.0	33.0	34.0	35.0	40.0	112.0	108.0	135.0	271.0
1920	27.0	28.0	29.0	32.0	36.0	49.0	58.0	86.0	233.0
1921	29.0	30.0	30.0	30.0	34.0	60.0	121.0	219.0	392.0
1922	41.0	41.0	47.0	47.0	62.0	102.0	164.0	230.0	392.0
1923	45.0	46.0	47.0	51.0	64.0	111.0	166.0	185.0	256.0
1924	28.0	28.0	28.0	29.0	37.0	40.0	63.0	93.0	189.0
1925	35.0	35.0	36.0	38.0	47.0	64.0	67.0	99.0	219.0
1926	22.0	22.0	22.0	22.0	24.0	36.0	40.0	55.0	197.0
1927	19.0	20.0	20.0	20.0	23.0	32.0	64.0	117.0	214.0
1928	32.0	33.0	34.0	37.0	44.0	83.0	152.0	259.0	413.0
1929	22.0	22.0	23.0	24.0	27.0	34.0	48.0	93.0	230.0
1930	23.0	23.0	24.0	26.0	28.0	39.0	51.0	60.0	116.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1919-1930)

MEAN	29.5	30.1	30.8	32.6	38.8	63.5	91.8	135.9	260.2
MAXIMUM	45.0	46.0	47.0	51.0	64.0	112.0	166.0	259.0	413.0
MINIMUM	19.0	20.0	20.0	20.0	23.0	32.0	40.0	55.0	116.0
STANDARD DEVIATION	7.89	8.01	8.38	9.58	13.58	30.84	47.75	69.75	92.23
SKWENESS	0.696	0.648	0.637	0.664	0.637	0.659	0.641	0.669	0.602
STD ERROR OF SKWENESS	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637
SERIAL CORR COEFF	0.274	0.255	0.227	0.187	0.265	0.046	0.199	0.159	0.178
COEFF OF VARIATION	0.268	0.266	0.272	0.294	0.350	0.486	0.520	0.513	0.354
MEAN LOGS	1.456	1.465	1.475	1.496	1.566	1.757	1.910	2.081	2.390
STD DEVIATION LOGS	0.114	0.113	0.116	0.126	0.147	0.207	0.223	0.225	0.157
SKWENESS LOGS	0.223	0.203	0.191	0.150	0.277	0.311	0.292	0.093	-0.246
STD ERR SKWENESS LOGS	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637
SER CORR COEFF LOGS	0.259	0.247	0.216	0.170	0.244	0.024	0.183	0.191	0.216
COEFF OF VAR LOGS	0.078	0.077	0.079	0.084	0.094	0.118	0.117	0.108	0.066

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1919-1930)

0.99	54.8	55.6	57.6	63.4	86.5	192.8	299.5	415.6	532.9
0.98	50.4	51.2	53.0	58.1	77.4	164.3	252.5	357.5	491.3
0.96	46.0	46.9	48.4	52.8	68.6	138.2	205.9	302.8	447.8
0.90	40.2	40.9	42.2	45.6	57.3	106.7	159.2	234.8	386.0
0.80	35.5	36.2	37.2	39.9	48.7	84.6	124.1	185.6	333.9
0.50	28.3	28.9	29.6	31.1	36.2	55.7	79.3	119.4	249.1
0.20	22.9	23.4	23.8	24.5	27.6	38.0	52.4	77.7	182.0
0.10	20.6	21.0	21.3	21.8	24.1	31.6	42.8	62.4	153.1
0.05	18.9	19.3	19.5	19.7	21.7	27.3	36.5	52.1	132.2
0.02	17.2	17.6	17.7	17.7	19.3	23.3	30.7	42.7	111.5
0.01	16.2	16.5	16.7	16.5	18.0	21.0	27.5	37.4	99.2

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1919-1930)

P95	P90	P75	P70	P50	P25	P10
32.0	42.0	110.0	140.0	290.0	600.0	1100.0

## STATION 12166500 DEER CREEK AT OSO, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE	REG. (R)
1918	5150.	4370.	3780.	2960.	2590.	1790.	1350.	1150.	950.	9300.	12/18/17	
1919	5530.	3560.	2400.	1820.	1130.	1080.	950.	879.	773.	7850.	12/04/18	
1920	6180.	4480.	2640.	2020.	1300.	1070.	979.	818.	703.	8490.	11/15/19	
1921	5000.	5000.	2560.	1610.	1160.	1010.	905.	815.	750.	7230.	02/10/21	
1922	5760.	3770.	2870.	1890.	1730.	1350.	1020.	813.	646.	10400.	12/12/21	
1923	4950.	3530.	2900.	2180.	1930.	1130.	937.	785.	734.	7230.	10/25/22	
1924	6420.	3960.	2510.	2240.	1470.	1000.	996.	855.	693.	8490.	02/11/24	
1925	4820.	4250.	3080.	2010.	1410.	1320.	1100.	1050.	891.	7230.	12/10/24	
1926	3740.	2830.	1900.	1580.	1320.	948.	863.	778.	661.	6170.	12/23/25	
1927	3690.	2300.	2020.	1190.	966.	868.	820.	772.	677.	5640.	10/16/26	
1928	5080.	3690.	2500.	2060.	1220.	1040.	986.	893.	775.	7290.	01/12/28	
1929	3550.	2270.	1560.	982.	880.	743.	683.	614.	471.	6030.	11/09/28	
1930	3450.	2430.	2110.	1400.	1210.	878.	752.	698.	575.	5640.	12/14/29	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1918-1930)

W R C  
ESTIMATESYSTEMATIC  
RECORD

MEAN	4870.8	3570.0	2525.4	1841.7	1413.5	1094.4	949.3	840.0	715.3			
MAXIMUM	6420.0	5000.0	3780.0	2960.0	2590.0	1790.0	1350.0	1150.0	950.0			
MINIMUM	3450.0	2270.0	1560.0	982.0	880.0	743.0	683.0	614.0	471.0			
STANDARD DEVIATION	996.77	880.05	571.75	509.52	460.97	268.35	165.53	138.24	123.71			
SKEWNESS	-0.127	-0.231	0.471	0.367	1.562	1.503	0.843	0.898	0.047			
STD ERROR OF SKEWNESS	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616			
SERIAL CORR COEFF	0.393	0.426	0.142	0.157	0.137	0.143	0.210	0.171	0.120			
COEFF OF VARIATION	0.205	0.247	0.226	0.277	0.326	0.245	0.174	0.165	0.173			
MEAN LOGS	3.679	3.539	3.392	3.249	3.132	3.029	2.972	2.919	2.848			
STD DEVIATION LOGS	0.092	0.115	0.100	0.126	0.127	0.098	0.074	0.069	0.078			
SKEWNESS LOGS	-0.384	-0.565	-0.231	-0.502	0.840	0.819	0.183	0.360	-0.582			3.8655
STD ERR SKEWNESS LOGS	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616			0.0825
SER CORR COEFF LOGS	0.450	0.430	0.176	0.149	0.175	0.197	0.258	0.199	0.151			0.1900
COEFF OF VAR LOGS	0.025	0.032	0.029	0.039	0.040	0.032	0.025	0.024	0.027			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1918-1930)

0.99	2741.9	1683.2	1392.0	814.9	824.9	725.8	644.6	597.6	431.5	4716.9	4844.4	
0.95	3290.9	2158.5	1667.2	1061.4	908.1	783.0	714.0	649.6	511.5	5368.5	5425.7	
0.90	3607.1	2438.9	1829.0	1209.6	967.1	822.5	755.4	681.4	555.9	5751.9	5776.1	
0.80	4010.4	2800.9	2039.4	1404.3	1056.4	881.2	810.3	724.3	610.9	6253.1	6243.7	
0.50	4837.9	3548.8	2487.6	1817.9	1301.9	1036.0	931.7	822.1	717.4	7336.7	7292.8	
0.20	5724.8	4341.3	2996.6	2274.2	1699.3	1271.7	1079.2	945.9	822.0	8608.0	8590.8	
0.10	6205.2	4760.3	3286.8	2523.6	2001.7	1441.8	1168.8	1023.6	874.6	9358.0	9391.1	
0.04	6725.5	5202.2	3614.2	2793.4	2430.4	1672.5	1275.5	1118.2	928.1	10229.9	10354.2	
0.02	7064.1	5481.8	3835.3	2968.1	2785.4	1856.0	1351.2	1186.8	961.1	10835.8	11044.4	
0.01	7369.2	5727.6	4040.5	3124.4	3172.4	2049.6	1424.4	1254.1	989.6	11411.5	11716.0	

STATION 12167000 N.F. STILLAGUAMISH R. NR. ARLINGTON, WASH.  
MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1928	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1929	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1930	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1931	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1932	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1933	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1934	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1935	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1936	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1937	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1938	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1939	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1940	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1941	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1942	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1943	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1944	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1945	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1946	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1947	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1948	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1949	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1950	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1951	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1952	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1953	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1954	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1955	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1956	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1957	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1958	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1959	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1960	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1961	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1962	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1963	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1964	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1965	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1966	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1967	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1968	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1969	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1970	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1971	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1972	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1973	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1974	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1975	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1976	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1977	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1978	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226
1979	1746	1470	1299	783	467	1899	1827	2335	1733	559	235	256	1226

## STATION 12167000 N.F. STILLAGUAMISH R. NR. ARLINGTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1928-1979)

MEAN	1574.5	2566.5	3059.4	2758.3	2359.5	2123.3	2201.3	2245.7	1740.1	906.8	473.9	727.6	1893.2
MAXIMUM	3832.0	5161.0	5734.0	5852.0	5215.0	5814.0	4040.0	3638.0	3348.0	2165.0	1049.0	2418.0	2808.0
MINIMUM	283.0	223.0	1299.0	484.0	467.0	985.0	812.0	1160.0	525.0	290.0	166.0	140.0	1123.0
STD DEVIATION	839.37	1183.54	1162.96	1199.49	1032.14	858.83	579.09	609.81	726.43	485.08	218.52	490.56	417.02
SKEWNESS	0.552	0.174	0.526	0.250	0.670	2.093	0.337	0.434	0.426	1.095	0.934	1.325	0.283
STD ERR SKEW	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.330	0.330	0.333
SER CORR COEFF	0.015	0.039	-0.049	0.156	0.030	0.085	0.034	0.080	-0.036	0.176	0.242	0.037	0.133
COEFF OF VAR	0.533	0.461	0.380	0.435	0.437	0.404	0.263	0.272	0.417	0.535	0.461	0.674	0.220
MEAN LOGS	3.123	3.343	3.454	3.390	3.329	3.300	3.327	3.336	3.200	2.901	2.633	2.772	3.267
STD DEV LOGS	0.279	0.284	0.170	0.231	0.205	0.150	0.123	0.119	0.196	0.222	0.193	0.283	0.097
SKEWNESS LOGS	-0.800	-1.760	-0.153	-1.045	-0.592	0.724	-0.817	-0.076	-0.439	0.152	0.168	0.088	-0.167
STD ERR SKEW LOGS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.330	0.330	0.333
SER CORR LOGS	-0.054	0.097	0.030	0.174	0.009	0.109	0.069	0.061	-0.005	0.153	0.289	0.163	0.187
COEFF OF VAR LOGS	0.085	0.049	0.049	0.068	0.062	0.045	0.037	0.036	0.061	0.077	0.073	0.102	0.030
% OF AVE FLW	6.9	11.3	13.5	12.1	10.4	9.3	9.7	9.9	7.7	4.0	2.1	3.2	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1928-1979)

0.99	207.3	227.3	1097.0	484.4	582.2	1076.6	934.4	1128.3	479.7	256.9	161.4	135.9	1068.9
0.95	407.4	605.1	1471.2	900.8	913.8	1224.3	1260.7	1372.6	715.1	351.5	211.4	206.4	1266.2
0.90	562.6	929.7	1713.7	1203.0	1139.4	1327.9	1454.3	1521.7	872.8	417.4	245.1	258.8	1382.5
0.80	804.3	1440.3	2054.0	1645.1	1462.1	1483.8	1703.1	1721.9	1097.2	516.4	294.6	341.5	1534.1
0.50	1444.4	2636.8	2873.0	2687.7	2234.8	1912.7	2204.4	2173.1	1638.1	786.4	424.4	586.4	1859.5
0.20	2299.2	3718.7	3962.7	3856.6	3198.5	2614.3	2702.8	2729.1	2333.9	1219.9	622.1	1020.7	2234.1
0.10	2804.8	4107.7	4662.2	4448.5	3763.5	3155.5	2947.7	3068.2	2758.6	1546.1	765.3	1371.1	2450.6
0.04	3362.2	4374.7	5521.9	5023.8	4398.1	3932.7	3189.2	3471.3	3254.5	2001.8	959.6	1886.0	2697.6
0.02	3720.8	4479.9	6146.0	5353.1	4818.8	4584.0	3332.3	3756.4	3596.4	2372.9	1114.0	2322.6	2866.3
0.01	4035.8	4541.0	6757.3	5616.7	5200.5	5301.2	3451.2	4030.7	3916.8	2770.9	1276.6	2805.4	3024.2



YEAR	N.F. STILLAGUAMISH R. NR. ARLINGTON, WASH.									
	LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31									
	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	
1930	191.0	192.0	195.0	206.0	214.0	256.0	274.0	279.0	483.0	
1931	163.0	165.0	172.0	176.0	187.0	220.0	293.0	414.0	689.0	
1932	167.0	180.0	197.0	204.0	231.0	351.0	688.0	801.0	1050.0	
1933	185.0	188.0	197.0	213.0	301.0	343.0	483.0	784.0	1260.0	
1934	301.0	310.0	345.0	359.0	420.0	703.0	948.0	1230.0	1730.0	
1935	250.0	251.0	256.0	263.0	283.0	426.0	417.0	571.0	724.0	
1936	225.0	234.0	243.0	255.0	318.0	410.0	461.0	516.0	751.0	
1937	160.0	162.0	176.0	198.0	221.0	267.0	294.0	317.0	605.0	
1938	234.0	237.0	244.0	255.0	300.0	380.0	407.0	551.0	1220.0	
1939	123.0	124.0	128.0	131.0	140.0	151.0	190.0	284.0	720.0	
1940	217.0	219.0	230.0	247.0	303.0	319.0	456.0	634.0	1040.0	
1941	194.0	194.0	196.0	203.0	211.0	229.0	248.0	281.0	669.0	
1942	191.0	191.0	195.0	203.0	220.0	273.0	406.0	638.0	814.0	
1943	173.0	173.0	176.0	182.0	205.0	245.0	283.0	431.0	944.0	
1944	199.0	201.0	212.0	223.0	230.0	272.0	367.0	599.0	868.0	
1945	193.0	194.0	198.0	205.0	227.0	262.0	351.0	640.0	914.0	
1946	263.0	264.0	274.0	289.0	300.0	375.0	503.0	728.0	1050.0	
1947	237.0	246.0	265.0	304.0	315.0	351.0	425.0	728.0	1240.0	
1948	294.0	294.0	297.0	318.0	349.0	520.0	611.0	846.0	1210.0	
1949	495.0	500.0	517.0	531.0	615.0	802.0	904.0	1110.0	1500.0	
1950	318.0	333.0	349.0	382.0	465.0	659.0	822.0	998.0	1430.0	
1951	282.0	285.0	295.0	316.0	409.0	694.0	886.0	1320.0	1780.0	
1952	172.0	174.0	183.0	207.0	249.0	273.0	351.0	530.0	1050.0	
1953	200.0	204.0	206.0	212.0	235.0	323.0	345.0	376.0	586.0	
1954	287.0	295.0	298.0	318.0	379.0	433.0	606.0	840.0	1210.0	
1955	425.0	440.0	464.0	556.0	700.0	919.0	978.0	1080.0	1560.0	
1956	280.0	287.0	329.0	388.0	403.0	523.0	976.0	1230.0	1710.0	
1957	265.0	266.0	277.0	322.0	363.0	438.0	705.0	958.0	1600.0	
1958	214.0	216.0	223.0	235.0	259.0	294.0	358.0	441.0	753.0	
1959	198.0	198.0	198.0	206.0	230.0	260.0	342.0	411.0	815.0	
1960	320.0	326.0	339.0	364.0	395.0	587.0	979.0	1280.0	1640.0	
1961	268.0	277.0	295.0	334.0	362.0	569.0	603.0	696.0	1270.0	
1962	262.0	268.0	283.0	314.0	316.0	430.0	525.0	633.0	1060.0	
1963	452.0	459.0	485.0	547.0	653.0	790.0	814.0	898.0	1090.0	
1964	276.0	276.0	283.0	304.0	366.0	420.0	440.0	491.0	788.0	
1965	530.0	548.0	599.0	665.0	913.0	1020.0	1250.0	1300.0	1720.0	
1966	220.0	225.0	235.0	266.0	358.0	409.0	455.0	605.0	968.0	
1967	257.0	264.0	278.0	284.0	304.0	354.0	429.0	639.0	1060.0	
1968	235.0	237.0	245.0	272.0	313.0	372.0	437.0	873.0	1210.0	
1969	360.0	366.0	378.0	412.0	492.0	656.0	786.0	991.0	1390.0	
1970	203.0	206.0	232.0	276.0	317.0	386.0	655.0	1080.0	1210.0	
1971	236.0	236.0	241.0	251.0	288.0	387.0	514.0	676.0	927.0	
1972	348.0	354.0	364.0	441.0	566.0	677.0	759.0	1110.0	1530.0	
1973	335.0	335.0	340.0	371.0	439.0	612.0	905.0	1100.0	1370.0	
1974	219.0	224.0	237.0	258.0	240.0	338.0	436.0	629.0	976.0	
1975	208.0	213.0	222.0	239.0	268.0	388.0	443.0	737.0	1540.0	
1976	235.0	240.0	250.0	269.0	349.0	557.0	631.0	833.0	1320.0	
1977	251.0	254.0	274.0	406.0	422.0	609.0	671.0	730.0	1000.0	
1978	226.0	235.0	252.0	272.0	328.0	424.0	546.0	626.0	1000.0	
1979	290.0	295.0	311.0	351.0	448.0	548.0	761.0	878.0	1060.0	

## STATION 12167000 N.F. STILLAGUAMISH R. NR. ARLINGTON, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1930-1979)

MEAN	256.5	261.1	273.6	299.9	349.2	450.3	569.5	741.7	1122.1
MAXIMUM	530.0	548.0	599.0	665.0	913.0	1020.0	1250.0	1320.0	1780.0
MINIMUM	123.0	124.0	128.0	131.0	140.0	151.0	190.0	279.0	483.0
STANDARD DEVIATION	83.76	86.09	92.23	107.21	143.55	190.33	239.57	289.20	337.42
SKEWNESS	1.473	1.490	1.562	1.413	1.562	1.011	0.726	0.352	0.239
STD. ERROR OF SKEWNESS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337
SERIAL CORR. COEFF.	0.243	0.240	0.229	0.243	0.234	0.249	0.203	0.207	0.232
COEFF OF VARIATION	0.326	0.330	0.337	0.358	0.411	0.423	0.421	0.390	0.301
MEAN LOGS	2.390	2.397	2.416	2.453	2.513	2.618	2.718	2.835	3.030
STD DEVIATION LOGS	0.128	0.129	0.132	0.142	0.157	0.177	0.184	0.182	0.137
SKEWNESS LOGS	0.1536	0.1540	0.156	0.143	0.1503	0.087	-0.070	-0.411	-0.361
STD ERR SKEWNESS LOGS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337
SER CORR COEFF LOGS	0.320	0.318	0.319	0.351	0.357	0.362	0.280	0.244	0.254
COEFF OF VAR LOGS	0.054	0.054	0.054	0.058	0.063	0.068	0.068	0.064	0.045

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1979)

0.99	546.6	560.0	595.6	671.7	863.3	1101.4	1369.5	1596.2	2050.1
0.98	488.2	499.5	529.8	597.1	753.5	978.3	1227.3	1471.7	1922.9
0.96	432.7	442.3	467.6	526.1	651.6	858.4	1085.5	1338.8	1785.4
0.90	362.9	370.2	389.9	436.6	526.7	702.7	896.1	1145.4	1581.8
0.80	311.1	317.0	332.7	370.3	437.0	583.9	747.2	979.1	1402.0
0.50	238.9	242.8	253.7	277.3	316.4	412.3	525.0	704.0	1091.2
0.20	190.3	193.2	201.2	214.8	239.1	293.6	366.3	486.0	826.8
0.10	171.4	173.9	180.9	190.3	210.0	246.7	302.7	393.8	707.3
0.05	158.4	160.5	167.0	173.3	190.1	214.0	258.2	328.0	618.2
0.02	145.9	147.8	153.7	157.1	171.4	182.7	215.5	264.5	527.6
0.01	138.6	140.5	146.1	147.6	160.8	164.6	190.9	227.8	473.2

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "PM" PERCENT OF THE TIME (YEARS 1930-1979)

p95	p90	p75	p70	p50	p25	p10
270.0	350.0	700.0	840.0	1400.0	2400.0	3800.0

## STATION 12167000 N.F. STILLAGUAMISH R. NR. ARLINGTON, WASH.

YEAR	HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30										ANNUAL PEAK-FLOW DATA		
	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW(CFS)	DATE	REG.(R)	
1929	10000.	5890.	4010.	2750.	2480.	2240.	2110.	1970.	1540.	14300.	10/09/28		
1930	8410.	5940.	5100.	3840.	3460.	2620.	2390.	2170.	1880.	12800.	02/05/30		
1931	16200.	9380.	8560.	5310.	3650.	3100.	3100.	2770.	2330.	22100.	01/23/31		
1932	23400.	18800.	11000.	7000.	5660.	4760.	3960.	3470.	3040.	27700.	02/26/32		
1933	19500.	12100.	10800.	7010.	5970.	4360.	3930.	3200.	2840.	24600.	11/13/32		
1934	14300.	11600.	8650.	7390.	6480.	5300.	4280.	4020.	3390.	21100.	12/21/33		
1935	21300.	17700.	13100.	8350.	5070.	3850.	3540.	3360.	2750.	22600.	01/24/35		
1936	7300.	5920.	4880.	4040.	3140.	2900.	2570.	2510.	2310.	10800.	01/04/36		
1937	9050.	5740.	5160.	4290.	3110.	2530.	2610.	2470.	2000.	12000.	01/13/36		
1938	16900.	14300.	8270.	5230.	4410.	4100.	3700.	3050.	2760.	22300.	12/13/36		
1939	12200.	10800.	7870.	5280.	4190.	3320.	3010.	2700.	2420.	15400.	01/01/39		
1940	8690.	7170.	5930.	5050.	3980.	3240.	2830.	2790.	2570.	12600.	12/15/39		
1941	6860.	4810.	4000.	3500.	2540.	2250.	2030.	2030.	1670.	9760.	10/10/40		
1942	10400.	6400.	4910.	3500.	3430.	2750.	2500.	2150.	1880.	14200.	12/19/41		
1943	13600.	8900.	5740.	4310.	3750.	3220.	2790.	2620.	2490.	17200.	11/23/42		
1944	14200.	8930.	5110.	3440.	2770.	2240.	2010.	1900.	1810.	19200.	12/03/43		
1945	15800.	9540.	8460.	5990.	3580.	2920.	2680.	2410.	2330.	21800.	01/07/45		
1946	21000.	13600.	7770.	5400.	4240.	3170.	3120.	2800.	2750.	23600.	10/25/45		
1947	18200.	14500.	9410.	5800.	4770.	3420.	3450.	3090.	2740.	27500.	01/24/47		
1948	13700.	8360.	6240.	4690.	4050.	3190.	3260.	2850.	2470.	21000.	10/19/47		
1949	9140.	5950.	5540.	4670.	3990.	3210.	3160.	2970.	2410.	12600.	02/17/49		
1950	20500.	13300.	8140.	6070.	4550.	3730.	3510.	3560.	3200.	25000.	12/28/49		
1951	28600.	23700.	14200.	7780.	5240.	4490.	4310.	3810.	3160.	30600.	02/09/51		
1952	8310.	7000.	6000.	4330.	3060.	2260.	2130.	2190.	1930.	13600.	01/30/52		
1953	16100.	11600.	8810.	7150.	6680.	4630.	3610.	3130.	2700.	23500.	01/31/53		
1954	15000.	10100.	6550.	6020.	5090.	4190.	3770.	3610.	3040.	19500.	12/20/53		
1955	11800.	8250.	5950.	5050.	3590.	3020.	2700.	2510.	2290.	21100.	02/08/55		
1956	21700.	13300.	8940.	7290.	4790.	4180.	3660.	3170.	2660.	26500.	11/03/55		
1957	17600.	12400.	9080.	7570.	4840.	3460.	3380.	2740.	2710.	26800.	12/10/56		
1958	9790.	8310.	5390.	4180.	3380.	3130.	2930.	2590.	2250.	15700.	01/16/58		
1959	21900.	14200.	8560.	6550.	5110.	4440.	4370.	3820.	3590.	28400.	11/12/58		
1960	20800.	15300.	13200.	8070.	6410.	4340.	3900.	3480.	3060.	29400.	11/23/59		
1961	23400.	15000.	9330.	6340.	5180.	4710.	4070.	3750.	3450.	27500.	02/21/61		
1962	15600.	9550.	8320.	6570.	5070.	3570.	3110.	2810.	2420.	20000.	01/03/62		
1963	15900.	11300.	9820.	5890.	4720.	4320.	3510.	3150.	2680.	28400.	11/20/62		
1964	17800.	11500.	7430.	5710.	4460.	4180.	3880.	3560.	3070.	27200.	11/26/63		
1965	16300.	14400.	8780.	6620.	5070.	3850.	3570.	3210.	2790.	22600.	11/30/64		
1966	9000.	6300.	4660.	3790.	2790.	2540.	2280.	2220.	2150.	15000.	01/13/66		
1967	18100.	12400.	11400.	7860.	5710.	5020.	4360.	4010.	3290.	22200.	12/13/66		
1968	16600.	14400.	9570.	6400.	5450.	4370.	3970.	3580.	3340.	20500.	12/24/67		
1969	15400.	12400.	7510.	4860.	3660.	3570.	3140.	2690.	2460.	26300.	01/04/69		
1970	9320.	7180.	5600.	4500.	3400.	2670.	2520.	2360.	2100.	20000.	04/09/70		
1971	16800.	13100.	9550.	7720.	6010.	4150.	3780.	3570.	3270.	24000.	01/30/71		
1972	16200.	12500.	9690.	8380.	6800.	5380.	4540.	4140.	3640.	28400.	03/06/72		
1973	20100.	12600.	11200.	8620.	6060.	3950.	3280.	2800.	2410.	27800.	12/26/72		
1974	19600.	14800.	10600.	8540.	6250.	4900.	4440.	4120.	3800.	23000.	03/16/74		
1975	18800.	12900.	8120.	5530.	4060.	3850.	3520.	3290.	2710.	26500.	01/18/75		
1976	25000.	20500.	12000.	8770.	6620.	5910.	5170.	4720.	3850.	29700.	12/02/75		
1977	16600.	9230.	5070.	2990.	2480.	2130.	2050.	1940.	1910.	23500.	01/19/77		
1978	24000.	14100.	10500.	8450.	6660.	4780.	3930.	3380.	2770.	29200.	12/02/77		
1979	12300.	10900.	6810.	4610.	3750.	2820.	2650.	2450.	2050.	17100.	03/05/79		

STATION 12167000 N.F. STILLAGUMWISH R. NR. ARLINGTON, WASH.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1929-1979)

W R C  
ESTIMATESYSTEMATIC  
RECORD

MEAN	15864.1	11350.0	8064.9	5871.4	4542.4	3671.2	3315.1	3012.9	2649.6
MAXIMUM	28600.0	23700.0	14200.0	8770.0	6800.0	5910.0	5170.0	4720.0	3850.0
MINIMUM	6860.0	4810.0	4000.0	2750.0	2480.0	2130.0	2010.0	1900.0	1540.0
STANDARD DEVIATION	5161.61	4008.02	2520.97	1678.90	1242.18	928.24	754.28	659.15	562.72
SKWENESS	0.124	0.632	0.364	0.106	0.188	0.224	0.267	0.296	0.202
STD ERROR OF SKWENESS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
SERIAL CORR COEFF	0.147	0.058	0.087	0.138	0.116	0.050	0.063	0.092	0.094
COEFF OF VARIATION	0.325	0.363	0.313	0.246	0.273	0.253	0.228	0.219	0.212
MEAN LOGS	4.175	4.028	3.885	3.750	3.641	3.551	3.509	3.469	3.413
STD DEVIATION LOGS	0.153	0.158	0.140	0.131	0.123	0.113	0.103	0.096	0.094
SKWENESS LOGS	-0.504	-0.273	-0.209	-0.382	-0.257	-0.232	-0.379	-0.142	-0.264
STD ERR SKWENESS LOGS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
SER CORR COEFF LOGS	0.178	0.152	0.144	0.138	0.090	0.052	0.080	0.113	0.130
COEFF OF VAR LOGS	0.037	0.039	0.036	0.035	0.034	0.032	0.029	0.028	0.028

4.3179  
0.1299  
-0.28704.3179  
0.1299  
-0.2870

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1929-1979)

0.99	5792.9	4242.0	3449.2	2563.6	2143.8	1856.7	1742.1	1716.7	1498.2	8709.9
0.95	7999.6	5692.5	4431.4	3320.2	2688.7	2278.8	2133.8	2025.5	1783.5	11976.1
0.90	9384.7	6614.7	5042.2	3781.3	3019.1	2531.7	2363.0	2207.6	1949.8	13938.9
0.80	11259.3	7865.3	5871.5	4394.4	3458.4	2865.0	2658.7	2445.6	2164.3	16481.7
0.50	15428.8	10835.7	7760.8	5734.0	4425.1	3590.0	3276.4	2957.6	2614.9	21660.0
0.20	20273.0	14544.8	10096.8	7281.2	5565.4	4434.7	3952.8	3550.3	3117.0	26860.0
0.10	23014.0	16810.6	11513.8	8163.9	6232.2	4925.2	4324.9	3894.6	3398.7	29426.9
0.04	26045.2	19485.6	13183.7	9153.2	6996.8	5485.5	4732.1	4289.2	3712.9	31962.5
0.02	28041.1	21358.2	14353.2	9814.9	7519.9	5867.9	4999.3	4559.7	3922.9	34463.8
0.01	29848.4	23140.2	15467.8	10422.9	8009.4	6225.3	5241.6	4813.8	4116.2	34711.7

9742.1  
12422.3  
14059.7  
16248.2  
21093.3  
26834.6  
30195.3  
34046.2  
36676.4  
39134.4

## STATION 12167500 ARMSTRONG CREEK NR ARLINGTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1950													
1951	13.6	22.1	24.4	32.1	27.2	38.5	10.7	8.98	7.33	5.44	4.51	5.81	16.3
1953	3.30	3.70	5.52	18.7	19.3	18.0	13.3	12.2	6.34	4.70	4.36	2.78	9.86
1954	5.01	19.1	47.3	31.8	25.9	16.6	20.5	11.2	13.8	5.14	3.14	2.97	18.5
1955	7.13	21.3	27.6	27.6	27.3	24.6	21.4	15.5	16.2	10.2	8.15	10.7	17.2
1956	15.8	31.0	31.0	27.6	24.3	25.2	14.8	7.73	8.57	4.29	3.82	3.86	16.5
1957	15.1	17.2	31.2	21.5	32.3	32.4	20.7	12.2	7.34	5.44	4.54	3.90	16.9

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1950	57.0	9-26-1950
1953	38.0	1-23-1953
1955	53.0	2- 8-1955
1956	63.0	12- 1-1955
1957	129.0	12-10-1956

## STATION 12168500 PILCHUCK CREEK NEAR BRYANT, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1929													
1930	62.0	194	347	236	535	337	343	218	118	17.6	14.2	7.21	173
1931	340	154	244	524	340	596	458	103	313	11.1	1.58	63.1	286
1950													
1951	334	455	588	537	567	307	197	161	27.0	65.0	50.0	79.4	265
1953	15.4	48.1	357	804	482	322	259	228	218	29.4	12.29	15.9	232
1954	292	502	883	494	573	240	328	166	256	106	10.6	31.7	342
1955	133	490	449	428	463	248	458	293	286	228	88.5	33.3	298
1956	467	552	565	649	203	434	359	147	178	36.1	7.51	79.9	305
1957	537	332	722	205	397	511	296	127	60.2	37.8	32.2	8.89	272
1958	65.7	245	487	502	552	209	276	63.9	23.8	7.47	1.59	39.3	204
1959	352	666	591	719	403	478	519	237	159	41.2	32.5	348	378
1960	271	741	531	434	551	321	460	304	103	13.6	57.6	73.1	320
1961	336	569	255	415	890	541	321	203	42.1	16.1	10.5	49.1	300
1962	323	344	578	632	211	293	301	208	120	29.1	104	62.4	268
1963	154	554	565	394	344	229	341	248	46.8	44.9	27.4	24.5	251
1964	162	682	432	621	358	474	527	315	215	69.7	57.9	188	341
1965	195	355	397	692	788	208	230	222	48.0	84.55	21.0	31.5	263
1966	170	303	278	506	319	443	233	184	76.5	94.1	14.9	13.5	219
1967	225	375	709	760	608	458	235	201	68.6	8.43	3.32	16.4	305
1968	480	297	751	390	401	328	352	165	120	41.5	57.5	190	298
1969	329	337	544	404	295	334	385	224	73.8	113	16.4	249	272
1970	167	220	314	373	382	137	378	132	28.4	18.8	13.4	222	197
1971	273	390	410	939	574	515	316	247	170	108	8.85	89.8	336
1972	138	480	211	474	639	601	480	214	108	198	16.6	185	340
1973	61.3	314	672	332	255	344	217	169	120	24.2	17.65	41.8	215
1974	287	568	663	782	614	358	358	344	160	110	15.3	11.4	381
1975	12.0	318	483	627	370	335	252	259	99.0	24.1	57.0	28.6	236
1976	439		866	711	419	362							

## STATION 12168500 PILCHUCK CREEK NEAR BRYANT, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1929-1976)

MEAN	243.8	403.7	527.3	540.1	465.3	379.9	334.0	203.0	122.0	55.9	30.5	95.1	280.7
MAXIMUM	537.0	741.0	883.0	939.0	890.0	630.0	527.0	344.0	313.0	228.0	121.0	348.0	381.0
MINIMUM	12.0	48.1	244.0	205.0	203.0	137.0	129.0	63.9	23.8	2.9	1.5	7.2	173.0
STD DEVIATION	143.81	171.03	174.20	179.91	164.30	132.61	102.40	66.02	80.63	56.15	32.29	97.49	55.12
SKEWNESS	0.204	0.100	0.239	0.218	0.647	0.239	0.223	0.134	0.872	1.738	1.463	1.293	-0.045
STD ERR SKEW	0.448	0.456	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.441	0.441	0.441	0.456
SER CORR COEFF	-0.199	0.163	-0.028	-0.219	-0.316	-0.212	-0.191	0.128	-0.030	0.037	0.030	0.048	-0.327
COEFF OF VAR	0.590	0.424	0.330	0.333	0.333	0.349	0.307	0.325	1.986	1.004	1.060	1.025	0.196
MEAN LOGS	2.261	2.554	2.697	2.707	2.641	2.552	2.502	2.282	1.986	1.539	1.209	1.740	2.440
STD DEV LOGS	0.415	0.247	0.153	0.158	0.158	0.164	0.143	0.160	0.316	0.460	0.555	0.488	0.089
SKEWNESS LOGS	-1.593	-1.814	-0.450	-0.662	-0.298	-0.524	-0.616	-1.002	-0.301	-0.258	-0.404	-0.032	-0.455
STD ERR SKEW LOGS	0.448	0.456	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.441	0.441	0.441	0.456
SER CORR LOGS	-0.295	0.005	-0.001	-0.184	-0.314	-0.213	-0.196	0.175	-0.193	-0.108	-0.024	0.153	-0.322
COEFF OF VAR LOGS	0.184	0.097	0.057	0.058	0.060	0.064	0.057	0.070	0.159	0.299	0.459	0.280	0.036
% OF AVE FLOW	7.2	11.9	15.5	15.9	13.7	11.2	9.8	6.0	3.6	1.6	0.9	2.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1929-1976)

0.99	7.2	48.6	195.3	184.1	173.5	128.7	128.0	62.8	15.2	2.4	0.6	3.9	159.9
0.95	27.9	115.7	267.3	263.6	233.6	182.2	175.9	95.8	27.6	5.6	1.7	8.6	191.9
0.90	51.1	169.1	312.5	313.8	271.8	216.3	205.4	116.8	37.3	8.7	3.0	13.0	210.1
0.80	95.4	248.5	373.9	381.5	324.3	263.0	244.6	144.8	53.1	14.4	5.7	21.4	233.1
0.50	232.2	420.8	511.5	529.8	445.5	368.2	328.9	203.4	100.4	36.2	17.6	55.3	279.5
0.20	398.4	564.0	674.0	695.3	596.7	492.0	421.6	262.0	180.1	85.3	46.2	141.6	327.9
0.10	472.4	612.3	707.6	744.8	688.3	562.6	471.6	290.0	239.5	130.2	77.9	230.8	353.4
0.04	531.2	644.1	872.5	879.6	795.6	640.8	524.7	316.5	320.0	200.7	125.6	380.6	397.9
0.02	557.7	656.0	942.6	939.6	870.3	692.4	558.4	331.5	382.7	262.7	168.0	541.1	397.9
0.01	574.7	662.7	1006.9	992.1	941.0	739.1	588.1	343.5	447.2	332.5	215.5	729.8	413.3

## STATION 1216R500 PILCHUCK CREEK NEAR BRYANT, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1930	4.6	4.6	4.8	5.6	8.8	11.0	12.0	18.0	48.0
1931	0.8	0.8	0.9	1.0	1.2	2.6	6.5	21.0	61.0
1954	3.9	3.9	4.2	5.1	7.7	9.9	22.0	69.0	122.0
1955	13.0	13.0	15.0	20.0	28.0	88.0	114.0	123.0	156.0
1956	8.5	8.7	8.9	10.0	20.0	40.0	103.0	146.0	198.0
1957	2.4	2.5	3.3	3.6	4.4	8.4	57.0	23.0	107.0
1958	5.8	5.9	6.2	6.4	8.8	11.0	20.0	26.0	50.0
1959	1.1	1.1	1.1	1.1	1.2	4.0	6.0	13.0	64.0
1960	4.6	5.2	6.2	6.7	9.4	30.0	70.0	104.0	173.0
1961	3.1	3.1	3.4	3.4	4.0	17.0	43.0	56.0	118.0
1962	2.8	2.8	2.9	3.2	4.4	11.0	20.0	27.0	85.0
1963	8.0	8.6	10.0	14.0	26.0	49.0	57.0	65.0	102.0
1964	6.0	6.6	7.4	7.6	19.0	26.0	26.0	33.0	79.0
1965	10.0	11.0	17.0	20.0	30.0	52.0	76.0	122.0	162.0
1966	3.3	3.4	3.9	4.0	6.7	11.0	15.0	23.0	81.0
1967	4.3	4.3	4.7	7.9	11.0	14.0	23.0	42.0	89.0
1968	2.7	2.7	2.8	3.0	3.3	4.8	7.7	22.0	89.0
1969	4.0	4.3	4.8	5.7	14.0	35.0	52.0	75.0	137.0
1970	6.3	6.7	7.0	8.7	14.0	23.0	58.0	75.0	135.0
1971	3.5	3.5	3.6	4.0	5.5	16.0	19.0	39.0	109.0
1972	4.0	4.3	5.3	5.4	8.6	38.0	48.0	78.0	124.0
1973	3.7	4.0	4.6	6.4	13.0	29.0	80.0	102.0	128.0
1974	4.2	4.7	5.8	7.3	9.1	22.0	46.0	46.0	90.0
1975	2.5	2.7	3.0	4.0	6.3	9.5	12.0	32.0	93.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1930-1975)

MEAN	4.7	4.9	5.7	6.8	10.9	22.9	39.1	58.8	108.0
MAXIMUM	13.0	13.0	17.0	20.0	30.0	88.0	114.0	146.0	198.0
MINIMUM	0.8	0.8	0.9	1.0	1.2	2.6	6.0	13.0	48.0
STANDARD DEVIATION	2.82	2.94	3.85	4.95	8.22	19.90	31.00	37.80	39.01
SKEWNESS	1.393	1.252	1.701	1.692	1.134	1.748	1.044	0.819	0.512
STD ERROR OF SKEWNESS	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472
SERIAL CORR COEFF	0.095	0.083	0.053	-0.020	0.195	0.052	0.039	0.101	0.190
COEFF OF VARIATION	0.598	0.597	0.677	0.724	0.757	0.869	0.794	0.653	0.361
MEAN LOGS	0.600	0.618	0.668	0.734	0.906	1.212	1.453	1.679	2.005
STD DEVIATION LOGS	0.271	0.276	0.292	0.315	0.371	0.377	0.366	0.296	0.163
SKEWNESS LOGS	-0.612	-0.630	-0.453	-0.477	-0.596	-0.129	-0.057	-0.103	-0.280
STD ERR SKEWNESS LOGS	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472
SER CORR COEFF LOGS	-0.045	-0.046	-0.020	-0.056	0.070	0.108	0.061	0.056	0.258
COEFF OF VAR LOGS	0.453	0.446	0.437	0.429	0.410	0.311	0.252	0.176	0.081

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1975)

0.99	12.8	13.5	17.7	22.7	40.2	113.2	194.9	220.7	224.1
0.98	11.6	12.2	15.6	19.9	35.1	91.3	156.4	185.9	206.4
0.96	10.3	10.9	13.5	17.0	29.8	71.7	122.2	153.3	188.0
0.90	8.4	8.9	10.6	13.1	22.5	49.0	83.3	113.2	161.6
0.80	6.8	7.1	8.3	10.1	16.7	34.0	57.9	84.9	139.3
0.50	4.2	4.4	4.9	5.7	8.8	16.6	28.6	48.3	103.0
0.20	2.4	2.5	2.7	3.0	4.1	7.9	14.0	27.0	74.2
0.10	1.7	1.8	1.9	2.1	2.6	5.3	9.6	19.8	61.9
0.05	1.3	1.3	1.4	1.5	1.7	3.8	7.0	15.3	53.0
0.02	0.9	0.9	1.0	1.0	1.1	2.6	4.9	11.4	44.3
0.01	0.7	0.7	0.8	0.8	0.8	2.0	3.9	9.3	39.2

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "PM" PERCENT OF THE TIME (YEARS 1930-1975)

P95	P90	P75	P70	P50	P25	P10
5.1	9.4	53.0	78.0	180.0	370.0	680.0

## STATION 1216R500 PILCHUCK CREEK NEAR BRYANT, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1930	3040.	1500.	1070.	654.	526.	435.	381.	368.	295.	3790. 02/01/30
1931	2900.	1500.	1310.	926.	795.	612.	563.	490.	405.	3190. 01/27/31
1951	2740.	2110.	1430.	881.	741.	676.	605.	552.	489.	3990. 02/09/51
1953	2120.	1370.	1190.	1050.	933.	642.	549.	493.	405.	2540. 01/23/53
1954	2540.	1670.	1290.	1120.	915.	771.	666.	636.	516.	3870. 12/20/53
1955	2000.	1630.	1000.	707.	575.	532.	516.	460.	423.	3770. 02/08/55
1956	2530.	1440.	1190.	960.	696.	570.	553.	571.	494.	4370. 11/03/55
1957	3590.	1940.	1490.	1170.	760.	600.	570.	475.	473.	6240. 12/09/56
1958	1540.	1210.	800.	669.	574.	534.	512.	379.	379.	2540. 12/25/57
1959	3590.	2340.	1340.	975.	787.	664.	671.	611.	569.	5980. 11/12/58
1960	2930.	2690.	2110.	1260.	1010.	660.	661.	578.	510.	6030. 11/22/59
1961	3410.	2750.	1760.	1190.	917.	714.	623.	568.	525.	4350. 02/21/61
1962	2440.	1750.	1360.	969.	847.	624.	530.	488.	413.	3620. 01/03/62
1963	2290.	2080.	1690.	1000.	713.	684.	544.	489.	433.	4720. 11/19/62
1964	1650.	1360.	1030.	867.	682.	585.	591.	541.	515.	3420. 01/01/64
1965	3040.	2730.	1820.	1250.	1060.	734.	633.	554.	440.	4660. 01/30/65
1966	2160.	1520.	1080.	763.	519.	421.	430.	393.	348.	3360. 01/13/66
1967	2070.	1590.	1120.	874.	801.	772.	714.	648.	542.	3860. 02/03/67
1968	3280.	2520.	1600.	911.	779.	611.	532.	505.	444.	4670. 12/25/67
1969	2950.	1860.	1150.	746.	609.	545.	479.	420.	389.	4140. 01/04/69
1970	1200.	907.	666.	582.	495.	398.	356.	329.	300.	2590. 04/09/70
1971	3270.	2470.	2060.	1510.	1100.	769.	694.	618.	535.	6900. 01/30/71
1972	2760.	1620.	1070.	874.	816.	666.	605.	587.	538.	4190. 12/17/71
1973	2430.	1860.	1540.	1200.	771.	524.	472.	418.	360.	3670. 12/26/72
1974	3510.	2720.	2020.	1560.	1050.	842.	754.	712.	623.	4240. 01/24/74
1975	3530.	2410.	1360.	916.	686.	583.	526.	486.	411.	5820. 01/18/75
1976										5820. 01/18/75
1977										7460. 01/18/77
1978										7440. 12/02/77
1979										2410. 03/06/79

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1930-1979)

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1930-1979)														
	MEAN	2700.4	1905.7	1367.2	984.0	775.5	625.7	570.4	517.0	452.1		W R C ESTIMATE	SYSTEMATIC RECORD	
MAXIMUM	3970.0	2750.0	2110.0	1560.0	1100.0	845.0	398.0	754.0	712.0	623.0				
MINIMUM	1200.0	907.0	666.0	582.0	495.0	440.0	398.0	356.0	329.0	295.0				
STANDARD DEVIATION	702.86	528.59	375.52	246.32	171.17	111.44	99.13	99.13	91.43	82.44				
SKEWNESS	-0.242	0.231	0.409	0.640	0.198	-0.277	-0.277	-0.311	-0.011	-0.047				
STD ERROR OF SKEWNESS	0.456	0.456	0.456	0.456	0.456	0.456	0.456	0.456	0.456	0.456				
SERIAL CORR COEFF	-0.278	-0.067	-0.176	-0.115	-0.164	-0.396	-0.396	-0.298	-0.278	-0.242				
COEFF OF VARIATION	0.260	0.277	0.275	0.250	0.221	0.278	0.278	0.174	0.177	0.182				
MEAN LOGS	3.415	3.263	3.120	2.980	2.749	2.749	2.749	2.648	2.648	2.648		3.6131	3.6131	
STD DEVIATION LOGS	-0.126	0.125	0.108	0.098	-0.0734	-0.0734	-0.0734	-0.080	-0.080	-0.080		0.1328	0.1328	
SKEWNESS LOGS	-0.905	-0.311	-0.296	0.034	-0.226	-0.226	-0.226	-0.273	-0.272	-0.268		0.0050	0.0050	
STD ERR SKEWNESS LOGS	0.456	0.456	0.456	0.456	0.456	0.456	0.456	0.456	0.456	0.456				
SER CORR COEFF LOGS	-0.298	-0.129	-0.191	-0.111	-0.129	-0.353	-0.353	-0.249	-0.231	-0.207				
COEFF OF VAR LOGS	0.037	0.038	0.039	0.036	0.034	0.029	0.029	0.029	0.029	0.031				
HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1979)														
	0.99	1103.7	880.5	643.9	540.4	431.6	359.5	330.5	312.4	268.5		2017.0	2052.0	
0.95	1518.3	1115.7	810.4	637.3	515.1	436.0	436.0	400.3	368.3	318.2		2482.4	2499.2	
0.90	1765.3	1258.2	911.0	696.3	549.2	478.4	478.4	438.9	399.6	348.2		2773.2	2780.4	
0.80	2082.5	1447.4	1044.4	775.4	628.0	530.5	530.5	486.0	438.8	381.3		3171.7	3168.3	
0.50	2716.3	1861.1	1335.6	954.1	763.6	629.7	629.7	574.9	516.3	451.9		4101.7	4085.8	
0.20	3324.0	2343.2	1874.9	1176.2	917.3	723.6	723.6	657.6	595.4	522.8		5306.5	5300.1	
0.10	3626.2	2621.5	1871.0	1313.3	1005.0	768.8	768.8	696.9	636.4	560.2		6072.1	6086.8	
0.04	3968.7	2957.1	2093.7	1477.9	1103.8	813.2	813.2	735.0	676.5	599.5		7011.5	7087.4	
0.02	4071.6	3150.7	2244.6	1595.6	1170.5	859.6	859.6	757.4	706.7	624.5		7694.7	7791.1	
0.01	4204.0	3348.9	2384.9	1709.9	1232.5	861.7	861.7	775.9	730.7	646.6		8366.3	8510.9	



STATION 12164500 FISH CREEK NEAR ARLINGTON, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1951-1972)												W R C SYSTEMATIC	
WATER YEAR	FLOW (CFS)	DATE	MEAN LOGS												ESTIMATE	RECORD
1951	92.0	1-2-1951	STANDARD DEVIATION LOGS												1.9574	1.9574
1952	70.0	12-18-1951	SKEWNESS LOGS												0.2041	0.2041
1953	31.0	3-28-1953													0.0	-0.160
1955	71.0	12-31-1954														
1956	207.0	12-20-1955														
1957	134.0	2-24-1957														
1958	69.0	2-24-1958														
1959	123.0	1-24-1959														
1960	108.0	1-29-1960														
1961	88.0	2-24-1961														
1962	72.0	12-17-1961													30.4	28.8
1963	42.0	1-3-1963													41.8	41.0
1964	90.0	3-11-1964													49.6	49.3
1965	154.0	1-29-1965													61.0	61.3
1966	70.0	3-18-1966													90.6	91.8
1967	86.0	2-18-1967													134.6	135.1
1968	245.0	12-25-1967													165.5	164.1
1969	114.0	2-11-1969													206.4	201.0
1970	90.0	1-27-1970													238.0	228.5
1971	173.0	1-30-1971													270.5	255.9
1972	106.0	9-21-1972														

STATION 12171000 LIGHTNING CREEK NEAR NEWHALEM, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)												256			
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL		
1944	91.8	78.9	102	73.4	65.3	75.1	229	611	598	192	107	89.7	193		
1945	88.8	84.3	125	142	201	105	160	970	903	344	137	110	281		
1946	176	218	125	105	146	140	1388	1124	1124	538	189	112	386		
1947	94.5	82.4	112	109	185	284	513	1210	805	340	152	98.1	333		
1948	188	183	190	146	104	96.6	304	1222							

STATION 12171500 SKAGIT RIVER AB DEVILS CR NR NEWHALEM, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)															
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL		
1940															
1941	1137	676	938	796	891	1007	2164	3770	2434	1081	630	492	1157		
1942	1873	1695	2298	763	532	520	1780	2258	1910	1976	567	728	1581		
1943	342	536	1016	746	762	993	3851	3088	3360	1713	843	435	2067		
1944	524	463	669	481	434	476	1226	3826	5888	4611	1483	708	1095		
1945	607	627	867	1027	1235	763	1021	3025	3198	1257	724	662	1548		

STATION 12171500 SKAGIT RIVER AB DEVILS CR NR NEWHALEM, WASH.

ANNUAL PEAK FLOW DATA		
WATER YEAR	FLOW (CFS)	DATE
1941	4210.0	10-21-1940
1942	6570.0	12-3-1941
1943	8220.0	6-10-1943
1944	4630.0	5-15-1944
1945	9140.0	5-31-1945

## STATION 12172000 BIG BEAVER CREEK NEAR NEHALEM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1940						410	510	759	605	396	261	237	
1941	606	220	278	201	201	257	428	510	502	387	261	237	
1942	443	379	481	112	88.4	108	355	516	502	340	280	306	345
1943	118	200	266	152	125	191	651	670	607	552	280	137	340
1944	177	126	200	157	114	138	270	488	929	907	393	212	402
1945	232	254	251	235	266	141	209	874	551	340	226	269	255
1946	338	285	172	154	147	212	455	1224	962	555	273	235	356
1947	190	125	308	156	310	278	498	899	726	812	448	257	458
1948	508	269	299	160	119	113	330	966	1399	568	294	227	352
1963		512	501	282	530	213	257	600	677	628	484	355	471
1964		476	375	324	141	117	277	636	1173	540	408	338	
1965	499	330	229	243	140	278	419	680	808	1005	530	309	490
1966	350	427	296	158	95.1	180	476	776	875	769	453	191	389
1967	331	243	591	228	211	163	191	757	1384	852	523	306	432
1968	646	456	277	495	457	418	233	736	1083	856	450	393	487
1969	269	424	222	157	76.9	124	457	1088	1141	560	335	451	542
													443

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1940-1969)

MEAN	359.8	308.3	317.2	208.7	210.6	204.9	376.0	760.6	885.2	648.4	380.3	285.8	413.7
MAXIMUM	646.0	512.0	591.0	495.0	530.0	418.0	651.0	1224.0	1399.0	1005.0	530.0	451.0	542.0
MINIMUM	118.0	125.0	172.0	112.0	76.9	108.0	191.0	488.0	502.0	340.0	226.0	137.0	255.0
STD DEVIATION	161.33	127.01	119.34	97.67	136.38	96.27	130.68	208.89	284.92	198.58	105.80	80.78	75.71
SKWENESS	0.361	0.191	1.203	2.057	1.310	1.305	0.321	0.732	0.510	0.181	-0.090	0.213	-0.353
STD ERR SKEW	0.597	0.580	0.580	0.580	0.580	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.597
SER CORR COEFF	0.113	0.151	0.009	0.018	-0.404	-0.190	-0.031	0.358	0.079	-0.002	0.429	0.436	0.390
COEFF OF VAR	0.448	0.412	0.376	0.468	0.648	0.470	0.348	0.275	0.322	0.306	0.278	0.283	0.183
MEAN LOGS	2.511	2.451	2.476	2.286	2.249	2.273	2.549	2.866	2.926	2.792	2.563	2.439	2.609
STD DEV LOGS	0.615	0.196	0.150	0.166	0.258	0.185	0.158	0.117	0.140	0.140	0.128	0.130	0.085
SKWENESS LOGS	-0.498	-0.451	0.588	1.146	0.444	0.566	-0.226	0.175	0.063	-0.338	-0.313	-0.572	-0.879
STD ERR SKEW LOGS	0.597	0.580	0.580	0.580	0.580	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.597
SER CORR LOGS	0.176	0.137	0.091	0.066	-0.454	-0.286	0.028	0.355	0.165	0.073	0.436	0.303	0.360
COEFF OF VAR LOGS	0.086	0.080	0.060	0.073	0.115	0.081	0.062	0.041	0.048	0.050	0.050	0.053	0.033
% OF AVE FLOW	7.3	6.2	6.4	4.2	4.3	4.1	7.6	15.4	17.9	13.1	7.7	5.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1940-1969)

0.99	85.9	85.2	156.0	109.4	54.0	83.3	143.5	407.7	405.4	270.7	172.7	120.9	228.8
0.95	134.8	127.3	180.8	119.2	72.2	100.3	190.7	479.3	500.0	350.2	220.1	160.5	283.1
0.90	168.4	155.5	197.7	127.0	85.5	112.2	220.7	524.0	560.0	405.8	248.9	184.4	313.1
0.80	217.2	195.5	222.7	139.8	106.5	130.1	262.2	585.3	643.0	475.3	287.2	215.9	349.8
0.50	337.6	291.9	289.3	179.9	169.6	180.0	359.1	729.4	840.7	630.2	371.4	282.5	418.4
0.20	494.9	415.3	394.3	256.4	287.4	263.5	482.3	919.0	1104.4	814.4	469.9	355.1	480.8
0.10	591.4	490.4	472.9	322.8	388.6	329.3	558.6	1041.7	1276.2	922.1	527.0	394.1	509.5
0.04	703.8	577.6	583.1	427.6	546.7	425.5	649.5	1194.8	1491.1	1045.1	591.9	435.6	536.5
0.02	780.9	637.5	673.4	523.4	689.3	507.4	713.9	1307.9	1650.2	1128.7	635.8	462.2	552.0
0.01	852.7	693.6	771.2	636.6	855.6	598.6	775.6	1420.6	1808.7	1206.5	676.7	485.6	564.5

## STATION 12172000 BIG BEAVER CREEK NEAR NE#HALEM, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1941	112.0	115.0	123.0	144.0	182.0	200.0	207.0	217.0	289.0
1942	80.0	81.0	82.0	83.0	88.0	94.0	103.0	196.0	271.0
1943	76.0	78.0	81.0	91.0	98.0	114.0	133.0	163.0	165.0
1944	67.0	68.0	69.0	73.0	95.0	126.0	131.0	145.0	153.0
1945	93.0	95.0	97.0	103.0	125.0	193.0	204.0	222.0	229.0
1946	84.0	85.0	86.0	89.0	104.0	135.0	150.0	167.0	213.0
1947	79.0	84.0	88.0	92.0	109.0	158.0	182.0	185.0	211.0
1948	82.0	83.0	86.0	89.0	105.0	113.0	135.0	179.0	249.0
1964	102.0	104.0	105.0	109.0	115.0	128.0	184.0	238.0	323.0
1965	82.0	83.0	84.0	88.0	105.0	165.0	194.0	212.0	241.0
1966	79.0	81.0	82.0	84.0	88.0	115.0	130.0	176.0	245.0
1967	108.0	110.0	115.0	121.0	127.0	188.0	200.0	300.0	296.0
1968	140.0	149.0	165.0	184.0	191.0	259.0	361.0	411.0	433.0
1969	64.0	64.0	64.0	65.0	69.0	80.0	110.0	145.0	212.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1941-1969)

MEAN	89.1	91.4	94.8	101.1	114.4	147.7	173.1	211.1	252.1
MAXIMUM	140.0	149.0	165.0	184.0	191.0	259.0	361.0	411.0	433.0
MINIMUM	64.0	64.0	64.0	65.0	69.0	80.0	103.0	145.0	153.0
STANDARD DEVIATION	20.30	22.05	25.85	31.05	34.11	48.91	64.98	70.66	70.35
SKENNESS	1.283	1.441	1.671	1.709	1.709	0.832	1.912	1.992	1.177
STD ERROR OF SKENNESS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597
SERIAL CORR COEFF	-0.075	-0.101	-0.101	-0.157	-0.315	-0.244	-0.179	0.083	0.194
COEFF OF VARIATION	0.228	0.241	0.273	0.307	0.298	0.331	0.375	0.335	0.279
MEAN LOGS	1.941	1.951	1.964	1.989	2.043	2.148	2.215	2.307	2.387
STD DEVIATION LOGS	0.092	0.096	0.106	0.117	0.118	0.140	0.142	0.123	0.115
SKENNESS LOGS	0.775	0.840	0.983	1.035	0.739	0.152	0.827	1.263	0.266
STD ERR SKENNESS LOGS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597
SER CORR COEFF LOGS	-0.113	-0.145	-0.158	-0.242	-0.396	-0.313	-0.237	0.028	0.280
COEFF OF VAR LOGS	0.047	0.049	0.054	0.059	0.058	0.065	0.064	0.053	0.048

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1941-1969)

	P99	P98	P95	P90	P75	P70	P50	P25	P10
0.99	160.2	170.2	191.7	221.8	238.9	309.1	424.3	501.0	476.6
0.98	146.2	154.2	170.7	194.4	212.9	280.3	367.1	430.2	436.9
0.96	132.8	139.0	151.2	169.6	188.6	251.7	315.3	367.8	397.6
0.90	115.7	120.0	127.6	140.0	158.4	213.8	254.0	296.3	345.1
0.80	102.9	106.0	110.7	119.4	136.5	184.1	211.5	248.8	303.7
0.50	84.9	86.6	88.5	93.1	106.7	139.5	157.0	191.1	241.0
0.20	72.8	73.9	74.8	77.4	87.4	107.0	124.1	159.6	194.4
0.10	68.1	69.1	69.9	72.0	80.2	93.5	112.3	149.4	174.9
0.05	64.9	65.9	66.7	68.5	75.2	83.9	104.6	143.3	160.8
0.02	61.9	62.9	63.8	65.5	70.7	74.4	97.6	138.3	146.8
0.01	60.2	61.2	62.3	63.9	68.1	68.8	93.8	135.8	138.4

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1941-1969)

P95	P90	P75	P70	P50	P25	P10
98.0	120.0	170.0	200.0	300.0	540.0	880.0

## STATION 12172000 BIG BEAVER CREEK NEAR NEWHALEM, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1941	2510.	2220.	1610.	993.	667.	520.	491.	462.	399.	3540. 10/19/40
1942	2340.	1780.	1200.	785.	716.	651.	568.	519.	409.	3980. 12/02/41
1943	1400.	1340.	1250.	1140.	1020.	969.	850.	798.	636.	1550. 07/04/43
1944	936.	742.	642.	607.	578.	522.	464.	417.	357.	1280. 12/03/43
1945	1550.	1480.	1290.	1040.	908.	816.	733.	627.	484.	1680. 05/31/45
1946	2560.	1790.	1520.	1360.	1280.	1120.	1010.	901.	700.	3760. 10/26/45
1947	1360.	1290.	1170.	986.	908.	830.	762.	687.	559.	1760. 10/25/46
1948	2350.	2230.	2060.	1870.	1650.	1220.	1020.	881.	694.	2490. 05/28/48
1963										3540. 11/20/62
1964	2940.	1850.	1530.	1460.	1250.	1120.	986.	849.	656.	4420. 10/22/63
1965	1240.	1170.	1040.	1000.	900.	814.	743.	695.	544.	1420. 05/29/65
1966	1760.	1280.	1190.	1010.	897.	848.	816.	731.	615.	2090. 06/28/66
1967	2100.	1980.	1780.	1560.	1380.	1190.	1020.	892.	677.	2130. 06/21/67
1968	3220.	2300.	1670.	1230.	1080.	1030.	911.	790.	645.	3720. 06/02/68
1969	1710.	1600.	1540.	1440.	1370.	1150.	947.	820.	672.	1770. 05/25/69

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1941-1969)

	W R C ESTIMATE	SYSTEMATIC RECORD
MEAN	1998.3	1646.6
MAXIMUM	3220.0	2300.0
MINIMUM	936.0	742.0
STANDARD DEVIATION	680.34	457.24
SKWENESS	0.233	-0.264
STD ERROR OF SKWENESS	0.597	0.597
SERIAL CORR COEFF	-0.034	0.175
COEFF OF VARIATION	0.340	0.278
MEAN LOGS	3.276	3.199
STD DEVIATION LOGS	0.156	0.135
SKWENESS LOGS	-0.339	-0.980
STD ERR SKWENESS LOGS	0.597	0.597
SER CORR COEFF LOGS	0.034	0.171
COEFF OF VAR LOGS	0.048	0.042

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1941-1969)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
MEAN	748.5	619.3	549.3	529.4	475.0	384.6	351.6	326.5	283.5	235.5
MAXIMUM	1011.1	862.0	780.8	779.9	759.0	659.9	575.7	519.9	437.0	367.0
MINIMUM	1177.1	1041.1	917.8	771.1	675.3	600.5	548.3	500.6	414.3	357.0
STANDARD DEVIATION	1404.5	1247.2	1091.0	891.8	778.2	704.6	640.0	579.9	472.7	395.3
SKWENESS	1925.2	1661.1	1421.3	1153.9	1010.1	915.8	818.3	730.6	582.8	467.1
STD ERROR OF SKWENESS	2564.4	2060.0	1711.3	1454.5	1293.6	1128.5	984.8	866.1	682.3	543.7
SERIAL CORR COEFF	2946.1	2247.2	1834.9	1625.3	1464.5	1234.3	1061.6	926.6	727.2	582.8
COEFF OF VARIATION	3388.3	2423.5	1942.1	1816.1	1665.1	1339.6	1133.3	981.4	768.7	615.7
MEAN LOGS	3692.6	2523.0	1997.7	1943.4	1805.2	1402.6	1173.5	1011.4	791.8	646.3
STD DEVIATION LOGS	3978.1	2602.4	2039.0	2060.2	1938.6	1455.3	1205.6	1034.7	810.0	660.3

## STATION 12172500 SKAGIT RIVER NEAR NEWHALEM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1930						1691	5031	4299	4863	2745	1388	980	
1931	860	873	627	1287	1654	1846	2333	6197	4399	2092	1108	1282	2048
1932	831	1577	1125	1177	2737	2855	3504	6261	7116	3068	1652	938	2731
1933	1236	3985	2564	1360	790	1077	2844	5152	9571	7008	2890	1671	3354
1934	3422	3436	3420	3396	2497	3779	7858	7193	4844	2721	1612	1048	3774
1935	1122	3718	2049	3392	3875	1539	1627	4942	6142	3804	1661	1444	2932
1936	842	601	726	733	480	736	4307	7366	5161	2013	1189	947	2102
1937	631	419	887	518	384	1045	1945	5346	8973	3678	1431	980	2191
1938	1327	2244	2171	1709	845	1579	3222	7136	7330	3230	1251	947	2757
1939	814	798	1357	2022	804	1339	3607	6218	4844	3445	1526	837	2311
1940	943	1294	3311	1555	1377	2076							

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1930-1940)

MEAN	1202.8	1894.5	1823.7	1712.9	1544.3	1796.5	3627.8	6011.0	6324.3	3380.4	1570.8	1097.4	2688.9
MAXIMUM	3422.0	3985.0	3420.0	3396.0	3875.0	3779.0	7858.0	7366.0	9571.0	7008.0	2890.0	1671.0	3774.0
MINIMUM	631.0	419.0	627.0	518.0	384.0	936.0	1627.0	4299.0	4399.0	2013.0	1108.0	837.0	2048.0
STD DEVIATION	808.25	1364.27	1038.17	986.60	1149.27	853.71	1814.48	1048.41	1850.11	1411.07	502.65	277.24	594.90
SKWENESS	2.770	0.596	0.436	0.955	1.032	1.462	1.471	-0.190	0.789	2.104	2.297	1.255	0.721
STD ERR SKEW	0.687	0.687	0.687	0.687	0.687	0.661	0.687	0.687	0.687	0.687	0.687	0.687	0.717
SER CORR COEFF	0.038	0.309	0.216	0.245	0.079	-0.227	-0.531	-0.692	-0.092	-0.205	0.128	-0.297	0.416
COEFF OF VAR	0.672	0.720	0.589	0.576	0.744	0.475	0.500	0.114	0.293	0.417	0.320	0.253	0.221
MEAN LOGS	3.026	3.161	3.190	3.168	3.078	3.216	3.516	3.773	3.785	3.502	3.181	3.029	3.421
STD DEV LOGS	0.203	0.348	0.270	0.258	0.334	0.185	0.201	0.078	0.121	0.153	0.116	0.101	0.093
SKWENESS LOGS	1.935	-0.091	-0.151	-0.193	0.071	0.628	0.322	-0.437	0.530	1.044	1.591	0.989	0.429
STD ERR SKEW LOGS	0.687	0.687	0.687	0.687	0.687	0.661	0.687	0.687	0.687	0.687	0.687	0.687	0.717
SER CORR LOGS	0.114	0.222	0.261	0.232	0.176	-0.168	-0.680	-0.658	-0.082	-0.222	0.163	-0.278	0.387
COEFF OF VAR LOGS	0.067	0.110	0.085	0.081	0.108	0.058	0.057	0.021	0.032	0.044	0.036	0.033	0.027
% OF AVE FLOW	3.8	5.9	5.7	5.4	4.8	5.6	11.3	18.8	19.8	10.6	4.9	3.4	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1940)

0.99	660.1	212.4	340.9	340.2	208.5	745.0	1247.0	3679.4	3556.1	1836.7	1099.5	738.6	1712.3
0.95	675.3	379.4	543.3	537.2	343.4	887.8	1601.3	4314.1	4033.6	2010.5	1130.9	787.3	1903.4
0.90	694.7	514.4	692.3	680.2	449.5	988.7	1845.7	4460.7	4348.9	2143.6	1161.6	823.0	2024.3
0.80	737.0	740.5	923.1	898.9	624.9	1142.1	2210.3	5116.8	4801.6	2356.3	1218.2	877.8	2192.0
0.50	924.3	1467.0	1573.5	1500.5	1184.8	1574.3	3202.8	6003.7	5951.3	2993.0	1416.4	1030.1	2593.4
0.20	1419.4	2856.8	2623.6	2437.7	1275.4	2310.9	4607.1	6914.6	7638.2	4142.5	1815.3	1275.5	3135.6
0.10	1955.9	4019.8	3397.6	3108.4	3216.9	2900.0	6030.0	7391.8	8829.8	5096.2	2160.8	1459.7	3493.9
0.04	2981.1	5756.5	4447.2	3996.4	4672.0	3771.8	7764.7	7896.3	10423.6	6548.8	2698.1	1716.9	3948.7
0.02	4095.7	7239.2	5273.3	4680.7	5958.5	4522.2	9199.1	8217.7	11677.1	7831.6	3179.5	1926.8	4290.1
0.01	5623.5	8880.0	6132.2	5380.4	7426.5	5366.4	10759.5	8502.7	12988.9	9305.9	3738.2	2152.8	4634.5

## STATION 12172500 SKAGIT RIVER NEAR NEWHALEM, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1931	450.0	453.0	464.0	466.0	487.0	584.0	713.0	737.0	933.0
1932	568.0	572.0	585.0	608.0	713.0	966.0	1010.0	1130.0	1120.0
1933	600.0	602.0	630.0	705.0	776.0	916.0	1080.0	1430.0	1800.0
1934	1200.0	1210.0	1280.0	1450.0	1530.0	1800.0	2380.0	2750.0	2970.0
1935	594.0	605.0	626.0	669.0	756.0	1030.0	1250.0	1590.0	1850.0
1936	425.0	427.0	437.0	446.0	481.0	600.0	645.0	723.0	723.0
1937	340.0	357.0	363.0	369.0	384.0	442.0	556.0	557.0	598.0
1938	577.0	583.0	593.0	616.0	682.0	865.0	1090.0	1400.0	1550.0
1939	589.0	595.0	605.0	640.0	678.0	803.0	830.0	917.0	1090.0
1940	577.0	593.0	598.0	630.0	679.0	841.0	991.0	1130.0	1550.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1931-1940)

MEAN	592.0	599.7	618.1	659.9	716.7	885.1	1054.5	1227.7	1418.4
MAXIMUM	1200.0	1210.0	1280.0	1450.0	1530.0	1800.0	2380.0	2750.0	2970.0
MINIMUM	340.0	357.0	363.0	369.0	384.0	442.0	556.0	557.0	598.0
STANDARD DEVIATION	231.50	231.87	249.94	298.19	314.39	371.60	514.92	639.06	696.27
SKEWNESS	2.233	2.281	2.346	2.364	2.128	1.709	2.129	1.559	1.157
STD ERROR OF SKEWNESS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SERIAL CORR COEFF	0.116	0.114	0.126	0.160	0.190	0.197	0.180	0.262	0.326
COEFF OF VARIATION	0.391	0.387	0.404	0.452	0.439	0.420	0.488	0.521	0.491
MEAN LOGS	2.749	2.755	2.767	2.790	2.826	2.917	2.987	3.043	3.107
STD DEVIATION LOGS	0.142	0.140	0.144	0.159	0.161	0.166	0.177	0.208	0.209
SKEWNESS LOGS	1.112	1.214	1.280	1.242	0.891	0.417	0.957	0.358	0.050
STD ERR SKEWNESS LOGS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SER CORR COEFF LOGS	0.219	0.220	0.236	0.284	0.292	0.251	0.246	0.271	0.308
COEFF OF VAR LOGS	0.052	0.051	0.052	0.057	0.057	0.057	0.059	0.068	0.067

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1931-1940)

	0.99	0.98	0.96	0.90	0.80	0.50	0.20	0.10	0.05	0.02	0.01
1546.7	1311.1	1105.2	870.8	716.1	528.8	425.1	390.7	369.4	351.4	342.1	
1573.4	1328.3	1115.8	876.4	720.3	534.3	434.1	401.8	382.3	366.2	358.2	
1690.1	1412.7	1175.3	911.8	742.9	545.7	442.4	410.0	390.8	375.3	367.8	
1969.9	1621.4	1327.3	1006.4	804.2	572.6	453.1	415.7	393.4	375.3	366.5	
2005.7	1692.1	1416.7	1101.3	891.4	634.0	487.3	436.8	404.4	375.7	360.3	
2250.6	1963.8	1696.2	1366.2	1127.9	805.1	596.7	517.6	463.5	412.5	383.3	
3286.3	2712.4	2221.0	1675.3	1324.3	910.7	686.0	611.3	528.9	453.8	411.7	
3801.9	3222.8	2696.4	2068.8	1633.2	1072.4	733.3	610.5	528.9	453.8	411.7	
3985.9	3479.1	2993.2	2374.8	1914.7	1273.7	852.1	692.2	583.7	482.4	423.2	

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1931-1940)

P95	P90	P75	P70	P50	P25	P10
560.0	660.0	940.0	1100.0	1700.0	3700.0	6300.0



## STATION 12173500 RUBY C BELOW PANTHER C, NR NEWHALEM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1949	362	191	142	116	102	218	810	2636	1916	1023	409	288	688
1950	283	900	630	252	185	241	314	1295	3532	2108	595	244	883
1951	363	561	744	365	657	261	862	2173	2234	1186	326	232	836
1952	248	215	152	96.6	132	114	719	1822	1564	815	326	161	531
1953	98.9	74.7	71.5	247	327	187	494	1855	1885	1251	461	227	600
1954	351	369	302	226	271	221	367	2006	2455	2599	980	448	887
1955	298	757	393	226	168	86.8	295	957	2361	1676	520	221	665
1956	557	943	297	174	115	113	844	2421	2536	1592	499	284	866
1963	237	481	561	324	585	318	346	1414	1680	815	411	272	620
1964	316	422	432	412	197	173	375	1200	3076	1923	531	279	778
1965	409	220	225	236	314	313	605	1520	2202	1185	506	188	658
1966	189	220	189	117	91.1	180	615	1523	1515	931	478	244	514
1967	298	268	507	259	224	170	224	1422	3538	1464	478	244	759
1968	479	634	369	592	534	571	321	1592	2457	1463	427	273	810
1969	203	274	197	217	127	178	600	2266	2090	666	249	230	610

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1949-1969)

MEAN	312.8	435.3	346.1	257.3	268.6	223.0	519.4	1740.1	2335.4	1378.5	475.9	253.9	713.7
MAXIMUM	557.0	943.0	744.0	592.0	657.0	571.0	862.0	2636.0	3538.0	2599.0	980.0	448.0	887.0
MINIMUM	98.9	74.7	71.5	96.6	91.1	86.8	224.0	957.0	1515.0	666.0	249.0	161.0	514.0
STD DEVIATION	115.67	270.46	197.93	127.78	183.74	117.42	217.77	481.73	635.78	536.29	165.14	64.58	126.54
SKWENESS	0.351	0.721	0.567	1.276	1.169	1.942	0.348	0.343	0.768	0.823	2.048	1.894	-0.044
STD ERR SKEW	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580
SER CORR COEFF	-0.298	0.207	0.053	-0.095	-0.425	-0.207	-0.202	-0.426	-0.311	-0.139	0.043	-0.117	-0.222
COEFF OF VAR	0.370	0.621	0.572	0.497	0.684	0.527	0.419	0.277	0.272	0.389	0.347	0.254	0.177
MEAN LOGS	2.463	2.551	2.462	2.363	2.433	2.302	2.678	3.225	3.354	3.110	2.657	2.393	2.847
STD DEV LOGS	0.183	0.301	0.283	0.213	0.278	0.203	0.189	0.123	0.115	0.167	0.133	0.099	0.079
SKWENESS LOGS	-1.023	-0.486	-0.520	-0.103	0.406	0.319	-0.081	-0.183	0.273	0.067	0.595	0.782	-0.261
STD ERR SKEW LOGS	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580
SER CORR LOGS	-0.209	0.218	0.084	-0.131	-0.425	-0.124	-0.186	-0.420	-0.295	-0.161	0.079	-0.069	-0.194
COEFF OF VAR LOGS	0.074	0.118	0.115	0.090	0.119	0.088	0.071	0.038	0.4034	0.054	0.050	0.042	0.028
% OF AVE FLOW	3.7	5.1	4.0	3.0	3.1	2.6	6.1	20.4	27.3	16.1	5.6	3.0	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1949-1969)

0.99	81.1	55.7	50.0	71.2	60.3	75.5	168.3	837.3	1290.2	536.9	255.3	165.9	445.2
0.95	131.8	104.2	91.0	101.7	83.2	97.2	230.2	1039.2	1495.8	689.5	290.8	179.8	514.8
0.90	165.4	142.3	122.4	122.5	100.3	112.2	271.5	1162.1	1625.4	799.1	314.6	189.3	554.5
0.80	211.6	203.1	171.5	153.2	127.5	134.6	330.7	1325.4	1804.6	930.6	349.5	203.4	605.0
0.50	311.8	376.5	306.8	323.5	211.0	195.6	479.3	1692.1	2332.7	1281.5	440.8	240.2	708.5
0.20	415.6	644.6	506.8	348.9	371.4	294.3	688.9	2132.6	2809.3	1775.5	580.3	295.9	820.5
0.10	466.0	828.4	639.3	423.3	511.9	369.8	830.0	2395.3	3189.8	2110.5	862.1	336.0	862.1
0.04	514.0	1059.2	801.2	533.7	735.0	476.9	1009.9	2701.5	3671.9	2542.4	821.9	390.1	949.8
0.02	541.2	1227.1	916.4	613.1	938.7	565.5	1144.8	2914.3	4033.4	2870.3	934.4	433.1	994.5
0.01	562.9	1390.3	1026.5	693.6	1178.4	662.0	1280.3	3115.9	4397.7	3203.4	1054.4	478.3	1035.4



## STATION 12173500 RUBY C BELOW PANTHER C, NH NEWHALEM, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1950	169.0	171.0	174.0	175.0	186.0	215.0	227.0	322.0	415.0
1951	161.0	164.0	178.0	205.0	213.0	303.0	320.0	410.0	459.0
1952	75.0	75.0	76.0	84.0	93.0	113.0	111.0	121.0	160.0
1953	49.0	51.0	58.0	62.0	68.0	72.0	78.0	93.0	160.0
1954	144.0	144.0	147.0	155.0	155.0	238.0	238.0	254.0	290.0
1955	59.0	62.0	69.0	71.0	85.0	126.0	160.0	216.0	321.0
1956	80.0	80.0	82.0	85.0	99.0	111.0	133.0	173.0	364.0
1957	147.0	148.0	152.0	164.0	188.0	184.0	253.0	302.0	326.0
1964	130.0	131.0	134.0	140.0	152.0	198.0	217.0	245.0	279.0
1965	130.0	131.0	134.0	140.0	152.0	198.0	217.0	245.0	279.0
1966	78.0	80.0	81.0	86.0	87.0	89.0	106.0	125.0	151.0
1967	108.0	110.0	119.0	139.0	162.0	197.0	218.0	283.0	288.0
1968	160.0	168.0	185.0	186.0	212.0	270.0	356.0	412.0	454.0
1969	100.0	100.0	109.0	110.0	115.0	129.0	158.0	176.0	195.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1950-1969)

MEAN	112.3	114.4	121.1	129.1	141.5	173.5	198.1	239.4	297.1
MAXIMUM	169.0	171.0	185.0	205.0	213.0	303.0	356.0	412.0	459.0
MINIMUM	49.0	51.0	58.0	62.0	68.0	72.0	78.0	93.0	151.0
STANDARD DEVIATION	41.85	42.74	44.94	48.63	52.46	71.23	83.55	103.26	106.18
SKEWNESS	-0.084	-0.011	0.072	0.065	0.053	0.0361	0.414	0.365	0.058
STD ERROR OF SKEWNESS	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616
SERIAL CORR COEFF	-0.019	-0.029	-0.030	-0.078	-0.148	-0.150	-0.117	-0.027	0.055
COEFF OF VARIATION	0.373	0.374	0.371	0.377	0.371	0.411	0.422	0.431	0.364
MEAN LOGS	2.019	2.027	2.053	2.080	2.120	2.203	2.258	2.338	2.443
STD DEVIATION LOGS	0.179	0.177	0.173	0.176	0.172	0.189	0.196	0.203	0.172
SKEWNESS LOGS	-0.484	-0.410	-0.279	-0.200	-0.262	-0.246	-0.355	-0.382	-0.418
STD ERR SKEWNESS LOGS	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616
SER CORR COEFF LOGS	-0.027	-0.027	-0.024	-0.065	-0.132	-0.138	-0.069	0.012	0.073
COEFF OF VAR LOGS	0.089	0.087	0.084	0.085	0.081	0.086	0.087	0.087	0.070

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1950-1969)

0.99	234.7	242.9	262.3	283.1	307.7	404.8	460.4	565.3	616.7
0.98	217.9	224.4	240.5	259.2	281.8	367.2	419.8	515.2	571.4
0.96	199.6	204.6	217.7	234.3	254.8	328.5	377.3	462.5	522.8
0.90	172.5	175.8	185.5	199.0	216.8	274.9	317.0	387.5	451.4
0.80	148.6	150.9	158.5	169.6	185.1	231.0	266.6	324.7	389.4
0.50	107.9	109.4	115.0	122.4	134.3	162.5	186.1	224.4	285.2
0.20	74.8	76.3	81.4	86.0	95.1	111.5	125.1	148.7	200.9
0.10	60.6	62.1	67.2	70.7	78.6	90.6	100.1	117.9	164.6
0.05	50.3	52.0	57.0	59.9	66.8	75.9	82.6	96.4	138.5
0.02	40.4	42.2	47.1	49.3	55.3	61.9	65.9	76.1	112.9
0.01	34.7	36.5	41.3	43.1	48.6	53.8	56.4	64.6	98.0

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "PM" PERCENT OF THE TIME (YEARS 1950-1969)

P95	P90	P75	P70	P50	P25	P10
110.0	140.0	210.0	230.0	340.0	830.0	2000.0



## STATION 12174000 RUBY CREEK NEAR NEWHALEM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1919													
1920	135	356	293	281	319	212			2209	1618	610	309	
1928													
1929	347	197	181	117	105	160	274	1614	1731	588	248	170	477
1930	107	78.8	74.9	60.0	185	290	1044	1219	1495	762	284	136	481
1931	143	130	90.0	172	250	283		1857	1228	498	226	175	467
1932	146	254	194	155	631	575	816	1919	2237	791	357	214	686
1933	221	603	480	249	143	182	606	1272	2947	2107	371	331	840
1934	821	860	787	531	435	857	2216	2164	1648	810	367	201	976
1935	182	733	420	643	834	857	396	1605	2132	1225	264	264	761
1936	145	105	104	106	82.5	131	989	2279	1670	489	250	152	542
1937	109	76.5	120	81.6	66.4	148	326	1538	2749	1039	283	193	565
1938	269	394	359	288	163	282	755	2059	2304	810	227	167	675
1939	154	140	189	308	140	291	894	1895	1464	929	310	157	575
1940	178	266	518	250	229	316	649	1570	1049	394	203	159	483
1941	400	215	264	181	177	274	807	922	1793	348	199	274	405
1942	559	406	500	194	134	141	626	1362	1371	670	239	115	528
1943	85.6	119	194	176	176	224	959	1287	2388	1872	481	210	683
1944	160	121	180	111	108	133	415	1237	1308	438	204	257	389
1945	206	180	240	290	309	180	252	1699	1682	696	243	190	515
1946	313	361	200	183	139	221	676	2663	2067	1184	402	194	720
1947	177	146	197	145	235	440	942	2357	1702	810	311	174	639
1948	359	278	248	191	139	129	445	2162	3602	1317	467	305	803
1949	382	228	182	129	122	257	857	2646					

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1919-1949)

MEAN	254.5	293.1	273.4	220.1	232.8	275.7	735.1	1777.4	1894.1	923.6	335.9	205.8	610.5
MAXIMUM	821.0	860.0	787.0	643.0	834.0	857.0	2216.0	2663.0	3602.0	2107.0	717.0	331.0	976.0
MINIMUM	85.6	76.5	74.9	60.0	66.4	129.0	252.0	922.0	793.0	348.0	199.0	115.0	389.0
STD DEVIATION	173.99	228.98	173.28	138.94	185.99	167.23	419.00	485.29	671.66	481.54	139.67	59.09	155.69
SKENNESS	1.962	1.535	1.480	1.853	2.210	2.371	2.199	0.243	0.781	1.120	1.402	0.778	0.664
STD ERR SKEW	0.491	0.491	0.491	0.491	0.491	0.491	0.501	0.501	0.501	0.501	0.501	0.491	0.512
SER CORR COEFF	-0.038	0.463	0.309	0.325	0.048	-0.082	-0.348	0.353	0.355	-0.201	0.038	-0.243	0.498
COEFF OF VAR	0.684	0.781	0.634	0.631	0.799	0.607	0.570	0.273	0.355	0.521	0.416	0.287	0.555
STD DEV LOGS	2.331	2.360	2.363	2.275	2.275	2.387	2.811	3.234	3.251	2.913	2.496	2.297	2.773
SKENNESS LOGS	0.249	0.306	0.259	0.244	0.271	0.208	0.223	0.123	0.156	0.217	0.160	0.120	0.103
STD ERR LOGS	0.633	0.368	0.114	0.220	0.791	0.884	0.073	-0.288	-0.208	0.172	0.739	0.277	0.190
STD ERR SKEW LOGS	0.491	0.491	0.491	0.491	0.491	0.491	0.501	0.501	0.501	0.501	0.501	0.491	0.512
SER CORR LOGS	-0.021	0.491	0.345	0.238	0.018	-0.070	-0.390	0.333	0.268	-0.105	0.078	-0.238	0.457
COEFF OF VAR LOGS	0.107	0.130	0.110	0.107	0.119	0.087	0.079	0.038	0.048	0.074	0.064	0.052	0.039
% OF AVE FLOW	3.4	3.9	3.7	3.0	3.1	3.7	9.9	23.9	25.5	12.4	4.5	2.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1919-1949)

0.99	74.0	54.0	60.5	55.9	63.6	109.4	201.1	837.2	734.6	273.0	162.6	110.2	343.4
0.95	93.6	77.8	88.2	77.6	79.1	127.1	280.7	1053.2	970.0	369.3	186.2	128.6	396.6
0.90	108.1	95.9	108.2	93.1	90.9	140.4	336.1	1183.9	1113.5	436.1	202.9	140.3	432.7
0.80	131.2	125.5	139.1	116.8	110.4	161.8	418.9	1357.2	1325.6	535.9	228.4	156.6	479.3
0.50	201.9	219.3	227.9	184.5	173.6	227.2	642.8	1736.3	1806.6	807.4	299.5	195.7	587.9
0.20	338.3	407.5	379.3	299.9	306.5	352.2	995.1	2179.2	2419.4	1241.2	418.7	249.1	729.1
0.10	459.3	577.6	498.3	391.3	433.4	462.2	1255.0	2435.9	2793.2	1566.9	512.6	284.7	819.6
0.04	654.5	854.5	669.9	524.4	651.8	638.8	1611.6	2727.9	3253.3	2021.5	649.8	330.2	931.8
0.02	835.8	1112.4	813.2	636.7	867.3	802.5	1897.0	2926.2	3575.2	2391.5	766.5	364.5	1014.3
0.01	1052.8	1420.8	969.9	760.8	1138.4	998.2	2198.9	3110.8	3884.7	2788.3	896.7	399.2	1096.2

STATION 12174000 RUBY CREEK NEAR NEWHALEM, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1930	60.0	60.0	60.0	60.0	60.0	68.0	71.0	80.0	107.0
1931	65.0	65.0	65.0	70.0	74.0	87.0	108.0	114.0	155.0
1932	100.0	100.0	103.0	106.0	112.0	139.0	157.0	181.0	182.0
1933	101.0	102.0	106.0	121.0	137.0	162.0	193.0	242.0	342.0
1934	208.0	258.0	275.0	292.0	303.0	380.0	561.0	614.0	628.0
1935	101.0	103.0	107.0	116.0	132.0	186.0	246.0	353.0	374.0
1936	70.0	71.0	74.0	76.0	82.0	93.0	98.0	99.0	112.0
1937	54.0	57.0	59.0	63.0	67.0	75.0	90.0	87.0	99.0
1938	126.0	129.0	133.0	140.0	142.0	174.0	218.0	275.0	277.0
1939	106.0	108.0	111.0	113.0	122.0	147.0	149.0	161.0	178.0
1940	115.0	117.0	122.0	130.0	135.0	162.0	187.0	223.0	267.0
1941	97.0	98.0	105.0	133.0	144.0	163.0	190.0	205.0	234.0
1942	122.0	123.0	124.0	125.0	129.0	137.0	157.0	243.0	324.0
1943	70.0	71.0	71.0	75.0	82.0	90.0	102.0	118.0	124.0
1944	90.0	90.0	92.0	93.0	101.0	107.0	115.0	128.0	136.0
1945	134.0	140.0	142.0	151.0	166.0	184.0	200.0	209.0	228.0
1946	105.0	105.0	105.0	106.0	123.0	162.0	174.0	183.0	229.0
1947	95.0	95.0	97.0	101.0	111.0	152.0	161.0	159.0	179.0
1948	113.0	117.0	117.0	118.0	124.0	133.0	152.0	176.0	225.0
1949	89.0	92.0	99.0	101.0	109.0	126.0	144.0	164.0	218.0

LOWEST MEAN FLOW STATISTICS (YEARS 1930-1949)

MEAN	101.1	105.1	108.4	114.5	122.7	146.4	173.6	201.7	231.8
MAXIMUM	208.0	258.0	275.0	292.0	303.0	380.0	561.0	644.0	628.0
MINIMUM	54.0	57.0	59.0	60.0	60.0	68.0	71.0	80.0	99.0
STANDARD DEVIATION	33.57	42.71	45.76	49.13	50.95	65.94	101.97	119.01	121.45
SKENNESS	1.554	2.471	2.608	2.539	2.331	2.539	3.067	2.358	1.921
STD ERROR OF SKENNESS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SERIAL CORR COEFF	0.051	0.023	0.038	0.102	0.180	0.255	0.226	0.335	0.360
COEFF OF VARIATION	0.332	0.407	0.422	0.429	0.415	0.450	0.587	0.590	0.524
MEAN LOGS	1.984	1.995	2.007	2.030	2.061	2.133	2.193	2.251	2.319
STD DEVIATION LOGS	0.135	0.148	0.151	0.155	0.155	0.169	0.192	0.212	0.200
SKENNESS LOGS	0.203	0.203	0.203	0.203	0.203	0.203	0.203	0.203	0.203
STD ERR SKENNESS LOGS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SER CORR COEFF LOGS	0.141	0.124	0.147	0.223	0.307	0.359	0.327	0.323	0.313
COEFF OF VAR LOGS	0.068	0.074	0.075	0.076	0.075	0.079	0.087	0.094	0.086

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1949)

0.99	208.1	262.8	278.4	296.3	300.8	378.0	579.2	675.0	697.2
0.98	188.8	226.8	238.9	254.5	263.0	328.6	472.1	558.8	591.9
0.96	169.7	194.3	203.5	216.9	227.9	282.8	381.4	457.0	496.4
0.90	144.5	155.8	161.9	172.4	184.7	226.5	282.0	340.8	382.6
0.80	124.8	129.1	133.4	141.8	153.6	186.2	219.0	264.0	303.6
0.50	95.4	94.7	97.1	102.6	111.7	132.0	146.0	170.4	202.0
0.20	74.0	74.0	75.3	79.0	84.7	97.3	107.1	117.3	140.4
0.10	65.2	66.5	67.8	70.6	74.5	84.3	94.2	98.8	118.1
0.05	58.9	61.5	62.8	65.0	67.5	75.4	86.1	86.8	103.2
0.02	52.7	57.1	58.3	59.9	61.0	67.0	79.1	76.0	89.4
0.01	49.0	54.6	55.8	57.1	57.2	62.2	75.4	70.0	81.7

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1930-1949)

FLOW DURATION DATA	P95	P90	P75	P70	P50	P25	P10
	95.0	110.0	160.0	180.0	280.0	750.0	1700.0

## STATION 12174000 RUBY CREEK NEAR NEWHALEM, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	ANNUAL PEAK-FLOW DATA DATE REG.(R)
1929	3200.	3120.	2740.	2260.	2120.	1710.	1350.	1090.	770.	3460.	05/22/29
1930	2740.	2390.	2190.	1720.	1540.	1380.	1300.	1040.	848.	3030.	06/06/30
1931	3330.	3010.	2460.	2260.	1850.	1600.	1270.	1030.	776.	3570.	05/14/31
1932	6090.	4350.	3350.	2790.	2790.	2080.	1740.	1460.	1190.	6730.	02/27/32
1933	5880.	5550.	4330.	3500.	3040.	2640.	2140.	1850.	1330.	6510.	06/14/33
1934	4300.	4140.	3770.	2930.	2450.	2340.	2040.	1770.	1350.	4920.	04/23/34
1935	3170.	3110.	2820.	2500.	2320.	1930.	1670.	1390.	1130.	3460.	11/05/34
1936	3850.	3470.	3270.	2770.	2490.	2120.	1730.	1390.	973.	4850.	06/02/36
1937	4620.	3340.	3190.	3010.	2750.	2220.	1790.	1400.	1020.	4480.	06/02/37
1938	4950.	3870.	3560.	3040.	2620.	2190.	1840.	1500.	1070.	4530.	05/25/38
1939	3520.	3230.	2600.	2090.	1900.	1680.	1530.	1310.	971.	4650.	05/28/39
1940	2750.	2580.	2280.	1950.	1690.	1340.	1110.	941.	702.	3070.	05/23/40
1941	1420.	1360.	1250.	1070.	968.	848.	731.	564.	564.	1630.	10/20/40
1942	3800.	3230.	2840.	2170.	1860.	1460.	1210.	1020.	736.	4650.	05/25/42
1943	3870.	3500.	3220.	2780.	2630.	2330.	1870.	1660.	1210.	4160.	06/09/43
1944	2150.	1940.	1770.	1660.	1490.	1280.	1030.	860.	643.	2370.	05/15/44
1945	3780.	3530.	2920.	2470.	2040.	1710.	1380.	1110.	807.	4360.	05/30/45
1946	3870.	3840.	3530.	3090.	2840.	2410.	2040.	1690.	1210.	4160.	05/26/46
1947	3960.	3710.	3330.	2730.	2430.	2090.	1750.	1470.	1100.	4260.	05/08/47
1948	8920.	8050.	5930.	5180.	4220.	3230.	2400.	1940.	1380.	9920.	05/21/48
1949										5340.	05/15/49

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1929-1949)

MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKWENESS	STD. ERROR OF SKWENESS	SERIAL CORR. COEFF	COEFF. OF VARIATION	MEAN LOGS	STD. DEVIATION LOGS	SKWENESS LOGS	STD. ERR. SKWENESS LOGS	SER. CORR. COEFF. LOGS	COEFF. OF VAR. LOGS
3913.5	8920.0	1420.0	1582.46	1.745	0.512	0.296	0.404	3.563	0.164	-0.096	0.512	0.259	0.046
3568.0	8050.0	1360.0	1377.10	1.801	0.512	0.316	0.386	3.525	0.158	-0.145	0.512	0.285	0.045
3067.5	5930.0	1250.0	977.98	1.022	0.512	0.346	0.319	3.466	0.142	-0.555	0.512	0.301	0.041
2598.5	5180.0	1070.0	840.30	0.834	0.512	0.348	0.323	3.394	0.136	-0.422	0.512	0.344	0.041
2274.4	4220.0	968.0	649.85	0.834	0.512	0.334	0.303	3.338	0.126	-0.527	0.512	0.345	0.041
1934.2	3230.0	848.0	406.95	0.375	0.512	0.398	0.279	3.190	0.117	-0.532	0.512	0.447	0.037
1601.9	2400.0	737.0	341.04	0.032	0.512	0.434	0.254	3.113	0.116	-0.419	0.512	0.391	0.037
1339.9	1940.0	564.0	248.25	-0.023	0.512	0.429	0.251	2.981	0.114	-0.378	0.512	0.427	0.038
989.0	1380.0	564.0	248.25	-0.023	0.512	0.429	0.251	2.981	0.114	-0.378	0.512	0.427	0.038
3.6228	0.1630	0.0											
3.6228	0.1630	0.0											
3.6228	0.1630	0.0											
3.6228	0.1630	0.0											

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1929-1949)

0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
1474.3	1440.3	2240.9	2662.1	3676.8	5034.8	5913.8	7003.0	7800.2	8586.6
1384.1	1816.2	2092.1	2474.9	3380.4	4560.3	5306.8	6215.3	6869.6	7506.8
1200.3	1630.2	1895.0	2247.8	3011.6	3866.2	4335.2	4841.9	5168.7	5459.9
1057.1	1403.1	1616.5	1902.5	2532.9	3265.5	3683.6	4151.3	4463.1	4748.7
934.9	1247.7	1438.6	1691.5	2235.8	2843.0	3176.5	3537.8	3771.7	3980.8
865.6	1117.3	1269.2	1469.5	1900.2	2385.8	2657.1	2956.1	3153.1	3332.0
746.2	958.2	1083.9	1247.0	1587.2	1953.0	2149.1	2358.0	2491.6	2610.0
641.8	810.8	911.3	1042.7	1321.1	1630.2	1801.3	1988.9	2112.1	2223.6
482.8	604.8	677.4	772.2	974.0	1200.0	1326.3	1465.9	1558.3	1642.6
1752.0	2262.8	2593.4	3059.1	4195.8	5754.7	6788.1	8095.3	9070.7	10048.1
1625.1	2200.4	2568.4	3077.7	4268.6	5777.6	6704.3	7801.9	8572.3	9306.8

## STATION 12174500 SKAGIT R BELOW RUBY C, NEAR NEWHALEM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1919	779	2140	2189	2231	2209	1275	1351	4789	9868	7385	2985	1511	
1920	3963	1883	1537	1793	2574	2319	2739	8829	7263	6366	2245	2053	2908
1921	3060	2842	5247	1198	750	657	1669	6873	13450	5786	2649	1721	4107
1922	1416	1117	1655	2043	934	1129	4353	8398	12240	4068	2119	1598	3538
1923	965	749	1460	983	4812	1651	1885	10430	6073	5776	2161	1319	3364
1924	2016	2051	4501	1660	2699	1747	4812	11910	8644	4384	1665	1279	2925
1925	577	605	2156	1253	1223	1459	3903	3767	2867	1920	1293	1054	3958
1926	1983	1189	1706	1294	909	1060	2533	6129	11500	4363	2141	2320	1822
1927	3247	3154	2789	3943	1495	2063	2485	10530	6019	3478	1513	1057	3098
1928	2087	1159	976	619	497	928	1711	7112	7407	3478	1630	919	3495
1929	826	500	591	500	2284	1825	6229	5676	6650	3763	1703	1164	2359
1930													2635

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1919-1930)

MEAN	1901.7	1580.8	2255.2	1592.5	1853.3	1464.8	3060.9	7676.6	8493.2	4470.1	2002.0	1401.1	3109.9
MAXIMUM	3963.0	3154.0	5247.0	3943.0	4812.0	2319.0	6229.0	11910.0	13450.0	7385.0	2985.0	2320.0	4107.0
MINIMUM	577.0	500.0	591.0	500.0	497.0	657.0	1351.0	3767.0	2867.0	1920.0	1293.0	818.0	1822.0
STD DEVIATION	1128.72	897.19	1432.11	951.57	1249.79	508.42	1557.82	2578.34	3035.70	1568.09	485.44	458.43	680.65
SKEWNESS	0.581	0.542	1.261	1.524	1.331	0.112	0.898	0.183	-0.038	0.389	0.623	0.777	-0.360
STD ERR SKEW	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.637	0.637	0.637	0.637	0.661
SER CORR COEFF	-0.032	-0.122	-0.224	-0.272	0.035	-0.537	-0.360	-0.120	-0.081	0.391	0.345	0.005	-0.199
COEFF OF VAR	0.594	0.568	0.635	0.597	0.674	0.347	0.509	0.336	0.357	0.351	0.242	0.327	0.219
MEAN LOGS	3.202	3.128	3.278	3.136	3.181	3.139	3.437	3.861	3.998	3.624	3.290	3.126	3.482
STD DEV LOGS	0.281	0.269	0.272	0.254	0.293	0.164	0.215	0.155	0.182	0.161	0.104	0.138	0.103
SKEWNESS LOGS	-0.171	-0.223	-0.071	-0.104	0.002	-0.564	0.259	-0.394	-1.155	-0.480	0.107	0.238	-0.898
STD ERR SKEW LOGS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.637	0.637	0.637	0.637	0.661
SER CORR LOGS	-0.144	-0.046	0.007	-0.080	-0.043	-0.469	-0.396	-0.136	-0.186	0.208	0.281	0.068	-0.193
COEFF OF VAR LOGS	0.086	0.086	0.083	0.081	0.092	0.052	0.063	0.040	0.047	0.044	0.032	0.044	0.030
% OF AVE FLOW	5.0	4.2	6.0	4.2	4.9	3.9	8.1	25.3	22.5	11.8	5.3	3.7	100.0

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## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1919-1930)

0.99	326.4	288.4	428.3	336.6	316.7	492.0	949.9	2864.3	2134.8	1561.2	1138.7	674.4	1504.9
0.95	533.3	468.0	669.3	515.0	501.0	701.8	1257.6	3894.8	3560.1	2182.2	1325.1	810.0	1953.0
0.90	687.8	600.4	846.6	643.6	639.7	835.6	1471.6	4544.4	4507.3	2576.9	1439.0	897.2	2209.2
0.80	929.7	804.9	1122.5	840.0	860.2	1018.3	1793.1	5429.9	5803.8	3116.3	1592.4	1019.7	2529.1
0.50	1621.7	1375.1	1909.7	1382.6	1516.1	1428.1	2676.3	7436.5	8562.2	4336.1	1941.6	1320.0	3146.1
0.20	2756.1	2274.2	3215.3	2243.8	2673.3	1905.0	4117.6	9852.8	11282.4	5785.4	2381.8	1739.5	3718.2
0.10	3599.6	2921.1	4204.3	2873.7	3596.4	2173.2	5221.6	11289.6	12529.7	6620.3	2650.7	2024.1	3986.1
0.04	4749.0	3779.1	5578.9	3725.7	4934.9	2467.4	6791.3	12885.5	13657.8	7556.0	2990.4	2392.3	4240.4
0.02	5856.6	4440.4	6686.2	4395.9	6054.4	2659.3	8090.6	13980.9	14263.0	8179.3	3231.3	2673.3	4385.7
0.01	6602.0	5116.3	7859.9	5093.4	7277.1	2831.6	9504.4	14996.6	14723.9	8748.8	3466.9	2960.4	4503.2

## STATION 12174500 SKAGIT R BELOW RUBY C, NEAR NEWMHALEM, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1921	945.0	957.0	979.0	1060.0	1350.0	1530.0	1670.0	1810.0	2150.0
1922	627.0	630.0	648.0	647.0	655.0	702.0	872.0	1990.0	2320.0
1923	600.0	600.0	600.0	612.0	805.0	988.0	1160.0	1290.0	1380.0
1924	604.0	606.0	611.0	627.0	716.0	848.0	960.0	1010.0	1260.0
1925	800.0	819.0	936.0	1040.0	1230.0	1320.0	1510.0	1730.0	2200.0
1926	450.0	465.0	487.0	516.0	570.0	589.0	738.0	966.0	1140.0
1927	615.0	618.0	649.0	662.0	770.0	925.0	1090.0	1240.0	1320.0
1928	1140.0	1150.0	1160.0	1220.0	1350.0	1630.0	2320.0	2550.0	2710.0
1929	460.0	460.0	460.0	469.0	492.0	542.0	615.0	728.0	1020.0
1930	390.0	392.0	402.0	417.0	461.0	499.0	532.0	590.0	796.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1921-1930)

MEAN	663.1	669.7	692.2	727.0	839.9	957.3	1146.7	1390.4	1629.6
MAXIMUM	1140.0	1150.0	1160.0	1220.0	1350.0	1630.0	2320.0	2550.0	2710.0
MINIMUM	390.0	392.0	402.0	417.0	461.0	499.0	532.0	590.0	796.0
STANDARD DEVIATION	235.23	238.44	249.59	277.48	344.10	409.52	550.13	617.57	653.29
SKEWNESS	1.007	1.002	0.833	0.830	0.830	0.682	1.108	0.559	0.447
STD ERROR OF SKEWNESS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SERIAL CORR COEFF	-0.211	-0.218	-0.248	-0.272	-0.332	-0.331	-0.284	-0.120	-0.150
COEFF OF VARIATION	0.355	0.356	0.361	0.382	0.410	0.428	0.480	0.444	0.401
MEAN LOGS	2.799	2.803	2.816	2.835	2.893	2.946	3.017	3.103	3.180
STD DEVIATION LOGS	0.146	0.147	0.150	0.158	0.173	0.185	0.200	0.201	0.177
SKEWNESS LOGS	0.412	0.424	0.366	0.442	0.305	0.156	0.254	0.192	0.023
STD ERR SKEWNESS LOGS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SER CORR COEFF LOGS	-0.137	-0.139	-0.166	-0.188	-0.239	-0.241	-0.184	0.045	-0.032
COEFF OF VAR LOGS	0.052	0.052	0.053	0.054	0.060	0.063	0.066	0.065	0.056

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1921-1930)

0.99	1521.9	1544.8	1607.3	1790.9	2160.2	2497.3	3302.1	3487.3	3933.9
0.98	1349.8	1368.4	1425.2	1569.3	1890.1	2193.7	2845.2	3127.4	3513.5
0.96	1186.4	1201.4	1251.9	1362.0	1635.4	1903.1	2419.7	2764.0	3099.6
0.90	980.4	991.3	1032.6	1105.3	1317.4	1533.6	1897.1	2271.2	2556.4
0.80	827.9	836.2	869.8	919.2	1084.8	1258.3	1522.4	1878.4	2132.0
0.50	614.8	620.3	641.3	665.6	765.1	872.4	1021.0	1285.8	1511.3
0.20	471.8	475.9	487.2	500.6	555.4	614.4	703.9	861.9	1073.8
0.10	415.9	419.7	426.9	437.7	475.0	514.7	585.7	693.3	898.9
0.05	377.2	380.8	385.0	394.5	419.8	446.0	506.0	576.7	776.5
0.02	340.1	343.7	344.8	353.7	367.5	381.0	431.7	466.5	658.9
0.01	318.7	322.2	321.5	330.3	337.5	343.6	389.6	403.8	590.7

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1921-1930)

P95	P90	P75	P70	P50	P25	P10
610.0	770.0	1200.0	1300.0	1900.0	3800.0	7100.0

## STATION 12174500 SKAGIT R BELOW RUBY C, NEAR NEWHALEM, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW (CFS) DATE REG. (R)
1920	11800.	11400.	10500.	9000.	8380.	6870.	6210.	5280.	4020.	12600. 07/01/20
1921	24700.	23000.	20800.	16900.	15000.	11900.	9510.	7890.	6070.	25200. 06/07/21
1922	29200.	23400.	20100.	15900.	12700.	10000.	7810.	6440.	4760.	45700. 12/12/21
1923	17700.	17100.	15100.	11500.	10400.	9580.	8350.	7190.	5340.	19200. 06/08/23
1924	21200.	18900.	17400.	15000.	11400.	8350.	6710.	5520.	4480.	26200. 02/12/24
1925	22200.	21400.	19400.	15600.	12300.	10500.	8830.	7560.	5710.	23200. 05/19/25
1926	6940.	6770.	5970.	5310.	4800.	4120.	3600.	3180.	2530.	7460. 04/30/26
1927	20200.	18900.	16400.	14000.	11500.	9050.	7530.	6320.	4820.	22200. 06/07/27
1928	21200.	19100.	17400.	14600.	11200.	8450.	6880.	5710.	4520.	22200. 05/22/28
1929	13200.	12800.	11100.	9260.	8880.	7330.	6050.	5010.	3700.	13600. 05/23/29
1930	10100.	9490.	9120.	7580.	6810.	6480.	6210.	5640.	4430.	10700. 06/11/30

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1920-1930)

W R C SYSTEMATIC  
ESTIMATE RECORD

MEAN	18040.0	16569.1	14844.5	12240.9	10306.4	8420.9	7062.7	5976.4	4598.2
MAXIMUM	29200.0	23400.0	20800.0	16900.0	15000.0	11900.0	9510.0	7890.0	6070.0
MINIMUM	6940.0	6770.0	5970.0	5310.0	4800.0	4120.0	3600.0	3180.0	2530.0
STANDARD DEVIATION	6779.20	5621.12	4937.70	3903.22	2888.81	2156.98	1617.85	1326.90	974.04
SKWENESS	-0.155	-0.515	-0.541	-0.550	-0.561	-0.561	-0.567	-0.542	-0.633
STD ERROR OF SKWENESS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661
SERIAL CORR COEFF	-0.010	-0.088	-0.101	-0.145	-0.117	-0.189	-0.285	-0.352	-0.313
COEFF OF VARIATION	0.376	0.339	0.333	0.319	0.280	0.256	0.229	0.222	0.212
MEAN LOGS	4.223	4.191	4.144	4.063	3.995	3.910	3.837	3.765	3.652
STD DEVIATION LOGS	0.189	0.175	0.172	0.162	0.140	0.126	0.114	0.108	0.103
SKWENESS LOGS	-0.835	-1.010	-1.074	-0.999	-1.172	-1.217	-1.443	-1.326	-1.359
STD ERR SKWENESS LOGS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661
SER CORR COEFF LOGS	-0.075	-0.130	-0.135	-0.161	-0.145	-0.204	-0.272	-0.325	-0.290
COEFF OF VAR LOGS	0.045	0.042	0.041	0.040	0.035	0.032	0.030	0.029	0.028

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1920-1930)

0.99	4687.4	4587.3	4136.5	3749.2	3587.5	3242.1	2894.7	2600.6	2071.7	5776.1	5394.6
0.95	7467.2	7288.4	6599.4	5745.9	5332.9	4661.1	4126.2	3596.9	2833.2	8132.3	7925.7
0.90	9320.8	9050.6	8199.8	7017.4	6401.3	5508.6	4839.3	4168.0	3264.9	9759.4	9670.2
0.80	11903.8	11449.0	10365.4	8720.2	7782.8	6574.8	5717.3	4869.8	3790.7	12171.3	12234.6
0.50	17727.3	16590.8	14941.6	12294.7	10502.6	8613.0	7294.6	6143.1	4731.3	18570.8	18861.9
0.20	24239.2	21862.1	19503.7	15868.9	12976.5	10391.0	8532.0	7176.9	5478.8	28335.0	28445.8
0.10	27670.6	24413.1	21647.4	17612.4	14056.0	11148.9	8990.2	7585.3	5768.3	35337.6	34956.4
0.04	31188.2	26445.4	23638.8	19250.1	15005.0	11783.4	9354.6	7916.8	5999.4	44721.9	43269.2
0.02	33327.5	28224.6	24739.3	20177.7	15503.4	12112.8	9519.6	8078.0	6110.0	52070.8	49489.4
0.01	35135.8	29325.4	25599.1	20918.3	15877.4	12355.3	9630.5	8191.6	6186.9	59707.3	55715.0



## STATION 12175400 THUNDER CR BLW MCALLISTER CR NR NEWHALEM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1958	302	204	151	177	191	144	212	1185	1400	1323	984	603	576
1959	546	401	584	267	126	131	460	759	1384	1476	880	833	657
1960	755	764	309	137	172	165	376	649	1312	1389	886	543	622
1961	428	277	219	383	389	200	304	869	1845	1421	1211	524	674
1962	436	214	172	403	303	112	374	493	1161	1048	941	484	513

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1958	4010.0	10-30-1957
1959	3660.0	12- 2-1958
1960	4320.0	11-23-1959
1961	3330.0	6-17-1961
1962	2180.0	6-25-1962

## STATION 12175500 THUNDER CREEK NR. NEWHALEM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1931	360	179	92.2	278	212	222	333	985	1351	1136	825	664	555
1932	214	301	195	140	630	455	591	842	1623	1144	935	380	623
1933	400	760	352	183	97.8	121	332	619	1301	1709	1329	678	668
1934	917	728	746	493	335	546	1057	1125	1245	1382	1125	608	863
1935	451	717	331	686	500	201	216	1339	1279	1401	947	850	695
1936	343	110	104	100	57.3	116	689	1399	1515	1153	1009	614	598
1937	371	115	167	84.6	64.2	144	243	784	1375	1375	796	640	537
1938	554	433	356	238	111	189	463	981	1588	1417	744	782	657
1939	361	175	258	300	115	183	468	968	1318	1318	942	548	550
1940	494	375	502	241	202	285	407	912	1047	1025	832	747	591
1941	915	210	313	185	161	201	430	609	891	1194	930	600	557
1942	572	358	412	128	103	101	347	703	963	1289	982	526	544
1943	257	197	277	168	144	199	640	709	1204	1533	875	607	570
1944	345	146	221	120	111	124	283	651	1979	945	726	737	452
1945	452	251	266	302	270	141	192	882	1011	1080	786	514	515
1946	429	335	168	157	129	182	409	1247	1191	1300	863	441	574
1947	303	147	253	171	261	289	583	1217	1140	1057	720	527	558
1948	753	290	262	174	117	113	298	1071	2072	1126	1019	598	659
1949	426	183	147	103	109	212	540	1353	1249	1214	930	730	603
1950	422	919	394	201	139	237	271	804	1896	1826	1251	703	757
1951	562	582	700	246	564	169	527	1035	1271	1367	924	640	717
1952	480	246	152	92.3	140	105	437	905	1053	1256	1083	592	547
1953	390	120	132	216	366	152	308	858	932	1406	1026	699	568
1954	526	391	374	216	270	194	288	958	1190	1591	1166	744	663
1955	364	777	296	162	127	92.3	211	588	1475	1457	1031	636	602
1956	777	732	247	140	189.3	91.1	458	1168	1452	1709	1066	794	730
1957	602	339	448	143	149	173	346	1336	1372	997	1066	613	613
1958	356	239	178	220	233	1518	257	1345	1518	1424	1095	684	647
1959	624	477	699	336	163	162	523	836	1476	1476	927	727	727
1960	827	610	352	157	194	188	438	706	1407	1485	926	543	671
1961	464	317	245	443	461	1407	329	919	2016	1504	1246	529	730
1962	443	238	205	443	322	120	398	527	1220	1106	1006	515	547
1963	325	623	462	300	457	214	229	719	926	926	853	801	581
1964	804	467	374	313	145	129	246	614	1508	1565	916	531	636
1965	474	242	271	208	289	171	394	735	1171	1282	1187	427	577
1966	421	323	214	146	104	170	407	761	1181	1114	933	676	524
1967	567	273	574	264	222	160	173	721	1953	1436	1134	694	699
1968	855	506	335	557	428	367	219	748	1512	1483	910	749	724

STATOPM 12175500 THUNDER CREEK NR. NEKHALEM, WASH.

1959	316	378	244	282	102	130	425	1254	1786	1034	705	778	621
1970	324	242	154	147	182	152	198	658	1487	1129	822	536	504
1971	232	194	162	305	485	170	262	1120	1717	1715	1307	499	640
1972	344	239	141	146	250	663	369	1240	1770	1804	1334	596	744
1973	297	172	283	232	131	150	201	751	1001	1087	863	561	480
1974	325	284	302	443	177	223	304	677	1837	1665	1277	643	682
1975	233	242	236	235	138	144	172	721	1332	1935	867	544	570
1976	469	593	779	362	229	147	240	937	993	1592	1308	714	700
1977	289	222	180	167	187	145	355	432	1110	1425	1055	496	491
1978	200	414	536	157	152	277	333	574	1309	1425	1055	806	606
1979	350	468	134	78.4	85.8	317	257	822	916	1117	969	711	521

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1931-1979)

MEAN	460.4	369.0	311.1	243.4	218.6	202.6	369.3	881.3	1336.7	1341.5	990.6	640.6	616.1
MAXIMUM	917.0	919.0	779.0	686.0	630.0	663.0	1057.0	1353.0	2072.0	1935.0	1334.0	894.0	863.0
MINIMUM	200.0	110.0	95.2	78.4	57.3	91.1	172.0	432.0	891.0	902.0	705.0	380.0	452.0
STD DEVIATION	185.24	210.37	169.13	129.02	138.99	110.38	161.69	242.80	312.33	256.44	177.73	119.70	84.79
SKENNESS	1.055	0.989	1.261	1.357	1.337	2.452	1.834	0.481	0.602	0.296	0.448	0.097	0.469
STD ERR SKEW	0.350	0.360	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340
SER CORR COEFF	0.122	0.239	-0.098	0.168	-0.039	-0.120	-8.174	0.203	0.088	0.051	0.139	0.032	0.121
COEFF OF VAR	0.402	0.570	0.544	0.530	0.536	0.545	0.438	0.275	0.234	0.191	0.179	0.187	0.138
MEAN LOGS	2.632	2.501	2.436	2.333	2.265	2.263	2.533	2.929	3.115	3.120	2.989	2.799	2.786
STD DEV LOGS	0.165	0.242	0.222	0.217	0.252	0.185	0.170	0.120	0.099	0.083	0.077	0.083	0.059
SKENNESS LOGS	0.112	0.112	0.173	0.130	0.338	0.962	0.387	-0.029	0.201	-0.038	0.139	-0.343	0.127
STD ERR SKEW LOGS	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340
SER CORR LOGS	0.192	0.187	-0.028	0.144	0.032	-0.110	-0.124	0.189	0.152	0.022	0.155	0.043	0.106
COEFF OF VAR LOGS	0.097	0.097	0.091	0.093	0.111	0.082	0.067	0.041	0.032	0.027	0.026	0.030	0.021
% OF AVE FLOW	6.3	5.0	4.2	3.3	3.0	2.8	5.0	12.0	18.1	18.2	13.4	8.7	100.0

MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1931-1979)

0.99	190.3	91.0	88.6	70.5	55.2	92.1	153.6	444.7	791.6	838.8	657.5	384.0	450.5
0.95	236.0	129.3	120.7	96.3	75.2	104.0	187.6	538.5	906.4	959.1	733.9	451.0	480.4
0.90	266.3	156.5	143.1	114.2	89.7	113.0	210.6	596.1	976.9	1029.6	779.3	489.2	513.7
0.80	309.9	198.0	176.8	140.8	112.2	127.4	244.2	673.8	1072.5	1121.6	839.2	537.7	544.0
0.50	421.3	313.9	269.0	212.8	178.2	171.2	332.8	850.5	1292.7	1319.2	971.3	636.3	608.7
0.20	586.1	504.9	418.0	326.4	296.4	253.2	470.1	1071.5	1574.9	1549.0	1130.8	741.5	684.0
0.10	703.2	651.2	530.9	410.8	394.2	323.7	571.4	1208.1	1753.9	1643.5	1227.1	798.4	728.1
0.06	860.0	858.0	689.4	527.4	542.2	434.8	711.8	1372.3	1973.8	1838.9	1361.4	860.1	779.3
0.02	983.4	1027.9	819.0	621.5	671.5	535.9	825.5	1485.6	2134.3	1946.3	1422.2	900.4	814.9
0.01	1112.5	1211.3	958.7	721.6	818.6	655.2	947.3	1603.3	2292.7	2047.9	1500.0	936.8	848.6

## STATION 12175500 THUNDER CREEK NR. NEWHALEM, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31									
YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1932	74.0	75.0	77.0	82.0	95.0	145.0	159.0	196.0	293.0
1933	68.0	90.0	90.0	91.0	96.0	109.0	135.0	187.0	320.0
1934	169.0	172.0	181.0	191.0	332.0	380.0	451.0	512.0	625.0
1935	125.0	125.0	131.0	151.0	199.0	272.0	430.0	425.0	478.0
1936	50.0	52.0	52.0	54.0	58.0	76.0	88.0	93.0	140.0
1937	60.0	62.0	62.0	63.0	64.0	73.0	98.0	108.0	161.0
1938	92.0	92.0	94.0	98.0	113.0	151.0	182.0	225.0	316.0
1939	77.0	77.0	79.0	82.0	91.0	119.0	180.0	198.0	237.0
1940	138.0	139.0	149.0	165.0	199.0	202.0	237.0	305.0	351.0
1941	127.0	129.0	130.0	135.0	154.0	170.0	176.0	211.0	336.0
1942	85.0	86.0	88.0	90.0	98.0	102.0	111.0	185.0	282.0
1943	98.0	98.0	102.0	122.0	130.0	139.0	156.0	187.0	209.0
1944	75.0	75.0	76.0	80.0	98.0	112.0	119.0	143.0	179.0
1945	116.0	116.0	118.0	121.0	139.0	201.0	236.0	245.0	282.0
1946	94.0	95.0	96.0	98.0	112.0	140.0	169.0	158.0	234.0
1947	92.0	95.0	107.0	113.0	126.0	179.0	188.0	207.0	232.0
1948	93.0	94.0	95.0	98.0	111.0	113.0	133.0	166.0	286.0
1949	71.0	75.0	75.0	76.0	83.0	99.0	119.0	136.0	199.0
1950	110.0	111.0	114.0	121.0	135.0	170.0	194.0	238.0	387.0
1951	142.0	142.0	146.0	150.0	167.0	354.0	318.0	415.0	468.0
1952	77.0	78.0	78.0	82.0	91.0	112.0	110.0	119.0	203.0
1953	62.0	63.0	65.0	74.0	101.0	125.0	166.0	248.0	262.0
1954	110.0	117.0	123.0	144.0	179.0	227.0	225.0	263.0	334.0
1955	84.0	84.0	86.0	86.0	92.0	109.0	127.0	168.0	303.0
1956	72.0	73.0	74.0	76.0	80.0	89.0	106.0	142.0	347.0
1957	86.0	86.0	89.0	96.0	99.0	139.0	155.0	155.0	315.0
1958	142.0	144.0	147.0	153.0	168.0	181.0	197.0	202.0	236.0
1959	128.0	130.0	132.0	138.0	149.0	164.0	223.0	340.0	414.0
1960	100.0	100.0	101.0	105.0	119.0	163.0	165.0	219.0	422.0
1961	161.0	164.0	170.0	189.0	244.0	262.0	324.0	351.0	365.0
1962	108.0	108.0	108.0	110.0	120.0	209.0	291.0	272.0	295.0
1963	110.0	113.0	125.0	147.0	209.0	319.0	319.0	356.0	396.0
1964	115.0	115.0	117.0	121.0	125.0	136.0	187.0	239.0	374.0
1965	110.0	112.0	117.0	128.0	156.0	218.0	240.0	240.0	288.0
1966	92.0	94.0	96.0	99.0	101.0	117.0	127.0	151.0	227.0
1967	130.0	131.0	137.0	140.0	145.0	192.0	215.0	307.0	344.0
1968	150.0	151.0	162.0	172.0	173.0	296.0	402.0	424.0	509.0
1969	72.0	72.0	73.0	75.0	82.0	105.0	166.0	191.0	245.0
1970	101.0	102.0	103.0	108.0	125.0	144.0	160.0	158.0	206.0
1971	97.0	98.0	98.0	104.0	115.0	163.0	163.0	197.0	255.0
1972	98.0	100.0	101.0	105.0	114.0	138.0	151.0	175.0	260.0
1973	100.0	105.0	110.0	114.0	131.0	142.0	173.0	201.0	213.0
1974	111.0	111.0	114.0	117.0	131.0	203.0	277.0	280.0	295.0
1975	103.0	104.0	107.0	118.0	140.0	173.0	189.0	189.0	206.0
1976	101.0	102.0	103.0	122.0	147.0	142.0	245.0	363.0	431.0
1977	98.0	99.0	102.0	111.0	144.0	165.0	184.0	194.0	216.0
1978	121.0	123.0	132.0	139.0	144.0	148.0	163.0	281.0	276.0
1979	65.0	66.0	68.0	71.0	74.0	82.0	97.0	144.0	242.0

## STATION 12175500 THUNDER CREEK NR. NEWMHALEM, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1932-1979)

MEAN	101.7	103.0	106.3	113.1	131.2	166.4	195.4	233.0	302.0
MAXIMUM	169.0	172.0	181.0	191.0	332.0	380.0	451.0	512.0	625.0
MINIMUM	50.0	52.0	52.0	54.0	58.0	73.0	88.0	93.0	140.0
STANDARD DEVIATION	26.51	26.71	28.76	32.03	46.88	69.27	84.20	91.19	97.40
SKEWNESS	0.475	0.503	0.530	0.509	1.753	1.335	1.428	1.101	1.037
STD ERROR OF SKEWNESS	0.343	0.343	0.343	0.343	0.343	0.343	0.343	0.343	0.343
SERIAL CORR COEFF	0.083	0.069	0.044	-0.006	0.014	0.015	0.166	0.054	0.176
COEFF OF VARIATION	0.261	0.259	0.271	0.283	0.372	0.416	0.431	0.391	0.323
MEAN LOGS	1.993	1.998	2.011	2.036	2.093	2.189	2.257	2.337	2.459
STD DEVIATION LOGS	0.115	0.114	0.119	0.124	0.147	0.166	0.168	0.162	0.135
SKEWNESS LOGS	-0.223	-0.178	-0.161	-0.153	0.328	0.333	0.465	0.174	0.144
STD ERR SKEWNESS LOGS	0.343	0.343	0.343	0.343	0.343	0.343	0.343	0.343	0.343
SER CORR COEFF LOGS	0.107	0.093	0.075	0.028	0.032	0.031	0.132	0.032	0.152
COEFF OF VAR LOGS	0.058	0.057	0.059	0.061	0.070	0.076	0.075	0.069	0.055

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1932-1979)

0.99	174.3	177.2	187.4	204.9	294.4	413.1	507.8	541.7	611.8
0.98	164.0	166.4	175.4	191.2	262.5	362.6	440.3	483.2	557.2
0.96	153.1	155.1	162.8	176.7	231.9	314.9	377.9	426.3	502.8
0.90	137.1	138.7	144.7	156.1	192.8	255.3	301.9	352.5	430.2
0.80	123.1	124.5	129.2	138.6	163.4	211.5	247.7	296.4	372.8
0.50	99.3	100.4	103.2	109.5	121.5	151.2	175.5	215.1	285.8
0.20	78.9	80.1	81.6	85.6	92.8	111.4	129.7	158.6	221.4
0.10	69.6	70.9	71.9	74.9	81.4	96.0	112.6	136.0	194.5
0.05	62.6	63.9	64.6	67.0	73.4	85.5	101.0	120.2	175.2
0.02	55.3	56.8	57.1	58.9	65.7	75.4	90.1	104.9	156.1
0.01	50.8	52.3	52.5	54.0	61.2	69.6	83.9	96.0	144.7

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1932-1979)

P95	P90	P75	P70	P50	P25	P10
110.0	130.0	200.0	230.0	420.0	910.0	1400.0

## STATION 12175500 THUNDER CREEK NR. NEWHALEM, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA DATE	REG. (R)
1920										4960.	/ /20	
1921										4570.	/ /21	
1922										15400.	/ /22	
1923										3180.	/ /23	
1924										6360.	/ /24	
1925										4200.	/ /25	
1926										2680.	/ /26	
1927										10400.	/ /27	
1928										3620.	/ /28	
1929										8800.	/ /29	
1930										2680.	/ /30	
1931	3490.	2100.	1650.	1520.	1400.	1250.	1160.	1090.	884.	3630.	06/26/31	
1932	7040.	4730.	2740.	2120.	1750.	1420.	1250.	1150.	1000.	8780.	02/26/32	
1933	3570.	2820.	2240.	1930.	1730.	1630.	1490.	1310.	1010.	5010.	11/13/32	
1934	3550.	2470.	1950.	1550.	1430.	1360.	1290.	1250.	1120.	4440.	07/16/34	
1935	5300.	3710.	2340.	1890.	1440.	1350.	1220.	1180.	909.	6120.	11/05/34	
1936	3200.	2670.	2240.	1980.	1740.	1400.	1360.	1290.	1060.	3800.	05/30/36	
1937	2490.	2200.	1900.	1720.	1650.	1520.	1310.	1170.	913.	2650.	06/21/37	
1938	4180.	2800.	2380.	1900.	1680.	1560.	1360.	1210.	997.	7630.	10/28/37	
1939	2780.	2120.	1780.	1490.	1340.	1200.	1130.	1050.	865.	4740.	05/28/39	
1940	1780.	1680.	1320.	1160.	1100.	1080.	1020.	968.	930.	2060.	05/23/40	
1941	3960.	3490.	2200.	1470.	1210.	1100.	1020.	936.	778.	5430.	10/20/40	
1942	2120.	2060.	1850.	1480.	1330.	1210.	1140.	1030.	805.	3530.	10/03/41	
1943	2090.	2000.	1880.	1770.	1600.	1400.	1280.	1120.	930.	2300.	07/10/43	
1944	2150.	1570.	1290.	1160.	988.	976.	907.	872.	724.	2780.	09/20/44	
1945	1950.	1820.	1540.	1320.	1230.	1120.	1030.	950.	747.	3080.	09/04/45	
1946	3150.	1870.	1670.	1500.	1370.	1290.	1260.	1160.	912.	4220.	10/25/45	
1947	2580.	1870.	1730.	1460.	1320.	1220.	1170.	1070.	876.	5550.	10/25/46	
1948	3550.	3270.	2890.	2590.	2310.	1780.	1550.	1370.	1030.	4410.	10/19/47	
1949	2320.	2290.	2210.	1740.	1540.	1340.	1330.	1210.	1010.	2560.	05/13/49	
1950	5320.	3340.	2720.	2260.	1870.	1670.	1500.	1300.	1130.	9630.	11/27/49	
1951	3290.	2360.	1610.	1500.	1440.	1350.	1270.	1170.	963.	3870.	02/10/51	
1952	1970.	1710.	1680.	1410.	1300.	1220.	1180.	1100.	891.	2580.	06/04/52	
1953	2280.	2130.	2040.	1770.	1420.	1240.	1150.	1070.	875.	2690.	09/28/53	
1954	2340.	1970.	1850.	1820.	1700.	1450.	1330.	1270.	993.	2850.	08/23/54	
1955	2790.	2700.	2240.	1850.	1570.	1520.	1340.	1220.	898.	3160.	06/16/55	
1956	7240.	3700.	2190.	2040.	1770.	1640.	1510.	1380.	1110.	10800.	10/25/55	
1957	2330.	2150.	2060.	1840.	1500.	1370.	1250.	1130.	913.	2790.	06/11/57	
1958	2740.	2640.	2410.	1910.	1690.	1580.	1480.	1370.	1060.	4060.	10/30/57	
1959	2580.	2290.	2160.	1920.	1610.	1530.	1360.	1240.	1040.	4730.	12/02/58	
1960	4220.	3280.	2100.	1650.	1500.	1450.	1300.	1140.	919.	5880.	11/23/59	
1961	3500.	3170.	2690.	2150.	2050.	1790.	1630.	1470.	1090.	3960.	06/17/61	
1962	2000.	1870.	1660.	1560.	1300.	1250.	1150.	1010.	797.	2280.	06/25/62	
1963	4040.	2540.	1630.	1330.	1230.	1080.	1020.	986.	765.	9610.	11/20/62	
1964	5000.	3330.	2220.	1900.	1580.	1550.	1370.	1180.	899.	8490.	10/22/63	
1965	1910.	1720.	1670.	1410.	1370.	1270.	1250.	1110.	869.	2170.	08/13/65	
1966	1790.	1580.	1410.	1250.	1160.	1100.	1030.	963.	816.	2200.	06/28/66	
1967	3420.	3210.	2860.	2480.	2080.	1700.	1510.	1390.	1050.	3620.	06/21/67	
1968	5180.	3410.	2360.	1760.	1560.	1500.	1390.	1210.	939.	6020.	06/02/68	
1969	2460.	2430.	2390.	2270.	2000.	1900.	1760.	1620.	997.	2700.	06/04/69	
1970	2580.	2350.	2070.	1520.	1490.	1320.	1180.	1060.	806.	3200.	06/03/70	
1971	2910.	2630.	2590.	2530.	2100.	1590.	1450.	1350.	1020.	3270.	07/19/71	
1972	3940.	3240.	2640.	2420.	1930.	1870.	1750.	1570.	1210.	5580.	05/12/72	
1973	1910.	1690.	1570.	1270.	1230.	1160.	1070.	962.	747.	2330.	06/23/73	
1974	2910.	2840.	2760.	2420.	2000.	1870.	1600.	1410.	1070.	3170.	06/20/74	
1975	3990.	3830.	3570.	2650.	1970.	1660.	1410.	1240.	933.	4250.	07/10/75	
1976	3730.	3140.	1890.	1710.	1690.	1510.	1360.	1240.	969.	4820.	12/04/75	
1977	2140.	1770.	1630.	1580.	1420.	1130.	1110.	975.	767.	3110.	01/18/77	
1978	2380.	2230.	1920.	1570.	1490.	1380.	1270.	1170.	919.	2660.	06/05/78	
1979	2360.	1830.	1410.	1280.	1160.	1070.	1010.	977.	801.	5140.	11/07/78	

## STATION 12175500 THUNDER CREEK NR. NEWHALEM, WASH.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1920-1979)

W R C  
ESTIMATE      SYSTEMATIC  
RECORD

MEAN	3193.9	2546.3	2081.6	1772.0	1564.4	1405.8	1286.3	1172.8	931.8
MAXIMUM	7240.0	4730.0	3570.0	2650.0	2310.0	1870.0	1750.0	1570.0	1210.0
MINIMUM	1780.0	1570.0	1290.0	1160.0	988.0	976.0	907.0	872.0	724.0
STANDARD DEVIATION	1261.44	720.56	479.48	392.00	304.04	232.54	188.60	160.48	115.42
SKEWNESS	1.455	0.736	0.644	0.583	0.513	0.271	0.306	0.365	0.175
STO ERROR OF SKEWNESS	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340
SERIAL CORR COEFF	-0.010	0.025	0.102	0.055	0.056	0.085	0.075	0.065	0.055
COEFF OF VARIATION	3.476	3.283	3.230	3.221	3.194	3.165	3.147	3.137	3.124
MEAN LOGS	3.476	3.390	3.307	3.238	3.186	3.142	3.105	3.065	2.966
STD DEVIATION LOGS	0.153	0.119	0.099	0.084	0.083	0.072	0.064	0.059	0.054
SKEWNESS LOGS	0.617	0.232	0.080	0.180	0.089	-0.032	-0.052	0.065	-0.069
STD ERR SKEWNESS LOGS	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340	0.340
SER CORR COEFF LOGS	0.025	0.059	0.118	0.072	0.099	0.117	0.104	0.091	0.074
COEFF OF VAR LOGS	0.044	0.035	0.030	0.029	0.026	0.023	0.021	0.019	0.018

3.6192  
0.2036  
0.7180

3.6192  
0.2036  
0.3350

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1920-1979)

0.99	1549.4	1357.0	1212.9	1075.7	995.1	939.5	899.6	852.4	688.2
0.95	1794.0	1590.6	1404.4	1225.7	1125.6	1054.5	997.7	931.5	751.9
0.90	1962.4	1737.8	1520.3	1317.0	1203.3	1121.0	1053.7	977.2	787.9
0.80	2212.5	1941.4	1675.2	1440.0	1305.9	1206.8	1125.3	1036.1	833.2
0.50	2887.2	2426.7	2023.4	1720.1	1531.9	1388.3	1274.4	1160.5	926.0
0.20	3965.7	3079.2	2454.5	2073.5	1804.3	1595.1	1440.6	1302.6	1027.1
0.10	4782.8	3508.8	2719.8	2294.8	1968.6	1714.4	1534.9	1384.8	1083.4
0.04	5939.8	4052.1	3038.5	2564.2	2163.0	1850.7	1641.3	1479.2	1146.1
0.02	6897.0	4458.7	3266.3	2759.1	2300.2	1944.0	1713.4	1544.1	1188.2
0.01	7940.1	4867.7	3487.4	2950.3	2432.2	2031.7	1780.7	1605.2	1227.1

1570.9  
2017.3  
2326.2  
2788.4  
4053.3  
6114.5  
7696.2  
9952.4  
11827.3  
13875.1

1795.4  
2141.1  
2392.6  
2784.2  
3935.5  
6020.6  
7774.5  
10484.0  
12907.9  
15721.8

## STATION 1217+000 THUNDER CREEK NEAR MARBLEMOUNT, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1919													
1920	202	490	381	346	317	148	515	988	1071	1571	1256	667	
1921	721	296	244	289	402	185	196	536	887	1865	1338	899	639
1922	920	486	998	149	82.6	130	355	1008	1969	1560	1227	573	750
1923	477	233	305	362	173	189	196	753	1658	1427	1212	860	740
1924	369	162	280	173	751	236	546	905	1333	1680	1217	740	684
1925	443	315	563	196	323	208	269	1229	1015	1240	996	646	614
1926	234	135	435	225	214	239	522	1297	1398	1556	1033	598	708
1927	864	312	294	205	147	154	587	680	1045	1319	1058	463	556
1928	774	597	425	639	199	264	305	658	1564	1413	1231	919	676
1929	747	206	135	73.6	58.9	103	289	1292	1201	1505	971	665	739
1930	275	90.6	87.5	84.7	407	267	691	617	1242	1139	1002	539	535
									970	1142	927	674	519

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1919-1930)

MEAN	548.5	302.1	377.0	249.3	279.5	200.0	389.7	907.0	1279.4	1451.4	1122.3	686.9	650.9
MAXIMUM	920.0	597.0	998.0	639.0	751.0	330.0	691.0	1297.0	1969.0	1865.0	1338.0	919.0	750.0
MINIMUM	202.0	90.6	87.5	73.6	58.9	77.5	196.0	536.0	887.0	1139.0	927.0	463.0	519.0
STD DEVIATION	265.36	162.08	246.47	159.60	195.95	72.56	173.10	266.28	322.26	217.60	137.43	143.73	84.76
SKEDNESS	0.055	0.587	1.661	1.503	1.400	-0.038	0.398	0.261	0.900	0.159	0.032	0.391	-0.433
STD. ERR. SKEW	0.661	0.661	0.661	0.661	0.661	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.661
SER CORR COEFF	-0.005	-0.055	-0.140	-0.294	-0.060	-0.605	-0.367	-0.113	-0.057	0.192	0.537	-0.306	0.107
COEFF OF VAR	0.484	0.537	0.654	0.640	0.701	0.363	0.444	0.294	0.252	0.150	0.122	0.209	0.130
MEAN LOGS	2.685	2.418	2.496	2.321	2.347	2.270	2.550	2.940	3.095	3.157	3.047	2.828	2.810
STD DEV LOGS	0.239	0.253	0.286	0.274	0.321	0.181	0.199	0.130	0.104	0.066	0.054	0.091	0.058
SKEWNESS LOGS	-0.391	-0.338	-0.370	-0.101	-0.330	-0.888	0.002	-0.101	0.484	-0.151	-0.067	0.003	-0.557
STD ERR SKEW LOGS	0.661	0.661	0.661	0.661	0.661	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.661
SER CORR LOGS	-0.101	0.031	0.170	-0.127	-0.117	-0.542	-0.417	-0.153	-0.102	0.220	0.538	-0.283	0.138
COEFF OF VAR LOGS	0.089	0.105	0.115	0.118	0.137	0.080	0.078	0.044	0.034	0.021	0.018	0.032	0.021
% OF AVE FLOW	7.0	3.9	4.8	3.2	3.6	2.6	5.0	11.6	16.4	18.6	14.4	8.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1919-1930)

0.99	115.3	56.4	56.7	46.1	33.4	54.3	121.9	423.9	775.9	993.5	831.8	414.2	447.4
0.95	185.1	95.1	99.4	72.9	61.9	85.8	166.7	527.2	868.8	1112.9	908.0	477.5	507.6
0.90	234.7	121.7	131.8	92.6	84.5	106.5	196.9	591.1	928.8	1186.5	951.0	515.1	540.1
0.80	308.7	162.1	182.8	123.5	121.3	135.0	240.9	677.7	1013.3	1266.2	1005.2	564.6	579.5
0.50	501.3	270.4	326.3	211.4	231.7	197.9	354.5	875.3	1221.2	1441.8	1116.1	673.2	653.8
0.20	773.7	430.5	550.2	356.7	418.0	266.0	521.8	1122.6	1512.5	1633.0	1236.8	802.8	724.6
0.10	952.1	539.2	707.2	466.0	556.5	300.9	638.6	1272.0	1710.9	1739.1	1304.0	880.3	759.6
0.04	1171.0	676.6	909.4	617.0	742.9	335.8	792.2	1457.2	1968.5	1856.9	1378.9	971.2	795.0
0.02	1328.5	777.9	1060.6	737.9	887.5	356.5	910.7	1586.7	2166.0	1935.6	1429.1	1034.9	816.6
0.01	1480.7	877.9	1211.1	865.3	1035.4	373.7	1032.2	1711.7	2368.4	2008.0	1475.5	1095.7	835.3

## STATION 12176000 THUNDER CREEK NEAR MARBLEMOUNT, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1920	92.0	98.0	103.0	116.0	135.0	249.0	282.0	308.0	319.0
1921	156.0	156.0	160.0	164.0	196.0	254.0	265.0	291.0	382.0
1922	71.0	71.0	72.0	74.0	77.0	81.0	104.0	330.0	458.0
1923	94.0	109.0	135.0	150.0	173.0	176.0	243.0	257.0	295.0
1924	116.0	122.0	124.0	129.0	142.0	209.0	196.0	235.0	325.0
1925	134.0	138.0	147.0	164.0	185.0	253.0	239.0	323.0	344.0
1926	119.0	119.0	121.0	124.0	135.0	185.0	225.0	254.0	247.0
1927	124.0	124.0	127.0	131.0	136.0	146.0	199.0	332.0	332.0
1928	155.0	156.0	158.0	164.0	182.0	217.0	354.0	373.0	486.0
1929	50.0	50.0	50.0	50.0	56.0	62.0	72.0	90.0	225.0
1930	70.0	72.0	74.0	74.0	76.0	84.0	87.0	124.0	180.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1920-1930)

MEAN	107.4	110.5	115.5	121.8	135.9	174.2	203.3	253.1	326.6
MAXIMUM	156.0	156.0	160.0	164.0	196.0	254.0	354.0	373.0	486.0
MINIMUM	50.0	50.0	50.0	50.0	56.0	62.0	72.0	90.0	180.0
STANDARD DEVIATION	35.01	34.85	36.68	40.05	47.72	71.79	88.25	87.27	92.35
SKEWNESS	-0.131	-0.366	-0.576	-0.648	-0.477	-0.475	-0.104	-0.719	0.271
STD ERROR OF SKEWNESS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661
SERIAL CORR COEFF	-0.112	-0.135	-0.166	-0.151	-0.209	0.148	-0.217	-0.005	0.005
COEFF OF VARIATION	0.326	0.316	0.317	0.329	0.351	0.412	0.434	0.345	0.283
MEAN LOGS	2.007	2.020	2.038	2.059	2.103	2.197	2.261	2.371	2.498
STD DEVIATION LOGS	0.157	0.157	0.163	0.172	0.181	0.221	0.226	0.190	0.128
SKEWNESS LOGS	-0.689	-0.920	-1.064	-1.121	-0.953	-0.895	-0.789	-1.383	-0.390
STD ERR SKEWNESS LOGS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661
SER CORR COEFF LOGS	-0.017	-0.036	-0.068	-0.029	-0.068	0.154	-0.032	0.173	0.125
COEFF OF VAR LOGS	0.078	0.078	0.080	0.084	0.068	0.101	0.100	0.080	0.051

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1920-1930)

0.99	195.8	189.7	194.6	207.5	249.2	367.1	451.3	420.9	572.8
0.98	185.8	182.4	188.3	201.0	238.6	346.7	422.1	411.8	540.4
0.96	174.3	173.5	180.3	192.6	225.7	322.4	388.5	398.8	505.1
0.90	156.0	158.2	165.7	177.1	203.5	282.3	335.0	371.7	452.0
0.80	138.5	142.5	150.1	160.0	180.8	243.0	284.8	338.7	404.4
0.50	105.9	110.5	116.5	123.0	135.2	169.5	195.2	259.2	320.5
0.20	76.3	79.3	82.4	85.3	92.2	106.3	121.5	172.4	247.2
0.10	62.8	64.5	66.1	67.3	72.5	79.5	91.0	130.9	213.4
0.05	52.7	53.4	53.8	54.0	58.2	61.0	70.2	100.7	188.0
0.02	42.6	42.3	41.7	41.0	44.3	44.1	51.0	72.1	161.8
0.01	36.7	35.8	34.6	33.6	36.4	34.9	40.7	56.3	145.9

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1920-1930)

P95	P90	P75	P70	P50	P25	P10
93.0	140.0	210.0	240.0	450.0	990.0	1500.0



## STATION 12176000 THUNDER CREEK NEAR MARBLEMOUNT, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30													ANNUAL PEAK-FLOW DATA	
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW(CFS)	DATE	REG.(R)		
1920	2500.	2260.	2160.	2020.	1890.	1670.	1430.	1270.	958.	4960.	09/11/20			
1921	3800.	3200.	2800.	2220.	1980.	1760.	1670.	1470.	1120.	4570.	06/07/21			
1922	8670.	5570.	3100.	1820.	1660.	1550.	1430.	1320.	1020.	15400.	12/12/21			
1923	2430.	2380.	2110.	1870.	1730.	1540.	1440.	1320.	1070.	3180.	06/09/23			
1924	3930.	2420.	1940.	1730.	1380.	1260.	1190.	1150.	903.	6360.	02/12/24			
1925	3060.	2540.	2260.	1940.	1760.	1610.	1500.	1340.	1070.	4200.	12/12/24			
1926	2120.	2020.	1790.	1690.	1460.	1260.	1150.	1050.	866.	2680.	07/05/26			
1927	5750.	3480.	2070.	1770.	1580.	1520.	1410.	1290.	1020.	10400.	10/16/26			
1928	2680.	2470.	2320.	1880.	1520.	1410.	1280.	1240.	992.	3620.	05/22/28			
1929	5470.	2940.	1670.	1470.	1300.	1220.	1170.	1090.	847.	8800.	10/09/28			
1930	1950.	1860.	1630.	1360.	1170.	1110.	1020.	942.	842.	2680.	07/13/30			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1920-1930)

W R C SYSTEMATIC  
ESTIMATE RECORD

MEAN	3850.9	2430.9	2168.2	1797.3	1586.4	1446.4	1350.0	1229.3	973.5			
MAXIMUM	8670.0	5570.0	3100.0	2220.0	1980.0	1760.0	1670.0	1470.0	1120.0			
MINIMUM	1950.0	1860.0	1630.0	1360.0	1170.0	1110.0	1020.0	942.0	842.0			
STANDARD DEVIATION	2047.20	1026.85	452.21	240.09	250.57	208.63	190.89	153.24	97.37			
SKEWNESS	1.475	2.133	0.950	-0.263	-0.060	-0.187	-0.264	-0.524	-0.097			
STD ERROR OF SKEWNESS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661			
SERIAL CORR COEFF	-0.426	-0.087	0.373	0.462	0.461	0.318	0.077	0.166	-0.059			
COEFF OF VARIATION	0.532	0.363	0.209	0.134	0.158	0.144	0.141	0.125	0.100			
MEAN LOGS	3.539	3.432	3.328	3.251	3.195	3.156	3.126	3.086	2.986			
STD DEVIATION LOGS	0.204	0.132	0.087	0.060	0.070	0.064	0.063	0.056	0.044			
SKEWNESS LOGS	0.716	1.377	0.547	-0.632	-0.343	-0.373	-0.520	-0.767	-0.202			
STD ERR SKEWNESS LOGS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661			
SER CORR COEFF LOGS	-0.528	-0.122	0.383	0.511	0.478	0.320	0.124	0.194	-0.023			
COEFF OF VAR LOGS	0.058	0.038	0.026	0.018	0.022	0.020	0.020	0.018	0.015			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1920-1930)

0.99	1484.4	1803.4	1451.7	1214.5	1034.1	975.8	901.9	840.7	754.7	1360.8	1824.3
0.95	1772.5	1890.8	1586.1	1389.2	1184.2	1106.8	1031.6	961.8	816.1	2011.9	2278.8
0.90	1982.0	1967.0	1672.6	1463.1	1268.2	1179.3	1102.3	1025.9	849.6	2478.2	2618.5
0.80	2308.4	2098.2	1794.1	1596.5	1373.2	1269.1	1188.8	1102.2	891.0	3189.9	3161.7
0.50	3268.3	2525.8	2090.1	1808.0	1582.5	1445.5	1354.2	1240.4	972.3	5170.1	4843.5
0.20	5008.4	3348.7	2498.3	2006.0	1800.0	1625.1	1515.3	1363.6	1055.8	8379.8	8141.0
0.10	6473.4	4052.1	2771.9	2101.8	1915.6	1719.2	1596.2	1420.6	1100.3	10786.0	11105.6
0.04	8738.1	5142.5	3122.9	2197.0	2039.6	1818.8	1678.9	1475.1	1148.1	14117.9	15948.6
0.02	10765.3	6118.8	3386.8	2254.3	2119.6	1882.5	1730.2	1506.7	1179.2	16799.3	20500.9
0.01	13120.0	7522.9	3658.9	2303.0	2191.5	1939.2	1774.7	1532.8	1207.3	19643.7	26001.7

## STATION 12177000 SKAGIT R AT REFLECTOR BAR, NR NEWHALEM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1914			1828	3593	1273	2800	5346	9181	8491	6009	3197	1956	
1915	1915	3844	1732	899	769	1562	5204	4525	3925	3590	3484	1502	2752
1916	1835	2031	1673	863	1184	1721	3000	8205	15620	10380	4765	2738	4521
1917	1235	1388	935	910	1257	925	2000	8177	12340	8987	3795	2224	3692
1918	1579	1843	5092	7224	2533	1977	5267	8377	12680	6621	3701	2416	4956
1919	2372	1957	3325	2105	1410	1222	5145	10250	12010	9318	4514	2345	4684
1920	1016	2780	2693	2811	2710	1573	1670	5483	8747	8488	3691	3101	3730
1921	4955	2270	1853	2235	3210	2762	3222	10360	16680	7655	4028	2430	5143
1922	4067	3510	6695	1423	876	785	2004	8150	14500	5696	3491	2533	4494

## STATION 12177000 SKAGIT R AT REFLECTOR BAR, NR NEWHALEM, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1815		
1856	95000.0	0- 0-1856
1898	45000.0	11-18-1897
1910	70000.0	11-29-1909
1914	16800.0	1- 6-1914
1915	11800.0	4- 3-1915
1916	29400.0	6-17-1916
1917	19700.0	6-16-1917
1918	37300.0	12-29-1917
1919	24200.0	5-27-1919
1920	15600.0	7- 1-1920
1921	30800.0	6- 7-1921
1922	58000.0	12-12-1921

## ANNUAL PEAK FLOW STATISTICS (YEARS 1815-1922)

W R C	ESTIMATE	SYSTEMATIC RECORD
MEAN LOGS	4.3845	4.3845
STANDARD DEVIATION LOGS	0.2134	0.2134
SKEWNESS LOGS	0.0	0.336
ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES		
LOG-PEARSON III ANALYSIS (YEARS 1815-1922)		
0.99	7728.3	8736.8
0.95	10802.2	11352.1
0.90	12913.4	13178.7
0.80	16029.4	15934.1
0.50	24239.0	23581.2
0.20	36652.9	36286.3
0.10	45497.4	46186.7
0.04	57292.6	60480.1
0.02	66491.9	72483.8
0.01	76022.1	85701.8

STATION 12177500 STETATLE CREEK NEAR NEWHALEM, WASH.  
MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1914				192	39.0	126							
1915			56.9	37.2	41.0	106	259						
1934	293	203	290	212	141	243	323	323	255	132	109	77.5	223
1935	147	320	162	301	164	85.2	116	285	336	261	114	80.9	198
1936	93.5	53.3	198.9	74.6	20.7			375	341	186	76.8	54.1	144
1937	39.8	20.5	113	27.2	27.5	102	141	305	437	205	80.7	47.0	129
1938	169	240	171	94.2	42.2	101	232	365	412	216	71.7	54.5	181
1939	95.4	100	167	168	105	100	233	368	301	270	105	63.0	169
1940	169	190	286	105	105	180	174	321	219	116	62.7	45.3	165
1941	234	85.9	144	103	79.5	111	162	198	176	85.9	47.1	164	133
1942	240	173	177	41.3	44.9	52.9	160	228	258	171	49.8	22.6	135
1943	31.1	87.7	152	105	75.5	104	272	250	368	395	139	54.4	170
1944	84.9	61.6	115	84.9	56.6	75.7	127	222	209	93.9	57.2	128	110
1945	101	127	116	150	145	66.8	118	373	278	198	71.7	95.7	153
1946	190	121	149.7	101	81.0	99.5	203	463	366	293	153	76.5	187
1947	98.4	74.9	137	103	153	138	225	373	520	222	96.7	78.7	167
1948		105	151	65.8	53.4	55.1	160	383	366	216	164	131	188
1949	133	363	106	39.7	52.2	106	251	493	366	303	147	130	181
1950	152	292	327	85.8	94.7	130	137	326	520	386	210	94.1	217
1951	216	292	327	104	279	55.5	217	354	362	245	112	100	221
1952	193	104	65.7	36.2	95.2	52.3	218	334	336	259	111	55.6	155
1953	41.2	40.5	65.8	346	153	66.5	174	320	292	316	157	167	179
1954	202	195	169	80.4	143	77.6	150	380	411	481	276	184	230
1955	169	960	110	51.8	57.7	30.5	117	272	464	396	182	93.1	192
1956	310	245	120	52.7	26.6	45.5	233	455	431	396	169	174	222
1957	267	139	216	45.5	85.9	93.1	205	428	328	204	118	86.7	185
1958	94.7	81.9	109	146.	150	74.5	137	412	339	162	81.8	118	159
1959	194	222	303	160	52.6	91.8	310	309	455	380	163	285	244
1960	279	266	128	173.9	98.8	104	207	288	430	287	125	88.3	198
1961	185	173	137	243	236	113	173	354	532	277	124	81.5	219
1962	186	124	141	192	161	40.5	213	246	391	274	181	126	190
1963	144	248	221	113	252	84.2	114	253	280	202	118	95.6	176
1964	171	212	182	135	78.9	65.9	143	290	422	417	250	164	211
1965	176	130	120	94.1	149	94.9	204	278	331	251	154	67.4	171
1966	163	183	135	92.1	49.3	115	192	304	335	291	141	83.2	174
1967	198	119	304	131	100	70.7	81.0	325	502	322	158	94.9	207
1968	361	154	163	244	244	165	118	287	416	303	137	159	229
1969	138	211	97.9	96.6	28.3	66.3	196	432	397	185	92.2	169	176
1970	113	113	89.3	89.0	105	80.6	119	242	358	196	86.7	107	141
1971	70.8	139	84.4	193	202	72.7	160	469	398	464	229	108	216
1972	122	149	56.5	86.7	162	305	161	472	480	454	241	164	238
1973	81.4	81.6	190	91.1	54.3	67.1	106	471	220	424	122	85.5	142
1974	158	152	171	271	77.9	150	154	314	308	220	127	127	239
1975	53.8	174	163	96.2	46.9	76.4	88.5	343	568	443	268	127	178
1976	212	290	341	161	86.4	60.4	142	367	343	404	281	164	238
1977	82.5	106	126	118	108	69.8	176	163	274	147	148	83.9	133
1978	73.5	253	286	57.5	88.0	184	135	225	385	274	148	209	194
1979	98.2	176	40.1	21.3	59.6	207	124	324	294	201	88.9	83.4	143

## STATION 12177500 STETATTLE CREEK NEAR NEMHALEM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1914-1979)

MEAN	158.2	164.3	154.2	119.1	101.9	101.2	177.7	330.0	369.6	275.1	138.8	108.9	183.7
MAXIMUM	361.0	363.0	341.0	346.0	279.0	305.0	323.0	493.0	568.0	481.0	281.0	285.0	244.0
MINIMUM	31.1	20.5	40.1	21.3	20.7	30.5	81.0	163.0	176.0	102.9	47.1	22.6	110.0
STD DEVIATION	75.92	82.56	76.64	73.06	64.22	52.63	57.70	76.76	90.75	102.92	60.15	50.52	34.36
SKEWNESS	0.491	0.633	0.938	1.235	1.059	1.895	0.641	0.204	0.251	0.307	0.761	1.121	-0.048
STD ERR SKEW	0.350	0.350	0.347	0.343	0.343	0.343	0.347	0.350	0.350	0.350	0.350	0.350	0.350
SER CORR COEFF	0.120	0.096	-0.166	-0.046	0.093	-0.007	-0.036	0.250	0.216	0.209	0.311	-0.023	0.047
COEFF OF VAR	0.480	0.503	0.497	0.613	0.630	0.520	0.325	0.233	0.246	0.374	0.433	0.464	0.187
MEAN LOGS	2.141	2.154	2.136	1.997	1.924	1.959	2.227	2.507	2.554	2.407	2.102	1.992	2.256
STD DEV LOGS	0.242	0.252	0.220	0.272	0.280	0.197	0.141	0.105	0.111	0.177	0.193	0.206	0.084
SKEWNESS LOGS	-0.760	-0.900	-0.252	-0.270	-0.105	0.349	-0.038	-0.439	-0.474	-0.595	-0.232	-0.415	-0.413
STD ERR SKEW LOGS	0.350	0.350	0.347	0.343	0.343	0.343	0.347	0.350	0.350	0.350	0.350	0.350	0.350
SER CORR LOGS	0.066	0.094	-0.099	0.020	0.134	0.067	-0.018	0.263	0.307	0.222	0.429	0.087	0.079
COEFF OF VAR LOGS	0.113	0.117	0.103	0.136	0.145	0.101	0.063	0.042	0.044	0.074	0.092	0.103	0.103
% OF AVE FLOW	7.2	7.5	7.0	5.4	4.6	4.6	8.1	15.0	16.8	12.5	6.3	5.0	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1914-1979)

0.99	28.0	25.6	38.2	20.5	17.9	35.5	78.7	169.5	180.9	82.9	41.6	28.3	108.4
0.95	49.8	48.4	57.3	33.9	28.6	45.2	98.7	209.8	227.8	122.5	59.1	42.8	128.4
0.90	65.7	65.5	70.5	43.9	36.5	51.8	111.3	233.4	255.4	148.3	70.8	52.6	139.7
0.80	89.4	91.2	89.8	59.3	49.0	61.7	128.6	263.8	291.2	184.0	87.4	66.7	154.0
0.50	148.5	155.3	139.6	102.3	84.8	88.6	169.2	326.8	365.6	265.6	126.6	101.4	182.9
0.20	223.3	234.0	210.5	169.4	144.6	132.0	221.9	394.8	445.2	362.1	184.7	147.2	213.0
0.10	266.5	277.3	257.9	217.2	190.0	165.1	255.5	431.7	489.8	416.8	221.0	175.7	229.0
0.04	313.6	322.5	317.5	279.9	252.8	212.2	296.6	471.6	536.7	476.7	265.8	209.4	246.1
0.02	343.8	350.2	361.4	327.6	303.3	251.2	326.4	497.4	567.0	515.8	298.3	233.0	257.1
0.01	370.3	373.5	404.8	376.0	356.7	293.6	355.7	520.6	594.1	550.9	330.0	255.3	266.9

## STATION 12177500 STATATLE CREEK NEAR NEWHALEN, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1935	28.0	28.0	25.0	30.0	48.0	75.0	93.0	122.0	153.0
1936	15.0	15.0	15.0	16.0	20.0	47.0	61.0	64.0	71.0
1937	9.0	9.0	9.7	11.0	19.0	28.0	34.0	43.0	47.0
1938	25.0	26.0	28.0	29.0	33.0	48.0	65.0	103.0	127.0
1939	30.0	30.0	31.0	32.0	35.0	49.0	68.0	80.0	103.0
1940	30.0	32.0	35.0	42.0	59.0	70.0	101.0	126.0	152.0
1941	25.0	26.0	30.0	41.0	43.0	48.0	64.0	88.0	109.0
1942	25.0	26.0	27.0	32.0	35.0	43.0	46.0	78.0	123.0
1943	15.0	17.0	18.0	19.0	23.0	27.0	30.0	38.0	75.0
1944	20.0	21.0	24.0	27.0	44.0	66.0	65.0	78.0	76.0
1945	24.0	26.0	27.0	29.0	45.0	62.0	87.0	94.0	101.0
1946	27.0	28.0	29.0	32.0	44.0	66.0	73.0	91.0	107.0
1947	23.0	26.0	26.0	30.0	37.0	70.0	80.0	89.0	101.0
1948	23.0	23.0	25.0	28.0	38.0	49.0	58.0	82.0	113.0
1949	24.0	24.0	24.0	25.0	29.0	35.0	46.0	57.0	79.0
1950	31.0	32.0	36.0	36.0	72.0	78.0	88.0	102.0	152.0
1951	40.0	40.0	40.0	43.0	51.0	140.0	142.0	169.0	203.0
1952	23.0	23.0	25.0	25.0	27.0	45.0	56.0	59.0	91.0
1953	20.0	21.0	21.0	22.0	32.0	40.0	42.0	50.0	87.0
1954	34.0	36.0	38.0	42.0	63.0	99.0	99.0	116.0	149.0
1955	26.0	27.0	27.0	28.0	30.0	44.0	46.0	62.0	129.0
1956	18.0	18.0	19.0	22.0	26.0	31.0	41.0	61.0	132.0
1957	19.0	20.0	21.0	23.0	25.0	43.0	74.0	110.0	144.0
1958	29.0	30.0	34.0	50.0	61.0	75.0	84.0	90.0	102.0
1959	36.0	36.0	38.0	41.0	56.0	73.0	103.0	133.0	171.0
1960	25.0	25.0	27.0	30.0	39.0	85.0	74.0	96.0	158.0
1961	40.0	42.0	47.0	58.0	69.0	88.0	108.0	136.0	153.0
1962	28.0	29.0	30.0	33.0	37.0	95.0	126.0	120.0	140.0
1963	23.0	25.0	29.0	36.0	78.0	133.0	137.0	164.0	169.0
1964	34.0	35.0	38.0	47.0	61.0	71.0	87.0	115.0	140.0
1965	28.0	28.0	30.0	36.0	50.0	92.0	107.0	109.0	130.0
1966	36.0	37.0	38.0	43.0	45.0	62.0	69.0	90.0	114.0
1967	39.0	41.0	45.0	50.0	56.0	83.0	100.0	132.0	154.0
1968	40.0	41.0	44.0	58.0	80.0	121.0	170.0	177.0	180.0
1969	23.0	23.0	24.0	24.0	25.0	30.0	56.0	72.0	105.0
1970	33.0	34.0	35.0	39.0	64.0	74.0	85.0	91.0	100.0
1971	30.0	31.0	36.0	41.0	46.0	85.0	83.0	94.0	98.0
1972	33.0	33.0	34.0	38.0	45.0	61.0	77.0	95.0	106.0
1973	30.0	32.0	34.0	39.0	47.0	61.0	71.0	101.0	95.0
1974	30.0	31.0	33.0	40.0	65.0	77.0	112.0	126.0	139.0
1975	26.0	28.0	33.0	36.0	43.0	62.0	74.0	101.0	102.0
1976	34.0	35.0	36.0	39.0	52.0	73.0	102.0	152.0	191.0
1977	31.0	32.0	34.0	41.0	70.0	86.0	96.0	100.0	102.0
1978	31.0	33.0	37.0	42.0	50.0	66.0	72.0	113.0	137.0
1979	16.0	17.0	17.0	19.0	20.0	28.0	36.0	65.0	95.0

## STATION 12177500 STETATLE CREEK NEAR NEWHALEM, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1935-1979)

MEAN	27.3	28.2	30.1	34.4	45.3	66.3	79.7	98.4	122.3
MAXIMUM	40.0	42.0	47.0	58.0	80.0	140.0	170.0	177.0	203.0
MINIMUM	9.0	9.0	9.7	11.0	19.0	27.0	29.76	38.0	47.0
STANDARD DEVIATION	7.10	7.29	7.95	10.32	16.10	26.27	29.76	32.23	33.90
SKEWNESS	-0.229	-0.244	-0.235	0.121	0.282	0.769	0.730	0.438	0.265
STD ERROR OF SKEWNESS	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354
SERIAL CORR COEFF	0.292	0.282	0.292	0.258	0.041	0.159	0.201	0.118	0.125
COEFF OF VARIATION	0.260	0.258	0.264	0.300	0.356	0.396	0.373	0.327	0.277
MEAN LOGS	1.419	1.434	1.461	1.514	1.627	1.788	1.871	1.969	2.070
STD DEVIATION LOGS	0.130	0.129	0.133	0.145	0.165	0.178	0.168	0.151	0.127
SKEWNESS LOGS	-1.250	-1.327	-1.290	-0.921	-0.406	-0.285	-0.347	-0.494	-0.578
STD ERR SKEWNESS LOGS	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354	0.354
SER CORR COEFF LOGS	0.323	0.320	0.331	0.326	0.112	0.186	0.252	0.157	0.172
COEFF OF VAR LOGS	0.091	0.090	0.091	0.096	0.102	0.099	0.090	0.076	0.062

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1935-1979)

0.99	40.1	40.8	44.2	56.7	91.6	145.6	165.5	183.6	205.0
0.98	39.3	40.1	43.4	55.7	85.0	133.2	152.8	172.6	195.4
0.96	38.3	39.1	42.3	52.2	78.0	120.3	139.4	160.4	184.5
0.90	36.2	37.2	40.0	47.9	67.6	102.1	120.0	142.0	167.5
0.80	33.8	34.8	37.3	43.5	58.6	86.9	103.4	125.3	151.1
0.50	27.9	28.9	30.8	34.4	43.4	62.5	76.0	95.8	120.9
0.20	21.2	21.9	23.2	25.3	31.0	43.8	54.1	70.4	92.9
0.10	17.6	18.2	19.2	20.9	25.6	35.9	44.7	58.9	79.6
0.05	14.8	15.3	16.1	17.5	21.7	30.3	38.0	50.4	69.5
0.02	11.9	12.2	12.8	14.1	17.9	24.9	31.3	41.9	59.0
0.01	10.2	10.4	10.9	12.1	15.6	21.7	27.4	36.8	52.6

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1935-1979)

P95	P90	P75	P70	P50	P25	P10
35.0	44.0	70.0	79.0	130.0	250.0	410.0

STATION 12177500 STETATTLE CREEK NEAR NEWHALEM, WASH.												
HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30												
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	DATE	REG. (R)
1934	1430.	1070.	772.	550.	358.	333.	317.	287.	265.	2020.	10/23/33	
1935	2330.	1690.	982.	650.	382.	319.	297.	260.	239.	5640.	11/05/34	
1936	652.	582.	515.	441.	405.	351.	357.	301.	222.	1010.	06/02/36	
1937	718.	590.	521.	450.	437.	374.	319.	275.	212.	1370.	06/18/37	
1938	1880.	1090.	615.	489.	434.	400.	361.	310.	233.	3220.	10/28/37	
1939	1360.	841.	571.	429.	371.	347.	295.	234.	197.	2560.	05/28/39	
1940	694.	633.	479.	405.	322.	275.	245.	226.	197.	1130.	11/30/39	
1941	1130.	970.	622.	402.	260.	204.	183.	164.	142.	1940.	10/19/40	
1942	1370.	757.	503.	381.	316.	284.	226.	206.	153.	2680.	12/02/41	
1943	678.	566.	550.	513.	431.	395.	350.	322.	256.	870.	06/17/43	
1944	896.	519.	519.	271.	245.	220.	188.	165.	139.	1510.	12/03/43	
1945	1120.	746.	509.	401.	373.	331.	294.	247.	198.	1980.	02/07/45	
1946	2210.	1280.	689.	507.	477.	427.	382.	344.	267.	3210.	10/25/45	
1947	700.	633.	486.	405.	374.	348.	322.	287.	242.	1740.	10/24/46	
1948	963.	841.	778.	684.	616.	464.	382.	332.	262.	2730.	10/19/47	
1949	820.	804.	781.	633.	538.	445.	398.	364.	283.	1740.	10/06/48	
1950	2370.	1590.	1000.	605.	556.	476.	419.	365.	287.	8580.	11/26/49	
1951	2900.	1700.	869.	476.	432.	373.	325.	298.	252.	3300.	02/10/51	
1952	882.	651.	497.	421.	414.	355.	326.	282.	221.	1480.	06/04/52	
1953	1350.	1010.	676.	458.	407.	344.	330.	295.	242.	1820.	09/30/53	
1954	1260.	876.	590.	563.	557.	457.	441.	395.	315.	1710.	10/30/53	
1955	1090.	852.	722.	562.	471.	439.	394.	333.	254.	1620.	11/22/54	
1956	2060.	1190.	755.	669.	547.	485.	434.	390.	310.	4330.	10/25/55	
1957	1070.	734.	681.	540.	438.	395.	336.	294.	237.	1710.	10/20/56	
1958	660.	640.	616.	525.	440.	381.	314.	266.	218.	1100.	10/30/57	
1959	1320.	998.	600.	480.	456.	429.	410.	365.	316.	2050.	12/02/58	
1960	1240.	1000.	718.	504.	435.	375.	337.	308.	247.	1690.	11/24/59	
1961	1500.	968.	751.	613.	578.	479.	397.	337.	285.	1850.	01/15/61	
1962	1030.	655.	485.	462.	395.	346.	314.	290.	238.	1390.	10/12/61	
1963	1620.	927.	583.	387.	353.	293.	250.	217.	197.	4020.	11/19/62	
1964	1160.	720.	566.	542.	460.	432.	393.	351.	282.	2150.	10/21/63	
1965	640.	551.	454.	419.	373.	339.	310.	281.	221.	780.	11/30/64	
1966	804.	580.	512.	402.	351.	328.	313.	287.	232.	1550.	10/06/65	
1967	1310.	1080.	850.	642.	562.	484.	408.	346.	260.	1980.	12/16/66	
1968	1580.	1080.	746.	477.	417.	392.	340.	272.	218.	3660.	10/27/67	
1969	712.	659.	596.	549.	517.	428.	356.	308.	245.	1130.	09/23/69	
1970	657.	583.	512.	385.	362.	313.	268.	233.	185.	901.	06/03/70	
1971	1020.	701.	633.	587.	491.	438.	444.	403.	308.	1400.	01/19/71	
1972	1190.	910.	688.	666.	598.	519.	480.	418.	360.	1990.	07/12/72	
1973	685.	581.	495.	376.	336.	307.	275.	245.	189.	959.	12/19/72	
1974	2020.	1460.	856.	687.	578.	512.	434.	401.	324.	3020.	01/16/74	
1975	959.	725.	704.	570.	458.	436.	393.	337.	252.	1730.	12/21/74	
1976	1810.	1460.	797.	499.	410.	390.	371.	352.	285.	2430.	12/04/75	
1977	1220.	644.	369.	321.	277.	236.	209.	195.	156.	1850.	01/18/77	
1978	1160.	809.	650.	485.	385.	335.	299.	240.	208.	6250.	11/01/77	
1979	1220.	752.	529.	383.	353.	317.	290.	244.	208.	2950.	11/07/78	

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1934-1979)

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1934-1979)										W R C ESTIMATE		SYSTEMATIC RECORD	
MEAN	1248.9	882.8	634.6	497.1	429.3	377.4	338.6	299.8	243.3				
MAXIMUM	2900.0	1700.0	1000.0	687.0	616.0	519.0	480.0	418.0	360.0				
MINIMUM	640.0	519.0	314.0	271.0	243.0	204.0	164.0	164.0	139.0				
STANDARD DEVIATION	531.12	311.63	149.07	101.95	90.40	75.91	69.36	60.97	47.91				
SKENNESS	1.146	0.401	0.401	0.153	0.229	-0.227	-0.246	-0.205	-0.064				
STD ERROR OF SKEWNESS	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350				
SERIAL CORR COEFF	-0.035	-0.020	0.187	0.097	0.162	0.194	0.193	0.148	0.078				
COEFF OF VARIATION	0.4425	0.3353	0.2335	0.205	0.211	0.201	0.205	0.203	0.177				
MEAN LOGS	3.062	2.923	2.791	2.687	2.623	2.567	2.520	2.467	2.377				
STD DEVATION LOGS	0.173	0.104	0.104	0.092	0.094	0.094	0.096	0.095	0.091				
SKENNESS LOGS	-0.309	-0.588	-0.298	-0.332	-0.311	-0.770	-0.844	-0.795	-0.699				
STD ERR SKEWNESS LOGS	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350	0.350				
SERIAL CORR COEFF LOGS	-0.062	-0.040	0.145	0.084	0.196	0.231	0.220	0.174	0.123				
COEFF OF VAR LOGS	0.057	0.048	0.037	0.034	0.036	0.036	0.038	0.038	0.038				
HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1934-1979)													
0.99	499.6	455.1	335.7	283.3	242.1	198.8	173.4	156.0	132.3				750.9
0.95	522.9	522.3	408.4	337.7	289.1	248.7	219.9	196.2	163.1				868.5
0.90	702.1	567.9	451.2	369.1	316.4	276.9	246.2	219.0	180.5				1038.8
0.80	820.5	634.7	506.8	409.3	351.5	311.9	278.8	247.3	202.2				1283.3
0.50	1129.4	810.8	624.7	492.3	424.5	379.6	341.4	301.8	244.2				1971.5
0.20	1600.5	1083.0	757.3	582.5	504.6	444.3	400.1	353.6	285.1				3093.2
0.10	1943.3	1293.7	832.0	632.1	549.0	470.5	427.7	378.4	305.2				4011.6
0.04	2412.2	1561.5	915.3	686.3	597.9	506.1	454.4	402.6	325.2				5154.7
0.02	2787.7	1786.8	971.1	722.0	630.3	524.2	469.8	416.8	337.3				6896.1
0.01	3186.3	2028.4	1022.3	754.4	659.8	539.3	482.4	428.6	347.5				8493.0

### HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1934-1979)



## STATION 12177520 PYRAMID CR NR NEWHALEM WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1971	110.0	1-19-1971
1972	133.0	5-29-1972
1973	190.0	12-26-1972
1974	215.0	1-16-1974
1975	114.0	2-21-1975

## STATION 12178000 SKAGIT RIVER AT NEWHALEM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1909				1981	1593	1739	3017	7271	14090	8168	3956	2823	
1910	2152	7878	664	2046	1660	4655	8065	14790	10400	8274	3893	2165	5872
1911	5955	6602	2936	1686	1023	1884	3638	7885	13910	7885	3877	2889	5025
1912	1252	1881	1624	1556	2272	1206	2890	9286	10950	5646	3569	1675	3651
1913	1226	2211	1528	1086	1517	1517	4043	9874	15890	8946	4480	3427	4652
1914	2863	3067	1859	4085	1430	3081	5898	9726					
1921	5735	2661	2314	2811	3968	3352	3812	11390	17590	8556	4159	2724	5761
1922	4681	4169	7684	1527	938	809	2288	8853	14590	5963	3680	2689	4842
1923	2151	1462	2510	2845	1187	1478	5528	9594	11750	8235	3798	2248	4416
1924	1440	1091	2180	1436	6272	2014	2344	12400	7699	4929	2928	2093	3896
1925	2900	2660	5665	2146	3478	2245	5853	13540	10470	6525	3198	1718	5044
1926	863	851	3174	1680	1670	1923	4808	4890	4270	3502	2643	1443	2650
1927	3215	1845	2411	1834	1257	1427	3269	7357	13740	3687	3687	3628	4185
1928	4548	4331	3550	5210	1939	2674	3067	12380	7674	5341	2590	1785	4609
1929	3251	1593	1297	771	598	1214	2165	8585	9191	4483	2722	1471	3125
1930	1161	606	767	744	3105	2583	7397	6617	7866	5155	2520	1467	3323
1931	1420	1420	1110	1746	2523	2848	3694	9926	7714	4106	2306	2539	3449
1932	1872	1951	1791	1645	4680	4464	5713	9710	11600	5677	3284	2051	4527
1933	1968	6409	3832	2189	1945	1712	3280	7490	14650	11530	5346	3086	5297
1934	6027	5706	5829	5050	5995	12300	11500	8352	8352	5325	3373	2237	6304
1935	2025	5684	3224	5695	5792	3070	2440	7419	10500	6952	3263	1961	4906
1936	2103	1131	1168	1279	930	1594	5679	12010	9211	4105	2664	1929	3658
1937	1254	723	1290	1162	927	1157	2869	8220	14330	6517	2734	2077	3611
1938	2293	3717	3406	2576	1309	2360	4927	10790	11950	5855	2409	2008	4480
1939	1538	1459	2078	3175	1258	2139	5556	9779	7917	6195	3047	1694	3837

## STATION 12178000 SKAGIT RIVER AT NEWHALEM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1940	1907	2322	5011	2248	2051	3314	3822	6803	6033	3135	2251	2128	3424
1941	3638	1966	2222	1870	1815	2416	3815	5021	4858	3158	2519	2605	3003
1942	3892	3428	4732	2338	2089	1440	2930	5122	4785	3158	2693	1626	3547
1943	1181	1907	2155	2145	2056	3033	5670	7540	11800	10240	3792	2399	4503
1944	2362	1077	1392	1346	1393	1531	2768	5028	6970	3576	2576	2656	2687
1945	2420	1785	2220	2271	3504	2051	2209	7740	12210	11430	3133	2451	3648
1946	2776	3452	1891	2307	1537	2286	3683	12610	11430	7305	3133	1947	4548
1947	1524	1406	2315	1954	2281	4959	4845	6496	9103	4765	2702	2279	3723
1948	5216	3433	5203	4317	2031	1404	2731	4389	8613	7194	4441	3628	4394
1949	3867	3377	3701	4596	4278	3451	3813	6745	4191	4776	5120	3884	4322
1950	4120	4416	5825	5082	7647	6769	4938	5004	6643	10640	4910	3660	5797
1951	3555	4946	7288	6757	7138	3999	7732	8060	5140	6501	3616	3666	5675
1952	5060	5299	4516	4327	4488	2860	7322	2039	2316	3555	3147	2644	3545
1953	3891	4153	4209	3302	3190	3073	3788	4205	4365	6776	4299	3124	3936
1954	4720	4807	5676	4618	5477	5498	5804	7208	6671	9855	6392	4196	5920
1955	3795	7563	4916	4710	4529	4578	4337	4269	4644	7557	4340	3184	4870
1956	5575	7670	4561	4495	4737	4591	5387	7230	9529	7430	4192	3834	5784
1957	5049	4586	5614	5731	5121	4623	3996	4772	6080	4279	2487	3415	4635
1958	3560	3910	3929	4400	3779	4026	2710	3439	5575	3843	2853	3113	3761
1959	4799	5349	6862	6439	5687	5289	5922	5472	5917	8642	4049	4209	5724
1960	6918	6695	5797	5413	4816	3612	4456	4495	5311	6006	4246	2409	5019
1961	3807	4189	4487	4586	4044	3389	4136	5698	13390	6389	3539	3000	5050
1962	3301	4096	4475	4832	4713	3951	3192	2836	3140	5245	3648	2118	3795
1963	3322	5198	5247	5098	4071	3668	4332	5117	6875	10130	3484	3098	4379
1964	3932	5664	4882	4799	4855	4843	4539	5361	7376	6476	3955	1952	5345
1965	4002	4408	5054	3848	3910	3484	4080	3773	6100	6476	3467	2662	4328
1966	3116	4068	5196	5671	4910	4576	3835	3134	2974	7585	3842	3256	5154
1967	3318	4640	4789	4662	4486	4362	4207	3546	13240	4280	3525	3560	5604
1968	4638	6280	5089	5766	5164	5534	5269	3520	10600	8283	3252	3089	4304
1969	2916	3691	6058	6165	4919	3831	3850	3935	6188	4432	2625	3095	3609
1970	3055	3841	4745	5219	4275	4409	2928	1513	2904	4000	3523	2895	3404
1971	2174	2667	4281	4800	4630	4579	3008	4850	10730	10890	5058	2682	5035
1972	2599	3087	4540	6075	5120	3906	5104	4850	17110	12490	5861	3357	6269
1973	2750	2378	4578	5278	3401	3754	2476	5416	17110	12490	5861	3357	6269
1974	2020	3551	4494	5542	5807	6783	5433	3658	10170	10720	3292	1755	3195
1975	2217	2938	3683	4473	6918	5720	4454	2501	5061	6645	3462	2296	4181
1976	3391	7081	8329	4470	5094	6098	5538	6767	6773	10060	6770	3684	6157
1977	2096	3734	4900	6875	3923	4798	2811	2286	2031	1729	1750	1427	3198
1978	1419	2341	5504	5377	5328	4456	2884	2115	4936	6189	3958	3551	4000
1979	2407	5060	4948	5690	3472	2515	2273	2585	2640	3161	3100	2867	3394

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1940-1979)

MEAN	3407.6	4061.5	4617.3	4506.8	4221.4	3993.1	4300.1	4905.0	6904.6	6435.1	3785.4	2902.4	4482.4
MAXIMUM	6918.0	7670.0	8329.0	6875.0	7647.0	6783.0	7732.0	12610.0	17110.0	12490.0	6770.0	4209.0	6269.0
MINIMUM	1181.0	1077.0	1392.0	1346.0	1393.0	1404.0	2209.0	1513.0	2031.0	1729.0	1750.0	420.0	2687.0
STD DEVIATION	1234.55	1616.30	1448.30	1440.58	1483.41	1329.06	1225.59	2156.14	3441.82	2651.92	1164.03	703.18	967.18
SKEWNESS	0.494	0.390	-0.203	-0.681	-0.037	-0.026	0.677	1.106	0.887	0.479	0.768	-0.126	0.194
STD ERR SKEW	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374
SER CORR COEFF	0.411	0.489	0.311	0.706	0.567	0.358	-0.113	0.157	-0.032	-0.129	0.074	0.117	0.001
COEFF OF VAR	0.362	0.398	0.314	0.320	0.354	0.333	0.304	0.440	0.498	0.412	0.308	0.242	0.216
MEAN LOGS	3.503	3.571	3.638	3.625	3.593	3.573	3.586	3.650	3.785	3.770	3.559	3.449	3.641
STD DEV LOGS	0.169	0.194	0.165	0.176	0.181	0.168	0.132	0.195	0.226	0.190	0.132	0.113	0.095
SKEWNESS LOGS	-0.531	-0.749	-1.287	-1.283	-0.932	-1.006	-0.024	-0.310	-0.296	-0.409	-0.039	-0.666	-0.148
STD ERR SKEW LOGS	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374
SER CORR LOGS	0.385	0.469	0.289	0.789	0.622	0.381	-0.091	0.108	-0.086	-0.134	0.097	0.069	0.026
COEFF OF VAR LOGS	0.048	0.054	0.045	0.048	0.050	0.047	0.037	0.054	0.037	0.054	0.037	0.037	0.037
% DF AVE FLOW	6.3	7.6	8.6	8.4	7.9	7.4	7.5	9.1	12.8	12.0	7.0	5.4	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1940-1979)

0.99	1111.5	1037.9	1284.8	1153.9	1133.4	1157.6	1894.5	1417.2	1622.3	1866.0	1767.4	1353.4	2567.9
0.95	1592.6	1643.0	2091.0	1935.4	1802.4	1806.9	2336.8	2052.1	2422.1	2731.7	2186.6	1752.4	3026.1
0.90	1901.6	2044.9	2610.7	2450.2	2243.0	2225.5	2812.1	2476.4	3082.1	3306.3	2447.4	1986.3	3296.0
0.80	2326.5	2619.3	3303.1	3146.0	2948.7	2990.8	3689.0	3082.9	3674.6	4119.9	2802.2	2286.1	3484.5
0.50	3291.8	3931.6	4703.7	4581.9	4176.2	3984.2	5050.6	4551.7	6252.6	6069.8	3626.4	2896.7	4403.5
0.20	4436.7	5455.3	5979.0	5916.0	5590.3	5205.6	6764.4	6517.7	8572.4	8572.4	4678.1	3518.3	5275.0
0.10	5091.4	6289.2	6520.4	6489.2	6301.3	5791.3	7810.5	7810.5	11059.8	10102.9	5334.2	3837.3	5779.8
0.04	5819.0	7172.4	6979.2	6978.5	7001.7	6348.5	6536.4	9332.7	14353.9	11895.6	6139.9	4164.2	6357.2
0.02	6299.2	7726.6	7210.0	7226.0	7411.8	6664.2	7155.3	10417.7	16325.2	13136.3	6717.7	4365.4	7122.7
0.01	6734.5	8207.3	7376.6	7405.2	7747.8	6916.1	7760.5	11462.8	18261.0	14303.3	7281.5	4538.5	

## STATION 1217R000 SKAGIT RIVER AT NEWHALEM, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1941	1180.0	1410.0	1540.0	1580.0	1640.0	1860.0	1870.0	1950.0	2260.0
1942	836.0	1150.0	1250.0	1310.0	1430.0	1750.0	1950.0	2540.0	3000.0
1943	698.0	846.0	948.0	977.0	1080.0	1270.0	1530.0	1700.0	1840.0
1944	318.0	636.0	779.0	916.0	1070.0	1210.0	1260.0	1280.0	1520.0
1945	386.0	715.0	993.0	1210.0	1660.0	1860.0	2010.0	2160.0	2240.0
1946	1070.0	1090.0	1150.0	1170.0	1470.0	1850.0	1910.0	2000.0	2360.0
1947	1150.0	1240.0	1280.0	1300.0	1350.0	1450.0	1540.0	1740.0	1870.0
1948	758.0	909.0	1090.0	1160.0	1340.0	1710.0	2580.0	3250.0	3620.0
1949	1330.0	1450.0	1570.0	1690.0	2730.0	3500.0	3620.0	3640.0	3870.0
1950	1310.0	2010.0	3120.0	3280.0	3680.0	3920.0	3980.0	4300.0	4390.0
1951	1420.0	2260.0	2750.0	3180.0	3510.0	3570.0	3790.0	4150.0	5180.0
1952	702.0	2060.0	2450.0	2600.0	2850.0	3600.0	3790.0	4150.0	4410.0
1953	1070.0	1100.0	1650.0	1830.0	2030.0	2130.0	2210.0	2530.0	2670.0
1954	1270.0	1510.0	2380.0	2710.0	2850.0	3600.0	3940.0	4170.0	4440.0
1955	2460.0	2800.0	3450.0	3690.0	3770.0	3920.0	4370.0	4860.0	4940.0
1956	1180.0	1680.0	2390.0	2800.0	3030.0	3390.0	3920.0	4580.0	4690.0
1957	1100.0	1520.0	2720.0	3220.0	3600.0	3990.0	4350.0	4410.0	4820.0
1958	1160.0	1400.0	1850.0	2060.0	2370.0	2930.0	3110.0	3320.0	3580.0
1959	1190.0	1670.0	1910.0	2300.0	2460.0	2960.0	3280.0	3590.0	3580.0
1960	1230.0	1600.0	2030.0	2340.0	3500.0	3920.0	4610.0	4830.0	5500.0
1961	1150.0	1200.0	1250.0	1370.0	2240.0	3060.0	3440.0	3640.0	3910.0
1962	1130.0	1200.0	1350.0	2080.0	2530.0	3020.0	3240.0	3440.0	3860.0
1963	1070.0	1260.0	1670.0	1950.0	2120.0	2670.0	2920.0	3370.0	3370.0
1964	1520.0	1970.0	2500.0	2720.0	2910.0	2990.0	3290.0	3650.0	4260.0
1965	1640.0	2250.0	2920.0	3000.0	3140.0	3590.0	3740.0	3960.0	4150.0
1966	1110.0	1130.0	1710.0	1800.0	1900.0	2380.0	2920.0	3250.0	3930.0
1967	1010.0	1210.0	1930.0	2190.0	2500.0	2720.0	3100.0	3430.0	3360.0
1968	980.0	1590.0	2320.0	2650.0	3040.0	3230.0	3700.0	4430.0	4760.0
1969	1010.0	1870.0	2270.0	2620.0	2820.0	3140.0	3180.0	3390.0	4200.0
1970	963.0	1380.0	2040.0	2250.0	2340.0	2720.0	2880.0	3070.0	3580.0
1971	1030.0	1060.0	1110.0	1280.0	1320.0	1690.0	2280.0	2660.0	2780.0
1972	1110.0	1290.0	1840.0	2040.0	2080.0	2550.0	2750.0	3070.0	4020.0
1973	1100.0	1440.0	2040.0	2130.0	2320.0	2530.0	2810.0	3270.0	3630.0
1974	1060.0	1110.0	1330.0	1620.0	1700.0	1860.0	2250.0	2590.0	2580.0
1975	1020.0	1120.0	1730.0	1880.0	1900.0	2120.0	2490.0	2810.0	3490.0
1976	1020.0	1250.0	1670.0	1880.0	2130.0	2520.0	3000.0	3760.0	3820.0
1977	1030.0	1190.0	1470.0	1740.0	1970.0	2540.0	3090.0	3570.0	4180.0
1978	1400.0	1410.0	1410.0	1410.0	1420.0	1420.0	1480.0	1560.0	1690.0
1979	1030.0	1290.0	1840.0	1950.0	2030.0	2450.0	3170.0	3660.0	3840.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1941-1979)

MEAN	1107.7	1417.3	1839.5	2048.3	2305.1	2656.2	2960.0	3270.3	3594.6
MAXIMUM	2460.0	2800.0	3450.0	3690.0	3770.0	3990.0	4610.0	4830.0	5500.0
MINIMUM	318.0	636.0	779.0	916.0	1070.0	1210.0	1260.0	1280.0	1520.0
STANDARD DEVIATION	339.90	443.52	634.02	697.80	761.92	817.50	868.92	916.66	1003.70
SKEWNESS	1.200	1.014	0.583	0.414	0.274	-0.051	-0.166	-0.425	-0.409
STD ERROR OF SKEWNESS	0.378	0.454	0.567	0.605	0.595	0.378	0.378	0.378	0.378
SERIAL CORR COEFF	0.336	0.313	0.345	0.378	0.378	0.308	0.294	0.280	0.279
COEFF OF VARIATION	0.307	0.313	0.345	0.378	0.331	0.308	0.294	0.280	0.279
MEAN LOGS	3.023	3.132	3.239	3.286	3.338	3.402	3.450	3.494	3.536
STD DEVIATION LOGS	0.148	0.132	0.152	0.153	0.151	0.146	0.142	0.141	0.140
SKEWNESS LOGS	-1.457	-0.028	-0.158	-0.235	-0.298	-0.538	-0.755	-1.049	-0.994
STD ERR SKEWNESS LOGS	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378
SER CORR COEFF LOGS	0.466	0.538	0.629	0.654	0.632	0.619	0.595	0.533	0.458
COEFF OF VAR LOGS	0.049	0.042	0.047	0.047	0.045	0.043	0.041	0.040	0.040

STATION 12178000 SKAGIT RIVER AT NEWHALEM, WASH.

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1941-1979)

0.99	1632.1	2736.5	3763.8	4129.7	4523.7	4818.2	5033.5	5178.7	5738.0
0.98	1608.4	2522.4	3458.3	3811.9	4199.0	4549.5	4817.0	5029.5	5560.8
0.96	1573.0	2383.4	3182.8	3474.5	3854.6	4249.5	4562.5	4838.8	5337.8
0.90	1496.3	2000.4	2701.5	3006.8	3356.7	3787.8	4144.9	4492.9	4941.3
0.80	1397.6	1751.5	2335.7	2608.3	2929.2	3363.9	3735.3	4117.7	4519.3
0.50	1141.1	1356.4	1751.0	1958.2	2216.7	2599.4	2938.2	3301.8	3619.6
0.20	830.8	1048.4	1295.6	1441.8	1636.9	1925.1	2180.6	2444.4	2689.7
0.10	668.4	915.5	1101.0	1218.8	1383.2	1616.5	1820.5	2017.7	2229.5
0.05	542.7	818.3	959.9	1056.5	1197.2	1386.1	1547.6	1689.8	1876.1
0.02	415.8	720.8	820.1	895.4	1011.8	1153.8	1270.2	1355.1	1514.8
0.01	341.4	662.2	737.1	799.7	901.4	1014.6	1103.7	1154.9	1297.9

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1941-1979)

P95	P90	P75	P70	P50	P25	P10
1500.0	1900.0	2800.0	3000.0	4100.0	5400.0	7300.0

## STATION 12178000 SKAGIT RIVER AT NEWHALEM, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	DATE	REG. (H)
1815	13200.	12300.	10200.	8710.	7600.	6500.	5640.	5110.	4230.	115000.	/ /15	
1856	13500.	10800.	7900.	5690.	5350.	5160.	4670.	4290.	3710.	95000.	/ /56	
1898	14700.	12300.	10000.	9740.	8300.	6950.	5800.	5180.	4100.	48000.	11/19/97	
1909	17000.	16400.	15600.	13900.	12900.	11800.	9950.	8920.	7040.	26900.	06/02/09	
1910	9550.	9020.	8170.	7750.	7180.	6050.	5210.	4650.	3850.	63500.	11/29/09	
1911	18600.	17100.	14400.	12200.	10300.	8900.	7510.	6330.	5000.	25500.	06/14/11	
1912	22600.	21200.	18800.	16400.	14400.	12300.	10700.	8990.	6760.	19800.	05/15/12	
1913	11200.	11000.	10800.	10400.	10100.	8030.	6880.	6690.	5500.	27900.	06/03/13	
1914	11900.	11600.	11300.	10700.	9960.	8130.	7050.	6220.	5170.	20700.	01/06/14	
1921	10000.	9820.	9320.	8560.	6870.	5550.	5310.	5270.	4770.	31400.	06/08/21	
1922	12700.	12300.	12200.	11800.	11500.	9120.	7480.	6940.	6940.	60000.	12/12/21	
1923	14400.	12900.	10300.	9240.	9000.	7990.	7370.	6880.	6870.	21400.	06/09/23	R
1924	8930.	7620.	6250.	5740.	5850.	5260.	5020.	4870.	4420.	31400.	02/12/24	R
1925	12500.	12200.	11400.	10700.	9900.	8670.	8270.	7650.	6980.	25400.	04/30/26	R
1926	16400.	15900.	13700.	10700.	10400.	8670.	8270.	7650.	6980.	9220.	04/30/26	R
1927	17900.	16900.	13100.	10500.	9770.	8950.	8240.	7500.	6520.	26000.	06/08/27	R
1928	13700.	13100.	12700.	11400.	10900.	9790.	8950.	8240.	7500.	27200.	05/21/28	R
1929	9770.	9580.	9180.	7980.	6520.	5710.	5500.	5360.	5170.	23600.	10/09/28	R
1930	7710.	7370.	6490.	6000.	5790.	4910.	4380.	4080.	3990.	13400.	06/11/30	R
1931	11500.	11100.	10600.	9890.	9450.	7400.	6830.	6540.	6190.	15500.	05/02/31	R
1932	11200.	11000.	10700.	9420.	7430.	7280.	6640.	6320.	5570.	45000.	02/27/32	R
1933	21900.	20500.	19400.	14600.	13800.	10300.	9580.	7470.	6190.	28200.	06/15/33	R
1934	9710.	7800.	6870.	5840.	5420.	4370.	4770.	4680.	4260.	25000.	04/23/34	R
1935	13000.	12600.	10900.	8690.	7750.	6540.	5350.	5120.	4760.	30300.	01/25/35	R
1936	12800.	10600.	10300.	8230.	7750.	5940.	5640.	5180.	4760.	22400.	05/31/36	R
1937	11300.	9160.	7150.	5940.	5770.	5640.	5350.	5120.	4760.	22500.	06/03/37	R
1938	31600.	29600.	25900.	20800.	15500.	10500.	7650.	7050.	6430.	24400.	10/28/37	R
1939	12000.	10700.	10200.	8590.	6910.	6140.	5740.	5410.	4910.	15100.	05/29/39	R
1940	7000.	6430.	5820.	5710.	5340.	5020.	4810.	4700.	4380.	17100.	05/23/40	R
1941	17900.	17100.	15200.	13300.	11200.	10900.	9460.	8050.	6580.	17100.	10/20/40	R
1971	24700.	24000.	22300.	20700.	17400.	15300.	12600.	10400.	8320.	17700.	06/29/50	R
1972	7560.	6870.	6630.	5810.	5340.	4980.	4470.	4280.	3730.	18300.	12/24/50	R
1973	20500.	18600.	16300.	14000.	12200.	10900.	9620.	8420.	7770.	12000.	10/29/51	R
1974	14600.	13100.	12200.	8480.	7300.	6410.	5770.	5480.	5200.	12000.	07/14/53	R
1975	24100.	23600.	19000.	12800.	10400.	8790.	8180.	7620.	6990.	19700.	07/16/55	R
1976	15300.	10900.	8350.	7070.	6980.	5880.	5400.	5200.	4510.	18600.	07/03/54	R
1977	10900.	10200.	9720.	7780.	6840.	5680.	5470.	5210.	4380.	20100.	07/16/55	R
1978	10900.	10200.	9720.	7780.	6840.	5680.	5470.	5210.	4380.	17500.	10/25/55	R
1979	8250.	7790.	7170.	6320.	5730.	5350.	5310.	4820.	4020.	10900.	06/07/57	R
										7930.	06/20/58	R
										11900.	07/02/59	R
										15000.	11/23/59	R
										24500.	06/07/61	R
										15300.	07/09/62	R
										20000.	12/16/62	R
										28900.	07/09/64	R
										17500.	07/08/65	R
										18800.	07/16/66	R
										36700.	06/21/67	R
										25600.	11/01/67	R
										17200.	12/20/68	R
										11100.	07/08/70	R
										22000.	06/19/71	R
										26600.	06/10/72	R
										12300.	12/08/72	R
										23500.	06/23/74	R
										19600.	07/12/75	R
										30900.	12/06/75	R
										24500.	01/05/77	R
										11700.	06/30/78	R
										12700.	01/03/79	R

## STATION 12178000 SKAGIT RIVER AT NEWHALEM, WASH.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1940-1979)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

MEAN	14634.5	13411.5	11880.2	10158.0	8905.2	7610.0	6747.2	6162.7	5412.7
MAXIMUM	31600.0	29600.0	25900.0	20800.0	17400.0	15300.0	12600.0	10400.0	8320.0
MINIMUM	7000.0	6430.0	5820.0	5640.0	5340.0	4870.0	4380.0	4080.0	3710.0
STANDARD DEVIATION	5525.25	5219.21	4583.77	3749.29	3029.58	2470.18	1905.07	1497.77	1222.34
SKWENESS	1.020	1.137	1.128	1.127	0.935	1.118	1.079	0.836	0.499
STD ERROR OF SKWENESS	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374
SERIAL CORR COEFF	0.008	-0.084	-0.141	-0.121	-0.125	-0.073	-0.135	-0.163	-0.168
COEFF OF VARIATION	0.378	0.389	0.386	0.369	0.340	0.319	0.282	0.243	0.226
MEAN LOGS	4.137	4.098	4.046	3.980	3.927	3.862	3.814	3.778	3.723
STD DEVIATION LOGS	0.156	0.159	0.158	0.152	0.140	0.128	0.114	0.101	0.096
SKWENESS LOGS	0.231	0.303	0.272	0.262	0.350	0.534	0.561	0.416	0.206
STD ERR SKWENESS LOGS	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374
SER CORR COEFF LOGS	-0.014	-0.110	-0.158	-0.148	-0.144	-0.103	-0.168	-0.174	-0.148
COEFF OF VAR LOGS	0.036	0.039	0.039	0.038	0.036	0.033	0.030	0.027	0.026

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1940-1979)

0.99	6315.3	5817.9	5132.1	4539.5	4336.3	4112.8	3941.8	3754.6	3260.8	7955.2
0.95	7778.4	7106.3	6293.8	5530.2	5141.1	4697.9	4424.0	4215.8	3716.8	10054.9
0.90	8735.4	7957.6	7058.3	6177.2	5666.4	5086.8	4742.4	4509.1	3996.4	11379.1
0.80	10100.8	9182.8	8154.7	7099.3	6414.7	5648.4	5199.1	4917.7	4374.7	13203.9
0.50	13532.4	12312.7	10937.0	9413.8	8294.1	7089.5	6356.3	5902.8	5243.0	17492.8
0.20	18488.7	16946.7	15015.6	12755.0	11013.9	9236.1	8045.9	7248.6	6351.7	23076.9
0.10	21939.0	20241.4	17890.9	15081.7	12914.4	10771.2	9233.8	8146.3	7052.3	26627.8
0.04	26492.7	24685.8	21725.1	18154.7	15433.8	12845.3	10816.6	9294.0	7911.4	30979.0
0.02	30027.3	28154.5	24729.3	20542.4	17398.9	14490.9	12056.9	10161.4	8537.0	34137.2
0.01	33685.1	31810.7	27861.7	23015.7	19441.4	16225.3	13351.4	11041.1	9153.4	37234.8

STATION 12178100 NEWHALEM CREEK NR. NEWHALEM, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1961					236	127	141	327	538	267	102	87.1	
1962	165	119	117	202	150	48.7	150	183	361	270	165	99.5	169
1963	113	245	222	103	209	85.5	96.1	215	270	167	119	90.3	161
1964	153	233	193	136	170.9	62.3	119	263	494	445	234	159	213
1965	166	116	121	118	137	96.4	169	256	348	265	134	63.7	166
1966	116	156	104	74.5	50.3	99.9	167	270	320	289	106	63.2	151
1967	181	121	302	113	90.1	69.3	79.9	293	542	289	114	75.1	190
1968	351	154	161	256	204	137	90.9	227	431	284	118	140	213
1969	128	191	94.3	108	39.9	68.7	178	391	383	173	71.5	143	164
1970	104	106	84.4	93.2	105	67.8	95.2	195	372	161	60.8	93.7	128
1971	74.4	137	77.9	132	191	62.4	120	354	342	405	154	72.3	177
1972	99.9	126	53.9	78.8	130	290	164	448	500	476	236	163	231
1973	81.1	81.7	185	113	59.1	71.8	95.5	258	293	229	121	75.6	139
1974	147.1	140	158	232	67.6	141	150	267	594	419	221	95.5	220
1975	43.0	158	144	115	66.9	69.8	68.7	278	399	409	127	74.3	163
1976	194	277	495	157	80.7	48.7	110	319	312	382	254	126	231
1977	66.2	88.3	95.7	132	83.5	55.3	138	145	370	110	107	171.6	114
1978	55.7	223	247	90.1	82.4	137	102	181	362	248	110	192	169
1979	66.9	138	44.7	29.2	45.9	166	111	284	264	163	62.3	54.4	119

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1961-1979)

MEAN	128.3	156.1	160.6	126.8	110.5	100.2	123.4	271.3	389.2	286.2	137.7	102.1	173.2
MAXIMUM	351.0	277.0	495.0	256.0	236.0	290.0	178.0	448.0	594.0	476.0	254.0	192.0	231.0
MINIMUM	43.0	81.7	44.7	29.2	39.9	48.7	68.7	145.0	264.0	110.0	60.8	54.4	114.0
STD DEVIATION	71.66	55.76	107.70	55.85	60.97	58.02	33.02	75.20	100.67	108.56	58.73	39.78	36.71
SKEWNESS	1.766	0.845	1.933	0.939	0.845	2.124	0.159	0.576	0.656	0.238	0.822	0.919	0.139
SER ERR SKEW	0.536	0.536	0.536	0.536	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.536
SER CORR COEFF	0.135	-0.194	-0.177	-0.074	0.085	-0.179	-0.025	-0.043	-0.220	0.031	-0.026	-0.418	-0.365
COEFF OF VAR	0.558	0.357	0.671	0.440	0.552	0.579	0.268	0.277	0.259	0.379	0.426	0.390	0.212
MEAN LOGS	2.053	2.169	2.124	2.061	1.993	1.950	2.076	2.418	2.577	2.424	2.103	1.980	2.229
STD DEV LOGS	0.225	0.149	0.261	0.209	0.235	0.206	0.120	0.122	0.109	0.178	0.183	0.159	0.094
SKEWNESS LOGS	0.107	0.247	0.202	-0.983	0.197	0.866	-0.227	-0.186	0.307	-0.428	0.034	0.456	-0.232
STD ERR SKEW LOGS	0.536	0.536	0.536	0.536	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.536
SER CORR LOGS	0.121	-0.230	-0.110	0.065	0.064	-0.179	-0.253	-0.035	-0.204	-0.015	0.113	-0.416	-0.346
COEFF OF VAR LOGS	0.110	0.069	0.123	0.102	0.119	0.105	0.058	0.050	0.042	0.087	0.087	0.080	0.042
% OF AVE FLOW	6.1	7.7	7.7	6.1	5.3	4.8	5.9	13.0	18.6	13.7	6.6	4.9	100.0

MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1961-1979)

0.99	35.2	70.5	36.4	27.0	29.5	40.1	59.9	131.2	222.9	90.3	48.1	46.1	98.7
0.95	48.9	85.9	52.0	46.6	40.7	46.7	74.4	162.6	255.6	129.4	63.7	55.0	117.0
0.90	58.5	95.9	63.3	60.3	48.6	51.6	83.1	181.7	276.3	154.8	74.0	61.0	127.8
0.80	72.8	110.0	80.9	79.8	60.7	59.4	94.8	207.2	304.8	190.3	88.8	69.8	141.6
0.50	111.9	145.4	132.0	124.3	94.4	83.2	120.4	263.8	372.7	273.4	126.4	92.9	170.9
0.20	174.1	196.0	221.9	173.4	150.7	128.3	150.7	331.8	464.3	376.9	180.4	128.7	203.8
0.10	220.5	231.1	294.4	198.3	194.3	167.7	168.5	372.2	524.6	438.8	217.6	155.0	225.4
0.04	284.9	277.1	401.6	222.8	256.9	230.5	189.0	415.3	601.0	510.2	266.0	191.6	243.3
0.02	337.0	312.7	493.3	237.1	309.0	288.3	203.1	452.0	658.3	558.9	303.0	221.2	257.4
0.01	392.5	349.4	595.5	248.6	365.9	357.0	216.3	482.9	716.0	604.2	340.8	252.9	270.4

STATION 12179100 NEWHALEM CREEK NR. NEWHALEM, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1962	30.0	33.0	38.0	44.0	48.0	88.0	116.0	113.0	133.0
1963	20.0	21.0	25.0	31.0	64.0	105.0	112.0	141.0	154.0
1964	48.0	49.0	50.0	52.0	58.0	65.0	83.0	112.0	139.0
1965	40.0	41.0	42.0	45.0	54.0	101.0	103.0	114.0	130.0
1966	41.0	41.0	42.0	47.0	47.0	61.0	75.0	94.0	94.0
1967	43.0	44.0	47.0	50.0	53.0	66.0	91.0	116.0	145.0
1968	50.0	52.0	55.0	60.0	75.0	94.0	138.0	168.0	170.0
1969	29.0	29.0	30.0	31.0	33.0	41.0	65.0	77.0	103.0
1970	37.0	38.0	40.0	44.0	59.0	74.0	92.0	87.0	96.0
1971	28.0	31.0	34.0	36.0	44.0	74.0	75.0	81.0	87.0
1972	31.0	31.0	33.0	36.0	42.0	58.0	71.0	82.0	85.0
1973	39.0	40.0	42.0	46.0	54.0	68.0	82.0	108.0	99.0
1974	39.0	40.0	42.0	50.0	56.0	73.0	105.0	116.0	133.0
1975	30.0	30.0	32.0	34.0	38.0	52.0	84.0	100.0	99.0
1976	34.0	35.0	38.0	39.0	48.0	64.0	95.0	163.0	210.0
1977	36.0	38.0	41.0	45.0	55.0	68.0	79.0	81.0	87.0
1978	35.0	37.0	40.0	46.0	49.0	63.0	78.0	85.0	126.0
1979	25.0	25.0	26.0	27.0	28.0	34.0	39.0	59.0	82.0

LOWEST MEAN FLOW STATISTICS (YEARS 1962-1979)

MEAN	35.3	36.3	38.7	42.3	50.3	69.1	86.6	104.3	120.7
MAXIMUM	50.0	52.0	55.0	60.0	75.0	105.0	138.0	168.0	210.0
MINIMUM	20.0	21.0	25.0	27.0	28.0	34.0	39.0	59.0	82.0
STANDARD DEVIATION	7.79	8.02	7.82	8.53	11.12	18.84	22.76	30.00	34.71
SKEWNESS	0.063	0.068	0.079	-0.014	0.014	0.277	0.265	0.801	1.038
STD ERROR OF SKEWNESS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SERIAL CORR COEFF	0.031	-0.037	-0.114	-0.174	-0.261	-0.113	-0.011	0.006	-0.101
COEFF OF VARIATION	0.221	0.221	0.202	0.201	0.202	0.273	0.263	0.288	0.288
MEAN LOGS	1.537	1.549	1.579	1.618	1.691	1.823	1.922	2.002	2.066
STD DEVIATION LOGS	0.100	0.100	0.091	0.091	0.102	0.125	0.123	0.121	0.118
SKEWNESS LOGS	-0.539	-0.512	-0.448	-0.454	-0.745	-0.566	-0.846	0.203	0.512
STD ERR SKEWNESS LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
SER CORR COEFF LOGS	0.003	-0.072	-0.134	-0.205	-0.258	-0.133	0.007	0.069	-0.053
COEFF OF VAR LOGS	0.065	0.065	0.058	0.056	0.061	0.068	0.064	0.061	0.057

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1962-1979)

0.99	53.8	55.5	57.6	63.0	74.5	115.1	135.1	200.5	241.3
0.98	51.7	53.3	55.4	60.5	72.1	109.7	130.6	183.7	217.9
0.96	49.3	50.8	52.9	57.8	69.3	103.6	125.2	167.0	195.4
0.90	45.5	46.9	49.0	53.6	64.7	94.1	115.9	144.5	166.6
0.80	42.0	43.2	45.4	49.6	60.0	85.1	106.4	126.7	146.8
0.50	35.1	36.1	38.5	42.1	50.5	68.4	87.0	99.6	113.8
0.20	28.6	29.4	32.0	35.0	40.8	52.8	61.2	75.3	92.3
0.10	25.3	26.1	28.8	31.5	35.8	45.4	57.3	70.8	83.8
0.05	22.8	23.5	26.2	28.7	31.9	39.8	49.6	64.6	77.8
0.02	20.1	20.7	23.5	25.7	27.7	33.9	41.6	58.4	72.1
0.01	18.4	19.0	21.8	23.8	25.0	30.3	36.7	54.8	68.8

FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1962-1979)

P95	P90	P75	P70	P50	P25	P10
44.0	51.0	70.0	78.0	120.0	220.0	380.0



## STATION 12178100 NEWHALEM CREEK NH. NEWHALEM, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW (CFS) DATE REG. (R)
1961	910.	572.	468.	435.	367.	321.	287.	252.	205.	975. 06/17/61
1962	1700.	983.	548.	359.	330.	321.	287.	252.	205.	1230. 01/03/62
1963	832.	682.	616.	596.	523.	484.	426.	366.	174.	5600. 11/20/62
1964	900.	493.	461.	416.	376.	339.	303.	272.	214.	1700. 09/30/64
1965	1330.	941.	779.	639.	542.	459.	379.	314.	234.	855. 10/02/64
1966	1680.	1100.	624.	593.	532.	489.	401.	332.	287.	1350. 10/06/65
1967	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	2260. 12/16/66
1968	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	2950. 10/27/67
1969	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	1570. 01/05/69
1970	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	958. 06/03/70
1971	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	1270. 11/23/70
1972	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	1270. 07/12/72
1973	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	2400. 12/19/72
1974	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	1020. 01/16/74
1975	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	1520. 12/21/74
1976	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	3470. 12/04/75
1977	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	2920. 01/18/77
1978	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	2240. 11/25/77
1979	1778.	1050.	684.	553.	416.	364.	309.	267.	233.	2920. 11/07/78

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1961-1979)

	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKEWNESS	STD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKEWNESS LOGS	STD ERR SKEWNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	1154.2	2900.0	843.8	635.4	505.7	426.0	367.6	321.1	279.2	225.2	3.2557	0.2211	0.0	0.4330	3.2557	3.2557
	2900.0	493.0	437.27	237.37	149.65	103.64	90.43	78.76	67.82	53.12	0.2211	0.2211	0.0	0.4330	0.2211	0.2211
	559.49	1.938	2.947	2.098	0.729	0.366	0.336	0.245	0.106	0.099	0.2211	0.2211	0.0	0.4330	0.2211	0.2211
	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
	0.485	0.485	0.485	0.485	0.485	0.485	0.485	0.485	0.485	0.485	0.485	0.485	0.485	0.485	0.485	0.485
	3.025	3.025	3.025	3.025	3.025	3.025	3.025	3.025	3.025	3.025	3.025	3.025	3.025	3.025	3.025	3.025
	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177	0.177
	0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897	0.897
	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536
	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044	0.044
	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.057

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1961-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
	537.9	609.8	663.3	747.5	996.7	1447.8	1825.7	2407.0	2925.3	3525.9
	495.8	515.1	534.5	571.1	705.9	1003.3	1285.5	1764.3	2230.0	2810.2
	368.8	400.1	423.8	461.4	571.8	765.0	920.7	1152.2	1351.9	1577.2
	270.4	313.8	341.8	381.2	478.0	614.2	707.1	828.2	921.1	1016.5
	238.2	279.1	304.0	337.4	413.2	507.9	566.5	637.3	688.1	737.6
	196.6	235.5	258.9	290.0	358.5	440.7	489.8	547.3	587.4	625.5
	172.9	206.7	227.0	253.9	313.3	384.5	427.1	476.9	511.7	544.8
	151.0	180.3	197.9	221.2	272.6	336.0	370.5	413.3	443.0	471.3
	134.8	165.1	180.8	217.5	265.2	324.4	355.3	392.6	416.0	444.1
	113.7	138.2	153.5	180.8	217.5	265.2	305.8	333.7	361.6	389.4
	938.2	965.0	1038.2	1163.7	1401.6	1736.8	2126.3	2525.8	2925.3	3325.3
	649.2	683.9	729.8	808.2	965.0	1163.7	1389.4	1616.0	1841.1	2066.5
	551.2	583.9	616.5	679.8	798.2	965.0	1163.7	1389.4	1616.0	1841.1
	479.8	508.2	537.5	588.2	698.2	838.2	968.2	1118.2	1248.2	1378.2
	389.4	418.8	448.2	498.2	598.2	718.2	818.2	918.2	1018.2	1118.2
	325.5	355.5	385.5	435.5	535.5	635.5	735.5	835.5	935.5	1035.5
	265.5	295.5	325.5	375.5	475.5	575.5	675.5	775.5	875.5	975.5
	205.5	235.5	265.5	315.5	415.5	515.5	615.5	715.5	815.5	915.5
	145.5	175.5	205.5	255.5	355.5	455.5	555.5	655.5	755.5	855.5
	85.5	115.5	145.5	195.5	295.5	395.5	495.5	595.5	695.5	795.5
	25.5	55.5	85.5	135.5	235.5	335.5	435.5	535.5	635.5	735.5

## STATION 12179000 SKAGIT RIVER ABV ALMA CR., NR MARBLEMOUNT, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1951	4932	6048	8739	7370	8952	4436	8754	9418	6454	7089	3987	4032	6670
1952	5973	5804	4862	4514	4964	3171	4365	3321	3310	4474	3594	2893	4170
1953	4038	4193	3266	4565	3804	4487	4861	4842	5512	4842	3572	3572	4621
1954	5477	5640	6559	5065	5864	5203	6285	8517	7813	11770	7384	4859	6792
1955	4467	9329	5522	5019	4861	4732	4826	5203	6511	9212	5117	3555	5699
1956	6896	9382	5254	4826	4370	4897	6385	9666	11590	9255	4740	4237	6798
1957	6234	5351	6793	6117	5705	5073	4867	6555	7512	5181	2976	3834	5516
1958	4126	4448	4615	5389	4674	4509	3344	5098	7043	4580	3207	3687	4558
1959	5893	6705	8425	7370	5784	5495	6930	6596	7603	10490	4513	5189	6759
1960	8120	7985	6691	5826	5516	4128	5406	5797	6778	6876	4609	2762	5886
1961	4661	5098	5302	5949	5261	4161	4122	7053	15940	7648	4220	3586	6138
1962	4287	4932	5510	6039	5789	4474	4232	3871	6689	6627	4617	2633	4799
1963	4063	6464	6822	6481	5186	4319	5124	5042	8350	6295	4291	3660	5433
1964	4939	6991	6100	5855	5435	5130	5124	6455	9433	12180	5448	3821	6423
1965	4721	4986	5738	4879	4722	4345	4842	4849	7459	7539	4565	2280	5082
1966	3783	4953	5906	6260	5343	5220	4756	4360	4336	4035	4565	2988	4825
1967	4092	5347	6419	5556	5196	4887	4631	4793	15180	8795	4542	3760	6095
1968	6022	7044	5853	6787	6092	6146	5875	4672	12110	9418	4121	4215	6507
1969	3548	4619	6643	6612	5166	4327	4775	5674	7895	5236	3093	3831	5116
1970	3689	4444	5240	5718	4867	4796	3531	2469	4404	4785	3901	3384	4268
1971	2585	3336	4811	5620	5668	5034	3771	6555	12190	12520	5963	3215	5954
1972	3134	3801	5467	6433	5698	5291	5777	7116	18610	14100	6720	4071	7183
1973	3127	2806	5437	5789	6432	4232	2942	3494	3515	4718	3785	2115	3830
1974	2739	4331	5288	6359	6134	7317	6038	7290	12110	12190	6962	3098	6679
1975	2463	3733	4528	5095	7310	6234	4892	3246	6713	8293	4082	2655	4965
1976	4280	8483	9375	5375	5664	6703	6240	8249	7167	11680	7865	4315	7130
1977	2380	4114	5482	7668	4408	5254	3560	2975	3398	2273	2271	1780	3798
1978	1712	3319	6580	5791	5894	5051	3345	2867	6147	7058	4447	4331	4691
1979	2715	5637	5155	5825	3755	3326	2753	3711	3672	3840	3357	4343	3910

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1951-1979)

MEAN	4313.7	5493.9	5944.2	5881.1	5400.6	4897.0	4837.9	5531.2	8049.8	7871.1	4595.0	3500.0	5527.4
MAXIMUM	8120.0	9382.0	9375.0	7668.0	8952.0	7317.0	8754.0	9418.0	18610.0	14100.0	7865.0	5189.0	7183.0
MINIMUM	1712.0	2806.0	3266.0	4514.0	3755.0	3171.0	2753.0	2469.0	3310.0	2273.0	2271.0	1780.0	3798.0
STD DEVIATION	1484.28	1732.22	1285.37	815.04	1020.99	943.03	1340.75	1902.63	3930.49	3019.25	1320.95	792.27	1061.71
SKEWNESS	0.546	0.792	0.917	0.391	1.400	0.538	0.774	0.358	1.089	0.300	0.924	-0.157	-0.073
STD ERR SKEW	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434
SER CORR COEFF	0.497	0.291	-0.247	-0.011	-0.176	0.222	-0.209	-0.219	-0.094	-0.107	-0.114	-0.251	-0.257
COEFF OF VAR	0.344	0.315	0.216	0.139	0.189	0.193	0.277	0.344	0.488	0.384	0.287	0.226	0.192
MEAN LOGS	3.609	3.720	3.765	3.765	3.726	3.682	3.669	3.717	3.859	3.862	3.646	3.532	3.734
STD DEV LOGS	0.155	0.133	0.092	0.060	0.078	0.083	0.119	0.156	0.204	0.183	0.121	0.106	0.086
SKEWNESS LOGS	-0.346	0.129	0.019	0.078	0.414	-0.090	0.0	-0.259	0.124	-0.635	0.096	-0.810	-0.308
STD ERR SKEW LOGS	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434
SER CORR LOGS	0.581	0.320	-0.220	0.041	-0.209	0.227	-0.153	-0.170	-0.135	-0.141	-0.111	-0.252	-0.241
COEFF OF VAR LOGS	0.043	0.036	0.024	0.016	0.021	0.023	0.032	0.042	0.053	0.047	0.033	0.030	0.023
% OF AVE FLW	6.5	8.3	9.0	8.9	8.1	7.4	7.3	8.3	12.1	11.9	6.9	5.3	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1951-1979)

0.99	1617.8	2643.3	3570.2	4263.9	3703.7	3037.6	2467.7	2105.5	2526.7	2252.9	2360.1	1673.4	3272.1
0.95	2184.5	3201.8	4115.2	4660.9	4050.4	3490.0	2974.0	2810.8	3391.9	3397.9	2819.7	2168.4	3851.7
0.90	2542.4	3554.9	4440.0	4890.6	4266.1	3753.9	3285.0	3252.7	3982.7	4150.6	3105.3	2453.9	4184.3
0.80	3031.9	4044.2	4869.0	5187.3	4561.2	4096.0	3705.6	3872.1	4853.7	5198.6	3495.6	2813.7	4608.3
0.50	4150.0	5212.4	5813.0	5816.9	5250.5	4824.7	4666.1	5293.6	7159.7	7602.8	4404.9	3519.2	5481.0
0.20	5517.1	6781.3	6946.6	6539.5	6150.2	5659.8	5875.6	7074.0	10707.2	10440.1	5585.7	4201.0	6425.8
0.10	6330.9	7810.6	7627.7	6959.3	6128.5	6142.4	6627.9	8159.0	13287.8	12036.0	6340.0	4530.5	6944.0
0.04	7271.3	9107.3	8430.1	7442.5	7446.8	7536.6	7536.6	9438.0	16799.4	13752.2	7270.8	4852.6	7511.8
0.02	7916.7	10073.4	8994.3	7775.6	7975.6	7072.4	8188.8	10332.5	19592.8	14699.4	7952.0	5042.1	7885.6
0.01	8521.2	11041.4	9535.0	8090.3	8501.7	7427.3	8823.6	11183.0	22535.8	15699.5	8625.3	5199.2	8225.7

## STATION 12179000 SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1952	1650.0	2430.0	2840.0	2940.0	3160.0	3980.0	4200.0	4360.0	4860.0
1953	1400.0	1470.0	2300.0	2490.0	2610.0	3040.0	3260.0	3560.0	3470.0
1954	1660.0	1670.0	2740.0	3060.0	3170.0	4120.0	4500.0	4830.0	5140.0
1955	2580.0	3110.0	3930.0	4300.0	4450.0	4570.0	4870.0	5030.0	5630.0
1956	1360.0	1920.0	2670.0	3090.0	3860.0	3900.0	4590.0	5000.0	5710.0
1957	1500.0	1900.0	3000.0	3530.0	3990.0	4450.0	5070.0	5140.0	5580.0
1958	1450.0	1680.0	2170.0	2420.0	2810.0	3390.0	3580.0	3830.0	4180.0
1959	1480.0	1980.0	2570.0	2850.0	3050.0	3420.0	3800.0	4290.0	4490.0
1960	1600.0	2060.0	2680.0	3060.0	4080.0	4610.0	5180.0	5480.0	6380.0
1961	1430.0	1480.0	1570.0	1690.0	2600.0	3500.0	3980.0	4260.0	4730.0
1962	1390.0	1470.0	1650.0	2490.0	3010.0	3620.0	3990.0	4210.0	4750.0
1963	1280.0	1550.0	2050.0	2420.0	2630.0	3340.0	3610.0	4210.0	4420.0
1964	2010.0	2430.0	3020.0	3260.0	3460.0	3530.0	3970.0	4480.0	5220.0
1965	2150.0	2840.0	3400.0	3480.0	3690.0	4260.0	4440.0	4670.0	4810.0
1966	1320.0	1370.0	2000.0	2090.0	2220.0	2860.0	3500.0	3880.0	4580.0
1967	1360.0	1490.0	2220.0	2510.0	2830.0	3050.0	3620.0	4030.0	4210.0
1968	1460.0	2100.0	2770.0	3220.0	3690.0	3950.0	4460.0	5320.0	5560.0
1969	1440.0	2340.0	2900.0	3100.0	3400.0	3790.0	3800.0	4090.0	4770.0
1970	1340.0	1800.0	2500.0	2640.0	2760.0	3210.0	3500.0	3700.0	4170.0
1971	1360.0	1500.0	1580.0	1760.0	1920.0	2670.0	3000.0	3210.0	3530.0
1972	1450.0	1770.0	2240.0	2450.0	2560.0	3070.0	3330.0	3650.0	4510.0
1973	1370.0	1790.0	2350.0	2580.0	2730.0	2930.0	3200.0	3670.0	4190.0
1974	1250.0	1330.0	1590.0	1930.0	2050.0	2310.0	2810.0	3170.0	3350.0
1975	1220.0	1330.0	1960.0	2140.0	2260.0	2420.0	2990.0	3400.0	4090.0
1976	1350.0	1920.0	1990.0	2210.0	2500.0	2970.0	3630.0	4540.0	4830.0
1977	1180.0	1410.0	1690.0	1970.0	2250.0	2880.0	3530.0	4030.0	4690.0
1978	1580.0	1590.0	1600.0	1610.0	1640.0	1740.0	1920.0	2000.0	2340.0
1979	1280.0	1550.0	2300.0	2310.0	2670.0	3060.0	3700.0	4200.0	4410.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1952-1979)

MEAN	1496.4	1838.6	2367.1	2628.6	2915.0	3378.6	3791.1	4158.6	4596.4
MAXIMUM	2580.0	3110.0	3930.0	4300.0	4450.0	4610.0	5180.0	5480.0	6380.0
MINIMUM	1180.0	1330.0	1570.0	1610.0	1640.0	1740.0	1920.0	2000.0	2340.0
STANDARD DEVIATION	301.05	453.17	591.39	626.78	678.75	698.68	715.93	740.56	826.12
SKENNESS	2.315	1.240	0.595	0.536	0.379	-0.109	-0.151	-0.612	-0.425
STD ERROR OF SKEWNESS	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441
SERIAL CORR COEFF	0.143	0.121	0.356	0.348	0.340	0.424	0.348	0.230	0.175
CDEFF OF VARIATION	0.201	0.246	0.250	0.238	0.233	0.207	0.189	0.178	0.180
MEAN LOGS	3.168	3.253	3.361	3.408	3.453	3.519	3.571	3.611	3.655
STD DEVIATION LOGS	0.075	0.099	0.108	0.104	0.103	0.096	0.086	0.087	0.086
SKENNESS LOGS	1.796	0.760	0.4039	-0.067	-0.202	-0.796	-1.050	-1.599	-1.317
STD ERR SKEWNESS LOGS	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441
SER CORR CDEFF LOGS	0.161	0.136	0.371	0.337	0.359	0.425	0.305	0.179	0.129
COEFF OF VAR LOGS	0.024	0.030	0.032	0.030	0.030	0.027	0.025	0.024	0.024

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1952-1979)

0.99	2694.1	3430.8	4119.0	4403.6	4747.5	4848.2	5103.7	5195.3	5926.8
0.98	2408.1	3112.2	3842.5	4139.3	4493.2	4713.7	5011.4	5163.0	5860.5
0.96	2150.8	2808.8	3597.9	3862.4	4220.9	4551.4	4891.9	5111.1	5766.4
0.90	1849.2	2425.0	3160.2	3466.5	3821.0	4275.2	4670.6	4987.8	5572.2
0.80	1646.1	2139.9	2829.6	3128.9	3469.9	3991.9	4423.0	4813.6	5331.4
0.50	1403.1	1740.8	2294.4	2564.6	2861.4	3401.2	3852.9	4299.2	4711.0
0.20	1283.0	1474.7	1864.7	2094.3	2333.3	2780.7	3192.7	3567.6	3918.4
0.10	1250.9	1372.5	1674.6	1881.0	2087.7	2459.2	2831.9	3129.1	3464.2
0.05	1234.8	1302.8	1533.0	1719.9	1899.9	2201.0	2534.6	2755.8	3082.9
0.02	1214.7	1237.5	1388.6	1553.8	1704.3	1922.2	2207.9	2339.0	2659.2
0.01	1220.3	1200.6	1300.4	1451.3	1582.8	1745.2	1997.8	2070.3	2385.6

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1952-1979)

P95	P90	P75	P70	P50	P25	P10
2300.0	2800.0	3900.0	4100.0	5100.0	6400.0	8400.0

## STATION 12179000 SKAGIT RIVER ABV ALMA CR, NR MARBLEMOUNT, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	PEAK-FLOW DATA REG. (R)
1951	24800.	19600.	13600.	11200.	10300.	9220.	8670.	7990.	8040.	28000.	R
1952	9670.	8590.	7290.	6840.	6540.	5960.	5570.	5350.	4880.	12900.	R
1953	14900.	14500.	13500.	10800.	8290.	7020.	6490.	6200.	5350.	20200.	R
1954	19000.	14000.	15800.	12800.	12400.	10200.	9780.	9020.	8020.	19400.	R
1955	21800.	20000.	15800.	13300.	9700.	8280.	7300.	6680.	6010.	24600.	R
1956	22800.	18000.	16400.	14500.	12100.	11000.	10100.	9350.	7700.	29400.	R
1957	12600.	11400.	10000.	8300.	7120.	6500.	6240.	6140.	5010.	16800.	R
1958	9590.	9210.	8230.	7580.	7510.	6360.	5610.	5060.	5010.	10100.	R
1959	14900.	13500.	13900.	12000.	11400.	9140.	8500.	7960.	7190.	19100.	R
1960	18300.	16000.	13900.	11500.	9180.	8590.	7770.	7320.	6460.	20100.	R
1961	26400.	25000.	23500.	17400.	16400.	12300.	10300.	8940.	7480.	28200.	R
1962	11300.	9440.	8370.	7040.	6820.	5990.	5850.	5690.	5210.	15900.	R
1963	15900.	14500.	11300.	10400.	8760.	7460.	6790.	6270.	5640.	24800.	R
1964	23400.	20300.	18900.	16200.	12400.	10900.	9510.	8520.	7400.	31200.	R
1965	14400.	12400.	12000.	9580.	9110.	7550.	6730.	6280.	5660.	18600.	R
1966	12700.	10400.	8390.	7140.	6350.	6170.	5880.	5700.	5420.	19300.	R
1967	33800.	32200.	28300.	22700.	17200.	12000.	8740.	8500.	7240.	38500.	R
1968	22900.	19400.	15200.	13900.	12800.	10800.	8850.	8090.	7430.	26100.	R
1969	13900.	12600.	12100.	10200.	8150.	6930.	6360.	5940.	5830.	16400.	R
1970	7780.	6810.	6290.	6070.	5850.	5510.	5330.	5210.	4900.	11900.	R
1971	19700.	19000.	17200.	15300.	12900.	12400.	11000.	9470.	7770.	23300.	R
1972	26900.	25900.	24300.	22400.	18900.	17000.	14100.	11800.	9620.	29200.	R
1973	7690.	7200.	7000.	6160.	5850.	5680.	5090.	4730.	4320.	12200.	R
1974	21900.	20300.	18300.	15700.	13800.	12600.	11100.	9730.	8770.	27600.	R
1975	17000.	15600.	14900.	10600.	8740.	7550.	6520.	5990.	6180.	20600.	R
1976	27000.	26400.	20800.	14200.	12000.	10200.	9380.	8850.	8020.	31600.	R
1977	14400.	11200.	8910.	8090.	7780.	6580.	6020.	5780.	5090.	23300.	R
1978	12200.	11400.	10900.	8860.	7780.	6690.	6040.	5840.	5080.	15700.	R
1979	9360.	8370.	7790.	6530.	5900.	5660.	5590.	5120.	4420.	14600.	R

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1951-1979)

W R C SYSTEMATIC  
ESTIMATE RECORD

MEAN	17499.7	15766.2	13902.4	11689.3	10110.7	8720.0	7809.3	7157.2	6423.4
MAXIMUM	33800.0	32200.0	28300.0	22700.0	18900.0	17000.0	14100.0	11800.0	9620.0
MINIMUM	7690.0	6810.0	6290.0	6070.0	5850.0	5510.0	5090.0	4870.0	4320.0
STANDARD DEVIATION	6717.59	6377.50	5549.11	4419.63	3489.57	2788.13	2229.66	1773.16	1407.00
SKENNESS	0.471	0.700	0.806	0.913	0.888	1.055	0.914	0.692	0.401
STD ERROR OF SKENNESS	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434
SERIAL CORR COEFF	-0.099	-0.138	-0.186	-0.208	-0.208	-0.130	-0.186	-0.228	-0.257
COEFF OF VARIATION	0.384	0.405	0.399	0.378	0.345	0.320	0.286	0.248	0.219
MEAN LOGS	4.211	4.163	4.110	4.039	3.981	3.921	3.877	3.842	3.798
STD DEVIATION LOGS	0.173	0.178	0.172	0.160	0.144	0.130	0.118	0.104	0.095
SKENNESS LOGS	-0.205	-0.071	0.004	0.135	0.287	0.471	0.450	0.329	0.091
STD ERR SKENNESS LOGS	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434	0.434
SER CORR COEFF LOGS	-0.103	-0.148	-0.197	-0.200	-0.238	-0.172	-0.228	-0.254	-0.253
COEFF OF VAR LOGS	0.041	0.043	0.042	0.040	0.036	0.033	0.030	0.027	0.025

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1951-1979)

0.99	6048.6	5506.2	5126.2	4828.1	4763.9	4610.2	4391.8	4222.9	3838.6	8841.0
0.95	8241.0	7372.5	6714.2	6066.7	5721.9	5317.2	5007.3	4802.3	4413.1	11607.4
0.90	9665.8	8597.6	7753.7	6872.9	6344.3	5782.6	5406.7	5166.7	4759.6	13331.5
0.80	11666.6	10338.9	9231.0	8016.5	7227.6	6450.0	5972.6	5669.9	5221.8	15669.7
0.50	16471.4	14635.7	12889.9	10856.3	9429.9	8143.3	7378.4	6866.8	6257.0	20960.5
0.20	22810.7	20577.9	18005.2	14874.1	12581.8	10628.6	9380.6	8472.4	7532.5	27389.9
0.10	26839.2	24523.5	21445.1	17618.3	14762.9	12385.6	10762.1	9528.3	8315.3	31217.3
0.04	31743.0	29508.2	25843.1	21180.5	17630.7	14737.5	12575.9	10863.4	9253.1	35650.9
0.02	35270.0	33218.2	29154.5	23903.6	19850.7	15886.5	13971.1	11862.6	9922.2	38704.8
0.01	38697.5	36924.9	32495.2	26886.6	22144.0	18526.5	15428.6	12868.2	10571.1	41575.7

STATION 12180000 BACON CREEK NEAR MARBLEMOUNT, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1943													
1944	205	197	312	295	190	209	311	527	525	233	258	146	290
1945	269	397	306	486	428	224	260	815	651	474	150	326	395
1946	447	466	328	302	257	306	370	891	864	741	194	234	458
1947	320	223	447	283	432	351	482	722	658	433	330	179	393
1948	574	325	431	212	199	177	338	833	1202	526	404	350	470
1949	357	306	172	113	161	360	545	1030	748	620	315	297	420
1950	354	954	511	248	375	445	368	646	1267	917	529	315	578

300

ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1944	3050.0	12-3-1943
1945	5510.0	2-7-1945
1946	7000.0	10-25-1945
1947	6480.0	10-24-1946
1948	5670.0	10-19-1947
1949	3300.0	10-7-1948
1950	18100.0	11-26-1949

STATION 12181000 SKAGIT RIVER AT MARBLEMOUNT, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1944	3263	1864	2608	2450	2117	2343	3932	7133	8639				
1947	2663	2224	4331	3254	4159	6289	6650	9294	11580	6290	3460	2934	5263
1948	7258	4763	6725	5323	2910	2222	4085	7303	12870	8931	5925	4890	6112
1949	5142	4716	4556	5088	4947	4824	5702	10330	6864	6848	6133	4978	5855
1950	5421	7433	7428	6467	8912	8438	6455	7487	11260	14730	7635	5120	8064
1951	6153	7848	10300	7928	10340	4988	9534	10630	7535	7719	4204	4292	7604
1976	2755	4407	6140	8566	4890	5720	4345	3680	9342	13870	9047	4834	
1977	2071	4507	8458	6818	6357	5999	4091	3872	7681	2891	2884	2144	4398
1978	3088	6499	5574	6057	4279	4252	3394	4929	4603	8209	5033	5145	5685
1979										4487	3641	3515	4529

STATION 12181000 SKAGIT RIVER AT MARBLEMOUNT, WASH.

ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1944	16800.0	12-3-1943
1947	24600.0	10-25-1946
1948	35400.0	10-19-1947
1949	17900.0	5-12-1949
1950	59300.0	11-27-1949
1951	42400.0	2-10-1951
1952	14000.0	10-29-1951
1953	20500.0	7-14-1953
1954	21100.0	7-4-1954
1955	25600.0	7-16-1955
1956	38900.0	10-25-1955
1957	23000.0	10-17-1956
1977	26600.0	1-5-1977
1978	19600.0	11-1-1977
1979	23100.0	11-7-1978

ANNUAL PEAK FLOW STATISTICS (YEARS 1944-1979)

W R C	SYSTEMATIC
ESTIMATE	RECORD
4.4154	4.4154
0.1665	0.1665
0.681	0.681

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1944-1979)

12951.5	12951.5
15041.4	15041.4
16511.7	16511.7
18736.0	18736.0
24925.9	24925.9
35262.2	35262.2
43381.6	43381.6
55223.5	55223.5
65284.7	65284.7
76487.6	76487.6

## STATION 12181100 S.F. CASCADE R AT SO CASCADE GL NR MBLMNT, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1957	33.3	13.6	7.85	4.79	3.80	2.00	2.50	7.04	50.9	69.6	51.4	51.0	
1958	35.0	18.5	2.76	2.88	10.1	3.26	2.63	22.0	81.3	98.1	88.6	53.9	
1959	25.7	6.23	3.07	7.05	1.96	1.73	2.00	11.3	44.9	97.7	73.7	60.5	
1960	16.5	18.5	7.05	4.04	3.16	1.96	3.74	12.0	42.9	83.2	62.7	38.9	
1961	39.7	10.3	5.53	3.08	1.59	1.52	3.55	13.7	34.9	84.9	82.4	41.1	23.4
1962	22.4	12.0	3.73	3.60	2.57	1.63	1.31	8.83	59.5	66.4	64.1	48.7	27.0
1963	26.6	6.35	6.59	9.23	5.20	4.76	2.66	15.8	56.8	76.5	65.4	57.9	24.9
1964	26.2	16.1	4.50	5.76	1.39	2.16	2.38	30.7	80.2	72.8	60.1	34.3	24.9
1965	13.7	11.0	4.96	5.76	1.93	1.56	2.01	12.6	65.5	83.2	65.4	41.1	23.4
1966	13.6	12.3	3.71	2.58	1.93	1.56	2.01	12.6	65.5	83.2	65.4	41.1	23.4
1967	18.3	6.37	3.31	5.64	6.12	3.86	4.18	21.0	42.5	84.9	82.4	41.1	23.4
1968	15.5	4.14	3.12	3.62	2.75	3.55	2.17	21.3	56.4	85.4	82.4	41.1	23.4
1969	13.0	4.25	4.16	3.68	2.56	2.84	3.69	18.8	49.9	85.4	82.4	41.1	23.4
1970	17.2	9.11	3.96	5.08	2.73	1.81	2.67	7.67	52.2	80.7	62.9	49.2	23.8
1971	12.6	7.82	4.71	4.26	2.72	1.84	1.43	9.81	44.8	70.7	62.9	49.2	23.8
1972	30.0	14.2	12.4	8.34	5.41	3.00	2.32	20.0	38.2	80.3	76.5	49.2	23.8
1973	27.3	15.1	8.47	10.4	7.07	4.64	9.55	13.1	64.9	94.6	60.1	40.4	23.9
1974	10.5	13.7	7.23	2.32	1.36	2.32	4.01	9.67	57.5	78.1	78.9	61.5	29.5
1975	25.9	22.6	4.16	1.69	2.26	3.18	4.18	18.3	52.3	85.4	81.6	70.9	31.2

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1957-1979)

MEAN	23.1	11.4	5.6	4.9	3.6	2.6	3.4	15.1	53.6	77.2	69.8	47.5	26.1
MAXIMUM	39.7	22.6	12.4	10.4	10.1	4.8	9.6	30.7	81.3	98.1	88.6	70.9	31.2
MINIMUM	10.5	4.1	2.8	1.7	1.4	1.5	1.3	7.0	34.9	59.5	51.4	27.7	22.3
STD DEVIATION	8.23	4.84	2.48	2.45	2.33	1.00	2.07	6.10	12.38	11.06	10.89	10.27	2.40
SKWENESS	0.216	0.458	1.288	0.974	1.560	1.040	1.945	0.866	0.880	0.326	0.101	0.261	0.509
STD ERR SKEW	0.501	0.501	0.512	0.536	0.536	0.536	0.536	0.524	0.512	0.481	0.481	0.481	0.536
SER CORR COEFF	0.112	0.203	0.464	0.436	-0.121	-0.054	-0.102	-0.091	0.045	0.292	0.057	0.122	0.335
COEFF OF VAR	0.456	0.426	0.444	0.502	0.649	0.387	0.601	0.404	0.231	0.143	0.156	0.216	0.092
MEAN LOGS	1.336	1.014	0.709	0.540	0.584	0.384	0.480	1.146	1.719	1.883	1.839	1.666	1.414
STD DEV LOGS	0.164	0.201	0.176	0.214	0.249	0.156	0.221	0.173	0.097	0.062	0.068	0.086	0.040
SKWENESS LOGS	-0.316	-0.460	0.540	0.532	0.532	0.507	0.587	0.050	0.330	0.059	-0.143	-0.307	0.314
STD ERR SKEW LOGS	0.501	0.501	0.512	0.536	0.536	0.536	0.536	0.524	0.512	0.481	0.481	0.481	0.536
SER CORR LOGS	0.078	0.314	0.281	0.044	-0.128	0.012	-0.093	-0.108	0.051	0.273	0.059	0.173	0.325
COEFF OF VAR LOGS	0.123	0.199	0.249	0.334	0.514	0.408	0.460	0.151	0.056	0.033	0.037	0.058	0.028
% OF AVE FLOW	7.3	3.6	1.7	1.5	1.1	0.8	1.1	4.8	16.9	24.3	22.0	14.9	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1957-1979)

0.99	8.2	3.0	2.3	1.4	1.0	1.2	1.2	5.6	32.9	55.2	47.0	26.4	21.5
0.95	11.3	4.6	2.8	2.0	1.3	1.4	1.4	7.3	37.1	60.6	52.9	31.6	22.5
0.90	13.2	5.6	3.1	2.3	1.5	1.6	1.6	8.4	39.7	63.7	56.2	34.7	23.2
0.80	15.9	7.1	3.6	2.9	1.9	1.8	2.0	10.0	43.3	67.7	60.5	38.7	24.0
0.50	22.1	10.7	4.9	4.3	2.9	2.3	2.9	14.0	51.7	76.3	69.3	46.9	25.8
0.20	29.9	15.4	7.1	6.6	4.8	3.2	4.5	19.6	62.8	86.1	78.9	56.0	28.0
0.10	34.7	18.2	8.8	8.2	6.5	3.9	5.9	23.4	70.0	91.8	84.2	61.1	29.3
0.04	40.3	21.5	11.2	10.4	9.1	4.8	8.1	28.3	79.1	98.4	90.2	66.7	30.7
0.02	44.2	23.8	13.2	12.2	11.5	5.6	10.0	32.1	85.8	102.9	94.2	70.4	31.8
0.01	47.8	25.9	15.4	14.0	14.4	6.4	12.2	35.9	92.5	107.2	97.9	73.8	32.8

STATION 12181100 S.F. CASCADE R AT SO CASCADE GL NR MBLMNT, WASH

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1963	1.2	1.3	1.3	1.5	2.4	4.6	5.3	6.2	10.0
1964	0.8	0.8	0.8	0.9	1.7	1.8	3.4	4.5	11.0
1965	1.5	1.5	1.5	1.5	1.7	2.6	3.0	3.6	8.0
1966	1.0	1.1	1.1	1.3	1.4	1.5	2.1	2.5	8.2
1967	1.4	1.4	1.5	1.5	1.6	2.1	2.6	3.6	8.1
1968	1.2	1.2	1.2	1.2	1.3	4.8	6.3	5.9	12.0
1969	1.0	1.0	1.0	1.1	1.2	1.5	3.1	3.6	6.6
1970	1.4	1.4	1.5	1.5	1.6	1.8	2.0	2.4	7.2
1971	1.3	1.3	1.5	1.9	2.0	3.8	4.4	4.4	6.8
1972	1.1	1.1	1.3	1.4	2.3	3.0	3.1	3.3	5.9
1973	1.8	1.8	1.8	1.9	2.2	2.6	3.0	3.3	5.1
1974	1.5	1.5	1.5	1.6	1.7	2.3	3.2	3.4	6.8
1975	1.3	1.4	1.5	1.8	1.8	2.3	2.9	3.4	5.8
1976	1.2	1.2	1.2	1.3	1.4	4.2	5.5	7.2	12.0
1977	1.8	1.9	1.9	2.1	2.3	5.8	7.4	7.6	12.0
1978	0.1	0.8	0.9	1.0	1.1	1.4	1.8	3.3	6.3
1979	0.9	0.9	1.0	1.2	1.5	1.9	2.4	2.8	10.0

LOWEST MEAN FLOW STATISTICS (YEARS 1963-1979)

MEAN	1.2	1.3	1.3	1.5	1.7	2.8	3.6	4.2	8.3
MAXIMUM	1.8	1.9	1.9	2.1	2.4	5.8	7.4	7.6	12.0
MINIMUM	0.1	0.8	0.8	0.9	1.1	1.4	1.8	2.4	5.1
STANDARD DEVIATION	0.40	0.31	0.30	0.33	0.40	1.33	1.61	1.59	2.36
SKEWNESS	-1.032	0.380	0.107	0.352	0.350	0.959	1.155	1.141	0.470
STD ERROR OF SKEWNESS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SERIAL CORR COEFF	-0.175	-0.221	-0.188	-0.137	0.147	-0.015	0.249	0.159	0.550
COEFF OF VARIATION	0.328	0.263	0.229	0.227	0.234	0.472	0.444	0.381	0.283
MEAN LOGS	0.035	0.092	0.111	0.152	0.224	0.409	0.523	0.595	0.905
STD DEVIATION LOGS	0.264	0.107	0.103	0.099	0.102	0.193	0.177	0.151	0.121
SKEWNESS LOGS	-3.231	-0.157	-0.358	-0.070	-0.025	0.418	0.514	0.669	0.173
STD ERR SKEWNESS LOGS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SER CORR COEFF LOGS	-0.091	-0.194	-0.163	-0.112	0.137	-0.137	-0.037	0.210	0.192
COEFF OF VAR LOGS	7.653	1.157	0.931	0.651	0.456	0.473	0.339	0.253	0.134

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1963-1979)

0.99	999999.0	2.1	2.1	2.4	2.9	8.3	10.0	10.4	16.0
0.98	999999.0	2.0	2.0	2.2	2.7	7.0	8.6	9.0	14.6
0.96	999999.0	1.9	1.9	2.1	2.5	5.9	7.3	7.8	13.3
0.90	999999.0	1.7	1.7	1.9	2.3	4.6	5.7	6.2	11.6
0.80	999999.0	1.5	1.6	1.7	2.0	3.7	4.6	5.2	10.1
0.50	999999.0	1.2	1.3	1.4	1.7	2.5	3.2	3.8	8.0
0.20	999999.0	1.0	1.1	1.2	1.4	1.8	2.4	2.9	6.3
0.10	999999.0	0.9	0.9	1.1	1.2	1.5	2.0	2.6	5.6
0.05	999999.0	0.8	0.9	1.0	1.1	1.3	1.8	2.4	5.1
0.02	999999.0	0.7	0.8	0.9	1.0	1.1	1.6	2.2	4.6
0.01	999999.0	0.7	0.7	0.8	1.0	1.0	1.5	2.1	4.3

FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1963-1979)

P95	P90	P75	P70	P50	P25	P10
1.6	2.0	3.4	4.0	9.9	47.0	74.0



ANNUAL PEAK-FLOW DATA

FLOW(CFS)	DATE	REG. (R)
177.	08/31/61	
114.	07/27/62	
120.	08/12/63	
125.	07/15/64	
125.	08/13/65	
103.	10/06/65	
108.	06/21/67	
141.	07/12/68	
136.	06/13/69	
146.	09/17/70	
151.	07/29/71	
190.	07/13/72	
190.	07/19/73	
135.	08/04/74	
177.	07/11/75	
101.	09/05/76	
119.	08/05/77	
116.	08/27/78	
126.	07/20/79	

3.

2.1135	2.1135
0.0811	0.0811
0.0	0.6860

961-1979)

84.1	92.5
95.5	99.5
102.2	104.1
111.0	110.7
129.9	127.1
152.0	150.5
165.0	166.6
180.1	187.4
190.6	203.3
200.5	219.7

## STATION 12181200 SALIX CR AT SO CASCADE GL NR MARBLEMOUNT, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1961													
1962	0.57	0.30		0.13	1.31	0.18	0.24	1.73	3.15	0.70	0.16	0.33	
1963			0.47					1.71	2.00	1.93	0.39	0.14	
1964	0.42	0.45	0.20	0.16	0.12	0.16	0.50	1.15	2.52	2.96	0.88	0.49	
1965	0.55	0.34					0.21	1.50	2.30	2.96	0.25	0.17	0.61
1966	0.40	0.55	0.54	0.07	0.05	0.04	0.04	0.88	2.95	0.94	0.11	0.05	
1967	0.63	0.25	0.09	0.33	0.24	0.27	0.20	1.26	2.43	1.03	0.28	0.18	0.64
1968	1.09	0.39	0.49	0.09	0.33	0.05	0.33	1.83	2.02	0.39	0.08	0.56	0.67
1969	0.48	0.29	0.11	0.05	0.08	0.08	0.06	1.02	2.49	0.47	0.06	0.32	0.45
1970	0.39	0.33	0.10	0.33	0.30	0.07	0.10	1.43	1.59	2.37	0.33	0.22	0.62
1971	0.21	0.16	0.06	0.04	0.05	0.15	0.14	1.64	2.85	3.52	1.14	0.47	0.87
1972	0.21	0.23	0.24	0.16	0.06	0.05	0.20	1.56	1.86	0.51	0.09	0.16	0.45
1973	0.27	0.23								3.18	0.89	0.18	
1974	0.54									2.72	0.33	0.11	0.63
1975	0.08	0.41	0.17	0.12	0.05	0.06	0.06	1.15	2.29	3.01	1.06	0.26	
1976									1.84	0.19	0.22	0.30	0.45
1977	0.16	0.34	0.27	0.48	0.24	0.07	0.80	0.91	1.47	1.21	0.32	0.72	0.49
1978	0.27	0.71	0.28	0.10	0.05	0.25	0.37	0.93	2.83	0.53	0.07		
1979	0.21	0.69	0.07	0.04	0.05	0.16	0.46	1.61	1.82				

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1961-1979)

MEAN	0.4	0.4	0.2	0.2	0.2	0.1	0.3	1.4	2.3	1.6	0.4	0.3	0.6
MAXIMUM	1.1	0.7	0.5	0.5	1.3	0.3	0.8	1.8	3.1	3.5	1.1	0.7	0.9
MINIMUM	0.1	0.2	0.1	0.0	0.1	0.0	0.0	0.9	1.5	0.2	0.1	0.1	0.4
STO DEVIATION	0.25	0.16	0.15	0.14	0.34	0.08	0.21	0.33	0.49	1.11	0.36	0.17	0.12
SKENNESS	1.365	0.775	1.209	0.969	3.209	0.778	1.310	-0.154	0.211	0.401	1.256	1.029	0.745
STD ERR SKEW	0.584	0.580	0.616	0.616	0.616	0.616	0.597	0.580	0.550	0.536	0.536	0.524	0.537
SER CORR COEFF	0.405	0.286	-0.031	-0.350	-0.076	-0.217	0.060	-0.014	-0.466	0.044	-0.170	-0.009	-0.366
COEFF OF VAR	0.608	0.404	0.751	0.783	1.688	0.630	0.800	0.243	0.217	0.691	0.939	0.606	0.207
MEAN LOGS	-0.469	-0.436	-0.795	-0.879	-0.976	-0.991	-0.717	0.119	0.345	0.077	-0.598	-0.621	-0.236
STO DEV LOGS	0.277	0.177	0.319	0.365	0.444	0.278	0.385	0.111	0.096	0.374	0.409	0.279	0.084
SKENNESS LOGS	-0.463	-0.131	0.251	-0.037	1.428	0.166	-0.308	-0.370	-0.156	-0.508	0.164	-0.439	0.231
STD ERR SKEW LOGS	0.564	0.580	0.616	0.616	0.616	0.616	0.597	0.580	0.550	0.536	0.536	0.524	0.637
SER CORR LOGS	0.418	0.241	0.073	-0.410	-0.186	-0.252	0.023	0.0	-0.440	-0.042	-0.034	0.108	-0.396
COEFF OF VAR LOGS	-0.592	-0.405	-0.401	-0.415	-0.455	-0.281	-0.536	0.935	0.277	4.873	-0.684	-0.450	-0.374
% OF AVE FLOW	5.3	5.2	2.7	2.3	2.7	1.6	3.5	17.7	29.6	20.9	4.9	3.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1961-1979)

0.99	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.7	1.3	0.1	0.0	0.0	0.4
0.95	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.8	1.5	0.3	0.1	0.1	0.4
0.90	0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.9	1.7	0.4	0.1	0.1	0.5
0.80	0.2	0.3	0.1	0.1	0.0	0.1	0.1	1.1	1.8	0.6	0.1	0.1	0.5
0.50	0.4	0.4	0.2	0.1	0.1	0.1	0.2	1.3	2.2	1.3	0.2	0.3	0.6
0.20	0.6	0.5	0.3	0.3	0.2	0.2	0.4	1.6	2.7	2.5	0.6	0.4	0.7
0.10	0.7	0.6	0.4	0.4	0.4	0.2	0.5	1.8	2.9	3.4	0.9	0.5	0.8
0.04	0.9	0.7	0.6	0.6	0.9	0.3	0.8	2.0	3.2	4.6	1.4	0.7	0.8
0.02	1.1	0.8	0.8	0.7	1.7	0.4	1.0	2.1	3.4	5.5	1.9	0.8	0.9
0.01	1.2	0.9	1.0	0.9	3.0	0.5	1.2	2.2	3.6	6.4	2.5	0.9	1.0

## STATION 12181200 SALIX CR AT SO CASCADE GL NR MARBLEMOUNT, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31									
YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1967	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3
1968	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.4
1969	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.3
1970	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2
1971	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2
1972	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
1973	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2
1978	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3
1979	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2

## LOWEST MEAN FLOW STATISTICS (YEARS 1967-1979)

MEAN	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2
MAXIMUM	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4
MINIMUM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
STANDARD DEVIATION	0.01	0.01	0.01	0.01	0.01	0.03	0.05	0.06	0.07
SKEWNESS	1.501	1.501	0.606	-0.018	-0.606	2.519	0.686	0.035	0.533
STD ERROR OF SKEWNESS	0.717	0.717	0.290	0.717	0.717	0.717	0.717	0.717	0.717
SERIAL CORR COEFF	-0.381	-0.381	-0.290	-0.391	-0.290	-0.311	-0.320	-0.286	0.429
COEFF OF VARIATION	0.211	0.211	0.193	0.155	0.163	0.460	0.539	0.422	0.328
MEAN LOGS	-1.470	-1.470	-1.443	-1.415	-1.369	-1.219	-1.060	-0.908	-0.677
STD DEVIATION LOGS	0.083	0.083	0.082	0.069	0.075	0.154	0.230	0.204	0.148
SKEWNESS LOGS	1.317	1.317	0.332	-0.495	-0.943	1.842	0.341	-0.457	-0.416
SER CORR SKEWNESS LOGS	0.717	0.717	0.717	0.717	0.717	0.717	0.717	0.717	0.717
COEFF OF VAR LOGS	-0.400	-0.400	-0.258	-0.400	-0.316	-0.421	-0.368	-0.333	0.410
	-0.057	-0.057	-0.057	-0.049	-0.055	-0.126	-0.217	-0.225	-0.219

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1967-1979)

0.99	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4
0.98	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4
0.96	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.4
0.90	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.3
0.80	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3
0.50	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2
0.20	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2
0.10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
0.05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
0.02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
0.01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1967-1979)

P95	P90	P75	P70	P50	P25	P10
0.0	0.1	0.1	0.1	0.2	0.6	2.0



STATION 12182500 CASCADE RIVER AT MARBLEMOUNT, WASH.  
MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1929	1019	416	317	201	146	313	509	1595	1962	1219	699	361	734
1930	307	176	335	210	972	611	1308	1159	1580	1333	724	553	769
1931	645	476	352	841	639	681	851	1712	1793	1106	556	746	867
1932	482	804	598	524	1144	1037	1224	1659	2286	1582	1597	1070	1064
1933	653	2051	941	585	270	447	880	1324	2604	2728	1577	1505	1266
1934	1592	1371	1946	1372	858	1173	1773	1678	1489	1270	843	556	1331
1935	682	1409	912	1594	1053	485	481	1268	2018	1598	813	681	1085
1936	393	255	307	455	221	475	1368	2538	2492	1177	689	491	906
1937	359	197	511	219	195	522	674	1525	2815	1575	887	498	817
1938	696	1078	785	738	353	488	1027	1702	2198	1327	585	511	960
1939	494	481	836	932	358	561	1047	1873	1861	1788	593	505	969
1940	792	873	1344	751	638	850	860	1604	1283	867	593	512	916
1941	1053	501	831	512	417	449	736	1074	1144	858	565	886	754
1942	1191	755	1054	373	323	316	788	1263	1784	1464	700	395	871
1943	299	612	792	624	555	562	1340	1306	1991	2167	936	541	979
1944	473	369	582	409	377	397	638	1282	1550	949	603	863	708
1945	681	508	642	919	777	467	557	1845	1748	1310	689	653	900
1946	1043	877	559	507	459	644	973	2395	2086	1848	954	517	1076
1947	727	462	900	626	878	801	1173	2130	1945	1435	735	560	1030
1948	1239	797	864	572	407	384	721	2026	3413	1526	1109	749	1152
1949	836	609	463	278	354	729	1128	2657	2137	1811	1032	794	1152
1950	880	1753	947	560	589	852	1087	1541	3423	2735	1406	672	1347
1951	1065	1252	1568	678	1524	479	1075	1782	1968	1425	710	571	1172
1952	875	611	448	230	551	337	984	1702	1720	1549	789	461	856
1953	294	185	252	1324	952	415	697	1566	1686	2136	1071	719	943
1954	898	1054	1210	717	1071	581	750	1829	2213	2790	1794	1195	1345
1955	754	1468	693	441	407	257	619	1153	2780	2275	1178	640	1057
1956	1202	1604	918	466	257	311	1113	2278	2363	2056	919	761	1189
1957	1134	761	1165	381	785	593	847	2283	1869	1217	718	529	1011
1958	477	484	547	775	729	472	651	2111	1868	1065	691	717	883
1959	1017	1191	1655	1055	452	491	1178	1637	2609	2370	1000	1439	1345
1960	1512	1797	964	481	666	556	1047	1490	2225	1800	909	635	1174
1961	752	934	715	1289	1239	745	783	1471	2983	1573	887	635	1165
1962	736	624	688	1277	758	340	904	1095	2068	1695	1136	668	1000
1963	637	1196	1290	774	1249	507	562	1287	1646	1256	858	665	992
1964	783	1053	912	837	464	429	669	1373	2824	2588	1369	838	1180
1965	869	604	768	745	925	615	924	1453	2041	1726	1059	448	1016
1966	516	727	543	473	308	532	941	1568	1809	1679	856	503	875
1967	811	659	1450	865	677	492	432	1577	3051	1910	1017	694	1139
1968	1574	1010	968	1390	1183	870	576	1386	2360	1835	926	937	1252
1969	718	1013	642	727	268	425	936	2259	2521	1198	601	877	1018
1970	678	567	484	577	648	403	542	1158	2255	1191	608	607	809
1971	433	655	570	915	1355	497	759	2305	2148	1398	1398	620	1197
1972	554	690	372	408	761	1734	891	2456	3024	2798	1559	946	1352
1973	493	447	958	716	373	413	543	1484	1712	1354	770	535	820
1974	624	718	929	1205	525	783	880	1483	3290	2628	1551	738	1284
1975	284	670	740	737	415	487	381	1512	2433	2435	1551	596	954
1976	891	1492	2194	1020	612	366	623	1914	1836	2460	1636	952	1338
1977	445	437	524	712	487	902	446	862	1636	917	1636	620	749
1978	398	1161	1516	609	470	672	689	1044	2056	1752	1043	1144	1050
1979	527	903	358	206	356	940	695	1666	1751	1310	702	596	836

## STATION 12182500 CASCADE RIVER AT MARBLEMOUNT, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1929-1979)

MEAN	754.6	839.2	840.2	702.7	630.4	577.1	851.7	1654.1	2161.9	1712.7	939.9	684.8	1030.9
MAXIMUM	1592.0	2051.0	2194.0	1599.0	1524.0	1734.0	1773.0	2657.0	3423.0	2798.0	1794.0	1439.0	1352.0
MINIMUM	284.0	176.0	252.0	201.0	146.0	257.0	381.0	862.0	1144.0	858.0	556.0	361.0	708.0
STD DEVIATION	324.48	437.42	424.58	338.63	331.79	255.41	274.42	421.97	530.20	560.65	309.75	214.29	185.45
SKWNESS	0.790	0.810	1.165	0.716	0.852	2.284	0.863	0.576	0.688	0.548	1.085	1.394	0.191
STD ERR SKEW	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
SER CORR COEFF	0.113	0.227	-0.056	0.155	-0.032	-0.101	-0.213	0.179	0.081	0.119	0.191	-0.080	0.123
COEFF OF VAR	0.430	0.521	0.505	0.482	0.526	0.443	0.322	0.255	0.245	0.327	0.330	0.313	0.180
MEAN LOGS	2.838	2.861	2.873	2.793	2.740	2.729	2.909	3.205	3.322	3.211	2.952	2.817	3.006
STD DEV LOGS	0.191	0.247	0.216	0.227	0.234	0.160	0.138	0.110	0.105	0.142	0.133	0.124	0.079
SKWNESS LOGS	-0.184	-0.552	-0.065	-0.462	-0.153	0.143	-0.055	0.006	0.070	0.018	0.509	0.549	-0.093
STD ERR SKEW LOGS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
SER CORR LOGS	0.106	0.205	0.064	0.146	-0.004	-0.057	-0.183	0.173	0.172	0.113	0.253	-0.044	0.141
COEFF OF VAR LOGS	0.067	0.086	0.075	0.081	0.085	0.059	0.048	0.034	0.031	0.044	0.045	0.044	0.026
% OF AVE FLOW	6.1	6.8	6.8	5.7	5.1	4.7	6.9	13.4	17.5	13.9	7.6	5.5	100.0

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## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1929-1979)

0.99	233.7	154.5	228.9	153.8	147.9	278.5	381.3	890.6	1214.9	763.6	494.3	379.8	656.9
0.95	327.1	263.1	326.0	246.5	221.6	318.8	477.5	1057.6	1420.8	991.6	568.9	431.0	749.1
0.90	389.2	341.8	392.9	311.5	271.5	347.4	537.8	1159.1	1546.0	1070.4	618.3	465.1	802.5
0.80	478.0	460.1	491.5	407.1	351.1	390.9	620.4	1295.3	1714.3	1234.7	689.8	514.2	871.5
0.50	698.0	765.6	749.8	648.0	557.4	512.5	812.9	1602.6	2095.1	1624.3	873.2	639.8	1017.3
0.20	1000.1	1183.4	1135.3	972.0	868.1	716.8	1060.8	1983.4	2570.8	2139.7	1146.7	826.0	1182.8
0.10	1197.8	1445.1	1405.9	1174.7	1086.0	877.9	1217.2	2217.6	2865.5	2472.6	1342.4	958.7	1277.8
0.04	1443.9	1752.7	1761.9	1414.4	1371.0	1113.4	1407.6	2498.1	3221.2	2886.1	1607.1	1137.3	1385.8
0.02	1624.2	1964.6	2035.9	1580.9	1588.8	1314.1	1545.2	2698.0	3476.4	3190.0	1817.3	1278.7	1459.4
0.01	1801.9	2162.3	2316.7	1737.6	1810.3	1538.0	1679.6	2891.6	3724.9	3491.1	2038.9	1427.3	1528.4

## STATION 12182500 CASCADE RIVER AT MARBLEMOUNT, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1930	149.0	151.0	158.0	167.0	172.0	206.0	242.0	256.0	341.0
1931	242.0	261.0	290.0	303.0	322.0	355.0	446.0	465.0	544.0
1932	279.0	281.0	284.0	296.0	330.0	438.0	489.0	577.0	585.0
1933	214.0	230.0	230.0	237.0	268.0	343.0	437.0	557.0	818.0
1934	474.0	512.0	585.0	611.0	873.0	951.0	1140.0	1310.0	1370.0
1935	259.0	266.0	276.0	287.0	354.0	546.0	672.0	818.0	855.0
1936	187.0	188.0	193.0	197.0	221.0	277.0	316.0	311.0	353.0
1937	158.0	159.0	162.0	166.0	176.0	208.0	305.0	282.0	323.0
1938	237.0	240.0	243.0	254.0	316.0	425.0	532.0	593.0	687.0
1939	251.0	255.0	261.0	267.0	294.0	380.0	486.0	511.0	580.0
1940	300.0	320.0	356.0	421.0	441.0	518.0	669.0	740.0	818.0
1941	276.0	283.0	303.0	329.0	385.0	424.0	454.0	553.0	627.0
1942	249.0	251.0	258.0	270.0	304.0	319.0	338.0	516.0	675.0
1943	219.0	227.0	235.0	240.0	277.0	321.0	376.0	464.0	539.0
1944	230.0	232.0	237.0	251.0	320.0	383.0	380.0	422.0	435.0
1945	299.0	306.0	313.0	333.0	420.0	550.0	561.0	656.0	663.0
1946	259.0	262.0	272.0	284.0	345.0	452.0	481.0	538.0	667.0
1947	214.0	217.0	234.0	250.0	307.0	476.0	567.0	626.0	669.0
1948	293.0	295.0	308.0	324.0	381.0	392.0	449.0	556.0	713.0
1949	223.0	228.0	229.0	232.0	240.0	277.0	361.0	419.0	546.0
1950	279.0	286.0	302.0	358.0	485.0	535.0	651.0	728.0	910.0
1951	332.0	346.0	363.0	395.0	473.0	857.0	854.0	1030.0	1070.0
1952	155.0	158.0	163.0	171.0	199.0	310.0	353.0	377.0	508.0
1953	118.0	119.0	122.0	134.0	155.0	202.0	239.0	291.0	524.0
1954	328.0	337.0	344.0	359.0	575.0	741.0	780.0	886.0	918.0
1955	222.0	227.0	233.0	238.0	253.0	330.0	367.0	446.0	670.0
1956	208.0	209.0	214.0	230.0	237.0	275.0	345.0	488.0	792.0
1957	212.0	213.0	217.0	222.0	234.0	363.0	486.0	661.0	763.0
1958	235.0	240.0	266.0	311.0	360.0	444.0	473.0	494.0	561.0
1959	312.0	319.0	333.0	357.0	419.0	478.0	673.0	836.0	981.0
1960	272.0	277.0	287.0	311.0	366.0	557.0	523.0	660.0	995.0
1961	359.0	374.0	407.0	459.0	471.0	591.0	724.0	740.0	866.0
1962	308.0	310.0	310.0	313.0	338.0	540.0	613.0	641.0	736.0
1963	360.0	377.0	394.0	428.0	495.0	637.0	672.0	863.0	934.0
1964	491.0	295.0	317.0	360.0	386.0	443.0	553.0	660.0	747.0
1965	320.0	323.0	335.0	357.0	400.0	634.0	614.0	715.0	763.0
1966	242.0	246.0	257.0	279.0	286.0	352.0	380.0	437.0	494.0
1967	224.0	231.0	260.0	356.0	416.0	503.0	636.0	687.0	819.0
1968	374.0	383.0	394.0	409.0	432.0	801.0	964.0	976.0	1060.0
1969	227.0	227.0	231.0	240.0	248.0	289.0	453.0	517.0	630.0
1970	247.0	256.0	264.0	291.0	402.0	440.0	473.0	526.0	567.0
1971	237.0	266.0	296.0	304.0	342.0	461.0	500.0	531.0	577.0
1972	242.0	246.0	255.0	258.0	279.0	372.0	423.0	480.0	550.0
1973	262.0	270.0	284.0	309.0	336.0	389.0	505.0	619.0	746.0
1974	263.0	268.0	282.0	323.0	418.0	498.0	582.0	637.0	746.0
1975	193.0	197.0	210.0	213.0	234.0	362.0	490.0	539.0	556.0
1976	265.0	266.0	272.0	312.0	366.0	485.0	662.0	952.0	1100.0
1977	204.0	218.0	242.0	274.0	299.0	387.0	431.0	493.0	511.0
1978	272.0	280.0	306.0	357.0	381.0	454.0	523.0	724.0	770.0
1979	163.0	165.0	169.0	180.0	194.0	247.0	300.0	415.0	551.0

STATION 12182500 CASCADE RIVER AT MARBLEMOUNT, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1930-1979)

MEAN	255.2	261.9	275.1	296.5	344.5	444.3	518.9	604.4	701.0
MAXIMUM	474.0	512.0	585.0	611.0	873.0	951.0	1140.0	1310.0	1370.0
MINIMUM	118.0	119.0	122.0	134.0	159.9	159.63	176.02	204.40	210.30
STANDARD DEVIATION	63.59	67.96	76.25	85.21	119.99	120.1	120.1	1.015	0.751
SKEWNESS	0.702	0.915	1.271	0.953	1.729	1.128	1.201	0.337	0.337
STD ERROR OF SKEWNESS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337
SERIAL CORR COEFF	0.023	0.027	0.011	0.023	-0.094	-0.016	0.048	0.008	0.150
COEFF OF VARIATION	0.249	0.260	0.277	0.287	0.348	0.359	0.339	0.338	0.300
MEAN LOGS	2.393	2.404	2.424	2.455	2.514	2.622	2.692	2.758	2.827
STD DEVIATION LOGS	0.110	0.113	0.118	0.125	0.142	0.150	0.141	0.145	0.131
SKEWNESS LOGS	-0.392	-0.322	-0.210	-0.228	0.048	0.039	0.075	-0.146	-0.192
STD ERR SKEWNESS LOGS	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337	0.337
SER CORR COEFF LOGS	0.072	0.078	0.073	0.085	-0.047	0.021	0.070	0.048	0.177
COEFF OF VAR LOGS	0.046	0.047	0.049	0.051	0.057	0.057	0.052	0.053	0.046

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1930-1979)

0.99	414.5	436.6	478.9	529.3	707.7	947.2	1068.4	1202.1	1295.5
0.98	394.3	413.3	449.7	495.8	645.3	859.5	973.0	1108.0	1207.0
0.96	372.1	388.1	418.7	460.2	582.6	771.8	877.5	1010.6	1113.9
0.90	338.2	350.3	373.6	408.5	497.8	653.9	749.0	873.9	980.4
0.80	307.3	316.6	334.4	363.8	430.0	560.2	646.7	760.2	866.6
0.50	251.6	257.0	268.0	288.1	325.8	417.9	490.5	577.2	677.5
0.20	201.2	204.6	211.8	224.7	247.8	312.7	374.1	433.3	522.5
0.10	171.2	180.1	186.3	196.1	215.1	269.1	325.5	371.2	453.6
0.05	158.8	161.5	167.1	174.7	191.5	237.8	290.5	325.9	402.5
0.02	139.6	142.1	147.4	152.8	168.2	207.1	255.9	280.8	350.7
0.01	127.7	130.1	135.3	139.4	154.3	188.9	235.3	253.8	319.3

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1930-1979)

P95	P90	P75	P70	P50	P25	P10
280.0	340.0	480.0	520.0	770.0	1300.0	2100.0



STATION 12182500 CASCADE RIVLR AT MARBLEMOUNT, WASH.									
HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30									
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1815	8310.	4210.	2490.	2290.	2040.	1860.	1610.	1400.	1070.
1898	2320.	2070.	1990.	1678.	1600.	1490.	1410.	1370.	1160.
1910	3370.	2690.	2200.	1960.	1690.	1780.	1590.	1380.	1190.
1911	9250.	7360.	4700.	2740.	2410.	2010.	1860.	1700.	1570.
1912	6650.	4870.	4300.	3080.	2880.	2690.	2410.	2110.	1700.
1918	5160.	4250.	3320.	2760.	2200.	1820.	1750.	1610.	1510.
1935	8550.	6980.	4660.	3300.	2120.	1870.	1660.	1440.	1300.
1936	4200.	3830.	3720.	3300.	2900.	2540.	2290.	1960.	1470.
1937	3850.	3380.	3030.	2840.	2820.	2390.	1990.	1690.	1300.
1938	5760.	3390.	2910.	2480.	2250.	2040.	1810.	1590.	1320.
1939	4880.	3830.	2680.	2210.	2050.	2000.	1850.	1680.	1360.
1940	2600.	2400.	2070.	1810.	1630.	1450.	1280.	1170.	1020.
1941	3250.	3120.	2330.	1620.	1330.	1140.	1070.	961.	877.
1942	3950.	2760.	2460.	2040.	1990.	1820.	1530.	1350.	1070.
1943	3120.	3030.	2890.	2700.	2350.	2150.	1890.	1720.	1400.
1944	3410.	2340.	1840.	1720.	1620.	1430.	1270.	1130.	980.
1945	3530.	3280.	2730.	2220.	1990.	1820.	1660.	1430.	1140.
1946	8780.	5380.	3160.	2750.	2540.	2290.	2130.	1900.	1490.
1947	6640.	3940.	3000.	2480.	2270.	2060.	1880.	1700.	1410.
1948	6520.	5670.	5100.	4560.	3930.	2930.	2380.	2050.	1590.
1949	5010.	4880.	4500.	3520.	2950.	2440.	2250.	2010.	1600.
1950	10200.	6300.	4660.	3980.	3760.	3110.	2650.	2310.	1800.
1951	8870.	6390.	3980.	2370.	2050.	1970.	1750.	1580.	1380.
1952	3170.	2790.	2360.	2180.	2090.	1860.	1690.	1550.	1200.
1953	3940.	3450.	3180.	2770.	2200.	1970.	1820.	1670.	1320.
1954	4470.	3500.	3300.	3190.	3060.	2550.	2390.	2210.	1770.
1955	5570.	5350.	4420.	3450.	2850.	2570.	2260.	1890.	1440.
1956	7800.	4850.	3590.	3280.	2880.	2570.	2260.	2010.	1580.
1957	3480.	3350.	2940.	2640.	2340.	2160.	1880.	1610.	1310.
1958	3760.	3710.	3500.	2830.	2370.	2010.	1700.	1470.	1190.
1959	5560.	4140.	3460.	2850.	2690.	2520.	2300.	1990.	1700.
1960	7980.	6010.	4560.	2930.	2230.	2040.	1860.	1650.	1380.
1961	5020.	4620.	3990.	3360.	3020.	2440.	2030.	1750.	1490.
1962	4610.	3130.	2900.	2480.	2100.	1910.	1740.	1530.	1260.
1963	7770.	4170.	2550.	2000.	1910.	1660.	1470.	1280.	1080.
1964	4190.	4020.	3560.	3380.	2970.	2780.	2420.	2080.	1610.
1965	3020.	2870.	2720.	2420.	2190.	1970.	1790.	1650.	1310.
1966	3430.	2900.	2540.	2170.	1920.	1800.	1710.	1510.	1250.
1967	4660.	4490.	4080.	3590.	3070.	2610.	2220.	1910.	1450.
1968	7050.	4810.	3480.	2590.	2360.	2200.	1900.	1640.	1430.
1969	3990.	3610.	3490.	3200.	2960.	2690.	2460.	2150.	1400.
1970	4070.	3600.	3220.	2400.	2260.	1870.	1550.	1320.	1060.
1971	5310.	4180.	3740.	3450.	2860.	2480.	2100.	1800.	1470.
1972	6150.	4880.	4220.	4060.	3390.	3140.	2870.	2500.	2100.
1973	3030.	3010.	2610.	2020.	1770.	1700.	1550.	1360.	1070.
1974	5390.	4760.	4680.	4130.	3420.	2980.	2580.	2260.	1810.
1975	4730.	4560.	4430.	3430.	2660.	2300.	2120.	1800.	1350.
1976	11000.	8970.	5360.	3370.	2500.	2300.	2110.	1980.	1580.
1977	5860.	3000.	2080.	1920.	1640.	1480.	1190.	1140.	988.
1978	4870.	3440.	2990.	2280.	2100.	1910.	1670.	1520.	1300.
1979	3700.	2950.	2420.	2210.	1980.	1710.	1620.	1410.	1190.

ANNUAL PEAK-FLOW DATA

FLOW (CFS) DATE REG. (R)

46000. / 15

40000. 11/19/97

30500. 11/29/09

17400. 10/24/10

8210. 06/19/12

32000. 12/29/17

10700. 10/09/28

2740. 06/07/30

4480. 01/27/31

12900. 02/26/32

10400. 11/13/32

8050. 11/02/33

11500. 11/05/34

5760. 06/02/36

4760. 06/03/37

8810. 10/28/37

7870. 05/28/39

3190. 12/15/39

4430. 10/19/40

6730. 12/02/41

3820. 06/17/43

5210. 12/03/43

4430. 01/07/45

9620. 10/25/45

11600. 10/25/46

11000. 10/19/47

5620. 05/13/49

17800. 11/27/49

9650. 02/10/51

4280. 06/04/52

4750. 01/31/53

5470. 08/23/54

6290. 06/11/55

10800. 10/25/55

4650. 10/17/56

5060. 10/30/57

9110. 12/03/58

10600. 11/23/59

8220. 01/15/61

5440. 01/03/62

18700. 11/20/62

7280. 10/22/63

3360. 10/02/64

3670. 05/06/66

6220. 12/16/66

10200. 10/27/67

5080. 01/05/69

4750. 06/03/70

6600. 01/30/71

9020. 07/13/72

3620. 06/22/73

5920. 01/16/74

5060. 07/07/75

11500. 12/04/75

8460. 01/18/77

8750. 11/26/77

9300. 11/07/78

### HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1815-1979)

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1815-1979)														
MEAN	5328.6	4146.5	3345.3	2766.3	2416.7	2135.1	1903.1	1683.5	1370.5					
MAXIMUM	11000.0	8970.0	5360.0	4560.0	3930.0	3140.0	2870.0	2500.0	2100.0					
MINIMUM	2320.0	2070.0	1840.0	1620.0	1230.0	1140.0	1070.0	961.0	877.0					
STANDARD DEVIATION	2105.74	1382.34	883.86	688.91	571.27	458.01	390.00	333.80	251.15					
SKEDNESS	0.899	1.270	0.845	0.443	0.528	0.219	0.216	0.240	0.419					
STD ERROR OF SKEWNESS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333					
SERIAL CORR. COEFF	0.100	0.135	0.347	0.260	0.177	0.133	0.172	0.145	0.104					
COEFF OF VARIATION	0.395	0.333	0.264	0.249	0.236	0.215	0.205	0.198	0.183					
MEAN LOGS	3.696	3.597	3.509	3.429	3.371	3.319	3.270	3.218	3.130					
STD DEVIATION LOGS	0.164	0.134	0.116	0.109	0.103	0.096	0.091	0.088	0.080					
SKEWNESS LOGS	0.251	0.387	-0.102	-0.058	-0.122	-0.076	-0.339	-0.278	-0.066					
STD ERR SKEWNESS LOGS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333					
SER CORR COEFF LOGS	0.143	0.200	0.357	0.302	0.208	0.184	0.208	0.173	0.127					
COEFF OF VAR LOGS	0.044	0.037	0.033	0.032	0.031	0.029	0.028	0.027	0.025					
0.99	2208.1	2101.1	1698.8	1483.8	1326.8	1174.9	1084.8	989.9	872.3	2355.6				2735.8
0.95	2739.4	2461.4	2064.3	1771.2	1579.9	1418.7	1293.6	1165.7	993.8	3188.1				3402.8
0.90	3090.3	2696.5	2286.2	1946.6	1730.7	1560.0	1413.9	1287.1	1064.5	3776.2				3890.6
0.80	3595.2	3031.3	2582.9	2175.7	1929.5	1740.9	1567.9	1397.0	1156.1	4670.2				4656.3
0.70	4883.0	3871.4	3245.9	2689.9	2365.0	2114.9	1885.5	1666.2	1350.9	7180.6				6946.4
0.50	6782.1	5086.1	4053.0	3314.2	2874.2	2519.4	2229.6	1961.2	1574.0	11393.8				11211.7
0.10	8128.5	5934.4	4540.4	3691.2	3175.6	2740.0	2418.1	2124.7	1703.0	14691.1				14883.1
0.04	9924.4	7058.9	5115.1	4136.4	3524.8	2980.2	2624.1	2305.2	1850.6	19456.5				20660.8
0.02	11336.2	7935.9	5517.9	4449.7	3766.4	3137.2	2759.3	2425.0	1951.9	23456.6				25911.6
0.01	12810.7	8847.7	5904.9	4750.0	3994.9	3279.2	2882.1	2534.6	2047.0	27855.7				32082.8

### HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1815-1979)

## STATION 12184300 IRON CREEK NEAR ROCKPORT, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1965-1975)			W R C SYSTEMATIC ESTIMATE RECORD	
WATER YEAR	FLOW(CFS)	DATE	MEAN LOGS			2.2936	
1965	270.0	11-30-1964	STANDARD DEVIATION LOGS			0.1250	
1966	116.0	3-30-1966	SKEWNESS LOGS			0.0	
1967	240.0	12-16-1966				2.2936	
1968	240.0	10-27-1967				0.1250	
1969	127.0	1- 4-1969				-0.667	
1970	209.0	11- 4-1969					
1971	170.0	1-30-1971					
1972	288.0	7-12-1972					
1973	195.0	12-26-1972					
1974	181.0	1-16-1974					
1975	205.0	6- 1-1975					
			ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES				
			LOG-PEARSON III ANALYSIS (YEARS 1965-1975)				
			0.99			100.6	
			0.95			122.4	
			0.90			134.0	
			0.80			154.3	
			0.50			196.6	
			0.20			250.5	
			0.10			284.3	
			0.04			325.4	
			0.02			355.1	
			0.01			384.1	
						87.8	
						116.7	
						134.0	
						156.5	
						203.0	
						251.6	
						276.9	
						302.9	
						319.1	
						333.0	

## STATION 12185500 S.F. SAUK RIVER NR BARLOW PASS, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)											
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	ANNUAL
1918	118	202	1071	498	213	176	322	376	575	322	350
1919	373	238	459	313	126	136	377	654	620	517	345
1920	70.0	508	291	431	163	134	111	291	410	326	279
1921	480	202	192	228							
1929	363	159	149	62.9	30.8	129	164	495	578	335	223
1930	76.0	59.2	195	72.7	475	195	376	317	351	233	208
1931	204	135	121	493	393	430	296	468	503	218	295

ANNUAL PEAK FLOW DATA	
WATER YEAR	FLOW(CFS)
1918	9410.0
1919	3350.0
1920	5870.0
1929	1100.0
1930	2080.0
1931	3210.0

## STATION 12186000 SAUK R ARV WHITECHUCK R NR DARRINGTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1918	421	545	3512	2160	954	732	1292	1569	2393	1230	650	323	1320
1919	1128	978	1579	1192	591	572	1284	2082	2123	1973	770	384	1227
1920	260	1428	1145	1557	827	603	555	1200	1477	1308	504	1504	1051
1921	1889	1843	841	1006	1353	1057			3405	1828	784	911	
1922	1429	1388	2659	464	321	340	692	1897	2684	1028	529	456	1163
1929	1075	482	468	250	167	481	654	2054	2151	1070	392	217	790
1930	240	210	657	284	1545	700	1523	1308	1433	809	291	239	763
1931	564	424	433	1181	869	1064	1158	2018	1980	819	251	416	931
1932	585	1064	665	665	1558	1482	1532	2075	2513	1477	614	315	1209
1933	705	2579	1230	890	297	625	962	1692	3185	2805	1238	1053	1442
1934	1704	1416	3077	1968	948	1698	1991	1859	1231	770	395	394	1461
1935	996	1970	1102	2108	1199	667	606	1619	2151	1385	525	427	1229
1936	309	345	466	707	267	648	1536	2772	2419	910	370	314	923
1937	252	137	1051	244	272	656	412	1835	2051	1307	426	268	862
1938	588	1687	1380	892	334	595	1317	1917	2051	1953	283	215	1020
1939	509	711	1057	1324	460	673	1392	2303	1948	1614	506	291	1070
1940	567	711	1795	781	914	1083	1160	1834	1136	451	261	196	922
1941	1034	712	1067	677	521	552	841	1162	895	396	215	749	736
1942	1441	1030	1395	368	369	409	1053	1390	1928	1059	336	177	916
1943	276	1186	1047	667	670	763	1629	1661	2222	1976	604	283	1083
1944	399	490	986	606	495	602	814	1501	1419	586	262	635	733
1945	600	776	808	1381	1139	571	620	2191	1778	984	343	480	972
1946	901	1067	832	792	1592	707	1293	2926	2677	1839	644	308	1211
1947	728	695	1469	966	1210	937	1483	2402	2010	1154	459	376	1159
1948	1594	1436	1146	711	588	499	970	2604	3531	1267	687	663	1308
1949	823	813	624	314	684	899	1258	2965	2294	1693	774	652	1152
1950	1065	2360	1466	1019	996	1264	996	1706	3505	2671	1153	469	1557
1951	1362	1611	1988	921	2369	581	1252	2202	1843	997	406	428	1322
1952	1248	828	582	353	730	363	1208	2302	1969	1319	502	278	974
1953	194	230	516	2584	1444	570	967	1973	2008	2131	815	545	1165
1954	901	1314	1687	919	1328	697	949	2101	2494	2875	1393	843	1460
1955	818	1715	760	472	669	293	724	1429	3117	2357	982	431	1147
1956	1692	2255	1308	647	286	483	1398	2875	2948	2345	739	639	1471
1957	1435	1062	1986	437	765	774	1168	2724	1938	918	456	328	1170
1958	427	595	924	1117	1006	580	987	2484	1784	712	324	493	951
1959	1010	1999	2018	1504	525	722	1718	1895	2675	1975	638	1480	1516
1960	1845	2268	1483	612	811	610	1232	1760	2188	1289	524	383	1250
1961	716	1315	856	1599	1746	968	941	1903	2663	1177	468	431	1227
1962	855	708	1085	1545	1778	357	1207	1198	2051	1342	677	491	1025
1963	665	1435	1598	870	1735	699	795	1367	1425	851	436	343	1013
1964	817	1404	1309	1266	593	553	756	1523	3020	2620	1301	786	1331
1965	1022	920	1291	1126	1297	685	1252	1838	2107	1392	655	332	1159
1966	594	1015	778	833	396	721	1314	2040	2155	1525	605	290	1025
1967	810	735	1838	1281	873	624	470	1735	3113	1785	661	405	1213
1968	2174	1253	1453	1755	1879	1147	742	1704	2489	1422	577	737	1444
1969	813	1370	910	924	554	1160	1160	2749	2840	943	432	706	1145
1970	824	709	682	918	854	628	777	1332	2281	946	432	528	903
1971	459	1065	797	1355	1505	647	805	2495	2318	2746	1105	501	1316
1972	521	943	578	760	1433	2442	1148	2785	3163	2754	1236	850	1554
1973	367	657	1479	1108	392	496	642	1668	1668	1044	435	397	867
1974	750	1014	1331	1957	790	1057	1092	1708	3648	1333	614	1507	1507
1975	228	857	1196	996	603	637	458	1691	2399	2086	1305	484	1041
1976	1115	1874	2820	1457	774	505	813	2166	2020	2247	1305	707	1491
1977	356	569	715	813	620	537	1041	1119	1500	563	622	545	749
1978	459	2020	2197	720	594	849	816	1270	1899	1177	613	1048	1140
1979	402	933	469	224	606	1179	767	2003	1761	1102	396	383	853

## STATION 12186000 SAUK R ABV WHITECHUCK R NR DARRINGTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1918-1979)

MEAN	838.6	1112.8	1261.4	1004.8	854.5	747.1	1055.1	1937.3	2274.9	1477.3	626.9	520.4	1138.9
MAXIMUM	2174.0	2579.0	3512.0	2584.0	2369.0	2442.0	1991.0	2965.0	3648.0	2875.0	1393.0	1504.0	1557.0
MINIMUM	194.0	137.0	433.0	224.0	167.0	293.0	458.0	1119.0	895.0	396.0	215.0	177.0	733.0
STD DEVIATION	475.58	572.55	665.16	526.98	477.19	358.40	331.71	490.84	634.12	672.95	309.08	281.29	230.02
SKWENESS	0.868	0.666	1.377	0.831	0.962	2.491	0.399	0.412	0.284	0.628	1.081	1.719	0.088
STD ERR SKEW	0.319	0.319	0.319	0.319	0.319	0.319	0.322	0.322	0.319	0.319	0.319	0.319	0.322
SER CORR COEFF	0.087	0.082	-0.102	0.135	-0.074	-0.091	-0.086	0.192	0.042	0.128	0.240	0.038	0.131
COEFF OF VAR	0.567	0.515	0.527	0.524	0.558	0.480	0.314	0.253	0.279	0.456	0.493	0.541	0.202
MEAN LOGS	2.852	2.980	3.047	2.938	2.864	2.837	3.001	3.273	3.339	3.124	2.750	2.665	3.047
STD DEV LOGS	0.261	0.262	0.217	0.251	0.253	0.170	0.143	0.111	0.128	0.207	0.204	0.208	0.090
SKWENESS LOGS	-0.257	-0.943	0.102	-0.542	-0.263	0.170	-0.357	-0.089	-0.545	-0.280	0.174	0.363	-0.277
STD ERR SKEW LOGS	0.319	0.319	0.319	0.319	0.319	0.319	0.322	0.322	0.319	0.319	0.319	0.319	0.322
SER CORR LOGS	0.050	0.130	-0.038	0.210	-0.010	-0.070	-0.044	0.174	0.126	0.143	0.325	0.126	0.156
COEFF OF VAR LOGS	0.091	0.088	0.071	0.085	0.088	0.060	0.048	0.034	0.038	0.066	0.074	0.078	0.030
% OF AVE FLOW	6.1	8.1	9.2	7.3	6.2	5.4	7.7	14.1	16.6	10.8	4.6	3.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1918-1979)

0.99	157.3	157.5	362.5	180.4	168.4	339.8	429.1	1019.1	982.3	398.8	200.3	172.5	660.3
0.95	254.0	309.5	497.9	309.0	268.7	394.2	566.3	1225.4	1292.3	586.1	265.9	221.4	780.8
0.90	324.6	425.5	591.5	402.8	341.2	432.8	651.4	1349.9	1479.1	713.3	310.8	255.6	850.5
0.80	432.8	602.3	730.9	544.3	451.3	491.5	766.2	1515.7	1724.2	897.5	377.2	306.9	940.0
0.50	729.3	1049.3	1105.7	913.0	749.2	656.6	1022.6	1884.0	2243.5	1358.8	554.2	449.0	1126.3
0.20	1184.8	1599.8	1692.9	1422.2	1199.8	936.4	1327.6	2329.2	2811.1	1993.6	830.0	684.4	1331.3
0.10	1505.5	1901.1	2125.4	1743.8	1513.3	1158.8	1505.5	2596.8	3118.1	2406.4	1033.3	867.7	1445.3
0.04	1923.4	2212.0	2719.0	2124.2	1918.3	1486.3	1708.3	2911.5	3447.0	2914.7	1312.9	1132.1	1571.5
0.02	2240.4	2400.0	3194.4	2387.6	2223.4	1787.1	1845.8	3132.1	3657.9	3282.9	1537.7	1354.2	1655.4
0.01	2560.4	2557.0	3697.8	2634.3	2529.7	2082.0	1973.6	3342.8	3845.1	3641.9	1776.5	1598.8	1732.3

## STATION 12186000 SAUK R ABV WHITECHUCK R NK DARRINGTON, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31									
YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1919	250.0	250.0	257.0	278.0	304.0	435.0	563.0	748.0	886.0
1920	178.0	186.0	200.0	226.0	260.0	319.0	433.0	630.0	844.0
1921	275.0	283.0	322.0	376.0	433.0	627.0	890.0	925.0	1090.0
1930	156.0	157.0	160.0	168.0	202.0	217.0	216.0	233.0	333.0
1931	148.0	154.0	176.0	206.0	216.0	247.0	305.0	379.0	391.0
1932	204.0	205.0	216.0	227.0	329.0	329.0	368.0	501.0	587.0
1933	152.0	153.0	167.0	193.0	241.0	343.0	516.0	722.0	1000.0
1934	315.0	338.0	387.0	425.0	636.0	944.0	1220.0	1310.0	1700.0
1935	188.0	194.0	204.0	227.0	264.0	342.0	388.0	507.0	902.0
1936	130.0	133.0	143.0	163.0	221.0	300.0	346.0	417.0	470.0
1937	115.0	116.0	117.0	121.0	136.0	186.0	208.0	250.0	372.0
1938	149.0	150.0	155.0	174.0	198.0	270.0	345.0	546.0	858.0
1939	153.0	158.0	181.0	184.0	194.0	227.0	319.0	415.0	608.0
1940	209.0	211.0	216.0	235.0	272.0	338.0	432.0	544.0	801.0
1941	156.0	159.0	174.0	185.0	194.0	209.0	267.0	387.0	618.0
1942	193.0	198.0	202.0	212.0	214.0	287.0	382.0	550.0	708.0
1943	132.0	137.0	143.0	149.0	158.0	179.0	232.0	385.0	615.0
1944	190.0	197.0	205.0	219.0	245.0	318.0	390.0	433.0	541.0
1945	190.0	195.0	198.0	205.0	219.0	308.0	477.0	511.0	598.0
1946	201.0	204.0	209.0	227.0	323.0	368.0	379.0	568.0	725.0
1947	168.0	171.0	179.0	197.0	224.0	309.0	486.0	568.0	761.0
1948	254.0	263.0	275.0	277.0	372.0	405.0	590.0	732.0	937.0
1949	215.0	218.0	220.0	227.0	255.0	320.0	515.0	527.0	615.0
1950	423.0	427.0	431.0	471.0	524.0	655.0	780.0	909.0	1190.0
1951	285.0	281.0	311.0	349.0	424.0	739.0	960.0	1050.0	1230.0
1952	220.0	220.0	223.0	230.0	266.0	378.0	469.0	485.0	632.0
1953	138.0	139.0	147.0	161.0	177.0	209.0	227.0	261.0	481.0
1954	250.0	261.0	281.0	299.0	389.0	625.0	705.0	849.0	1020.0
1955	228.0	231.0	237.0	254.0	275.0	466.0	472.0	542.0	782.0
1956	220.0	221.0	230.0	251.0	288.0	338.0	473.0	680.0	1080.0
1957	184.0	191.0	210.0	230.0	251.0	423.0	654.0	970.0	987.0
1958	181.0	185.0	204.0	237.0	257.0	296.0	360.0	450.0	586.0
1959	205.0	220.0	233.0	248.0	283.0	352.0	450.0	611.0	1050.0
1960	251.0	254.0	265.0	285.0	350.0	682.0	620.0	872.0	1270.0
1961	201.0	208.0	221.0	255.0	303.0	406.0	461.0	658.0	802.0
1962	190.0	204.0	233.0	246.0	316.0	429.0	576.0	612.0	770.0
1963	263.0	281.0	302.0	358.0	433.0	525.0	560.0	685.0	950.0
1964	215.0	218.0	226.0	240.0	280.0	315.0	389.0	530.0	806.0
1965	325.0	333.0	375.0	430.0	544.0	869.0	859.0	968.0	1050.0
1966	213.0	217.0	227.0	240.0	320.0	448.0	511.0	639.0	659.0
1967	182.0	200.0	226.0	286.0	289.0	320.0	507.0	596.0	914.0
1968	241.0	245.0	254.0	301.0	405.0	528.0	788.0	1120.0	1170.0
1969	229.0	255.0	261.0	274.0	292.0	332.0	564.0	677.0	801.0
1970	251.0	258.0	279.0	293.0	331.0	449.0	596.0	660.0	654.0
1971	220.0	228.0	267.0	297.0	329.0	430.0	448.0	495.0	634.0
1972	281.0	287.0	301.0	331.0	370.0	494.0	639.0	603.0	660.0
1973	189.0	198.0	201.0	209.0	328.0	448.0	591.0	614.0	756.0
1974	241.0	243.0	246.0	250.0	340.0	487.0	604.0	780.0	780.0
1975	175.0	178.0	188.0	194.0	203.0	315.0	493.0	636.0	752.0
1976	299.0	304.0	313.0	342.0	446.0	604.0	722.0	994.0	1330.0
1977	216.0	219.0	236.0	283.0	347.0	484.0	531.0	420.0	601.0
1978	264.0	273.0	303.0	345.0	387.0	493.0	525.0	794.0	794.0
1979	148.0	153.0	166.0	180.0	215.0	312.0	400.0	487.0	593.0

STATION 12186000 SAUK R ABV WHITECHUCK R NR DARRINGTON, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1919-1979)

MEAN	211.9	218.2	232.1	254.2	299.9	405.0	510.1	624.0	805.5
MAXIMUM	423.0	427.0	431.0	471.0	636.0	944.0	1220.0	1310.0	1700.0
MINIMUM	115.0	116.0	117.0	121.0	136.0	179.0	208.0	233.0	333.0
STANDARD DEVIATION	56.56	58.49	63.36	72.96	99.92	163.14	194.99	221.01	264.84
SKEWNESS	1.079	0.980	0.924	0.936	1.165	1.365	1.234	0.890	0.838
STD ERROR OF SKEWNESS	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327
SERIAL CORR COEFF	0.087	0.100	0.090	0.096	0.076	0.039	0.069	0.079	0.162
COEFF OF VARIATION	0.267	0.268	0.273	0.287	0.333	0.403	0.382	0.354	0.329
MEAN LOGS	2.312	2.324	2.351	2.388	2.455	2.577	2.678	2.769	2.883
STD DEVIATION LOGS	0.112	0.113	0.115	0.121	0.137	0.161	0.162	0.155	0.144
SKEWNESS LOGS	0.139	0.086	0.093	0.118	0.232	0.320	-0.094	-0.295	-0.236
STD ERR SKEWNESS LOGS	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327	0.327
SER CORR COEFF LOGS	0.143	0.162	0.167	0.175	0.174	0.125	0.175	0.138	0.210
COEFF OF VAR LOGS	0.048	0.049	0.049	0.050	0.056	0.062	0.060	0.056	0.050

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1919-1979)

0.99	382.9	393.0	422.9	478.0	626.3	975.3	1104.2	1246.6	1558.3
0.98	354.4	364.4	391.5	440.2	566.3	860.6	1004.6	1154.4	1445.7
0.96	325.5	335.3	359.6	402.2	507.5	751.6	903.5	1056.8	1327.2
0.90	286.1	295.2	315.7	350.3	430.3	614.1	765.2	916.3	1157.5
0.80	254.1	262.3	279.9	308.5	370.4	512.3	653.2	796.3	1013.0
0.50	203.8	210.2	223.3	243.3	281.9	370.3	479.7	597.6	774.3
0.20	164.9	169.3	179.2	193.4	218.3	275.2	349.4	437.5	581.0
0.10	148.0	151.5	160.1	172.0	192.3	238.2	295.0	367.9	496.2
0.05	135.7	138.4	146.0	156.4	173.7	212.6	256.1	317.2	433.9
0.02	123.3	125.1	131.8	140.4	155.5	188.2	218.1	266.8	371.5
0.01	115.7	117.0	123.2	131.4	144.8	174.0	195.7	236.9	334.2

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1919-1979)

P95	P90	P75	P70	P50	P25	P10
240.0	300.0	460.0	520.0	820.0	1500.0	2400.0

## STATION 12186000 SAUK R ABV WHITECHUCK R NR DARRINGTON, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	ANNUAL PEAK-FLOW DATA DATE REG. (R)
1918	17400.	11100.	8430.	5970.	4720.	3070.	2260.	1930.	1860.	24400.	12/29/17
1919	6380.	4530.	3510.	2810.	2450.	2390.	2110.	1880.	1500.	8430.	12/14/18
1920	6880.	4660.	3130.	2490.	1830.	1610.	1470.	1260.	1170.	11400.	11/15/19
1921										8960.	10/04/20
1922	16700.	12000.	7100.	4350.	3030.	2360.	1920.	1590.	1220.	29100.	12/12/21
1929	5340.	3590.	3140.	2610.	2360.	2120.	1810.	1510.	1130.	7030.	10/09/28
1930	4020.	2970.	2190.	1680.	1550.	1450.	1440.	1350.	1200.	5060.	02/05/30
1931	5600.	4670.	3340.	2310.	2040.	2030.	1730.	1610.	1450.	7410.	01/27/31
1932	14600.	10900.	6130.	3630.	2580.	2310.	2130.	2110.	1820.	22900.	02/26/32
1933	10100.	6140.	5220.	3550.	2580.	2310.	2130.	2110.	1820.	13000.	11/13/32
1934	9720.	8240.	5280.	4200.	3430.	2620.	2270.	2120.	1950.	18600.	12/21/33
1935	12700.	10100.	6360.	4240.	2620.	1950.	1740.	1700.	1500.	13200.	01/25/35
1936	3970.	3780.	3330.	3100.	2960.	2700.	2370.	1950.	1450.	4400.	05/16/36
1937	3800.	3670.	3390.	3030.	2950.	2430.	2060.	1770.	1350.	4310.	06/03/37
1938	6030.	4270.	2960.	2540.	2240.	2010.	1880.	1580.	1240.	8240.	04/18/38
1939	5140.	4290.	3060.	2560.	2320.	2160.	2020.	1830.	1420.	7010.	05/29/39
1940	3780.	3450.	2600.	2340.	1840.	1590.	1440.	1320.	1270.	5480.	12/15/39
1941	2940.	2630.	2170.	1610.	1230.	1090.	981.	921.	821.	4180.	10/18/40
1942	5030.	3590.	2610.	2300.	2130.	1760.	1540.	1370.	1040.	7220.	12/02/41
1943	4200.	3500.	3100.	2620.	2440.	2320.	1980.	1920.	1500.	6230.	11/23/42
1944	7110.	3950.	3270.	1720.	1640.	1470.	1260.	1120.	930.	10300.	12/03/43
1945	6360.	4390.	3080.	2320.	2240.	2000.	1700.	1420.	1320.	8940.	02/07/45
1946	7110.	5050.	3760.	3380.	3140.	2850.	2550.	2220.	1700.	8950.	10/25/45
1947	6300.	3750.	3080.	2590.	2410.	2260.	2060.	1810.	1600.	10200.	10/25/46
1948	8230.	6620.	5330.	5020.	4260.	3200.	2670.	2140.	1620.	13500.	10/19/47
1949	5460.	5330.	5020.	3880.	3840.	3670.	3370.	2370.	2110.	5660.	05/13/49
1950	17500.	10100.	6360.	4290.	3240.	2670.	2370.	2290.	1920.	30200.	11/27/49
1951	15000.	11300.	6670.	3830.	2410.	2080.	1690.	1760.	1600.	20800.	02/10/51
1952	4160.	3600.	3140.	2970.	2760.	2220.	2010.	1730.	1320.	5080.	06/05/52
1953	7750.	5880.	4400.	3270.	3060.	2210.	2120.	1860.	1680.	9360.	01/31/53
1954	4700.	3740.	3540.	3380.	3280.	2770.	2590.	2260.	1790.	5600.	10/31/53
1955	6010.	5910.	4960.	3820.	3180.	2770.	2400.	2000.	1510.	6460.	06/10/55
1956	11700.	8380.	5070.	4380.	3650.	3170.	2790.	2440.	1830.	14400.	11/04/55
1957	7760.	4860.	3580.	3220.	2740.	2410.	1970.	1730.	1410.	9650.	12/10/56
1958	4070.	4050.	3820.	3180.	2620.	2150.	1820.	1510.	1340.	4440.	05/26/58
1959	8570.	6290.	3930.	3050.	2670.	2350.	2090.	1730.	1340.	11200.	11/20/58
1960	9500.	7000.	5950.	3760.	2870.	2140.	1890.	1660.	1340.	14700.	12/15/59
1961	7000.	5250.	3680.	3060.	2910.	2340.	1950.	1690.	1660.	9730.	01/15/61
1962	6220.	4150.	3470.	2670.	2060.	1750.	1550.	1470.	1210.	7250.	01/03/62
1963	7680.	5150.	3580.	2260.	2120.	1720.	1570.	1430.	1210.	13800.	11/20/62
1964	4780.	4110.	3810.	3510.	3140.	2890.	2530.	2150.	1670.	6610.	01/01/64
1965	5870.	5200.	3380.	2700.	2410.	2120.	1950.	1700.	1490.	6880.	11/30/64
1966	4410.	3770.	3240.	2640.	2220.	2130.	1930.	1790.	1400.	4890.	05/06/66
1967	5860.	4880.	4480.	3900.	3340.	2830.	2310.	1900.	1480.	7410.	12/13/66
1968	8550.	6120.	4310.	3190.	2520.	2250.	1900.	1710.	1710.	16800.	10/27/67
1969	5220.	4590.	4270.	3940.	3600.	2850.	2590.	1960.	1470.	6010.	01/05/69
1970	4280.	3890.	3690.	2640.	2340.	1890.	1530.	1350.	1190.	4970.	06/03/70
1971	5650.	4980.	3780.	3390.	2810.	2560.	2540.	2220.	1780.	7180.	01/19/71
1972	7120.	5250.	4420.	4350.	3720.	3280.	2970.	2540.	2370.	7820.	02/28/72
1973	4630.	3880.	3550.	2700.	1960.	1700.	1470.	1290.	1090.	5910.	12/26/72
1974	9000.	7670.	5360.	4530.	3760.	3200.	2760.	2390.	1950.	12500.	01/16/74
1975	5770.	3970.	3800.	2990.	2590.	2430.	2090.	1770.	1350.	8670.	12/21/74
1976	14000.	11700.	6890.	4210.	3010.	2600.	2160.	1960.	1560.	19400.	12/04/75
1977	6080.	3440.	2180.	1840.	1520.	1450.	1240.	1070.	955.	8610.	01/18/77
1978	7870.	5520.	4250.	3480.	2890.	2150.	1690.	1410.	1200.	12900.	11/01/77
1979	4210.	3710.	2680.	2440.	2200.	1900.	1700.	1460.	1250.	7480.	11/04/78



#### HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1918-1979)

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1918-1979)														
	0.99	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01	0.001
MEAN	7376.5	5537.8	4104.2	3208.7	2710.2	2305.5	2017.5	1772.8	1473.6					
MAXIMUM	17500.0	12000.0	8430.0	5970.0	4720.0	3280.0	2970.0	2540.0	2370.0					
MINIMUM	2940.0	2630.0	2170.0	1610.0	1230.0	1090.0	981.0	926.0	821.0					
STANDARD DEVIATION	3629.97	2457.84	1382.89	882.00	694.19	512.89	434.41	367.31	298.57					
COEFF OF VARIATION	1.469	1.430	1.051	0.569	0.419	0.004	-0.007	-0.059	0.293					
STD ERROR OF SKEWNESS	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322					
SERIAL CORR COEFF	0.105	0.029	0.123	0.146	0.098	0.133	0.180	0.178	0.200					
MEAN LOGS	3.826	3.404	3.397	3.275	3.256	0.222	0.215	0.207	0.203					
STD DEVIATION LOGS	0.187	0.166	0.138	0.121	0.115	0.102	0.099	0.095	0.090					
SKEWNESS LOGS	0.628	0.850	0.333	-0.225	-0.417	-0.614	-0.612	-0.565	-0.338					
STD EPN SKEWNESS LOGS	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362					
SER CORR COEFF LOGS	0.136	0.066	0.187	0.209	0.150	0.169	0.207	0.196	0.221					
COEFF OF VAR LOGS	0.049	0.045	0.038	0.035	0.034	0.031	0.030	0.029	0.028					

### HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1918-1979)

## STATION 12187500 SAUK RIVER AT DARRINGTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1914	1569	3608	841	755	739	1187	2793	1511	1216	2015	876	1022	
1915	1620	1762	2235	586	2488	2590	2138	2898	4599	1017	844	449	1376
1916	541	1594	893	795	679	1520	1520	3113	5242	4101	1885	963	2321
1917	632	1131	7427	4430	1968	1560	1520	2574	4050	2208	1715	836	1932
1918	2387	2100	3354	2832	1785	1490	2983	3866	3465	3455	1274	665	2509
1919	582	2963	2714	2834	1703	1132	1034	2078	2768	2292	999	2692	2549
1920	3495	1587	1745	2081	2432	1744	1631	3487	5644	3048	999	747	1964
1921	2637	2675	4513	808	531	479	1236	3139	4411	1879	1346	920	2473
1922	1258	996	2361	2987	1009	1062	2151	2984	3487	2565	963	641	2026
1923	938	1466	2637	1600	4207	984	1187	3562	2441	1461	821	817	1880
1924	2935	2359	2864	2588	2981	1168	2343	4348	3494	2316	881	506	1835
1925	691	865	3182	1865	1869	1343	1787	2107	1401	874	672	929	2396
1926	1935	1044	1034	590	377	1106	1318	3450	3746	1828	684	470	1464
1928	497	1320	651	3890	2871	1436	2871	2222	2501	1855	779	420	1478
1930	1117	855	919	2363	1673	2221	2216	3400	3388	1605	689	507	1531
1931	1144	2133	1566	1553	2769	2707	2730	3274	4244	1537	609	1022	1776
1932										2865	1194	735	2238

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1914-1932)

MEAN	1498.6	1722.2	2475.3	1832.4	1963.3	1430.5	2000.7	3000.8	3531.1	2331.4	1047.1	876.9	1984.2
MAXIMUM	3495.0	3608.0	7427.0	4430.0	4207.0	2707.0	2983.0	4348.0	5844.0	5045.0	1885.0	2692.0	2549.0
MINIMUM	497.0	417.0	841.0	586.0	377.0	479.0	1034.0	1511.0	1216.0	874.0	609.0	420.0	1376.0
STD DEVIATION	936.35	869.86	1685.56	1122.78	1120.58	624.66	640.48	741.70	1238.11	1062.20	382.34	522.71	397.01
SKWENESS	0.841	0.629	1.801	0.683	0.544	0.827	0.049	-0.335	-0.322	1.115	1.009	2.687	-0.045
STD ERR SKEW	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.536	0.536	0.536	0.564
SER CORR COEFF	-0.214	0.116	-0.008	0.141	-0.231	0.013	-0.174	-0.410	0.001	0.170	0.486	0.220	0.153
COEFF OF VAR	0.625	0.505	0.681	0.613	0.571	0.437	0.320	0.247	0.351	0.456	0.385	0.596	0.200
MEAN LOGS	3.095	3.178	3.312	3.177	3.211	3.116	3.279	3.463	3.516	3.327	2.995	2.894	3.289
STD DEV LOGS	0.278	0.272	0.272	0.293	0.298	0.196	0.148	0.119	0.187	0.194	0.148	0.199	0.090
SKWENESS LOGS	0.068	-0.565	0.203	-0.168	-0.734	-0.366	-0.358	-0.943	-1.219	-0.063	0.536	1.002	-0.287
SER CORR LOGS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.536	0.536	0.536	0.564
SER CORR LOGS	-0.301	0.244	0.058	0.249	-0.253	-0.086	-0.198	-0.392	-0.094	0.054	0.526	0.222	0.191
COEFF OF VAR LOGS	0.090	0.076	0.082	0.092	0.093	0.063	0.045	0.034	0.053	0.058	0.049	0.069	0.027
% OF AVE FLOW	6.3	7.3	10.4	7.7	8.3	6.0	8.4	12.7	14.9	9.8	4.4	3.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1914-1932)

0.99	290.3	328.1	525.3	288.1	230.7	405.9	786.3	1280.7	840.7	735.0	513.6	378.8	1153.7
0.95	440.1	555.2	760.6	480.4	484.7	595.4	1049.1	1740.7	1438.9	1009.6	598.3	428.7	1384.2
0.90	550.9	718.8	933.7	626.4	651.1	722.1	1213.3	2011.3	1841.0	1193.7	655.5	467.4	1485.8
0.80	724.8	963.3	1205.5	857.6	948.0	902.9	1436.0	2355.2	2394.0	1459.6	739.2	530.2	1641.6
0.50	1234.6	1589.1	2010.0	1532.4	1767.7	1342.6	1938.1	3569.4	3569.4	2133.5	959.6	726.0	1965.2
0.20	2124.6	2434.0	3453.4	2665.9	2928.3	1920.2	2541.5	3670.1	4710.6	3098.2	1300.3	1106.6	2319.8
0.10	2833.4	2957.6	4638.6	3523.4	3649.4	2280.7	2896.1	3969.2	5221.2	3755.4	1551.7	1444.8	2516.4
0.04	3863.6	3568.5	6413.5	4706.9	4475.9	2710.2	3302.1	4251.8	5671.7	4601.6	1899.8	1992.5	2733.3
0.02	4728.7	3986.3	7947.6	5651.1	5026.6	3012.0	3578.4	4412.2	5907.0	5241.4	2182.2	2504.2	2877.1
0.01	5677.9	4373.8	9672.2	6642.4	5524.0	3299.3	3835.8	4541.0	6082.1	5888.4	2485.2	3120.3	3008.6

## STATION 12187500 SAUK RIVER AT DARRINGTON, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1916	340.0	350.0	382.0	415.0	449.0	612.0	708.0	790.0	1000.0
1917	370.0	380.0	404.0	428.0	479.0	731.0	859.0	879.0	940.0
1918	400.0	412.0	436.0	487.0	598.0	723.0	858.0	952.0	2230.0
1919	489.0	496.0	521.0	556.0	629.0	887.0	1140.0	1450.0	1880.0
1920	471.0	496.0	522.0	549.0	577.0	660.0	849.0	1240.0	1760.0
1921	588.0	612.0	625.0	767.0	826.0	1170.0	1790.0	1780.0	1970.0
1922	315.0	348.0	395.0	437.0	463.0	502.0	609.0	1550.0	1960.0
1923	469.0	477.0	502.0	557.0	769.0	853.0	913.0	981.0	1320.0
1924	432.0	447.0	470.0	536.0	581.0	725.0	759.0	846.0	1280.0
1925	500.0	500.0	500.0	557.0	633.0	803.0	988.0	1310.0	1720.0
1926	286.0	286.0	290.0	298.0	351.0	446.0	623.0	721.0	1340.0
1930	282.0	287.0	290.0	295.0	388.0	430.0	428.0	459.0	670.0
1931	262.0	277.0	338.0	426.0	466.0	550.0	675.0	793.0	833.0
1932	450.0	472.0	487.0	529.0	579.0	811.0	838.0	1050.0	1270.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1916-1932)

MEAN	403.9	417.1	440.1	488.4	556.6	707.4	859.8	1057.2	1440.9
MAXIMUM	588.0	612.0	625.0	767.0	825.0	1170.0	1790.0	1780.0	2230.0
MINIMUM	262.0	277.0	290.0	295.0	351.0	430.0	428.0	459.0	670.0
STANDARD DEVIATION	97.69	99.70	96.14	120.39	134.89	198.46	320.63	363.98	483.07
SKEWNESS	0.110	0.132	-0.020	0.405	0.491	0.657	1.930	0.510	0.009
STD ERROR OF SKEWNESS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597
SERIAL CORR COEFF	0.136	0.220	0.345	0.258	0.049	-0.149	-0.093	0.467	0.441
COEFF OF VARIATION	0.242	0.239	0.218	0.247	0.242	0.281	0.373	0.467	0.335
MEAN LOGS	2.594	2.608	2.633	2.676	2.734	2.834	2.911	2.999	3.133
STD DEVIATION LOGS	0.108	0.107	0.099	0.111	0.105	0.122	0.144	0.155	0.158
SKEWNESS LOGS	-0.245	-0.284	-0.467	-0.450	-0.452	-0.4075	0.530	-0.349	-0.497
STD ERR SKEWNESS LOGS	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597	0.597
SER CORR COEFF LOGS	0.185	0.271	0.399	0.341	0.138	-0.033	0.010	0.470	0.461
COEFF OF VAR LOGS	0.042	0.041	0.038	0.041	0.039	0.043	0.049	0.052	0.050

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1916-1932)

0.99	670.4	686.1	675.6	788.2	945.2	1290.7	1994.4	2088.1	2773.3
0.98	633.8	649.7	647.9	751.6	886.5	1200.6	1758.1	1940.7	2599.1
0.96	594.5	610.4	616.8	710.8	825.3	1107.1	1536.9	1783.2	2407.4
0.90	536.6	552.2	568.2	647.9	738.3	975.3	1282.7	1553.4	2117.8
0.80	485.5	500.6	522.8	589.9	684.6	864.8	1063.5	1354.4	1857.5
0.50	396.6	410.2	437.6	483.4	542.6	684.5	791.4	1019.6	1401.3
0.20	319.4	331.1	357.3	385.6	441.9	539.2	613.8	745.4	1013.0
0.10	263.5	294.1	316.0	336.8	396.5	474.9	545.8	625.2	840.0
0.05	256.2	265.8	287.2	302.6	362.4	427.3	499.3	537.3	712.9
0.02	227.8	236.4	254.6	264.8	327.3	378.9	455.3	449.9	586.5
0.01	210.2	218.2	234.1	241.3	305.7	349.5	430.1	398.0	511.8

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1916-1932)

P	P95	P90	P75	P70	P50	P25	P10
460.0	550.0	820.0	920.0	1400.0	2600.0	4000.0	



STATION 1218B300 STRAIGHT CREEK NEAR DARRINGTON, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1965-1975)				W R C SYSTEMATIC	
WATER YEAR	FLOW(CFS)	DATE					ESTIMATE	RECORD
1965	243.0	11-30-1964					2.4684	2.4684
1966	163.0	5- 6-1966					0.1356	0.1356
1967	245.0	12-16-1966					0.0	-0.211
1968	374.0	6- 2-1968						
1969	301.0	5-29-1969						
1970	330.0	11- 4-1969						
1971	406.0	5-12-1971						
1972	494.0	2-28-1972						
1973	225.0	12-26-1972						
1974	335.0	1-16-1974						
1975	272.0	6- 1-1975						
			ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES					
			LOG-PEARSON III ANALYSIS (YEARS 1965-1975)					
			MEAN LOGS	0.99	142.3	135.6		
			STANDARD DEVIATION LOGS	0.95	176.0	172.8		
			SKEWNESS LOGS	0.90	197.1	195.9		
				0.80	226.1	227.0		
				0.50	294.1	297.3		
				0.20	382.4	383.4		
				0.10	438.7	435.3		
				0.04	507.9	496.2		
				0.02	558.3	538.6		
				0.01	607.9	579.0		

STATION 1218B400 SUITATLE R ABV BIG CR NR DARRINGTON, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)											
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	ANNUAL
1971	726	1114	1055	1920	2280	1006	1167	3746	3848	4882	2338
1972	898	798	685	736	1457	2972	1384	4102	5574	5032	1528
1973	930	1210	1619	1300	673	659	776	2205	2651	1965	834
1974	573	1040	1622	2421	1058	1354	1571	2339	6251	4534	1154
1975	1356	2505	3914	1465	938	972	663	2448	4201	4502	1039
1976	755	701	821	1986	1201	786	1026	3348	3138	4003	1506
1977	930	1892	2940	1021	784	762	1439	1554	2684	1404	1236
1978	843	1323	719	1147	900	1109	1193	1782	3499	2835	1799
1979				415	737	1393	1069	2632	2889	2102	1043
											324

ANNUAL PEAK FLOW DATA		
WATER YEAR	FLOW(CFS)	DATE
1971	20100.0	1-30-1971
1972	13400.0	7-13-1972
1973	6700.0	12-26-1972
1974	13500.0	1-16-1974
1975	11500.0	7- 7-1975
1976	29700.0	12- 4-1975
1977	8770.0	1-18-1977
1978	14600.0	11-26-1977
1979	9130.0	11- 8-1978

## STATION 12189000 SUIATILE RIVER NEAR MANSFORD, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1938													
1939	774	882	1490	1879	807	1020	1964	3463	3449	2274	1034	878	1783
1940	987	1237	2254	1356	1242	1551	1611	2939	2492	3275	1450	852	1581
1941	1532	964	1595	1172	846	774	1280	1836	1985	1476	998	801	1318
1942	1874	1455	1989	774	674	675	1501	2315	3333	2673	1328	778	1620
1943	582	1362	1594	1163	1199	1108	2427	2417	3856	4026	1644	922	1861
1944	751	682	1110	828	750	757	1198	2366	2868	1592	983	1381	1272
1945	1087	1119	1218	1746	1672	975	1035	3256	3277	2256	1190	1121	1663
1946	1588	1695	1209	1225	938	1131	1594	4434	4142	3314	1515	870	1980
1947	1151	1045	1888	1260	1635	1383	1989	3986	3716	2500	1221	919	1893
1948	2080	1860	1799	1250	919	823	1276	3870	7091	3047	1835	1142	2250
1949	1352	1236	1044	650	1017	1395	1938	5217	4150	3259	1704	1239	2024

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1938-1949)

MEAN	1250.7	1230.6	1563.1	1209.4	1065.4	1053.8	1619.4	3281.7	3669.0	2598.6	1326.3	1015.8	1749.5
MAXIMUM	2080.0	1860.0	2254.0	1879.0	1672.0	1551.0	2427.0	5217.0	7091.0	4026.0	1835.0	1381.0	2250.0
MINIMUM	582.0	682.0	1044.0	650.0	674.0	675.0	1035.0	1033.30	1985.0	1476.0	983.0	778.0	1272.0
STD DEVIATION	480.60	349.28	393.29	376.00	336.28	291.78	421.43	1033.30	1318.34	819.21	300.24	207.07	296.64
SKWENESS	0.350	0.369	0.273	0.333	0.923	0.412	0.482	0.438	1.775	0.019	0.367	0.586	-0.160
STD ERR SKEW	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.637	0.637	0.637	0.661
SER CORR COEFF	0.066	-0.257	0.071	-0.032	-0.441	-0.252	-0.237	0.692	0.265	-0.120	0.077	-0.048	0.380
COEFF OF VAR	0.384	0.284	0.252	0.311	0.318	0.277	0.260	0.315	0.359	0.315	0.226	0.204	0.170
MEAN LOGS	3.066	3.074	3.181	3.063	3.009	3.008	3.196	3.496	3.543	3.393	3.113	2.999	3.237
STD DEV LOGS	0.175	0.127	0.111	0.141	0.130	0.120	0.113	0.139	0.141	0.147	0.098	0.086	0.076
SKWENESS LOGS	-0.252	-0.279	-0.064	-0.356	0.513	0.065	0.043	-0.086	0.511	-0.447	0.148	0.419	-0.504
STD ERR SKEW LOGS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.637	0.637	0.637	0.661
SER CORR LOGS	0.044	-0.225	0.118	-0.065	-0.438	-0.213	-0.183	0.674	0.364	-0.036	0.053	-0.037	0.328
COEFF OF VAR LOGS	0.057	0.041	0.035	0.046	0.043	0.040	0.035	0.040	0.034	0.043	0.031	0.029	0.024
% OF AVE FLOW	6.0	5.9	7.5	5.8	5.1	5.0	7.8	15.7	17.6	12.4	6.4	4.9	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1938-1949)

0.99	423.0	566.8	829.1	499.5	569.2	541.5	865.4	1460.2	1955.5	1008.7	786.9	668.9	1076.0
0.95	583.4	717.6	993.7	656.9	653.2	648.7	1027.8	1938.6	2153.6	1361.9	903.7	738.2	1263.3
0.90	687.7	809.3	1093.2	754.2	709.0	715.1	1127.3	2075.2	2353.0	1581.6	974.9	781.8	1367.7
0.80	834.2	931.6	1226.0	885.2	789.4	805.4	1261.9	2398.8	2642.7	1877.8	1070.8	841.8	1497.4
0.50	1184.7	1201.2	1522.2	1177.2	995.3	1014.7	1567.7	3149.3	3394.6	2335.1	1288.6	993.7	1751.3
0.20	1642.5	1519.5	1882.6	1523.5	1301.3	1283.8	1953.1	4107.9	4533.9	3302.6	1563.1	1172.2	2006.1
0.10	1930.3	1705.4	2100.6	1725.3	1519.8	1494.2	2193.3	4707.9	5360.6	3740.9	1734.5	1295.1	2136.7
0.04	2277.1	1915.2	2358.3	1954.8	1814.6	1663.2	2484.0	5434.0	6490.6	4230.7	1942.8	1449.5	2272.3
0.02	2524.2	2063.4	2539.8	2110.4	2048.3	1815.2	2693.1	5955.3	7396.5	4556.6	2093.3	1564.4	2357.2
0.01	2762.5	2199.1	2713.8	2254.8	2294.4	1964.7	2897.2	6462.3	8359.1	4854.4	2240.7	1679.5	2431.6

## STATION 12189000 SUITATTLE RIVER NEAR MANSFORD, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1940	496.0	531.0	569.0	643.0	704.0	859.0	1010.0	1110.0	1320.0
1941	577.0	580.0	595.0	643.0	709.0	807.0	932.0	1050.0	1140.0
1942	542.0	545.0	557.0	587.0	647.0	674.0	709.0	1030.0	1250.0
1943	430.0	436.0	476.0	483.0	518.0	647.0	774.0	963.0	1090.0
1944	469.0	473.0	488.0	517.0	643.0	717.0	769.0	825.0	813.0
1945	644.0	655.0	667.0	688.0	911.0	1070.0	1080.0	1130.0	1190.0
1946	562.0	626.0	643.0	661.0	793.0	940.0	1060.0	1130.0	1270.0
1947	460.0	465.0	480.0	509.0	588.0	823.0	992.0	1130.0	1260.0
1948	645.0	645.0	670.0	704.0	816.0	868.0	987.0	1190.0	1450.0
1949	520.0	520.0	521.0	539.0	583.0	657.0	879.0	915.0	1080.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1940-1949)

MEAN	534.5	547.6	566.6	597.4	691.2	806.2	919.2	1047.3	1186.3
MAXIMUM	645.0	655.0	670.0	704.0	911.0	1070.0	1080.0	1190.0	1450.0
MINIMUM	430.0	436.0	476.0	483.0	518.0	647.0	709.0	825.0	813.0
STANDARD DEVIATION	73.99	77.54	75.63	80.73	120.81	136.39	130.57	115.06	171.91
SKEWNESS	0.296	0.085	0.196	-0.134	0.462	0.589	-0.462	-0.826	-0.881
STD ERROR OF SKEWNESS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SERIAL CORR COEFF	-0.235	-0.166	-0.253	-0.189	-0.076	0.274	0.420	0.088	0.075
COEFF OF VARIATION	0.138	0.142	0.133	0.135	0.175	0.169	0.142	0.110	0.145
MEAN LOGS	2.724	2.735	2.735	2.773	2.834	2.901	2.959	3.018	3.070
STD DEVIATION LOGS	0.060	0.062	0.058	0.060	0.075	0.072	0.064	0.050	0.068
STD ERR SKEWNESS LOGS	0.093	-0.086	0.074	-0.239	0.145	0.296	-0.504	-1.000	-1.379
SER CORR COEFF LOGS	-0.206	-0.148	-0.232	-0.157	-0.073	0.303	0.422	0.087	0.090
COEFF OF VAR LOGS	0.022	0.023	0.021	0.022	0.027	0.025	0.022	0.017	0.022

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1940-1949)

0.99	737.2	749.3	772.1	795.9	1038.9	1214.1	1201.2	1250.1	1446.9
0.98	708.2	722.5	743.0	771.6	986.0	1148.9	1173.3	1236.3	1435.5
0.96	677.6	693.5	712.2	744.7	931.1	1082.1	1140.6	1218.5	1418.9
0.90	633.2	650.6	667.5	703.7	853.4	989.4	1086.8	1185.5	1383.5
0.80	594.8	612.2	628.5	665.9	787.8	912.9	1033.3	1148.5	1338.1
0.50	528.8	543.7	561.1	595.6	679.1	789.6	924.0	1061.1	1215.6
0.20	471.5	481.6	502.2	528.7	588.8	691.0	809.1	954.3	1050.4
0.10	444.7	451.4	474.3	495.2	547.8	647.4	748.3	892.4	931.6
0.05	423.9	427.7	452.7	468.4	516.7	614.8	698.2	839.0	866.2
0.02	402.0	402.2	429.7	439.1	484.4	581.5	642.5	777.2	788.5
0.01	388.1	386.0	415.2	420.2	464.4	561.1	606.0	735.4	703.7

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "PM" PERCENT OF THE TIME (YEARS 1940-1949)

P95	P90	P75	P70	P50	P25	P10
620.0	690.0	900.0	960.0	1300.0	2200.0	3400.0

## STATION 12189000 SUITATTLE RIVER NEAR MANSFORD, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA FLOW (CFS)	DATE	REG. (R)
1939	7420.	5890.	4610.	4050.	3760.	3670.	3430.	3070.	2480.	9680.	05/29/39	
1940	4800.	4330.	3720.	3240.	3000.	2730.	2400.	2170.	1890.	5580.	12/15/39	
1941	3670.	3630.	2880.	2270.	2150.	1960.	1850.	1660.	1480.	4980.	10/18/40	
1942	5450.	4750.	4400.	3690.	3600.	3320.	2820.	2510.	1990.	9100.	10/03/41	
1943	6170.	5740.	5080.	4420.	4070.	3530.	3210.	2600.		7200.	06/30/43	
1944	5220.	3680.	3270.	3110.	2980.	2650.	2300.	2020.	1730.	8850.	12/03/43	
1945	7030.	5890.	4860.	4010.	3680.	3290.	2960.	2590.	2090.	9520.	02/08/45	
1946	11000.	7040.	5980.	5320.	4840.	4400.	4010.	3490.	2710.	12600.	10/25/45	
1947	6780.	6510.	5790.	4800.	4360.	3880.	3500.	3110.	2560.	19200.	10/25/46	
1948	13800.	12400.	11000.	9650.	8090.	5990.	4770.	4010.	3040.	18000.	10/19/47	
1949	9100.	8930.	8270.	6810.	5810.	4780.	4270.	3780.	2970.	9900.	05/13/49	
1950										30700.	11/27/49	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1939-1950)

W R C  
ESTIMATE

SYSTEMATIC  
RECORD

MEAN	7312.7	6292.7	5501.8	4730.0	4244.5	3703.6	3258.2	2870.9	2321.8			
MAXIMUM	13800.0	12400.0	11000.0	9650.0	8090.0	5990.0	4770.0	4010.0	3040.0			
MINIMUM	3670.0	3630.0	2880.0	2270.0	2150.0	1960.0	1850.0	1660.0	1480.0			
STANDARD DEVIATION	2966.29	2556.32	2360.35	2048.58	1616.81	1115.98	891.91	750.59	515.26			
SKWENESS	1.158	1.452	1.398	1.480	1.365	0.534	0.093	-0.084	-0.173			
STD ERROR OF SKWENESS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661			
SERIAL CORR COEFF	0.300	0.474	0.524	0.453	0.455	0.425	0.465	0.437	0.451			
COEFF OF VARIATION	0.406	0.406	0.429	0.433	0.381	0.301	0.274	0.261	0.222			
MEAN LOGS	3.834	3.770	3.709	3.643	3.602	3.550	3.497	3.443	3.355			
STD DEVIATION LOGS	0.166	0.161	0.170	0.172	0.155	0.134	0.125	0.121	0.101			
SKWENESS LOGS	0.362	0.560	0.513	0.475	0.323	-0.296	-0.415	-0.503	-0.485			
STD ERR SKWENESS LOGS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661			
SER CORR COEFF LOGS	0.411	0.492	0.526	0.491	0.484	0.404	0.428	0.394	0.410			
COEFF OF VAR LOGS	0.043	0.043	0.046	0.047	0.043	0.038	0.036	0.035	0.030			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1939-1950)

	0.99	0.95	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01
MEAN	3115.3	2908.4	2384.4	1904.1	1620.0	1477.1	1316.4	1214.7	3135.3	3997.4				
MAXIMUM	3802.0	3421.2	2854.0	2411.3	2306.3	2084.6	1897.9	1696.1	1500.0	4477.2				
MINIMUM	4261.7	3772.5	3176.1	2701.0	2571.5	2370.0	2151.5	1922.7	1665.4	5413.6				
STANDARD DEVIATION	4930.8	4293.4	3654.1	3128.0	2952.7	2752.9	2485.9	2218.4	1876.9	6813.5				
SKWENESS	6675.6	5695.3	4945.1	4266.5	3924.4	3605.0	3205.3	2841.3	2310.0	10021.6				
STD ERROR OF SKWENESS	9336.9	7932.6	7016.8	6050.7	5359.3	4620.2	4018.3	3521.4	2768.2	16048.7				
SERIAL CORR COEFF	11276.5	9626.6	8592.5	7404.4	6377.8	5216.3	4474.0	3890.5	3012.2	20673.3				
COEFF OF VARIATION	13934.4	12023.5	10829.7	9287.5	7744.3	5900.5	4977.7	4287.9	3272.2	29259.6				
MEAN LOGS	15068.3	14004.9	12684.4	10830.0	8821.1	6368.3	5310.7	4544.3	3438.5	30954.9				
STD DEVIATION LOGS	18337.2	16162.8	14708.5	12497.0	9949.1	6805.8	5613.7	4773.1	3586.2	45071.0				



## STATION 121894.00 SAUK RIVER TRIBUTARY NEAR DARRINGTON, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1951-1979)			W R C		SYSTEMATIC RECORD
WATER YEAR	FLOW(CFS)	DATE	MEAN LOGS	STANDARD DEVIATION LOGS	SKWENESS LOGS	ESTIMATE		
1951	160.0	2-10-1951				1.9861	1.9861	
1952	51.0	2- 5-1952				0.1747	0.1747	
1953	145.0	1-31-1953				0.0	-0.094	
1954	88.0	12-19-1953						
1955	78.0	2- 8-1955						
1956	88.0	11- 3-1955						
1957	184.0	12- 9-1956						
1958	55.0	12-25-1957						
1959	122.0	11-12-1958				38.0	37.0	
1960	128.0	11-22-1959				50.0	49.5	
1961	157.0	2-21-1961				57.8	57.6	
1962	95.0	1- 3-1962				69.2	69.2	
1963	183.0	11-19-1962				96.9	97.5	
1964	114.0	11-26-1963				135.9	136.1	
1965	100.0	11-30-1964				162.2	161.5	
1966	68.0	11-13-1966				195.9	193.3	
1967	82.0	12-16-1966				221.3	216.8	
1968	119.0	12-24-1967				246.9	240.1	
1969	83.0	1- 4-1969						
1970	48.0	1-22-1970						
1978	92.0	11- 1-1977						
1979	58.0	3- 7-1979						

## STATION 121895.00 SAUK RIVER NEAR SAUK, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)											
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	ANNUAL
1911											
1912											
1928											
1929											
1930											
1931											
1932											
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1965											
1966											
1967											

STATION 12189500 SAUK RIVER NEAR SAUK, WASH.

1968	6770	4702	5751	7166	6911	4549	3181	5894	8734	5844	2909	3131	5460
1969	3153	4869	4201	3887	1664	2529	4381	9345	9984	3917	2039	2849	4412
1970	2953	2674	2925	3944	3694	2493	3119	4760	8263	3954	1929	2043	3556
1971	1792	3516	3383	5851	6440	3283	3575	9114	8707	10240	4643	2228	5229
1972	2556	3655	2681	3503	5905	9443	4169	9665	12070	10610	5177	3618	6048
1973	1938	2635	5887	4165	1879	2047	2135	5424	5939	3995	2205	1781	3350
1974	2690	3957	5751	8615	3625	4525	4063	5968	13520	10270	5529	2515	5937
1975	1127	3607	4848	4682	3003	3060	2039	6337	9369	8867	3369	1968	4384
1976	4128	7767	10990	6089	3531	2482	3466	7672	7334	8682	5427	2991	5898
1977	1566	1926	2564	2997	2520	2413	3925	4061	6099	2872	2695	2280	2991
1978	1904	6378	8918	3479	2656	3342	3159	4702	7438	5527	2944	4014	4546
1979	1931	3351	2104	1199	2665	4349	2997	6397	6147	4350	2104	1809	3285

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1911-1979)

MEAN	2900.3	4140.4	4627.6	4079.1	3652.0	3169.7	3888.2	6665.4	8262.3	5894.6	2896.0	2188.7	4379.9
MAXIMUM	6770.0	9595.0	11580.0	8615.0	9062.0	9443.0	7375.0	10570.0	13520.0	10610.0	5529.0	4941.0	6048.0
MINIMUM	993.0	724.0	1457.0	1199.0	793.0	1520.0	2039.0	4061.0	3715.0	2515.0	1718.0	1089.0	2887.0
STD DEVIATION	1377.26	2092.46	2162.77	1861.97	1718.09	1331.54	1093.79	1582.66	2179.33	2276.39	1084.74	777.09	882.55
SKEDNESS	0.995	0.672	1.187	0.706	0.849	2.496	0.684	0.598	0.450	0.713	1.215	1.421	0.204
STD ERR SKEW	0.330	0.330	0.330	0.330	0.330	0.330	0.327	0.327	0.327	0.327	0.327	0.327	0.333
SER CORR COEFF	0.125	0.153	-0.056	0.165	-0.068	-0.045	-0.112	0.163	0.066	0.126	0.208	-0.028	0.131
COEFF OF VAR	0.475	0.505	0.467	0.456	0.470	0.420	0.281	0.237	0.264	0.386	0.375	0.355	0.202
MEAN LOGS	3.415	3.555	3.621	3.563	3.514	3.473	3.573	3.812	3.902	3.740	3.436	3.317	3.633
STD DEV LOGS	0.207	0.253	0.200	0.216	0.213	0.151	0.122	0.102	0.117	0.166	0.146	0.139	0.089
SKEDNESS LOGS	-0.138	-0.829	-0.088	-0.554	-0.355	0.782	-0.123	0.097	-0.271	0.049	0.707	0.565	-0.144
STD ERR SKEW LOGS	0.330	0.330	0.330	0.330	0.330	0.330	0.327	0.327	0.327	0.327	0.327	0.327	0.333
SER CORR LOGS	0.095	0.171	0.038	0.165	-0.081	-0.011	-0.077	0.166	0.148	0.105	0.253	0.048	0.150
COEFF OF VAR LOGS	0.061	0.071	0.055	0.061	0.061	0.043	0.034	0.027	0.030	0.044	0.042	0.042	0.024
% DF AVE FLOW	5.5	7.9	8.8	7.8	7.0	6.1	7.4	12.7	15.8	11.3	5.5	4.2	100.0

MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1911-1979)

0.99	817.0	660.0	1393.0	945.2	919.8	1621.8	1894.0	3829.3	4044.9	2290.8	1490.3	1126.1	2611.1
0.95	1165.4	1226.4	1940.6	1504.6	1391.7	1831.7	2331.3	4445.3	5027.9	2946.4	1693.3	1295.5	3041.8
0.90	1402.4	1847.6	2309.8	1891.0	1715.2	1980.9	2598.5	4820.1	5615.8	3373.4	1834.7	1409.7	3293.4
0.80	1747.6	2282.4	2845.0	2450.9	2185.3	2207.7	2957.1	5323.4	6391.7	3978.3	2046.6	1576.6	3619.6
0.50	2630.7	3882.3	4207.9	3822.5	3363.0	2840.6	3763.1	6463.5	8078.2	5472.4	2624.3	2013.7	4313.2
0.20	3899.2	5897.2	6164.5	5587.9	4967.1	3895.1	4749.8	7889.9	10035.6	7560.5	3558.3	2684.1	5104.1
0.10	4760.4	7040.9	7498.0	6650.4	5994.6	4719.8	5347.4	8775.7	11165.9	8967.9	4271.7	3175.0	5558.5
0.04	5862.5	8266.2	9213.0	7867.9	7241.1	5917.6	6053.1	9845.1	12450.3	10772.8	5288.0	3851.2	6075.2
0.02	6690.1	9036.4	10508.1	8689.8	8130.2	6931.6	6549.3	10615.9	13322.0	12136.6	6133.5	4397.0	6427.2
0.01	7521.4	9701.7	11815.6	9445.7	8986.0	8057.3	7024.0	11366.5	14133.2	13516.9	7059.1	4980.1	6756.1

## STATION 12189500 SAUK RIVER NEAR SAUK, WASH.

YEAR	LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31										
	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS		
1912	780.0	780.0	814.0	889.0	1080.0	1570.0	1780.0	2230.0	2880.0		
1930	578.0	588.0	604.0	621.0	691.0	800.0	863.0	1070.0	1450.0		
1931	700.0	743.0	961.0	1180.0	1340.0	1430.0	1690.0	1730.0	1820.0		
1932	1040.0	1050.0	1090.0	1240.0	1610.0	1880.0	1880.0	2330.0	2590.0		
1933	964.0	1000.0	1070.0	1230.0	1400.0	1840.0	2400.0	3180.0	4130.0		
1934	1920.0	2060.0	2160.0	2340.0	2970.0	3600.0	4620.0	5080.0	6510.0		
1935	952.0	987.0	1030.0	1090.0	1250.0	1760.0	2110.0	2620.0	3650.0		
1936	944.0	959.0	1000.0	1140.0	1340.0	1380.0	1510.0	1880.0	1910.0		
1937	628.0	639.0	664.0	692.0	747.0	925.0	1070.0	1330.0	1670.0		
1938	791.0	798.0	810.0	866.0	1060.0	1400.0	1740.0	2530.0	3550.0		
1939	847.0	854.0	1020.0	1100.0	1250.0	1450.0	1690.0	1970.0	2690.0		
1940	952.0	1000.0	1110.0	1290.0	1480.0	1690.0	2040.0	2400.0	3280.0		
1941	1000.0	1050.0	1150.0	1260.0	1330.0	1440.0	1710.0	2070.0	2490.0		
1942	1180.0	1200.0	1260.0	1440.0	1780.0	1880.0	1890.0	2720.0	3000.0		
1943	790.0	810.0	870.0	884.0	919.0	1010.0	1330.0	1700.0	2500.0		
1944	1150.0	1160.0	1200.0	1300.0	1460.0	1680.0	1750.0	2010.0	2230.0		
1945	1300.0	1370.0	1410.0	1470.0	1540.0	1910.0	2220.0	2330.0	2530.0		
1946	1210.0	1290.0	1320.0	1340.0	1630.0	1790.0	1910.0	2360.0	3120.0		
1947	830.0	839.0	866.0	939.0	1080.0	1500.0	2060.0	2530.0	3010.0		
1948	1280.0	1330.0	1440.0	1450.0	1730.0	1990.0	2500.0	3120.0	3320.0		
1949	1030.0	1040.0	1040.0	1080.0	1200.0	1490.0	2190.0	2310.0	2620.0		
1950	1480.0	1540.0	1770.0	2020.0	2270.0	2580.0	2960.0	3470.0	4370.0		
1951	1330.0	1370.0	1650.0	1780.0	1980.0	3130.0	3670.0	4110.0	4820.0		
1952	1060.0	1070.0	1100.0	1150.0	1320.0	1970.0	2260.0	2350.0	2610.0		
1953	590.0	597.0	614.0	682.0	833.0	935.0	1080.0	1230.0	1940.0		
1954	1230.0	1380.0	1480.0	1590.0	1950.0	2540.0	2860.0	3210.0	3840.0		
1955	1400.0	1400.0	1400.0	1410.0	1490.0	2260.0	2360.0	2720.0	3390.0		
1956	1220.0	1260.0	1350.0	1400.0	1630.0	1870.0	2420.0	3060.0	4160.0		
1957	1480.0	1500.0	1520.0	1530.0	1580.0	2200.0	3160.0	3570.0	3710.0		
1958	921.0	940.0	1020.0	1130.0	1260.0	1470.0	1740.0	1850.0	2350.0		
1959	1000.0	1030.0	1190.0	1460.0	1630.0	1890.0	2150.0	2660.0	4100.0		
1960	1460.0	1470.0	1500.0	1620.0	2020.0	3160.0	2910.0	2860.0	5040.0		
1961	1240.0	1270.0	1350.0	1490.0	1640.0	1960.0	2290.0	2860.0	3390.0		
1962	1040.0	1110.0	1280.0	1340.0	1560.0	1900.0	2210.0	2390.0	3050.0		
1963	1430.0	1460.0	1510.0	1670.0	2030.0	2300.0	2350.0	2880.0	3800.0		
1964	1160.0	1160.0	1220.0	1350.0	1480.0	1610.0	1970.0	2470.0	3310.0		
1965	1480.0	1530.0	1610.0	1810.0	2240.0	3070.0	3110.0	3510.0	3800.0		
1966	1080.0	1100.0	1120.0	1220.0	1510.0	1870.0	2180.0	2510.0	2550.0		
1967	949.0	963.0	1020.0	1250.0	1380.0	1550.0	2120.0	2390.0	3620.0		
1968	1360.0	1420.0	1420.0	1610.0	1900.0	2330.0	3010.0	4050.0	4420.0		
1969	1420.0	1420.0	1440.0	1500.0	1580.0	1740.0	2640.0	3080.0	3350.0		
1970	1300.0	1350.0	1450.0	1500.0	1660.0	2090.0	2450.0	2580.0	2660.0		
1971	1010.0	1050.0	1220.0	1550.0	1660.0	1830.0	1850.0	2050.0	2550.0		
1972	1320.0	1410.0	1490.0	1620.0	1690.0	2090.0	2580.0	2550.0	2850.0		
1973	1200.0	1230.0	1290.0	1440.0	1800.0	1970.0	2570.0	2720.0	3110.0		
1974	1120.0	1150.0	1230.0	1320.0	1530.0	1670.0	2120.0	2500.0	3260.0		
1975	860.0	887.0	943.0	949.0	1010.0	1390.0	2110.0	2690.0	3310.0		
1976	1330.0	1340.0	1380.0	1480.0	1740.0	2350.0	2930.0	3950.0	5360.0		
1977	1020.0	1060.0	1140.0	1300.0	1470.0	1650.0	1840.0	2020.0	2330.0		
1978	1220.0	1250.0	1360.0	1540.0	1740.0	2060.0	2270.0	2410.0	3290.0		
1979	900.0	907.0	927.0	1060.0	1130.0	1530.0	1760.0	2070.0	2480.0		

STATION 12189500 SAUK RIVER NEAR SAUK, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1912-1979)

MEAN	1107.4	1140.6	1213.4	1325.9	1519.0	1871.0	2214.8	2607.1	3211.2
MAXIMUM	1920.0	2060.0	2160.0	2340.0	2970.0	3600.0	4620.0	5080.0	6510.0
MINIMUM	578.0	588.0	604.0	621.0	691.0	800.0	863.0	1070.0	1450.0
STANDARD DEVIATION	268.41	284.25	298.76	327.13	407.21	558.53	650.68	765.33	968.03
SKEWNESS	0.263	0.372	0.335	0.266	0.701	0.916	0.989	0.750	0.948
STD ERROR OF SKEWNESS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
SERIAL CORR COEFF	0.146	0.131	0.127	0.127	-0.010	0.081	0.197	0.178	0.227
COEFF OF VARIATION	0.242	0.249	0.246	0.247	0.268	0.299	0.294	0.294	0.301
MEAN LOGS	3.031	3.043	3.070	3.109	3.166	3.253	3.327	3.398	3.488
STD DEVIATION LOGS	0.110	0.113	0.112	0.114	0.120	0.130	0.130	0.129	0.129
SKEWNESS LOGS	-0.483	-0.452	-0.568	-0.717	-0.497	-0.283	-0.484	-0.407	-0.097
STD ERR SKEWNESS LOGS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333
SER CORR COEFF LOGS	0.222	0.213	0.195	0.187	0.055	0.114	0.247	0.206	0.259
COEFF OF VAR LOGS	0.036	0.037	0.037	0.037	0.038	0.040	0.039	0.038	0.037

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1912-1979)

0.99	1768.3	1850.6	1923.5	2058.4	2517.2	3373.7	3819.9	4582.7	6012.8
0.98	1689.2	1763.4	1842.9	1983.8	2396.2	3161.3	3619.5	4323.3	5576.4
0.96	1600.6	1666.4	1751.2	1896.1	2260.8	2934.2	3396.8	4039.5	5124.2
0.90	1482.9	1517.1	1605.8	1751.7	2051.1	2602.0	3055.2	3612.3	4481.8
0.80	1334.6	1379.3	1467.5	1608.7	1856.7	2312.3	2741.9	3228.4	3955.5
0.50	1096.4	1126.7	1205.0	1324.8	1499.0	1817.9	2174.9	2549.6	3090.7
0.20	875.2	895.3	955.8	1043.6	1171.7	1401.0	1667.4	1956.4	2398.7
0.10	768.7	784.9	834.6	904.2	1016.4	1212.8	1430.9	1683.4	2095.3
0.05	686.2	699.8	740.5	795.1	897.4	1072.0	1251.6	1477.5	1871.2
0.02	599.6	610.9	641.7	680.4	773.9	928.6	1067.6	1267.0	1645.0
0.01	545.8	555.8	580.3	609.1	697.8	841.4	955.5	1138.9	1508.2

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1912-1979)	
P95	P10
1300.0	8500.0
1600.0	5600.0
2200.0	3400.0
2400.0	5600.0
3400.0	8500.0

STATION 12189500 SAUK RIVER NEAR SAUK, WASH.										ANNUAL PEAK-FLOW DATA			
HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30										FLOW (CFS)	DATE	REG.	(R)
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS				
1912													
1929	17500.	11700.	10100.	8930.	8240.	7460.	6450.	5530.	4340.	28000.	11/19/11		
1930	13000.	9520.	7620.	6110.	5690.	5380.	5190.	5120.	4660.	21800.	10/09/28		
1931	19200.	14600.	11400.	8070.	7410.	7110.	7100.	5800.	5290.	15200.	02/05/30		
1932	51400.	39400.	22000.	13100.	9490.	8050.	7420.	7500.	6680.	21800.	01/28/31		
1933	34200.	20600.	19100.	13100.	11300.	10600.	9210.	8150.	6510.	68500.	02/26/32		
1934	35900.	29600.	19500.	15600.	13000.	10200.	8830.	8290.	7600.	42500.	11/13/32		
1935	46300.	37900.	24400.	16400.	10200.	7120.	6580.	6460.	5570.	56600.	12/22/33		
1936	15200.	14300.	13200.	12400.	11400.	10100.	9000.	7570.	5810.	49400.	11/05/34		
1937	15000.	13900.	13000.	11900.	11500.	9260.	8010.	6950.	5460.	16600.	06/03/36		
1938	23000.	17000.	13000.	9370.	8320.	7510.	7070.	6080.	4980.	15900.	06/03/37		
1939	19000.	16300.	11700.	8790.	7980.	7800.	7220.	6590.	5350.	29900.	04/18/38		
1940	13100.	12600.	9890.	8480.	6860.	5470.	4930.	4690.	4640.	25200.	01/01/39		
1941	7520.	6340.	5380.	5010.	4460.	4040.	3670.	3370.	3020.	20000.	12/15/39		
1942	13500.	11500.	9440.	8010.	7650.	6650.	5660.	5110.	4020.	7980.	05/17/41		
1943	14300.	11700.	10900.	9970.	8900.	8320.	7130.	7030.	5740.	19000.	12/02/41		
1944	21300.	12200.	7610.	6490.	6040.	5530.	4780.	4260.	3590.	19500.	11/23/42		
1945	20800.	14100.	9820.	7620.	7260.	6640.	5900.	5100.	4790.	29900.	12/03/43		
1946	20000.	15100.	11900.	10600.	9880.	9010.	8190.	7280.	5860.	26800.	02/08/45		
1947	23100.	12500.	10700.	9010.	8260.	7640.	7020.	6240.	5670.	25000.	10/25/45		
1948	25600.	22500.	19100.	17900.	14800.	10900.	8990.	7750.	6030.	33200.	10/25/46		
1949	18700.	18500.	17400.	13600.	11400.	9560.	8490.	7650.	6320.	35900.	10/19/47		
1950	55800.	31300.	20700.	14500.	13800.	11500.	9900.	8540.	7380.	19700.	05/13/49		
1951	53700.	40900.	24400.	14200.	9250.	7830.	7490.	6790.	6110.	82400.	11/27/49		
1952	11800.	10500.	9330.	8910.	8440.	7170.	6640.	5890.	4790.	62700.	02/10/51		
1953	22200.	15600.	12000.	10100.	9790.	6890.	6630.	6060.	5570.	13600.	06/05/52		
1954	14300.	12800.	12000.	11800.	11400.	9420.	8920.	7950.	6500.	28400.	01/31/53		
1955	21900.	21600.	18100.	14100.	11700.	10400.	8990.	7590.	5910.	15600.	12/20/53		
1956	33600.	25000.	15600.	13900.	11600.	10300.	9090.	8100.	6260.	40600.	06/11/55		
1957	24000.	16300.	11800.	10700.	9340.	8420.	7050.	6410.	5420.	28500.	10/25/55		
1958	14000.	13900.	13000.	10800.	8920.	7510.	6380.	5430.	4880.	14600.	12/10/56		
1959	28000.	20300.	13000.	10900.	9350.	8690.	8380.	7450.	6250.	36100.	05/26/58		
1960	35900.	26700.	22500.	14400.	11000.	8090.	7090.	6080.	5150.	14600.	11/20/58		
1961	24700.	20300.	14100.	11500.	10900.	8740.	7240.	6270.	5150.	44600.	11/23/59		
1962	27700.	16400.	14900.	11200.	8170.	6540.	5820.	5410.	4610.	35500.	01/16/61		
1963	24300.	16700.	11900.	8160.	7870.	6580.	5910.	5350.	4540.	27800.	01/03/62		
1964	16300.	15300.	14100.	13100.	11600.	10600.	9180.	7850.	6190.	44800.	11/20/62		
1965	19500.	17300.	11000.	9380.	8250.	7500.	6860.	6140.	5510.	24400.	01/01/64		
1966	14000.	12200.	10500.	8560.	7340.	6970.	6490.	6030.	4900.	23800.	11/30/64		
1967	21100.	18300.	16500.	14100.	11900.	9920.	8210.	6860.	5600.	15800.	05/06/66		
1968	29600.	20800.	15400.	11000.	8760.	8040.	6980.	6410.	5670.	27400.	12/13/66		
1969	18000.	15600.	14600.	13400.	12300.	9900.	8070.	7020.	5410.	47400.	10/28/67		
1970	14500.	13500.	12100.	9080.	8280.	6860.	5700.	5080.	4610.	22200.	01/05/69		
1971	26500.	20000.	14200.	12800.	10600.	9610.	8460.	8370.	7070.	17300.	06/04/70		
1972	24300.	20100.	17400.	16600.	13700.	12400.	11100.	9310.	8940.	32000.	01/31/71		
1973	20700.	14400.	13700.	10300.	7550.	5920.	5170.	4530.	3940.	31600.	03/06/72		
1974	40800.	33400.	22800.	17500.	14100.	12000.	10200.	8920.	7360.	26300.	12/26/72		
1975	23200.	17100.	16500.	12700.	10600.	9670.	8390.	7110.	5620.	46700.	01/16/74		
1976	50600.	45000.	26400.	16700.	12100.	9530.	8390.	7560.	5990.	35800.	12/21/74		
1977	20300.	11900.	8010.	7230.	6100.	5340.	4780.	4280.	3780.	65300.	12/04/75		
1978	24900.	18900.	15800.	13500.	10900.	7760.	6370.	5450.	4710.	28400.	01/18/77		
1979	13200.	11500.	8670.	7960.	7180.	6280.	5810.	5070.	4530.	35800.	11/26/77		
										22100.	11/04/78		

STATION 12189500 SAUK RIVER NEAR SAUK, WASH.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1912-1979)

	MEAN	24251.4	18742.4	14244.5	11363.5	9663.3	8249.6	7305.9	6510.4	5531.4	W R C ESTIMATE	SYSTEMATIC RECORD
MAXIMUM	55800.0	45000.0	26400.0	17900.0	14800.0	12400.0	11100.0	9510.0	8940.0			
MINIMUM	7520.0	6340.0	5380.0	5010.0	4460.0	4040.0	3670.0	3370.0	3020.0			
STANDARD DEVIATION	11414.47	8489.49	4839.48	3107.50	2330.36	1867.66	1589.54	1338.17	1100.74			
SKWNESS	1.332	1.545	0.711	0.190	0.128	0.132	0.084	-0.032	0.409			
STD ERROR OF SKWNESS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333			
SERIAL CORR. COEFF	0.223	0.118	0.268	0.245	0.163	0.140	0.196	0.182	0.168			
COEFF OF VARIATION	0.471	0.453	0.340	0.273	0.241	0.226	0.218	0.206	0.199			
MEAN LOGS	4.344	4.237	4.129	4.039	3.972	3.905	3.853	3.804	3.734		4.4497	4.4497
STD DEVIATION LOGS	0.187	0.173	0.147	0.125	0.110	0.102	0.099	0.094	0.088		0.2022	0.2022
SKWNESS LOGS	0.296	0.517	-0.102	-0.419	-0.503	-0.453	-0.487	-0.560	-0.350		0.0140	0.0390
STD ERR SKWNESS LOGS	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333	0.333			
SER CORR COEFF LOGS	0.255	0.201	0.315	0.290	0.209	0.174	0.224	0.199	0.185			
COEFF OF VAR LOGS	0.043	0.041	0.036	0.031	0.028	0.026	0.026	0.025	0.024			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1912-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01	9501.7	9663.9
0.99	8894.9	7950.4	5967.2	5139.0	4747.0	4296.8	3880.1	3533.1	3214.8	3014.8	13120.8	13164.5
0.95	11276.8	9538.3	7637.6	6604.4	5981.3	5300.5	4766.8	4320.1	3812.8	3540.6	15520.9	15404.6
0.90	12893.8	10630.3	8692.2	7487.5	6706.1	5884.6	5278.9	4781.9	4155.9	3812.8	19019.1	19019.1
0.80	15274.2	12255.6	10145.1	8651.0	7640.7	6634.0	5931.6	5354.2	4592.6	4155.9	28135.9	28081.7
0.50	21598.1	16665.7	13550.3	11151.9	9576.1	8178.9	7261.8	6497.6	5487.6	41664.1	41639.7	41639.7
0.20	31475.2	23791.0	17952.1	13973.6	11647.3	9832.7	8661.2	7663.9	6448.2	51186.2	51248.3	51248.3
0.10	38797.6	29240.9	20729.0	15552.6	12756.7	10722.7	9403.3	8265.4	6970.5	63779.6	64032.6	64032.6
0.04	48955.0	37014.2	24106.9	17296.0	13941.4	11679.1	10191.5	8890.4	7538.5	73536.4	73993.2	73993.2
0.02	57191.4	43484.9	26541.4	18446.8	14700.4	12296.0	10694.6	9281.3	7909.7	83595.8	84310.1	84310.1
0.01	66013.0	50569.4	28915.2	19493.4	15374.8	12847.7	11140.8	9622.3	8245.5			

STATION 12190700 MOROVITZ CREEK NEAR CONCRETE, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLW(CFS)	DATE
1966	32.0	11-1-1965
1967	79.0	2-4-1967
1968	163.0	10-27-1967
1969	62.0	1-4-1969
1970	61.0	11-4-1969
1971	31.0	1-31-1971
1972	96.0	6-9-1972
1973	87.0	12-19-1972

## STATION 12191500 HAKER R BELOW ANDERSON C, NR CONCRETE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1911				909	503	943	1378	2664	4036	3708	2060	1934	
1912	926	1968	1442	1615	1917	736	1161	2831	4139	2977	2193	1369	1937
1913	1117	2364	936	688	1191	764	1834	3826	5026	4695	2330	1591	2199
1914	1785	2169	1093	2720	962	1899	1899	3006	2687	2564	1610	1607	1979
1915	1811	4795	777	884	856	1302	3037	1992	1802	1898	1809	893	1656
1916	2343	1381	1709	633	2329	2077	1939	2429	3922	3648	2687	1349	2187
1917	730	1265	713	734	1055	632	1472	3249	4492	4956	2226	1399	1915
1918	1315	2104	5233	5280	1283	1180	1462	2462	4085	3881	1846	1400	2600
1919	2362	1426	2405	1367	977	790	1961	3099	2911	3353	1890	1126	1982
1920	603	2647	2094	2290	1368	980	1998	1913	3164	3170	1741	3030	1998
1921	3508	1471	1491	1452	2226	1359	1396	2882	5050	3106	2018	2238	2349
1922	3352	2047	3066	604	465	471	1099	2704	4286	2544	1829	1792	2031
1923	1822	922	1843	1584	732	847	1829	2704	3335	2995	1504	1305	1793
1924	1001	952	1595	1470	4722	1114	1357	3460	2722	2005	1510	1482	1938
1925	2511	1655	3264	1364	2222	1112	2030	3882	3280	2729	1548	927	2211
1928												1027	
1929	2427	1257	960	558	387	883	1143	3071	3374	2125	1391	832	1542
1930	924	462	1145	2290	2290	1337	2447	2188	2703	2108	1279	1192	1550
1931	1465	1138	935	2535	1248	1821	1959	2956	3660	2052	1070	1179	1885
1955				963	893	523	1290	2264	4113	3905	2381	1395	
1956	2861	2951	1580	1104	553	731	2080	3435	4425	3903	1906	1662	2270
1957	2827	1545	2235	697	1217	1301	1953	3475	2892	2254	1456	1166	1924
1958	1069	1036	1484	2126	2093	995	1213	3032	2404	1700	1096	1204	1652
1959	1995	2268	3272	2375	911	1118	2444	2892	3951	3276	1621	2635	2404

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1911-1959)

MEAN	1845.4	1705.9	1870.1	1503.1	1407.0	1068.7	1727.1	2886.8	3602.6	2989.2	1774.0	1512.7	2000.1
MAXIMUM	3508.0	2951.0	5233.0	5280.0	4722.0	2077.0	3037.0	3862.0	5050.0	4956.0	2487.0	3030.0	2600.0
MINIMUM	603.0	462.0	713.0	558.0	387.0	471.0	998.0	1913.0	1802.0	1700.0	1070.0	832.0	1542.0
STD DEVIATION	869.11	674.31	1095.86	1065.36	955.17	396.81	530.57	824.55	824.55	876.00	395.47	530.04	279.94
SKWENESS	0.357	0.211	1.641	2.184	2.012	0.827	0.654	-0.013	-0.116	0.571	0.031	1.386	0.215
STD ERR SKEW	0.501	0.501	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.472	0.501
SER CORR COEFF	-0.026	0.043	-0.044	-0.172	-0.118	-0.118	-0.077	0.045	0.170	0.389	0.223	0.200	-0.102
COEFF OF VAR	0.471	0.395	0.586	0.709	0.679	0.371	0.295	0.184	0.229	0.293	0.223	0.350	0.140
MEAN LOGS	3.215	3.194	3.212	3.097	3.069	3.001	3.220	3.453	3.545	3.458	3.238	3.157	3.297
STD DEV LOGS	0.224	0.196	0.228	0.259	0.265	0.161	0.127	0.083	0.107	0.127	0.101	0.139	0.061
SKWENESS LOGS	-0.323	-0.849	0.502	0.528	0.175	-0.111	0.055	-0.429	-0.779	0.014	-0.432	0.501	-0.107
STD ERR SKEW LOGS	0.501	0.501	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.472	0.501
SER CORR LOGS	-0.155	0.142	0.003	-0.149	-0.242	-0.136	-0.114	0.009	0.168	0.163	0.393	0.221	-0.052
COEFF OF VAR LOGS	0.070	0.061	0.071	0.084	0.086	0.054	0.039	0.024	0.030	0.037	0.031	0.044	0.019
% OF AVE FLOW	7.7	7.1	7.8	6.3	5.9	4.5	7.2	12.1	15.1	12.5	7.4	6.3	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1911-1959)

0.99	438.7	419.6	562.3	343.9	306.7	409.3	845.5	1719.5	1736.7	1458.4	936.6	768.4	1412.6
0.95	672.5	680.8	732.9	516.0	443.3	537.3	1027.5	2032.1	2236.0	1776.7	1149.3	891.4	1565.5
0.90	835.0	856.9	854.3	606.3	542.9	619.4	1140.7	2208.9	2524.8	1974.3	1273.0	973.3	1852.0
0.80	1074.2	1104.1	1040.5	749.6	698.4	734.1	1295.4	2431.4	2890.1	2243.8	1431.7	1092.1	1761.5
0.50	1686.5	1666.5	1573.6	1186.6	1151.9	1008.3	1655.1	2877.2	3613.6	2868.1	1759.2	1399.0	1986.4
0.20	2545.9	2299.5	2500.8	1948.3	1748.3	1371.6	2119.9	3340.0	4427.0	3669.6	2111.0	1861.1	2231.9
0.10	3109.9	2633.7	3252.0	2757.9	2590.6	1604.8	2415.0	3584.4	4679.1	4175.8	2301.2	2194.7	2368.8
0.04	3807.0	2976.0	4371.9	3931.4	3537.8	1891.8	2771.5	3844.2	5029.8	4794.0	2506.4	2648.7	2521.4
0.02	4312.3	3183.8	5340.0	5010.3	4345.5	2100.7	3040.6	4101.5	5239.9	5242.1	2639.3	3011.3	2623.7
0.01	4804.9	3359.1	6431.3	6289.2	5243.6	2305.8	3299.8	4158.4	5416.7	5681.5	2758.5	3395.5	2718.2

## STATION 12191500 BAKER R BELOW ANDERSON C. NR CONCRETE, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1912	524.0	548.0	594.0	650.0	731.0	1050.0	1410.0	1370.0	1430.0
1913	525.0	540.0	557.0	594.0	635.0	698.0	867.0	884.0	1170.0
1914	431.0	451.0	498.0	555.0	872.0	1120.0	1600.0	1560.0	1650.0
1915	554.0	554.0	564.0	587.0	740.0	778.0	795.0	953.0	1410.0
1916	525.0	525.0	528.0	559.0	603.0	807.0	1090.0	1430.0	1400.0
1917	508.0	525.0	535.0	561.0	625.0	689.0	782.0	777.0	850.0
1918	505.0	511.0	515.0	535.0	633.0	1170.0	1530.0	1620.0	2550.0
1919	591.0	604.0	608.0	645.0	711.0	876.0	1040.0	1390.0	1560.0
1920	220.0	221.0	233.0	268.0	600.0	744.0	995.0	1330.0	1660.0
1921	660.0	684.0	712.0	822.0	998.0	1350.0	1480.0	1490.0	1920.0
1922	398.0	406.0	416.0	426.0	445.0	464.0	515.0	1150.0	1690.0
1923	450.0	450.0	478.0	513.0	688.0	727.0	1060.0	1240.0	1310.0
1924	460.0	482.0	503.0	560.0	646.0	872.0	1050.0	1100.0	1210.0
1925	688.0	722.0	748.0	876.0	1090.0	1430.0	1540.0	1710.0	1850.0
1930	408.0	412.0	418.0	422.0	453.0	552.0	655.0	773.0	893.0
1931	545.0	570.0	604.0	680.0	833.0	922.0	1110.0	1150.0	1190.0
1956	382.0	442.0	449.0	480.0	515.0	611.0	788.0	989.0	1620.0
1957	350.0	357.0	373.0	411.0	436.0	663.0	1060.0	1290.0	1620.0
1958	464.0	486.0	537.0	645.0	727.0	955.0	1060.0	1120.0	1350.0
1959	593.0	652.0	699.0	751.0	952.0	1020.0	1220.0	1470.0	1840.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1912-1959)

MEAN	489.1	507.1	528.4	576.9	696.6	874.9	1082.4	1239.8	1508.6
MAXIMUM	688.0	722.0	748.0	876.0	1090.0	1430.0	1600.0	1710.0	2550.0
MINIMUM	220.0	221.0	233.0	268.0	436.0	464.0	515.0	773.0	850.0
STANDARD DEVIATION	109.11	115.35	120.62	143.82	180.88	256.28	306.54	273.76	383.46
SKEWNESS	-0.420	-0.361	-0.333	0.115	0.555	0.157	0.166	0.683	0.683
STD ERROR OF SKEWNESS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SERIAL CORR COEFF	-0.459	-0.456	-0.483	-0.499	-0.392	-0.401	-0.559	-0.229	-0.229
COEFF OF VARIATION	0.223	0.227	0.228	0.249	0.260	0.293	0.283	0.221	0.294
MEAN LOGS	2.677	2.693	2.710	2.747	2.829	2.924	3.017	3.083	3.165
STD DEVIATION LOGS	0.110	0.113	0.113	0.117	0.112	0.127	0.130	0.102	0.112
SKEWNESS LOGS	-1.404	-1.393	-0.873	-0.873	-0.014	-0.026	-0.512	-0.547	-0.287
STD ERR SKEWNESS LOGS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SER CORR COEFF LOGS	-0.411	-0.438	-0.437	-0.483	-0.382	-0.395	-0.539	-0.540	-0.222
COEFF OF VAR LOGS	0.041	0.042	0.042	0.043	0.040	0.043	0.043	0.033	0.035

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1912-1959)

0.99	664.3	688.0	723.5	878.0	1229.1	1647.9	1863.4	1894.8	2519.2
0.98	656.3	680.3	714.3	851.2	1146.2	1524.2	1767.8	1821.2	2382.6
0.96	644.5	668.6	701.0	818.4	1060.5	1397.2	1661.0	1737.4	2234.9
0.90	619.5	643.7	672.8	761.8	940.0	1220.6	1496.1	1604.5	2015.8
0.80	567.5	611.0	637.1	703.1	839.3	1074.8	1343.8	1477.7	1821.4
0.50	503.8	523.4	544.1	580.6	675.3	841.5	1065.9	1235.2	1481.0
0.20	397.8	411.0	427.5	453.8	542.9	657.6	815.5	1001.8	1183.4
0.10	338.8	348.3	363.0	389.6	484.2	577.7	698.3	886.8	1045.0
0.05	290.8	297.3	310.7	339.1	440.4	518.8	609.5	736.4	939.5
0.02	234.3	242.7	254.8	286.0	395.8	459.6	518.3	700.4	830.1
0.01	207.2	208.9	220.1	253.2	368.6	423.8	462.8	640.1	762.4

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "PM" PERCENT OF THE TIME (YEARS 1912-1959)

P95	P90	P75	P70	P50	P25	P10
550.0	670.0	970.0	1100.0	1600.0	2500.0	3800.0



## STATION 12191500 BAKER R BELOW ANDERSON C. NR CONCRETE, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW (CFS) DATE REG. (R)
1815										50000. / /15
1897										36700. / /97
1910										46200. 11/ /09
1911										20000. 11/20/10
1912	6280.	5740.	5240.	4950.	4210.	3640.	3390.	3070.	2650.	6860. 06/25/12
1913	7750.	7010.	6190.	5780.	5360.	5050.	4840.	4070.	3230.	8800. 09/04/13
1914	22700.	13300.	7820.	4520.	3130.	3010.	2770.	2570.	2230.	24900. 01/06/14
1915	17200.	12200.	7000.	4320.	3070.	2510.	2300.	2190.	2000.	17700. 04/02/15
1916	12600.	9610.	5960.	5110.	4460.	3840.	3400.	3150.	2890.	14800. 02/15/16
1917	7600.	6940.	6440.	5900.	5520.	5300.	4340.	3780.	2970.	8210. 07/16/17
1918	27400.	21100.	17700.	12600.	8630.	5530.	4290.	3540.	3140.	36800. 12/29/17
1919	14800.	8350.	5760.	4210.	3700.	3530.	3170.	2890.	2410.	18700. 12/04/18
1920	16000.	13800.	8080.	6640.	5030.	3190.	2780.	2790.	2340.	19600. 11/15/19
1921	17800.	12100.	7960.	5420.	5050.	4340.	3780.	3320.	2780.	18700. 10/04/20
1922	19600.	15700.	8740.	5160.	4340.	3830.	3190.	2850.	2380.	23600. 12/12/21
1923	9510.	6820.	5240.	4080.	3640.	3250.	3050.	2730.	2300.	11800. 12/24/22
1924	18700.	10400.	8640.	8100.	5140.	3250.	2760.	2640.	2840.	28500. 01/31/24
1925	12500.	12500.	9790.	5620.	3920.	3660.	3310.	3040.	2550.	20900. 10/08/28
1929	15000.	9950.	5930.	3890.	3480.	3260.	2900.	2560.	2050.	7390. 02/18/30
1930	5830.	5170.	3990.	2930.	2710.	2550.	2460.	2430.	2160.	19600. 01/23/31
1931	14900.	8000.	7050.	4540.	3740.	3350.	3000.	2720.	2530.	20100. 11/03/55
1956	15500.	11800.	7070.	6040.	4840.	4450.	3970.	3560.	2900.	12200. 10/20/56
1957	9880.	7140.	6470.	6180.	3560.	3290.	2980.	2680.	2330.	7710. 01/16/58
1958	5630.	4960.	4770.	3970.	3360.	2940.	2530.	2230.	2070.	15700. 04/29/59
1959	12400.	10200.	6070.	4050.	3950.	3720.	3620.	3160.	2800.	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1815-1959)

	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKEWNESS	STD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGSTATION LOGS	STD DEVIATION LOGS	SKEWNESS LOGS	STD ERR SKEWNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
0.99	13694.3	27400.0	21100.0	10132.9	7236.2	5237.6	4260.9	3675.2	3268.1	2956.7	2531.0	2530.0	2000.0	360.01	4.2150	4.2150
0.95	5737.3	5630.0	4960.0	3936.68	2788.56	1999.75	1270.18	800.64	641.14	490.84	360.01	2190.0	2000.0		0.2247	0.2247
0.90	5737.3	5630.0	4960.0	3936.68	2788.56	1999.75	1270.18	800.64	641.14	490.84	360.01	2190.0	2000.0		0.0	-0.1000
0.80	8703.6	5630.0	4960.0	3936.68	2788.56	1999.75	1270.18	800.64	641.14	490.84	360.01	2190.0	2000.0			
0.50	12906.0	5630.0	4960.0	3936.68	2788.56	1999.75	1270.18	800.64	641.14	490.84	360.01	2190.0	2000.0			
0.20	18350.1	5630.0	4960.0	3936.68	2788.56	1999.75	1270.18	800.64	641.14	490.84	360.01	2190.0	2000.0			
0.10	21704.1	5630.0	4960.0	3936.68	2788.56	1999.75	1270.18	800.64	641.14	490.84	360.01	2190.0	2000.0			
0.04	25655.0	5630.0	4960.0	3936.68	2788.56	1999.75	1270.18	800.64	641.14	490.84	360.01	2190.0	2000.0			
0.02	28402.7	5630.0	4960.0	3936.68	2788.56	1999.75	1270.18	800.64	641.14	490.84	360.01	2190.0	2000.0			
0.01	30996.7	5630.0	4960.0	3936.68	2788.56	1999.75	1270.18	800.64	641.14	490.84	360.01	2190.0	2000.0			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1815-1959)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
MEAN	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
MAXIMUM	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
MINIMUM	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
STANDARD DEVIATION	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
SKEWNESS	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
STD ERROR OF SKEWNESS	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
SERIAL CORR COEFF	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
COEFF OF VARIATION	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
MEAN LOGSTATION LOGS	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
STD DEVIATION LOGS	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
SKEWNESS LOGS	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
STD ERR SKEWNESS LOGS	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
SER CORR COEFF LOGS	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7
COEFF OF VAR LOGS	3500.8	5737.3	5737.3	8703.6	12906.0	18350.1	21704.1	25655.0	28402.7	30996.7

4740.4  
6904.7  
8454.0  
10614.7  
16406.3  
25416.8  
31838.8  
39857.6  
46163.4  
54664.9

## STATION 12191800 SULPHUR CREEK NEAR CONCRETE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1963	53.0	62.4	48.5	40.3	24.4	25.1	26.8	36.9	36.3	31.1	23.9	27.2	
1964	41.1	46.4	43.1	32.6	34.2	17.9	21.9	41.3	77.9	78.2	46.5	37.0	45.8
1965	45.7	62.5	48.5	41.1	23.7	24.6	34.4	45.9	58.4	45.2	30.0	37.0	38.4
1966	45.0	49.8	78.1	39.1	29.6	23.2	37.0	53.1	64.1	64.9	30.5	24.2	43.7
1967	98.7	66.7	53.0	64.3	61.6	45.1	26.0	46.5	77.3	65.9	33.9	37.5	47.1
1968	53.0	57.5	40.6	67.6	19.4	20.4	30.9	64.9	82.5	46.7	29.8	44.7	55.0
1969	43.2	45.7	38.2	34.8	29.7	26.5	30.3	34.4	64.4	41.1	28.3	56.7	47.0
1970	40.7	50.6	34.7	36.6	41.3	24.5	25.4	60.9	64.4	37.5	24.6	30.4	36.6
1971	47.1	52.5	31.6	25.6	29.8	50.3	29.5	62.3	79.3	86.0	48.9	37.8	46.0
1972	39.6	47.6	81.2	44.9	24.1	21.5	21.3	56.3	61.0	97.7	45.4	41.7	49.5
1973										40.1	23.5	23.6	40.6
1974													

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1963-1974)

MEAN	50.7	54.2	49.8	42.7	31.8	27.9	27.5	50.0	69.1	57.7	33.2	35.1	45.0
MAXIMUM	98.7	66.7	81.2	67.6	61.6	50.3	37.0	64.9	94.7	97.7	48.9	56.7	55.0
MINIMUM	39.6	45.7	31.6	25.6	19.4	17.9	19.5	34.4	36.3	31.1	23.5	23.6	36.6
STD DEVIATION	17.50	7.56	17.07	13.36	12.16	10.24	5.50	10.33	15.52	22.18	9.38	10.27	5.43
SKEWNESS	2.759	0.528	1.170	1.092	1.861	1.649	0.202	-0.010	-0.524	0.630	0.807	0.783	0.144
STD ERR SKEW	0.687	0.687	0.687	0.687	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.687
SER CORR COEFF	0.010	-0.338	0.015	0.266	-0.361	-0.345	-0.186	-0.102	-0.139	-0.136	-0.223	0.104	0.006
COEFF OF VAR	0.345	0.140	0.343	0.313	0.383	0.367	0.200	0.207	0.285	0.385	0.283	0.293	0.121
MEAN LOGS	1.689	1.730	1.676	1.613	1.479	1.424	1.432	1.690	1.828	1.732	1.507	1.529	1.650
STD DEV LOGS	0.116	0.059	0.137	0.128	0.143	0.137	0.088	0.092	0.110	0.104	0.117	0.124	0.053
SKEWNESS LOGS	2.380	0.410	0.741	0.515	1.092	1.249	-0.134	-0.293	-1.356	0.229	0.565	0.274	-0.146
STD ERR SKEW LOGS	0.687	0.687	0.687	0.687	0.687	0.687	0.661	0.661	0.661	0.661	0.661	0.661	0.687
SER CORR LOGS	0.051	-0.355	0.075	0.200	-0.418	-0.366	-0.231	-0.121	-0.216	-0.201	-0.287	0.092	-0.021
COEFF OF VAR LOGS	0.069	0.034	0.082	0.079	0.097	0.096	0.061	0.055	0.060	0.095	0.077	0.081	0.032
% OF AVE FLOW	9.6	10.2	9.4	8.1	6.0	5.3	5.2	9.4	13.1	10.9	6.3	6.6	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1963-1974)

0.99	39.0	40.7	27.1	23.2	18.3	17.0	16.6	28.6	29.6	23.9	19.2	18.5	33.2
0.95	39.2	43.6	30.4	26.5	19.8	18.0	19.3	34.0	41.2	29.7	21.6	21.7	36.4
0.90	39.4	45.4	32.8	28.7	20.9	18.9	20.8	37.1	47.9	33.6	23.7	23.7	38.2
0.80	40.2	47.8	36.2	31.9	22.8	20.3	22.8	41.1	56.2	39.1	25.5	26.5	40.4
0.50	44.5	53.2	45.7	40.0	28.4	24.9	27.2	49.5	71.1	53.2	31.3	33.4	44.8
0.20	56.4	60.1	60.8	52.0	38.5	33.3	32.1	58.7	83.2	73.9	39.8	42.7	49.5
0.10	68.4	64.3	72.3	60.5	46.8	40.5	34.9	63.9	87.9	88.4	45.8	49.0	52.1
0.04	89.2	69.5	88.5	72.0	59.4	51.4	38.2	69.5	91.6	107.8	53.9	57.1	54.9
0.02	109.4	73.3	101.9	81.0	70.4	61.1	40.4	73.3	93.4	123.0	60.2	63.1	56.8
0.01	134.4	76.9	116.6	90.6	83.0	72.3	42.4	76.7	94.7	138.7	66.8	69.3	58.5

## STATION 12191800 SULPHUR CREEK NEAR CONCRETE, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1964	16.0	16.0	16.0	17.0	18.0	21.0	26.0	28.0	30.0
1965	18.0	18.0	18.0	20.0	21.0	25.0	30.0	32.0	38.0
1966	18.0	18.0	19.0	20.0	24.0	30.0	30.0	35.0	40.0
1967	18.0	18.0	19.0	20.0	21.0	26.0	31.0	36.0	44.0
1968	18.0	18.0	18.0	19.0	20.0	33.0	45.0	56.0	50.0
1969	16.0	16.0	16.0	16.0	17.0	19.0	36.0	37.0	43.0
1970	19.0	20.0	20.0	23.0	21.0	28.0	30.0	32.0	37.0
1971	16.0	17.0	17.0	19.0	21.0	26.0	29.0	32.0	35.0
1972	15.0	16.0	17.0	19.0	24.0	25.0	28.0	34.0	37.0
1973	17.0	18.0	18.0	19.0	21.0	23.0	30.0	41.0	43.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1964-1973)

MEAN	17.1	17.5	17.8	19.2	21.2	25.6	31.5	36.3	39.7
MAXIMUM	19.0	20.0	20.0	23.0	27.0	33.0	45.0	56.0	50.0
MINIMUM	15.0	16.0	16.0	16.0	17.0	19.0	26.0	28.0	30.0
STANDARD DEVIATION	1.29	1.27	1.32	1.87	2.82	4.11	5.38	7.76	5.58
SKEWNESS	-0.227	0.408	0.088	0.274	0.674	0.202	2.063	2.057	0.147
STD ERROR OF SKEWNESS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SERIAL CORR COEFF	-0.086	-0.434	-0.293	-0.448	-0.322	-0.614	0.311	0.139	0.492
COEFF OF VARIATION	0.075	0.073	0.074	0.098	0.133	0.161	0.171	0.214	0.141
MEAN LOGS	1.232	1.242	1.249	1.281	1.323	1.403	1.493	1.552	1.595
STD DEVIATION LOGS	0.033	0.031	0.032	0.042	0.057	0.071	0.067	0.082	0.062
SKEWNESS LOGS	-0.322	0.237	-0.038	-0.100	0.270	-0.196	1.748	1.573	-0.264
STD ERR SKEWNESS LOGS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SER CORR COEFF LOGS	-0.068	-0.433	-0.293	-0.443	-0.309	-0.614	0.355	0.213	0.493
COEFF OF VAR LOGS	0.027	0.025	0.026	0.033	0.043	0.050	0.045	0.053	0.039

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1964-1973)

0.99	20.0	20.9	21.1	23.8	29.3	36.1	53.0	67.4	53.3
0.98	19.7	20.4	20.6	23.2	28.0	34.7	48.0	60.2	51.6
0.96	19.3	19.9	20.2	22.6	26.8	33.2	43.5	53.6	49.8
0.90	18.7	19.2	19.5	21.6	25.0	31.0	38.1	45.9	47.0
0.80	18.2	18.5	18.9	20.8	23.4	29.0	34.4	40.6	44.4
0.50	17.1	17.4	17.8	19.1	20.9	25.4	29.9	34.0	39.6
0.20	16.0	16.4	16.7	17.6	18.8	22.1	27.5	30.6	35.0
0.10	15.4	16.0	16.1	16.9	17.9	20.5	26.9	29.5	32.7
0.05	15.0	15.6	15.7	16.2	17.1	19.2	26.6	29.0	30.8
0.02	14.4	15.2	15.2	15.6	16.4	17.8	26.3	28.6	28.8
0.01	14.0	15.0	14.9	15.1	15.9	16.9	26.3	28.4	27.5

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1964-1973)

P95	P90	P75	P70	P50	P25	P10
20.0	22.0	27.0	29.0	37.0	54.0	80.0

## STATION 12191800 SULPHUR CREEK NEAR CONCRETE, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW(CFS)	DATE	REG.(R)
1964	310.	184.	122.	93.	81.	79.	71.	62.	51.	795.	10/21/63	
1965	169.	138.	91.	71.	63.	58.	52.	48.	41.	199.	12/01/64	
1966	137.	122.	93.	76.	70.	65.	61.	55.	46.	265.	10/06/65	
1967	229.	153.	148.	111.	96.	83.	71.	61.	50.	292.	12/13/66	
1968	272.	187.	123.	105.	98.	84.	74.	72.	65.	475.	06/26/68	
1969	600.	333.	196.	115.	97.	76.	64.	56.	51.	885.	01/04/69	
1970	175.	108.	88.	68.	65.	54.	46.	42.	38.	403.	11/04/69	
1971	170.	129.	116.	110.	91.	78.	72.	66.	54.	188.	01/31/71	
1972	265.	192.	147.	119.	100.	92.	84.	72.	61.	327.	07/12/72	
1973	350.	273.	209.	133.	92.	66.	60.	54.	44.	451.	12/19/72	
1974										475.	01/14/74	
1975										531.	06/02/75	
1976										860.	12/04/75	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1964-1976)

W R C SYSTEMATIC  
ESTIMATE RECORD

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MEAN	267.7	181.9	133.3	100.1	85.3	73.5	65.5	58.8	50.1			
MAXIMUM	600.0	333.0	209.0	133.0	100.0	92.0	84.0	72.0	65.0			
MINIMUM	137.0	108.0	88.0	68.0	63.0	54.0	46.0	42.0	38.0			
STANDARD DEVIATION	135.59	71.39	42.25	22.14	14.41	12.24	11.22	9.77	8.44			
SKEWNESS	1.802	1.272	0.816	-0.307	-0.677	-0.269	-0.234	-0.174	0.426			
STD ERROR OF SKEWNESS	0.667	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687			
SERIAL CORR COEFF	-0.044	-0.049	-0.030	0.217	0.213	-0.074	-0.073	-0.060	-0.065			
COEFF OF VARIATION	2.507	0.392	0.317	0.221	0.169	0.167	0.171	0.166	0.168			
MEAN LOGS	2.387	2.233	2.106	1.990	1.925	1.861	1.810	1.764	1.694			
STD DEVIATION LOGS	0.190	0.155	0.132	0.102	0.078	0.075	0.078	0.075	0.073			
SKEWNESS LOGS	0.776	0.694	0.395	-0.553	-0.777	-0.510	-0.637	-0.511	0.098	2.6228		
STD ERR SKEWNESS LOGS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.2235		
SER CORR COEFF LOGS	0.039	-0.014	-0.015	0.158	0.191	-0.085	-0.091	-0.074	-0.076	0.0		
COEFF OF VAR LOGS	0.080	0.070	0.063	0.051	0.041	0.040	0.043	0.042	0.043	-0.0200		

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1964-1976)

0.99	113.2	89.5	68.8	51.6	50.2	45.5	39.3	36.5	33.9	126.7	125.7	
0.95	132.1	102.8	80.3	64.3	60.5	53.4	46.8	42.8	37.7	179.9	179.4	
0.90	146.0	112.0	87.8	71.6	66.2	57.7	50.9	46.2	40.0	216.9	216.7	
0.80	167.5	125.9	98.4	81.0	73.1	63.1	56.0	50.5	42.9	272.0	272.2	
0.50	230.4	164.2	125.2	99.9	86.1	73.6	65.8	58.9	49.3	419.5	420.3	
0.20	343.4	227.1	163.8	119.5	98.1	84.1	75.3	67.3	56.9	647.0	647.3	
0.10	437.7	275.7	190.7	129.7	103.8	89.5	80.0	71.5	61.4	811.4	810.5	
0.04	582.2	345.8	226.3	140.5	109.3	95.1	84.7	75.9	66.7	1033.0	1029.3	
0.02	710.8	404.6	254.1	147.2	112.5	98.5	87.6	78.7	70.4	1200.7	1200.7	
0.01	859.3	469.5	282.9	153.2	115.2	101.6	90.0	81.1	73.9	1376.4	1376.7	

STATION 12193500 BAKER RIVER AT CONCRETE, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1911	4556	4627	4558	1422	736	1283	1630	3214	4471	3771	2173	2549	2759
1912	1261	3063	1739	2259	2681	992	1378	3465	4568	2978	2100	1253	2306
1913	1365	3083	1800	980	1738	1227	1970	3544	5612	5034	2629	2321	2609
1914	2690	2993	1158	3366	1049	2281	2737	3278	2947	2742	1732	1778	2405
1915	2189	3264	1012	1278	1067								

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1912	700.0	743.0	760.0	456.0	989.0	1490.0	1800.0	1890.0	1990.0
1913	634.0	648.0	662.0	742.0	841.0	1120.0	1300.0	1420.0	1640.0
1914	695.0	695.0	725.0	764.0	924.0	1340.0	1880.0	1980.0	2150.0

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
1911	17400.	11000.	8040.	6100.	5010.	4630.	3950.	3460.	2980.	FLOW (CFS)
1912	12400.	9620.	7080.	5250.	4710.	4220.	3720.	3320.	2760.	DATE
1913	14600.	4490.	6540.	6000.	5690.	5490.	4920.	4410.	3520.	11/21/10
1914	23900.	16900.	9750.	5690.	3460.	3190.	3080.	2970.	2690.	11/18/11
										09/04/13
										01/06/14

STATION 12193500 BAKER RIVER AT CONCRETE, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1944	1409	1067	1711	1968	1526	1387	1588	2314	2853	1625	1156	1943	1712
1945	1633	2351	2070	2616	2519	1719	1786	4191	3580	2845	1596	1453	2363
1946	2680	2620	2024	1895	1823	1831	2925	4917	4440	3856	1947	1279	2701
1947	1671	1455	3219	1896	2847	2017	2669	4038	3684	2659	1349	1427	2409
1948	3708	2369	2961	1872	1424	1677	1667	3850	6156	3003	2059	1814	2783
1949	2170	1811	1564	1736	1097	1938	2997	5571	4191	3548	2089	1764	2469
1950	1865	4262	2969	1653	1776	2783	2372	3778	3042	5048	3055	1232	3119
1951	3357	3397	5188	2448	4861	1781	1860	3689	3582	2487	1409	1232	2930
1952	2773	2041	1707	1028	1734	1872	1691	3598	3933	3303	1786	1098	2217
1953	1134	1263	1459	4907	3244	2287	2000	2100	3443	4113	2121	1738	2482
1954	3177	3308	3535	2740	2244	2169	2163	3097	4612	5130	3221	2311	3150
1955	2660	4951	2535	2328	1596	160	1349	2852	5403	4768	2731	1943	2776
1956	3014	4178	2398	1940	2164	1590	1535	4363	5704	4808	2198	2097	3000
1957	3873	2548	2996	2040	1296	2036	2085	4510	3932	2577	1516	1574	2564
1958	1293	1717	1727	2869	2902	1923	1474	4337	3932	2224	1307	1714	2281
1959	2945	3410	4528	3409	1848	1890	2948	3734	4985	2547	2182	2279	3065

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1944-1959)

MEAN	2460.7	2671.7	2661.9	2277.8	2181.3	1815.2	2069.3	3808.7	4382.4	3408.8	2007.6	1741.6	2626.3
MAXIMUM	3873.0	4951.0	5188.0	4907.0	4861.0	2783.0	2997.0	5571.0	6156.0	5130.0	3221.0	2311.0	3150.0
MINIMUM	1134.0	1067.0	1459.0	736.0	1097.0	160.0	1349.0	2100.0	2853.0	1625.0	1156.0	1098.0	1712.0
STD DEVIATION	878.45	1148.09	1077.56	962.22	941.62	542.40	556.74	903.82	1006.42	1098.36	624.75	377.22	390.09
SKWENESS	-0.024	0.492	1.063	1.187	1.645	-1.702	0.595	-0.207	0.543	0.298	0.549	-0.086	-0.609
STD ERR SKEW	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
SER CORR COEFF	-0.317	0.262	-0.237	-0.008	-0.032	0.011	-0.021	0.237	-0.063	0.351	0.186	0.275	0.050
COEFF OF VAR	0.357	0.430	0.405	0.422	0.432	0.299	0.269	0.237	0.230	0.322	0.311	0.217	0.149
MEAN LOGS	3.362	3.387	3.395	3.321	3.307	3.212	3.302	3.568	3.631	3.511	3.283	3.231	3.414
STD DEV LOGS	0.170	0.196	0.165	0.191	0.166	0.277	0.114	0.112	0.098	0.145	0.135	0.098	0.069
SKWENESS LOGS	-0.456	-0.227	0.393	-0.637	0.626	-3.587	0.305	-0.861	0.210	-0.235	0.062	-0.434	-1.072
STD ERR SKEW LOGS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
SER CORR LOGS	-0.317	0.153	-0.245	0.001	-0.225	-0.035	-0.026	0.248	-0.019	0.352	0.176	0.319	0.093
COEFF OF VAR LOGS	0.051	0.058	0.049	0.058	0.050	0.086	0.034	0.032	0.027	0.041	0.041	0.030	0.020
% OF AVE FLOW	7.8	8.5	8.5	7.2	6.9	5.8	6.6	12.1	13.9	10.8	6.4	5.5	100.0

MONTHLY AND ANNUAL DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1944-1959)

0.99	813.4	792.2	1142.7	615.0	995.1	999999.0	1155.2	1730.6	2621.7	1408.9	946.5	936.0	1594.1
0.95	1153.0	1128.9	1387.2	945.0	1165.0	999999.0	1333.0	2289.5	3932.5	2832.8	1159.1	1142.5	1923.0
0.90	1371.7	1354.3	1551.5	1164.8	1283.3	999999.0	1445.5	2615.0	3222.0	2097.7	1292.9	1262.2	2098.2
0.80	1673.9	1677.8	1791.3	1473.7	1460.8	999999.0	1601.6	3026.9	3531.6	2458.5	1477.3	1415.1	2305.3
0.50	2369.8	2480.4	2420.2	2192.0	1948.7	999999.0	1976.2	3836.5	4244.6	3283.0	1913.2	1759.5	2670.2
0.20	3216.5	3579.4	3387.3	3052.4	2749.9	999999.0	2484.9	4614.9	5158.5	4303.9	2489.0	2055.2	2972.1
0.10	3713.5	4295.1	4097.2	3540.8	3371.0	999999.0	2822.6	4932.6	5738.1	4932.6	2861.2	2246.0	3099.5
0.04	4278.3	5180.4	5075.6	4076.0	4261.1	999999.0	3252.6	5346.7	6450.3	5650.4	3324.1	2440.5	3211.3
0.02	4659.0	5825.0	5865.4	4423.5	5020.8	999999.0	3576.5	5555.7	6970.2	6159.1	3665.1	2566.2	3270.7
0.01	5010.2	6456.9	6708.9	4733.4	5853.4	999999.0	3904.1	5726.9	7483.3	6642.9	4003.6	2678.8	3316.0

STATION 12193500 BAKER RIVER AT CONCRETE, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1960	1498	3778	2668	2624	3909	2304	2546	2338	2200	3275	1828	1860	2561
1961	2586	3681	3631	3299	4165	2186	2510	3656	4209	2231	1885	1201	2927
1962	2760	2259	2540	3139	1697	2420	1825	1011	1697	2707	2556	1669	2360
1963	2415	3599	3438	3667	1816	1989	1855	1905	2956	2369	1720	1541	2427
1964	3413	4134	3227	3622	1642	3051	1989	783	4349	6466	2988	2140	3159
1965	2476	2339	2816	1773	2537	2092	2070	3160	3400	2885	2118	1134	2401
1966	1973	3202	2758	2259	1582	2497	1349	2992	3936	3611	1997	1214	2455
1967	2359	2526	5250	2805	2747	1934	2330	1949	5962	5718	2065	1648	3111
1968	5034	3558	3172	3834	3497	2888	2856	2530	4882	3399	1868	2562	3238
1969	2686	3447	3360	3677	2271	1132	478	3111	5059	2637	1543	2919	2694
1970	2196	2104	2321	2916	3654	2492	1914	1413	935	2824	1399	1844	2127
1971	1868	2459	2543	3360	3266	2253	1431	4938	4430	6866	3973	1755	3270
1972	1966	2958	2007	2889	3266	2466	3970	3350	4498	6131	2786	2126	3217
1973	1546	2071	3569	3568	2933	1394	999	2390	1501	2061	1599	1229	2072
1974	2494	3308	3344	3902	3385	2628	2891	2615	7309	5525	3342	1799	3543
1975	1521	2804	3942	3794	2649	1923	766	2482	4083	3519	2179	1420	2593
1976	3834	4621	5525	3414	3550	2192	1647	2758	2613	3289	3465	3276	3276
1977	1446	2300	1827	2014	2202	3185	3531	1486	509	1935	2216	1520	2013
1978	2138	3781	5034	3064	1938	1768	2012	1144	1669	2095	2044	3208	2494
1979	1370	3356	1862	1833	1833	1802	2113	911	2500	2254	1485	1868	1975

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1960-1979)

MEAN	2378.9	3114.2	3242.7	3099.7	2716.6	2199.8	2084.6	2346.1	3514.9	3569.9	2242.8	1850.9	2695.6
MAXIMUM	5034.0	4621.0	5525.0	3902.0	4165.0	3185.0	3970.0	4938.0	7309.0	6866.0	3973.0	3208.0	3543.0
MINIMUM	1370.0	2071.0	1827.0	1773.0	1582.0	1132.0	478.0	783.0	509.0	1935.0	1399.0	1134.0	1975.0
STD DEVIATION	898.09	731.38	1056.89	631.42	822.61	488.33	891.29	1053.70	1695.24	1621.17	721.48	567.27	486.01
SKWENESS	1.532	0.179	0.846	-0.653	0.124	-0.101	0.365	0.477	0.177	1.009	1.001	0.946	0.128
STD ERR SKEW	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SER CORR COEFF	-0.070	-0.284	-0.354	0.231	0.282	-0.398	-0.438	0.030	-0.038	0.012	-0.112	0.018	-0.293
COEFF OF VAR	0.378	0.235	0.326	0.204	0.303	0.222	0.432	0.449	0.482	0.454	0.322	0.306	0.180
MEAN LOGS	3.351	3.482	3.490	3.482	3.414	3.331	3.268	3.323	3.478	3.515	3.332	3.249	3.424
STD DEV LOGS	0.148	0.104	0.137	0.098	0.137	0.105	0.223	0.218	0.282	0.180	0.130	0.127	0.079
SKWENESS LOGS	0.565	-0.157	0.172	-1.009	-0.203	-0.953	-1.050	-0.544	-1.345	0.292	0.589	0.333	-0.088
STD ERR SKEW LOGS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SER CORR LOGS	-0.094	-0.287	-0.390	0.206	0.301	-0.360	-0.394	0.069	0.049	0.031	-0.089	0.021	-0.284
COEFF OF VAR LOGS	0.030	0.039	0.039	0.028	0.040	0.031	0.068	0.066	0.081	0.051	0.039	0.039	0.023
% OF AVE FLOW	7.4	9.6	10.0	9.6	6.4	6.8	6.4	7.3	10.9	11.0	6.9	5.7	100.0

MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1960-1979)

0.99	1173.4	1687.7	1542.0	1531.0	1188.2	1042.0	387.3	538.6	368.5	1511.5	1220.9	966.7	1716.5
0.95	1361.5	2021.9	1866.8	1984.2	1517.0	1366.2	705.3	859.6	860.1	1793.5	1387.1	1130.2	1957.7
0.90	1489.2	2220.8	2073.9	2240.1	1720.7	1551.9	932.6	1082.1	1263.3	1991.8	1498.7	1235.4	2097.6
0.80	1676.9	2482.4	2363.0	2555.4	1996.5	1703.4	1261.6	1405.4	1894.5	2292.6	1661.3	1383.4	2278.3
0.50	2174.2	3050.6	3062.7	3145.8	2622.4	2226.0	2025.5	2201.6	3261.7	4556.6	2084.0	1747.0	2660.8
0.20	2949.5	3715.8	4020.7	3672.0	3392.9	2633.1	2867.6	3234.2	5168.7	3134.6	2724.7	2257.3	3095.8
0.10	3525.3	4105.1	4659.7	3906.4	3859.0	2819.7	3289.2	3859.6	5954.1	5685.0	3189.2	2605.3	3345.8
0.04	4327.3	4553.3	5475.1	4120.2	4407.4	2993.8	3696.2	4579.7	6636.7	7344.4	3823.6	3057.8	3630.6
0.02	4981.0	4861.7	6089.6	4237.7	4791.0	3091.7	3927.8	5068.0	6982.1	8764.7	4331.8	3400.8	3824.9
0.01	5685.1	5152.0	6711.1	4329.7	5156.3	3109.8	4112.5	5518.7	7230.0	10355.1	4871.6	3760.8	4007.0

## STATION 12193500 BAKER RIVER AT CONCRETE, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1945	384.0	581.0	888.0	951.0	1060.0	1230.0	1510.0	1580.0	1770.0
1946	399.0	707.0	815.0	856.0	1030.0	1240.0	1410.0	1820.0	2020.0
1947	450.0	731.0	983.0	993.0	1070.0	1260.0	1440.0	1570.0	1890.0
1948	332.0	705.0	901.0	1010.0	1150.0	1370.0	1630.0	2000.0	2240.0
1949	142.0	338.0	420.0	489.0	591.0	781.0	1060.0	1290.0	1550.0
1950	216.0	556.0	703.0	1200.0	1370.0	1710.0	1810.0	2050.0	2360.0
1951	382.0	871.0	1030.0	1140.0	1640.0	2310.0	2420.0	2650.0	3180.0
1952	121.0	504.0	766.0	848.0	1010.0	1190.0	1480.0	1580.0	1690.0
1953	397.0	456.0	744.0	809.0	982.0	1100.0	1150.0	1210.0	1610.0
1954	470.0	1040.0	1280.0	1320.0	1390.0	1800.0	2270.0	2490.0	2590.0
1955	73.0	93.0	99.0	116.0	134.0	863.0	1350.0	1650.0	2370.0
1956	90.0	296.0	774.0	1210.0	1340.0	1850.0	1890.0	2020.0	2540.0
1957	55.0	858.0	1060.0	1140.0	1200.0	1590.0	1810.0	2110.0	2490.0
1958	452.0	572.0	1030.0	1080.0	1170.0	1380.0	1450.0	1480.0	1700.0
1959	114.0	114.0	114.0	664.0	1250.0	1440.0	1610.0	2030.0	2460.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1945-1959)

MEAN	275.8	561.5	773.8	921.7	1097.1	1414.3	1619.3	1835.3	2164.0
MAXIMUM	470.0	1040.0	1280.0	1320.0	1640.0	2310.0	2420.0	2650.0	3180.0
MINIMUM	55.0	93.0	99.0	116.0	134.0	781.0	1060.0	1210.0	1550.0
STANDARD DEVIATION	157.56	272.33	334.44	313.80	348.60	393.73	373.43	410.83	463.72
SKWENESS	-0.242	-0.193	-0.969	-1.304	-1.467	0.568	0.792	0.428	0.466
STD ERROR OF SKWENESS	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580
SERIAL CORR. COEFF	-0.004	-0.241	-0.342	-0.482	-0.316	-0.188	-0.247	-0.344	-0.118
COEFF OF VARIATION	0.571	0.485	0.432	0.340	0.316	0.278	0.231	0.224	0.214
MEAN LOGS	2.344	2.674	2.809	2.917	2.996	3.135	3.199	3.254	3.326
STD DEVIATION LOGS	0.330	0.306	0.336	0.261	0.257	0.123	0.097	0.097	0.092
SKWENESS LOGS	-0.635	-1.433	-1.954	-2.810	-3.125	-0.252	0.229	-0.028	0.091
STD ERR SKWENESS LOGS	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580	0.580
SER CORR COEFF LOGS	0.079	-0.101	-0.258	-0.328	-0.238	-0.255	-0.270	-0.356	-0.127
COEFF OF VAR LOGS	0.141	0.115	0.120	0.089	0.086	0.039	0.030	0.030	0.028

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1959)

0.99	901.7	1178.5	1409.1	1266.7	999999.0	2497.8	2765.5	3005.8	3525.4
0.98	802.3	1141.6	1396.2	1266.4	999999.0	2344.7	2574.7	2831.2	3313.9
0.96	696.7	1088.3	1371.3	1264.9	999999.0	2181.4	2381.7	2648.5	3095.4
0.90	546.5	978.3	1298.7	1257.8	999999.0	1942.8	2118.0	2387.8	2788.5
0.80	423.1	847.3	1179.7	1231.3	999999.0	1734.9	1904.0	2165.8	2531.7
0.50	239.1	555.0	813.0	1040.4	999999.0	1379.8	1567.8	1794.9	2111.8
0.20	120.6	287.8	399.3	627.3	999999.0	1079.0	1306.7	1485.3	1769.6
0.10	80.4	183.8	234.2	399.4	999999.0	942.4	1193.6	1344.5	1616.4
0.05	56.1	119.8	137.7	246.8	999999.0	839.6	1110.3	1238.0	1501.2
0.02	36.4	69.3	88.3	126.9	999999.0	734.5	1026.2	1127.8	1382.8
0.01	26.8	46.3	40.2	75.7	999999.0	670.2	975.1	1059.6	1309.8

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1945-1959)

P95	P90	P75	P70	P50	P25	P10
850.0	1200.0	1700.0	1700.0	2100.0	3000.0	4700.0



## STATION 12193500 BAKER RIVER AT CONCRETE, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)

1944	784.0	5280.0	3880.0	3390.0	3120.0	2670.0	2280.0	2110.0	1980.0	14100.0 12/03/43 R
1945	1640.0	8760.0	5890.0	4640.0	4410.0	3980.0	3580.0	3140.0	2840.0	20000.0 02/08/45 R
1946	2320.0	15000.0	8280.0	5680.0	5060.0	4770.0	4470.0	4080.0	3380.0	27000.0 10/25/45 R
1947	12200.0	8730.0	5720.0	4870.0	4100.0	3900.0	3660.0	3310.0	3060.0	20000.0 10/24/46 R
1948	15800.0	10200.0	9410.0	8230.0	7110.0	5810.0	4450.0	3960.0	3220.0	23000.0 10/18/47 R
1949	9590.0	9210.0	8620.0	7140.0	5910.0	5020.0	4550.0	4140.0	3410.0	12600.0 05/10/49 R
1950	25100.0	16200.0	11100.0	7830.0	6670.0	5670.0	4550.0	4530.0	3850.0	35200.0 11/27/49 R
1951	28000.0	21900.0	12800.0	7380.0	6600.0	4600.0	4600.0	4110.0	3480.0	29700.0 02/10/51 R
1952	8250.0	6550.0	5380.0	4870.0	4690.0	4160.0	3700.0	3240.0	2740.0	11000.0 10/19/51 R
1953	15000.0	10800.0	7700.0	6290.0	5770.0	4120.0	3500.0	3120.0	3150.0	16200.0 01/12/53 R
1954	9810.0	7310.0	6200.0	5980.0	5700.0	4930.0	4530.0	4080.0	3440.0	14200.0 10/31/53 R
1955	15000.0	12600.0	9830.0	7350.0	5570.0	5250.0	4670.0	4010.0	3180.0	18500.0 11/18/54 R
1956	20400.0	16200.0	9740.0	7860.0	6420.0	5620.0	5060.0	4340.0	3460.0	26900.0 11/04/55 R
1957	14200.0	9620.0	7950.0	5180.0	4710.0	4080.0	3580.0	3210.0	2740.0	20400.0 10/17/56 R
1958	7680.0	7270.0	7010.0	5750.0	4810.0	4210.0	3550.0	3040.0	2910.0	11400.0 01/17/58 R
1959	16600.0	12700.0	7770.0	5310.0	4990.0	4720.0	4090.0	3660.0	3200.0	23500.0 04/29/59 R

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1944-1959)

W R C  
ESTIMATESYSTEMATIC  
RECORD

MEAN	15329.4	11145.6	7967.5	6109.4	5316.9	4581.9	4082.5	3630.0	3127.5	
MAXIMUM	28000.0	21900.0	12800.0	8230.0	7110.0	5820.0	5060.0	4530.0	3850.0	
MINIMUM	7840.0	5280.0	3880.0	3390.0	3120.0	2670.0	2280.0	2110.0	1980.0	
STANDARD DEVIATION	6234.53	4397.04	2303.67	1395.94	1026.51	795.03	726.19	635.26	429.47	
SKEWNESS	0.632	0.998	0.292	-0.0251	-0.251	-0.359	-0.818	-0.752	-1.090	
STD ERROR OF SKEWNESS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	
SERIAL CORR COEFF	-0.095	-0.029	0.167	0.312	0.251	0.251	0.319	0.320	0.289	
COEFF OF VARIATION	0.407	0.395	0.289	0.228	0.193	0.174	0.178	0.175	0.137	
MEAN LOGS	4.152	4.017	3.883	3.775	3.717	3.654	3.603	3.553	3.491	
STD DEVIATION LOGS	0.178	0.165	0.132	0.105	0.090	0.082	0.087	0.084	0.066	
SKEWNESS LOGS	-0.007	0.187	-0.476	-0.601	-0.847	-1.244	-1.469	-1.295	-1.687	4.2814
STD ERR SKEWNESS LOGS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.1523
SER CORR COEFF LOGS	-0.210	-0.080	0.161	0.348	0.259	0.287	0.336	0.340	0.308	-0.0500
COEFF OF VAR LOGS	0.043	0.041	0.034	0.028	0.024	0.023	0.024	0.024	0.019	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1944-1959)

0.99	5444.9	4529.9	3396.6	3053.2	2854.9	2469.1	2073.9	1920.8	1836.5	8348.0
0.95	7212.0	5686.5	4465.7	3850.9	3562.9	3135.6	2722.4	2462.0	2294.8	10685.0
0.90	8376.3	6486.9	5115.6	4313.7	3958.7	3497.9	3075.9	2756.7	2531.7	12174.0
0.80	10038.8	7535.5	5975.5	4903.4	4446.1	3929.3	3494.0	3107.3	2799.9	14242.7
0.50	14187.1	10284.6	7830.1	6095.9	5369.2	4686.0	4205.9	3718.9	3224.0	19169.8
0.20	20036.4	14272.9	9915.7	7323.4	6223.6	5290.4	4732.4	4199.8	3501.4	25695.7
0.10	23992.6	17055.1	11073.9	7957.5	6623.5	5531.7	4922.9	4387.9	3589.5	29899.4
0.04	29070.0	20729.4	12341.9	8614.9	7005.9	5731.9	5066.6	4540.7	3648.6	35099.3
0.02	32904.5	23581.6	13171.3	9024.6	7226.6	5832.0	5131.4	4615.5	3672.2	38903.7
0.01	36781.2	26532.2	13919.7	9380.6	7406.9	5904.4	5174.3	4668.6	3686.2	42657.5

## STATION 12193500 BAKEN RIVER AT CONCRETE, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1961	65.0	387.0	924.0	1220.0	1300.0	1640.0	1770.0	2190.0	2190.0
1962	69.0	89.0	245.0	673.0	1070.0	1410.0	1780.0	1990.0	2150.0
1963	82.0	138.0	294.0	443.0	890.0	1380.0	2100.0	2290.0	2240.0
1964	71.0	195.0	758.0	975.0	1370.0	1530.0	1720.0	1890.0	2010.0
1965	100.0	104.0	250.0	538.0	635.0	1130.0	2090.0	2230.0	2330.0
1966	137.0	291.0	370.0	738.0	1010.0	1450.0	1720.0	1980.0	2150.0
1967	548.0	562.0	664.0	812.0	1190.0	1380.0	1730.0	1990.0	2480.0
1968	457.0	591.0	855.0	1270.0	1650.0	1850.0	2680.0	3090.0	3090.0
1969	54.0	114.0	417.0	608.0	1060.0	1710.0	2190.0	2700.0	2700.0
1970	75.0	102.0	141.0	196.0	368.0	1610.0	2070.0	2190.0	2190.0
1971	90.0	95.0	226.0	235.0	538.0	1040.0	1400.0	1480.0	1580.0
1972	54.0	59.0	152.0	252.0	1310.0	1770.0	2060.0	2110.0	2350.0
1973	30.0	30.0	30.0	248.0	1320.0	1730.0	1880.0	2060.0	2500.0
1974	81.0	81.0	81.0	165.0	937.0	1150.0	1450.0	1570.0	1640.0
1975	83.0	108.0	487.0	852.0	1090.0	1730.0	2240.0	2750.0	2750.0
1976	91.0	92.0	94.0	97.0	748.0	1630.0	2070.0	2600.0	2400.0
1977	85.0	124.0	621.0	969.0	1390.0	1640.0	1770.0	1870.0	2030.0
1978	70.0	78.0	488.0	94.0	326.0	707.0	1140.0	1430.0	1630.0
1979	45.0	47.0	119.0	582.0	922.0	1300.0	1410.0	1620.0	1910.0

LOWEST MEAN FLOW STATISTICS (YEARS 1961-1979)

MEAN	120.4	173.0	358.7	577.2	1006.5	1439.3	1829.5	2063.7	2227.4
MAXIMUM	548.0	591.0	924.0	1270.0	1650.0	1850.0	2680.0	3090.0	3090.0
MINIMUM	30.0	30.0	30.0	94.0	326.0	707.0	1140.0	1430.0	1580.0
STANDARD DEVIATION	137.38	165.65	281.85	372.80	360.40	290.10	349.51	398.60	391.36
SKEWNESS	2.722	1.809	0.781	0.357	-0.381	-0.860	0.290	0.609	0.204
STD ERROR OF SKEWNESS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524
SERIAL CORR COEFF	0.480	0.520	0.100	0.019	-0.064	-0.059	0.162	0.149	0.160
COEFF OF VARIATION	1.141	0.957	0.786	0.646	0.358	0.202	0.191	0.193	0.176
MEAN LOGS	1.944	2.096	2.399	2.645	2.968	3.148	3.255	3.307	3.341
STD DEVIATION LOGS	0.301	0.343	0.410	0.358	0.194	0.101	0.085	0.083	0.078
SKEWNESS LOGS	1.650	0.604	-0.462	-0.593	-1.201	-1.536	-0.394	-0.034	-0.266
STD ERR SKEWNESS LOGS	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524
SER CORR COEFF LOGS	0.477	0.543	0.216	-0.087	-0.037	-0.081	0.182	0.162	0.116
COEFF OF VAR LOGS	0.155	0.164	0.171	0.135	0.065	0.032	0.026	0.025	0.023

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1961-1979)

	0.99	0.98	0.96	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01
MEAN	938.6	1101.6	1633.3	2090.4	1772.2	1873.7	2674.9	3154.6	3210.4						
MAXIMUM	611.2	805.3	1372.1	1830.4	1717.7	1858.1	2573.9	2997.6	3086.2						
MINIMUM	395.9	577.4	1118.1	1560.9	1645.1	1833.8	2461.3	2831.7	2949.9						
STANDARD DEVIATION	220.5	356.2	795.7	1189.6	1507.5	1778.2	2286.9	2591.8	2743.4						
SKEWNESS	139.6	234.5	563.1	895.8	1353.2	1702.5	2124.4	2384.3	2555.2						
STD ERROR OF SKEWNESS	73.4	115.2	269.7	479.3	1013.6	1488.9	1820.5	2030.2	2211.8						
SERIAL CORR COEFF	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50						
COEFF OF VARIATION	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20						
MEAN LOGS	4.45	4.84	72.0	148.0	511.2	1032.2	1389.5	1584.6	1737.5						
STD DEVIATION LOGS	41.7	39.5	47.3	100.7	356.6	853.1	1276.7	1476.2	1614.7						
SKEWNESS LOGS	39.9	32.1	28.8	93.5	288.2	741.4	1155.7	1362.5	1482.9						
STD ERR SKEWNESS LOGS	39.1	25.3	20.3	45.9	228.2	645.7	1078.6	1291.3	1398.8						

FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1961-1979)

P95	P90	P75	P70	P50	P25	P10
160.0	690.0	1600.0	1800.0	2600.0	3700.0	4400.0

## STATION 12193500 BAKER RIVER AT CONCRETE, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA FLOW (CFS)	DATE	REG. (R)
1950	13200.	10700.	7820.	5480.	4340.	3300.	3520.	3270.	2990.	20600.	11/24/59	R
1961	11300.	8240.	6360.	5020.	4400.	4020.	3830.	3760.	3370.	21700.	10/23/60	R
1962	6680.	6120.	5030.	4270.	3710.	3280.	3030.	2730.	2490.	9820.	08/04/62	R
1963	13700.	9020.	6140.	4720.	4460.	3980.	3680.	3360.	2820.	36600.	11/19/62	R
1964	16500.	12300.	10900.	8720.	6620.	5670.	4720.	4050.	3350.	27000.	10/22/63	R
1965	11000.	6890.	4910.	4460.	4060.	3580.	3260.	3050.	2740.	18400.	10/02/64	R
1966	9510.	7550.	5360.	4670.	4230.	3860.	3610.	3180.	2740.	10500.	11/04/65	R
1967	12500.	11500.	10600.	9470.	8140.	5920.	4630.	4020.	3440.	13000.	06/21/67	R
1968	11700.	8060.	6950.	5440.	5380.	4340.	3950.	3360.	2760.	24700.	09/11/68	R
1969	12800.	7900.	7070.	6560.	6210.	4640.	3780.	3360.	2900.	17100.	09/23/69	R
1970	5700.	4540.	3900.	3800.	3720.	3540.	3220.	2900.	2590.	13100.	11/04/69	R
1971	12500.	12000.	10800.	10000.	8300.	6280.	5690.	5140.	4070.	18300.	07/19/71	R
1972	17700.	14700.	11000.	7920.	6360.	5560.	4920.	4600.	4000.	29400.	12/12/72	R
1973	8790.	6880.	5720.	4720.	4290.	3760.	3400.	3090.	2500.	11900.	12/26/72	R
1974	15100.	14500.	13100.	10600.	7910.	6650.	5610.	4860.	4190.	17200.	06/15/74	R
1975	7520.	7350.	5720.	4600.	4510.	3970.	3800.	3500.	2770.	10300.	11/21/74	R
1976	17300.	14700.	10600.	7780.	6020.	5570.	4850.	4510.	3870.	26900.	12/05/75	R
1977	4030.	3990.	3940.	3810.	3700.	3390.	3150.	2840.	2590.	4170.	11/03/76	R
1978	12400.	9430.	6790.	6120.	5070.	4430.	4210.	3760.	3130.	16700.	12/14/77	R
1979	4120.	4060.	4060.	3820.	3360.	2620.	2530.	2420.	2250.	4190.	09/01/79	R

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1960-1979)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

MEAN	11202.5	9021.5	7338.5	6099.0	5239.5	4417.0	3969.5	3616.5	3111.0	
MAXIMUM	17700.0	14700.0	13100.0	10600.0	8300.0	6650.0	5690.0	5140.0	4190.0	
MINIMUM	4030.0	3990.0	3900.0	3800.0	3360.0	2820.0	2530.0	2420.0	2250.0	
STANDARD DEVIATION	4072.45	3391.70	2811.57	2199.15	1559.15	1137.77	855.41	743.78	586.78	
SKWENESS	-0.268	0.327	0.620	0.868	0.840	0.566	0.586	0.508	0.531	
STD ERROR OF SKWENESS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	
SERIAL CORR COEFF	-0.453	-0.363	-0.323	-0.367	-0.232	-0.247	-0.236	-0.209	-0.307	
COEFF OF VARIATION	0.364	0.376	0.383	0.361	0.298	0.258	0.215	0.206	0.189	
MEAN LOGS	4.015	3.924	3.836	3.761	3.702	3.632	3.599	3.550	3.486	4.1867
STD DEVIATION LOGS	0.190	0.174	0.164	0.147	0.122	0.110	0.092	0.088	0.080	0.2508
SKWENESS LOGS	-1.000	-0.375	0.164	0.533	0.505	0.171	0.142	0.133	0.300	-0.9650
STD ERR SKWENESS LOGS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	
SER CORR COEFF LOGS	-0.425	-0.372	-0.335	-0.401	-0.235	-0.236	-0.251	-0.234	-0.334	
COEFF OF VAR LOGS	0.047	0.044	0.043	0.039	0.033	0.030	0.026	0.025	0.023	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1960-1979)

0.99	2752.6	2965.0	2978.8	2999.9	2908.7	2454.6	2425.8	2255.1	2075.3	2717.9
0.95	4546.8	4173.2	3748.8	3493.3	3312.6	2860.9	2765.4	2558.9	2296.6	5218.2
0.90	5751.3	4956.3	4253.6	3826.1	3578.3	3112.4	2970.9	2741.7	2431.9	7089.5
0.80	7424.4	6047.3	4974.3	4313.1	3958.8	3455.4	3245.9	2985.3	2614.6	9901.1
0.50	11117.0	8605.0	6784.6	5593.1	4921.3	4252.7	3865.6	3530.1	3032.3	16843.9
0.20	15025.7	11818.2	9389.4	7567.6	6326.3	5287.7	4636.3	4200.8	3562.9	25149.8
0.10	16957.6	13761.9	11193.6	9021.4	7315.0	5949.9	5113.2	4612.5	3897.0	29595.0
0.04	18823.6	16027.6	13562.2	11032.1	8633.3	6769.1	5688.3	5106.0	4305.5	34107.1
0.02	19892.7	17591.8	15391.0	12661.0	9667.3	7370.2	6101.2	5458.5	4602.4	36795.0
0.01	20752.2	19062.0	17274.9	14406.3	10747.2	7965.8	6503.5	5800.5	4894.4	39015.2

## STATION 12194000 SKAGIT RIVER NEAR CONCRETE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1925	14030	13770	21270	12740	17810	9162	17620	36310	29710	19630	9327	5297	17230
1926	3808	4428	18580	9534	9376	8103	13960	14400	12300	9403	7415	5678	9759
1927	14870	10500	12690	10350	8904	7745	10360	20580	36850	19870	12250	12250	14620
1928	14560	19880	14420	22620	8337	11540	11060	31940	26010	16010	8191	5714	15780
1929	13100	8463	6849	4674	3195	6224	8995	24060	28010	14960	8877	5686	11140
1930	5142	3537	5289	4485	15430	10090	20260	17580	21400	14880	7668	5527	10890
1931	7013	6570	5552	11910	10950	12410	14280	26510	25440	13320	7670	9598	12600
1932	7461	11140	9648	8774	18220	18700	18720	25620	32570	20310	10950	7444	15770
1933	9745	29350	16260	11750	9361	8653	12460	21390	38280	33780	16820	12520	18150
1934	20690	18440	31150	24010	13830	19830	29270	27760	20200	14560	9094	7374	13740
1935	9505	22830	14090	25240	19010	10050	8624	19290	26500	18240	9663	8858	15960
1936	7010	5582	6369	9264	5661	8855	20150	35150	32180	14090	8984	7114	13380
1937	4614	2876	9393	4604	3991	7721	11350	23800	42130	19790	9245	6440	12190
1938	9018	19060	16870	12580	6544	9076	16480	27310	30770	16130	7462	6251	14830
1939	6742	8003	12600	16720	7376	9102	16080	28450	25330	21510	10060	6350	14080
1940	8759	11640	22720	11020	11000	14680	13480	22270	17390	9310	6550	5998	12920
1941	13790	8307	11670	8882	7869	8083	10810	15300	14330	9337	6403	10480	10450
1942	16540	12970	18040	7043	6951	6313	11220	16730	23610	16460	7955	4852	12430
1943	4145	11800	12800	9975	9883	10670	21590	20160	30330	27810	10460	6394	14680
1944	7042	5469	9265	8162	6866	6907	9712	16310	19330	10440	6464	9556	9629
1945	6511	9450	10170	13720	14170	9192	9574	24520	23980	15620	7874	7992	12890
1946	13170	15520	11140	11900	9395	11300	15410	34720	31720	20300	10580	6364	16250
1947	8528	8179	16040	10850	14320	13600	16680	24680	25570	15690	8161	6875	14090
1948	18240	13500	16810	12660	8463	7393	10950	23200	36540	20140	13500	10860	16040
1949	11950	11430	10500	8098	10060	13100	16620	31410	23170	19830	13180	10470	15020
1950	12520	22900	20250	13460	16600	18710	14680	20080	35650	33950	16860	9677	19620
1951	16050	19470	26950	17250	28700	11000	19270	25330	21550	16980	8850	8148	18220
1952	16150	13710	11500	8605	13000	8440	12290	19020	18380	16210	9316	6305	12740
1953	6753	7079	7595	23150	16370	9740	12320	18250	20060	24320	12010	8668	13860
1954	14490	17410	21310	14930	18590	13390	14790	23620	26720	33360	20370	13360	19380
1955	12480	24980	14880	11980	11640	7664	12250	16750	29550	28110	14980	9023	16200
1956	18100	26630	15970	12330	9355	9946	16120	27370	32470	26890	12270	10810	18200
1957	18870	14530	21070	11950	12430	13520	14130	26070	22940	14350	8006	7784	15500
1958	7802	9526	11820	15950	14790	10570	10240	22310	21530	12090	7440	8581	12710
1959	14860	20770	25330	21150	12250	12620	19970	22450	28110	25430	12180	16400	19330
1960	20460	26040	19030	13270	16460	11140	16100	18910	22730	19790	10800	78580	16870
1961	12050	17450	15210	20350	21860	13160	13610	22150	36250	17820	9813	7986	17260
1962	11980	11620	15100	19730	12790	9658	12720	11790	20460	18030	12530	7876	13700
1963	10580	20040	21760	16440	16850	10790	10840	15240	20800	14740	9864	8247	14660
1964	13720	20550	17260	18230	12040	13200	17330	17330	33100	33920	16850	11090	18380
1965	13370	12800	16180	13840	16800	11720	14840	18530	23540	19940	12000	5874	14880
1966	9681	14340	14630	14230	14000	13030	13840	16210	19940	18920	10570	6746	13690
1967	11510	13240	24810	17450	15130	12230	13840	16930	38760	23770	11790	8850	17130
1968	22550	19020	18710	22750	20830	16250	14300	30540	30540	22730	10820	12250	18960
1969	11770	16480	17160	17370	10240	9697	12370	23970	28480	14650	7855	11520	15190
1970	10660	11100	12590	15330	14950	11400	10900	11620	18450	13510	8239	8688	12260
1971	7419	11630	13140	18300	20460	12310	10930	27230	31540	34840	17590	9220	17860
1972	9229	13170	12020	15060	18010	23380	17510	26310	43320	37430	18570	12640	20560
1973	8131	9266	18750	16580	10190	9265	7825	15320	15010	13680	9185	6232	11650
1974	9918	14530	18560	23790	16480	18350	16550	20630	39060	34140	19420	9175	20100
1975	5815	12630	16210	16570	14690	13220	8925	16470	25810	25520	11830	7264	14590
1976	15210	26050	34660	20180	16060	13510	14270	24130	23120	29180	20930	12150	20830
1977	6722	9949	12230	15240	10780	12830	14150	11440	13670	8856	9306	6863	11010
1978	6787	17170	25630	14570	12050	10580	10580	11480	19310	17800	11260	14450	14450
1979	7201	14810	10610	10300	10140	12780	10130	15560	16250	13190	8253	8161	11450

STATION 12194000 SKAGIT RIVER NEAR CONCRETE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1925-1979)

MEAN	11324.0	14210.6	15827.5	14216.4	12816.5	11534.9	13921.5	21650.4	26314.5	19973.9	10955.1	8612.1	15122.9
MAXIMUM	22550.0	29350.0	34660.0	25240.0	28700.0	23380.0	29270.0	36310.0	43320.0	37430.0	20930.0	16400.0	20830.0
MINIMUM	3808.0	2876.0	5289.0	4485.0	3195.0	6224.0	7825.0	11440.0	12300.0	8856.0	6403.0	4852.0	9629.0
STD DEVIATION	4526.96	6253.02	6156.15	5136.12	4922.05	3497.75	3919.60	6008.55	7535.30	7417.79	3662.65	2551.19	2942.61
SKENNESS	0.485	0.434	0.757	0.249	0.537	1.167	1.289	0.439	0.323	0.734	1.237	0.880	0.131
STD ERR SKEW	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322
SER CORR COEFF	0.128	0.206	0.080	0.284	0.213	-0.010	-0.316	0.120	-0.079	0.070	0.220	-0.041	0.078
COEFF OF VAR	0.400	0.440	0.389	0.361	0.384	0.303	0.282	0.278	0.286	0.371	0.334	0.296	0.195
MEAN LOGS	4.018	4.105	4.166	4.121	4.073	4.044	4.128	4.219	4.402	4.272	4.019	3.918	4.171
STD DEV LOGS	0.183	0.219	0.177	0.176	0.184	0.124	0.115	0.123	0.129	0.160	0.132	0.123	0.086
SKENNESS LOGS	-0.328	-0.813	-0.436	-0.785	-0.752	0.289	0.368	-0.230	-0.287	0.009	0.665	0.304	-0.228
STD ERR SKEW LOGS	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322
SER CORR LOGS	0.123	0.223	0.269	0.326	0.271	0.043	-0.332	0.153	-0.065	0.052	0.275	0.019	0.086
COEFF OF VAR LOGS	0.046	0.053	0.042	0.043	0.045	0.031	0.028	0.029	0.029	0.037	0.033	0.031	0.021
% OF AVE FLOW	6.2	7.8	8.7	7.6	7.1	6.4	7.7	11.9	14.5	11.0	6.0	4.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1925-1979)

0.99	3529.1	2944.7	-	5004.7	4120.0	3522.3	6048.3	7818.6	10272.4	11915.1	7969.0	5997.4	4559.5
0.95	5013.6	5023.0	7164.6	6287.7	5448.3	7086.0	8966.9	12837.5	15156.6	10222.8	6762.7	5324.4	10569.9
0.90	5989.5	6481.3	8569.5	7698.1	6718.6	7747.8	9700.5	14395.0	17133.3	11676.8	7285.7	5812.5	11452.4
0.80	7365.4	8591.0	10526.6	9634.4	8482.2	8672.5	10726.9	16470.4	19771.2	13719.6	8056.8	6495.1	12585.3
0.50	10663.6	13617.5	15095.0	13928.7	12468.3	10917.1	13223.7	21058.1	25598.4	18687.5	10101.6	8153.8	14949.5
0.20	14942.7	19603.5	20759.0	18690.4	17006.4	14013.6	16679.4	26513.6	32484.6	25476.0	13279.7	10446.1	17569.2
0.10	17601.5	22895.4	24132.4	21207.4	19458.2	16095.1	19009.5	29728.1	36507.6	29961.6	15629.6	11989.5	19036.8
0.04	20786.7	26365.0	28008.5	23808.0	22034.2	18771.5	22013.9	34337.7	41111.3	35630.0	18889.2	13976.5	20673.2
0.02	22993.3	28522.5	30847.2	25405.2	23840.6	20803.6	24301.4	39990.1	44252.3	39855.1	21536.9	15487.0	21767.9
0.01	25116.8	30375.2	33098.5	26768.2	25027.8	22871.6	28634.5	38390.8	47185.4	44085.9	24380.4	17025.6	22776.7

## STATION 12194000 SKAGIT RIVER NEAR CONCRETE, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1926	2400.0	2400.0	2400.0	2560.0	2930.0	3900.0	4480.0	5590.0	8370.0
1927	3650.0	4060.0	4690.0	5000.0	5560.0	6510.0	7020.0	8140.0	9880.0
1928	5440.0	5950.0	6390.0	6600.0	7630.0	9030.0	13000.0	13800.0	15200.0
1929	2770.0	2870.0	2890.0	2930.0	3170.0	3690.0	4360.0	5070.0	6870.0
1930	2360.0	2400.0	2570.0	2660.0	3060.0	3730.0	4240.0	4610.0	5460.0
1931	3490.0	3700.0	3990.0	4310.0	4940.0	5510.0	6150.0	6150.0	6520.0
1932	4680.0	4710.0	5080.0	5770.0	6400.0	7780.0	8170.0	8820.0	8850.0
1933	5200.0	5290.0	5360.0	5500.0	6170.0	7380.0	8970.0	10700.0	13500.0
1934	6720.0	6970.0	7780.0	8150.0	9990.0	11900.0	15100.0	16700.0	20100.0
1935	5360.0	5460.0	5500.0	5600.0	6020.0	7200.0	8240.0	9890.0	12000.0
1936	4640.0	4760.0	4790.0	5030.0	5570.0	5910.0	6280.0	6720.0	7130.0
1937	2610.0	2670.0	2730.0	2770.0	2870.0	3570.0	4440.0	5120.0	5420.0
1938	3150.0	3380.0	3460.0	3690.0	4620.0	5800.0	7120.0	9600.0	11800.0
1939	4100.0	4730.0	5290.0	5490.0	5800.0	6330.0	6700.0	7080.0	9460.0
1940	4790.0	5030.0	5450.0	5680.0	5940.0	6660.0	8000.0	9050.0	11700.0
1941	4120.0	4250.0	4520.0	5350.0	5780.0	5930.0	6700.0	7900.0	9020.0
1942	4550.0	5080.0	5380.0	5680.0	6230.0	6630.0	6760.0	9570.0	11100.0
1943	2930.0	3130.0	3380.0	3510.0	3930.0	4390.0	5230.0	6480.0	8570.0
1944	3740.0	4030.0	4370.0	4770.0	5470.0	6280.0	6290.0	7000.0	7140.0
1945	4060.0	4330.0	4770.0	5250.0	5700.0	7090.0	8150.0	8300.0	8880.0
1946	4100.0	4400.0	4600.0	4740.0	5440.0	6680.0	7360.0	9780.0	11100.0
1947	3740.0	3980.0	4140.0	4220.0	4840.0	6070.0	7370.0	8330.0	9950.0
1948	4480.0	5250.0	5840.0	5910.0	6870.0	7400.0	9390.0	11400.0	12500.0
1949	5930.0	6620.0	6860.0	7240.0	7560.0	7980.0	9340.0	9690.0	10500.0
1950	6280.0	7210.0	8440.0	8710.0	9490.0	10900.0	11300.0	12700.0	15200.0
1951	6130.0	6920.0	7470.0	8010.0	9310.0	12200.0	13100.0	14500.0	17700.0
1952	5400.0	5940.0	6840.0	7320.0	7580.0	8360.0	9960.0	10200.0	11100.0
1953	4390.0	4870.0	5630.0	6060.0	6210.0	6420.0	6710.0	6870.0	8630.0
1954	4470.0	6020.0	6690.0	7260.0	7190.0	9910.0	11300.0	12800.0	14800.0
1955	5930.0	6560.0	7080.0	7280.0	7510.0	9270.0	10400.0	11500.0	13900.0
1956	4950.0	5760.0	7090.0	7620.0	8780.0	9550.0	10600.0	11900.0	15100.0
1957	5820.0	7070.0	7860.0	8510.0	9170.0	11100.0	12600.0	14100.0	14500.0
1958	4120.0	4530.0	5430.0	6030.0	6790.0	7150.0	7590.0	8240.0	9690.0
1959	4560.0	5310.0	6130.0	6360.0	6940.0	7790.0	8830.0	10700.0	13600.0
1960	6830.0	7520.0	8880.0	9440.0	10500.0	13700.0	13400.0	14800.0	17700.0
1961	3940.0	4230.0	4900.0	5520.0	6850.0	8310.0	9460.0	11600.0	13400.0
1962	4550.0	5160.0	5440.0	5990.0	6560.0	8310.0	9740.0	10300.0	12300.0
1963	4060.0	5370.0	5840.0	7030.0	7580.0	9130.0	9630.0	11400.0	13500.0
1964	5030.0	5640.0	6510.0	6810.0	7410.0	7940.0	9040.0	10700.0	12900.0
1965	6400.0	6730.0	7710.0	7860.0	9800.0	12200.0	12200.0	13200.0	13900.0
1966	3790.0	4120.0	4240.0	4830.0	5610.0	7520.0	9020.0	10400.0	11400.0
1967	4740.0	5100.0	5880.0	6330.0	6740.0	7100.0	9070.0	10300.0	13400.0
1968	6350.0	6750.0	7730.0	7730.0	8850.0	10200.0	12700.0	15500.0	16300.0
1969	5340.0	6500.0	7740.0	8180.0	9430.0	10000.0	11400.0	12300.0	13800.0
1970	4010.0	4900.0	5890.0	6140.0	6840.0	8260.0	9890.0	10300.0	10800.0
1971	3840.0	4170.0	4820.0	6490.0	6960.0	7590.0	7760.0	8350.0	10100.0
1972	4460.0	5600.0	6250.0	6880.0	7630.0	8910.0	10400.0	10700.0	12000.0
1973	4200.0	4940.0	6060.0	6920.0	7940.0	8630.0	9970.0	10700.0	12100.0
1974	3660.0	3840.0	4600.0	4920.0	5790.0	6480.0	8120.0	9470.0	11200.0
1975	3420.0	3920.0	4900.0	4950.0	5260.0	6010.0	8600.0	10300.0	12500.0
1976	4370.0	4930.0	5150.0	5470.0	6810.0	8780.0	10600.0	13900.0	15900.0
1977	4290.0	5060.0	5270.0	5490.0	6640.0	7720.0	9150.0	10000.0	11100.0
1978	4250.0	4510.0	4860.0	5120.0	5800.0	6730.0	7580.0	7900.0	9420.0
1979	5210.0	5590.0	5880.0	6410.0	6930.0	9960.0	10200.0	10700.0	11000.0

STATION 12194000 SKAGIT RIVER NEAR CONCRETE, WASH.  
LOWEST MEAN FLOW STATISTICS (YEARS 1926-1979)

MEAN	4514.6	5005.2	5533.0	5918.3	6616.7	7773.7	8873.7	10033.7	11669.6
MAXIMUM	6830.0	7520.0	8980.0	9440.0	10500.0	13700.0	15100.0	16700.0	20100.0
MINIMUM	2360.0	2400.0	2400.0	2560.0	2870.0	3570.0	4240.0	4610.0	5420.0
STANDARD DEVIATION	1074.43	1247.00	1474.93	1566.29	1779.58	2222.38	2464.70	2747.54	3131.88
SKEWNESS	0.203	-0.039	0.014	-0.142	-0.002	0.387	0.210	0.166	0.216
STD ERROR OF SKEWNESS	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325
SERIAL CORR COEFF	0.374	0.414	0.457	0.494	0.428	0.358	0.319	0.299	0.385
COEFF OF VARIATION	0.238	0.249	0.267	0.265	0.269	0.286	0.278	0.274	0.268
MEAN LOGS	3.642	3.685	3.726	3.755	3.803	3.872	3.930	3.984	4.051
STD DEVIATION LOGS	0.108	0.117	0.127	0.129	0.130	0.131	0.128	0.127	0.124
SKEWNESS LOGS	-0.472	-0.741	-0.813	-0.971	-0.928	-0.537	-0.555	-0.569	-0.581
STD ERR SKEWNESS LOGS	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325	0.325
SER CORR COEFF LOGS	0.402	0.433	0.474	0.507	0.453	0.426	0.405	0.367	0.444
COEFF OF VAR LOGS	0.030	0.032	0.034	0.034	0.034	0.034	0.033	0.032	0.031

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1926-1979)

0.99	7162.7	7817.0	8804.6	9173.4	10370.4	13313.4	15001.5	16819.1	19293.5
0.98	6845.0	7534.8	8489.7	8903.0	10044.3	12645.2	14275.1	16025.1	18414.7
0.96	6489.4	7201.1	8112.0	8564.5	9641.1	11894.7	13455.4	15126.1	17415.6
0.90	5937.7	6648.7	7476.0	7964.6	8937.4	10728.6	12174.3	13714.3	15839.0
0.80	5424.1	6099.2	6833.7	7327.2	8200.8	9645.1	10975.8	12387.2	14348.6
0.50	4471.2	5002.6	5534.5	5964.5	6652.3	7654.1	8754.9	9912.5	11548.3
0.20	3585.3	3914.7	4239.2	4538.4	5057.0	5846.9	6718.9	7627.9	8938.9
0.10	3158.0	3375.8	3601.2	3821.4	4261.1	4999.0	5757.3	6543.9	7692.4
0.05	2826.5	2955.3	3107.2	3263.4	3643.5	4355.3	5024.4	5715.7	6736.1
0.02	2478.2	2514.2	2594.5	2684.4	3003.7	3694.6	4269.7	4861.1	5745.6
0.01	2261.1	2241.3	2281.0	2331.7	2614.1	3292.3	3808.9	4338.4	5137.8

FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1926-1979)

P95	P90	P75	P70	P50	P25	P10
5500.0	6500.0	8800.0	9500.0	13000.0	19000.0	27000.0

## STATION 12194000 SKAGIT RIVER NEAR CONCRETE, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.-30

ANNUAL PEAK-FLOW DATA  
FLOW (CFS) DATE REG. (R)

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	
1815										500000. / /15
1856										350000. / /56
1898										275000. 11/19/97
1910										260000. 11/30/09
1918										220000. 12/30/17
1922										240000. 12/13/21
1925	85400.	73200.	56100.	45700.	37300.	33800.	29400.	26300.	21800.	92500. 12/12/24 R
1926	42100.	33800.	24000.	22200.	18900.	15300.	14000.	12800.	12400.	51600. 12/23/25 R
1927	56700.	52000.	50700.	42700.	36900.	30000.	26100.	23700.	18300.	88900. 10/16/26 R
1928	81200.	60100.	49600.	42000.	33900.	27900.	23900.	20700.	18300.	95500. 01/12/28 R
1929	62200.	43300.	37700.	32900.	30700.	26700.	22800.	19600.	15400.	74300. 10/09/28 R
1930	30800.	29100.	28100.	23300.	21500.	20000.	19800.	19000.	16500.	32200. 06/07/30 R
1931	51300.	37900.	33400.	30100.	26600.	26400.	22600.	20500.	18000.	60600. 06/26/31 R
1932	129000.	101000.	65600.	40200.	33700.	29100.	26800.	25800.	23000.	147000. 02/27/32 R
1933	97800.	63300.	59200.	43600.	39900.	36800.	31800.	28600.	22600.	116000. 11/13/32 R
1934	85000.	66800.	45800.	41100.	35800.	28900.	24900.	24600.	24800.	101000. 12/22/33 R
1935	120000.	97700.	69300.	51100.	33700.	24200.	21500.	20600.	19200.	131000. 01/25/35 R
1936	52400.	48100.	46700.	42200.	38600.	35600.	30900.	26000.	19900.	60000. 06/03/36 R
1937	62600.	59300.	51400.	44900.	42300.	38000.	28800.	24600.	19000.	68300. 06/19/37 R
1938	63500.	47500.	44900.	37900.	33100.	29300.	26600.	23000.	17900.	89600. 10/28/37 R
1939	68400.	51200.	38400.	32300.	29100.	27800.	25500.	23000.	18500.	79600. 05/29/39 R
1940	38900.	36200.	30300.	28500.	23100.	20100.	18100.	17100.	16000.	48200. 12/15/39 R
1941	42200.	40500.	31500.	21100.	16700.	15200.	13700.	12700.	11200.	51000. 10/19/40 R
1942	56100.	46400.	33300.	27500.	25800.	22600.	19100.	17200.	13700.	76300. 12/02/41 R
1943	45000.	43800.	41800.	37600.	33500.	31000.	26300.	25200.	20400.	54000. 11/23/42 R
1944	49000.	29100.	22500.	21600.	20400.	18000.	15600.	14100.	12000.	65200. 12/03/43 R
1945	61200.	43800.	36500.	30400.	26800.	24500.	21700.	18600.	16400.	70800. 02/08/45 R
1946	87500.	64900.	46400.	41300.	37200.	33700.	30500.	26800.	21500.	102000. 10/25/46 R
1947	62000.	37600.	34500.	30500.	28700.	25300.	23000.	21200.	18800.	82200. 10/25/46 R
1948	69000.	55400.	47400.	43900.	40200.	32300.	27100.	23700.	19200.	95200. 10/19/47 R
1949	52100.	50000.	47500.	39300.	33000.	27700.	25300.	23300.	19800.	55700. 05/13/49 R
1950	123000.	74400.	54200.	43700.	41200.	35100.	30700.	26900.	23700.	154000. 11/27/49 R
1951	126000.	98700.	63400.	41300.	29500.	26300.	26100.	23300.	22000.	139000. 02/10/51 R
1952	36700.	29300.	25800.	24000.	22900.	19800.	18200.	16800.	14600.	43500. 06/05/52 R
1953	60700.	45300.	35900.	31100.	27500.	22700.	21300.	19600.	17600.	66000. 02/01/53 R
1954	46900.	40800.	40300.	37000.	35500.	30500.	29100.	26500.	22300.	58000. 10/31/53 R
1955	51200.	50100.	42500.	35500.	30300.	29500.	26100.	22600.	18500.	56300. 06/11/55 R
1956	94100.	74500.	51800.	43300.	36100.	32700.	29200.	26100.	21000.	106000. 11/03/55 R
1957	49700.	38300.	35100.	29600.	26700.	24900.	21600.	19700.	17500.	61000. 10/20/56 R
1958	36200.	35800.	34400.	29100.	25600.	22100.	18900.	16700.	15900.	41400. 01/17/58 R
1959	78600.	59500.	39600.	31100.	29000.	27300.	26700.	24100.	20700.	90700. 04/30/59 R
1960	77500.	67800.	54100.	39800.	31000.	24400.	22100.	20200.	18000.	89300. 11/23/59 R
1961	60300.	50800.	48300.	39000.	37000.	30100.	25700.	22600.	21400.	79000. 01/16/61 R
1962	48900.	38700.	35800.	28900.	22100.	19400.	17800.	16300.	14700.	56000. 01/03/62 R
1963	81700.	50300.	35300.	28800.	27400.	23500.	21100.	18900.	16100.	114000. 11/20/62 R
1964	58600.	49000.	46000.	41400.	35400.	33800.	25600.	25600.	21300.	73800. 10/22/63 R
1965	49500.	40700.	29900.	26200.	24900.	23400.	21400.	19700.	17700.	52600. 12/01/64 R
1966	31400.	28500.	26300.	23100.	20400.	19900.	19200.	17900.	15800.	36800. 05/06/66 R
1967	69500.	66900.	59700.	50900.	40800.	31800.	26800.	23100.	19700.	72300. 06/21/67 R
1968	60200.	46400.	42500.	32400.	30500.	26900.	23600.	21400.	17300.	84200. 10/28/67 R
1969	44100.	36800.	35100.	34400.	32400.	27100.	22800.	20200.	17300.	49500. 01/05/69 R
1970	30300.	28200.	25200.	19400.	18500.	16400.	14700.	14000.	14100.	38400. 11/04/69 R
1971	54700.	52200.	47100.	42700.	35900.	33500.	31700.	28200.	23200.	62200. 01/31/71 R
1972	77500.	63700.	57800.	52500.	44700.	42200.	37000.	31800.	28300.	91900. 07/13/72 R
1973	43100.	33700.	32400.	26200.	22300.	17900.	15400.	13900.	13200.	49500. 12/26/72 R
1974	73400.	60100.	53300.	48500.	41400.	37000.	32600.	28700.	24800.	79900. 01/16/74 R
1975	48400.	46700.	42800.	39900.	29300.	26000.	23000.	20100.	17500.	57500. 12/21/74 R
1976	108000.	96300.	73100.	49800.	37900.	31100.	27300.	25300.	21600.	122000. 12/04/75 R
1977	45800.	32800.	23500.	17900.	16000.	14000.	13300.	13500.	13200.	58400. 01/18/77 R
1978	57800.	45500.	38300.	34300.	28600.	21900.	19300.	17500.	15400.	70300. 12/02/77 R
1979	35300.	26300.	22800.	19300.	17800.	16000.	15300.	13900.	13100.	46000. 11/08/78 R



STATION 12194000 SKAGIT RIVER NEAR CONCRETE, WASH.

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1925-1979)

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

MEAN	63863.6	51274.5	42270.9	35072.7	30480.0	26603.6	23732.7	21323.6	18476.4
MAXIMUM	129000.0	101000.0	73100.0	52500.0	44700.0	42200.0	37000.0	31600.0	28300.0
MINIMUM	30300.0	26300.0	22500.0	17900.0	16000.0	14000.0	13300.0	12700.0	11200.0
STANDARD DEVIATION	24647.75	18337.26	12305.50	9065.41	7295.21	6375.37	5461.54	4585.63	3634.19
SKENNESS	1.102	1.131	0.428	-0.044	-0.163	-0.029	-0.049	-0.091	0.157
STD. ERROR OF SKENNESS	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322
SERIAL CORR. COEFF	0.116	0.003	0.013	-0.051	-0.035	-0.062	-0.029	-0.038	0.032
COEFF OF VARIATION	0.386	0.358	0.291	0.258	0.239	0.240	0.230	0.215	0.197
MEAN LOGS	4.776	4.685	4.608	4.529	4.471	4.412	4.363	4.318	4.258
STD DEVIATION LOGS	0.157	0.146	0.129	0.120	0.112	0.111	0.106	0.099	0.088
SKENNESS LOGS	0.289	0.325	-0.180	-0.508	-0.616	-0.563	-0.549	-0.529	-0.333
STD ERR SKENNESS LOGS	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322	0.322
SER CORR COEFF LOGS	0.072	-0.007	-0.001	-0.065	-0.040	-0.063	-0.037	-0.044	0.029
COEFF OF VAR LOGS	0.033	0.031	0.028	0.026	0.025	0.025	0.024	0.023	0.021

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1925-1979)

0.99	27781.9	24075.6	19520.0	16097.9	14490.9	12853.3	11873.4	11253.0	10782.7	31537.3
0.95	33956.4	28832.9	24489.4	20725.5	18584.1	16343.9	14918.4	13885.4	12762.1	39726.1
0.90	38024.8	31944.2	27539.9	23484.0	20983.3	18390.9	16691.7	15402.1	13898.4	45028.7
0.80	43866.1	36384.5	31644.2	27079.4	24061.0	21022.5	18961.3	17329.6	15346.6	52515.7
0.50	58724.8	47566.4	40876.2	34641.5	30340.4	26427.3	23596.3	21230.5	18321.6	70938.4
0.20	80585.6	63805.2	52141.8	42875.4	36856.1	32115.6	28451.2	25282.8	21528.6	96641.4
0.10	96046.7	75180.5	58925.0	47335.0	40234.6	35110.2	31002.8	27405.1	23279.6	113984.4
0.04	116721.5	90285.6	66867.3	52129.5	43741.1	38260.4	33686.9	29635.6	25190.2	136275.7
0.02	132961.4	102082.6	72449.4	55217.0	45926.7	40249.8	35383.1	31045.2	26443.1	153163.2
0.01	149299.4	114355.7	77743.4	57969.8	47625.4	41996.8	36874.0	32285.2	27579.3	170299.2

STATION 12194000 SKAGIT RIVER NEAR CONCRETE, WASH.  
MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1940	8759	11640	22720	11020	11000	14680	13480	22270	17390	9310	6550	5998	12920
1941	13790	8307	11670	8862	7869	8083	10810	15300	14330	9337	6403	10480	10450
1942	16540	12970	18040	7043	6951	6313	11220	16730	23610	18460	7955	4852	12430
1943	4145	11800	12800	9975	9883	10670	21590	20160	30330	27810	10460	6394	14680
1944	5469	9265	8162	6866	6907	9712	9574	24520	23980	10440	6464	9556	9629
1945	8511	9450	10170	13720	14170	9192	9712	24520	23980	10440	7874	7992	12890
1946	13170	15520	11140	11900	9395	11300	15410	34720	31720	23300	10580	6364	16250
1947	8528	8179	16040	10850	14320	13600	16680	24680	25570	15690	8161	6875	14090
1948	18240	13500	16810	12660	8463	7393	10950	36540	36540	20140	13500	10860	16040
1949	11950	11430	10500	8098	10060	13100	16620	31410	23170	19830	13180	10470	15020
1950	12520	22000	20250	13460	16600	18710	14680	20080	35650	33950	16860	9677	19620
1951	16050	19470	26950	17250	28700	11000	19270	25330	21550	16980	8850	8148	18220
1952	16150	13710	11500	8605	13000	8440	12290	19020	18380	16210	9316	6305	12740
1953	6753	7079	7595	23150	16370	9740	12320	18250	20060	24320	12010	8668	13860
1954	14490	17410	21310	14930	18590	13390	14790	23620	26720	33360	20370	13360	19360
1955	12480	14880	14880	11980	11640	7664	12250	16750	29550	28110	14980	9023	16200
1956	18100	26630	15970	12330	9355	9946	16120	27370	32470	26890	12270	10810	18200
1957	18870	14530	21070	11950	12430	13520	14130	24070	22940	14350	8006	7784	15500
1958	7802	9526	11820	15950	14790	10570	10240	22310	21530	12090	7440	8581	12710
1959	14860	20170	25330	12150	12250	12620	19970	22450	28110	25430	12180	16400	19330
1960	20460	26040	19030	13270	16460	11140	16100	18910	27370	19790	10800	7858	16870
1961	12050	17450	15210	20350	21860	13160	13610	22150	36250	17820	9813	7986	17260
1962	11980	11820	15100	19730	12790	9658	12720	11790	20460	18030	12530	7876	13700
1963	10580	20040	21760	16440	10840	10790	10840	15240	20600	14740	9864	8247	14660
1964	13720	20550	17260	18230	12040	13200	17510	17330	33100	33920	16850	11090	18380
1965	13370	12800	16180	13840	16800	11720	14040	18530	23540	19940	12000	5874	14880
1966	9681	14340	14340	14030	10400	13030	13840	18210	38760	23770	11790	6746	13690
1967	11510	13240	24810	17450	15130	10990	12230	16930	30540	22730	10820	8850	17130
1968	22550	19020	18710	22750	20240	16250	14300	19950	28480	14650	7855	12250	18960
1969	11770	16480	17160	17370	10340	9697	12470	23970	28480	14650	7855	11520	15190
1970	10660	11100	12590	15330	14950	11400	10900	11620	31450	13510	8233	8668	12260
1971	7419	11630	13140	18300	20460	12310	10930	17230	35400	34840	17290	9220	17860
1972	9229	13170	12020	15060	10190	9265	7825	26310	43320	37430	12640	12640	20560
1973	8131	9266	18750	16360	10190	9265	15320	15320	15010	13680	9185	6232	11850
1974	9918	14530	18560	23790	16480	13350	16550	20630	30600	34140	19620	9175	20100
1975	5815	12630	16210	16570	14690	13220	8925	16470	25810	25520	11830	7264	14590
1976	15210	26050	34660	20180	16060	13510	14270	24130	23120	29180	12150	20830	20830
1977	6722	9949	12230	15240	10780	14150	14150	11440	13670	8856	9306	6883	11010
1978	6787	17170	25630	14570	12050	12400	10580	11480	19310	17800	14260	14260	14450
1979	7201	14810	10610	10300	10140	12780	10130	15560	16250	13190	8253	8161	11450

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1940-1979)

MEAN	11837.8	14928.9	16737.0	14816.1	13747.8	11928.9	13405.6	20268.7	25577.5	2802.1	11518.1	9039.2	15391.0
MAXIMUM	22550.0	26630.0	34660.0	23790.0	28700.0	23380.0	21590.0	34720.0	43320.0	37430.0	20930.0	16400.0	20830.0
MINIMUM	4145.0	5469.0	7595.0	7043.0	6866.0	6313.0	7825.0	11440.0	13670.0	8856.0	6403.0	4852.0	9629.0
STD DEVIATION	4338.07	5425.12	5658.20	4327.50	4501.33	3309.89	3092.58	5381.09	7439.18	7919.57	3933.15	2521.71	2979.66
SKEDNESS	0.485	0.634	0.949	0.234	0.998	1.149	0.627	0.447	0.507	0.494	0.953	0.863	0.101
STD ERR SKEW	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374
SER CORR COEFF	0.088	0.219	-0.150	0.349	0.173	-0.024	-0.280	0.185	-0.080	0.064	0.167	-0.142	-0.031
COEFF OF VAR	0.366	0.363	0.338	0.292	0.327	0.277	0.231	0.265	0.291	0.381	0.341	0.279	0.194
MEAN LOGS	4.044	4.146	4.201	4.152	4.117	4.061	4.116	4.292	4.390	4.287	4.039	3.941	4.179
STD DEV LOGS	0.166	0.161	0.143	0.133	0.138	0.116	0.099	0.118	0.127	0.170	0.140	0.117	0.086
SKEWNESS LOGS	-0.312	-0.207	0.079	-0.391	0.053	0.051	0.067	-0.228	-0.031	-0.165	0.370	0.196	-0.257
STD ERR SKEW LOGS	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374
SER CORR LOGS	0.107	0.185	-0.093	0.404	0.234	0.030	-0.295	0.173	-0.028	0.083	0.244	-0.107	-0.003
COEFF OF VAR LOGS	0.039	0.034	0.034	0.032	0.034	0.029	0.024	0.027	0.029	0.040	0.035	0.030	0.021
% OF AVE FLOW	6.4	8.1	9.1	8.0	7.4	6.5	7.3	11.0	13.9	11.3	6.2	4.9	100.0

MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1940-1979)

0.99	4161.1	5595.4	7529.0	6363.6	6310.2	6236.1	7785.3	9970.2	12378.4	7415.9	5641.3	4841.8	9196.3
0.95	5704.5	7455.2	9311.2	8288.4	7781.8	7439.7	9029.2	12331.2	15159.8	9974.5	6668.0	5663.3	10762.2
0.90	6695.2	8643.8	10444.5	9464.6	8710.9	8180.5	9780.9	13754.3	16879.9	11632.5	7339.8	6209.8	11665.2
0.80	8068.2	10291.5	12021.2	11031.6	9995.7	9184.4	10784.9	15840.2	19215.9	13958.9	8298.9	6934.0	12822.3
0.50	11277.0	14169.3	15804.5	14462.9	13044.3	11489.7	13037.1	19773.8	25863.6	19552.3	10716.4	8643.5	15227.8
0.20	15323.7	19160.0	20905.9	18432.4	17090.7	14181.7	15816.5	24639.8	31884.9	26974.3	14233.1	10909.2	17877.4
0.10	27792.8	22275.6	24257.6	20697.9	19714.9	16257.5	17523.0	27486.6	36294.5	31725.4	16701.2	12383.3	19354.1
0.04	20698.6	26021.3	28479.3	23236.2	22986.7	18496.0	17523.0	30756.1	40764.6	37549.9	19884.8	14230.3	20993.5
0.02	22725.1	28687.9	31622.2	24933.1	25400.7	20114.3	21026.6	32997.2	44453.9	41768.4	22554.1	15600.9	22086.1
0.01	24646.6	31259.9	34768.7	26491.2	27800.6	21698.7	22440.8	35099.1	48045.9	45892.4	25231.5	15970.7	23089.8

## STATION 12194000 SKAGIT RIVER NEAR CONCRETE, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1941	4120.0	4250.0	4520.0	5350.0	5780.0	5930.0	6700.0	7900.0	9020.0
1942	4550.0	5080.0	5380.0	5680.0	6230.0	6630.0	6700.0	9570.0	11100.0
1943	2930.0	3130.0	3380.0	3510.0	3930.0	4390.0	5230.0	6480.0	8570.0
1944	3740.0	4030.0	4370.0	4770.0	5470.0	6280.0	6290.0	7000.0	7140.0
1945	4060.0	4330.0	4770.0	5250.0	5700.0	7090.0	8150.0	8300.0	8880.0
1946	4100.0	4400.0	4600.0	4740.0	5640.0	6680.0	7360.0	7800.0	11100.0
1947	3740.0	3980.0	4140.0	4220.0	4540.0	6070.0	7370.0	8330.0	9950.0
1948	4480.0	5250.0	5840.0	5910.0	6870.0	7400.0	9390.0	11400.0	12500.0
1949	5930.0	6620.0	6860.0	7240.0	7560.0	7980.0	9340.0	9690.0	10500.0
1950	6280.0	7210.0	8440.0	8110.0	9490.0	10900.0	11300.0	12700.0	15200.0
1951	6130.0	6920.0	7470.0	8010.0	9310.0	12200.0	13100.0	14500.0	17700.0
1952	5400.0	5940.0	6840.0	7320.0	7540.0	8360.0	9960.0	10200.0	11100.0
1953	4390.0	4870.0	5630.0	6060.0	6210.0	6820.0	6710.0	6870.0	8630.0
1954	4470.0	6020.0	6690.0	6790.0	7190.0	9910.0	11300.0	12800.0	14800.0
1955	5930.0	6560.0	7080.0	7260.0	7510.0	9570.0	10400.0	11500.0	13900.0
1956	4950.0	5760.0	7090.0	7620.0	8780.0	9550.0	10600.0	11900.0	15100.0
1957	5820.0	7070.0	7860.0	8510.0	9170.0	11100.0	12600.0	14100.0	14500.0
1958	4120.0	4530.0	5430.0	6030.0	6790.0	7150.0	7590.0	8240.0	9690.0
1959	4560.0	5310.0	6130.0	6360.0	6940.0	7790.0	8830.0	10700.0	13600.0
1960	6830.0	7520.0	8840.0	9440.0	10500.0	13700.0	13400.0	14800.0	17700.0
1961	3940.0	4230.0	4900.0	5520.0	6860.0	8310.0	9460.0	11600.0	13400.0
1962	4550.0	5160.0	5440.0	5990.0	6560.0	8310.0	9740.0	10300.0	12300.0
1963	4060.0	5370.0	5840.0	7030.0	7580.0	9130.0	9630.0	11400.0	13500.0
1964	5030.0	5640.0	6510.0	6810.0	7410.0	7940.0	9040.0	10700.0	12900.0
1965	6400.0	6730.0	7710.0	7860.0	9800.0	12200.0	12200.0	13200.0	13900.0
1966	3790.0	4120.0	4280.0	4830.0	5610.0	7520.0	9020.0	10400.0	11400.0
1967	4740.0	5100.0	5860.0	6330.0	6740.0	7100.0	9070.0	10300.0	13400.0
1968	6350.0	6750.0	7730.0	8850.0	9430.0	10200.0	12700.0	15500.0	16300.0
1969	5340.0	6500.0	7740.0	8180.0	8430.0	10000.0	11400.0	12300.0	13800.0
1970	4010.0	4900.0	5890.0	6140.0	6840.0	8260.0	9890.0	10300.0	10800.0
1971	3840.0	4170.0	4820.0	6490.0	6960.0	7590.0	7760.0	8350.0	10100.0
1972	4460.0	5600.0	6250.0	6880.0	7630.0	8910.0	10400.0	10700.0	12000.0
1973	4200.0	4940.0	6060.0	6920.0	7940.0	8630.0	9970.0	10700.0	12100.0
1974	3660.0	3840.0	4600.0	4920.0	5790.0	6480.0	8120.0	9470.0	11200.0
1975	3420.0	3920.0	4600.0	4950.0	5600.0	6010.0	8600.0	10300.0	12500.0
1976	4370.0	4990.0	5150.0	5470.0	6810.0	8780.0	10600.0	13900.0	15900.0
1977	4290.0	5060.0	5270.0	5490.0	6840.0	7720.0	9150.0	10000.0	11100.0
1978	4250.0	4510.0	4860.0	5120.0	5800.0	6730.0	7580.0	7900.0	9420.0
1979	5210.0	5540.0	5880.0	6410.0	6930.0	9960.0	10200.0	10700.0	11000.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1941-1979)

MEAN	4677.9	5279.5	5907.9	6355.1	7093.1	8330.3	9407.9	10635.4	12248.7
MAXIMUM	6830.0	7520.0	8880.0	9440.0	10500.0	13700.0	13400.0	15500.0	17700.0
MINIMUM	2930.0	3130.0	3380.0	3510.0	3930.0	4390.0	5230.0	6480.0	7140.0
STANDARD DEVIATION	936.97	1092.95	1280.95	1324.63	1484.07	1970.02	1968.03	2223.92	2538.64
SKWENESS	0.665	0.312	0.383	0.206	0.349	0.692	0.116	0.244	0.262
STD ERROR OF SKWENESS	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378
SERIAL CORR COEFF	0.282	0.326	0.384	0.427	0.365	0.240	0.314	0.205	0.352
COEFF OF VARIATION	0.201	0.207	0.217	0.208	0.209	0.236	0.209	0.209	0.207
MEAN LOGS	3.662	3.713	3.761	3.794	3.841	3.909	3.964	4.017	4.079
STD DEVIATION LOGS	0.085	0.090	0.095	0.092	0.092	0.101	0.094	0.093	0.092
SKWENESS LOGS	0.274	-0.084	-0.096	-0.338	-0.263	0.003	-0.409	-0.265	-0.227
STD ERR SKWENESS LOGS	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378
SER CORR COEFF LOGS	0.304	0.333	0.403	0.457	0.396	0.309	0.357	0.238	0.368
COEFF OF VAR LOGS	0.023	0.024	0.025	0.024	0.024	0.026	0.024	0.023	0.022

STATION 12194000 SKAGIT RIVER NEAR CONCRETE, WASH.

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1941-1979)

	0.99	7515.9	8285.9	9440.1	9695.8	10918.9	13967.7	14260.3	16399.6	18901.6
0.98	7049.7	7855.6	8932.4	9275.0	8811.8	9871.1	13104.9	13673.3	15643.5	18013.4
0.96	6576.1	7399.8	8395.0	8811.8	8107.5	9053.3	12208.4	13019.3	14821.1	17052.7
0.90	5925.1	6738.7	7616.7	8107.5	7464.4	8318.6	10940.6	12010.1	13589.0	15622.6
0.80	5393.3	6165.5	6943.0	7464.4	6293.2	7006.0	9872.0	11074.0	12481.9	14346.6
0.50	4549.8	5184.9	5793.9	6293.2	5216.1	5823.4	8111.0	9337.7	10504.3	12086.2
0.20	3487.0	4342.3	4811.2	5216.1	4695.7	5258.6	6665.2	7710.8	8722.9	10067.6
0.10	3597.4	3951.2	4357.1	4695.7	4289.4	4820.1	6015.5	6916.7	7872.5	9108.4
0.05	3383.0	3651.8	4010.4	4289.4	3858.4	4356.6	5527.2	6294.1	7212.4	8365.3
0.02	3165.3	3338.7	3649.0	3858.4	3586.7	4065.2	5025.1	5631.8	6515.0	7581.2
0.01	3032.6	3143.3	3424.0	3586.7		4065.2	4716.0	5213.8	6076.6	7088.6

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "PM" PERCENT OF THE TIME (YEARS 1941-1979)

	P95	P90	P75	P70	P50	P25	P10
6100.0	7100.0	9500.0	10000.0	13000.0	19000.0	27000.0	

STATION 12194000 SKAGIT RIVER NEAR CONCRETE, WASH.									
HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30									
YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1940	38900.	36200.	30300.	28500.	23100.	20100.	18100.	17100.	16000.
1941	42200.	40500.	31500.	21100.	16700.	15200.	13700.	12700.	11200.
1942	56100.	46400.	33300.	27500.	25800.	22600.	19100.	17200.	13700.
1943	45000.	43800.	41800.	37600.	33500.	31000.	26300.	25200.	20400.
1944	49000.	29100.	22500.	21600.	20000.	18000.	15600.	14100.	12000.
1945	61200.	43800.	36500.	30400.	26800.	24500.	21700.	18600.	16400.
1946	87500.	64900.	46400.	41300.	37200.	33700.	30500.	26800.	21500.
1947	62000.	37600.	34500.	30500.	28700.	25300.	23000.	21200.	18800.
1948	69000.	55400.	47400.	43900.	40200.	32300.	27100.	23700.	19200.
1949	52100.	50000.	47500.	39300.	33000.	27700.	25300.	23300.	19800.
1950	123000.	74400.	54200.	43700.	41200.	35100.	30700.	26900.	23700.
1951	128000.	98700.	63400.	41300.	29500.	26300.	23000.	20700.	18000.
1952	36700.	29300.	25800.	24000.	22900.	19800.	18200.	16800.	14600.
1953	60700.	45300.	35900.	31100.	27500.	22700.	21300.	19600.	17600.
1954	46900.	40800.	40300.	37000.	35300.	30500.	29100.	26500.	22300.
1955	51200.	50100.	42500.	35500.	30300.	29500.	26100.	22600.	18500.
1956	94100.	74500.	51800.	43300.	36100.	32700.	29200.	21000.	15000.
1957	49700.	38300.	35100.	29600.	26700.	24900.	21600.	19700.	17500.
1958	36200.	35800.	34400.	29100.	25600.	22100.	18900.	16700.	15900.
1959	78600.	59500.	39600.	31100.	29000.	27300.	24100.	20700.	18000.
1960	77500.	67800.	54100.	39800.	31000.	24300.	22100.	20200.	18000.
1961	60300.	50800.	48300.	39000.	37000.	30100.	25700.	22600.	21400.
1962	48900.	38700.	35800.	28900.	22100.	19400.	17800.	16300.	14700.
1963	81700.	50300.	35300.	28800.	27400.	23500.	21100.	18900.	16100.
1964	58600.	49000.	46000.	41400.	35400.	33800.	29500.	25600.	21300.
1965	49500.	40700.	29900.	26200.	24900.	23400.	21400.	19700.	17700.
1966	31400.	28500.	26300.	23100.	20800.	19900.	19200.	17900.	15800.
1967	69500.	66900.	59700.	50900.	40800.	31800.	26800.	23100.	19700.
1968	60200.	46400.	42500.	32400.	30500.	26900.	23600.	21400.	17200.
1969	44100.	36800.	35100.	34400.	32400.	27100.	22800.	20200.	17300.
1970	30300.	28200.	25200.	19400.	18500.	16400.	14700.	14000.	14100.
1971	54700.	52200.	47100.	42700.	35900.	33500.	31700.	28200.	23200.
1972	77500.	63700.	57800.	52500.	44700.	42200.	37000.	31800.	28300.
1973	43100.	33700.	32400.	26200.	22300.	17900.	15400.	13900.	13200.
1974	73400.	60100.	53300.	48500.	41400.	37000.	32600.	28700.	24800.
1975	48400.	46700.	42800.	33900.	29300.	26000.	20100.	17500.	15000.
1976	108000.	96300.	73100.	49800.	37900.	31100.	27300.	25300.	21600.
1977	45800.	32800.	23500.	17900.	16000.	14000.	13300.	13500.	13200.
1978	57800.	45500.	38300.	34300.	28600.	21900.	19300.	17500.	15400.
1979	35300.	26300.	22800.	19300.	17800.	16000.	15300.	13900.	13100.

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1940-1979)									
MEAN	60602.5	48895.0	40600.0	33920.0	29610.0	25940.0	23197.5	20875.0	18265.0
MAXIMUM	128000.0	98700.0	73100.0	52500.0	44700.0	42200.0	37000.0	31800.0	28300.0
MINIMUM	30300.0	26300.0	22500.0	17900.0	16000.0	14000.0	13300.0	12700.0	11200.0
STANDARD DEVIATION	23033.39	16969.29	11784.81	9166.47	7445.79	6559.66	5709.38	4793.83	3820.22
SKEDNESS	1.322	1.230	0.606	0.182	0.054	0.200	0.191	0.149	0.271
STD. ERROR OF SKEWNESS	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374
SERIAL CORR. COEFF.	0.644	-0.070	-0.066	-0.167	-0.126	-0.079	-0.042	-0.071	-0.028
COEFF. OF VARIATION	0.380	0.347	0.290	0.270	0.251	0.253	0.246	0.230	0.209
MEAN LOGS	4.756	4.666	4.591	4.514	4.457	4.400	4.352	4.308	4.252
STD. DEVIATION LOGS	0.151	0.140	0.126	0.112	0.115	0.114	0.111	0.103	0.092
SKEWNESS LOGS	0.450	0.385	-0.061	-0.339	-0.438	-0.347	-0.308	-0.266	-0.207
STD. ERR. SKEWNESS LOGS	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374	0.374
SER. CORR. COEFF. LOGS	-0.018	-0.102	-0.071	-0.168	-0.113	-0.068	-0.040	-0.065	-0.012
COEFF. OF VAR. LOGS	0.032	0.030	0.027	0.027	0.026	0.026	0.025	0.024	0.022

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1940-1979)									
0.99	28509.0	24013.9	19574.9	15822.8	14230.2	12753.5	11747.6	11200.1	10550.2
0.95	37379.7	31360.2	24052.7	20031.4	17978.6	15904.9	14485.9	13542.5	12433.9
0.90	37235.2	28310.0	22681.3	18256.9	16020.4	14781.8	14162.4	14922.6	13549.1
0.80	42313.9	35208.0	30552.6	25922.0	23100.2	20491.1	18239.7	16718.6	14979.5
0.50	55133.6	45440.5	39093.0	33196.0	29210.9	25491.1	22790.8	20539.0	18004.0
0.20	75569.3	60389.3	49812.4	41564.5	35940.5	31423.7	27981.4	24862.7	21415.3
0.10	90155.2	70917.4	56445.5	46343.7	39638.4	34766.6	30841.4	27315.4	23353.1
0.04	110124.7	84963.9	64415.1	51716.3	43668.7	38489.5	34160.2	30069.6	25535.8
0.02	126154.1	95982.9	70104.5	55324.1	46299.9	40970.1	36357.6	31921.2	27008.8
0.01	143200.9	107489.3	75616.1	58651.5	48671.1	43244.9	38382.5	33632.7	28375.3

ANNUAL PEAK-FLOW DATA									
FLOW (CFS)	DATE	REG. (H)							
48200.	12/15/39	R							
51000.	10/19/40	R							
76300.	12/02/41	R							
54000.	11/23/42	R							
45200.	12/03/43	R							
70800.	02/08/45	R							
102000.	10/25/45	R							
82200.	10/25/46	R							
95200.	10/19/47	R							
55700.	05/13/49	R							
154000.	11/27/49	R							
139000.	02/10/51	R							
43500.	06/05/52	R							
66000.	02/01/53	R							
58000.	10/31/53	R							
56300.	06/11/55	R							
106000.	11/03/55	R							
61000.	10/20/56	R							
41400.	01/17/58	R							
90700.	04/30/59	R							
89300.	11/23/59	R							
79000.	01/16/61	R							
56000.	01/03/62	R							
114000.	11/20/62	R							
73800.	10/22/63	R							
52600.	12/01/64	R							
36800.	05/06/66	R							
72300.	06/21/67	R							
44200.	10/28/67	R							
49500.	01/05/69	R							
38400.	11/04/69	R							
62200.	01/31/71	R							
91900.	07/13/72	R							
49500.	12/26/72	R							
79900.	01/16/74	R							
57500.	12/21/74	R							
122000.	12/04/75	R							
58400.	01/18/77	R							
70300.	12/02/77	R							
46000.	11/08/78	R							

W R C SYSTEMATIC RECORD									
ESTIMATE	4.8338	4.8338	0.1508	0.3950	4.8338	0.1508	0.3950	4.8338	0.1508
RECORD									

## STATION 12196000 ALDER CREEK NR HAMILTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1943	10.1	10.9	29.5	38.4	29.2	31.5	23.1	23.1	16.9	8.96	7.15	8.70	19.8
1944	9.77	22.8	27.2	78.8	40.9	47.2	58.6	34.1	15.5	10.4	9.08	8.91	30.3
1945	35.4	65.6	50.1	62.7	51.6	62.0	45.2	27.7	20.9	15.7	10.4	9.48	37.9
1946	18.8	32.1	82.4	64.4	65.5	38.7	38.3	23.6	17.8	13.9	11.6	11.6	34.6
1947	37.6	60.6	63.2	62.1	47.6	44.6	49.9	45.8	21.0	15.5	12.9	11.9	39.4
1948	17.5	56.1	55.0	24.8	42.9	85.7	49.3	31.5	15.0	12.3	10.0	10.8	34.2
1949	19.9	36.1	85.8	44.9	76.8	102	66.5	45.4	25.1	15.1	13.1	12.4	45.1
1950	33.5	47.9	72.2	82.5	127	53.9	42.5	45.4	15.7	10.9	8.59	7.00	43.3
1951	18.6	32.3	34.0	28.6	65.0	33.1	32.2	19.2	12.6	11.0	8.65	7.44	25.1
1952	15.5	48.6	19.7	60.9	63.4	32.8	32.2	23.1	19.0	13.2	9.73	8.47	26.2
1953	15.5	48.6	11.1	70.7	77.2	43.0	51.5	27.5	27.6	18.7	14.9	14.5	40.4
1954	14.7	57.5	43.5	62.7	69.3	40.4	68.3	48.8	33.8	22.5	15.3	10.8	43.2
1955	45.4	91.0	75.1	67.5	35.0	47.4	50.7	26.6	20.2	14.0	11.1	9.75	41.2
1956	65.1	37.1	94.3	32.2	36.9	67.1	46.1	23.3	17.3	12.6	9.92	9.75	37.8
1957	11.7	13.5	35.2	51.5	46.7	30.0	24.3	13.6	9.64	7.58	5.93	6.92	21.3
1958	19.6	70.4	65.0	90.4	52.8	59.6	76.4	44.3	22.1	15.1	11.7	23.2	45.8
1959	35.5	74.1	65.2	42.7	75.2	40.2	51.3	42.2	23.2	14.5	12.8	14.1	40.7
1960	25.2	34.0	51.7	59.3	86.0	61.4	52.4	30.0	17.9	14.2	10.6	12.8	39.8
1961	25.2	34.0	52.9	65.8	38.1	26.8	33.7	24.7	17.2	12.4	12.0	10.8	29.5
1962	15.5	44.8	66.1	56.6	43.0	34.4	34.3	23.1	13.5	11.3	9.13	9.56	30.4
1963	17.9	65.0	47.3	68.5	49.4	62.4	62.3	41.7	31.0	19.3	12.6	15.7	41.0
1964	21.9	27.5	35.5	65.6	92.3	38.4	25.5	28.5	15.8	10.5	8.97	7.79	31.2
1965	11.6	25.9	35.1	56.6	43.5	47.9	40.0	24.9	17.5	14.9	9.72	8.80	28.0
1966	16.6	29.8	72.6	80.6	81.7	59.6	37.0	28.6	17.4	11.7	9.37	8.98	37.6
1967	55.8	40.7	97.2	60.6	60.4	44.8	44.8	29.6	24.7	15.1	12.0	18.2	42.0
1968	34.6	40.5	69.8	67.5	36.0	46.7	44.7	28.8	16.5	13.1	10.2	11.8	35.1
1969	15.4	24.4	28.7	44.3	46.4	23.1	46.9	20.3	12.1	9.20	7.63	12.5	24.1
1970	23.1	40.0	45.5	131	115	69.1	51.9	42.4	22.6	17.3	12.2	10.5	48.0
1971													

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1943-1971)

MEAN	24.1	43.0	57.5	62.2	60.5	49.1	45.7	30.2	19.3	13.6	10.6	11.1	35.5
MAXIMUM	65.1	91.0	111.0	131.0	127.0	102.0	76.4	48.8	33.8	22.5	15.3	23.2	48.0
MINIMUM	6.6	7.9	19.7	24.8	29.2	23.1	23.1	13.6	9.6	7.6	5.9	6.9	19.8
STD DEVIATION	14.08	20.38	23.49	21.33	24.18	17.90	13.23	9.30	5.56	3.30	2.20	3.52	7.74
SKENNESS	1.408	0.335	0.425	0.919	1.146	1.139	0.314	0.611	0.863	0.635	0.204	1.746	-0.433
STD ERR SKEW	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.434	0.434
SER CORR COEFF	0.080	0.141	-0.007	-0.359	0.123	0.091	-0.146	-0.092	-0.018	0.007	0.081	-0.002	-0.078
COEFF OF VAR	0.584	0.474	0.408	0.343	0.400	0.365	0.289	0.208	0.242	0.242	1.015	1.028	1.539
MEAN LOGS	1.319	1.574	1.722	1.769	1.752	1.665	1.642	1.461	1.268	1.122	1.015	0.93	0.104
STD DEV LOGS	0.235	0.252	0.190	0.155	0.162	0.151	0.132	0.133	0.122	0.105	0.093	0.121	-0.804
SKENNESS LOGS	0.194	-1.019	-0.362	-0.551	0.381	0.192	-0.424	-0.040	0.036	-0.119	-0.431	0.819	0.434
STD ERR SKEW LOGS	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.434	0.434
SER CORR LOGS	0.081	0.096	0.054	-0.279	0.183	-0.040	-0.164	-0.072	-0.084	-0.034	0.041	0.030	-0.071
COEFF OF VAR LOGS	0.178	0.160	0.110	0.088	0.092	0.091	0.080	0.091	0.097	0.097	0.092	0.118	0.067
% OF AVE FLOW	5.6	10.1	13.5	14.6	14.2	11.5	10.7	7.1	4.5	3.2	2.5	2.6	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1943-1971)

0.99	6.4	6.5	17.0	22.2	26.4	21.6	19.7	14.0	9.7	7.4	5.9	6.6	17.3
0.95	8.8	12.6	24.7	31.0	31.9	26.6	25.7	17.4	11.7	8.8	7.1	7.2	22.3
0.90	10.5	17.3	29.7	36.5	35.6	29.9	29.4	19.5	12.9	9.7	7.8	7.7	25.1
0.80	13.2	24.2	36.9	44.0	41.1	34.4	34.2	22.3	14.6	10.8	8.7	8.4	28.7
0.50	20.5	41.4	54.2	60.6	55.2	45.7	44.8	28.9	18.5	13.3	10.5	10.3	35.7
0.20	32.7	61.5	76.6	79.7	76.6	61.7	56.8	37.4	23.5	16.2	12.4	13.3	42.4
0.10	42.2	72.0	90.5	90.4	92.2	72.7	63.6	42.7	26.6	18.0	13.5	15.5	45.6
0.04	55.8	82.5	107.0	102.1	113.6	86.9	71.1	49.2	30.5	20.0	14.6	18.6	48.8
0.02	67.1	88.6	118.6	109.7	130.7	97.8	76.1	53.8	33.3	21.4	15.3	21.2	50.7
0.01	79.5	93.6	129.6	116.5	148.9	109.0	80.7	58.4	36.0	22.8	15.9	24.0	52.2

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1945	6.3	6.3	6.3	6.5	6.7	7.2	8.3	8.6	11.0
1946	8.4	8.4	8.4	8.5	9.0	9.2	9.4	9.9	17.0
1947	7.9	7.9	8.0	8.2	8.3	8.8	9.6	12.0	16.0
1948	9.8	9.8	9.9	9.9	10.0	11.0	12.0	13.0	18.0
1949	10.0	10.0	11.0	11.0	12.0	12.0	13.0	14.0	18.0
1950	8.9	8.9	8.9	9.1	9.4	10.0	11.0	12.0	15.0
1951	10.0	10.0	10.0	10.0	11.0	12.0	13.0	15.0	22.0
1952	6.4	6.4	6.4	6.6	7.0	7.8	8.7	9.9	14.0
1953	6.1	6.1	6.2	6.2	6.4	7.0	7.3	7.6	9.0
1954	7.5	7.6	7.8	8.0	8.3	8.9	9.7	11.0	14.0
1955	11.0	11.0	13.0	13.0	14.0	14.0	15.0	15.0	19.0
1956	9.4	9.4	9.7	9.8	10.0	12.0	14.0	16.0	25.0
1957	4.5	4.9	6.2	6.7	8.6	9.6	11.0	13.0	19.0
1958	7.6	7.7	8.1	9.3	9.5	9.7	9.9	10.0	12.0
1959	5.3	5.3	5.4	5.5	5.9	6.3	6.7	7.3	10.0
1960	11.0	11.0	11.0	11.0	11.0	13.0	15.0	17.0	23.0
1961	9.6	9.6	9.8	11.0	11.0	13.0	15.0	17.0	23.0
1962	8.9	8.9	9.3	9.6	10.0	11.0	12.0	14.0	21.0
1963	9.0	9.0	9.0	9.4	10.0	11.0	12.0	13.0	18.0
1964	7.3	7.3	7.3	7.4	8.3	9.3	9.9	11.0	15.0
1965	10.0	10.0	11.0	11.0	11.0	13.0	15.0	17.0	21.0
1966	6.5	6.5	6.6	6.8	7.7	8.4	8.9	9.6	13.0
1967	8.0	8.0	8.1	8.2	8.6	8.9	9.6	11.0	15.0
1968	7.5	7.8	7.9	8.2	8.8	9.1	10.0	11.0	17.0
1969	11.0	11.0	11.0	11.0	12.0	12.0	14.0	16.0	22.0
1970	8.6	8.9	9.2	9.3	9.5	10.0	12.0	13.0	15.0
1971	6.8	6.8	7.0	7.2	7.4	8.3	8.9	10.0	14.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1945-1971)

MEAN	8.3	8.3	8.6	8.8	9.3	10.1	11.1	12.2	16.6
MAXIMUM	11.0	11.0	13.0	13.0	14.0	14.0	15.0	17.0	25.0
MINIMUM	4.5	4.9	5.4	5.5	5.9	5.3	5.7	7.3	9.0
STANDARD DEVIATION	1.77	1.73	1.88	1.86	1.89	2.04	2.38	2.71	4.07
SKWENESS	-0.227	-0.196	0.295	0.148	0.326	0.119	0.145	0.141	0.185
STD ERROR DF SKWENESS	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448
SERIAL CORR COEFF	-0.026	-0.021	-0.028	-0.040	-0.007	0.077	0.063	0.042	0.087
COEFF OF VARIATION	0.214	0.208	0.218	0.210	0.203	0.203	0.215	0.222	0.246
MEAN LOGS	0.907	0.910	0.925	0.936	0.960	0.995	1.034	1.075	1.206
STD DEVIATION LOGS	0.100	0.096	0.096	0.094	0.089	0.090	0.096	0.100	0.111
SKWENESS LOGS	-0.704	-0.591	-0.136	-0.259	-0.211	-0.266	-0.244	-0.317	-0.380
STD ERR SKWENESS LOGS	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448
SER CORR COEFF LOGS	-0.030	-0.026	-0.028	-0.049	0.010	0.079	0.081	0.078	0.107
COEFF OF VAR LOGS	0.110	0.105	0.104	0.100	0.093	0.091	0.092	0.093	0.092

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1971)

	0.99	0.98	0.96	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01
1945	12.2	12.3	13.8	13.7	14.3	15.4	17.3	19.2	21.1	23.0	25.0	27.1	29.2	31.3	33.4
1946	11.8	11.9	13.4	13.3	13.9	14.7	16.5	18.3	20.2	22.1	24.0	25.9	27.8	29.7	31.6
1947	11.4	11.4	12.9	12.8	13.4	14.2	15.9	17.7	19.5	21.3	23.1	24.9	26.7	28.5	30.3
1948	10.6	10.6	11.1	11.3	11.8	12.5	13.2	14.0	14.8	15.6	16.4	17.2	18.0	18.8	19.6
1949	9.8	9.8	10.1	10.4	10.9	11.4	11.8	12.3	12.8	13.3	13.8	14.3	14.8	15.3	15.8
1950	8.3	8.3	8.5	8.7	9.2	9.7	10.2	10.7	11.2	11.7	12.2	12.7	13.2	13.7	14.2
1951	6.7	6.8	7.0	7.2	7.7	8.3	8.9	9.5	10.1	10.7	11.3	11.9	12.5	13.1	13.7
1952	5.9	6.1	6.3	6.5	7.0	7.5	8.1	8.7	9.3	9.9	10.5	11.1	11.7	12.3	12.9
1953	5.3	5.5	5.8	6.0	6.4	6.9	7.4	7.9	8.4	8.9	9.4	9.9	10.4	10.9	11.5
1954	4.6	4.8	5.3	5.4	5.8	6.3	6.7	7.1	7.6	8.0	8.5	8.9	9.4	9.8	10.3
1955	4.0	4.2	4.4	4.9	5.5	6.1	6.6	7.1	7.6	8.1	8.6	9.1	9.6	10.1	10.6

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1945-1971)

P	P95	P90	P75	P70	P50	P25	P10
8.4	9.8	14.0	16.0	27.0	47.0	71.0	

## STATION 12196000 ALDER CREEK NR HAMILTON, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

ANNUAL PEAK-FLOW DATA  
FLOW (CFS) DATE REG. (R)

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	
1944	106.	85.	66.	52.	43.	35.	33.	32.	29.	137.
1945	278.	198.	159.	128.	82.	61.	58.	58.	49.	670.
1946	228.	184.	116.	87.	78.	65.	63.	61.	59.	265.
1947	268.	234.	174.	119.	96.	75.	73.	65.	54.	450.
1948	165.	123.	105.	88.	87.	68.	64.	59.	55.	241.
1949	193.	171.	136.	116.	90.	73.	63.	56.	53.	256.
1950	396.	328.	209.	157.	125.	98.	86.	82.	71.	477.
1951	577.	472.	298.	186.	140.	112.	95.	84.	71.	654.
1952	168.	135.	106.	89.	67.	50.	45.	41.	38.	212.
1953	260.	196.	151.	127.	101.	72.	59.	52.	42.	364.
1954	201.	172.	152.	131.	116.	94.	87.	77.	67.	239.
1955	215.	167.	119.	90.	75.	68.	65.	61.	58.	300.
1956	325.	258.	242.	165.	106.	94.	85.	74.	65.	363.
1957	340.	267.	214.	149.	99.	75.	70.	60.	59.	714.
1958	135.	106.	80.	69.	57.	51.	47.	34.	34.	166.
1959	297.	204.	148.	113.	92.	79.	79.	73.	71.	410.
1960	300.	249.	189.	122.	100.	71.	72.	66.	59.	681.
1961	253.	215.	157.	112.	88.	74.	69.	67.	62.	253.
1962	180.	157.	130.	109.	81.	61.	54.	49.	42.	189.
1963	182.	171.	147.	106.	80.	76.	62.	57.	48.	230.
1964	190.	158.	122.	96.	70.	64.	65.	62.	60.	238.
1965	194.	189.	153.	124.	107.	81.	65.	58.	48.	263.
1966	138.	125.	99.	76.	62.	51.	51.	47.	42.	148.
1967	219.	165.	134.	103.	90.	86.	79.	74.	61.	259.
1968	301.	244.	183.	113.	99.	80.	73.	68.	62.	360.
1969	256.	205.	159.	105.	79.	73.	61.	56.	51.	327.
1970	110.	96.	79.	68.	58.	46.	43.	40.	36.	128.
1971	460.	315.	281.	215.	178.	124.	107.	92.	77.	482.
1972										445.
1973										425.
1974										390.
1975										426.
1976										482.
1977										241.
1978										536.
1979										120.

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1944-1979)

W R C SYSTEMATIC  
ESTIMATE RECORD

MEAN	247.7	199.6	153.9	114.8	90.9	73.5	66.9	61.1	54.4	
MAXIMUM	577.0	472.0	298.0	215.0	178.0	124.0	107.0	92.0	77.0	
MINIMUM	106.0	85.0	66.0	52.0	43.0	35.0	33.0	32.0	29.0	
STANDARD DEVIATION	105.25	80.43	56.25	35.77	27.13	19.36	16.29	14.13	12.37	
SKWENESS	1.358	1.514	0.930	0.896	1.201	0.563	0.306	0.066	-0.247	
STD ERROR OF SKWENESS	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	
SERIAL CORR COEFF	-0.026	0.017	-0.159	-0.207	-0.189	-0.197	-0.161	-0.163	-0.127	
COEFF OF VARIATION	0.425	0.403	0.366	0.312	0.298	0.263	0.244	0.231	0.227	
MEAN LOGS	2.360	2.270	2.160	2.040	1.941	1.851	1.812	1.774	1.724	
STD DEVIATION LOGS	0.174	0.164	0.157	0.134	0.125	0.117	0.110	0.106	0.107	
SKWENESS LOGS	0.146	0.108	-0.077	-0.144	-0.029	-0.406	-0.531	-0.596	-0.721	
STD ERR SKWENESS LOGS	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	
SER CORR COEFF LOGS	-0.143	-0.119	-0.249	-0.274	-0.205	-0.200	-0.145	-0.165	-0.122	
COEFF OF VAR LOGS	0.074	0.072	0.073	0.066	0.065	0.063	0.061	0.060	0.062	

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1944-1979)

0.99	94.2	79.6	61.1	51.7	44.3	35.0	32.6	30.4	26.3	100.3
0.95	120.5	101.1	79.2	65.2	54.2	44.2	41.3	38.4	33.8	137.6
0.90	134.0	115.1	90.7	73.5	60.3	49.7	46.4	43.0	38.1	140.3
0.80	163.0	135.1	106.8	84.8	68.5	56.9	52.9	48.9	43.6	166.5
0.50	228.7	184.8	145.2	110.5	87.5	72.3	66.4	60.9	54.5	207.8
0.20	319.7	255.3	196.2	142.6	111.4	89.5	80.7	73.3	65.3	312.8
0.10	384.7	303.4	229.0	162.2	126.3	99.0	88.3	79.8	70.7	469.6
0.04	470.7	365.9	269.5	185.6	144.4	109.5	96.4	86.4	76.1	580.0
0.02	537.5	413.5	299.1	202.1	157.4	116.4	101.5	90.6	79.4	725.8
0.01	606.6	462.2	328.2	217.9	170.0	122.7	106.1	94.2	82.2	838.6
										954.6



## STATION 12196200 DAY CREEK BELOW DAY LAKE, NEAR LYMAN, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1963													
1964	54.4	123	76.1	84.1	56.6	53.2	89.2	95.9	82.7	31.5	14.8	14.5	67.7
1965	50.6	68.0	75.5	84.6	114	47.7	70.7	61.2	21.3	9.29	22.0	45.6	52.0
1966	46.0	65.7	53.4	75.4	48.3	77.9	69.2	59.1	27.9	23.9	12.2	14.0	47.1
1967	58.2	71.5	128	127	85.6	67.5	43.4	73.2	37.7	9.91	9.41	8.47	59.5
1968	108	57.0	110	81.9	99.7	69.1	60.5	40.9	36.8	18.1	20.1	46.7	62.3
1969	56.8	72.0	80.4	59.5	31.1	51.6	96.9	77.7	28.8	34.4	9.73	48.7	54.1
1970	39.1	45.0	59.6	67.9	83.6	42.9	66.8	31.7	13.2	13.7	8.15	55.0	43.6
1971	43.8	68.4	68.5	113	100	73.1	71.7	97.7	62.2	31.7	7.83	23.3	63.2
1972	43.6	90.4	68.9	68.8	132	152	99.3	84.2	40.8	53.1			

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1964	474.0	11-26-1963
1965	498.0	12-1-1964
1966	314.0	1-13-1966
1967	442.0	10-23-1966
1968	486.0	12-24-1967
1969	672.0	1-4-1969
1970	340.0	4-9-1970
1971	480.0	1-30-1971
1972	752.0	1-20-1972
1973	543.0	12-26-1972
1974	672.0	1-16-1974
1975	802.0	1-17-1975
1976	977.0	12-3-1975
1977	595.0	12-18-1977
1978	676.0	12-2-1977
1979	480.0	11-3-1978

## ANNUAL PEAK FLOW STATISTICS (YEARS 1964-1979)

W R C	ESTIMATE	SYSTEMATIC RECORD
MEAN LOGS	2.7413	2.7413
STANDARD DEVIATION LOGS	0.1316	0.1316
SKEWNESS LOGS	0.0	-0.050

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1964-1979)

PROBABILITY	PEAK FLOW (CFS)
0.99	272.4
0.95	334.8
0.90	373.8
0.80	427.1
0.50	551.1
0.20	711.2
0.10	812.6
0.04	936.8
0.02	1026.9
0.01	1115.3

## STATION 12196400 DAY CREEK NEAR HAMILTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1963													
1964	181	460	448	263	328	167	290	210	54.0	66.4	40.5	44.1	212
1965	215	624	325	422	215	245	336	308	364	148	94.4	195.4	298
1966	174	367	300	417	484	165	282	267	101	25.4	34.7	35.4	219
1967	181	315	261	400	186	375	283	282	140	95.5	32.1	27.7	215
1968	247	308	676	611	370	303	157	309	206	36.8	13.3	42.1	273
1969	545	232	487	375	488	322	233	174	151	54.5	72.1	158	274
1970	255	300	377	226	137	222	421	365	113	95.1	33.4	240	232

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1963	5500.0	11-19-1962
1964	5180.0	1-1-1964
1965	3940.0	1-30-1965
1966	3760.0	1-13-1966
1967	3040.0	1-15-1967
1968	3270.0	10-1-1967
1969	3750.0	12-3-1968

## STATION 12196500 DAY CREEK NEAR LYMAN, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1943													
1944	195	117	356	420	206	203	228	187	74.3	21.4	28.4	26.6	180
1945	143	498	230	530	296	263	248	397	74.9	22.1	131	131	235
1946	358	517	502	455	340	372	400	319	346	81.1	14.2	30.5	312
1947	240	262	584	395	436	259	349	516	238	92.2	41.0	96.8	255
1948	453	321	438	301	275	202	282	200	203	60.6	86.7	200	281
1949	200	432	426	105	380	414	375	444	368	107	65.8	99.1	253
1950	238	487	573	263	539	514	421	368	368	129	96.7	67.5	337
1951	398	423	644	433	701	198	421	228	60.1	19.8	11.7	29.6	282
1952	356	287	224	249	377	173	359	343	228	53.1	34.2	49.9	227
1953	33.1	72.1	343	984	403	232	235	256	211	58.2	33.5	79.2	245
1954	374	484	634	336	516	200	307	278	255	113	87.7	86.6	304
1955	143	476	388	254	310	133	392	419	424	269	90.1	51.4	279
1956	501	631	468	418	105	269	388	323	300	84.9	22.9	114	301
1957	449	258	601	113	276	341	333	210	78.8	58.3	50.7	20.6	233
1958	69.8	173	404	500	462	176	245	96.1	36.6	14.1	9.23	60.0	186
1959	312	536	540	546	183	315	586	244	172	45.8	43.5	363	324
1960	284	621	442	330	378	306	442	344	131	27.8	85.9	66.2	287
1961	354	456	253	515	996	457	297	220	71.2	27.5	27.9	64.0	307

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1943-1961)

MEAN	283.4	391.7	436.1	397.1	398.8	279.8	340.4	295.1	192.6	71.4	46.0	92.1	268.2
MAXIMUM	501.0	631.0	644.0	984.0	986.0	514.0	586.0	516.0	428.0	269.0	96.7	363.0	337.0
MINIMUM	33.1	72.1	224.0	105.0	105.0	133.0	228.0	96.1	36.6	14.1	9.2	20.6	180.0
STD DEVIATION	134.59	165.42	143.48	196.78	204.42	105.71	90.71	111.62	116.23	60.50	29.97	78.67	44.70
SKWENESS	-0.251	-0.518	-0.151	1.329	1.525	0.800	1.039	0.077	0.460	2.173	0.575	2.532	-0.501
STD ERR SKEW	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.524	0.524	0.536
SER CORR COEFF	-0.349	0.057	-0.141	-0.134	0.178	0.165	-0.028	0.012	0.126	0.286	0.116	-0.115	-0.005
COEFF OF VAR	0.475	0.422	0.329	0.496	0.513	0.378	0.266	0.378	0.603	0.848	0.652	0.854	0.167
MEAN LOGS	2.378	2.537	2.614	2.546	2.550	2.419	2.518	2.435	2.193	1.729	1.563	1.855	2.422
STD DEV LOGS	0.306	0.258	0.158	0.235	0.221	0.160	0.110	0.191	0.311	0.340	0.317	0.308	0.077
SKWENESS LOGS	-1.615	-1.469	-0.577	-0.810	-0.370	0.150	0.354	-0.927	-0.482	0.071	-0.254	0.266	-0.843
STD ERR SKEW LOGS	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.524	0.524	0.536
SER CORR LOGS	-0.338	-0.003	-0.132	-0.070	0.185	0.153	-0.046	-0.036	0.149	0.330	0.068	-0.115	0.036
COEFF OF VAR LOGS	0.128	0.102	0.061	0.092	0.086	0.066	0.044	0.078	0.142	0.197	0.203	0.166	0.032
% OF AVE FLOW	8.8	12.1	13.5	12.3	12.4	8.7	10.6	9.2	6.0	2.2	1.4	2.9	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1943-1961)

0.99	21.9	48.1	151.4	73.4	95.1	115.8	195.3	73.6	23.0	9.0	5.9	15.8	157.3
0.95	60.0	108.2	213.9	129.9	146.5	145.3	223.2	120.0	43.9	15.0	10.5	23.6	190.4
0.90	93.8	155.7	253.4	170.5	182.1	164.5	240.9	151.1	60.5	19.8	14.1	29.5	208.5
0.80	148.7	227.7	307.0	230.5	234.2	191.8	285.6	194.4	87.3	27.7	20.0	39.1	230.4
0.50	286.0	395.9	426.0	377.5	366.2	259.9	325.1	291.0	165.1	53.1	37.7	69.4	271.0
0.20	428.0	562.8	562.4	557.7	547.7	356.7	486.4	396.1	287.8	103.3	68.0	128.8	307.8
0.10	479.4	633.1	638.3	658.7	664.6	423.2	460.7	449.7	373.2	147.1	91.0	181.1	324.9
0.04	521.3	689.8	720.8	766.3	806.8	509.8	530.2	502.9	491.4	215.2	122.6	264.1	341.0
0.02	539.5	716.5	774.3	833.8	908.3	576.2	582.7	534.2	560.7	275.7	147.6	339.7	350.3
0.01	551.0	734.5	822.0	892.2	1006.0	644.3	636.0	560.0	638.2	345.1	173.7	428.3	357.8

## STATION 12196500 DAY CREEK NEAR LYMAN, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1945	13.0	13.0	13.0	14.0	16.0	18.0	22.0	56.0	93.0
1946	9.7	9.7	10.0	11.0	13.0	17.0	31.0	46.0	127.0
1947	13.0	14.0	16.0	17.0	20.0	27.0	32.0	70.0	146.0
1948	25.0	27.0	31.0	35.0	39.0	58.0	74.0	101.0	142.0
1949	28.0	29.0	31.0	34.0	40.0	63.0	96.0	132.0	194.0
1950	28.0	30.0	30.0	33.0	42.0	73.0	87.0	111.0	166.0
1951	20.0	20.0	21.0	23.0	37.0	71.0	88.0	221.0	221.0
1952	9.5	9.6	9.7	10.0	11.0	12.0	15.0	27.0	101.0
1953	13.0	13.0	14.0	15.0	17.0	34.0	35.0	40.0	77.0
1954	13.0	13.0	14.0	17.0	25.0	28.0	41.0	84.0	145.0
1955	29.0	29.0	30.0	32.0	42.0	74.0	102.0	158.0	158.0
1956	19.0	20.0	20.0	22.0	32.0	52.0	123.0	180.0	254.0
1957	14.0	14.0	15.0	17.0	20.0	23.0	52.0	94.0	186.0
1958	15.0	15.0	16.0	17.0	20.0	23.0	35.0	41.0	66.0
1959	7.8	7.9	8.1	8.2	8.6	11.0	14.0	25.0	73.0
1960	20.0	20.0	22.0	22.0	25.0	39.0	75.0	113.0	180.0
1961	13.0	13.0	14.0	16.0	18.0	30.0	59.0	66.0	136.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1945-1961)

MEAN	17.1	17.5	18.5	20.2	25.0	38.4	56.6	84.5	145.0
MAXIMUM	29.0	30.0	31.0	35.0	42.0	74.0	123.0	180.0	254.0
MINIMUM	7.8	7.9	8.1	8.2	8.6	11.0	14.0	25.0	66.0
STANDARD DEVIATION	6.89	7.32	7.79	8.60	11.37	22.12	32.08	44.13	52.84
SKENNESS	0.625	0.655	0.603	0.616	0.335	0.511	0.421	0.518	0.270
STD ERROR OF SKENNESS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SERIAL CORR COEFF	0.331	0.376	0.365	0.427	0.449	0.364	0.330	0.215	0.197
COEFF OF VARIATION	0.404	0.419	0.421	0.426	0.454	0.576	0.566	0.522	0.364
MEAN LOGS	1.199	1.207	1.231	1.268	1.352	1.510	1.675	1.863	2.132
STD DEVIATION LOGS	0.174	0.180	0.184	0.188	0.212	0.271	0.285	0.254	0.171
SKENNESS LOGS	0.090	0.130	0.032	-0.081	-0.298	-0.174	-0.471	-0.424	-0.448
STD ERR SKENNESS LOGS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SER CORR COEFF LOGS	0.253	0.291	0.270	0.324	0.329	0.249	0.239	0.224	0.228
COEFF OF VAR LOGS	0.145	0.149	0.149	0.148	0.157	0.179	0.170	0.136	0.080

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1961)

0.99	41.3	44.0	46.0	49.4	63.1	127.2	173.0	236.3	296.5
0.98	36.8	38.9	40.9	44.2	56.8	109.7	153.5	211.3	275.5
0.96	32.3	33.9	35.9	39.0	50.3	92.7	133.3	185.4	252.7
0.90	26.6	27.6	29.3	32.1	41.4	71.0	105.4	149.5	219.1
0.80	22.1	22.8	24.3	26.7	34.2	54.9	83.0	120.3	189.6
0.50	15.7	16.0	17.0	18.6	23.1	32.9	49.8	76.1	139.4
0.20	11.3	11.4	11.9	12.9	15.0	19.3	27.8	45.4	98.4
0.10	9.5	9.5	9.9	10.6	11.9	14.4	19.9	33.8	80.6
0.05	8.3	8.3	8.5	9.0	9.7	11.3	14.8	26.2	67.7
0.02	7.1	7.1	7.2	7.5	7.6	8.5	10.5	19.3	55.1
0.01	6.4	6.4	6.4	6.6	6.5	7.0	8.2	15.7	47.8

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "PM" PERCENT OF THE TIME (YEARS 1945-1961)

P95	P90	P75	P70	P50	P25	P10
17.0	25.0	67.0	84.0	170.0	340.0	600.0

STATION 12196500 DAY CREEK NEAR LYMAN, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1944	2240.	1570.	1000.	643.	479.	399.	335.	310.	268.	4370. 12/03/43
1945	2740.	1660.	1360.	989.	556.	492.	435.	396.	354.	4310. 01/07/45
1946	3200.	2350.	1270.	870.	704.	576.	514.	484.	462.	4530. 11/14/45
1947	2790.	2030.	1280.	1020.	739.	509.	441.	453.	403.	4530. 10/24/46
1948	1600.	1260.	1040.	670.	590.	436.	386.	367.	347.	4420. 10/18/47
1949	1890.	1340.	876.	671.	535.	463.	473.	422.	347.	3330. 02/16/49
1950	4060.	2560.	1420.	873.	706.	530.	522.	473.	473.	5570. 12/28/49
1951	3920.	3260.	2070.	1160.	836.	716.	655.	584.	466.	4510. 02/09/51
1952	2010.	1430.	1080.	777.	518.	393.	346.	293.	293.	3350. 01/02/51
1953	2610.	1780.	1400.	1160.	1070.	750.	584.	497.	410.	3890. 01/02/53
1954	2390.	1810.	1040.	838.	702.	539.	522.	431.	410.	4180. 10/30/53
1955	1860.	1180.	802.	690.	513.	458.	411.	375.	336.	3750. 02/07/58
1956	3100.	1890.	1310.	1110.	766.	643.	584.	515.	411.	4750. 11/03/55
1957	2900.	1570.	1250.	981.	626.	477.	452.	363.	361.	5360. 12/09/56
1958	1460.	1150.	808.	629.	526.	483.	455.	394.	328.	3250. 01/16/58
1959	4530.	2570.	1410.	810.	641.	556.	549.	497.	456.	5440. 04/29/59
1960	2680.	2190.	1740.	1050.	842.	563.	527.	467.	428.	4700. 11/22/59
1961	3870.	3370.	2230.	1370.	982.	773.	670.	573.	522.	6000. 02/20/61

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1944-1961)

	MEAN	MINIMUM	STANDARD DEVIATION	SKWENESS	STD ERROR OF SKWENESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKWENESS LOGS	STD ERR SKWENESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	2769.4	1942.8	1299.2	906.2	684.9	546.6	502.8	450.3	394.2						
	4530.0	3370.0	2230.0	1370.0	1070.0	773.0	670.0	584.0	522.0						
	1460.0	1150.0	802.0	629.0	479.0	355.0	310.0	268.0	268.0						
	885.51	663.70	393.99	212.62	166.83	117.90	95.45	79.74	68.74						
	0.444	0.908	1.044	0.462	0.886	0.505	-0.147	-0.018	-0.053						
	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536						
	-0.155	0.119	0.233	-0.052	-0.027	-0.244	-0.269	-0.114	0.003						
	0.320	0.342	0.303	0.235	0.244	0.216	0.190	0.177	0.174						
	3.421	3.266	3.096	2.946	2.824	2.728	2.647	2.589	2.589						
	0.141	0.141	0.125	0.101	0.101	0.093	0.087	0.079	0.078						
	-0.125	0.353	0.358	0.089	0.455	0.074	-0.602	-0.293	-0.388						
	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536	0.536						
	-0.168	0.081	0.168	-0.055	-0.273	-0.260	-0.110	-0.008	-0.008						
	0.041	0.043	0.040	0.034	0.036	0.034	0.032	0.030	0.030						
														3.6415	3.6415
														0.0771	0.0771
														0.0	-0.0910

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1944-1961)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
	1199.7	942.2	690.2	521.4	421.1	329.1	285.0	279.7	243.1	2899.1
	1525.8	1118.2	802.4	605.5	470.6	378.0	345.1	324.3	283.7	3271.7
	1729.9	1233.3	874.6	656.6	502.4	407.0	378.9	349.7	306.6	3489.5
	2088.9	1397.4	976.4	725.1	546.9	446.5	421.1	381.9	335.3	3772.8
	2654.5	1810.5	1226.9	880.1	655.4	533.4	503.7	447.4	392.9	4392.1
	3474.1	2410.1	1579.7	1073.4	805.6	639.8	585.9	517.7	452.9	5085.8
	3983.7	2830.2	1820.9	1193.2	906.9	704.6	627.3	556.1	484.7	5498.6
	4596.7	3388.1	2135.2	1337.7	1037.4	781.8	669.6	597.9	518.7	5975.9
	5034.2	3824.1	2376.7	1441.4	1136.7	836.7	695.7	625.4	540.6	6306.0
	5457.7	4277.8	2624.9	1542.4	1238.1	889.7	718.2	650.4	560.2	6618.5
										2865.0
										3257.0
										3483.7
										3776.0
										4392.1
										5085.8
										5498.6
										5975.9
										6306.0
										6540.1

## STATION 12197200 PARKER CREEK NEAR LYMAN, WASH.

ANNUAL PEAK FLOW DATA		ANNUAL PEAK FLOW STATISTICS (YEARS 1951-1970)			M R C		SYSTEMATIC	
WATER YEAR	FLOW(CFS)	DATE	MEAN LOGS	STANDARD DEVIATION LOGS	ESTIMATE	RECORD	ESTIMATE	RECORD
1951	164.0	2-10-1951						
1952	158.0	1-30-1952						
1953	141.0	1-2-1953						
1954	142.0	12-19-1953						
1955	132.0	2-7-1955						
1956	164.0	11-3-1955						
1957	233.0	12-9-1956						
1958	160.0	12-25-1957						
1959	171.0	4-29-1959						
1960	117.0	12-14-1959						
1961	168.0	2-21-1961						
1962	80.0	1-3-1962						
1963	102.0	11-19-1962						
1964	136.0	1-1-1964						
1965	125.0	11-24-1964						
1966	94.0	1-8-1966						
1967	116.0	3-22-1967						
1968	118.0	10-27-1967						
1969	161.0	12-3-1968						
1970	91.0	11-4-1969						
ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES			LOG-PEARSON III ANALYSIS (YEARS 1951-1970)					
			0.99		73.6		71.3	
			0.95		87.8		86.7	
			0.90		96.4		96.0	
			0.80		108.1		108.3	
			0.50		134.4		135.3	
			0.20		167.1		167.4	
			0.10		187.2		186.3	
			0.04		211.4		208.2	
			0.02		228.6		223.3	
			0.01		245.4		237.6	

## STATION 12199000 SKAGIT RIVER NEAR SEDRO WOOLLEY, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1908													
1909	5522	18660	8369	10560	7886	6362	8364	15710	26020	25120	10520	5572	
1910	7008	33220	23610	11840	9224	19380	22790	14630	28120	17940	9410	7298	11920
1911	23930	29500	17560	11580	5469	4431	11370	21680	35470	19850	10730	6500	18720
1912	4929	17540	11540	12750	15260	5992	8868	25230	33270	23450	11390	10790	17610
1913	5930	15140	11560	9202	10970	8718	14310	33230	42870	19290	11620	6494	14370
1914	14050	16710	8874	21950	14770	19790	13740	25670	30060	15170	13080	13080	16900
1915	9917	19630	7934	7123	6056	9579	19720	13700	19530	10300	9222	4505	16200
1916	10050	12130	14310	5462	16390	19120	16860	23950	31180	10420	17650	8616	18100
1917	5917	11420	7286	7646	9319	6278	11040	26090	40130	32550	16500	10030	15800
1918	8135	11120	36340	32850	14120	11460	16810	23180	36930	22660	12760	8264	19560
1919	14360	12620	21360	15300	10020	9106	18130	28930	30000	27800	13760	8217	17530
1920	5993	19070	16870										
1921				18130	12990	12000	27750	45850	25380	14700		13210	
1922	15730	19460	34540	6948	5407	5543	9328	24230	18810	11250	10700	17030	
1923	10430	7094	15000	20590	6695	7705	16810	25510	31250	23950	10570	7444	15320
1924	6373	6902	13680										
1975				16270	14950	10250	17960	17960	26140	25760	12500	8219	
1976	16640	28660	38330	22120	17740	14980	15800	25020	23410	28720	20730	12550	22150
1977	7073	10250	13330	15860	11650	13770	14960	12660	13800	8854	9227	7117	
1978	6817	18030	27700	15880	13310	13550	11680	12540	19150	17840	11520	15010	15260
1979	7815	15390	11520	10710	11750	14190	11190	16140	16000	13060	8141	8226	12010

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1908-1979)

MEAN	9822.1	16976.1	17879.6	14058.3	11270.5	11372.3	14214.2	22070.0	29491.0	22437.2	12383.5	9060.0	15923.5
MAXIMUM	23930.0	33220.0	38330.0	32850.0	18130.0	19380.0	22790.0	35080.0	45850.0	37600.0	20730.0	15010.0	22150.0
MINIMUM	4929.0	6902.0	7286.0	5462.0	5407.0	5543.0	8364.0	12660.0	11680.0	8854.0	8141.0	4505.0	10710.0
STD DEVIATION	5000.49	7215.15	9836.77	7135.95	4175.12	4366.33	4182.43	6237.79	9960.94	7254.52	3193.43	2773.61	3097.04
SKWENESS	1.492	0.831	1.036	1.219	0.200	0.325	0.379	-0.082	-0.130	0.047	1.147	0.576	-0.055
STD ERR SKEW	0.524	0.524	0.524	0.550	0.524	0.524	0.524	0.512	0.512	0.512	0.512	0.512	0.550
SER CORR COEFF	-0.371	0.187	-0.162	-0.049	-0.144	-0.267	-0.143	0.132	0.411	0.059	0.009	-0.227	-0.319
COEFF OF VAR	0.509	0.425	0.550	0.508	0.370	0.382	0.294	0.283	0.338	0.323	0.258	0.306	0.194
MEAN LOGS	3.948	4.193	4.195	4.099	4.021	4.024	4.135	4.326	4.442	4.326	4.080	3.938	4.194
STD DEV LOGS	0.193	0.187	0.225	0.210	0.171	0.173	0.129	0.133	0.167	0.159	0.104	0.134	0.088
SKWENESS LOGS	0.737	-0.181	0.353	0.178	-0.298	-0.158	-0.026	-0.537	-0.797	-0.903	0.628	-0.093	-0.463
STD ERR SKEW LOGS	0.524	0.524	0.524	0.550	0.524	0.524	0.524	0.512	0.512	0.512	0.512	0.512	0.550
SER CORR LOGS	-0.371	0.168	-0.073	0.043	-0.106	-0.201	-0.156	0.214	0.375	0.003	0.033	-0.193	-0.296
COEFF OF VAR LOGS	0.045	0.054	0.051	0.043	0.043	0.043	0.031	0.031	0.038	0.037	0.026	0.034	0.021
% OF AVE FLOW	5.1	8.9	9.4	7.4	5.9	6.0	7.4	11.6	15.4	11.7	6.5	4.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1908-1979)

0.99	4019.0	5401.3	5375.0	4340.8	3850.1	3987.0	6788.6	9239.3	9104.6	7182.1	7699.3	4149.7	9122.6
0.95	4735.5	7507.3	7060.2	5811.3	5316.7	5386.2	8343.2	12272.7	13639.4	10737.6	8499.0	5184.2	10932.3
0.90	5254.5	8901.9	8251.7	6824.7	6265.2	6297.0	9308.0	14115.3	16547.1	12986.2	9030.4	5826.5	11961.9
0.80	6059.5	10890.1	10068.4	8332.0	7568.0	7579.6	10621.8	16547.4	20495.0	15995.6	9795.1	6700.3	13261.2
0.50	8404.1	15788.1	15208.4	12342.7	10712.1	10662.4	13654.6	21478.0	29105.2	22365.8	11737.3	9708.0	15873.0
0.20	12589.3	22472.9	23986.5	18809.7	14709.0	14833.8	17520.9	27498.6	38461.0	28944.5	14572.8	11241.1	18584.6
0.10	16066.0	26833.3	30981.4	23587.5	17175.3	17508.5	19945.1	30635.8	43334.3	32207.4	16562.7	12811.9	20012.9
0.04	21380.5	32445.7	41264.0	30216.3	20102.5	20803.6	22888.3	34017.2	48318.1	35409.0	19209.4	14700.0	21525.6
0.02	26090.8	36203.9	50038.1	35562.7	22158.9	23200.2	25009.2	36190.1	51353.0	37283.0	21277.5	16047.7	22490.1
0.01	31518.4	40100.1	59822.7	41316.4	24119.6	25500.7	27079.0	38137.9	53926.2	38621.4	23433.0	17352.4	23445.2

## STATION 12199000 SKAGIT RIVER NEAR SEDRO WOOLLEY, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1910	5160.0	5290.0	5660.0	6200.0	6750.0	7140.0	7810.0	9120.0	14100.0
1911	4300.0	4300.0	4300.0	4540.0	5090.0	6190.0	8590.0	10800.0	15700.0
1912	3040.0	3100.0	3230.0	3590.0	4630.0	6290.0	7960.0	9720.0	11200.0
1913	4780.0	3780.0	3880.0	4450.0	4680.0	5880.0	7260.0	9180.0	9430.0
1914	5770.0	5850.0	5930.0	6160.0	7690.0	10600.0	12800.0	12400.0	13600.0
1915	5080.0	5150.0	5360.0	5540.0	5720.0	5990.0	6350.0	7400.0	9850.0
1916	2830.0	2900.0	3250.0	3620.0	4020.0	5530.0	6800.0	7700.0	9100.0
1917	4500.0	4710.0	4940.0	5220.0	5730.0	7000.0	7580.0	7590.0	7930.0
1918	5690.0	6320.0	6010.0	6240.0	7510.0	8900.0	9660.0	10400.0	18500.0
1919	5900.0	6320.0	6750.0	6940.0	7730.0	9160.0	10600.0	11900.0	13600.0
1922	4680.0	4680.0	4930.0	5190.0	5330.0	5430.0	5980.0	13100.0	14700.0
1923	4000.0	4000.0	4000.0	4310.0	5340.0	7000.0	8220.0	8810.0	11300.0
1976	5000.0	5370.0	5720.0	6040.0	7600.0	9580.0	11300.0	15000.0	16700.0
1977	4700.0	5230.0	5590.0	5790.0	6950.0	8040.0	9520.0	10600.0	11700.0
1978	4200.0	4470.0	4740.0	5030.0	5820.0	6840.0	7520.0	7930.0	9590.0
1979	5610.0	6000.0	6320.0	6920.0	7480.0	10700.0	11200.0	11300.0	11800.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1910-1979)

MEAN	4640.0	4813.7	5038.1	5361.2	6129.4	7516.9	8701.2	10184.4	12425.0
MAXIMUM	5900.0	6320.0	6750.0	6940.0	7730.0	10700.0	12800.0	15000.0	18500.0
MINIMUM	2830.0	2900.0	3230.0	3590.0	4020.0	5430.0	5980.0	7400.0	7930.0
STANDARD DEVIATION	924.51	1014.20	1068.15	1053.58	1252.00	1760.58	1961.24	2181.29	3002.56
SKEWNESS	-0.508	-0.445	-0.326	-0.225	-0.043	0.668	0.639	0.612	0.447
STD ERROR OF SKEWNESS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
SERIAL CORR COEFF	0.101	0.125	0.149	0.116	0.099	-0.117	-0.230	-0.038	-0.015
COEFF OF VARIATION	0.199	0.211	0.212	0.197	0.204	0.234	0.225	0.214	0.242
MEAN LOGS	3.657	3.672	3.692	3.721	3.779	3.865	3.930	3.999	4.082
STD DEVIATION LOGS	0.094	0.099	0.098	0.090	0.091	0.098	0.095	0.091	0.105
SKEWNESS LOGS	-0.925	-0.849	-0.663	-0.554	-0.288	0.421	0.279	0.224	0.040
STD ERR SKEWNESS LOGS	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564	0.564
SER CORR COEFF LOGS	0.085	0.115	0.153	0.127	0.125	-0.081	-0.224	0.006	0.036
COEFF OF VAR LOGS	0.026	0.027	0.027	0.024	0.024	0.025	0.024	0.023	0.026

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1910-1979)

0.99	6488.0	6937.3	7461.9	7812.6	9372.8	13295.7	14826.2	16820.8	21333.7
0.98	6338.6	6750.7	7213.6	7545.8	8954.5	12660.4	13791.6	15734.9	19938.2
0.96	6152.1	6522.8	6923.4	7239.8	8497.7	11237.8	12750.1	14630.9	18499.1
0.90	5821.8	6129.6	6448.3	6750.1	7809.4	9881.8	11335.0	13111.7	16483.3
0.80	5468.7	5720.8	5979.8	6277.9	7187.0	8818.5	10194.6	11869.3	14802.9
0.50	4697.0	4856.5	5047.6	5359.4	6066.7	7219.5	8417.2	9896.0	12071.9
0.20	3849.1	3939.0	4112.7	4453.6	5048.3	6044.6	7050.9	8342.9	9867.4
0.10	3399.2	3462.6	3640.5	3997.5	4559.3	5556.1	6463.6	7663.7	8888.4
0.05	3034.2	3080.3	3265.5	3634.4	4178.5	5204.9	6032.8	7160.5	8157.4
0.02	2637.5	2668.7	2863.9	3243.4	3775.2	4858.0	5599.0	6649.2	7410.0
0.01	2384.7	2408.3	2610.2	2994.5	3521.1	4651.7	5336.6	6337.4	6952.2

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1910-1979)

P95	P90	P75	P70	P50	P25	P10
5400.0	6200.0	8300.0	9100.0	12000.0	20000.0	30000.0

## STATION 12199000 SKAGIT RIVER NEAR SEDRO WOOLLEY, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA FLOW(CFS)	DATE	REG.(R)
1815										400000.	/ /15	
1856										300000.	/ /56	
1897										185000.	11/16/96	
1898										190000.	11/19/97	
1907										180000.	11/16/06	
1909	92600.	63000.	43000.	33900.	29000.	24300.	20400.	17700.	14300.	97000.	11/18/08	
1910	198000.	137000.	80200.	62800.	44600.	32900.	29100.	26400.	22300.	220000.	11/30/09	
1911	89100.	76000.	50900.	39800.	35900.	30100.	27000.	23600.	19300.	114000.	11/21/10	
1912	65100.	57100.	41200.	26900.	33200.	30700.	26300.	22700.	18300.	66600.	11/19/11	
1913	69200.	65700.	56500.	50300.	44700.	38300.	33800.	29500.	23600.	70800.	06/03/13	
1914	104000.	85000.	57700.	35600.	27300.	25500.	24300.	22500.	19900.	104000.	01/07/14	
1915	66500.	48300.	34300.	24700.	19800.	16800.	14100.	12300.	10200.	67300.	04/03/15	
1916	75000.	70400.	58100.	50900.	44600.	36600.	32400.	29200.	26000.	75800.	06/18/16	
1917	57600.	55600.	50100.	44900.	44500.	40900.	35400.	30500.	23600.	60400.	06/16/17	
1918	155000.	120000.	95700.	67200.	54700.	37200.	28700.	25100.	24800.	195000.	12/30/17	
1919	67600.	62500.	49700.	39600.	34000.	33200.	29400.	26500.	21400.	80200.	12/04/18	
1922	188000.	141000.	91600.	53700.	42400.	34800.	28500.	24300.	19300.	210000.	12/13/21	
1923	60300.	54400.	47600.	35900.	33700.	30200.	27400.	24600.	19400.	71000.	12/25/22	
1976	116000.	105000.	78300.	54500.	41800.	30200.	30200.	28000.	23900.			
1977	46600.	34700.	25100.	19000.	16900.	15000.	14100.	14300.	13900.			
1978	57000.	48300.	42000.	36800.	30800.	23700.	20800.	18900.	16700.			
1979	35100.	28600.	23400.	19200.	17700.	16100.	15400.	14600.	13800.			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1815-1979)

MEAN	90747.0	73682.3	54435.3	41511.8	35035.3	29441.2	25788.2	23088.2	19576.5
MAXIMUM	198000.0	141000.0	95700.0	67200.0	54700.0	40900.0	35400.0	30500.0	26000.0
MINIMUM	35100.0	28600.0	19000.0	16900.0	14100.0	12300.0	10200.0	8200.0	6200.0
STANDARD DEVIATION	47836.39	33474.17	21118.52	13849.27	10710.21	7994.29	6503.35	5392.91	4234.75
SKEWNESS	1.306	0.918	0.623	0.402	-0.211	-0.610	-0.515	-0.369	-0.269
STD ERROR OF SKEWNESS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SERIAL CORR COEFF	-0.184	-0.227	-0.222	-0.191	0.048	0.258	0.171	0.084	-0.024
COEFF OF VARIATION	0.527	0.454	0.388	0.334	0.306	0.272	0.252	0.234	0.216
MEAN LOGS	4.909	4.827	4.704	4.593	4.522	4.451	4.396	4.351	4.281
STD DEVIATION LOGS	0.207	0.193	0.174	0.160	0.150	0.136	0.124	0.112	0.100
SKEWNESS LOGS	0.491	0.057	-0.256	-0.674	-0.807	-1.010	-0.961	-0.818	-0.570
STD ERR SKEWNESS LOGS	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550	0.550
SER CORR COEFF LOGS	-0.118	-0.121	-0.145	-0.141	0.041	0.212	0.150	0.078	-0.042
COEFF OF VAR LOGS	0.042	0.040	0.037	0.035	0.033	0.031	0.028	0.026	0.023
								5.0459	5.0459
								0.2108	0.2108
								0.0	0.2590

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1815-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
MEAN	318544.6	242994.6	18549.7	13951.6	12278.2	10939.7	10583.3	10618.6	10193.6	35937.1
STD ERROR	397984.6	32535.9	25520.4	20096.7	17658.4	15682.0	14600.8	13952.3	12664.7	50025.2
SKEWNESS	453984.4	38072.8	30405.9	23986.0	21005.4	18559.0	16984.8	15893.2	14084.3	59671.3
COEFF OF VARIATION	53918.3	46120.7	36384.1	29245.6	25451.7	22282.7	20030.1	18353.5	15894.9	73874.2
MEAN LOGS	77984.6	66860.1	51495.5	40775.1	34488.2	29737.2	26034.0	23216.6	19534.5	111144.7
STD DEVIATION LOGS	119182.3	97500.5	71145.4	53632.6	44701.8	36858.3	31755.6	27951.8	23278.6	167218.2
SKEWNESS LOGS	152203.4	119038.2	83454.4	60567.9	49714.7	40164.1	34422.6	30248.3	25218.8	207019.5
STD ERR SKEWNESS LOGS	201108.4	147539.7	98250.7	67905.1	54765.9	43245.7	36933.8	32493.9	27234.9	29954.2
SER CORR COEFF LOGS	243180.6	169654.1	108767.9	72930.4	58066.0	44965.7	38353.0	33818.9	28504.0	301144.9
COEFF OF VAR LOGS	290457.7	192493.9	118890.8	76568.9	60362.9	46325.4	39488.1	34914.9	29608.6	376726.7



## STATION 12199R00 EAST FORK NOOKACHAMPS CREEK NEAR BIG LAKE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1962			31.4	41.9	20.2	11.7	41.6	29.5	17.7	2.44	16.4	7.11	
1963	16.2	32.6	41.4	24.2	30.8	15.0	31.7	22.7	11.0	7.99	4.29	3.87	20.1
1964	15.0	47.5	23.5	27.9	20.5	18.9	30.6	51.3	57.3	18.9	12.5	22.5	28.8
1965	16.3	31.0	24.2	35.9	40.4	19.3	34.1	34.3	14.9	2.35	3.85	4.74	21.6
1966	14.6	22.4	19.4	28.9	15.1	34.9	37.2	44.9	21.9	11.7	3.53	4.49	21.6
1967	20.2	28.1	51.3	47.4	31.1	21.4	17.3	46.5	27.7	3.06	6.59	3.15	24.8
1968	41.3	19.4	46.7	32.3	42.7	29.5	28.2	31.9	15.6	4.79	18.5	18.5	26.5
1969	23.6	24.3	44.7	22.0	10.8	20.4	38.7	42.5	12.7	11.2	3.47	20.6	21.6
1970	10.00	19.7	22.7	40.0	36.5	19.3	29.2	24.7	4.73	3.79	1.55	18.3	18.2
1971	29.7	32.7	22.7	59.3	44.5	17.6	21.4	74.3	45.2	17.9	2.13	10.9	31.5
1972	12.7	37.5	22.4	19.3	44.0	69.6	36.0	55.2	24.9	22.3			

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1962-1972)

MEAN	20.0	29.5	30.4	33.6	30.6	25.2	31.5	41.6	23.1	9.7	5.5	11.4	23.9
MAXIMUM	41.3	47.5	51.3	59.3	44.5	69.6	41.6	74.3	57.3	22.3	16.4	22.5	31.5
MINIMUM	10.0	19.4	19.4	19.3	10.8	11.7	17.3	22.7	4.7	2.4	0.8	3.1	18.2
STD DEVIATION	9.41	8.74	11.03	11.92	12.22	16.05	7.31	15.23	15.58	7.28	5.05	7.79	4.36
SKEWNESS	1.492	0.810	1.044	1.062	-0.377	2.469	-0.680	0.822	1.324	0.628	1.513	0.327	0.618
STD ERR SKEW	0.687	0.687	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.687	0.687	0.717
SER CORR COEFF	-0.091	0.296	0.224	-0.411	-0.248	-0.096	-0.189	-0.092	-0.313	-0.046	-0.017	0.083	-0.527
COEFF OF VAR	0.471	0.296	0.363	0.355	0.399	0.636	0.232	0.366	0.676	0.752	0.916	0.680	0.183
MEAN LOGS	1.263	1.296	1.460	1.503	1.466	1.348	1.485	1.594	1.275	0.855	0.588	0.951	1.371
STD DEV LOGS	0.182	0.125	0.145	0.146	0.209	0.207	0.114	0.157	0.298	0.369	0.391	0.336	0.078
SKEWNESS LOGS	0.691	0.234	0.772	0.411	-0.882	1.378	-1.179	0.081	-0.285	-0.038	0.041	-0.041	8.357
STD ERR SKEW LOGS	0.687	0.687	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.687	0.687	0.717
SER CORR LOGS	-0.193	0.291	0.215	-0.442	-0.341	0.061	-0.177	-0.149	-0.262	-0.273	0.047	0.109	-0.512
COEFF OF VAR LOGS	0.144	0.086	0.099	0.097	0.145	0.154	0.077	0.098	0.234	0.432	0.665	0.353	0.057
% OF AVE FLOW	6.8	10.1	10.4	11.5	10.5	8.6	10.8	14.3	7.9	3.3	1.9	3.9	100.0

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## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1962-1972)

0.99	8.6	15.3	16.1	16.1	16.1	6.8	11.8	13.4	17.3	3.3	1.0	0.5	1.4	16.3
0.95	10.1	18.0	18.1	18.1	18.1	11.4	12.7	18.5	21.8	5.8	1.8	0.9	2.5	17.9
0.90	11.1	19.4	19.5	19.5	21.1	14.7	13.5	21.5	24.8	7.7	2.4	1.2	3.3	18.8
0.80	12.8	22.2	21.7	23.9	23.9	19.3	15.0	25.2	28.9	10.7	3.5	1.8	4.7	20.2
0.50	17.5	28.1	27.6	31.1	31.1	29.9	20.1	32.1	39.0	19.5	7.2	3.8	9.0	23.3
0.20	25.6	36.1	37.4	41.9	42.1	31.3	31.3	38.1	53.1	33.8	14.6	8.2	17.1	27.7
0.10	32.1	41.4	45.0	49.5	48.5	42.3	42.3	40.7	62.5	44.3	21.2	12.3	23.9	29.2
0.04	41.8	48.2	55.8	59.9	55.1	61.5	61.5	42.9	74.6	58.4	31.3	19.0	34.1	32.8
0.02	50.3	53.2	65.0	68.1	69.1	80.9	80.9	44.0	83.7	69.2	40.2	25.1	42.9	35.1
0.01	59.9	58.4	75.0	76.8	76.8	62.4	105.8	44.9	92.9	80.4	50.4	32.3	52.6	37.3

## STATION 12199800 EAST FORK NOOKACHAMPS CREEK NEAR BIG LAKE, WASH

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1963	0.60	0.60	0.61	0.93	2.20	6.90	8.20	9.20	14.00
1964	1.19	1.30	1.50	1.70	2.70	3.80	5.60	5.60	10.00
1965	2.90	3.30	4.20	4.50	7.80	11.00	16.00	17.00	19.00
1966	0.40	0.40	0.54	0.59	1.40	2.70	3.60	5.20	10.00
1967	1.19	1.30	1.40	2.10	2.50	3.40	4.80	7.30	14.00
1968	0.31	0.31	0.35	0.51	0.60	1.30	1.90	7.30	15.00
1969	0.78	0.81	1.00	1.19	2.10	4.30	6.00	9.70	15.00
1970	1.70	1.90	2.20	2.30	2.90	3.80	7.30	10.00	12.00
1971	0.54	0.58	0.64	0.70	1.00	2.70	3.00	6.40	12.00
1972	1.19	1.19	1.30	1.40	2.10	5.30	6.50	11.00	16.00

## LOWEST MEAN FLOW STATISTICS (YEARS 1963-1972)

MEAN	1.1	1.2	1.4	1.6	2.5	4.5	6.1	8.9	13.7
MAXIMUM	2.9	3.3	4.2	4.5	7.8	11.0	16.0	17.0	19.0
MINIMUM	0.3	0.3	0.4	0.5	1.3	1.9	5.2	5.2	10.0
STANDARD DEVIATION	0.77	0.90	1.14	1.19	1.99	2.74	4.00	3.46	2.79
SKEWNESS	1.555	1.646	1.930	1.773	2.350	1.609	1.823	1.478	0.347
STD ERROR OF SKEWNESS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SERIAL CORR COEFF	-0.303	-0.290	-0.231	-0.323	-0.120	-0.187	-0.333	-0.549	-0.636
COEFF OF VARIATION	0.717	0.767	0.830	0.750	0.788	0.606	0.654	0.390	0.204
MEAN LOGS	-0.058	-0.036	0.027	0.108	0.309	0.591	0.716	0.922	1.129
STD DEVIATION LOGS	0.298	0.316	0.321	0.296	0.297	0.251	0.259	0.154	0.089
SKEWNESS LOGS	0.150	0.181	0.361	0.356	0.106	-0.063	0.206	0.603	-0.088
STD ERR SKEWNESS LOGS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SER CORR COEFF LOGS	-0.404	-0.397	-0.334	-0.469	-0.174	-0.165	-0.385	-0.638	-0.645
COEFF OF VAR LOGS	-5.099	-8.869	11.894	2.736	0.958	0.425	0.362	0.167	0.079

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1963-1972)

0.99	4.7	5.5	7.2	7.5	10.5	14.5	22.7	22.3	21.4
0.98	3.8	4.4	5.6	5.9	8.6	12.5	18.9	19.3	20.3
0.96	3.0	3.4	4.2	4.6	6.9	10.6	15.4	16.6	19.1
0.90	2.1	2.4	2.8	3.1	4.4	8.1	11.3	13.4	17.4
0.80	1.5	1.7	1.9	2.2	3.6	6.3	8.5	11.1	16.0
0.50	0.9	0.9	1.0	1.2	2.0	3.9	5.1	8.1	13.5
0.20	0.5	0.5	0.6	0.7	1.1	2.4	3.1	6.2	11.3
0.10	0.4	0.4	0.4	0.6	0.9	1.9	2.5	5.5	10.3
0.05	0.3	0.3	0.3	0.4	0.7	1.5	2.0	5.0	9.5
0.02	0.2	0.2	0.3	0.4	0.5	1.2	1.6	4.5	8.7
0.01	0.2	0.2	0.2	0.3	0.4	1.0	1.4	4.3	8.2

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "PM" PERCENT OF THE TIME (YEARS 1963-1972)

P95	P90	P75	P70	P50	P25	P10
1.4	2.3	6.8	8.2	16.0	31.0	55.0

STATION 12199800 EAST FORK NOOKACHAMPS CREEK NEAR BIG LAKE, WASH

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT-30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW(CFS) DATE REG.(R)
1962										560. 01/03/62
1963	209.	167.	126.	69.	57.	45.	36.	33.	31.	490. 02/04/63
1964	144.	105.	90.	77.	69.	55.	47.	42.	35.	610. 10/21/63
1965	199.	165.	100.	68.	56.	42.	37.	36.	33.	499. 11/24/64
1966	149.	92.	70.	57.	46.	45.	41.	36.	31.	219. 05/06/66
1967	191.	129.	101.	71.	58.	53.	48.	42.	36.	309. 02/04/67
1968	240.	193.	131.	70.	58.	46.	42.	39.	36.	534. 09/17/68
1969	257.	137.	72.	47.	44.	41.	36.	30.	27.	382. 01/04/69
1970	188.	90.	66.	51.	45.	35.	33.	32.	27.	432. 11/04/69
1971	308.	208.	154.	104.	84.	62.	49.	45.	44.	470. 01/30/71
1972										470. 11/03/71
1974										455. 01/24/74
1975										556. 01/17/75
1976										636. 12/02/75
1977										656. 01/18/77
1978										676. 12/02/77

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1962-1978)

	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKEWNESS	STD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	STD ERR SKEWNESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	209.4	308.0	144.0	52.15	0.552	0.717	0.014	0.249	0.107	0.144	0.717	0.006	0.046	2.6809	2.6809
	142.9	208.0	90.0	43.11	0.180	-0.542	-0.542	0.302	0.135	-0.155	0.717	-0.551	0.063	0.1272	0.1272
	101.1	154.0	66.0	30.58	0.509	0.717	-0.387	1.987	0.131	0.133	0.717	-0.357	0.066	0.0	-1.4080
	68.2	104.0	47.0	16.74	1.042	0.717	-0.232	1.823	0.102	0.348	0.717	-0.153	0.056		
	57.4	84.0	44.0	12.79	1.108	0.717	-0.220	1.750	0.092	0.659	0.717	-0.182	0.052		
	47.1	62.0	35.0	8.21	0.534	-0.409	0.174	1.667	0.075	0.153	0.717	-0.372	0.045		
	41.0	49.0	33.0	5.92	0.191	-0.310	0.144	1.609	0.063	0.057	0.717	-0.291	0.039		
	37.2	45.0	30.0	5.12	0.115	-0.205	0.137	1.567	0.060	-0.059	0.717	-0.168	0.038		
	33.3	44.0	27.0	5.27	0.795	-0.309	0.158	1.518	0.067	0.398	0.717	-0.258	0.044		

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1962-1978)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
	118.3	137.6	149.5	165.6	202.7	250.2	280.2	317.0	343.9	370.3
	64.1	81.0	91.5	105.7	138.1	178.4	203.0	232.3	252.9	272.7
	49.7	59.9	66.4	75.3	96.5	124.8	143.4	166.7	184.0	201.4
	40.9	46.3	49.7	54.4	65.6	80.7	90.7	103.3	112.7	122.2
	38.2	41.6	43.8	47.0	55.0	66.5	74.5	85.0	93.1	101.4
	31.8	35.3	37.4	40.2	46.3	53.7	58.1	63.4	67.1	70.7
	29.2	32.1	33.8	36.0	40.6	45.8	48.9	52.4	54.9	57.2
	26.6	29.3	30.9	32.9	37.0	41.5	44.0	46.9	48.8	50.6
	24.1	26.1	27.3	28.9	32.6	37.4	40.4	43.1	45.7	49.3
	242.7	296.3	329.5	374.9	479.7	613.7	698.2	801.0	875.3	948.1
	183.7	271.8	324.3	390.3	512.6	612.0	650.4	680.7	694.9	704.6

STATION 12200000 E.F. NOOKACHAMPS CREEK NR CLEAR LAKE, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1943													
1944	50.8	18.4	76.1	105	67.5	68.5	82.0	77.4	31.1	2.31	3.97	4.92	52.1
1945	27.7	179	55.4	178	84.2	81.8	111	88.0	16.1	3.91	4.49	43.7	72.5
1946	160	264	125	147	141	130	104	71.8	84.1	25.8	4.53	4.39	105
1947	84.6	115	171	157	91.1	51.4	151	43.6	68.9	15.8	6.66	45.3	83.2
1948	136	216	166	131	128	88.3	87.3	178	130	12.0	47.3	55.6	115
1949	103	145	136	39.4	217	128	96.9	86.2	41.0	40.2	23.0	21.4	88.8
1950	88.9	126	285	132	210	197	153	106.2	73.0	20.0	9.36	13.9	117
1962			160	151	52.9	70.6	82.4	64.5	45.8	6.36	32.4	15.1	
1963	40.0	121	126	102	90.0	48.0	73.6	66.6	23.8	16.1	10.4	10.7	60.5

ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1944	1390.0	9-20-1944
1945	2000.0	1-7-1945
1946	2710.0	10-25-1945
1948	2220.0	10-19-1947
1949	2130.0	2-17-1949
1950	2010.0	12-28-1949
1962	1270.0	1-3-1962
1963	1210.0	11-19-1962

## STATION 12200500 SKAGIT RIVER NEAR MOUNT VERNON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1941	14800	9880	14290	10310	8654	8487	11080	15880	14970	9820	6441	11450	11360
1942	17330	13860	20490	7636	7626	6856	11510	16870	25400	17230	8373	5023	13220
1943	4323	13380	15710	11730	11970	11600	23360	21660	31420	29840	11430	7183	16140
1944	8100	6592	10670	9965	8044	7878	10610	17400	19620	20430	6635	9945	10510
1945	4736	10810	10930	15950	14860	9714	10130	25960	25370	16170	8083	8469	13760
1946	14340	17990	12540	13670	10680	12820	16580	36530	32810	23750	10590	6745	17460
1947	8957	9351	18200	12800	16430	14460	17720	24720	25740	15780	8319	7390	14980
1948	19110	15670	19050	15180	10380	8448	11800	24680	39280	20380	13760	11590	17460
1949	12820	13290	12840	9015	12020	15200	17900	35920	24470	20010	13320	10910	16340
1950	12970	23740	21830	15560	19740	22810	17720	22020	37920	35710	17060	10200	21440
1951	17120	21000	30560	19650	31140	11760	19580	26400	21700	17460	9269	8329	19420
1952	16800	14480	12790	9541	14910	9501	13690	20280	18810	16260	9607	6642	13600
1953	6898	7252	8417	26740	20170	10930	13180	20280	20030	23920	12430	8995	14830
1954	14810	19540	24900	17730	21230	15290	16640	25150	27770	34840	20290	13950	21030
1955	12840	27200	15810	13550	13560	9192	12390	17250	31010	28420	15010	9201	17250
1956	20430	29620	19580	15140	10500	11460	17590	28420	34460	26950	10510	10920	19700
1957	21100	15110	23770	12230	13270	15010	14790	26660	23240	14240	8486	7962	16360
1958	8086	10170	12770	17420	16540	11570	11600	22410	21080	12080	7677	8838	13330
1959	16040	23450	27720	24420	13680	14170	21730	24760	27960	25360	12510	17540	20820
1960	20850	29350	21190	14530	19110	12330	17470	19510	22140	18980	11050	8383	17810
1961	12620	19250	16260	22400	25250	15730	15150	22100	36670	17220	9995	8502	18360
1962	12820	13300	17490	22570	14050	10920	14320	13090	20520	17760	13550	8809	14950
1963	11780	21070	23490	18800	19020	12320	12280	16060	20630	15260	10530	8861	15820
1964	14460	23210	19450	21260	14340	15110	15290	19100	35020	34210	17130	11880	20050
1965	15000	14060	18760	16340	20470	13230	15240	19940	23960	20170	12760	6624	16360
1966	10430	15660	15360	16360	11660	14900	15680	19540	20660	19570	11090	7201	14870
1967	12390	14390	29060	21490	18090	14410	12280	18530	39660	23970	11900	9096	18780
1968	23710	21630	22380	26020	24150	14630	15870	18560	31750	23440	11750	13410	20930
1969	13360	18580	20190	19850	11880	11230	15220	26030	29730	15360	8411	12110	16850
1970	11780	12230	13940	17160	16710	12310	12660	12440	18890	14320	8887	9763	13400
1971	8827	13390	15330	21500	24840	14620	13210	28300	31940	33960	16970	9398	19340
1972	9562	14850	14020	16780	20350	27010	19550	27150	43910	37650	18910	13610	21910
1973	8810	10600	21060	18350	11260	10800	8857	16260	15590	13870	9492	6895	12690
1974	10720	16540	21950	27220	19600	21500	19000	22480	26440	34430	20100	8948	21960
1975	6004	14010	18390	19180	16200	14880	9898	17710	26440	26330	13210	8290	15890
1976	17350	30380	37930	22460	17140	14260	24890	24890	23710	29060	20990	12380	22200
1977	7005	10150	13230	16060	11990	14430	15540	13010	14550	9310	9666	7334	11860
1978	7078	18710	28920	16560	13490	13540	11850	12500	19390	18360	11890	15740	15680
1979	8114	16070	12260	11160	12510	15070	11900	17190	17180	14200	9153	9020	12810

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1941-1979)

MEAN	12776.4	16661.9	18782.7	17032.5	15808.1	13445.8	14814.5	21399.0	26532.1	21337.9	12029.3	9702.7	16705.9
MAXIMUM	23710.0	30380.0	37930.0	27220.0	31140.0	27010.0	23360.0	36530.0	43460.0	37650.0	20990.0	17540.0	22200.0
MINIMUM	4323.0	6592.0	8417.0	7636.0	7626.0	6856.0	8857.0	12460.0	14550.0	9310.0	6441.0	5023.0	10510.0
STD DEVIATION	4664.07	6076.45	6278.93	5012.15	5178.49	3996.01	3325.34	5570.04	7732.51	7875.96	3821.33	2660.31	3226.62
SKWENESS	0.387	0.669	0.914	0.181	0.811	1.321	0.464	0.560	0.455	0.528	0.879	0.976	0.062
STD ERR SKEW	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378
SER CORR COEFF	0.078	0.153	-0.152	0.274	0.170	0.050	-0.299	0.167	-0.133	-0.007	0.143	-0.136	-0.079
COEFF OF VAR	0.365	0.365	0.334	0.294	0.328	0.297	0.224	0.260	0.291	0.367	0.318	0.274	0.193
MEAN LOGS	4.076	4.193	4.251	4.212	4.177	4.112	4.112	4.316	4.406	4.302	4.060	3.972	4.215
STD DEV LOGS	0.169	0.161	0.142	0.136	0.140	0.122	0.098	0.113	0.127	0.162	0.132	0.114	0.086
SKWENESS LOGS	-0.424	-0.175	0.056	-0.479	-0.003	0.420	-0.052	-0.107	-0.010	-0.097	0.295	0.235	-0.274
STD ERR SKEW LOGS	0.078	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378
SER CORR LOGS	0.081	0.115	-0.089	0.322	0.228	0.132	-0.301	0.159	-0.099	-0.030	0.195	-0.096	-0.051
COEFF OF VAR LOGS	0.041	0.038	0.032	0.032	0.034	0.030	0.023	0.026	0.029	0.038	0.032	0.029	0.020
% OF AVE FLOW	6.4	8.3	9.4	8.5	7.9	6.7	7.4	10.7	13.2	10.7	6.0	4.8	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1941-1979)

0.99	4284.6	6302.1	8460.4	7055.1	7077.0	7013.6	8498.6	11046.4	12846.9	8198.7	6059.1	5326.6	9941.3
0.95	6022.4	9350.0	10481.0	9355.6	8825.7	8282.7	9957.6	13377.4	15724.7	10747.3	7161.9	6198.6	11683.5
0.90	7139.9	9660.2	11761.9	10762.3	9927.5	9081.2	10826.9	13871.3	17496.0	12386.8	7871.0	6745.0	12654.8
0.80	8684.1	11479.7	13538.4	12631.9	11446.8	10194.5	11973.4	16642.4	19906.6	14678.4	11319.0	7497.8	13921.6
0.50	12248.7	15782.1	17776.8	16687.2	15028.4	12808.6	14484.8	20801.9	25469.0	20178.7	11319.0	9280.0	16543.8
0.20	16618.3	21368.9	23442.2	21279.1	19725.6	16323.1	17474.5	25831.3	32563.7	27504.6	11754.9	11654.2	19410.2
0.10	19204.4	24887.5	27136.4	23840.1	22736.8	18628.3	19254.3	28852.1	37017.0	32230.1	17094.6	13205.9	20996.6
0.04	21166.0	29150.0	31761.1	26651.0	26454.2	21334.8	21534.7	32400.5	42430.4	38070.9	20133.5	15157.7	22747.8
0.02	24178.0	32206.3	35185.0	28493.1	29171.5	23703.2	22786.5	34884.7	46336.5	42337.2	22461.1	16611.3	23908.7
0.01	26045.0	35171.4	38598.0	30157.3	31852.6	25879.2	24169.3	37255.1	50152.4	46538.9	24845.9	18068.3	24970.7

## STATION 12C00500 SKAGIT RIVER NEAR MOUNT VERNON, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1942	4980.0	5340.0	5520.0	6060.0	6420.0	7230.0	7360.0	10500.0	11600.0
1943	3050.0	3240.0	3530.0	3720.0	4160.0	4590.0	5590.0	7010.0	9740.0
1944	4970.0	5130.0	5380.0	5740.0	6590.0	7380.0	7280.0	8080.0	8370.0
1945	4900.0	5220.0	5370.0	5630.0	6160.0	7340.0	6490.0	8710.0	9420.0
1946	5260.0	5420.0	5640.0	5780.0	6200.0	7370.0	7860.0	10300.0	12400.0
1947	3980.0	4170.0	4240.0	4390.0	4760.0	6340.0	7920.0	8790.0	10800.0
1948	5000.0	5790.0	6300.0	6390.0	7360.0	7700.0	9630.0	12300.0	14100.0
1949	7280.0	7770.0	7880.0	8000.0	8200.0	8980.0	11000.0	11100.0	11700.0
1950	6740.0	7040.0	8360.0	8660.0	9440.0	11200.0	11700.0	12600.0	16200.0
1951	6920.0	7520.0	7900.0	8440.0	9810.0	12900.0	13900.0	15100.0	19200.0
1952	5660.0	6260.0	7180.0	7710.0	7870.0	8690.0	10700.0	11500.0	11800.0
1953	4920.0	5190.0	5850.0	6330.0	6580.0	6690.0	6930.0	7160.0	9000.0
1954	6130.0	7020.0	7490.0	8100.0	8190.0	10500.0	11800.0	13500.0	16300.0
1955	7540.0	8030.0	8580.0	8910.0	9050.0	11300.0	12000.0	13000.0	15300.0
1956	6320.0	6660.0	7500.0	8010.0	9040.0	10400.0	12400.0	13900.0	17200.0
1957	6900.0	7550.0	8260.0	8790.0	9320.0	11200.0	13500.0	14900.0	15500.0
1958	5110.0	5430.0	6100.0	6600.0	7210.0	7510.0	7960.0	8640.0	10200.0
1959	5380.0	5700.0	6400.0	6610.0	7120.0	8090.0	9060.0	11100.0	12000.0
1960	8350.0	9080.0	10100.0	10500.0	11500.0	14500.0	14700.0	16400.0	19100.0
1961	4740.0	4840.0	5340.0	5990.0	7270.0	8700.0	9740.0	12000.0	14000.0
1962	4670.0	5080.0	5800.0	6330.0	7030.0	8670.0	10200.0	11000.0	13100.0
1963	5710.0	6140.0	6790.0	8050.0	8490.0	10200.0	10700.0	12400.0	14100.0
1964	5860.0	6460.0	7290.0	8120.0	8620.0	9700.0	11300.0	1300.0	13500.0
1965	7250.0	7930.0	9040.0	9410.0	11200.0	13400.0	13400.0	14400.0	15300.0
1966	4470.0	4790.0	4870.0	5450.0	6300.0	8310.0	9770.0	11300.0	12700.0
1967	5380.0	5630.0	6460.0	6830.0	7290.0	7550.0	9560.0	11100.0	12000.0
1968	6780.0	7130.0	7330.0	7960.0	9070.0	10400.0	13100.0	16400.0	17800.0
1969	6800.0	7830.0	8770.0	9110.0	10300.0	11600.0	12700.0	13600.0	15800.0
1970	4520.0	5660.0	6320.0	6660.0	7310.0	8740.0	10700.0	11100.0	11700.0
1971	4400.0	5540.0	6200.0	7630.0	8260.0	8810.0	8830.0	9450.0	11500.0
1972	5100.0	5830.0	6240.0	6980.0	7820.0	9160.0	10900.0	11600.0	13100.0
1973	5400.0	6130.0	7020.0	7590.0	8630.0	9640.0	11000.0	11600.0	13500.0
1974	3910.0	4280.0	4590.0	4890.0	6160.0	6900.0	8550.0	10000.0	11700.0
1975	3550.0	3930.0	5080.0	5130.0	5440.0	6400.0	9070.0	11100.0	13800.0
1976	4700.0	5370.0	5640.0	6020.0	7590.0	9910.0	11800.0	15700.0	16900.0
1977	4750.0	5270.0	5640.0	5840.0	6930.0	7950.0	9390.0	10400.0	11700.0
1978	4250.0	4530.0	4870.0	5220.0	6040.0	7080.0	7900.0	8270.0	10100.0
1979	5630.0	6140.0	6460.0	7130.0	7740.0	11200.0	11600.0	11900.0	12400.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1942-1979)

MEAN	5454.2	5928.7	6493.7	6945.0	7692.1	9030.3	10220.8	11573.9	13387.6
MAXIMUM	8350.0	9080.0	10100.0	10500.0	11500.0	14500.0	14700.0	16400.0	19200.0
MINIMUM	3050.0	3240.0	3530.0	3720.0	4160.0	4590.0	5590.0	7010.0	8370.0
STANDARD DEVIATION	1189.77	1288.82	1440.98	1483.00	1601.74	2124.99	2151.67	2411.89	2719.55
SKENNESS	0.417	0.355	0.390	0.134	0.293	0.560	0.078	0.173	0.296
STD ERROR OF SKENNESS	0.383	0.383	0.280	0.305	0.245	0.383	0.383	0.383	0.383
SERIAL CORR COEFF	0.297	0.255	0.280	0.214	0.208	0.179	0.267	0.183	0.291
COEFF OF VARIATION	0.218	0.217	0.222	0.214	0.208	0.235	0.211	0.208	0.203
MEAN LOGS	3.727	3.763	3.802	3.832	3.877	3.944	4.000	4.054	4.118
STD DEVIATION LOGS	0.095	0.096	0.098	0.096	0.093	0.102	0.095	0.093	0.089
SKENNESS LOGS	-0.150	-0.237	-0.211	-0.460	-0.429	-0.141	-0.419	-0.339	-0.155
STD ERR SKENNESS LOGS	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383	0.383
SER CORR COEFF LOGS	0.313	0.275	0.304	0.338	0.280	0.237	0.205	0.205	0.323
COEFF OF VAR LOGS	0.026	0.025	0.026	0.025	0.024	0.026	0.024	0.023	0.022

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LGP-PEARSON III ANALYSIS (YEARS 1942-1979)

0.99	8670.2	9311.1	10323.2	10538.9	11571.1	14842.3	15520.4	17666.9	20665.8
0.98	8219.2	8857.2	9800.1	10115.7	11108.5	14010.0	14881.9	16899.7	19662.6
0.96	7738.1	8366.7	9237.6	9640.3	10591.2	13127.3	14169.7	16055.2	18587.8
0.90	7034.9	7637.7	8407.0	8899.3	9788.7	11846.3	13068.8	14770.8	17007.5
0.80	6420.0	6988.5	7672.7	8204.9	9040.3	10735.6	12046.1	13597.9	15615.6
0.50	5358.0	5842.5	6388.3	6901.7	7642.4	8840.3	10145.9	11461.4	13187.7
0.20	4437.3	4824.7	5259.9	5662.1	6322.2	7222.8	8362.9	9496.6	11054.3
0.10	4008.2	4343.5	4730.3	5062.1	5674.6	6478.1	7492.4	8547.2	10049.7
0.05	3679.3	3972.0	4323.1	4586.4	5111.6	5911.6	6809.9	7806.1	9274.5
0.02	3335.3	3561.5	3896.5	4061.2	4622.7	5323.5	6084.2	7019.9	8458.7
0.01	3120.7	3337.0	3630.1	3762.3	4279.6	4958.9	5626.4	6524.5	7946.9

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1942-1979)

P95	P90	P75	P70	P50	P25	P10
6800.0	7800.0	10000.0	11000.0	14000.0	20000.0	29000.0

## STATION 12C00500 SKAGIT RIVER NEAR MOUNT VERNON, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA	DATE	REG. (R)
1907	44000.	42000.	33000.	22500.	17200.	15700.	14200.	13200.	11800.	180000.	11/ /06	R
1941	59900.	45100.	35400.	29700.	27500.	23800.	20000.	17900.	14400.	44000.	10/20/40	R
1942	45500.	44200.	42300.	38600.	34600.	32400.	27900.	26800.	21800.	65300.	12/03/41	R
1943	38200.	31900.	22000.	20000.	18600.	16100.	16100.	14600.	12600.	47000.	06/18/43	R
1944	50300.	45600.	37900.	31800.	27800.	25900.	22900.	19600.	17600.	55700.	12/03/43	R
1945	80000.	66000.	48700.	43400.	39000.	35200.	31800.	27900.	22600.	59800.	02/08/45	R
1946	52300.	41200.	34800.	30300.	28500.	25400.	23200.	21500.	19600.	94300.	10/26/45	R
1947	59900.	56000.	50900.	47200.	43200.	34100.	28600.	25000.	20200.	69400.	10/25/46	R
1948	54600.	53900.	51100.	47000.	42700.	35600.	29700.	26800.	23100.	64000.	10/19/47	R
1949	91000.	71900.	54600.	44300.	37200.	32500.	28600.	26200.	23900.	56200.	05/13/49	R
1950	138000.	107000.	70200.	44900.	32600.	29600.	29200.	25800.	23900.	114000.	11/28/49	R
1951	36900.	30600.	27200.	25200.	23900.	20400.	19000.	17400.	15600.	41400.	06/05/52	R
1952	61100.	50100.	39100.	33700.	33000.	33500.	21500.	19800.	19100.	65700.	02/01/53	R
1953	54000.	44400.	43400.	39600.	37600.	31900.	30300.	27500.	23900.	57900.	11/01/53	R
1954	57500.	55200.	46500.	39700.	31900.	30400.	26800.	23400.	19300.	60800.	11/20/54	R
1955	98700.	79100.	56300.	49600.	38100.	33900.	30300.	27100.	21900.	107000.	11/04/55	R
1956	36800.	37000.	32000.	29500.	25500.	22000.	21800.	20600.	18600.	64000.	10/20/56	R
1957	53900.	47000.	41200.	35200.	27100.	25200.	21800.	20600.	18600.	43900.	01/17/58	R
1958	82300.	67200.	62000.	54700.	45600.	35300.	26900.	24000.	21000.	92300.	04/30/59	R
1959	83800.	80000.	64300.	56000.	45600.	35300.	26900.	24000.	21000.	91600.	11/24/59	R
1960	72200.	54100.	50400.	39700.	37300.	29800.	25700.	23000.	22900.	76000.	01/16/61	R
1961	52800.	43700.	41000.	32000.	25700.	20600.	18600.	17400.	16100.	61600.	01/04/62	R
1962	69400.	51300.	37000.	29700.	28800.	25400.	22900.	20800.	17900.	83200.	11/20/62	R
1963	67900.	50700.	42300.	36500.	34900.	34900.	30500.	26700.	22700.	72100.	11/27/63	R
1964	55000.	47400.	33700.	27300.	25300.	24000.	22200.	20400.	19400.	59300.	12/02/64	R
1965	35500.	31300.	28300.	23900.	21600.	20600.	20100.	19100.	17100.	38700.	05/07/66	R
1966	71400.	67500.	60600.	51700.	41500.	32800.	27700.	23900.	21600.	72000.	06/22/67	R
1967	65800.	55700.	46500.	35800.	31900.	28100.	25200.	24200.	23500.	72700.	10/28/67	R
1968	47300.	40400.	36600.	35500.	34000.	28700.	24400.	21800.	19100.	54300.	01/05/69	R
1969	34100.	28600.	25600.	22200.	19800.	17400.	16400.	15600.	15300.	37900.	04/10/70	R
1970	65700.	53500.	46200.	41400.	35000.	33200.	31900.	28300.	24800.	70300.	01/31/71	R
1971	73900.	63900.	57500.	52600.	44800.	42400.	37300.	32400.	29800.	80600.	07/13/72	R
1972	44000.	40100.	37500.	30500.	25400.	20000.	17200.	15600.	14700.	53600.	12/26/72	R
1973	70900.	64000.	52900.	48600.	41600.	37400.	33400.	29700.	26500.	77600.	01/16/74	R
1974	47200.	46000.	42700.	34100.	29600.	26600.	24000.	21200.	18900.	76000.	12/21/74	R
1975	123000.	108000.	78500.	54400.	42800.	35200.	30700.	28300.	23900.	130000.	12/04/75	R
1976	42200.	34800.	25300.	19300.	17000.	15600.	14800.	14800.	14500.	52800.	01/19/77	R
1977	60300.	50400.	43800.	38500.	32000.	26600.	21600.	19600.	17200.	65600.	12/03/77	R
1978	34900.	30300.	24000.	20100.	18900.	17200.	16500.	15600.	14700.	40300.	11/08/78	R

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1941-1979)

MEAN	62125.6	52697.4	43489.7	36107.7	31323.1	27279.5	24469.2	22146.2	19725.6	W R C	SYSTEMATIC
MAXIMUM	138000.0	108000.0	78500.0	54400.0	44800.0	42400.0	37300.0	32400.0	29800.0	ESTIMATE	RECORD
MINIMUM	34100.0	28600.0	23200.0	19300.0	17000.0	15600.0	14200.0	13200.0	11800.0		
STANDARD DEVIATION	22951.29	18343.71	12580.02	9639.02	7730.84	6623.84	5766.73	4867.16	4073.51		
STANDARD ERROR OF SKEWNESS	1.463	1.403	0.616	0.066	-0.072	0.074	0.076	0.031	0.180		
SER CORR COEFF	-0.111	-0.099	-0.085	-0.178	-0.162	-0.150	-0.108	-0.141	-0.055		
COEFF OF VARIATION	0.369	0.348	0.289	0.267	0.247	0.243	0.236	0.220	0.207		
MEAN LOGS	4.768	4.699	4.621	4.541	4.482	4.423	4.376	4.335	4.286	4.8158	4.8158
STD DEVIATION LOGS	0.146	0.138	0.127	0.122	0.114	0.110	0.107	0.099	0.092	0.1394	0.1394
SKEWNESS LOGS	0.490	0.442	-0.166	-0.401	-0.550	-0.404	-0.353	-0.339	-0.310	0.4500	0.4500
STD ERR SKEWNESS LOGS	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378	0.378		
SER CORR COEFF LOGS	-0.145	-0.119	-0.085	-0.176	-0.179	-0.148	-0.114	-0.136	-0.038		
COEFF OF VAR LOGS	0.031	0.029	0.027	0.027	0.026	0.025	0.024	0.023	0.021		

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1941-1979)

0.99	30382.9	26461.4	20432.1	16658.2	14006.9	13596.9	12623.0	12016.6	11241.9	34527.4	34527.4
0.95	35542.4	30917.9	25485.1	21254.3	18944.3	16950.7	15523.5	14543.5	13385.1	40336.0	40336.0
0.90	38995.3	33859.8	28580.5	24016.4	21385.5	18931.2	17231.7	16017.2	14625.3	44179.2	44179.2
0.80	44015.7	38069.9	32740.3	27650.3	24539.2	21503.3	19449.0	17916.9	16216.1	49715.0	49715.0
0.50	57073.6	48881.1	42086.3	35452.9	31068.2	26918.8	24127.6	21886.3	19519.5	63879.5	63879.5
0.20	76925.7	64848.1	53488.0	44262.2	38013.6	32890.7	29327.2	26251.8	23134.7	84924.7	84924.7
0.10	91370.9	76212.6	60358.0	49201.8	41701.1	36184.9	32222.9	28667.9	25132.6	99952.9	99952.9
0.04	111158.8	91506.2	68430.5	45668.7	37971.1	31827.5	27332.6	23732.6	20230.9	120230.9	120230.9
0.02	127052.1	103597.3	74076.2	58286.3	48083.1	42156.5	37539.2	33083.6	28786.7	136300.1	136300.1
0.01	143964.5	116302.6	79455.9	61583.4	50268.9	44298.8	39471.3	34683.7	30113.3	153217.7	153217.7

## STATION 12200700 CARPENTER CR TRIB NR MOUNT VERNON, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1949-1970)			W R C SYSTEMATIC ESTIMATE RECORD	
WATER YEAR	FLOW(CFS)	DATE	MEAN LOGS	STANDARD DEVIATION LOGS	SKENNESS LOGS	1.5332	1.5332
1949	61.0	2-22-1949				0.2216	-0.032
1950	62.0	1-22-1950					
1951	27.0	3-13-1951					
1952	39.0	3-28-1952					
1953	14.0	0-0-1953					
1954	30.0	12-9-1953					
1955	40.0	2-7-1955					
1956	30.0	12-11-1955					
1957	42.0	12-9-1956	0.99			10.4	10.3
1958	19.0	1-16-1958	0.95			14.7	14.7
1959	52.0	1-23-1959	0.90			17.8	17.7
1960	70.0	0-0-1960	0.80			22.2	22.2
1961	32.0	3-15-1961	0.50			34.1	34.2
1962	16.0	1-3-1962	0.20			52.5	52.5
1963	16.0	11-19-1962	0.10			65.7	65.7
1964	51.0	12-6-1963	0.04			83.4	82.9
1965	56.0	1-29-1965	0.02			97.4	96.5
1966	26.0	1-8-1966	0.01			111.9	110.6
1967	23.0	2-18-1967					
1968	86.0	12-25-1967					
1969	32.0	1-4-1969					
1970	24.0	1-27-1970					

## STATION 12200800 LAKE CREEK NEAR BELLINGHAM, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1949-1968)			W R C SYSTEMATIC ESTIMATE RECORD	
WATER YEAR	FLOW(CFS)	DATE	MEAN LOGS	STANDARD DEVIATION LOGS	SKENNESS LOGS	2.0727	2.0727
1949	250.0	2-17-1949				0.2136	0.033
1950	214.0	12-28-1949					
1951	208.0	2-10-1951					
1952	110.0	1-30-1952					
1953	82.0	1-31-1953					
1954	97.0	12-9-1953					
1955	91.0	2-8-1955					
1956	124.0	11-3-1955	0.99			37.6	38.1
1957	200.0	12-9-1956	0.95			52.6	52.9
1958	71.0	1-24-1958	0.90			62.9	63.1
1959	159.0	11-12-1958	0.80			78.1	78.1
1960	108.0	12-15-1959	0.50			118.2	117.9
1961	178.0	1-15-1961	0.20			178.8	178.7
1962	44.0	1-7-1962	0.10			222.0	222.4
1963	74.0	12-30-1962	0.04			279.7	281.3
1965	248.0	1-28-1965	0.02			324.6	327.5
1966	88.0	1-8-1966	0.01			371.2	375.7
1967	78.0	2-3-1967					
1968	91.0	12-25-1967					

## STATION 12201000 FRIDAY CREEK NR BURLINGTON, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)											
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	ANNUAL
1944	9.60	13.0	71.1	87.6	107	75.1	48.6	32.7	23.5	4.73	2.60
1945	8.47	120	94.1	267	113	105	76.2	45.9	9.69	2.53	5.92
1946	123	211	124	203	195	193	136	35.2	37.1	19.7	2.11
1947	13.4	45.3	170	227	143	94.5	101	32.3	8.55	4.45	2.77
1948	37.3	134	173	192	167	112	64.9	78.3	52.1	11.8	7.23
											16.8
											87.2

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1944	195.0	12-3-1943
1945	960.0	1-7-1945
1946	1090.0	10-25-1945
1947	825.0	12-11-1946
1948	537.0	1-4-1948



## STATION 12201500 SAMISH RIVER NR BURLINGTON, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1943													
1944	55.2	64.2	221	232	254	203	151	125	80.9	27.4	35.0	30.5	123
1945	50.0	298	231	738	386	319	258	174	49.9	27.7	25.2	44.1	215
1946	44.4	84.9	370	552	556	547	401	183	136	71.9	30.9	38.7	329
1947	184.4	181	490	530	360	280	293	113	70.0	41.4	31.0	29.4	269
1948	194	391	446	476	405	317	244	260	159	65.4	65.2	80.2	259
1949	146	420	582	203	656	439	216	184	66.2	50.2	39.0	53.6	332
1950	113	264	798	555	686	698	469	202	103	38.0	33.6	33.6	274
1951	149	340	589	618	789	394	179	138	54.2	26.8	21.1	20.9	179
1952	97.6	194	313	377	377	297	236	169	78.3	42.0	27.4	25.1	186
1953	25.5	30.4	89.2	578	546	299	292	165	122	51.4	83.5	69.2	286
1954	117	409	854	615	490	234	221	133	124	91.4	64.9	37.1	250
1955	92.9	410	324	401	467	333	345	240	181	119	30.6	45.3	252
1956	155	496	558	462	262	424	422	123	115	54.8	30.2	24.6	279
1957	497	326	805	293	401	474	264	120	65.7	43.1	19.1	21.8	152
1958	39.5	92.0	266	404	445	205	199	84.3	41.2	23.0	13.4	13.4	301
1959	206	594	389	603	376	373	477	262	121	51.0	36.5	41.3	284
1960	214	548	487	401	475	266	304	235	128	43.0	33.6	26.0	260
1961	82.4	287	192	372	988	503	364	199	88.4	44.2	29.7	33.6	196
1962	105	220	418	465	244	254	239	174	87.3	36.3	60.0	52.2	192
1963	126	379	404	361	236	216	262	148	59.7	54.1	37.0	27.0	300
1964	96.8	465	475	587	409	427	418	296	182	87.6	66.4	119	284
1965	208	289	468	811	921	241	169	161	77.7	34.8	40.3	32.8	208
1966	104	221	275	512	272	431	267	176	92.5	74.1	37.9	37.5	265
1967	121	232	543	769	595	364	204	166	72.7	35.6	53.5	108	261
1968	227	253	629	451	384	337	274	190	155	69.9	26.3	70.3	228
1969	198	290	518	484	323	223	246	181	71.8	58.3	26.3	44.9	174
1970	110	193	281	416	316	173	302	149	54.0	32.4	105	41.3	297
1971	106	236	310	992	684	408	341	177	157	105	34.9	41.3	350.9

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1943-1972)

MEAN	148.7	313.3	441.8	505.8	475.1	345.7	284.5	176.0	99.8	53.9	38.3	48.0	243.1
MAXIMUM	497.0	649.0	854.0	942.0	988.0	698.0	477.0	296.0	182.0	119.0	83.5	134.0	332.0
MINIMUM	25.5	30.4	89.2	203.0	236.0	173.0	151.0	84.3	41.2	23.0	19.1	20.9	123.0
STD DEVIATION	106.03	151.45	189.72	176.59	198.76	120.58	83.77	48.76	40.57	24.18	15.99	29.13	52.92
SKEWNESS	2.107	0.329	0.471	0.741	1.083	0.944	0.756	0.620	0.589	1.127	1.417	1.783	-0.400
STD ERR SKEW	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.434	0.434	0.441
SER CORR COEFF	-0.238	0.006	-0.018	-0.133	-0.105	-0.010	-0.294	-0.156	-0.223	0.054	0.145	-0.141	-0.142
COEFF OF VAR	0.713	0.483	0.429	0.349	0.416	0.349	0.294	0.277	0.410	0.449	0.418	0.607	0.218
MEAN LOGS	2.086	2.426	2.601	2.678	2.643	2.514	2.437	2.229	1.964	1.693	1.552	1.623	2.375
STD DEV LOGS	0.279	0.289	0.214	0.156	0.171	0.147	0.126	0.121	0.179	0.184	0.159	0.166	0.104
SKEWNESS LOGS	-0.112	-1.642	-0.948	-0.385	0.308	0.121	0.053	-0.214	0.002	0.250	0.753	0.871	-0.926
STD ERR SKEW LOGS	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.441	0.434	0.434	0.441
SER CORR LOGS	-0.220	-0.035	-0.039	-0.148	-0.067	-0.035	-0.280	-0.124	-0.214	0.007	0.168	-0.094	-0.115
COEFF OF VAR LOGS	0.119	0.082	0.059	0.059	0.065	0.059	0.052	0.054	0.091	0.109	0.103	0.133	0.044
% OF AVE FLOW	5.1	10.7	15.1	17.3	16.2	11.8	9.7	6.0	3.4	1.8	1.3	1.6	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1943-1972)

0.99	25.9	27.6	91.5	186.5	192.4	153.1	141.0	84.7	35.2	19.9	18.6	18.2	116.3
0.95	41.5	72.1	158.9	254.0	238.5	189.4	170.5	105.3	46.6	25.3	25.3	21.3	151.7
0.90	53.1	110.4	206.1	296.6	269.4	212.7	188.9	117.8	54.2	29.0	23.2	23.6	172.0
0.80	71.2	171.1	273.7	354.9	314.3	245.3	214.1	134.5	65.0	34.4	26.0	27.4	197.2
0.50	123.4	317.4	430.4	497.4	431.1	324.7	272.6	171.3	92.0	48.4	34.1	39.0	274.6
0.20	210.3	458.8	606.8	648.0	608.5	433.9	348.3	215.1	130.2	70.0	47.6	61.6	295.7
0.10	275.9	513.9	698.2	742.6	737.2	506.8	396.5	240.9	156.2	85.7	58.2	81.6	311.4
0.04	366.9	554.7	789.5	850.9	912.7	600.0	455.8	270.8	189.7	107.3	73.8	114.0	330.9
0.02	439.7	572.1	843.4	924.6	1053.1	670.2	499.0	291.4	215.0	124.5	87.1	144.3	342.0
0.01	516.6	582.9	887.8	993.1	1201.8	741.1	541.6	310.9	240.7	142.8	101.9	180.8	350.9

## STATION 12201500 SAMISH RIVER NR BURLINGTON, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1945	19.0	19.0	19.0	20.0	21.0	23.0	29.0	35.0	58.0
1946	22.0	22.0	23.0	23.0	24.0	26.0	28.0	31.0	72.0
1947	26.0	27.0	27.0	26.0	28.0	30.0	33.0	30.0	79.0
1948	28.0	26.0	29.0	29.0	31.0	33.0	37.0	45.0	80.0
1949	37.0	37.0	38.0	39.0	44.0	65.0	71.0	87.0	126.0
1950	25.0	25.0	26.0	27.0	30.0	39.0	45.0	51.0	73.0
1951	26.0	26.0	26.0	27.0	30.0	34.0	38.0	50.0	90.0
1952	18.0	18.0	18.0	19.0	20.0	21.0	23.0	29.0	56.0
1953	21.0	21.0	21.0	21.0	22.0	24.0	26.0	27.0	36.0
1954	21.0	21.0	22.0	22.0	23.0	27.0	34.0	47.0	80.0
1955	35.0	36.0	39.0	42.0	53.0	73.0	79.0	79.0	97.0
1956	30.0	31.0	34.0	37.0	44.0	60.0	60.0	77.0	124.0
1957	26.0	26.0	28.0	29.0	30.0	31.0	41.0	56.0	88.0
1958	23.0	23.0	23.0	23.0	25.0	26.0	29.0	32.0	47.0
1959	17.0	17.0	18.0	18.0	19.0	20.0	20.0	23.0	61.0
1960	25.0	26.0	28.0	29.0	30.0	38.0	61.0	77.0	123.0
1961	27.0	28.0	29.0	29.0	31.0	37.0	38.0	44.0	89.0
1962	25.0	25.0	26.0	27.0	29.0	31.0	34.0	43.0	77.0
1963	27.0	29.0	30.0	31.0	35.0	48.0	54.0	54.0	85.0
1964	22.0	23.0	24.0	25.0	27.0	29.0	33.0	39.0	67.0
1965	46.0	47.0	51.0	55.0	61.0	67.0	83.0	108.0	151.0
1966	21.0	23.0	23.0	24.0	29.0	35.0	35.0	42.0	75.0
1967	24.0	26.0	27.0	30.0	32.0	37.0	40.0	49.0	87.0
1968	20.0	20.0	21.0	22.0	24.0	24.0	28.0	37.0	79.0
1969	30.0	31.0	32.0	33.0	38.0	54.0	64.0	82.0	126.0
1970	23.0	24.0	25.0	27.0	30.0	32.0	45.0	56.0	83.0
1971	23.0	23.0	24.0	25.0	26.0	28.0	32.0	37.0	63.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1945-1971)

MEAN	25.3	25.9	27.0	28.0	30.8	36.1	41.8	51.4	84.1
MAXIMUM	46.0	47.0	51.0	55.0	61.0	73.0	83.0	108.0	151.0
MINIMUM	17.0	17.0	18.0	18.0	19.0	20.0	20.0	23.0	36.0
STANDARD DEVIATION	6.19	6.39	7.08	7.79	9.47	14.10	16.45	20.89	26.50
SKENNESS	1.716	1.590	1.702	1.806	1.754	1.385	1.081	1.057	0.748
STD ERROR OF SKENNESS	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448
SERIAL CORR COEFF	-0.103	-0.063	-0.063	-0.048	0.028	-0.010	-0.010	-0.043	-0.023
COEFF OF VARIATION	0.244	0.247	0.263	0.278	0.308	0.390	0.394	0.407	0.315
MEAN LOGS	1.393	1.402	1.418	1.434	1.472	1.531	1.592	1.679	1.904
STD DEVIATION LOGS	0.095	0.097	0.102	0.107	0.117	0.150	0.159	0.167	0.138
SKENNESS LOGS	0.928	0.769	0.860	0.860	0.880	0.729	0.442	0.258	-0.241
STD ERR SKENNESS LOGS	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448	0.448
SER CORR COEFF LOGS	-0.068	-0.020	0.009	0.029	0.108	0.062	0.051	0.036	0.078
COEFF OF VAR LOGS	0.068	0.069	0.072	0.075	0.080	0.098	0.100	0.100	0.072

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1971)

0.99	47.4	48.0	51.9	56.0	65.7	90.9	102.7	125.8	158.6
0.98	42.8	43.6	46.8	50.1	58.1	78.5	90.0	111.0	147.6
0.96	38.5	39.4	42.0	44.6	51.1	67.3	78.0	96.9	136.1
0.90	33.1	34.0	35.9	37.8	42.6	53.9	63.3	79.0	119.4
0.80	28.2	30.1	31.5	32.9	36.5	44.6	52.6	65.7	105.1
0.50	23.9	25.4	25.4	26.2	28.5	32.6	38.0	47.0	81.3
0.20	20.5	20.8	21.4	22.0	23.5	25.3	28.6	34.4	61.7
0.10	19.3	19.4	19.9	20.4	21.7	22.6	25.0	29.5	53.1
0.05	18.4	18.4	18.9	19.4	20.5	20.8	22.5	26.1	46.7
0.02	17.7	17.5	18.0	18.4	19.4	19.2	20.2	22.8	40.2
0.01	17.3	17.0	17.4	17.9	18.8	18.3	18.8	21.0	36.3

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1945-1971)

P95	P90	P75	P70	P50	P25	P10
26.0	31.0	58.0	74.0	170.0	320.0	530.0

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30										ANNUAL PEAK-FLOW DATA	
	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW (CFS)	DATE	REG. (R)
1944	891.	567.	383.	317.	286.	257.	236.	228.	197.	998.	12/03/43	
1945	2340.	1810.	1330.	1140.	760.	570.	491.	441.	374.	2820.	01/07/45	
1946	3740.	2920.	1720.	1160.	978.	673.	617.	597.	562.	4310.	10/25/45	
1947	2480.	1760.	1270.	902.	658.	551.	470.	424.	357.	2750.	12/11/46	
1948	1040.	953.	873.	736.	627.	471.	452.	433.	385.	1210.	10/19/47	
1949	3910.	2450.	1570.	1140.	770.	555.	478.	498.	418.	4990.	02/17/49	
1950	5020.	3460.	2120.	1370.	940.	764.	777.	718.	584.	5830.	12/28/49	
1951	3760.	2960.	1850.	1160.	873.	790.	695.	620.	482.	4030.	02/10/51	
1952	1070.	684.	747.	607.	460.	364.	332.	321.	292.	1210.	01/31/52	
1953	1760.	1560.	1300.	1090.	823.	581.	476.	429.	329.	2150.	01/31/53	
1954	1890.	1560.	1360.	1100.	893.	762.	661.	602.	476.	2330.	02/09/53	
1955	1900.	1330.	864.	678.	513.	459.	456.	422.	386.	2420.	02/08/55	
1956	1730.	1280.	807.	611.	612.	549.	519.	456.	427.	2000.	11/03/55	
1957	2680.	2080.	1510.	1290.	878.	603.	598.	515.	485.	3670.	12/09/56	
1958	1130.	835.	613.	530.	465.	436.	390.	330.	270.	1490.	01/16/58	
1959	2420.	1860.	1290.	837.	617.	513.	538.	506.	475.	2670.	11/12/58	
1960	2600.	1450.	1240.	914.	743.	542.	546.	488.	450.	2690.	11/25/59	
1961	3260.	2660.	2050.	1390.	1000.	742.	627.	550.	418.	3770.	02/21/61	
1962	1060.	967.	823.	703.	605.	458.	389.	354.	312.	1220.	01/07/62	
1963	1320.	1150.	1000.	702.	494.	477.	388.	356.	315.	1590.	11/19/62	
1964	1120.	961.	766.	614.	575.	549.	531.	502.	461.	1540.	11/26/63	
1965	3130.	2700.	2020.	1520.	1260.	859.	729.	625.	482.	3740.	01/29/65	
1966	1180.	1020.	904.	738.	521.	410.	377.	331.	280.	1280.	01/08/66	
1967	1980.	1500.	993.	925.	735.	657.	583.	459.	357.	2200.	02/04/67	
1968	2840.	2200.	1520.	981.	736.	559.	494.	453.	397.	3300.	12/25/67	
1969	2020.	1520.	1140.	774.	585.	545.	461.	410.	357.	2530.	01/04/69	
1970	786.	739.	646.	585.	465.	380.	341.	317.	281.	891.	01/19/70	
1971	3170.	2640.	2220.	1710.	1200.	845.	704.	615.	495.	3980.	01/30/71	
1972										3790.	03/06/72	
1973										3730.	12/26/72	
1974										3380.	01/24/74	
1975										1940.	01/17/75	
1976										6090.	12/02/75	
1977										1650.	01/18/77	
1978										3090.	12/02/77	
1979										1340.	11/03/78	

### HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1944-1979)

[illegible]

## STATION 12201950 ANDERSON CREEK NEAR BELLINGHAM, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1968	159.0	12-25-1967
1969	122.0	11- 9-1968
1971	273.0	1-30-1971
1972	219.0	12-17-1971
1973	206.0	12-26-1972
1974	235.0	1-24-1974
1975	106.0	1-17-1975
1976	303.0	12- 2-1975
1977	187.0	1-18-1977

## STATION 12202000 AUSTIN CREEK NR BELLINGHAM, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1968	308.0	12-25-1967
1969	355.0	1- 4-1969
1970	138.0	11- 4-1969
1973	471.0	12-26-1972
1974	368.0	1-24-1974
1975	116.0	1-17-1975
1976	446.0	12- 2-1975

## STATION 12202300 OLSEN CREEK NR BELLINGHAM, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1968	225.0	12-25-1967
1969	164.0	12- 3-1968
1970	112.0	11- 4-1969
1971	222.0	1-26-1971
1972	226.0	12-17-1971
1973	173.0	12-26-1972
1974	144.0	1-24-1974

## STATION 12203000 WHATCOM CREEK NEAR BELLINGHAM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1911													
1912	19.0	34.2	40.6	39.7	202	160	60.7	24.4	18.6	19.6	24.3	25.1	
1939		31.0	34.1	24.9	278	121	70.0	87.5	59.4	28.5	25.9	40.6	135
1940	41.9	22.4	22.8	281	148	214	23.9	25.9	1.59	3.92	14.8	4.32	84.5
1941	2.36	5.90	0.83	143	61.9	2.10	12.5	1.85	2.27	2.00	1.59	3.25	19.8
1942	14.5	59.2	32.0	51.4	0.58	39.5	12.7	18.9	55.6	6.64	0.88	4.81	49.3
1943	7.98	10.6	101	242	291	17.5	115	20.8	22.0	7.59	4.34	2.23	68.7
1944	1.87	1.92	2.37	87.5	118	44.6	10.3	4.28	4.28	1.44	1.03	1.11	22.9
1945	2.11	3.18	81.9	374	166	164	48.3	7.28	19.9	2.54	2.72	1.43	72.6
1946	25.2	31.9	165	306	245	151	165	1.51	1.29	0.57	0.30	0.53	114
1974		9.65	0.54	42.6	167	69.1	0.88	1.50	0.67	18.9	0.92	0.99	47.2
1975		89.0											
1976													

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW(CFS)	DATE
1912	739.0	11-20-1911
1940	412.0	3-16-1940
1941	473.0	1-23-1941
1942	538.0	12- 6-1941
1943	473.0	4- 9-1943
1944	154.0	1-25-1944
1945	590.0	1-10-1945
1946	505.0	3-30-1946

## STATION 12203500 WHATCOM CR BLW HATCHERY NR BELLINGHAM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1946	38.2	342	176	317	284	158	199	6.30	5.67	5.05	5.13	5.57	125
1947	3.65	258	211	219	219	121	52.3	21.2	6.80	7.34	7.08	5.48	79.7
1948	67.8	141	170	214	194	175	37.6	10.2	18.4	7.30	7.05	5.45	84.8
1949	6.28	208	344	35.6	326	250	6.23	18.2	4.92	6.59	7.29	5.67	100
1950	5.69	50.5	469	333	338	437	191	11.3	4.92	6.59	6.21	5.07	154
1951	5.03	8.62	268	357	387	104	7.38	7.57	6.08	5.61	5.02	3.82	95.8
1952	5.06	5.45	7.34	7.09	115	89.7	70.9	36.5	9.93	9.26	8.58	3.67	30.6
1953	5.71	4.47	2.33	5.88	180	112	58.2	13.1	11.4	12.0	10.0	6.70	34.1
1954	5.37	8.45	41.9	325	226	13.9	8.59	8.10	7.93	6.73	4.35	3.26	86.1
1955	2.40	5.94	24.0	212	261	16.6	134	16.6	14.6	10.9	9.58	7.03	58.1
1956	6.30	33.1	397	229	19.6	199	88.7	10.8	8.44	7.09	5.90	5.41	85.1
1957			183	223	136	98.0	60.4	9.12	8.70	6.92	7.28	6.98	
1958			283	153	22.4	48.1	96.1	43.7	7.50	5.88	6.60	7.09	68.2

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1946-1969)

MEAN	13.6	82.1	230.8	201.7	203.7	140.2	77.7	16.4	9.0	7.3	6.9	5.7	83.5
MAXIMUM	67.8	342.0	469.0	357.0	387.0	437.0	199.0	43.7	18.4	12.0	10.0	7.1	154.0
MINIMUM	2.4	4.5	2.3	5.9	19.6	13.9	6.2	6.3	4.9	4.2	4.4	3.3	30.6
STD DEVIATION	19.58	105.28	155.81	121.65	113.46	112.42	63.89	11.49	3.95	2.23	1.70	1.21	34.72
SKWENESS	2.439	1.636	-0.156	-0.555	-0.171	1.578	0.863	1.656	1.498	0.970	0.417	-0.723	0.368
STD ERR SKEW	0.637	0.637	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.637
SER CORR COEFF	-0.171	0.249	-0.201	-0.100	0.282	0.282	-0.431	-0.382	-0.157	0.146	-0.482	-0.258	0.300
COEFF OF VAR	1.436	1.282	0.675	0.603	0.557	0.802	0.822	0.702	0.428	0.305	0.245	0.211	0.416
MEAN LOGS	0.890	1.505	2.082	2.087	2.189	1.994	1.686	1.136	0.923	0.846	0.859	0.746	1.881
STD DEV LOGS	0.418	0.680	0.734	0.621	0.414	0.429	0.514	0.257	0.184	0.127	0.107	0.103	0.206
SKWENESS LOGS	1.468	0.099	-1.606	-1.609	-1.584	-0.894	-0.807	0.809	0.775	0.297	-0.078	-1.185	-0.804
STD ERR SKEW LOGS	0.637	0.637	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.637
SER CORR LOGS	-0.250	0.664	0.124	0.165	0.116	0.372	-0.433	-0.495	-0.018	0.191	-0.509	-0.288	0.328
COEFF OF VAR LOGS	0.469	0.452	0.353	0.298	0.189	0.215	0.305	0.226	0.178	0.150	0.129	0.138	0.109
% OF AVE FLOW	1.4	8.3	23.2	20.3	20.5	14.1	7.8	1.6	0.9	0.7	0.7	0.6	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1969)

0.99	2.3	0.9	0.4	1.0	6.1	5.3	1.6	4.9	4.3	3.8	3.7	2.7	19.3
0.95	2.6	2.5	4.4	7.4	23.8	15.7	5.5	6.0	4.9	4.4	4.5	3.6	31.8
0.90	2.9	4.4	12.8	18.3	43.4	26.2	10.0	6.9	5.4	4.9	4.9	4.1	40.4
0.80	3.5	8.5	38.7	46.6	80.9	46.1	19.3	8.2	6.1	5.5	5.5	4.7	52.6
0.50	6.2	31.1	186.1	176.2	196.4	114.0	56.9	12.6	8.0	6.9	6.8	5.8	81.0
0.20	15.2	118.5	481.0	393.2	337.1	229.3	133.7	21.7	11.3	8.9	8.3	6.8	114.2
0.10	28.0	241.7	647.7	505.5	400.1	306.6	192.6	30.1	13.9	10.3	9.2	7.2	132.2
0.04	60.8	522.9	794.0	600.2	450.5	396.9	268.4	44.5	17.7	12.0	10.3	7.6	151.1
0.02	107.3	866.3	863.4	644.2	473.3	457.0	323.1	58.5	21.1	13.4	11.1	7.7	162.8
0.01	187.5	1369.7	909.2	672.7	488.1	510.5	374.8	75.8	24.8	14.7	11.8	7.9	172.8

## STATION 12203500 WHATCOM CR BLW HATCHERY NW BELLINGHAM, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1947	2.8	2.9	3.0	3.2	3.6	4.2	4.8	4.8	5.1
1948	4.5	4.8	4.9	5.1	5.4	6.0	6.4	6.6	17.0
1949	4.1	4.1	4.1	4.3	5.4	5.7	6.4	6.5	9.0
1950	3.8	3.9	4.0	4.1	5.1	5.7	5.7	6.2	6.2
1951	2.6	2.7	2.9	3.1	3.5	4.4	5.0	4.9	5.3
1952	3.3	3.3	3.4	3.5	3.8	4.3	4.6	4.8	5.1
1953	1.1	1.4	1.5	1.7	2.3	2.9	3.8	4.3	5.6
1954	4.0	4.3	4.7	4.8	5.0	6.0	6.8	7.5	8.9
1955	1.3	1.5	1.6	1.8	2.2	2.6	3.2	3.5	4.8
1956	4.5	4.7	5.3	5.5	5.9	6.1	6.5	7.3	9.2
1969	5.7	5.9	6.1	6.3	6.6	6.9	7.0	7.1	7.7

## LOWEST MEAN FLOW STATISTICS (YEARS 1947-1969)

MEAN	3.5	3.6	3.8	3.9	4.4	5.0	5.5	5.8	7.6
MAXIMUM	5.7	5.9	6.1	6.3	6.6	6.9	7.0	7.5	17.0
MINIMUM	1.1	1.4	1.5	1.7	2.2	2.6	3.2	3.5	4.8
STANDARD DEVIATION	1.42	1.39	1.46	1.46	1.45	1.40	1.26	1.36	3.55
SKEWNESS	-0.367	-0.215	-0.144	-0.129	-0.284	-0.550	-0.511	-0.261	2.054
STD ERROR OF SKEWNESS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661
SERIAL CORR COEFF	-0.107	-0.130	-0.176	-0.136	-0.016	-0.180	-0.274	-0.340	-0.073
COEFF OF VARIATION	0.411	0.388	0.388	0.370	0.327	0.280	0.232	0.235	0.466
MEAN LOGS	0.493	0.518	0.540	0.564	0.622	0.679	0.725	0.750	0.850
STD DEVIATION LOGS	0.228	0.202	0.200	0.185	0.160	0.138	0.110	0.109	0.167
SKEWNESS LOGS	-1.176	-0.965	-0.910	-0.831	-0.766	-0.959	-0.859	-0.560	1.190
STD ERR SKEWNESS LOGS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661
SER CORR COEFF LOGS	-0.217	-0.238	-0.244	-0.250	-0.131	-0.234	-0.299	-0.360	-0.084
COEFF OF VAR LOGS	0.463	0.390	0.370	0.329	0.258	0.204	0.152	0.145	0.196

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1947-1969)

0.99	6.7	7.0	7.4	7.6	8.0	8.0	8.2	9.1	23.7
0.98	6.5	6.7	7.0	7.2	7.6	7.7	7.9	8.7	19.4
0.96	6.1	6.3	6.6	6.8	7.2	7.4	7.6	8.3	15.8
0.90	5.5	5.6	5.9	6.0	6.5	6.9	7.1	7.6	11.8
0.80	4.8	4.9	5.1	5.3	5.7	6.3	6.6	7.0	9.4
0.50	3.4	3.5	3.7	3.9	4.4	5.0	5.5	5.7	6.6
0.20	2.1	2.3	2.4	2.6	3.1	3.7	4.4	4.6	5.1
0.10	1.5	1.8	1.9	2.1	2.6	3.1	3.8	4.0	4.7
0.05	1.1	1.4	1.5	1.7	2.1	2.6	3.3	3.6	4.4
0.02	0.8	1.0	1.1	1.3	1.7	2.1	2.8	3.1	4.2
0.01	0.6	0.8	0.9	1.1	1.5	1.8	2.5	2.8	4.0

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1947-1969)

P95	P90	P75	P70	P50	P25	P10
4.0	4.5	6.1	6.4	8.3	73.0	340.0

## STATION 12203500 WHATCOM CR RLW HATCHERY NM HELLINGHAM, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA	REG.(R)
1940										412.	03/16/40 R
1941										473.	01/23/41 R
1942										538.	12/06/41 R
1943										473.	04/09/43 R
1944										154.	01/25/44 R
1945										590.	01/10/45 R
1946	526.	497.	427.	401.	362.	295.	281.	277.	241.	544.	03/31/46 R
1947	638.	632.	614.	588.	377.	299.	235.	210.	153.	638.	01/27/47 R
1948	490.	480.	450.	394.	305.	214.	192.	166.	160.	505.	01/05/48 R
1949										682.	02/19/49 R
1950	1280.	1110.	933.	615.	432.	282.	232.	251.	192.	1350.	02/29/49 R
1951	1080.	1060.	928.	592.	479.	425.	412.	400.	302.	1100.	02/11/51 R
1952	330.	267.	266.	213.	118.	115.	97.	78.	54.	381.	03/18/52 R
1953	600.	561.	493.	303.	174.	146.	114.	89.	62.	685.	02/04/53 R
1954	805.	782.	720.	624.	497.	393.	327.	248.	166.	821.	12/12/53 R
1955	600.	589.	549.	459.	245.	241.	166.	158.	109.	614.	02/08/55 R
1956	426.	426.	417.	415.	400.	335.	229.	212.	164.	432.	12/12/55 R
1968										524.	12/27/67 R
1969	412.	402.	396.	370.	302.	250.	194.	150.	125.	424.	12/05/68 R
1970										514.	01/21/70 R
1971										1060.	01/30/71 R
1972										1040.	03/06/72 R
1973										574.	12/26/72 R
1974										1040.	01/24/74 R

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1940-1974)

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1940-1974)											
	W R C ESTIMATE										SYSTEMATIC RECORD
MEAN	654.1	620.9	569.7	472.5	349.4	285.1	234.7	211.5	159.5		
MAXIMUM	1280.0	1110.0	933.0	696.0	497.0	426.0	412.0	400.0	302.0		
MINIMUM	330.0	267.0	266.0	213.0	118.0	115.0	97.0	76.0	54.0		
STANDARD DEVIATION	279.78	253.99	207.78	148.38	124.17	100.17	92.60	89.14	69.54		
SKEWNESS	1.290	0.923	0.691	-0.123	-0.580	-0.128	0.371	0.428	0.395		
STD ERROR OF SKEWNESS	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637		
SERIAL CORR COEFF	0.247	0.174	0.141	0.091	-0.083	-0.047	0.039	0.245	0.293		
COEFF OF VARIATION	0.428	0.409	0.365	0.314	0.355	0.451	0.395	0.421	0.436		
MEAN LOGS	2.784	2.761	2.729	2.652	2.510	2.426	2.336	2.285	2.158	2.7892	
STD DEVIATION LOGS	0.170	0.175	0.159	0.151	0.193	0.176	0.186	0.206	0.218	0.1576	
SKEWNESS LOGS	0.514	-0.006	-0.082	-0.759	-1.276	-0.400	-0.521	-0.718	-0.833	-0.6450	
STD ERR SKEWNESS LOGS	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	2.7717	
SER CORR COEFF LOGS	0.153	0.041	0.029	0.100	0.019	0.013	0.051	0.240	0.320	0.1966	
COEFF OF VAR LOGS	0.061	0.063	0.058	0.057	0.077	0.072	0.080	0.090	0.101	0.1260	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1940-1974)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.05	0.02	0.01	167.5
MEAN	283.4	225.5	223.8	165.6	78.0	80.6	68.3	50.3	33.2	0.0	167.5
STD DEVIATION	339.1	297.1	291.1	237.3	137.6	125.7	101.3	81.3	56.9	368.4	260.9
SKEWNESS	377.4	344.0	334.3	282.0	178.2	155.1	123.1	102.4	73.5	401.3	323.7
COEFF OF VARIATION	434.1	410.9	394.6	341.6	234.6	195.3	153.6	132.6	97.4	451.0	412.4
MEAN LOGS	587.5	576.9	538.9	468.8	354.6	282.9	225.2	203.8	154.2	549.2	620.4
STD DEVIATION LOGS	833.7	809.5	730.8	604.7	470.0	376.5	313.1	289.2	221.3	819.0	871.4
SKEWNESS LOGS	1021.0	966.0	854.5	675.2	520.5	423.8	368.7	337.1	257.9	988.6	1014.3
STD ERR SKEWNESS LOGS	1287.0	1166.3	1007.5	747.4	568.2	470.8	422.9	388.8	296.2	1259.5	1171.1
SER CORR COEFF LOGS	1507.6	1317.1	1119.4	791.5	586.4	498.6	461.9	421.8	319.8	1480.4	1272.9
COEFF OF VAR LOGS	1748.3	1469.2	1229.6	829.2	602.6	521.5	497.6	450.7	339.9	1725.6	1363.7

## STATION 12204400 NOOKSACK RIVER TRIBUTARY NEAR GLACIER, WASH.

ANNUAL PEAK FLOW DATA			ANNUAL PEAK FLOW STATISTICS (YEARS 1956-1979)												W R C		SYSTEMATIC RECORD	
WATER YEAR			MEAN LOGS												ESTIMATE			
FLOW(CFS)			STANDARD DEVIATION LOGS												0.0			
DATE			SKEWNESS LOGS															
1956	181.0	12- 3-1955													1.7372			1.7372
1957	121.0	10-17-1956													0.2378			0.2378
1958	48.0	1-16-1958																0.426
1959	140.0	12- 1-1958																
1960	71.0	11-23-1959																
1962	68.0	1- 7-1962																
1963	97.0	11-19-1962																
1964	43.0	10-21-1963																
1965	32.0	11- 4-1964																
1966	34.0	5- 6-1966																
1967	38.0	6-19-1967																
1968	49.0	9-17-1968																
1969	36.0	1- 4-1969																
1970	42.0	6- 3-1970																
1971	82.0	1-30-1971																
1972	50.0	7-12-1972																
1973	18.0	12-26-1972																
1974	41.0	6-15-1974																
			ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES															
			LOG-PEARSON III ANALYSIS (YEARS 1956-1979)															
			0.99												15.3			18.2
			0.95												22.2			23.8
			0.90												27.9			27.9
			0.80												34.4		34.2	
			0.50												54.6		52.5	
			0.20												86.6		85.3	
			0.10												110.1		112.4	
			0.04												142.4		153.5	
			0.02												168.1		189.7	
			0.01												195.2		230.9	

## STATION 12205000 N.F. NOOKSACK R RLV CASCADE CR NR GLACIER, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)												ANNUAL				
YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT				
1938	746	885	684	432	184	309	611	1096	1506	1158	639	504				
1939	481	402	767	648	206	335	749	1419	1402	1435	775	430				
1940	613	687	1354	605	463	569	567	1280	1018	725	537	426				
1941	1011	405	685	428	415	352	544	881	893	786	473	625				
1942	995	903	820	249	215	215	462	843	1228	1067	606	442				
1943	296	539	598	487	351	306	864	850	1425	1550	670	431				
1944	434	355	478	397	226	261	372	863	1176	785	527	602				
1945	495	661	453	550	513	266	322	1187	1294	1130	599	494				
1946	855	736	491	419	353	328	552	1346	1606	1478	819	478				
1947	501	366	560	368	731	502	705	1336	1332	1023	552	476				
1948	1039	601	613	383	245	191	312	1329	2459	1185	936	793				
1949	622	460	257	178	208	425	720	1579	1461	1137	758	643				
1950	501	1070	594	472	508	490	474	949	2190	1955	1261	945				
1951	1219	1023	1186	471	792	313	637	1081	1275	1091	581	466				
1952	658	397	348	179	366	221	650	1340	1322	1231	732	418				
1953	275	216	273	827	535	309	490	1103	1252	1517	950	716				
1954	1001	1019	746	433	651	393	427	1115	1470	1917	1244	784				
1955	755	1553	576	304	251	192	328	764	1967	1759	955	566				
1956	720	1015	438	326	165	202	644	1604	2194	1834	847	638				
1957	916	570	706	244	341	383	510	1532	1364	974	623	543				
1958	526	399	439	629	763	366	389	1175	1262	815	555	470				
1959	739	638	1126	642	266	337	708	1103	1851	1606	677	961				
1960	896	921	584	391	536	370	685	1014	1551	1281	699	482				
1961	830	667	578	818	885	485	529	1080	1352	1232	780	467				
1962	585	518	450	435	586	226	595	686	1352	1150	1007	644				
1963	720	942	954	435	965	359	439	841	1081	1022	778	649				
1964	1078	1204	665	551	325	268	401	838	1889	1867	1048	696				
1965	748	541	480	453	556	408	589	968	1457	1266	886	431				
1966	717	926	552	352	247	446	730	1105	1327	1439	808	506				
1967	592	543	1248	466	381	326	271	1025	2408	1654	963	720				
1968	1358	784	647	1126	759	711	348	892	1755	1582	862	877				
1969	653	830	498	397	219	269	672	1574	1992	1582	642	996				
1970	587	578	501	409	432	315	372	742	1612	1143	697	438				
1971	421	534	405	593	862	351	464	1481	1703	2068	1238	589				
1972	541	658	322	345	1061	1061	581	1503	1857	1668	931	591				
1973	367	500	791	445	258	280	304	1093	1339	1048	658	483				
1974	605	741	803	859	311	603	601	1055	2266	2112	1386	734				
1975	334	653	577	413	277	314	253	956	1612	1815	907	536				
1976	867	979	1197	673	360	219	451	1249	1334	1761	1290	864				
1977	417	374	427	400	344	272	612	742	1360	780	893	494				
1978	421	791	896	439	342	495	441	780	1385	1148	838	1122				
1979	412	546	232	147	244	547	423	1033	1112	941	630	676				



## STATION 12205000 N.F. NOOKSACK R BLW CASCADE CR NR GLACIER, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1938-1979)

MEAN	679.7	693.6	644.3	480.5	432.3	371.2	519.0	1112.7	1554.8	1337.5	815.6	615.4	773.1
MAXIMUM	1358.0	1553.0	1354.0	1126.0	965.0	1061.0	864.0	1504.0	2459.0	2112.0	1386.0	1122.0	1011.0
MINIMUM	275.0	216.0	232.0	147.0	165.0	191.0	253.0	686.0	893.0	725.0	473.0	418.0	540.0
STD DEVIATION	254.15	270.88	273.50	199.26	218.24	160.86	189.08	262.93	380.51	384.47	227.04	179.13	116.51
SKEWNESS	0.629	0.830	0.983	1.052	0.935	2.232	0.117	0.383	0.767	0.336	0.821	1.067	0.143
STD ERR SKEW	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
SER CORR COEFF	-0.040	0.075	-0.103	-0.049	0.042	-0.105	-0.190	0.200	0.083	0.127	0.198	-0.024	-0.054
COEFF OF VAR	0.374	0.391	0.425	0.415	0.496	0.433	0.287	0.236	0.245	0.287	0.278	0.291	0.151
MEAN LOGS	2.802	2.809	2.772	2.646	2.587	2.539	2.696	3.035	3.180	3.108	2.896	2.773	2.883
STD DEV LOGS	0.166	0.173	0.182	0.184	0.206	0.159	0.132	0.103	0.103	0.127	0.116	0.117	0.066
SKEWNESS LOGS	-0.185	-0.277	-0.069	-0.411	0.247	0.708	-0.407	0.009	0.267	-0.111	0.280	0.621	-0.148
STD ERR SKEW LOGS	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
SER CORR LOGS	-0.009	-0.022	-0.077	-0.046	0.080	-0.076	-0.173	0.197	0.161	0.130	0.272	-0.006	-0.037
COEFF OF VAR LOGS	0.059	0.062	0.065	0.069	0.080	0.063	0.049	0.034	0.032	0.041	0.040	0.042	0.023
% OF AVE FLOW	7.3	7.5	7.0	5.2	4.7	4.0	5.6	12.0	16.8	14.4	8.8	6.6	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1938-1979)

0.99	247.5	235.0	219.2	145.7	139.6	179.1	224.0	625.8	914.1	634.6	446.2	358.7	527.8
0.95	331.6	324.3	295.3	210.5	183.1	205.7	291.7	734.4	1044.3	786.2	518.0	401.1	591.5
0.90	385.8	382.2	345.5	253.1	213.2	224.5	332.9	800.0	1125.4	879.4	563.4	429.4	627.6
0.80	461.5	463.2	417.1	313.0	257.9	252.8	387.8	887.4	1236.3	1005.2	626.4	470.6	673.4
0.50	641.7	655.5	595.0	455.1	379.0	331.3	507.4	1082.4	1496.4	1290.6	777.3	576.7	767.3
0.20	877.4	903.9	843.0	635.0	572.5	461.4	644.7	1321.0	1838.3	1644.4	981.7	735.1	869.7
0.10	1026.6	1058.4	1008.6	744.0	718.4	562.8	722.6	1466.3	2059.6	1860.8	1117.1	848.4	926.7
0.04	1207.9	1243.0	1218.8	870.9	823.1	709.9	809.5	1639.2	2335.8	2118.3	1289.3	1001.5	990.0
0.02	1336.1	1373.5	1375.9	958.4	1050.6	834.3	867.2	1761.7	2540.3	2300.4	1618.8	1122.9	1032.3
0.01	1464.6	1498.6	1533.3	1040.3	1271.2	972.2	920.1	1874.8	2744.2	2475.5	1549.6	1071.3	

STATION 12205000 N.F. NODKACK R BLW CASCADE CH NR GLACIER, WASH

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1939	149.0	150.0	151.0	154.0	165.0	223.0	389.0	468.0	464.0
1940	150.0	160.0	188.0	257.0	312.0	432.0	539.0	619.0	696.0
1941	168.0	185.0	220.0	273.0	324.0	367.0	394.0	464.0	549.0
1942	187.0	187.0	187.0	194.0	214.0	233.0	240.0	376.0	576.0
1943	171.0	172.0	178.0	198.0	259.0	315.0	376.0	425.0	425.0
1944	141.0	142.0	146.0	155.0	190.0	244.0	296.0	338.0	360.0
1945	151.0	160.0	176.0	194.0	242.0	373.0	420.0	442.0	488.0
1946	168.0	172.0	181.0	214.0	272.0	337.0	367.0	347.0	531.0
1947	204.0	216.0	220.0	224.0	239.0	347.0	413.0	426.0	474.0
1948	159.0	163.0	169.0	175.0	217.0	266.0	266.0	358.0	514.0
1949	110.0	112.0	120.0	127.0	134.0	162.0	213.0	267.0	361.0
1950	270.0	272.0	276.0	291.0	367.0	436.0	489.0	505.0	604.0
1951	249.0	252.0	263.0	282.0	307.0	538.0	516.0	687.0	833.0
1952	130.0	130.0	131.0	133.0	149.0	239.0	246.0	266.0	361.0
1953	150.0	150.0	156.0	169.0	202.0	226.0	252.0	289.0	403.0
1954	220.0	225.0	230.0	242.0	362.0	491.0	487.0	548.0	720.0
1955	169.0	172.0	174.0	177.0	190.0	221.0	249.0	329.0	604.0
1956	129.0	130.0	130.0	136.0	145.0	175.0	231.0	283.0	478.0
1957	140.0	140.0	146.0	148.0	153.0	227.0	322.0	420.0	532.0
1958	236.0	241.0	250.0	290.0	356.0	415.0	447.0	456.0	507.0
1959	190.0	197.0	199.0	203.0	270.0	302.0	420.0	574.0	628.0
1960	177.0	181.0	184.0	200.0	226.0	430.0	366.0	463.0	615.0
1961	288.0	299.0	326.0	363.0	432.0	495.0	603.0	629.0	676.0
1962	202.0	204.0	209.0	211.0	325.0	397.0	487.0	493.0	528.0
1963	200.0	208.0	221.0	239.0	351.0	615.0	574.0	673.0	725.0
1964	227.0	229.0	238.0	251.0	263.0	296.0	366.0	452.0	683.0
1965	241.0	243.0	249.0	263.0	286.0	425.0	457.0	460.0	539.0
1966	190.0	194.0	200.0	207.0	223.0	292.0	307.0	381.0	525.0
1967	188.0	188.0	200.0	215.0	242.0	354.0	391.0	600.0	599.0
1968	246.0	249.0	257.0	264.0	271.0	627.0	782.0	825.0	896.0
1969	156.0	157.0	160.0	165.0	186.0	211.0	286.0	344.0	477.0
1970	234.0	243.0	251.0	269.0	317.0	371.0	384.0	415.0	473.0
1971	185.0	185.0	196.0	205.0	240.0	309.0	424.0	451.0	481.0
1972	175.0	177.0	181.0	185.0	203.0	307.0	362.0	424.0	477.0
1973	179.0	183.0	189.0	206.0	230.0	289.0	362.0	448.0	443.0
1974	166.0	174.0	174.0	210.0	242.0	441.0	536.0	600.0	622.0
1975	167.0	187.0	195.0	219.0	277.0	296.0	337.0	398.0	429.0
1976	130.0	133.0	146.0	150.0	205.0	287.0	414.0	593.0	718.0
1977	190.0	195.0	200.0	218.0	271.0	305.0	362.0	338.0	374.0
1978	188.0	194.0	212.0	228.0	259.0	333.0	371.0	543.0	538.0
1979	98.0	100.0	108.0	127.0	144.0	170.0	200.0	274.0	358.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1939-1979)

MEAN	182.6	186.6	195.3	210.4	247.2	337.3	388.2	457.1	543.6
MAXIMUM	288.0	299.0	326.0	363.0	432.0	627.0	782.0	825.0	896.0
MINIMUM	98.0	100.0	108.0	122.0	134.0	162.0	200.0	266.0	358.0
STANDARD DEVIATION	42.39	43.47	45.46	52.04	68.84	114.43	118.91	126.19	127.67
SKEWNESS	0.435	0.416	0.487	0.503	0.508	0.686	0.898	0.707	0.711
STD ERROR OF SKEWNESS	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369
SERIAL CORR COEFF	0.053	0.025	-0.005	-0.062	-0.148	-0.059	-0.011	-0.047	-0.047
COEFF OF VARIATION	0.232	0.233	0.233	0.247	0.278	0.339	0.306	0.276	0.235
MEAN LOGS	2.250	2.259	2.279	2.310	2.377	2.504	2.570	2.644	2.724
STD DEVIATION LOGS	0.102	0.103	0.102	0.108	0.122	0.147	0.131	0.119	0.100
SKEWNESS LOGS	-0.218	-0.250	-0.215	-0.162	-0.159	-0.051	-0.038	0.013	0.148
STD ERR SKEWNESS LOGS	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369	0.369
SER CORR COEFF LOGS	0.044	0.021	-0.002	-0.048	-0.099	-0.018	0.030	0.007	-0.037
COEFF OF VAR LOGS	0.045	0.046	0.045	0.047	0.052	0.059	0.051	0.045	0.037

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1939-1979)

	0.99	0.98	0.96	0.90	0.80	0.50	0.20	0.10	0.05	0.02	0.01
	295.9	280.3	263.6	238.9	217.2	179.4	146.4	130.9	119.1	106.8	99.2
	301.6	286.0	269.2	244.3	222.2	183.5	149.4	133.4	121.1	108.3	100.3
	316.8	300.1	282.1	255.6	232.3	191.7	156.4	139.9	127.3	114.1	105.9
	354.3	333.6	311.7	279.9	252.4	205.5	165.8	147.6	133.9	119.6	110.9
	443.6	414.4	383.8	339.8	302.3	239.7	188.2	165.1	147.8	130.2	119.5
	693.6	634.5	574.4	491.9	424.9	320.0	240.1	206.2	181.7	157.5	143.1
	743.9	686.6	627.9	546.4	479.2	372.1	288.1	251.8	225.2	198.4	182.3
	833.8	773.5	711.6	625.6	554.5	440.6	350.3	310.9	281.7	252.2	234.2
	926.6	864.4	801.0	713.4	641.4	526.7	435.9	396.2	366.6	336.6	318.3

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1939-1979)

	P95	P90	P75	P70	P50	P25	P10
	210.0	250.0	370.0	410.0	590.0	1000.0	1600.0

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	DATE	REG. (H)
1938	4820.	3420.	1950.	1630.	1510.	1440.	1270.	1150.	920.	9670.	10/28/37	
1939	3470.	2920.	2140.	1690.	1560.	1520.	1430.	1300.	1060.	5100.	05/28/39	
1940	3660.	3030.	2320.	1790.	1480.	1160.	1020.	915.	812.	4950.	12/10/39	
1941	4870.	4280.	2790.	1690.	1110.	916.	868.	782.	705.	6300.	10/19/40	
1942	5420.	3860.	2340.	1450.	1370.	1250.	1080.	948.	776.	7450.	12/02/41	
1943	2510.	2250.	2090.	1930.	1660.	1520.	1340.	1190.	971.	3250.	07/03/43	
1944	2370.	1570.	1340.	1280.	1220.	1040.	950.	845.	721.	3900.	12/03/43	
1945	2360.	2230.	1820.	1530.	1430.	1320.	1070.	1070.	841.	4100.	12/05/44	
1946	6690.	4780.	2660.	1970.	1810.	1660.	1560.	1390.	1080.	8490.	10/25/45	
1947	2770.	2430.	1910.	1590.	1470.	1340.	1260.	1130.	956.	6100.	10/24/46	
1948	4290.	4250.	3730.	3380.	2760.	2080.	1720.	1510.	1170.	6690.	10/19/47	
1949	2750.	2730.	2480.	2010.	1800.	1550.	1420.	1280.	1050.	3540.	10/04/48	
1950	4390.	3420.	2970.	2590.	2490.	2090.	1830.	1640.	1300.	10300.	11/26/49	
1951	3980.	2850.	1800.	1490.	1360.	1260.	1170.	1040.	876.	6050.	12/24/50	
1952	2380.	2090.	1800.	1700.	1630.	1440.	1320.	1210.	951.	6650.	06/04/52	
1953	3190.	2150.	2270.	1880.	1550.	1410.	1310.	1230.	1010.	4710.	09/30/53	
1954	3120.	2410.	2270.	2140.	2000.	1760.	1590.	1480.	1160.	4040.	10/10/53	
1955	4270.	3860.	3120.	2420.	2020.	1930.	1650.	1410.	1060.	6460.	11/22/54	
1956	6100.	4580.	3170.	2800.	2480.	2190.	1910.	1650.	1300.	6960.	11/03/55	
1957	3500.	2320.	2100.	1760.	1610.	1470.	1320.	1160.	926.	6040.	10/17/56	
1958	2230.	2030.	1960.	1650.	1450.	1260.	1090.	961.	798.	3460.	10/30/57	
1959	3810.	3070.	2360.	1970.	1850.	1750.	1590.	1370.	1150.	5860.	12/01/58	
1960	3210.	2810.	2070.	1800.	1860.	1430.	1300.	1140.	970.	4810.	11/23/59	
1961	3970.	3030.	2580.	2140.	2010.	1710.	1450.	1280.	1030.	5910.	10/23/60	
1962	2900.	3200.	1810.	1570.	1370.	1280.	1210.	1080.	906.	4010.	01/07/62	
1963	3970.	3210.	2170.	1950.	1230.	1100.	1060.	971.	803.	9000.	11/19/62	
1964	5490.	3610.	2500.	2230.	1960.	1900.	1670.	1450.	1130.	9680.	10/21/63	
1965	2020.	1920.	1830.	1670.	1550.	1400.	1290.	1180.	935.	2410.	05/16/65	
1966	2490.	2350.	1730.	1630.	1490.	1420.	1310.	1190.	1000.	4140.	11/03/65	
1967	3780.	3430.	3110.	2800.	2430.	2060.	1770.	1550.	1170.	4860.	12/13/66	
1968	5800.	3790.	2680.	1970.	1770.	1690.	1490.	1320.	1070.	8020.	06/02/68	
1969	3640.	2640.	2630.	2490.	2290.	1860.	1560.	1340.	1150.	5080.	09/23/69	
1970	2760.	2390.	2150.	1650.	1610.	1380.	1230.	1060.	834.	4690.	11/04/69	
1971	3740.	3240.	2760.	2630.	2180.	1920.	1780.	1640.	1270.	5610.	01/30/71	
1972	3720.	3120.	2460.	2360.	2040.	1930.	1720.	1510.	1270.	5610.	07/12/72	
1973	3470.	3270.	1800.	1540.	1390.	1320.	1210.	1050.	823.	4310.	05/24/73	
1974	4260.	3270.	3200.	2840.	2440.	2260.	1960.	1730.	1390.	4880.	01/16/74	
1975	3310.	3180.	3010.	2820.	1910.	1750.	1620.	1350.	1020.	3540.	07/08/75	
1976	5000.	4000.	2490.	1910.	1780.	1660.	1510.	1420.	1160.	7720.	12/03/75	
1977	2260.	2050.	1710.	1540.	1370.	1080.	1020.	970.	813.	3120.	06/01/77	
1978	3550.	2630.	1920.	1550.	1400.	1270.	1150.	1140.	962.	5960.	11/01/77	
1979	2190.	1700.	1430.	1320.	1190.	1100.	1040.	946.	804.	5030.	11/07/78	

## STATION 12205000 N.F. NOOKSACK R BLW CASCADE CR NR GLACIER, WASH.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1938-1979)

	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKEWNESS	STD ERROR OF SKEWNESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SERIAL CORR COEFF LOGS	COEFF OF VAR LOGS	W R C ESTIMATE	SYSTEMATIC RECORD
	3678.1	6690.0	2020.0	1139.64	0.725	0.365	-0.145	0.310	3.546	0.132	0.098	0.124	3.7246	3.7246
	2930.0	4780.0	1570.0	781.13	0.496	0.365	0.005	0.267	3.452	0.116	0.084	0.124	0.1463	0.1463
	2318.1	3730.0	1340.0	527.36	0.496	0.365	0.005	0.267	3.277	0.098	0.084	0.124	0.0090	0.0090
	1946.4	3380.0	1280.0	483.29	1.006	0.365	0.036	0.248	3.179	0.098	0.084	0.124		
	1726.0	2760.0	1110.0	404.98	0.787	0.365	0.055	0.235	3.026	0.098	0.084	0.124		
	1545.1	2260.0	916.0	338.88	0.327	0.365	0.122	0.198	2.826	0.098	0.084	0.124		
	1385.0	1960.0	916.0	274.55	0.244	0.365	0.142	0.191	2.626	0.098	0.084	0.124		
	1237.6	1730.0	782.0	236.49	0.203	0.365	0.163	0.188	2.426	0.098	0.084	0.124		
	1002.5	1390.0	705.0	171.53	0.297	0.365	0.188	0.145	2.226	0.098	0.084	0.124		
	755.6	1043.9	468.0	104.79	0.145	0.365	0.202	0.127	2.026	0.098	0.084	0.124		
	745.0	1034.3	855.7	1254.2	1141.6	1552.0	1332.5	1402.8	1177.1	1861.2	1469.0			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1938-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
MEAN LOGS	1770.3	1502.9	1332.7	1210.1	1061.6	890.6	836.1	755.6	662.2	2427.4
STD DEVIATION LOGS	2149.3	1815.7	1556.9	1342.2	1192.1	1043.9	965.8	875.5	745.0	3049.9
SERIAL CORR LOGS	2387.9	2006.2	1691.1	1428.2	1274.4	1134.8	1047.9	944.9	793.3	3445.2
COEFF OF VAR LOGS	2717.2	2261.9	1869.0	1550.4	1388.1	1254.2	1149.0	1034.3	855.7	3993.8
MEAN LOGS	3497.5	2837.5	2261.9	1869.0	1550.4	1388.1	1254.2	1149.0	1034.3	5292.3
STD DEVIATION LOGS	4533.6	3546.8	2735.8	2284.1	2023.1	1818.9	1609.7	1432.7	1141.6	7038.7
SERIAL CORR LOGS	5206.9	3980.0	3021.0	2579.8	2262.8	1998.8	1751.0	1552.0	1230.4	8180.6
COEFF OF VAR LOGS	6048.4	4495.6	3357.3	2966.3	2566.2	2207.4	1911.9	1686.4	1332.5	9578.1
MEAN LOGS	6670.9	4860.9	3593.9	3264.2	2793.5	2354.0	2021.6	1777.1	1402.8	10614.2
STD DEVIATION LOGS	7291.3	5212.7	3820.6	3570.9	3022.4	2486.9	2124.3	1861.2	1469.0	11732.1

## STATION 12205490 KIDNEY CREEK NR GLACIER, WASH.

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1966	138.0	5-6-1966
1967	85.0	5-20-1967
1968	122.0	9-17-1968
1969	97.0	6-3-1969
1970	64.0	6-3-1970
1971	249.0	1-30-1971
1972	123.0	5-29-1972
1973	90.0	12-19-1972
1974	141.0	1-16-1974
1975	114.0	7-8-1975

## ANNUAL PEAK FLOW STATISTICS (YEARS 1966-1975)

W R C ESTIMATE	SYSTEMATIC RECORD
2.0221	2.0221
0.1124	0.1124
0.0	-0.783

MEAN LOGS	STANDARD DEVIATION LOGS	SKEWNESS LOGS
57.6	68.7	49.9
65.4	75.5	65.4
74.5	84.6	74.5
86.0	105.2	86.0
108.8	130.8	108.8
131.3	146.6	131.3
142.4	165.5	142.4
153.3	179.0	153.3
159.8	192.1	159.8
165.3		165.3

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1966-1975)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
MEAN LOGS	1941	1754	1557	1401	1257	1101	952	804	654	2382
STD DEVIATION LOGS	2191	1901	1657	1401	1257	1101	952	804	654	2382
SKEWNESS LOGS	2486	2124	1861	1609	1357	1101	952	804	654	2382

## STATION 12205500 N.F. NOOKSACK RIVER NR GLACIER, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1911													
1934													
1935	792	1584	1001	1657	754	1111	1941	1961	2382	2353	1437	1394	1154
1936	670	549	540	708	1101	512	471	1215	1996	1637	901	988	993
1937	502	300	267	265	269	593	1349	2263	2212	1290	872	532	979
1938	1054	1537	1312	924	334	535	1032	1721	2297	1792	805	634	1171

## STATION 12207200 N.F. NOOKSACK RIVER NR DEMING, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES\* IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1964													
1965	1402	1374	1388	1370	2101	1081	1307	1950	2307	1759	1325	1356	1489
1966	1237	1782	1449	1253	750	1249	1829	2224	2343	2161	1208	554	1521
1967	1073	1291	2756	1786	1421	1053	763	2011	3486	2056	1305	1003	1603
1968	2900	1750	1947	2579	1706	1706	1044	1904	2761	2554	1507	1866	2043
1969	1436	1919	1617	1300	693	930	1626	3003	3013	1641	1086	1656	1663
1970	1114	1416	1249	1267	1240	405	1179	1452	2342	1585	1000	880	1293
1971	849	1255	1140	2039	2280	1156	1455	2844	2710	2736	1902	971	1776
1972	1088	2215	1520	1420	1537	3058	1822	3668	3666	3465	1713	1050	2138
1973	682	969	2263	1317	733	798	817	2125	2279	1534	853	631	1255
1974	1066	1570	1859	2104	1366	1542	1344	1981	3552	2907	1900	1091	1861
1975	619	1426	1590	1521	816	922	586	1818	2810	2747	1453	883	1438
1976		1311											

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1964-1976)

MEAN	1224.2	1523.2	1707.1	1632.4	1354.6	1300.0	1233.8	2234.5	2842.9	2285.9	1386.5	1067.8	1650.9
MAXIMUM	2900.0	2215.0	2756.0	2579.0	2280.0	3058.0	1829.0	3268.0	3666.0	3465.0	1902.0	1666.0	2138.0
MINIMUM	619.0	969.0	1140.0	1253.0	683.0	798.0	586.0	1452.0	2279.0	1534.0	853.0	554.0	1255.0
STD DEVIATION	613.56	340.73	473.98	430.31	576.03	649.85	397.40	559.68	525.22	638.98	349.51	386.45	287.27
STANDARD ERROR	2.263	0.566	1.155	1.195	0.335	2.286	-0.221	0.798	0.509	0.417	0.189	0.936	0.325
SKEWNESS	0.661	0.637	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661
SER CORR COEFF	0.193	-0.530	0.187	-0.202	-0.283	-0.323	-0.335	-0.206	-0.439	-0.135	-0.287	0.184	-0.354
COEFF OF VAR	0.501	0.4224	0.278	0.269	0.427	0.500	0.322	0.250	0.185	0.279	0.252	0.362	0.174
MEAN LOGS	3.050	3.173	3.218	3.200	3.094	3.078	3.068	3.337	3.447	3.344	3.129	3.004	3.212
STD DEV LOGS	0.179	0.097	0.113	0.107	0.194	0.171	0.156	0.105	0.079	0.121	0.112	0.153	0.075
SKEWNESS LOGS	0.905	-0.009	0.617	0.916	-0.102	1.431	-0.726	0.380	0.342	0.081	-0.238	0.138	0.047
SER CORR LOGS	0.661	0.637	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661
SER CORR LOGS	0.276	-0.531	0.280	-0.194	-0.341	-0.407	-0.309	-0.280	-0.412	-0.166	-0.326	0.067	-0.368
COEFF OF VAR LOGS	0.059	0.030	0.035	0.033	0.063	0.056	0.051	0.031	0.023	0.036	0.036	0.051	0.023
% OF AVE FLOW	6.2	7.7	8.6	8.2	6.8	6.6	6.2	11.3	14.4	11.5	7.0	5.4	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1964-1976)

0.99	566.6	886.1	1018.2	1055.4	424.1	718.0	420.1	1327.8	1924.1	1170.9	704.5	461.8	1093.8
0.95	642.7	1032.1	1134.3	1136.9	587.1	759.4	605.9	1503.3	2118.1	1402.2	864.4	574.1	1226.7
0.90	699.5	1119.4	1211.7	1195.4	696.3	796.9	722.8	1614.6	2237.4	1545.9	960.1	646.6	1304.7
0.80	789.2	1234.9	1323.6	1284.1	853.6	863.6	880.0	1769.4	2399.2	1742.0	1086.1	748.9	1406.4
0.50	1056.1	1489.5	1610.2	1527.4	1250.0	1094.0	1220.0	2141.9	2771.6	2197.9	1359.6	1000.5	1626.2
0.20	1542.8	1795.8	2034.1	1915.7	1811.1	1578.6	1590.7	2649.6	3248.9	2788.1	1677.5	1352.0	1883.9
0.10	1952.9	1979.9	2335.0	2206.1	2027.5	2027.5	1786.3	2987.6	3551.4	3164.1	1861.7	1589.8	2036.1
0.04	2581.2	2196.6	2738.8	2611.2	2671.1	2776.5	1989.5	3419.2	3923.3	3626.9	2071.7	1896.3	2213.2
0.02	3155.5	2349.0	3057.4	2941.5	3032.2	3494.9	2115.3	3745.0	4194.9	3964.9	2214.8	2129.2	2336.5
0.01	3816.5	2494.8	3391.5	3297.3	3394.7	4379.4	2223.6	4075.1	4462.9	4298.4	2348.4	2366.2	2453.8

## STATION 12C07200 N.F. NOOKSACK RIVER NR OEHING, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1966	410.0	417.0	433.0	474.0	542.0	755.0	968.0	1120.0	1140.0
1967	472.0	475.0	487.0	623.0	747.0	843.0	1040.0	1130.0	1500.0
1968	672.0	703.0	720.0	721.0	761.0	1150.0	1370.0	1690.0	1730.0
1969	541.0	550.0	563.0	578.0	650.0	687.0	956.0	1140.0	1310.0
1970	575.0	593.0	646.0	693.0	806.0	1020.0	1100.0	1140.0	1180.0
1971	350.0	371.0	461.0	654.0	753.0	821.0	862.0	971.0	1030.0
1972	493.0	515.0	538.0	609.0	798.0	1010.0	1250.0	1410.0	1410.0
1973	422.0	440.0	459.0	504.0	621.0	758.0	852.0	914.0	1130.0
1974	400.0	413.0	430.0	442.0	531.0	594.0	793.0	962.0	1180.0
1975	467.0	479.0	510.0	535.0	559.0	707.0	966.0	1120.0	1150.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1966-1975)

MEAN	480.2	495.6	524.7	583.3	676.8	834.5	1015.7	1159.7	1276.0
MAXIMUM	672.0	703.0	720.0	721.0	806.0	1150.0	1370.0	1690.0	1730.0
MINIMUM	350.0	371.0	430.0	442.0	531.0	594.0	793.0	914.0	1030.0
STANDARD DEVIATION	95.21	98.97	95.39	93.57	108.70	174.17	181.49	231.84	213.45
SKENNESS	0.783	0.981	1.132	-0.063	-0.222	0.606	0.893	1.509	1.185
STD ERROR OF SKENNESS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SERIAL CORR COEFF	0.093	0.049	0.081	0.351	0.300	-0.162	-0.200	-0.152	0.201
COEFF OF VARIATION	0.198	0.200	0.182	0.160	0.161	0.209	0.179	0.200	0.167
MEAN LOGS	2.674	2.688	2.714	2.761	2.825	2.913	3.001	3.057	3.101
STD DEVIATION LOGS	0.084	0.083	0.074	0.071	0.072	0.059	0.075	0.080	0.069
SKENNESS LOGS	0.363	0.580	0.862	-0.242	-0.324	0.268	0.594	1.113	0.923
STD ERR SKENNESS LOGS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SER CORR COEFF LOGS	0.060	0.029	0.114	0.372	0.332	-0.094	-0.170	-0.141	0.183
COEFF OF VAR LOGS	0.4031	0.4031	0.027	0.026	0.025	0.030	0.025	0.026	0.022

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1966-1975)

	0.99	0.98	0.96	0.90	0.80	0.50	0.20	0.10	0.05	0.02	0.01
MEAN	777.2	727.1	793.2	731.0	651.0	590.7	504.6	447.0	387.3	330.4	317.8
MAXIMUM	822.3	763.1	857.6	786.8	755.2	707.1	662.7	624.9	583.6	540.9	508.5
MINIMUM	822.3	763.1	857.6	786.8	755.2	707.1	662.7	624.9	583.6	540.9	508.5
STANDARD DEVIATION	95.21	98.97	95.39	93.57	108.70	174.17	181.49	231.84	213.45	150.0	130.0
SKENNESS	0.783	0.981	1.132	-0.063	-0.222	0.606	0.893	1.509	1.185	0.687	0.687
STD ERROR OF SKENNESS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SERIAL CORR COEFF	0.093	0.049	0.081	0.351	0.300	-0.162	-0.200	-0.152	0.201	0.167	0.101
COEFF OF VARIATION	0.198	0.200	0.182	0.160	0.161	0.209	0.179	0.200	0.167	0.101	0.069
MEAN LOGS	2.674	2.688	2.714	2.761	2.825	2.913	3.001	3.057	3.101	3.101	3.101
STD DEVIATION LOGS	0.084	0.083	0.074	0.071	0.072	0.059	0.075	0.080	0.069	0.069	0.069
SKENNESS LOGS	0.363	0.580	0.862	-0.242	-0.324	0.268	0.594	1.113	0.923	0.923	0.923
STD ERR SKENNESS LOGS	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687	0.687
SER CORR COEFF LOGS	0.060	0.029	0.114	0.372	0.332	-0.094	-0.170	-0.141	0.183	0.183	0.183
COEFF OF VAR LOGS	0.4031	0.4031	0.027	0.026	0.025	0.030	0.025	0.026	0.022	0.022	0.022

## FLOW DURATION DATA

## DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1966-1975)

P	P95	P90	P75	P70	P50	P25	P10
560.0	660.0	900.0	1400.0	2100.0	3100.0		

2016.1  
1837.4  
1874.3  
1669.4  
1558.3  
1460.3  
1423.5  
1231.3  
1102.1  
976.6  
931.5  
902.7  
877.7  
864.7

## STATION 12207200 N.F. NOOKSACK RIVER NR DEMING, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA FLOW(CFS)	DATE	REG.(R)
1965	6090.	5160.	3490.	2850.	2550.	2310.	2090.	1930.	1800.	7040.	11/30/64	
1966	4510.	3910.	3440.	2780.	2480.	2320.	2270.	2190.	1850.	6400.	11/02/65	
1967	8010.	6080.	5570.	3940.	3490.	3010.	2550.	2240.	1820.	10100.	12/16/66	
1968	13000.	7840.	5170.	4230.	3120.	2730.	2460.	2320.	2150.	13100.	06/02/68	
1969	6390.	4530.	4050.	3790.	3660.	3080.	2620.	2350.	2010.	8960.	01/04/69	
1970	4150.	3570.	3170.	2480.	2340.	2040.	1810.	1660.	1470.	10100.	11/04/69	
1971	11200.	9490.	5670.	3880.	3160.	2790.	2590.	2590.	2290.	16000.	01/30/71	
1972	8690.	7130.	5210.	4900.	4300.	3910.	3530.	3080.	2870.	12900.	07/12/72	
1973	8240.	5770.	5280.	4020.	2710.	2280.	2000.	1770.	1490.	9880.	12/26/72	
1974	8050.	6140.	5180.	4440.	3600.	2910.	2600.	2230.	2230.	8410.	01/16/74	
1975	5440.	4780.	4440.	3590.	3040.	2840.	2520.	2240.	1720.	8020.	12/21/74	

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1965-1975)

MEAN	7615.5	5854.5	4606.4	3718.2	3131.8	2778.2	2504.5	2270.0	1972.7		
MAXIMUM	13000.0	9490.0	5670.0	4900.0	4300.0	3910.0	3530.0	3080.0	2870.0		
MINIMUM	4150.0	3570.0	3170.0	2480.0	2340.0	2040.0	1810.0	1660.0	1470.0		
STANDARD DEVIATION	2719.30	1769.65	923.68	743.96	597.39	536.37	477.37	402.76	402.82		
STANDARD ERROR OF SKEWNESS	0.708	0.768	-0.485	-0.349	0.484	0.689	0.699	0.391	0.955		
STD ERROR OF SKEWNESS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661		
SERIAL CORR COEFF	-0.080	0.128	0.222	0.222	-0.300	-0.328	-0.285	-0.343	-0.319		
COEFF OF VARIATION	0.357	0.302	0.201	0.200	0.191	0.193	0.191	0.177	0.204		
MEAN LOGS	3.857	3.750	3.655	3.562	3.489	3.437	3.392	3.350	3.287	3.9882	3.9882
STD DEVIATION LOGS	0.154	0.128	0.093	0.092	0.082	0.082	0.081	0.077	0.085	0.1200	0.1200
SKEWNESS LOGS	0.028	0.176	-0.628	-0.680	0.143	0.249	0.178	-0.076	0.446	0.0	0.3070
STD ERR SKEWNESS LOGS	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661	0.661		
SER CORR COEFF LOGS	-0.055	0.144	0.214	0.214	-0.270	-0.317	-0.315	-0.378	-0.379		
COEFF OF VAR LOGS	0.040	0.034	0.025	0.026	0.024	0.024	0.024	0.023	0.026		

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1965-1975)

0.99	3167.6	2938.2	2497.6	2005.7	1822.9	1634.4	1465.0	1309.9	5448.6
0.95	4018.3	3511.6	3073.0	2478.6	2276.5	2030.7	1829.3	1664.0	5116.3
0.90	4564.5	3873.8	3399.8	2746.3	2426.4	2157.0	1946.5	1779.3	6176.9
0.80	5329.2	4375.9	3809.4	3080.6	2625.4	2326.7	2102.5	1928.1	6829.3
0.50	7180.1	5576.0	4617.1	3733.9	3067.4	2711.6	2451.0	2242.8	7712.4
0.20	9696.8	7192.8	5422.3	4374.4	3606.6	3195.4	2879.8	2600.5	9595.9
0.10	11356.7	8257.6	5828.4	4692.1	3935.3	3497.5	3143.0	2806.2	12218.2
0.04	13450.8	9603.9	6242.5	5011.3	4327.5	3864.5	3458.7	3040.5	15885.3
0.02	15010.6	10610.5	6497.0	5204.7	4506.4	4129.8	3684.2	3200.5	15789.6
0.01	16572.1	11622.2	6715.8	5369.2	4876.2	4389.7	3903.2	3350.5	17169.3
									18512.9
									19689.0

## STATION 12208000 M.F. NOOKSACK RIVER NR DEMING, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1920													
1921	1272	585	559	499	855	363	380	780	1202	654	417	796	
1934					531	603	553	688	418	440	332	434	665
1935	484	924	574	867	671	247	208	458	506	366	250	397	490
1954									877	839	573	380	
1955	456												
1956	449	522	499	502	692	301	414	567	603	405	338	120	449
1965	376	579	521	409	198	383	739	688	617	513	284	168	458
1966					404	277	127	594	942	412	250	221	444
1967	373	383	838	499	404								
1968	1049	491	720	908	675	496	331	542	740	559	323	576	618
1969	510	557											
1970	296	482	440	490	436	255	411	401	581	331	180	492	

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1965	3800.0	1-30-1965
1966	5230.0	12-3-1965
1967	4160.0	12-16-1966
1968	7250.0	9-17-1968
1969	4850.0	9-23-1969
1970	7250.0	11-4-1969
1971	12100.0	1-30-1971
1972	8650.0	3-5-1972
1973	3250.0	12-26-1972
1974	5150.0	1-16-1974
1975	5540.0	12-21-1974
1976	13100.0	12-3-1975
1977	2560.0	1-18-1977

## ANNUAL PEAK FLOW STATISTICS (YEARS 1965-1977)

W R C	SYSTEMATIC
ESTIMATE	RECORD
MEAN LOGS	3.7566
STANDARD DEVIATION LOGS	0.2103
SKEWNESS LOGS	0.255
ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES LOG-PEARSON III ANALYSIS (YEARS 1965-1977)	
0.99	1851.2
0.95	2574.9
0.90	3070.1
0.80	3798.9
0.50	5710.0
0.20	8582.5
0.10	10619.9
0.04	13328.3
0.02	15434.8
0.01	16470.9
	17612.6
	19270.5

## STATION 12208500 CANYON CREEK AT KULSHAN, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1948													
1949	36.0	67.0	30.9	20.0	33.7	57.5	63.0	110	59.5	24.2	30.5	33.3	
1950	33.1	78.7	85.5	37.7	51.5	76.6	55.6	81.2	116	41.4	19.9	19.8	46.6
1951	60.5	103	149	77.6	195	27.3	44.3	65.5	33.9	51.2	21.0	13.9	58.5
1952	52.3	35.8	28.5	27.8	50.2	23.7	69.0	88.0	56.2	8.22	2.26	3.30	63.2
1953	7.71	10.7	25.0	212	72.5	33.7	66.2	82.8	78.0	20.5	6.82	8.16	38.8
1954									79.9	36.3	8.67	20.3	54.5
										53.8	40.7	22.2	

## ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1949	378.0	11-23-1948
1950	1660.0	11-27-1949
1951	2800.0	2-11-1951
1952	320.0	1-30-1952
1953	1090.0	1-2-1953



STATION 12209000 S.F. NOOKSACK RIVER NEAR WICKERSHAM, WASH.  
MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1934	506	1449	1138	1688	961	531	475	714	308	281	138	306	
1935	392	462	616	907	375	744	1153	962	911	358	141	309	789
1936	667	126	1162	194	310	774	925	1666	1135	351	132	220	
1937	164	1660	1251	838	380	575	994	1230	1740	390	190	125	681
1938	667	1260	1364	1238	445	623	934	915	545	204	102	86.4	612
1939	342	628	1336	1658	966	1187	697	1242	1063	646	181	152	686
1940	646	886	1535	658	944	574	653	777	309	123	95.7	81.4	664
1941	695	623	1007	918	647	516	676	712	359	140	734	734	583
1942	1068	1020	1026	414	418	650	1249	972	965	317	119	84.4	583
1943	222	1114	1093	666	774	650	827	812	965	589	170	147	719
1944	376	311	794	803	490	527	606	812	484	147	110	385	488
1945	380	948	586	1248	885	582	667	1419	556	246	122	349	664
1946	1110	1132	975	1092	777	739	911	1052	1125	541	195	131	815
1947	657	531	1290	945	1259	775	1040	873	672	352	140	271	731
1948	1337	872	707	493	477	675	1048	1502	1339	410	321	412	809
1949	544	965	516	292	666	979	1048	1594	1042	645	296	334	748
1950	643	1251	1265	698	1003	1093	893	1173	1576	832	376	288	923
1951	987	1029	1739	1108	1447	514	897	1043	1571	205	113	149	844
1952	992	672	553	461	781	509	940	1253	812	378	154	137	627
1953	121	184	2092	403	1026	509	747	1029	829	542	199	324	674
1954	902	1174	846	1211	603	324	813	1187	1280	919	501	375	933
1955	621	1570	764	531	603	523	975	1354	1546	949	356	183	774
1956	970	1434	920	747	288	767	893	1286	1347	629	201	346	814
1957	1255	766	1223	302	507	767	893	1230	615	312	180	116	684
1958	245	501	875	1326	1316	507	673	892	432	137	81.5	236	598
1959	831	1314	1302	1233	510	684	1456	1117	1021	490	202	791	736
1960	780	1236	951	654	875	614	947	1059	839	357	280	260	844
1961	628	997	792	1531	1830	953	938	993	748	275	149	383	844
1962	629	757	1062	1080	701	356	866	713	721	350	398	361	666
1963	618	1282	1226	723	1001	525	729	671	433	349	158	160	652
1964	711	1504	898	916	531	502	728	1115	1658	935	455	569	878
1965	668	820	749	913	1132	539	831	1016	731	320	195	148	669
1966	615	1028	824	809	443	810	908	1154	876	565	210	140	700
1967	610	831	1818	1274	888	627	432	1163	1340	475	179	163	917
1968	1806	835	1209	1151	1323	969	625	855	997	407	235	606	918
1969	809	1010	900	495	350	556	1003	1352	831	358	159	559	721
1970	546	704	697	752	747	523	865	692	597	259	125	387	570
1971	500	871	713	1294	1290	711	757	1505	1291	929	286	864	686
1972	315	1104	632	770	1014	1745	984	1542	1237	1017	307	454	926
1973	216	845	1373	745	447	494	492	954	703	266	118	151	551
1974	796	815	1203	1435	968	1155	883	1263	1696	1055	397	186	989
1975	125	867	1053	806	476	570	401	1167	1061	570	341	183	636
1976	1187	1546	2164	1168	602	504	724	1299	1029	725	461	282	977
1977	278	441	825	628	509	519	744	700	603	222	211	248	494
1978	373								482	213	194	676	
1979													

STATION 12209000 F.S. NOOKSACK RIVER NEAR WICKERSHAM, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1934-1979)

MEAN	658.8	928.3	1051.0	913.9	792.2	670.4	825.6	1083.1	919.0	463.1	217.6	293.6	737.7
MAXIMUM	1806.0	1680.0	2164.0	2092.0	1847.0	1745.0	1456.0	1666.0	1740.0	1055.0	501.0	791.0	989.0
MINIMUM	121.0	126.0	500.0	194.0	288.0	324.0	401.0	648.0	308.0	123.0	81.5	61.4	488.0
STD DEVIATION	353.86	369.44	358.43	380.47	379.43	262.21	216.72	269.33	386.70	257.82	109.15	176.28	129.59
SKEWNESS	0.867	-0.043	0.838	0.698	0.980	2.072	0.305	0.234	0.425	0.863	1.042	1.169	0.147
STD ERR SKEW	0.357	0.361	0.361	0.361	0.361	0.361	0.361	0.357	0.354	0.354	0.354	0.354	0.361
SER CORR COEFF	-0.095	-0.125	-0.037	-0.136	-0.007	-0.078	-0.091	0.081	0.006	0.132	0.188	-0.068	-0.211
COEFF OF VAR	0.537	0.398	0.341	0.416	0.479	0.391	0.262	0.249	0.421	0.557	0.502	0.600	0.176
MEAN LOGS	2.748	2.921	2.997	2.920	2.852	2.801	2.901	3.021	2.922	2.599	2.289	2.395	2.861
STD DEV LOGS	0.269	0.231	0.148	0.204	0.205	0.143	0.121	0.111	0.197	0.247	0.205	0.256	0.077
SKEWNESS LOGS	-0.740	-1.570	-0.100	-0.930	0.043	0.851	-0.627	-0.229	-0.408	-0.123	0.318	0.036	-0.207
STD ERR SKEW LOGS	0.357	0.361	0.361	0.361	0.361	0.361	0.361	0.357	0.354	0.354	0.354	0.354	0.361
SER CORR LOGS	-0.136	-0.091	-0.003	-0.093	0.052	-0.048	-0.060	0.098	0.055	0.117	0.207	0.009	-0.196
COEFF OF VAR LOGS	0.079	0.079	0.049	0.070	0.072	0.051	0.042	0.037	0.068	0.095	0.089	0.107	0.027
% OF AVE FLOW	7.5	10.5	11.9	10.4	9.0	7.6	9.4	12.3	10.4	5.3	2.5	3.3	100.0

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MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1934-1979)

0.99	95.7	134.4	439.3	205.5	240.6	361.1	367.4	555.3	254.1	100.3	72.6	64.2	466.9
0.95	180.5	292.1	562.5	346.5	328.9	402.1	481.7	678.8	377.1	152.7	93.7	95.0	536.3
0.90	244.9	411.5	640.4	443.2	389.1	431.6	549.7	752.5	459.5	190.2	108.2	117.2	575.9
0.80	344.0	585.0	747.7	580.2	477.4	476.7	637.7	849.0	577.2	247.0	130.1	151.3	626.5
0.50	604.1	958.8	995.6	892.8	708.6	603.6	819.8	1060.1	862.4	402.2	189.7	247.6	731.0
0.20	952.4	1283.0	1325.6	1240.3	1057.0	816.7	1011.5	1304.7	1233.5	644.2	286.7	407.3	845.5
0.10	1161.2	1401.6	1531.4	1419.6	1305.2	983.8	1111.6	1466.5	1462.6	818.6	360.9	529.4	909.2
0.04	1395.1	1486.3	1782.1	1598.9	1636.8	1226.8	1215.9	1608.2	1732.6	1051.9	466.6	701.2	980.0
0.02	1548.3	1521.4	1962.8	1705.0	1896.1	1432.8	1281.1	1718.5	1920.5	1233.6	554.2	841.6	1027.2
0.01	1685.0	1542.7	2139.2	1792.5	2165.5	1661.8	1337.8	1821.5	2097.8	1421.2	649.7	992.3	1070.6

## STATION 12209000 S.F. NOOKSACK RIVER NEAR WICKERSHAM, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1936	95.0	104.0	105.0	110.0	122.0	182.0	227.0	286.0	372.0
1937	91.0	92.0	94.0	101.0	112.0	141.0	151.0	158.0	314.0
1938	87.0	88.0	91.0	98.0	122.0	148.0	173.0	268.0	645.0
1939	72.0	75.0	79.0	80.0	86.0	94.0	112.0	167.0	315.0
1940	92.0	92.0	96.0	103.0	145.0	156.0	227.0	372.0	585.0
1941	67.0	67.0	69.0	75.0	77.0	83.0	94.0	120.0	300.0
1942	71.0	73.0	73.0	78.0	86.0	114.0	193.0	323.0	415.0
1943	73.0	73.0	74.0	80.0	84.0	101.0	112.0	162.0	367.0
1944	91.0	99.0	107.0	117.0	132.0	141.0	185.0	250.0	367.0
1945	66.0	66.0	68.0	72.0	86.0	104.0	151.0	246.0	380.0
1946	90.0	91.0	94.0	103.0	118.0	165.0	211.0	237.0	510.0
1947	102.0	104.0	106.0	110.0	129.0	138.0	182.0	316.0	524.0
1948	108.0	108.0	110.0	116.0	128.0	203.0	244.0	350.0	551.0
1949	150.0	159.0	161.0	173.0	205.0	277.0	370.0	418.0	506.0
1950	136.0	144.0	147.0	158.0	186.0	329.0	418.0	457.0	637.0
1951	132.0	133.0	137.0	145.0	184.0	309.0	434.0	570.0	810.0
1952	80.0	80.0	82.0	86.0	104.0	106.0	143.0	248.0	438.0
1953	80.0	81.0	83.0	86.0	93.0	119.0	131.0	147.0	243.0
1954	107.0	108.0	115.0	125.0	159.0	183.0	311.0	432.0	602.0
1955	174.0	180.0	188.0	227.0	278.0	402.0	482.0	545.0	722.0
1956	123.0	128.0	140.0	158.0	173.0	225.0	391.0	555.0	753.0
1957	112.0	114.0	121.0	128.0	156.0	189.0	317.0	464.0	685.0
1958	87.0	87.0	92.0	99.0	102.0	117.0	148.0	195.0	318.0
1959	70.0	71.0	71.0	74.0	81.0	92.0	137.0	188.0	399.0
1960	144.0	151.0	154.0	156.0	184.0	306.0	456.0	530.0	664.0
1961	111.0	116.0	128.0	144.0	177.0	267.0	264.0	315.0	537.0
1962	96.0	97.0	99.0	118.0	128.0	199.0	224.0	303.0	449.0
1963	131.0	134.0	147.0	191.0	284.0	329.0	350.0	428.0	509.0
1964	90.0	91.0	97.0	110.0	136.0	154.0	192.0	232.0	355.0
1965	232.0	241.0	265.0	291.0	337.0	450.0	564.0	576.0	629.0
1966	88.0	89.0	91.0	104.0	142.0	168.0	196.0	299.0	503.0
1967	112.0	113.0	118.0	129.0	140.0	162.0	205.0	320.0	516.0
1968	93.0	95.0	100.0	108.0	144.0	163.0	262.0	516.0	625.0
1969	127.0	129.0	138.0	148.0	187.0	245.0	381.0	482.0	609.0
1970	106.0	107.0	115.0	128.0	142.0	165.0	267.0	399.0	470.0
1971	84.0	85.0	87.0	93.0	115.0	180.0	233.0	274.0	407.0
1972	125.0	132.0	139.0	157.0	238.0	255.0	291.0	439.0	527.0
1973	140.0	144.0	144.0	160.0	206.0	319.0	319.0	401.0	561.0
1974	72.0	74.0	78.0	88.0	89.0	117.0	155.0	258.0	432.0
1975	88.0	89.0	93.0	98.0	115.0	147.0	198.0	345.0	554.0
1976	106.0	109.0	114.0	122.0	158.0	260.0	298.0	427.0	619.0
1977	125.0	127.0	135.0	170.0	183.0	257.0	319.0	358.0	459.0

STATION 12209000 S.F. NOOKSACK RIVER NEAR WICKERSHAM, WASH.

## LOWEST MEAN FLOW STATISTICS (YEARS 1936-1977)

MEAN	105.4	106.0	113.0	124.2	148.4	196.7	255.2	342.3	504.4
MAXIMUM	232.0	241.0	265.0	291.0	337.0	450.0	564.0	576.0	810.0
MINIMUM	66.0	66.0	66.0	72.0	77.0	83.0	94.0	120.0	243.0
STANDARD DEVIATION	32.23	34.17	37.21	43.68	50.84	87.84	111.75	126.64	133.69
STANDARD ERROR OF MEAN	1.714	1.686	1.844	1.691	1.304	1.001	0.828	0.184	0.155
SKEDNESS	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
SERIAL CORR COEFF	0.083	0.083	0.073	0.117	0.144	0.187	0.206	0.179	0.135
COEFF OF VARIATION	0.306	0.316	0.329	0.352	0.383	0.447	0.438	0.370	0.265
MEAN LOGS	2.006	2.016	2.034	2.072	2.144	2.254	2.367	2.502	2.687
STD DEVIATION LOGS	0.119	0.123	0.127	0.136	0.154	0.186	0.189	0.176	0.121
SKEDNESS LOGS	0.686	0.661	0.657	0.620	0.556	0.210	0.002	-0.514	-0.412
STD ERR SKEDNESS LOGS	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365	0.365
SER CORR COEFF LOGS	0.167	0.165	0.158	0.210	0.228	0.276	0.237	0.134	0.086
COEFF OF VAR LOGS	0.059	0.061	0.062	0.066	0.072	0.082	0.080	0.070	0.045

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1936-1977)

0.99	218.9	228.7	244.4	280.9	348.3	518.9	641.6	699.0	853.4
0.98	195.4	203.7	217.0	247.9	308.2	453.5	569.7	651.1	808.6
0.96	173.4	180.3	191.3	217.0	270.1	391.4	499.2	598.6	759.4
0.90	145.9	151.1	159.4	179.0	221.9	313.5	406.9	519.8	684.7
0.80	125.9	129.8	136.3	151.5	186.2	256.2	335.9	449.7	617.0
0.50	98.3	100.5	104.7	114.3	136.4	177.0	232.8	328.9	495.7
0.20	80.2	81.3	84.1	90.3	102.8	124.9	161.4	229.0	387.6
0.10	73.3	74.0	76.3	81.2	89.8	104.9	133.3	185.7	337.1
0.05	68.6	69.0	71.0	75.0	80.7	91.3	113.8	154.5	298.6
0.02	64.2	64.3	66.0	69.1	72.0	78.4	95.3	124.1	258.8
0.01	61.7	61.7	63.2	65.8	67.0	71.0	84.6	106.4	234.4

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1936-1977)

P95	P90	P75	P70	P50	P25	P10
120.0	150.0	300.0	350.0	560.0	950.0	1500.0

## STATION 12209000 S.F. NOOKSACK RIVER NEAR WICKERSHAM, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT. 30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW (CFS)	DATE	REG. (R)
1935	8550.	7350.	4670.	3210.	1960.	1530.	1420.	1350.	1070.	11200.	11/05/34	
1936	2960.	2480.	1920.	1780.	1690.	1590.	1350.	1200.	1010.	3770.	05/04/36	
1937	4870.	3570.	2900.	2100.	1750.	1500.	1300.	1170.	896.	8470.	12/06/36	
1938	6350.	4830.	2860.	2240.	1690.	1500.	1370.	1150.	994.	12900.	10/28/37	
1939	6000.	4690.	3190.	2090.	1620.	1330.	1100.	1030.	983.	7760.	11/01/39	
1940	3430.	2580.	2270.	1910.	1600.	1300.	1120.	1090.	1030.	6380.	12/15/39	
1941	3660.	2750.	1760.	1390.	1140.	995.	890.	897.	774.	5340.	11/18/41	
1942	4350.	3070.	2040.	1630.	1320.	1140.	1050.	890.	751.	7370.	11/13/41	
1943	4970.	3070.	2010.	1640.	1500.	1180.	1140.	1050.	944.	8430.	01/14/43	
1944	4400.	3240.	1800.	1210.	951.	815.	708.	661.	676.	9090.	12/03/43	
1945	6980.	3710.	3170.	2180.	1430.	1110.	1030.	924.	916.	11300.	01/07/45	
1946	11600.	7590.	3990.	2580.	1660.	1330.	1310.	1140.	1060.	14400.	10/25/45	
1947	6340.	4560.	2790.	2050.	1600.	1210.	1200.	1090.	1040.	15600.	10/24/46	
1948	5400.	4050.	3220.	2130.	1800.	1440.	1200.	1030.	933.	14400.	10/18/47	
1949	3000.	2570.	2440.	2010.	1640.	1430.	1280.	1210.	1010.	4850.	02/16/49	
1950	7450.	4790.	3920.	2620.	1730.	1450.	1270.	1200.	1120.	15800.	11/27/49	
1951	12700.	9170.	5450.	2990.	2420.	1880.	1700.	1490.	1240.	15600.	02/10/51	
1952	3270.	2540.	1900.	1550.	1320.	1170.	1020.	880.	797.	5450.	01/30/52	
1953	5310.	3640.	2870.	2500.	2340.	1590.	1220.	1100.	1040.	8100.	01/31/53	
1954	5900.	4910.	2340.	1730.	1600.	1420.	1270.	1220.	1040.	8590.	10/31/53	
1955	5540.	4440.	3090.	2390.	1610.	1360.	1200.	1100.	885.	8840.	11/18/54	
1956	11700.	6300.	3510.	2610.	1720.	1440.	1280.	1130.	893.	19300.	11/03/55	
1957	5860.	3420.	3240.	2090.	1530.	1220.	1100.	950.	844.	9640.	12/09/56	
1958	4490.	3600.	2290.	1790.	1490.	1320.	1170.	1030.	928.	8020.	01/16/58	
1959	8900.	5760.	3280.	2080.	1620.	1340.	1300.	1210.	1100.	12600.	04/29/59	
1960	4380.	3860.	3150.	2000.	1610.	1170.	1070.	984.	931.	10800.	11/22/59	
1961	11300.	5650.	3720.	2410.	1890.	1710.	1490.	1340.	1210.	14100.	01/15/61	
1962	4100.	2910.	2470.	2160.	1520.	1150.	1030.	944.	819.	5810.	12/29/61	
1963	6070.	3980.	2840.	1710.	1500.	1420.	1160.	1070.	920.	14400.	11/19/62	
1964	6580.	3530.	2390.	2120.	1770.	1500.	1250.	1120.	925.	9700.	11/26/63	
1965	4420.	3600.	2170.	1800.	1370.	1100.	968.	934.	876.	6290.	01/30/65	
1966	3010.	2170.	1890.	1410.	1170.	1090.	1030.	972.	853.	6550.	10/06/65	
1967	7150.	4190.	3880.	2670.	2050.	1600.	1440.	1280.	1050.	9470.	12/13/66	
1968	5270.	4310.	2940.	1900.	1800.	1370.	1300.	1270.	1220.	13300.	10/27/67	
1969	4500.	3230.	1910.	1530.	1490.	1240.	1110.	964.	833.	7500.	12/03/68	
1970	3800.	2310.	1910.	1220.	960.	818.	811.	768.	737.	7720.	11/04/69	
1971	5400.	4400.	2870.	2190.	1870.	1410.	1270.	1160.	1170.	10100.	01/30/71	
1972	5200.	3530.	2540.	2380.	1920.	1530.	1450.	1430.	1310.	10200.	03/05/72	
1973	4050.	3270.	2970.	2370.	1610.	1090.	935.	816.	772.	7040.	12/19/72	
1974	5290.	4230.	2970.	2260.	1880.	1510.	1350.	1280.	1290.	7250.	10/13/73	
1975	4770.	2730.	2010.	1450.	1370.	1150.	971.	858.	790.	9500.	12/21/74	
1976	10100.	8810.	4660.	3280.	2420.	2030.	1730.	1550.	1230.	17200.	12/02/75	
1977	4390.	2590.	1510.	1010.	667.	793.	714.	678.	690.	7370.	01/18/77	
1978										11400.	12/02/77	
1979										6180.	11/07/78	

## STATION 12209000 S.F. NOOKSACK RIVER NEAR WICKERSHAM, WASH.

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1935-1979)

	W R C ESTIMATE	SYSTEMATIC RECORD
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MEAN	5901.4	4115.8	2837.7	2056.0	1622.3	1332.3	1187.8	1084.0	967.4
MAXIMUM	12700.0	9170.0	5450.0	3280.0	2420.0	2030.0	1730.0	1550.0	1310.0
MINIMUM	2960.0	2170.0	1510.0	1010.0	867.0	793.0	708.0	661.0	676.0
STANDARD DEVIATION	2471.54	1641.50	874.34	507.85	332.71	256.99	219.57	199.09	163.51
SKWENESS	1.341	1.596	0.985	0.285	-0.017	0.141	0.083	0.106	0.316
STD ERROR OF SKWENESS	0.361	0.361	0.361	0.361	0.361	0.361	0.361	0.361	0.361
SERIAL CORR COEFF	-0.113	-0.179	-0.099	-0.173	-0.207	-0.150	-0.222	-0.269	-0.225
COEFF OF VARIATION	0.419	0.399	0.308	0.247	0.205	0.193	0.185	0.184	0.169
MEAN LOGS	3.739	3.587	3.434	3.299	3.200	3.116	3.067	3.028	2.980
STD DEVIATION LOGS	0.163	0.151	0.128	0.112	0.095	0.087	0.084	0.082	0.073
SKWENESS LOGS	0.551	0.728	0.249	-0.457	-0.801	-0.574	-0.597	-0.451	-0.021
STD ERR SKWENESS LOGS	0.361	0.361	0.361	0.361	0.361	0.361	0.361	0.361	0.361
SER CORR COEFF LOGS	-0.129	-0.193	-0.091	-0.149	-0.173	-0.116	-0.195	-0.231	-0.223
COEFF OF VAR LOGS	0.044	0.042	0.037	0.034	0.030	0.028	0.027	0.027	0.025

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1935-1979)

	0.99	0.90	0.80	0.50	0.20	0.10	0.05	0.02	0.01
MEAN	2667.5	2073.6	1445.5	1006.4	642.2	442.2	254.1	168.6	64.5
MAXIMUM	3150.7	2360.2	1710.4	1265.9	1080.5	912.1	825.6	762.8	642.1
MINIMUM	3486.1	2561.5	1879.1	1418.9	1184.0	1001.2	903.5	829.6	721.7
STANDARD DEVIATION	3973.7	2865.1	2114.6	1617.3	1337.5	1112.7	1000.4	913.4	827.7
SKWENESS	5299.1	3702.3	2684.6	2032.3	1633.2	1332.5	1189.7	1080.8	954.6
STD ERROR OF SKWENESS	7419.9	5078.1	3467.6	2483.9	1913.8	1552.9	1376.9	1253.3	1100.1
SERIAL CORR COEFF	9029.2	6142.9	3992.0	2729.7	2048.0	1665.1	1471.1	1343.9	1184.4
COEFF OF VARIATION	11310.3	7676.8	4664.0	2995.6	2178.5	1780.7	1567.4	1439.6	1281.1
MEAN LOGS	13199.0	8965.5	5172.7	3168.0	2255.1	1852.5	1626.6	1500.6	1347.5
STD DEVIATION LOGS	15258.2	10387.7	5689.0	3322.8	2318.4	1914.7	1677.7	1554.6	1410.0

3829.9	3892.2	5028.7	5158.2	6792.5	9306.2	12660.5	14828.8	17514.8	19480.9
21420.9	21771.8	17150.0	17650.0	19714.2	19480.9	17514.8	14828.8	12660.5	9306.2
6792.5	9306.2	12660.5	14828.8	17514.8	19480.9	17514.8	14828.8	12660.5	9306.2
12660.5	14828.8	17514.8	19480.9	17514.8	14828.8	12660.5	9306.2	6792.5	5158.2
5158.2	6792.5	9306.2	12660.5	14828.8	17514.8	19480.9	17514.8	14828.8	12660.5
14828.8	17514.8	19480.9	17514.8	14828.8	12660.5	9306.2	6792.5	5158.2	3892.2
3892.2	5028.7	5158.2	6792.5	9306.2	12660.5	14828.8	17514.8	19480.9	17514.8
17514.8	14828.8	12660.5	9306.2	6792.5	5158.2	3892.2	5028.7	5158.2	3829.9
3829.9	5028.7	5158.2	6792.5	9306.2	12660.5	14828.8	17514.8	19480.9	17514.8

## STATION 12209500 SKOOKUM CREEK NEAR WICKERSHAM, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1948	102	191	80.3	44.1	111	172	178	277	169	81.6	82.9	92.2	
1949	87.2	208	230	107	196	220	150	189	276	107	63.0	80.0	131
1950	160	167	277	161	289	85.7	147	157	276	129	66.0	42.6	158
1951	156	125	95.3	69.0	134	67.8	178	214	130	43.5	27.2	28.8	137
1952	25.0	31.7	88.8	315	156	91.4	139	189	146	79.5	41.8	33.0	110
1953	162	232	255	151	225	99.3	130	204	202	101	48.7	71.5	117
1954	106	274	139	100	103	55.7	131	184	286	143	96.5	75.5	164
1955	146	211	177	155	49.5	104	189	265	231	169	72.8	48.2	139
1956	217	138	217	167.5	93.9	166	171	198	231	105	44.2	62.6	145
1957	54.1	86.4	142	225	235	93.8	122	129	105	69.2	46.8	29.0	127
1958	132	188	261	213	90.0	111	222	129	178.1	35.5	21.1	44.6	105
1959	124	182	167	112	145	112	161	194	162	87.6	47.1	139	154
1960	156	197	154	243	306	175	160	172	146	70.2	56.8	50.7	125
1961	102	137	175	190	120	61.5	153	114	141	67.0	41.4	52.7	155
1962	112	137	175	190	120	61.5	153	114	118	65.5	104	72.0	118
1963	112	196	214	116	160	84.3	122	121	83.9	79.5	40.9	37.5	114
1964	139	272	179	167	104	101	139	207	275	157	86.3	127	163
1965	122	161	129	172	220	92.0	133	155	112	59.3	49.1	33.4	119
1966	106	183	147	146	74.8	159	169	201	141	105	51.0	37.2	127
1967	107	140	272	201	139	115	72.7	194	208	77.8	40.3	36.7	134
1968	278	140	207	232	211	115	102	138	174	85.3	59.2	102	156
1969	150	200	197	116	87.4	97.5	183	239	144	76.3	37.3	119	137

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1948-1969)

MEAN	130.6	174.3	181.1	158.2	154.7	114.6	150.1	186.6	162.7	90.6	55.7	64.3	135.0
MAXIMUM	278.0	274.0	277.0	315.0	306.0	220.0	222.0	277.0	286.0	169.0	104.0	139.0	164.0
MINIMUM	25.0	31.7	80.3	44.1	49.5	55.7	72.7	114.0	78.1	35.5	21.1	28.8	105.0
STD. DEVIATION	52.81	56.27	58.82	66.87	70.88	42.41	32.82	42.67	62.69	34.22	21.54	33.30	18.11
SKENNESS	0.803	-0.505	-0.005	0.356	0.680	0.823	-0.177	0.263	0.127	0.818	0.788	0.953	0.139
STD ERR SKEW	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.491	0.491	0.491	0.501
SER CORR COEFF	-0.222	0.141	-0.224	-0.248	-0.201	0.099	-0.033	-0.035	-0.004	0.164	-0.074	-0.060	-0.256
COEFF OF VAR	0.404	0.323	0.325	0.423	0.458	0.370	0.219	0.229	0.385	0.378	0.387	0.518	0.134
MEAN LOGS	2.075	2.208	2.233	2.156	2.145	2.032	2.165	2.260	2.182	1.928	1.715	1.757	2.127
STD DEV LOGS	0.212	0.200	0.156	0.210	0.205	0.155	0.104	0.102	0.166	0.165	0.169	0.214	0.058
SKENNESS LOGS	-1.594	-2.388	-0.655	-0.773	-0.189	0.169	-1.115	-0.341	0.058	-0.216	-0.188	0.333	-0.043
STD ERR SKEW LOGS	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.501	0.491	0.491	0.491	0.501
SER CORR LOGS	-0.266	0.051	-0.159	-0.203	-0.104	0.096	0.034	0.002	-0.003	0.101	-0.038	-0.001	-0.222
COEFF OF VAR LOGS	0.102	0.090	0.070	0.097	0.096	0.076	0.048	0.045	0.076	0.086	0.099	0.122	0.028
% OF AVE FLOW	8.0	10.7	11.2	9.7	9.5	7.1	9.2	11.5	10.0	5.6	3.4	4.0	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1948-1969)

0.99	22.7	28.3	62.8	35.8	43.6	49.1	69.5	99.3	63.6	32.9	19.9	20.5	97.4
0.95	45.6	64.1	89.4	59.1	62.7	60.9	92.7	120.9	81.6	44.3	26.8	26.7	107.1
0.90	62.1	90.4	106.1	75.2	75.6	68.6	106.0	133.6	93.4	51.6	31.2	31.0	112.6
0.80	85.4	126.2	128.7	98.2	94.4	79.5	122.3	149.9	110.1	61.8	37.5	37.5	119.5
0.50	134.6	189.8	177.9	152.4	141.8	106.6	152.8	184.3	151.3	85.9	52.5	55.6	134.0
0.20	177.4	225.7	232.7	216.7	208.6	145.0	179.4	222.4	209.1	117.1	72.2	85.6	149.9
0.10	193.6	233.2	262.4	252.2	253.2	171.3	190.8	243.5	248.1	136.6	84.7	109.1	159.0
0.04	205.5	236.4	293.8	289.9	309.4	205.5	200.9	266.8	298.3	160.2	100.0	162.9	169.1
0.02	210.7	237.1	313.7	313.5	351.0	205.5	206.2	286.2	336.2	171.0	110.9	171.3	175.9
0.01	214.0	237.4	331.1	334.0	392.3	258.6	210.2	296.3	374.7	193.2	121.6	202.6	182.3

STATION 12209500 SKOOKUM CREEK NEAR WICKERSHAM, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1950	30.0	31.0	32.0	42.0	49.0	68.0	72.0	79.0	104.0
1951	18.0	18.0	18.0	19.0	27.0	52.0	70.0	92.0	132.0
1952	17.0	17.0	18.0	19.0	23.0	25.0	31.0	46.0	74.0
1953	18.0	18.0	18.0	19.0	21.0	26.0	30.0	32.0	50.0
1954	28.0	29.0	32.0	32.0	40.0	45.0	65.0	86.0	115.0
1955	36.0	38.0	40.0	46.0	47.0	78.0	86.0	128.0	128.0
1956	34.0	36.0	39.0	40.0	45.0	53.0	74.0	103.0	131.0
1957	19.0	20.0	21.0	24.0	33.0	39.0	61.0	82.0	124.0
1958	23.0	23.0	24.0	25.0	26.0	29.0	37.0	46.0	63.0
1959	18.0	18.0	19.0	19.0	21.0	24.0	32.0	40.0	70.0
1960	34.0	35.0	36.0	39.0	45.0	62.0	94.0	114.0	114.0
1961	25.0	27.0	28.0	35.0	40.0	53.0	84.0	99.0	99.0
1962	25.0	26.0	27.0	29.0	38.0	45.0	62.0	86.0	94.0
1963	35.0	36.0	38.0	44.0	57.0	81.0	76.0	94.0	94.0
1964	26.0	26.0	27.0	30.0	36.0	38.0	45.0	54.0	72.0
1965	40.0	41.0	44.0	50.0	57.0	89.0	112.0	113.0	119.0
1966	21.0	22.0	22.0	24.0	32.0	40.0	44.0	58.0	86.0
1967	28.0	28.0	30.0	35.0	37.0	40.0	47.0	93.0	93.0
1968	20.0	20.0	22.0	24.0	33.0	37.0	50.0	87.0	105.0
1969	33.0	34.0	36.0	38.0	46.0	60.0	79.0	90.0	108.0

LOWEST MEAN FLOW STATISTICS (YEARS 1950-1969)

MEAN	26.4	27.1	28.6	31.6	37.6	49.2	60.0	73.9	98.3
MAXIMUM	40.0	41.0	44.0	50.0	57.0	89.0	112.0	113.0	132.0
MINIMUM	17.0	17.0	18.0	19.0	21.0	24.0	30.0	32.0	50.0
STANDARD DEVIATION	7.14	7.60	8.27	9.89	10.88	18.98	21.72	22.72	23.99
SKEWNESS	0.286	0.254	0.269	0.222	0.119	0.222	0.119	0.522	-0.339
STD ERROR OF SKEWNESS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SERIAL CORR COEFF	-0.031	0.012	0.008	-0.013	0.110	-0.035	-0.019	0.107	0.172
COEFF OF VARIATION	0.270	0.280	0.290	0.312	0.289	0.386	0.382	0.308	0.244
MEAN LOGS	1.406	1.417	1.438	1.479	1.557	1.661	1.750	1.846	1.978
STD DEVIATION LOGS	0.119	0.124	0.128	0.140	0.133	0.169	0.162	0.150	0.116
SKEWNESS LOGS	-0.013	-0.056	-0.062	-0.145	-0.400	-0.052	-0.188	-0.765	-0.807
STD ERR SKEWNESS LOGS	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512	0.512
SER CORR COEFF LOGS	0.012	0.059	0.055	0.058	0.205	0.087	-0.010	0.039	0.088
COEFF OF VAR LOGS	0.084	0.087	0.089	0.095	0.085	0.102	0.093	0.082	0.059

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1950-1969)

	P99	P95	P90	P75	P70	P50	P25	P10
0.99	48.0	50.1	53.7	61.7	67.1	111.8	127.3	128.9
0.98	44.6	46.5	49.7	57.1	63.2	100.9	116.5	123.1
0.96	41.1	42.8	45.6	52.2	58.9	90.0	105.5	116.3
0.90	36.2	37.6	39.9	45.4	52.6	75.0	90.0	105.2
0.80	32.1	33.2	35.2	39.7	46.9	63.7	77.3	94.3
0.50	25.5	26.2	27.5	30.4	36.8	46.0	56.9	73.2
0.20	20.3	20.6	21.4	23.0	28.1	33.0	41.3	53.4
0.10	17.9	18.1	18.7	19.8	24.1	27.8	34.6	44.1
0.05	16.2	16.3	16.8	17.5	21.1	24.0	29.9	37.2
0.02	14.5	14.4	14.8	15.2	18.1	20.4	25.2	30.1
0.01	13.5	13.3	13.6	13.5	16.2	18.2	22.4	26.0

FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1950-1969)

P95	P90	P75	P70	P50	P25	P10
30.0	39.0	61.0	70.0	100.0	170.0	270.0



HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	FLOW(CFS)	DATE	REG.(R)
1949	519.	462.	443.	359.	299.	245.	219.	208.	173.	893.	09/15/49	
1950	1260.	908.	807.	490.	336.	286.	212.	218.	196.	3050.	11/27/49	
1951	1690.	1280.	788.	455.	336.	291.	272.	236.	198.	2100.	02/10/51	
1952	527.	416.	295.	264.	227.	204.	176.	154.	138.	960.	10/19/51	
1953	755.	509.	425.	370.	347.	242.	189.	180.	173.	1320.	01/31/53	
1954	682.	554.	375.	308.	295.	257.	233.	222.	187.	1070.	10/31/53	
1955	1010.	744.	563.	402.	284.	254.	219.	194.	156.	1640.	11/19/54	
1956	956.	565.	396.	324.	315.	270.	234.	208.	170.	1290.	11/03/55	
1957	840.	530.	353.	287.	273.	203.	196.	172.	158.	1860.	10/20/56	
1958	586.	472.	336.	299.	242.	229.	201.	176.	150.	1010.	01/16/58	
1959	928.	417.	291.	237.	237.	241.	224.	185.	184.	1320.	04/30/59	
1960	630.	489.	403.	279.	239.	184.	173.	159.	153.	1180.	11/22/59	
1961	1060.	654.	531.	378.	358.	258.	252.	229.	213.	1260.	01/15/61	
1962	626.	413.	355.	355.	295.	198.	179.	162.	142.	912.	01/07/62	
1963	600.	497.	430.	265.	230.	260.	191.	174.	151.	1150.	11/19/62	
1964	802.	533.	418.	373.	309.	256.	226.	201.	171.	1080.	11/26/63	
1965	636.	565.	392.	329.	281.	210.	181.	170.	154.	1100.	11/04/64	
1966	576.	394.	357.	257.	206.	200.	183.	174.	152.	904.	12/03/65	
1967	824.	589.	516.	388.	310.	244.	225.	202.	166.	1050.	12/13/66	
1968	900.	658.	490.	387.	297.	245.	218.	202.	180.	1100.	10/01/67	
1969	627.	457.	325.	272.	230.	216.	197.	173.	155.	892.	12/03/68	

### HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1949-1969)

[illegible]

HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1949-1969)

## STATION 12210500 NOOKSACK RIVER AT DEMING, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1935													
1936	2042	1903	1997	3727	1349	3228	4861	6750	5266	2659	1400	1957	3063
1937	1104	672	4528	957	1504	3163	3491	4643	7815	3281	1720	1594	2848
1938	2781	6405	5039	3532	1600	2110	3519	3914	3640	3281	1720	1226	3133
1939	1583	2238	4966	5098	2123	2447	3492	4716	4536	3778	1895	1222	3183
1940	2624	3522	6376	2932	3568	4409	2776	3767	2366	1652	1334	1166	3030
1941	2841	2026	3521	2947	2395	2063	1924	3135	2463	1862	1339	2789	2444
1942	4102	3714	4173	1688	1635	1784	2368	2950	4227	2730	1584	963	2667
1943	1091	3348	4054	2607	2988	2264	5011	4040	4511	4023	1715	1300	3075
1944	1723	1370	3233	2771	1701	1990	2283	3372	3142	1798	1324	1983	2227
1945	1751	3276	2430	4456	3179	2472	2619	5480	3617	2696	1490	1748	2934
1946	4102	5010	3481	3558	3007	3098	3725	6123	5327	3761	1949	1245	3703
1947	2331	2099	4459	3435	4420	2974	3774	4413	4030	2564	1348	1495	3104
1948	4815	3921	4752	3542	2505	2063	2636	5637	6550	3027	2742	2587	3736
1949	2800	4063	2523	1430	2731	3706	4029	6109	4538	3405	2201	2161	3309
1950	2405	4462	4931	3146	3817	4782	3631	4630	7207	4963	2668	1864	4041
1951	3856	4175	6244	4247	7118	2284	3205	4067	3458	2366	1432	1218	3617
1952	3316	2509	2416	1560	3193	1828	3590	5260	4156	3160	1855	1252	2639
1953	895	901	1760	6941	4385	2290	3041	4365	4036	3811	1978	1847	3017
1954	3923	5616	6552	4055	5229	2622	2930	4694	5588	5288	3319	2371	4342
1955	2608	6986	3409	2656	2686	1609	3069	4238	7228	5365	2817	1716	3696
1956	3779	5967	4063	3032	1473	2368	4061	5993	7091	4152	2133	1950	3841
1957	5835	3517	5801	1791	2595	3723	3464	5496	3751	2632	1870	1569	3516
1958	3031	3167	3556	3945	6007	2464	3178	4028	3719	2731	2001	1031	3221
1959	2766	4305	3574	3478	1993	3257	4145	4413	4251	3665	2042	1386	3281
1960	2611	3019	6598	4973	4169	2858	1865	4336	6497	3317	2029	1605	3657
1961	7239	4154	5149	6125	5218	3708	2502	3595	5139	3621	2393	3760	4384
1962	3896	4623	4409	3861	2127	2735	4365	6369	5546	3005	1716	3555	3857
1963	2793	4160	3515	3805	3305	2076	3541	3251	4186	2119	1491	1809	2997
1964	2355	3422	2974	5104	5912	3319	3565	6275	5979	5359	2734	1740	4033
1965	2286	4933	2942	3319	4303	7347	4024	6330	6354	6168	2812	2284	4426
1966	1217	2497	5512	3454	1864	2180	2056	4225	3900	2649	1527	1232	2703
1967	2998	3324	4817	5895	3920	4437	3562	4682	7702	6180	3526	1962	4424
1968	1022	3384	4088	4087	2542	2563	1584	4271	5314	4437	2346	1511	3102
1969	5419	6842	9668	5772	2930	2188	3068	5062	4559	4491	3247	2346	4647
1970	1521	1878	3095	2814	2374	2542	3282	3129	3725	2008	2175	1530	2506
1971	1699	4896	5861	3103	2567	2686	2249	2669	3138	2430	2059	3888	3103
1972	1625	2938	1895	1136	2211	3411	2552	3986	3338	2297	1453	1778	2383

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1935-1979)

MEAN	2830.9	3649.8	4280.0	3540.0	3152.5	2887.8	3217.2	4605.8	4807.9	3340.5	2011.3	1837.8	3353.8
MAXIMUM	7239.0	6986.0	9668.0	6941.0	7118.0	7347.0	5011.0	6750.0	7815.0	6180.0	3526.0	3888.0	4647.0
MINIMUM	895.0	672.0	1760.0	957.0	1349.0	1609.0	1584.0	2669.0	2368.0	1652.0	1317.0	963.0	2227.0
STD DEVIATION	1421.72	1540.83	1615.48	1389.04	1409.39	1075.22	811.39	1074.45	1461.21	1201.68	605.64	711.61	626.99
SKWENESS	1.099	0.279	0.966	0.327	1.024	2.252	0.040	0.285	0.527	0.808	0.885	1.503	0.342
STD ERR SKEW	0.388	0.388	0.388	0.388	0.388	0.388	0.388	0.388	0.388	0.383	0.383	0.383	0.388
SER CORR COEFF	-0.018	-0.079	-0.176	0.842	0.127	-0.039	-0.104	0.144	0.155	0.4216	0.241	0.146	0.059
COEFF OF VAR	0.502	0.422	0.377	0.392	0.447	0.372	0.252	0.233	0.304	0.355	0.301	0.387	0.187
MEAN LOGS	3.400	3.515	3.602	3.511	3.459	3.438	3.493	3.652	3.663	3.504	3.286	3.238	3.518
STD DEV LOGS	0.220	0.224	0.165	0.197	0.186	0.135	0.117	0.103	0.132	0.150	0.124	0.149	0.081
SKWENESS LOGS	-1.187	-1.187	-0.219	-0.924	0.187	0.966	-0.589	-0.166	-0.056	0.178	0.424	0.656	-0.023
STD ERR SKEW LOGS	0.388	0.388	0.388	0.388	0.388	0.388	0.388	0.388	0.388	0.383	0.383	0.383	0.388
SER CORR LOGS	-0.060	-0.083	-0.134	0.005	0.196	0.003	-0.069	0.182	0.235	0.191	0.267	0.151	0.091
COEFF OF VAR LOGS	0.064	0.064	0.046	0.036	0.054	0.039	0.033	0.028	0.036	0.043	0.037	0.046	0.023
% OF AVE FLOW	7.0	9.1	10.6	8.8	7.8	7.2	8.0	11.5	12.0	8.4	5.0	4.6	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1935-1979)

0.99	729.3	648.4	551.7	839.9	1127.0	1658.2	1484.8	2509.3	2233.8	1495.9	1087.5	919.1	2127.4
0.95	1068.1	1224.7	2089.0	1390.5	1456.4	1811.4	1919.1	3002.7	2771.1	1841.0	1252.7	1054.6	2421.2
0.90	1302.1	1640.7	2434.3	1763.8	1767.9	1924.8	2176.0	3295.8	3105.0	2064.1	1360.2	1148.2	2593.4
0.80	1647.1	2242.7	2914.9	2288.1	2000.7	2101.4	2508.0	3680.3	3560.1	2379.1	1512.6	1287.6	2817.6
0.50	2544.0	3617.5	4052.2	3472.0	2841.3	2608.8	3194.1	4515.8	4610.5	3155.9	1892.3	1665.1	3299.6
0.20	3855.2	5060.6	5523.7	4775.5	4111.8	3475.1	3918.8	5482.5	5946.7	4247.0	2435.8	2270.2	3860.1
0.10	4755.0	5740.8	6445.0	5445.0	5026.5	4161.7	4300.1	6047.5	6782.0	4989.3	2812.3	2729.7	4188.4
0.04	5914.0	6360.7	7554.3	6113.4	6263.6	5167.7	4700.4	6696.0	7793.1	5950.9	3308.3	3381.4	4568.0
0.02	6788.1	6693.5	8344.6	6508.8	7243.9	6025.4	4952.4	7141.0	8595.1	6695.1	3693.0	3921.3	4630.5
0.01	7668.8	6945.9	9107.3	6835.1	8274.0	6983.3	5173.0	7555.0	9226.6	7435.0	4091.3	4510.4	5078.9

## STATION 12210500 NOOKSACK RIVER AT DEMING, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1937	560.0	565.0	582.0	588.0	670.0	843.0	965.0	1150.0	1650.0
1938	768.0	789.0	819.0	905.0	1050.0	1250.0	1510.0	2050.0	3250.0
1939	640.0	668.0	697.0	972.0	1180.0	1180.0	1080.0	1500.0	2060.0
1940	644.0	691.0	786.0	976.0	1110.0	1280.0	1710.0	2230.0	2880.0
1941	692.0	708.0	741.0	950.0	1070.0	1150.0	1300.0	1430.0	1900.0
1942	992.0	997.0	1020.0	1160.0	1310.0	1580.0	1700.0	2090.0	2250.0
1943	645.0	660.0	716.0	755.0	902.0	933.0	1150.0	1460.0	2220.0
1944	844.0	849.0	895.0	991.0	1210.0	1290.0	1470.0	1520.0	1980.0
1945	800.0	812.0	878.0	1040.0	1180.0	1400.0	1650.0	1690.0	2070.0
1946	1100.0	1100.0	1110.0	1120.0	1300.0	1480.0	1520.0	1870.0	2790.0
1947	605.0	814.0	847.0	899.0	950.0	1240.0	1580.0	1810.0	2390.0
1948	1000.0	1030.0	1070.0	1140.0	1240.0	1400.0	1750.0	2200.0	2910.0
1949	810.0	820.0	830.0	881.0	1020.0	1370.0	2130.0	2390.0	2590.0
1950	1060.0	1140.0	1290.0	1530.0	1630.0	2020.0	2100.0	2330.0	2960.0
1951	1240.0	1280.0	1320.0	1380.0	1680.0	2200.0	2720.0	2810.0	3720.0
1952	698.0	739.0	758.0	811.0	923.0	1270.0	1630.0	2000.0	1990.0
1953	526.0	534.0	553.0	629.0	855.0	876.0	991.0	1120.0	1620.0
1954	960.0	1020.0	1210.0	1270.0	1380.0	1710.0	2350.0	2720.0	3190.0
1955	1110.0	1140.0	1220.0	1460.0	1490.0	2120.0	2300.0	2580.0	3290.0
1956	990.0	1030.0	1130.0	1170.0	1480.0	1760.0	2240.0	2720.0	3310.0
1957	1200.0	1200.0	1230.0	1240.0	1310.0	1720.0	2380.0	3040.0	3410.0
1966	742.0	748.0	790.0	852.0	944.0	1420.0	1740.0	2100.0	2660.0
1967	770.0	784.0	837.0	1130.0	1300.0	1390.0	1760.0	2130.0	2790.0
1968	1030.0	1110.0	1190.0	1320.0	1580.0	1810.0	2270.0	3220.0	3270.0
1969	1500.0	1500.0	1520.0	1640.0	1880.0	2000.0	2850.0	3290.0	3490.0
1970	1130.0	1180.0	1280.0	1370.0	1560.0	1790.0	2370.0	2710.0	2980.0
1971	772.0	812.0	954.0	1270.0	1360.0	1590.0	1700.0	1890.0	2320.0
1972	1050.0	1060.0	1100.0	1190.0	1510.0	1850.0	2170.0	2840.0	2920.0
1973	832.0	853.0	866.0	940.0	1140.0	1730.0	1970.0	1960.0	2790.0
1974	881.0	888.0	932.0	1000.0	1100.0	1190.0	1550.0	1980.0	2560.0
1975	650.0	680.0	751.0	813.0	867.0	1240.0	1740.0	2300.0	2850.0
1976	1060.0	1080.0	1090.0	1170.0	1450.0	1890.0	2160.0	2890.0	3250.0
1977	812.0	852.0	903.0	1230.0	1460.0	1610.0	1750.0	2070.0	2310.0
1978	748.0	778.0	856.0	949.0	1070.0	1420.0	1660.0	1760.0	2360.0
1979	750.0	763.0	833.0	1010.0	1110.0	1380.0	1610.0	1850.0	2200.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1937-1979)

MEAN	880.3	904.9	960.1	1078.6	1234.9	1496.6	1820.2	2162.9	2662.3
MAXIMUM	1500.0	1500.0	1520.0	1640.0	1880.0	2200.0	2850.0	3290.0	3720.0
MINIMUM	526.0	534.0	553.0	588.0	670.0	843.0	965.0	1120.0	1620.0
STANDARD DEVIATION	215.18	218.18	227.41	242.63	272.04	341.79	450.63	559.95	550.11
SKWENESS	0.704	0.601	0.437	0.206	0.230	0.149	0.254	0.190	-0.088
STD ERROR OF SKWENESS	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398
SERIAL CORR COEFF	0.197	0.235	0.287	0.293	0.315	0.360	0.395	0.320	0.155
COEFF OF VARIATION	0.244	0.241	0.237	0.225	0.220	0.228	0.248	0.259	0.207
MEAN LOGS	2.932	2.945	2.970	3.022	3.081	3.164	3.247	3.320	3.416
STD DEVIATION LOGS	0.104	0.103	0.103	0.101	0.098	0.103	0.112	0.118	0.094
SKWENESS LOGS	0.122	0.062	-0.069	-0.429	-0.319	-0.407	-0.420	-0.416	-0.453
STD ERR SKWENESS LOGS	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398	0.398
SER CORR COEFF LOGS	0.190	0.210	0.246	0.246	0.266	0.328	0.354	0.259	0.144
COEFF OF VAR LOGS	0.035	0.035	0.035	0.034	0.032	0.033	0.034	0.035	0.027

STATION 12210500 NOOKSACK RIVER AT DERING, WASH.

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1937-1979)

0.99	1527.0	1548.9	1604.4	1679.0	1933.7	2355.5	2962.7	3607.7	4005.0
0.98	1422.1	1447.2	1508.6	1606.1	1843.6	2249.4	2819.9	3424.2	3847.0
0.96	1315.0	1342.6	1408.2	1524.9	1745.1	2131.7	2661.8	3222.0	3669.6
0.90	1167.0	1196.4	1264.6	1399.5	1596.4	1951.2	2420.2	2914.3	3393.1
0.80	1045.5	1074.9	1142.0	1283.5	1461.9	1785.2	2198.9	2634.2	3134.0
0.50	851.8	878.1	935.9	1089.0	1219.8	1481.1	1796.5	2129.4	2647.1
0.20	696.7	718.8	765.6	869.6	1000.7	1201.1	1430.8	1676.3	2084.9
0.10	631.7	649.7	687.9	773.0	896.0	1066.5	1257.0	1463.2	1957.6
0.05	582.0	597.4	629.1	697.8	814.9	961.9	1123.2	1300.2	1778.7
0.02	531.6	544.0	568.5	618.4	729.4	851.8	983.5	1131.1	1588.0
0.01	500.9	511.2	531.1	568.6	675.8	783.0	896.9	1026.9	1467.4

## FLOW DURATION DATA

OAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1937-1979)

P95	P90	P75	P70	P50	P25	P10
1100.0	1300.0	1800.0	2000.0	2700.0	4200.0	6100.0

## STATION 12-10500 NOOKSACK RIVER AT DEMING, WASH.

## HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL FLOW(CFS)	PEAK-FLOW DATA DATE	REG.(R)
1908											03/15/08	
1910										49300.	11/30/09	
1932										39600.	02/27/32	
1935										21000.	01/25/35	
1936	10300.	9030.	7480.	7060.	6790.	6590.	5860.	5080.	4210.	20900.	05/04/36	
1937	18600.	14400.	11600.	8990.	7810.	6300.	5530.	4850.	4080.	33200.	06/21/37	
1938	21600.	15100.	10700.	8630.	6570.	5960.	5430.	4580.	3870.	23000.	10/28/37	
1939	19000.	15800.	11200.	7850.	6180.	5110.	4430.	4200.	3870.	18200.	01/01/39	
1940	11000.	9240.	8520.	7800.	6460.	5220.	4590.	4330.	4060.	15000.	12/15/39	
1941	11200.	9220.	8510.	4500.	3580.	3300.	3000.	3060.	2700.	15800.	01/18/41	
1942	13600.	10200.	7530.	5800.	4930.	4360.	4050.	3450.	2870.	17200.	12/02/41	
1943	11300.	8570.	6760.	5630.	5400.	4780.	4600.	4540.	3800.	23300.	01/15/43	
1944	17300.	10300.	6470.	4110.	3740.	3320.	2950.	2770.	2590.	28800.	12/03/43	
1945	19200.	12200.	9930.	7220.	5500.	4640.	4150.	3790.	3690.	38000.	01/07/45	
1946	35000.	23100.	13500.	9610.	7240.	5790.	5330.	4810.	4190.	29900.	10/25/45	
1947	19500.	13000.	8450.	6530.	5600.	4380.	4190.	4040.	3950.	31400.	10/25/46	
1948	20000.	12000.	9640.	8890.	7740.	6200.	5200.	4560.	3980.	36500.	10/19/47	
1949	9840.	9680.	9190.	7560.	6250.	5610.	4980.	4720.	4230.	43200.	11/27/49	
1950	24400.	15500.	12700.	8910.	7480.	6580.	5650.	5140.	4880.	14200.	02/10/51	
1951	39600.	30700.	18800.	11000.	7940.	6720.	6360.	5540.	4710.	22700.	01/30/52	
1952	8770.	7910.	7140.	6390.	5780.	4920.	4530.	4080.	3600.	24900.	01/31/53	
1953	14700.	12700.	9790.	8260.	8070.	5670.	4220.	4210.	4210.	38500.	10/31/53	
1954	20000.	14700.	9610.	7740.	7020.	6410.	5750.	5520.	4630.	27500.	11/19/54	
1955	19900.	15400.	13000.	10300.	7370.	6510.	5860.	5090.	4120.	22000.	10/20/55	
1956	24000.	20500.	12500.	9640.	8360.	6740.	6020.	5420.	4300.	31400.	01/16/58	
1957	21200.	14900.	13300.	9050.	6800.	5340.	5120.	4360.	3960.	25700.	04/30/59	
1958										32900.	11/23/59	
1959										18200.	01/15/61	
1960										33400.	01/08/62	
1961										24500.	11/20/62	
1962										19300.	10/22/63	
1963										18500.	01/30/65	
1964										21600.	12/04/65	
1965	15600.	13100.	9540.	8570.	6840.	5310.	4520.	4170.	3980.	27200.	12/13/66	
1966	12900.	9770.	7890.	5590.	4660.	4510.	4390.	4260.	4240.	25900.	10/27/67	
1967	16800.	13300.	13000.	9340.	7040.	6140.	5460.	4930.	4570.	32000.	01/05/69	
1968	19000.	15700.	11700.	9400.	7630.	6260.	5780.	5020.	4210.	25200.	11/04/69	
1969	17800.	12900.	8980.	7540.	7240.	6130.	5520.	5020.	4210.	32000.	07/12/72	
1970	11200.	10200.	7630.	5650.	4440.	3880.	3890.	3710.	3430.	22200.	12/26/72	
1971	23500.	20000.	12900.	9440.	8090.	6870.	6360.	6090.	5850.	18200.	01/16/74	
1972	15100.	13200.	11400.	10400.	7950.	6870.	6360.	6090.	5850.	20000.	12/21/74	
1973	16300.	12500.	11600.	9710.	8660.	4600.	3890.	3390.	3440.	24000.	12/03/75	
1974	17300.	14700.	11200.	9280.	7850.	7100.	6290.	5630.	5380.	21400.	01/18/77	
1975	14500.	11200.	8460.	6350.	5550.	5320.	4720.	4120.	3710.	23200.	12/02/77	
1976	36000.	28700.	19600.	14000.	10900.	8990.	7810.	7080.	5570.	18000.	11/08/78	
1977	15200.	9360.	6190.	4560.	3900.	3720.	3400.	3190.	3040.			
1978	19100.	12300.	9290.	8430.	6820.	5580.	4760.	4240.	3620.			
1979	9940.	8330.	5980.	4610.	4110.	3750.	3390.	3370.	2980.			

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1908-1979)

### HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1908-1979)

0.99	8057.4	7461.5	5363.9	3607.0	3118.1	2974.6	2729.8	2676.7	2485.4	11688.1	11528.9
0.95	9754.4	8325.4	6288.8	4666.1	4018.7	3632.8	3315.9	3148.8	2882.5	14848.3	14408.7
0.90	10879.7	8941.3	6879.1	5258.4	4543.2	4013.2	3652.7	3421.7	3111.3	16232.3	16031.3
0.80	12504.3	9877.8	7704.5	6122.8	5211.0	4498.7	4080.8	3772.1	3404.5	18626.9	18465.1
0.50	16679.9	12465.1	9710.5	7856.2	6551.1	5492.5	4950.7	4502.1	4015.3	24208.2	24283.7
0.20	22920.9	16798.1	12482.5	9739.2	7901.3	6547.4	5865.5	5307.9	4491.2	31451.1	31441.4
0.10	27395.5	20145.9	14348.3	10755.9	8561.3	7112.0	6351.6	5757.5	5070.1	35977.9	35902.7
0.04	33447.6	24747.9	16749.9	11845.6	9269.9	7716.7	6869.2	6256.8	5492.7	41557.6	41286.9
0.02	38251.4	29038.0	18575.1	12545.2	9689.1	8105.8	7200.7	6589.6	5775.7	4502.8	45143.7
0.01	43312.9	33025.7	20433.8	13167.3	10466.3	8853.2	7495.6	6895.4	6036.8	49568.6	48889.4

## STATION 12211500 NOOKSACK RIVER NEAR LYNDEN, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1945	4933	5327	2734	5468	3818	2894	2987	6412	4143	2891	1618	1911	
1946	2397	2145	3681	3876	3267	3397	4093	6550	5652	3841	2018	1366	4005
1947	4896	3941	4701	3761	4738	3005	3779	4430	4063	3570	1412	1558	3204
1948	2804	4326	2854	3786	2844	2228	2714	5955	6816	3047	2739	2618	3875
1949	2396	4930	2854	1511	3392	4334	4058	6886	4727	3567	2316	2305	3597
1950	4086	4846	2508	4930	4235	5460	4068	4744	7426	5083	2783	1843	3597
1951	3461	2588	1793	4759	7878	2541	3352	4502	3597	2510	1498	1258	4011
1952	942	1808	7559	1626	3366	1912	3752	5417	4405	3417	1883	1262	2964
1953	3987	5688	6730	4348	7277	2456	3244	4449	4348	4075	1991	1859	3189
1954	2655	7454	3737	2938	5423	2753	3066	4741	5639	5298	3414	2423	4455
1955	3744	6644	4549	3401	1568	1695	3315	4423	7300	5500	2799	1608	3862
1956	5556	3544	6347	1922	2879	2496	4127	5935	7028	4539	2028	2040	4011
1957	1793	1724	2978	4767	5040	3710	3424	5496	4016	2685	1675	1356	3546
1958	3677	5441	6220	6057	2609	2804	2854	4451	3580	2238	1515	1614	2900
1959	3972	5772	4892	3253	4105	3169	5900	5634	5002	4109	2113	4035	4570
1960	3365	4173	3456	5997	7724	4192	3771	4488	5109	3216	2141	1719	3765
1961	2685	2926	3923	5109	3229	1736	3408	3170	2821	2650	1859	1639	4023
1962	2605	5211	5355	3401	4690	2332	2897	3110	3884	2650	2833	2028	3132
1963	3575	6567	4323	4525	2758	2724	3341	4334	2911	2701	1870	1620	3214
1964	3119	3359	3705	4358	6199	2752	3317	4277	7170	5568	3054	2786	4271
1965	2544	4365	3658	3775	2161	2752	3217	4277	4104	2810	2092	1101	3407
1966	2719	3017	7583	5615	4332	3491	4496	4406	6618	3662	1964	1357	3381
1967						3078	1982	4496		3381	1958	1573	3865

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1945-1967)

MEAN	3269.1	4316.4	4533.3	4129.4	4077.0	2929.8	3552.6	4935.0	5118.3	3573.0	2155.3	1864.3	3708.2
MAXIMUM	5556.0	7454.0	7583.0	7277.0	7874.0	5460.0	5900.0	6886.0	7426.0	5568.0	3414.0	4035.0	4570.0
MINIMUM	942.0	952.0	1808.0	1511.0	1568.0	1495.0	1982.0	3110.0	2911.0	2238.0	1612.0	1101.0	2900.0
STD DEVIATION	1073.75	1679.03	1594.47	1434.65	1614.13	880.85	757.45	985.94	1368.90	1020.22	536.27	647.08	487.99
SKEDNESS	0.162	-0.141	0.400	0.069	0.960	1.173	0.991	0.283	0.419	0.785	0.785	1.897	0.007
STD ERR SKEW	0.491	0.491	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.491
SER CORR COEFF	-0.379	0.144	-0.259	-0.178	-0.205	0.076	-0.221	0.394	-0.179	0.108	0.001	-0.092	-0.212
COEFF OF VAR	0.328	0.389	0.352	0.347	0.396	0.301	0.213	0.196	0.267	0.286	0.249	0.347	0.132
MEAN LOGS	3.488	3.594	3.629	3.586	3.579	3.450	3.541	3.685	3.694	3.321	3.321	3.250	3.566
STD DEV LOGS	0.166	0.213	0.160	0.174	0.169	0.123	0.091	0.087	0.116	0.118	0.104	0.130	0.058
SKEDNESS LOGS	-1.294	-1.316	-0.358	-0.965	-0.059	0.309	-0.184	-0.329	0.059	0.432	0.351	0.904	-0.186
STD ERR SKEW LOGS	0.491	0.491	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.491
SER CORR LOGS	-0.348	0.055	-0.193	-0.174	-0.148	0.045	-0.263	0.435	-0.172	0.081	-0.004	-0.048	-0.184
COEFF OF VAR LOGS	0.059	0.104	0.047	0.049	0.047	0.036	0.026	0.024	0.031	0.031	0.031	0.040	0.016
% OF AVE FLOW	7.4	9.7	10.2	9.3	9.2	6.6	8.0	11.1	11.5	8.0	4.8	4.2	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1945-1967)

0.99	903.7	807.9	1640.0	1156.3	1505.0	1552.0	2071.5	2901.5	2691.0	1994.9	1278.0	1081.8	2648.8
0.95	1475.4	1524.2	2240.7	1819.7	1984.0	1811.8	2433.8	3426.2	3204.8	2281.1	1449.8	1185.7	2933.5
0.90	1844.5	2034.1	2622.6	2251.7	2295.5	1977.8	2845.4	3727.1	3521.1	2466.4	1558.2	1261.1	3092.4
0.80	2336.5	2759.7	3147.4	2840.1	2735.0	2210.1	2919.6	4110.2	3949.7	2728.6	1708.2	1376.7	3291.6
0.50	3332.0	4354.9	4354.9	4108.9	3807.9	2775.2	3500.9	4896.7	4934.3	3378.0	2066.7	1701.4	3692.3
0.20	4237.1	5917.1	5838.3	5429.1	5272.9	3557.7	4159.8	5743.8	6187.2	4299.7	2550.4	2240.6	4117.7
0.10	4620.2	6601.7	624.9	6079.6	6237.4	4085.4	4535.9	6206.2	6974.4	4933.9	2870.0	2659.0	4349.2
0.04	4943.9	7187.2	7750.7	7103.1	7449.1	4765.5	4961.4	6710.8	7933.5	5764.7	3275.5	3261.5	4602.6
0.02	5106.3	7482.0	8455.3	7073.7	8346.9	5249.6	5249.6	7041.8	8627.5	6066.2	3580.1	3761.3	4769.7
0.01	5223.1	7693.9	9115.3	7368.2	9241.1	5810.8	5517.8	7442.0	9307.4	7067.9	3887.3	4325.2	4922.2

## STATION 12211500 NOOKSACK RIVER NEAR LYNDEN, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1946	1120.0	1130.0	1150.0	1170.0	1390.0	1600.0	1640.0	2020.0	3150.0
1947	1000.0	1000.0	1020.0	1060.0	1100.0	1350.0	1680.0	1900.0	2480.0
1948	1120.0	1130.0	1160.0	1220.0	1310.0	1470.0	1900.0	2250.0	2950.0
1949	850.0	850.0	857.0	902.0	1070.0	1500.0	2500.0	2560.0	2720.0
1950	1210.0	1270.0	1380.0	1420.0	1620.0	2130.0	2170.0	2410.0	3100.0
1951	1260.0	1290.0	1320.0	1400.0	1680.0	2210.0	2820.0	2930.0	4130.0
1952	720.0	753.0	771.0	833.0	948.0	1340.0	1710.0	2090.0	2070.0
1953	605.0	615.0	635.0	703.0	910.0	925.0	1030.0	1150.0	1680.0
1954	1070.0	1180.0	1320.0	1380.0	1470.0	1760.0	2400.0	2830.0	3360.0
1955	1250.0	1270.0	1340.0	1560.0	1590.0	2300.0	2520.0	2820.0	3540.0
1956	1060.0	1070.0	1160.0	1230.0	1540.0	1850.0	2380.0	2990.0	3590.0
1957	1190.0	1230.0	1270.0	1290.0	1370.0	1820.0	2350.0	2900.0	3500.0
1958	780.0	802.0	921.0	1110.0	1190.0	1320.0	1490.0	1620.0	1980.0
1959	928.0	947.0	1010.0	1180.0	1380.0	1500.0	1670.0	2020.0	2680.0
1960	1280.0	1300.0	1350.0	1500.0	1740.0	2790.0	3100.0	3290.0	3780.0
1961	1020.0	1050.0	1120.0	1320.0	1450.0	1830.0	1930.0	2350.0	2960.0
1962	886.0	932.0	953.0	1020.0	1250.0	1670.0	1950.0	2180.0	2470.0
1963	1170.0	1260.0	1350.0	1550.0	1840.0	2250.0	2390.0	2800.0	2800.0
1964	1130.0	1170.0	1200.0	1270.0	1460.0	1580.0	1830.0	2030.0	2360.0
1965	1380.0	1410.0	1500.0	1690.0	1770.0	2800.0	2930.0	3010.0	3190.0
1966	760.0	763.0	803.0	872.0	1050.0	1500.0	1800.0	2100.0	2690.0
1967	742.0	752.0	821.0	1100.0	1270.0	1350.0	1710.0	2130.0	2830.0

LOWEST MEAN FLOW STATISTICS (YEARS 1946-1967)

MEAN	1024.1	1053.4	1109.6	1226.4	1394.9	1765.7	2081.8	2375.9	2909.5
MAXIMUM	1380.0	1410.0	1500.0	1690.0	1940.0	2800.0	3100.0	3290.0	4130.0
MINIMUM	605.0	615.0	635.0	703.0	910.0	925.0	1030.0	1150.0	1680.0
STANDARD DEVIATION	212.85	223.01	237.29	266.72	286.32	477.39	514.31	527.55	607.56
SKEWNESS	-0.339	-0.368	-0.329	-0.105	0.112	0.764	0.220	-0.212	-0.054
STD ERROR OF SKEWNESS	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491
SERIAL CORR COEFF	0.026	0.004	-0.018	-0.066	0.034	-0.013	-0.100	-0.040	0.004
COEFF OF VARIATION	0.208	0.212	0.214	0.217	0.205	0.270	0.247	0.222	0.209
MEAN LOGS	3.001	3.012	3.035	3.078	3.136	3.232	3.305	3.364	3.454
STD DEVIATION LOGS	0.097	0.099	0.100	0.100	0.091	0.115	0.112	0.105	0.096
SKEWNESS LOGS	-0.675	-0.682	-0.686	-0.562	-0.279	0.052	-0.495	-0.994	-0.610
STD ERR SKEWNESS LOGS	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491
SER CORR COEFF LOGS	0.085	0.057	0.032	-0.020	0.066	0.064	-0.040	-0.037	0.021
COEFF OF VAR LOGS	0.032	0.033	0.033	0.032	0.029	0.036	0.034	0.031	0.028

LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1946-1967)

0.99	1503.3	1556.6	1644.3	1850.7	2135.2	3196.0	3345.2	3406.3	4298.2
0.98	1454.8	1505.7	1590.4	1782.5	2039.2	2964.9	3194.8	3225.9	4151.1
0.96	1397.9	1446.0	1526.9	1704.2	1934.5	2728.6	3025.9	3225.9	3980.7
0.90	1304.4	1347.8	1422.5	1578.8	1777.0	2401.5	2763.2	3043.7	3705.2
0.80	1211.8	1250.5	1319.1	1458.0	1634.9	2132.5	2518.0	2845.9	3436.8
0.50	1026.5	1055.6	1111.9	1223.9	1379.7	1703.2	2062.4	2407.8	2909.7
0.20	839.3	859.2	903.2	995.5	1148.3	1364.8	1639.2	1925.4	2386.7
0.10	744.3	759.8	797.7	881.9	1037.4	1217.2	1435.8	1671.7	2123.5
0.05	668.7	680.8	713.9	792.3	951.0	1108.1	1278.4	1468.0	1914.6
0.02	587.5	596.1	624.2	696.9	859.6	997.7	1113.7	1249.6	1690.6
0.01	536.0	542.6	567.6	636.8	802.1	930.6	1011.3	1112.4	1548.7

FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1946-1967)

P95	P90	P75	P70	P50	P25	P10
1200.0	1500.0	2000.0	2200.0	3100.0	4600.0	6600.0





## STATION 12C12000 FISHTRAP CREEK AT LYNDEN, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1948	15.4	51.4	66.0	27.8	60.9	52.5	29.9	21.5	8.96	7.46	7.95	7.73	
1949	5.63	21.1	73.8	42.0	130	118	84.9	42.6	17.8	6.96	3.47	2.43	28.7
1950	16.9	41.4	94.2	114	162	103	37.9	31.1	13.6	9.45	7.34	6.72	46.1
1951	11.4	22.1	39.3	40.3	60.8	35.5	20.7	15.7	9.76	7.47	6.41	4.54	52.1
1952	4.31	4.59	15.1	104	82.2	40.3	38.3	22.3	17.4	6.62	3.85	4.51	22.4
1953	14.3	58.4	106	80.3	92.9	50.6	40.5	18.7	16.7	9.99	6.12	6.01	28.9
1954	7.11	74.9	46.1	48.3	61.1	38.3	52.3	29.4	18.7	11.0	8.30	7.97	41.8
1955	14.9	60.1	83.1	74.9	44.0	60.6	41.1	16.8	16.9	7.66	5.36	5.36	33.1
1956	34.0	44.1	92.0	39.7	63.5	80.7	42.5	18.5	11.2	8.61	5.39	6.81	36.1
1957	5.33	10.2	24.6	64.1	71.1	33.0	31.1	13.9	7.64	4.15	2.55	4.96	37.0
1958	7.84	37.8	66.0	91.3	57.7	55.4	70.1	47.3	20.9	10.3	6.41	2.97	22.3
1959	22.5	59.8	74.2	71.7	73.4	50.9	41.3	46.7	22.8	9.11	6.62	11.1	40.1
1960	34.5	53.8	56.5	86.5	142	95.0	50.1	39.8	16.8	10.3	8.19	10.00	40.7
1961	16.1	27.4	78.7	98.4	51.2	42.1	36.7	34.7	18.4	11.1	12.0	8.23	49.6
1962	17.7	45.6	66.3	44.9	49.5	38.1	44.7	25.2	13.0	9.63	6.18	6.19	30.5
1963	12.7	84.1	105	108	63.0	68.7	43.6	27.5	21.0	17.5	14.8	19.3	48.8
1964	21.9	43.6	53.4	99.5	169	50.4	37.2	30.8	15.0	10.6	8.02	7.32	44.6
1965	9.53	32.2	42.7	91.5	54.6	61.2	36.8	19.0	12.3	7.43	6.69	6.69	32.0
1966	18.9	39.2	116	151	99.7	70.3	41.5	23.4	15.2	9.76	6.09	4.91	49.5
1967	35.6	46.7	79.8	102	87.1	83.0	42.4	24.9	23.9	12.5	9.82	11.7	46.5
1968	29.8	44.7	77.0	61.8	71.7	51.5	58.7	25.2	13.2	13.5	7.26	12.0	38.4
1969	16.2	35.5	38.2	54.7	45.1	32.4	40.8	20.5	11.5	7.40	5.73	6.43	26.1
1970	8.16	23.8	52.7	97.7	86.1	74.8	45.3	21.8	22.4	14.8	7.78	7.41	38.3
1971													
1972													

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1948-1972)

MEAN	16.6	41.8	67.2	78.0	81.7	60.3	43.8	26.8	15.9	9.7	7.2	7.6	37.8
MAXIMUM	35.6	84.1	116.0	151.0	169.0	118.0	84.9	47.3	23.9	17.5	14.8	19.3	52.1
MINIMUM	4.3	4.6	15.1	27.8	44.0	32.4	20.7	13.9	7.6	4.1	2.6	2.4	22.3
STD DEVIATION	9.45	19.07	26.20	30.31	36.20	23.32	13.24	9.67	4.56	2.73	2.55	3.63	8.82
SKEWNESS	0.795	0.148	-0.070	0.295	1.348	0.945	1.561	0.897	0.020	0.876	1.108	1.488	-0.157
STD ERR SKEW	0.481	0.481	0.481	0.441	0.481	0.481	0.481	0.481	0.481	0.472	0.472	0.472	0.481
SER CORR COEFF	0.140	0.186	-0.245	0.018	-0.067	0.045	-0.275	0.347	-0.081	0.013	0.036	0.036	-0.055
COEFF OF VAR	0.571	0.456	0.390	0.388	0.443	0.387	0.302	0.360	0.287	0.281	0.357	0.476	0.233
MEAN LOGS	1.147	1.558	1.787	1.857	1.878	1.751	1.625	1.404	1.182	0.970	0.828	0.839	1.566
STD DEV LOGS	0.264	0.281	0.211	0.186	0.170	0.160	0.122	0.149	0.134	0.124	0.160	0.199	0.109
SKEWNESS LOGS	-0.253	-1.776	-1.278	-0.525	0.748	0.298	0.194	0.318	-0.339	-0.502	-0.594	-0.129	-0.565
STD ERR SKEW LOGS	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.472	0.472	0.472	0.481
SER CORR LOGS	0.075	0.074	-0.159	0.019	-0.059	-0.024	-0.226	0.262	-0.061	0.060	0.037	0.060	-0.072
COEFF OF VAR LOGS	0.230	0.180	0.118	0.100	0.090	0.092	0.075	0.106	0.114	0.128	0.193	0.238	0.069
% OF AVE FLOW	3.6	9.2	14.7	17.1	17.9	13.2	9.6	5.9	3.5	2.1	1.6	1.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1948-1972)

0.99	3.0	3.4	13.0	22.7	37.8	25.9	22.8	12.4	6.6	4.3	2.4	2.3	18.7
0.95	4.9	10.0	24.1	33.6	43.5	31.8	27.0	14.9	8.8	5.6	3.5	3.2	23.6
0.90	6.3	15.4	31.9	40.9	47.7	35.6	29.6	16.5	10.1	6.4	4.1	3.8	26.4
0.80	8.5	23.8	43.1	51.0	54.0	41.2	33.2	18.9	11.9	7.4	5.0	4.7	30.1
0.50	14.4	43.2	67.7	74.7	71.9	55.4	24.9	15.6	9.6	7.0	7.0	7.0	37.6
0.20	23.5	60.8	92.0	103.8	102.6	76.4	53.3	33.6	19.8	11.9	9.2	10.2	45.5
0.10	30.0	66.8	102.8	120.8	127.2	91.4	60.8	39.7	22.1	13.2	10.5	12.4	49.6
0.04	38.5	70.9	112.3	140.0	163.6	111.5	68.8	47.9	24.6	14.6	11.8	15.1	54.0
0.02	45.0	72.6	117.1	152.9	195.1	127.4	77.3	54.3	26.1	15.7	12.7	15.2	56.7
0.01	51.5	73.5	120.6	164.6	230.5	144.1	84.4	61.0	27.6	16.3	13.4	19.2	59.1

## STATION 12212000 FISHTRAP CREEK AT LYNDEN, WASH.

LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1950	0.40	0.90	0.94	1.10	1.60	2.80	3.70	4.40	6.30
1951	5.50	5.60	6.00	6.20	6.40	7.00	7.60	9.00	14.00
1952	3.40	3.60	3.70	3.90	4.40	5.40	6.00	6.70	11.00
1953	3.40	3.40	3.50	3.70	3.80	4.10	4.30	4.30	5.50
1954	4.50	4.50	4.60	4.70	5.00	5.70	7.20	8.30	12.00
1955	6.00	6.00	6.10	6.40	7.00	7.40	7.70	8.20	11.00
1956	4.70	4.80	5.00	5.10	5.30	6.10	7.10	8.30	14.00
1957	3.80	3.80	3.90	4.10	4.20	5.00	6.50	8.30	12.00
1958	4.10	4.20	4.30	4.40	4.60	4.90	5.30	5.80	7.60
1959	1.90	1.90	2.00	2.10	2.20	2.70	3.00	3.80	6.20
1960	5.50	5.70	5.80	5.80	6.20	7.10	8.80	10.00	17.00
1961	4.20	4.50	4.50	4.90	5.60	7.40	8.30	10.00	19.00
1962	6.80	6.80	6.90	7.10	7.90	8.20	8.60	9.80	14.00
1963	7.60	7.70	8.10	8.90	10.00	11.00	11.00	13.00	16.00
1964	5.10	5.20	5.30	5.60	5.80	6.00	6.50	7.50	11.00
1965	10.00	10.00	11.00	11.00	12.00	14.00	16.00	18.00	20.00
1966	6.40	6.50	6.60	6.80	7.20	7.60	7.80	8.30	13.00
1967	4.80	5.00	5.20	5.70	6.10	6.80	7.30	8.30	12.00
1968	4.10	4.20	4.40	4.50	4.80	5.50	6.80	8.50	14.00
1969	8.30	8.50	8.60	8.80	9.30	10.00	11.00	13.00	18.00
1970	5.90	6.00	6.10	6.70	6.90	7.30	9.00	10.00	13.00
1971	3.10	3.20	4.00	4.40	5.20	5.90	6.30	6.80	9.10

## LOWEST MEAN FLOW STATISTICS (YEARS 1950-1971)

MEAN	5.0	5.1	5.3	5.5	6.0	6.7	7.5	8.7	12.5
MAXIMUM	10.0	10.0	11.0	11.0	12.0	14.0	16.0	18.0	20.0
MINIMUM	0.8	0.9	0.9	1.1	1.6	2.7	3.0	3.8	5.5
STANDARD DEVIATION	2.07	2.07	2.18	2.22	2.39	2.56	2.76	3.17	4.03
SKEWNESS	0.397	0.355	0.383	0.465	0.583	1.076	1.220	1.102	-0.017
STD ERROR OF SKEWNESS	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491
SERIAL CORR COEFF	0.137	0.140	0.126	0.165	0.184	0.128	0.060	0.029	0.139
COEFF OF VARIATION	0.415	0.407	0.412	0.400	0.400	0.380	0.367	0.365	0.322
MEAN LOGS	0.652	0.663	0.680	0.703	0.739	0.798	0.849	0.911	1.073
STD DEVIATION LOGS	0.230	0.223	0.221	0.212	0.196	0.167	0.160	0.159	0.156
SKEWNESS LOGS	-1.681	-1.593	-1.585	-1.485	-1.003	-0.375	-0.358	-0.270	-0.787
STD ERR SKEWNESS LOGS	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491	0.491
SER CORR COEFF LOGS	0.056	0.061	0.059	0.102	0.157	0.166	0.113	0.095	0.135
COEFF OF VAR LOGS	0.353	0.337	0.325	0.302	0.266	0.209	0.188	0.174	0.145

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1950-1971)

	P99	P98	P96	P95	P90	P75	P70	P50	P25	P10
0.99	8.3	8.3	8.5	8.9	9.4	11.2	13.8	15.1	17.7	22.4
0.98	8.2	8.2	8.4	8.7	9.2	10.8	12.8	14.0	16.4	21.3
0.96	8.0	8.0	8.2	8.5	8.9	10.2	11.7	12.8	14.9	20.1
0.90	7.5	7.5	7.7	8.0	8.3	9.1	10.1	11.1	12.9	18.1
0.80	6.9	7.0	7.0	7.3	7.6	8.1	8.7	9.7	11.1	16.1
0.50	5.2	5.2	5.2	5.4	5.7	5.9	6.4	7.2	8.3	12.4
0.20	3.2	3.2	3.2	3.4	3.6	3.9	4.6	5.2	6.0	8.9
0.10	2.2	2.2	2.3	2.4	2.6	3.0	3.8	4.4	5.0	7.3
0.05	1.6	1.6	1.7	1.8	1.9	2.3	3.2	3.7	4.3	6.1
0.02	1.1	1.1	1.1	1.2	1.3	1.7	2.6	3.1	3.6	4.9
0.01	0.7	0.7	0.8	0.9	1.0	1.4	2.3	2.7	3.2	4.2

## FLOW DURATION DATA DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1950-1971)

P95	P90	P75	P70	P50	P25	P10
4.9	6.2	10.0	12.0	25.0	49.0	86.0

## STATION 12212000 FISHTRAP CREEK AT LYNDEN, WASH.

HIGHEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING SEPT.30

YEAR	1 DAY	3 DAYS	7 DAYS	15 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS	ANNUAL PEAK-FLOW DATA
										FLOW (CFS) DATE REG. (R)
1949	246.	177.	123.	103.	79.	64.	51.	54.	48.	289. 02/17/49
1950	300.	243.	200.	180.	156.	129.	111.	99.	82.	342. 12/28/49
1951	330.	283.	230.	229.	180.	146.	133.	119.	93.	550. 02/11/51
1952	202.	159.	134.	104.	74.	55.	48.	44.	37.	278. 01/31/52
1953	222.	196.	165.	154.	127.	93.	76.	66.	50.	286. 01/23/53
1954	240.	203.	151.	129.	115.	104.	94.	88.	71.	286. 12/20/53
1955	298.	196.	184.	127.	85.	69.	65.	60.	54.	354. 11/22/54
1956	226.	176.	129.	102.	87.	81.	74.	67.	61.	299. 11/03/55
1957	278.	224.	163.	144.	100.	78.	70.	72.	63.	406. 12/09/56
1958	193.	127.	102.	90.	79.	70.	57.	50.	39.	214. 01/24/58
1959	327.	262.	186.	124.	97.	81.	75.	73.	67.	386. 01/24/59
1960	331.	211.	159.	124.	101.	82.	80.	74.	63.	432. 12/15/59
1961	429.	348.	247.	176.	142.	118.	109.	97.	82.	469. 02/21/61
1962	210.	194.	173.	155.	132.	98.	78.	70.	57.	258. 01/07/62
1963	305.	217.	159.	103.	80.	65.	56.	53.	49.	31. 12/30/62
1964	363.	275.	209.	166.	133.	116.	105.	96.	79.	497. 12/23/63
1965	504.	367.	273.	250.	197.	137.	106.	94.	74.	536. 02/05/65
1966	333.	258.	200.	142.	99.	76.	71.	63.	53.	359. 01/13/66
1967	313.	283.	250.	169.	157.	146.	125.	111.	86.	398. 01/19/67
1968	418.	349.	218.	162.	122.	105.	98.	88.	76.	454. 01/19/68
1969	251.	194.	144.	98.	84.	74.	70.	66.	61.	368. 01/05/69
1970	145.	122.	93.	77.	63.	51.	47.	45.	41.	204. 11/05/69
1971	329.	230.	198.	150.	124.	98.	89.	79.	64.	376. 01/26/71
1972										504. 03/06/72
1973										194. 12/26/72
1974										550. 01/24/74

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW STATISTICS (YEARS 1949-1974)

	MEAN	MAXIMUM	MINIMUM	STANDARD DEVIATION	SKWENESS	STD. ERROR OF SKWENESS	SERIAL CORR COEFF	COEFF OF VARIATION	MEAN LOGS	STD DEVIATION LOGS	SKWENESS LOGS	STD ERR SKWENESS LOGS	SER CORR COEFF LOGS	COEFF OF VAR LOGS
	304.2	238.8	181.3	141.7	113.6	92.9	82.1	75.1	63.0					
	533.0	483.0	330.0	250.0	197.0	146.0	133.0	119.0	93.0					
	145.0	122.0	93.0	77.0	63.0	51.0	47.0	44.0	37.0					
	97.23	83.99	56.17	42.59	35.56	28.24	24.39	20.77	15.56					
	0.795	1.264	0.844	0.867	0.751	0.545	0.443	0.409	0.107					
	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481					
	0.011	-0.026	0.080	0.071	0.011	-0.044	-0.053	-0.088	-0.103					
	0.320	0.352	0.310	0.301	0.313	0.304	0.297	0.276	0.247					
	2.463	2.355	2.239	2.133	2.036	1.949	1.896	1.860	1.786					
	0.137	0.143	0.133	0.127	0.132	0.131	0.130	0.121	0.112					
	-0.013	0.296	-0.011	0.121	0.217	0.064	-0.064	-0.085	-0.345					
	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481	0.481					
	0.022	0.002	0.081	0.059	-0.011	-0.088	-0.101	-0.126	-0.127					
	0.056	0.061	0.059	0.060	0.065	0.067	0.069	0.065	0.062					

## HIGHEST MEAN FLOW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1949-1974)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.05	0.02	0.01
	138.8	113.1	85.1	70.6	56.2	44.7	38.6	37.1	31.5	174.6
	172.4	135.6	104.9	84.8	67.2	54.4	47.8	45.4	39.1	161.5
	193.5	150.2	117.2	93.8	74.1	60.5	53.4	50.5	43.6	208.8
	222.5	171.0	134.2	106.1	83.9	68.9	61.2	57.3	49.5	237.7
	290.3	222.8	173.5	135.1	107.4	88.6	78.9	72.7	62.1	276.2
	378.4	297.0	224.2	173.6	139.8	114.5	101.4	91.7	76.1	360.7
	434.5	348.4	256.3	198.5	161.4	131.2	115.3	103.3	84.1	459.1
	503.3	416.1	295.6	229.7	189.1	151.9	132.1	117.1	92.8	515.6
	553.4	468.6	324.0	252.7	210.0	167.1	144.2	126.9	98.7	579.3
	602.6	522.8	351.9	275.7	231.3	182.1	155.9	136.3	104.1	622.2
										661.7

W R C  
ESTIMATE  
SYSTEMATIC  
RECORD

2.5493  
0.1318  
-0.0050  
2.5493  
0.1318  
-0.3600

STATION 12212700 TENMILE CREEK TRIBUTARY NR BELLINGHAM, WASH.

ANNUAL PEAK FLOW DATA		ANNUAL PEAK FLOW STATISTICS (YEARS 1949-1967)		W R C ESTIMATE		SYSTEMATIC RECORD	
WATER YEAR	FLOW (CFS)	DATE	MEAN LOGS	STANDARD DEVIATION LOGS	W R C ESTIMATE	SYSTEMATIC RECORD	W R C ESTIMATE
1949	52.0	2-17-1949					
1950	32.0	12-26-1949					
1951	56.0	2-10-1951					
1952	11.0	1-30-1952					
1953	19.0	1-23-1953					
1954	29.0	12-12-1953					
1955	49.0	11-19-1954					
1956	24.0	12-11-1955					
1957	32.0	12- 9-1956					
1958	12.0	2-13-1958					
1959	34.0	1-24-1959					
1960	18.0	12-15-1959					
1961	20.0	2-21-1961					
1962	12.0	1- 7-1962					
1963	24.0	12-30-1962					
1964	18.0	3- 5-1964					
1965	33.0	2- 5-1965					
1966	25.0	1- 6-1966					
1967	26.0	1-10-1967					

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1949-1967)

0.99	8.3
0.95	11.4
0.90	13.6
0.80	16.7
0.50	24.9
0.20	37.2
0.10	45.8
0.04	57.2
0.02	65.0
0.01	73.5

STATION 12212800 TENMILE CREEK TRIB #2 NR BELLINGHAM, WASH.

ANNUAL PEAK FLOW DATA		ANNUAL PEAK FLOW STATISTICS (YEARS 1956-1979)		W R C ESTIMATE		SYSTEMATIC RECORD	
WATER YEAR	FLOW (CFS)	DATE	MEAN LOGS	STANDARD DEVIATION LOGS	W R C ESTIMATE	SYSTEMATIC RECORD	W R C ESTIMATE
1956	13.0	12-11-1955					
1957	29.0	12- 9-1956					
1958	10.0	2-13-1958					
1959	33.0	1-24-1959					
1960	20.0	12-15-1959					
1961	23.0	2-21-1961					
1962	11.0	1- 7-1962					
1963	13.0	12-30-1962					
1964	20.0	3- 5-1964					
1965	26.0	2- 5-1965					
1966	22.0	1- 6-1966					
1967	21.0	1-19-1967					
1968	27.0	11-25-1967					
1969	44.0	1- 4-1969					
1970	10.0	1-19-1970					
1971	52.0	1-26-1971					
1972	36.0	12-18-1971					
1973	24.0	12-25-1972					
1974	34.0	1-24-1974					
1975	25.0	1-18-1975					
1976	33.0	12- 2-1975					
1977	23.0	1-18-1977					
1978	7.7	12-11-1977					
1979	6.5	3- 7-1979					

ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES  
LOG-PEARSON III ANALYSIS (YEARS 1956-1979)

0.99	5.7
0.95	8.3
0.90	10.2
0.80	13.0
0.50	20.6
0.20	32.7
0.10	41.6
0.04	53.9
0.02	63.6
0.01	73.9

## STATION 12213100 NOOKSACK RIVER AT FERNDALE, WASH.

## MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1967	2869	3346	4576	6645	4925	3384	2203	4574	6743	3531	2000	1597	4201
1968	6815	4646	6139	7010	6236	4736	2945	3970	5375	2190	3439	4765	3983
1969	3616	5036	5266	4510	2371	2662	4632	6526	5460	2801	1586	3256	3107
1970	2882	3605	3546	4302	3906	2368	3694	3158	4221	2420	1488	1769	4437
1971	2157	3626	3570	6374	7778	3925	3948	6038	5974	5424	2926	1744	5015
1972	2290	5453	4237	4486	5736	9339	4590	6416	6410	6156	2784	2290	3026
1973	1371	2445	6792	4446	2439	2541	2156	4423	4098	2579	1607	1288	3022
1974	3055	4143	6295	7520	5375	5061	4203	5231	8285	6010	3289	1784	3502
1975	991	3660	4978	5148	3125	3157	1746	4555	5753	4810	2425	1603	5094
1976	5114	7537	9992	6423	3833	2893	3669	5541	5056	4860	3511	2568	2770
1977	1664	2236	3777	3487	2508	2901	3469	3300	4245	1988	2085	1569	4074
1978	1921	5506	7737	3839	3113	3137	2748	2998	3509	2504	1945	4074	3586
1979	1662	3433	2201	1149	3074	4254	2803	4416	3494	2471	1600	1849	2695

## MONTHLY AND ANNUAL MEAN DISCHARGE STATISTICS (YEARS 1967-1979)

MEAN	2800.5	4205.5	5623.5	5026.1	4186.1	3873.7	3292.8	4703.5	5278.7	3789.9	2284.3	2217.7	3938.7
MAXIMUM	6815.0	7537.0	9992.0	7520.0	7778.0	9339.0	4632.0	6526.0	8285.0	6156.0	3511.0	4074.0	5094.0
MINIMUM	991.0	2236.0	2201.0	1149.0	2371.0	2368.0	1746.0	2998.0	3494.0	1988.0	1488.0	1288.0	2695.0
STD DEVIATION	1621.81	1430.09	2244.86	1750.91	1691.79	1845.84	939.76	1190.94	1389.25	1481.57	675.99	863.20	886.05
SKEDNESS	1.495	0.909	0.466	-0.582	0.831	2.432	-0.124	0.135	0.626	0.466	0.648	1.149	-0.031
STD ERR SKEW	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616
SER CORR COEFF	-0.033	-0.627	-0.268	0.190	0.025	-0.173	-0.280	-0.175	0.093	0.118	-0.037	-0.176	-0.362
COEFF OF VAR	0.579	0.340	0.399	0.348	0.404	0.477	0.285	0.253	0.263	0.391	0.299	0.389	0.225
MEAN LOGS	3.389	3.601	3.716	3.665	3.591	3.556	3.500	3.659	3.709	3.548	3.338	3.319	3.585
STD DEV LOGS	0.230	0.145	0.184	0.211	0.169	0.161	0.134	0.113	0.113	0.170	0.126	0.154	0.101
SKEDNESS LOGS	0.320	0.026	-0.377	-2.087	0.318	1.473	-0.556	-0.236	0.094	0.156	0.306	0.747	-0.240
STD ERR SKEW LOGS	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616	0.616
SER CORR LOGS	-0.132	-0.662	-0.238	0.317	-0.051	-0.205	-0.299	-0.140	0.194	0.122	-0.007	-0.197	-0.334
COEFF OF VAR LOGS	0.040	0.049	0.049	0.057	0.047	0.045	0.038	0.031	0.030	0.048	0.038	0.046	0.028
% OF AVE FLOW	5.9	8.9	11.9	10.6	8.9	8.2	7.0	10.0	11.2	8.0	4.8	4.7	100.0

## MONTHLY AND ANNUAL MEAN DISCHARGE EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1967-1979)

0.99	808.3	1847.5	1733.5	786.7	1725.4	2240.7	1364.5	2376.6	2843.2	1486.8	1182.8	1114.7	2150.6
0.95	1076.5	2311.0	2487.4	1751.0	2130.3	2353.4	1821.5	2920.0	3398.0	1888.9	1386.1	1288.1	2584.2
0.90	1266.6	2605.3	2982.9	2465.9	2401.1	2457.6	2099.5	3245.4	3675.0	2154.0	1516.3	1376.4	2839.5
0.80	1557.0	3013.9	3680.1	3464.6	2794.6	2644.6	2466.4	3674.7	4105.0	2544.1	1698.8	1540.5	3171.8
0.50	2380.0	3988.6	5339.9	5391.0	3817.5	3294.3	3250.1	4608.0	5095.0	3495.8	2144.5	1996.5	3879.7
0.20	3786.8	5289.4	7462.4	6703.7	5369.6	4655.4	4113.4	5695.3	6360.3	4892.2	2764.3	2753.1	4683.6
0.10	4906.8	6135.4	8761.6	7058.3	6495.1	5905.0	4582.2	6324.4	7158.8	5865.9	3183.8	3343.4	5141.7
0.04	6550.7	7191.7	10287.9	7249.1	8030.1	7969.7	5085.3	7047.1	8135.4	7150.4	3726.0	4199.3	5658.0
0.02	7950.9	7971.6	11348.0	7307.1	9257.0	9931.4	5408.1	7538.6	8844.6	8146.2	4139.6	4922.8	6006.5
0.01	9509.5	8747.2	12348.7	7334.3	10556.7	12326.5	5694.8	7998.0	9541.5	9175.0	4562.1	5724.9	6329.6

## STATION 12213100 NOOKSACK RIVER AT FERNDALE, WASH.

## LOWEST MEAN FLOW IN CFS FOR THE FOLLOWING NUMBER OF CONSECUTIVE DAYS IN YEAR ENDING MARCH 31

YEAR	1 DAY	3 DAYS	7 DAYS	14 DAYS	30 DAYS	60 DAYS	90 DAYS	120 DAYS	183 DAYS
1968	1220.0	1240.0	1280.0	1360.0	1590.0	1790.0	2310.0	3220.0	3440.0
1969	1410.0	1500.0	1570.0	1630.0	2060.0	2210.0	2810.0	3170.0	3550.0
1970	1160.0	1190.0	1250.0	1310.0	1440.0	1640.0	2210.0	2580.0	2840.0
1971	942.0	968.0	1030.0	1070.0	1360.0	1550.0	1710.0	1870.0	2470.0
1972	1060.0	1070.0	1120.0	1200.0	1500.0	1820.0	2200.0	3040.0	3430.0
1973	1020.0	1030.0	1050.0	1130.0	1300.0	1810.0	2000.0	2000.0	3090.0
1974	858.0	874.0	961.0	1050.0	1160.0	1250.0	1580.0	2000.0	2640.0
1975	730.0	759.0	820.0	841.0	887.0	1170.0	1590.0	2280.0	3180.0
1976	1090.0	1130.0	1140.0	1220.0	1490.0	1970.0	2230.0	3040.0	3480.0
1977	1000.0	1060.0	1130.0	1420.0	1630.0	1800.0	1990.0	2370.0	2680.0
1978	850.0	875.0	984.0	1080.0	1190.0	1490.0	1670.0	1770.0	2490.0
1979	740.0	767.0	821.0	990.0	1140.0	1500.0	1830.0	2070.0	2370.0

## LOWEST MEAN FLOW STATISTICS (YEARS 1968-1979)

MEAN	1006.7	1038.4	1094.7	1208.4	1395.6	1666.7	2012.5	2450.8	2971.7
MAXIMUM	1410.0	1500.0	1570.0	1630.0	2060.0	2210.0	2810.0	3220.0	3550.0
MINIMUM	730.0	759.0	820.0	841.0	887.0	1170.0	1580.0	1770.0	2370.0
STANDARD DEVIATION	200.04	212.71	208.85	211.11	299.72	295.09	364.59	540.02	640.84
SKWENESS	0.438	0.677	0.856	0.262	0.582	-0.032	0.743	0.334	0.019
STD ERROR OF SKWENESS	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637
SERIAL CORR COEFF	0.528	0.505	0.516	0.412	0.288	0.112	0.313	0.156	0.215
COEFF OF VARIATION	0.199	0.205	0.191	0.175	0.215	0.177	0.181	0.220	0.148
MEAN LOGS	2.995	3.008	3.032	3.076	3.136	3.215	3.297	3.380	3.469
STD DEVIATION LOGS	0.086	0.087	0.080	0.077	0.093	0.079	0.077	0.095	0.065
SKWENESS LOGS	0.010	0.191	0.323	-0.238	-0.155	-0.452	0.371	0.169	-0.087
STD ERR SKWENESS LOGS	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637	0.637
SER CORR COEFF LOGS	0.500	0.494	0.510	0.406	0.291	0.146	0.294	0.136	0.237
COEFF OF VAR LOGS	0.029	0.029	0.027	0.025	0.030	0.025	0.023	0.028	0.019

## LOWEST MEAN FLOW NON-EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1968-1979)

0.99	1570.5	1672.9	1730.8	1742.9	2199.7	2362.5	3133.2	4097.9	4127.7
0.98	1487.2	1571.6	1625.7	1674.5	2088.0	2283.4	2946.8	3832.0	3972.8
0.96	1400.0	1467.7	1519.3	1599.8	1968.6	2194.0	2758.3	3560.5	3806.0
0.90	1275.0	1323.6	1373.3	1487.1	1793.6	2053.4	2500.6	3185.1	3558.7
0.80	1168.1	1204.5	1254.4	1385.0	1640.2	1920.0	2291.3	2876.3	3338.6
0.50	988.4	1012.7	1066.6	1199.8	1374.1	1664.6	1962.1	2382.7	2947.8
0.20	836.7	859.2	919.9	1029.1	1142.2	1415.4	1706.4	1990.9	2594.8
0.10	767.0	791.3	856.0	945.9	1033.7	1289.9	1595.6	1818.7	2424.4
0.05	714.0	740.6	808.9	880.5	950.3	1189.6	1514.1	1690.8	2290.7
0.02	658.7	688.7	761.1	810.3	863.0	1080.9	1431.9	1560.4	2147.6
0.01	624.3	656.9	732.1	765.7	808.4	1011.1	1382.0	1480.7	2056.3

## FLOW DURATION DATA

DAILY MEAN DISCHARGE IN CFS EXCEEDED "P" PERCENT OF THE TIME (YEARS 1968-1979)

P95	P90	P75	P70	P50	P25	P10
1400.0	1600.0	2100.0	2300.0	3200.0	4900.0	7100.0





STATION 12213100 NODKACK RIVER AT FERDALE, WASH.

HIGHEST MEAN FLDW AND ANNUAL PEAK FLOW EXCEEDENCE PROBABILITIES BASED ON LOG-PEARSON III ANALYSIS (YEARS 1918-1979)

	0.99	0.95	0.90	0.80	0.50	0.20	0.10	0.04	0.02	0.01
	12129.8	13633.6	14630.8	16066.6	19725.4	25111.4	28923.4	34029.3	38049.6	42261.0
	8568.1	10116.1	11111.4	12511.7	15950.7	20773.0	24056.9	28322.4	31589.6	34937.4
	5683.1	7343.3	8359.7	9718.1	12716.7	16239.3	18280.6	20598.1	22166.7	23621.8
	3718.9	5158.7	6055.3	7258.0	9881.8	12829.6	14445.2	16184.9	17302.1	18293.6
	3054.3	4253.2	4988.5	5958.6	8001.3	10161.1	11278.1	12423.9	13126.8	13727.7
	2971.2	3856.1	4380.4	5058.9	6461.9	7943.4	8722.1	9538.2	10051.2	10499.6
	2851.0	3572.7	3998.3	4549.7	5703.9	6963.3	7650.6	8396.3	8881.2	9317.4
	2828.9	3409.4	3756.5	4214.3	5213.8	6391.0	7082.7	7881.7	8432.7	8952.3
	2728.3	3215.6	3508.9	3899.0	4766.2	5819.8	6457.3	7211.8	7744.1	8255.4
	13104.7	15522.1	17012.3	19035.2	23697.0	29660.8	33426.7	38034.0	41380.6	44669.1
	16556.6	17331.5	17982.3	19074.7	22493.9	28740.5	33854.6	41492.8	48101.4	55561.8

STATION 12214000 DAKOTA CREEK NEAR BLAINE, WASH.

MONTHLY AND ANNUAL MEAN DISCHARGES, IN CUBIC FEET PER SECOND (CFS)

YEAR	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	ANNUAL
1948													
1949	12.3	111	75.4	16.7	48.8	37.0	16.4	12.5	3.29	3.09	3.71	3.57	28.1
1950	3.24	21.9	117	65.5	166	132	56.3	17.8	5.87	3.25	1.52	2.35	48.9
1951	3.90	25.2	96.4	120	124	82.8	12.8	1.9	4.94	1.65	1.52	1.41	40.4
1952	4.14	10.8	33.0	51.0	52.6	35.6	13.7	8.04	4.26	2.76	1.79	1.66	18.2
1953	1.83	1.56	6.51	121	60.2	30.6	25.5	9.39	7.32	2.76	2.03	2.06	22.4
1954									4.86	3.87	2.55	3.05	
1955	2.32												

STATION 12214000 DAKOTA CREEK NEAR BLAINE, WASH.

ANNUAL PEAK FLOW DATA

WATER YEAR	FLOW (CFS)	DATE
1949	612.0	11-23-1948
1950	669.0	12-27-1949
1951	753.0	2-10-1951
1952	309.0	1-30-1952
1953	401.0	1-23-1953

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