Magnitude and Frequency of Floods in Washington

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U.S. Geological Survey
Water-Resources Investigations Report 97-4277

Prepared in cooperation with

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION and
WASHINGTON STATE DEPARTMENT OF ECOLOGY

Tacoma, Washington
1998

U.S. DEPARTMENT OF THE INTERIOR

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To Obtain
inch (in)	2.54	centimeter
foot (ft)	0.3048	meter
cubic feet per second (ft^3/s)	0.02832	cubic meters per second
mile (mi)	1.609	kilometer
foot per mile (ft/mi)	0.18943	meter per kilometer
square mile (mi^2)	2.59	square kilometer

Temperature: To correct temperature given in this report in degrees Fahrenheit (°F) to degrees Celsius (°C), use the following equation: °C = 5/9(°F-32)

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

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ABSTRACT

Annual maximum instantaneous discharge data for 527 gaging stations with at least 10 years of peak-discharge record on unregulated streams were used to compute the magnitude and frequency of floods on Washington streams. Flood magnitudes having exceedance probabilities of 0.5, 0.1, 0.04, 0.02, and 0.01 were related to physical and climatic characteristics for 504 of the 527 gaging stations using generalized least-squares regression analyses. The regression relations can be used to estimate flood discharges having these exceedance probabilities for ungaged stream basins.

INTRODUCTION

Estimates of the magnitude and frequency of floods are used by engineers in the design of bridges, culverts, dams, and embankments, and by land-use managers to assess the hazards related to the development of flood plains. The U.S. Geological Survey (USGS) published estimates of flood frequencies in Washington in 1985 for stream-gaging stations with 10 or more years of annual flood records (Williams and others, 1985a,b; and Williams and Pearson, 1985a,b). However, these estimates were based on data collected only through the 1979 water year (the 12-month period from October 1, 1978, through September 30, 1979).

In 1993, the U.S. Geological Survey, in cooperation with the Washington State Department of Transportation, began a study to update these flood frequency estimates, incorporating data collected through the 1992 water year, and to develop regional regression equations by which flood discharges could be estimated at ungaged sites. However, because some very large floods occurred after 1992, the USGS, in cooperation with the Washington State Department of Transportation and the Washington State Department of Ecology, expanded that study to include all data collected through the 1996 water year. Flood peaks that occurred during a prolonged and intense storm in February 1996 exceeded previous historic peak discharges recorded at several gaging stations in Washington.

The preferred method of expression of flood frequency is the annual exceedance probability. The annual exceedance probability is the probability that a flood of a certain magnitude will occur or be exceeded in any 1-year period. Thus, a flood discharge with an exceedance probability of 0.02, or 2 percent, has a one-in-fifty chance of being equalled or exceeded each year. Another method of expressing flood frequency is as a recurrence interval—the average time interval in years between consecutive occurrences of an annual peak discharge equal to or greater than a certain magnitude. The recurrence interval corresponding to the annual peak discharge for a certain exceedance probability flood is given by the reciprocal of the exceedance probability. Thus, a flood with an exceedance probability of 0.02 has a recurrence interval of 50 years.

Purpose and Scope

This report presents the results of flood-frequency analyses for 527 gaging-station records on unregulated streams (defined in this report as being not significantly affected by reservoir operations, diversions, or urbanization) that have at least 10 years of annual maximum instantaneous discharge data. Also presented are equations and techniques by which the magnitude and frequency of floods can be estimated for any ungaged site on

naturally flowing (unregulated) streams. The data and results are presented on figures 1 to 10 and in tables 1 to 5 at the end of the report.

The flood-frequency analyses used annual maximum instantaneous discharge data collected through the 1996 water year, which are stored in the USGS National Water Information System (NWIS) database. The results of the flood-frequency analyses were used in conjunction with data stored in the NWIS basin-characteristics file to develop regression equations for estimating flood frequencies at ungaged sites. The State was divided into nine regions for the regression analyses on the basis of hydrologic unit code boundaries.

Previous Flood Reports for Washington

Descriptions of floods and the computation of flood magnitude and frequency for specific river basins in Washington can be found in reports by Anderson (1948) for the Puyallup and Chehalis River Basins, Bailey (1960) for the Nooksack River Basin, Richardson (1965) for the upper Green River Basin, Walters (1974) for the Okanogan River Basin, Walters and Nassar (1974) for the Methow River Basin, Nassar and Walters (1975) for the Palouse River Basin, and Drost and Lombard (1978) for the Skagit River Basin. Results of regional and State-wide flood-frequency analyses can be found in reports by Rantz and Riggs (1949), Bodhaine and Thomas (1960 and 1964), Williams and Pearson (1985a and 1985b), and Williams and others (1985a and 1985b). Techniques for estimating flood magnitude and frequency at ungaged stream basins were developed by Bodhaine and Robinson (1952) for western Washington, Thomas and others (1963) for the Snake River Basin, Bodhaine and Thomas (1964) for Pacific Slope Basins, Cummans and others (1975) for the entire State, and Haushild (1979) for small, ephemeral streams in eastern Washington.

Description of the Study Area

The State of Washington encompasses several physiographic provinces (Fenneman, 1931): the Puget Border Province, consisting of the Puget Sound Basin, the Olympic Mountains, and the lowlands west of the Cascade Range extending southward to the Columbia River; the Sierra-Cascade Province, consisting of the Cascade Range; the Columbia Plateau Province, consisting of the area east of the Cascade Range and south of the Columbia River in Washington; and the Northern Rocky Mountain Province consisting of the Pend Oreille, Okanogan, and Sanpoil River Basins in Washington. The topography of the State varies from lowlands at or near sea level to the mountainous areas of the Olympic Mountains and the Cascade Range. Land use and land cover in the State vary greatly, ranging from forested and agricultural areas to densely populated urban and suburban areas.

Climate

The Cascade Range separates Washington into two climatically different regions. Western Washington, influenced by the Pacific Ocean, has a predominantly marine climate, characterized by cool, dry summers and mild, wet winters. Eastern Washington has a continental climate, characterized by warm, dry summers and cold, clear winters.

Local and regional variations in precipitation are influenced primarily by the Olympic Mountains and the Cascade Range. In western Washington, mean annual precipitation ranges from less than 20 inches in the rain shadow of the Olympic Mountains to more than 220 inches along the crest of the Olympic Mountains (U.S. Department of Commerce, 1965). Precipitation along the crest of the Cascade Range exceeds 140 inches in some places. In eastern Washington, mean annual precipitation ranges from less than 10 inches in parts of the Columbia River Basin to about 40 inches near the southeastern and northeastern corners of the State.

Characteristics of Flood Discharge

Several types of floods occur in Washington. In most parts of western Washington, floods generally occur in late fall and winter as a result of prolonged rainstorms. These floods may be augmented by water from snowmelt if rain falls on snow. The rain-on-snow floods are usually of short duration. In basins at higher elevations, floods may occur in the spring as a result of rapid snowmelt. These floods are usually of longer duration than the winter floods.

In eastern Washington, floods generally occur in the foothills of the Cascade Range and in the highlands of northeastern Washington during spring snowmelt. In some areas of eastern Washington, flooding may occur during the winter when rain or unseasonably warm weather melts accumulations of snow. Flooding may also occur in small basins in response to summer thunderstorms.

FLOOD-FREQUENCY ANALYSES

The data used in the flood-frequency analyses were the annual maximum instantaneous discharges for each of the 527 gaging stations on unregulated streams in Washington (fig. 1) with 10 or more years of record (table 1). In this report, these data will be referred to as peak flows, and the annual series of peak flows during the period of record for a particular gaging station will be referred to as the systematic record for that station. In some instances, the years of record for a station listed in table 1 may not agree with the number of peaks used in the flood-frequency analysis listed in table 2 because of the exclusion of peaks designated as being affected by regulation and of peaks that are outside of the range of discharges defined by high and low outlier thresholds. In some cases, peak flows have been determined for floods outside of the period when regular, systematic records of discharge have been kept. These peak flows, referred to as historic peaks, can be used to extend systematic records to longer historical periods (U.S. Water Resources Council, 1981).

The stations given in table 1 and all other tables containing gaging-station data are listed in downstream order by USGS gaging station numbers. The first two digits (12, 13, or 14) designate major basin subdivisions of the State. Stations with numbers beginning with 12 are located on streams tributary to the Pacific Ocean or the Columbia River upstream from the mouth of the Snake River; stations with numbers beginning with 13 are located on streams tributary to the Snake River; and stations with numbers beginning with 14 are on streams tributary to the Columbia River below the mouth of the Snake River.

Estimates of flood discharge and frequency were computed for all 527 gaging stations using an interactive version of USGS computer program J407 (Kirby, 1981), which implements guidelines established by the U.S. Water Resources Council (1981). The U.S. Water Resources Council suggests that separate flood-frequency curves be computed for each type of flood from a mixed population of floods (U.S. Water Resources Council, 1981), but the detailed study required to segregate peak flows by cause was beyond the scope of this project; therefore, no attempt was made to analyze any of the annual flood series separately for mixed populations. Statistical procedures were used to identify high and low outliers in systematic station records. High outliers known or believed to be the highest during an extended period of time were treated as historic flood peaks. Flood peaks identified as low outliers were deleted and then a conditional probability adjustment was applied to all the remaining peaks to determine the flood frequency estimates. In a few cases, visual inspection of the frequency curves identified small peaks that departed from the fitted relation (a sharp downward break in the curve), but were not identified as low outliers by the statistical procedures. A user-defined low-discharge threshold was used to omit such peaks from the flood-frequency analysis.

Not all of the available peak-flow data could be used in the flood-frequency analyses. Stations for which more than 25 percent of the peak-flow record consisted of zero flows were not included in the analyses (U.S. Water Resources Council, 1981, p. 5-1). Also, if part of the systematic record for a station included periods of regulated flow, those periods were not included in the analysis. In some cases, part of the systematic record for a station was excluded from the frequency analysis because only gage heights (and not discharge) were recorded for some years. Flood-frequency results were not included for stations at which the peak discharge data appeared to be representative of and significantly influenced by mixed populations of floods and for which it appeared that no single flood-frequency curve would adequately fit the peak discharge data.

In this study, a log-Pearson Type III distribution was fit to the data for each station using the method of moments as described by the U.S. Water Resources Council (1981). The base 10 logarithms of the mean, standard deviation, and skew coefficient were used to compute the logarithm of the discharge, Q, at a selected exceedance probability using the following equation:

$$\log Q = \bar{x} + KS \quad , \tag{1}$$

where

$\bar{x}$ = mean of the logarithms of peak flows,

K = factor that is a function of the logarithm of the skew coefficient and the selected exceedance probability, and

S = standard deviation of the logarithms of peak flows.

Values of K were obtained from the table in appendix 3 of the U.S. Water Resources Council guidelines (1981). For this study, the skew coefficient used to obtain K in the above equation was estimated by weighting the station skew coefficient and a generalized skew coefficient in inverse proportion to their individual mean-square errors. The generalized skews and their mean-square errors used for this study were those determined by the U.S. Water

Resources Council (1981). A detailed study of the regional (generalized) skews for the State of Washington was not done for this study.

Flood-frequency estimates were determined graphically for a small number of gaging-station records because the log-Pearson Type III distribution did not accurately fit the peak discharge data.

Flood discharges computed for exceedance probabilities of 0.5, 0.1, 0.04, 0.02, and 0.01 are given in table 2 (first line of data for each station), along with the 95-percent confidence interval for each computed flood magnitude (second line of data). This interval is the range that, with a probability of 95 percent, contains the true flood magnitude for a particular exceedance probability. Confidence intervals were not determined for flood-frequency estimates determined by graphical techniques.

REGRESSION ANALYSES

Flood magnitudes determined for 504 of the 527 gaging stations included in the flood-frequency analyses were used in conjunction with selected physical and climatic basin characteristics to develop generalized least-squares regression equations for estimating flood magnitudes and frequencies for ungaged, unregulated (hereafter referred to as ungaged) stream basins. Stations not used were omitted for a variety of different reasons, including uncertainties regarding the correct location of drainage boundaries and the amount of a basin that contributes to runoff. Stations for which a significant portion of the upstream drainage basin was located outside of the State boundaries were not used because they may not be representative of hydrologic conditions within the State. Also, stations for which flood frequency estimates were determined graphically were not included because the log-Pearson Type III station skew—one of the variables used in the regression analyses—determined for them would not be representative of the graphically determined relations.

A review of previous flood-frequency studies for Washington indicated that various combinations of nine identified physical and climatic basin characteristics should be sufficient to produce equations by which flood magnitudes and frequencies can be accurately estimated. Brief descriptions of the nine identified basin characteristics are as follows:

Contributing drainage area, A, in square miles, upstream from the gaging station; determined by planimetering the contributing drainage area on a topographic map;

Main channel slope, Sl, in feet per mile; determined by extending the main stream channel upstream to the basin divide and then locating a point that is 10 percent of the distance from the gage to the divide and another point on the stream that is 85 percent of the distance from the gage to the divide; the slope is equal to the difference in elevation between the two points divided by the distance between the points;

Stream length, L, in miles, from the gage to the basin divide; measured along the channel from the gage to the basin divide;

Basin elevation, E—the mean basin elevation, in feet above sea level; determined by finding the average elevation of at least 20 equally spaced points in the drainage basin as indicated by a transparent grid overlay;

Storage, St—the percentage of the contributing drainage area made up of lakes, ponds, and swamps; determined by placing a transparent grid over the drainage-basin map and counting the number of squares occupied by water or swamp surfaces; to prevent computing the logarithm of zero, storage values of zero percent were changed to 0.01 percent before running regression analyses;

Forest cover, F—the percentage of the contributing drainage area covered by forests; estimates of forest cover were obtained from the Washington State Department of Natural Resources; forest cover may also be determined by the grid-sampling method on a suitable large-scale map; to prevent computing the logarithm of zero, forest cover values of zero percent were changed to 0.01 percent before running regression analyses;

Annual precipitation, P—mean annual precipitation, in inches, determined by locating the basin on the precipitation map (plate 1 and U.S. Weather Bureau, 1965), placing a transparent grid over the map, and averaging the values determined at each grid intersection;

Precipitation intensity, $I_{24,2}$—the 24-hour rainfall, in inches, that can be expected on the average of once every 2 years within the basin, obtained by using the

grid-sampling method from precipitation-frequency maps for the State of Washington (Miller and others, 1973); and

Minimum January temperature, *J*—the mean minimum January air temperature, in degrees Fahrenheit; determined by using the grid-sampling method on an equal-temperature map from the U.S. Department of Commerce (1965).

All nine of these basin characteristics were used in ordinary least-squares regression analyses to obtain an indication of which explanatory variables (basin characteristics) were most significant for each of nine State regions. Generalized least-squares regression analyses were used to develop equations for estimating flood magnitudes and frequencies for ungaged stream basins in each region. The goal was to develop sets of equations using only a few easily obtainable basin characteristics that could be used to estimate flood discharges at selected exceedance probabilities for sites on ungaged streams.

Flood-frequency determinations for all of the gaging stations and their associated basin characteristics were placed in a single data set for an initial regression analysis to attempt to determine the geographic regions within the State for which separate regression equations should be developed. The residuals (the differences between the flood magnitudes obtained from the flood-frequency analyses and the flood magnitudes obtained from the regression equations) were plotted on a statewide map. Using this same procedure, Cummans and others (1975) were able to subdivide the State into 12 regions, each with its own set of regression coefficients and constants. However, no meaningful grouping of the residuals computed during this study could be made. Adjacent basins and, in some cases, parts of the same basin were located in different regions when residuals were used as the grouping criteria. Therefore, hydrologic-unit code boundaries were used instead to group the stations into separate geographic regions believed to have different hydrologic characteristics. The State of Washington is divided into eight hydrologic units, each composed of several cataloging units (U.S. Geological Survey, 1976). Each cataloging unit, in turn, contains one to several major stream basins. For this study, an additional region was created by dividing the Columbia River Basin hydrologic unit into two subunits: one encompassing the Columbia Plateau (Region 7) and the other encompassing mostly those areas east of the Cascade Range and north or west of the Columbia River (Region 4). The nine geographic regions are shown on figure 1, and the distribution of gaging stations used for the regression analysis in each region is shown on figures 2–10.

Regression analyses for each region included the use of the ordinary least-squares technique to obtain a preliminary list of which basin characteristics were most influential in affecting peak flows at the 5 percent level of significance. All nine of the basin characteristics identified in previous reports as being the most important in determining flood discharges were considered for inclusion in each regional regression equation. In addition, a subjective decision was made in cases where two or more basin characteristics were about of equal significance in estimating flood magnitude. In these cases, the relative ease by which values for the basin characteristics could be obtained was considered in the selection of which characteristics to use in the development of the regression equations for estimating flood magnitudes and frequencies for ungaged streams. The objective in making such decisions was to greatly simplify the application of an equation with only a minor decrease in its accuracy. Consequently, a regression equation may contain a basin characteristic that is slightly less significant than another characteristic that was considered but not included in the equation or it may contain fewer basin characteristics than the "best" regression equation defined by the regression analysis.

The physical and climatic basin characteristics determined most significant in predicting flood discharge were contributing drainage area and mean annual precipitation for regions 1, 2, 3, 4, 6, and 9; and contributing drainage area only for regions 5, 7, and 8. All basin characteristic values were computed in accordance with both the NWIS basin-characteristics file guidelines and the National Handbook of Recommended Methods for Water-Data Acquisition (U. S. Department of the Interior, 1977). The basin characteristic values for the stations used in the regression analyses are given in table 3.

Main channel slope, one of the basin characteristics found to be statistically significant in the development of the regression equation for region 5, was removed from the final regression equation because it had a negative regression coefficient, which doesn't seem physically realistic. It is believed that its statistical significance in the regression analysis may be the result of either a spurious relationship or the fact that it may be a surrogate for one or more other basin characteristics.

Once it was determined which basin characteristics should be used for each regression region, then the flood-frequency data for each region were analyzed using

the generalized least-squares technique (Tasker and Stedinger, 1989) to determine equations for estimating flood magnitude and frequency for ungaged sites within the regions. This method differs from the ordinary least-squares method by weighting each station used in an analysis on the basis of the number of years of peak flows in the station record and by the distance between stations. Ordinary least squares were not used to develop the regression equations because two assumptions that are made in the use of that method—that the residuals of the data have equal variances and that each residual is independent of all others—are usually violated to some degree in hydrologic regression analysis. In the case of peak-flow data, both of these assumptions are often violated. Peak-flow records are usually of differing lengths, and nearby basins may be affected by the same weather patterns, leading to unwanted correlations in the peak flows.

The mathematical model used to define the relation between flood discharge and basin characteristics for each region was

$$Q = aA^{b}B^{c}...N^{n} \quad , \qquad (2)$$

where

Q = flood discharge, in cubic feet per second,
$A, B, ..., N$ = basin characteristics,
a = regression constant, and
$b, c, ..., n$ = regression coefficients.

This model was converted to the following linear form by transforming the variables (Q, A, B, ..., N) to base 10 logarithms:

$$\log Q = \log a + b(\log A) + c(\log B) + ... + n(\log N) \quad . \qquad (3)$$

Logarithmic transformations were performed so that least-squares linear regression techniques could be used during the analyses.

The regression equations developed for the nine flood-frequency regression regions are presented in table 4. The standard error of prediction (given in table 4) is a measure of how well the regression equation predicts Q from the data used in the analysis; a higher degree of uncertainty is associated with a higher standard error. The highest percent standard error of prediction is found in Region 8 (133 percent for an exceedance probability of 0.5). Although the exact source of this high value is not known, it is probably a combination of the time sampling error and model error. The time sampling error is the error due to using a peak flow record that might not represent the entire range of peak flows possible at a site. The model error is the error due to not having the most influential variable in the regression equation. Although the time sampling error may be reduced by accumulating more years of peak-flow data, a reduction in model error is limited by the availability of basin-characteristic data and the cost and effort involved in collecting other types of basin data. Also, including more explanatory variables in the regression equation may reduce the model error at the cost of ease of use and data availability for the user. The equivalent years of record (given in table 4) is also a measure of the predictive ability of the regression equation, expressed as the number of years of actual peak-flow data required to achieve results equal to those obtained from the regression equation.

Weighted estimates of flood magnitude for the 504 gaging stations used in the regression analyses (table 2) were obtained using the weighting procedures presented in appendix 8 of the guidelines of the U.S. Water Resources Council (1981), in which two different estimates of flood magnitude (from the frequency analysis and from the regression equation) are weighted inversely proportional to their variance. The weighted estimates generally provide better estimates of the true flood discharges than those determined from either the flood-frequency analysis or the regression analysis alone.

Application and Limitations of Regression Equations

The flood magnitude for a desired exceedance probability for an ungaged site in an ungaged stream basin can be computed as follows:

1. From the figure showing the hydrologic regions (fig. 1), select the region in which the basin is located.

2. From table 4, find the desired equation for the selected region and exceedance probability.

3. Determine which basin characteristics are required for the selected regression equation and obtain or determine the required data.

4. Substitute the data values obtained in step 3 into the regression equation and compute the flood magnitude.

For example, to determine the magnitude for a flood with an exceedance probability of 0.01 at an ungaged site in Region 1, the appropriate equation from table 4 would be

$$Q = 0.745A^{0.922}P^{1.26} \quad . \qquad (4)$$

Assuming the drainage area of the basin is 100 mi^2 and the mean annual precipitation is 40 inches,

$$Q = 0.745\,(100)^{0.922}\,(40)^{1.26}$$
$$Q = 5,430 \text{ cubic feet per second} \quad .$$

However, the flood discharge at an ungaged site on a gaged stream can be computed by the following equation (Thomas and others, 1994), if the drainage area of the ungaged site is between 50 and 150 percent of the drainage area of the gaged site:

$$Q_u = Q_g\left(\frac{A_u}{A_g}\right)^x \quad , \qquad (5)$$

where

Q_u = flood discharge, in cubic feet per second, at the ungaged site,

Q_g = weighted flood discharge, in cubic feet per second, at the gaged site (from table 2),

A_u = contributing drainage area, in square miles, at the ungaged site,

A_g = contributing drainage area, in square miles, at the gaged site, and

x = exponent for each region as follows.

Flood-Frequency Regression Region	Exponent, x
1	0.92
2	.98
3	.93
4	.97
5	.76
6	.75
7	.58
8	.69
9	.59

The exponent x for each region was determined by regressing the discharges for each exceedance probability on the drainage areas for the stations in the region. The drainage area exponents determined from the regression analyses for each of the exceedance probabilities were averaged to produce the single exponent for each region.

Equation 5 should only be used if the basins of the gaged and ungaged sites have similar basin characteristics. Therefore, if a large tributary enters the stream between the gaged and ungaged sites, and the tributary basin has much different topography, vegetation, or other basin characteristics that could affect flood discharges, then the appropriate regression equation from this report should be used to estimate flood-frequency discharges for the ungaged site.

The following is an example of the determination of the flood discharge with an exceedance probability of 0.01 at an ungaged site on the Naselle River (Region 1). The contributing drainage area at the ungaged site (A_u) is 47 square miles. The contributing drainage area at the gage (A_g) on the Naselle River (station number 12010000 in table 2) is 54.8 square miles.

The drainage area of the ungaged site A_u, expressed as a percentage of the drainage area of the gaged site A_g, is given by:

$$\left(\frac{A_u}{A_g}\right)100 = \left(\frac{47 \text{ square miles}}{54.8 \text{ square miles}}\right)100 = 86 \text{ percent},$$

which satisfies the requirement for the use of equation 5.

The weighted discharge, Q_g (obtained from table 2, third line for station 12010000) is 12,100 cubic feet per second. The exponent, x, for Region 1 is 0.92. The computed discharge, Q_u, is

$$Q_{0.01} = 12,100\left(\frac{47}{54.8}\right)^{0.92}$$
$$= 10,500 \text{ cubic feet per second} \quad . \qquad (6)$$

There are some limitations to the use of the regional flood-frequency equations presented in this report. One is that the equations should not be used for streams in which the flow is significantly regulated or diverted because the regression coefficients were computed from gaging-station data for naturally flowing (unregulated) streams. Another limitation is that the equations should not be used to compute discharges for basins in which the values for one or more of the basin characteristics are significantly outside the range of values used in the development of the equations. Maximum and minimum basin characteristic values used in the development of the regression equations are listed in table 5.

A further limitation on the use of the regression equations is that they should not be used for basins in which urbanization has taken place. Because the regression equations were developed using data from unurbanized basins, application of the equations to urbanized basins could produce misleading results. Techniques for estimating flood discharges on urban streams are presented by Sauer and others (1983).

SUMMARY

The procedures recommended by the U.S. Water Resources Council (1981) were applied to the peak-flow records of 527 gaging stations on unregulated streams in the State of Washington to obtain discharges with exceedance probabilities of 0.5, 0.1, 0.04, 0.02, and 0.01. The frequency analyses included peak-flow data collected through the 1996 water year.

The results of the frequency analysis were combined with physical and climatic basin characteristics values to develop equations that can be used to compute peak discharges for ungaged streams. The State was divided into nine regions, based on hydrologic unit boundaries, and a separate set of equations was developed for each region. Basin characteristics shown to be important in estimating flood discharge include contributing drainage area and mean annual precipitation.

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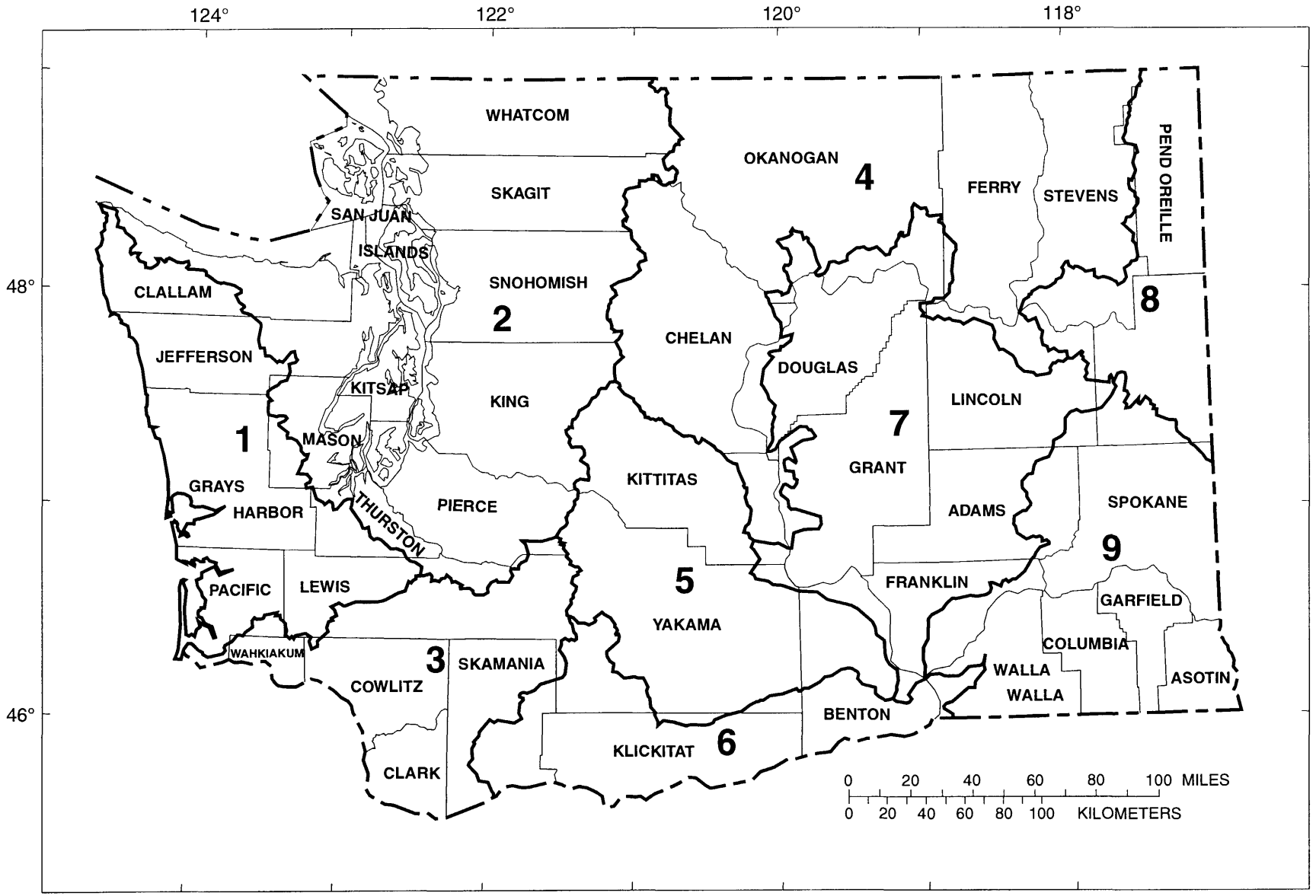

Figure 1. Flood-frequency regression regions in Washington State.

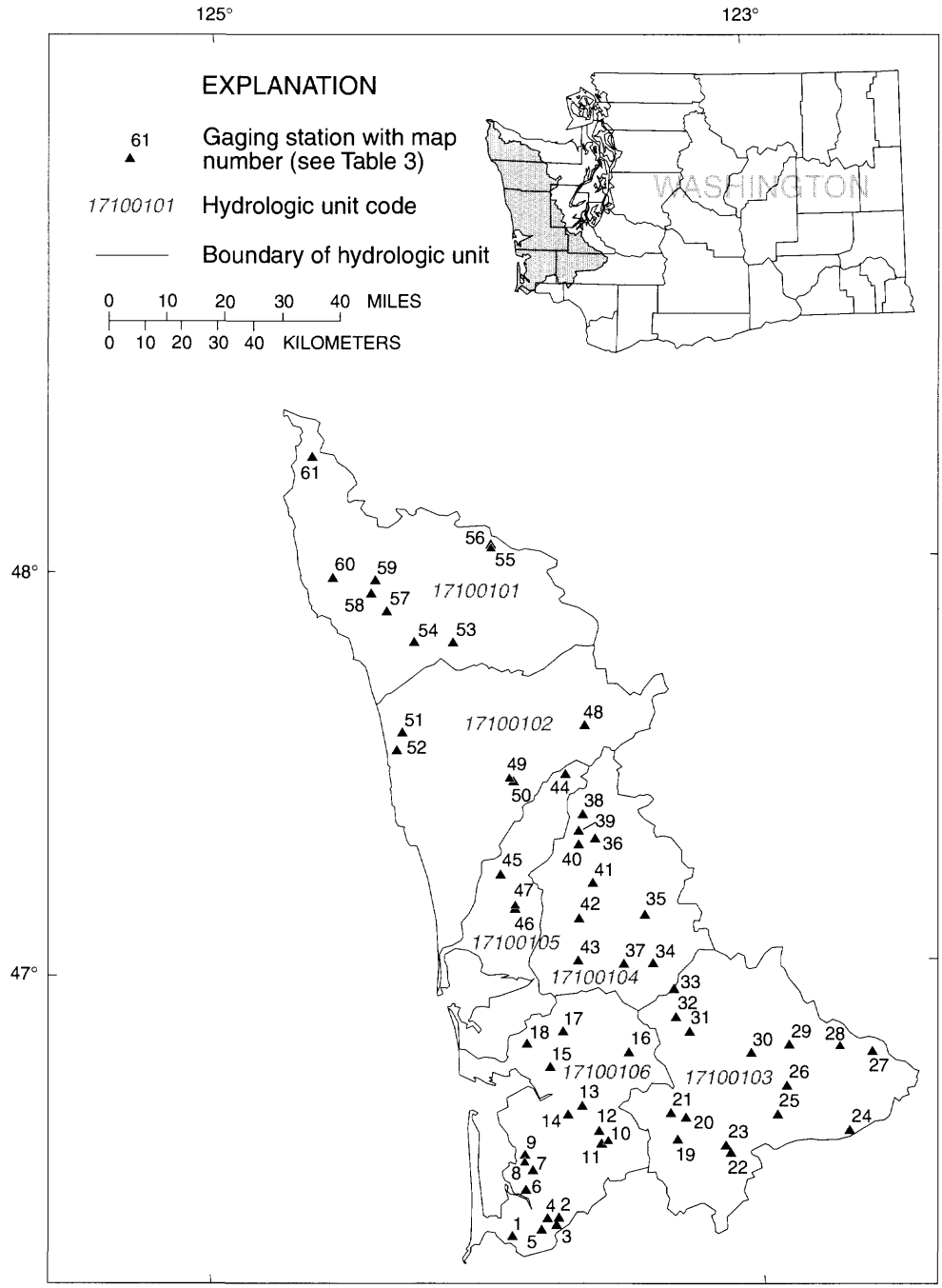

Figure 2. Distribution of gaging stations used in the development of the regression equation for region 1.

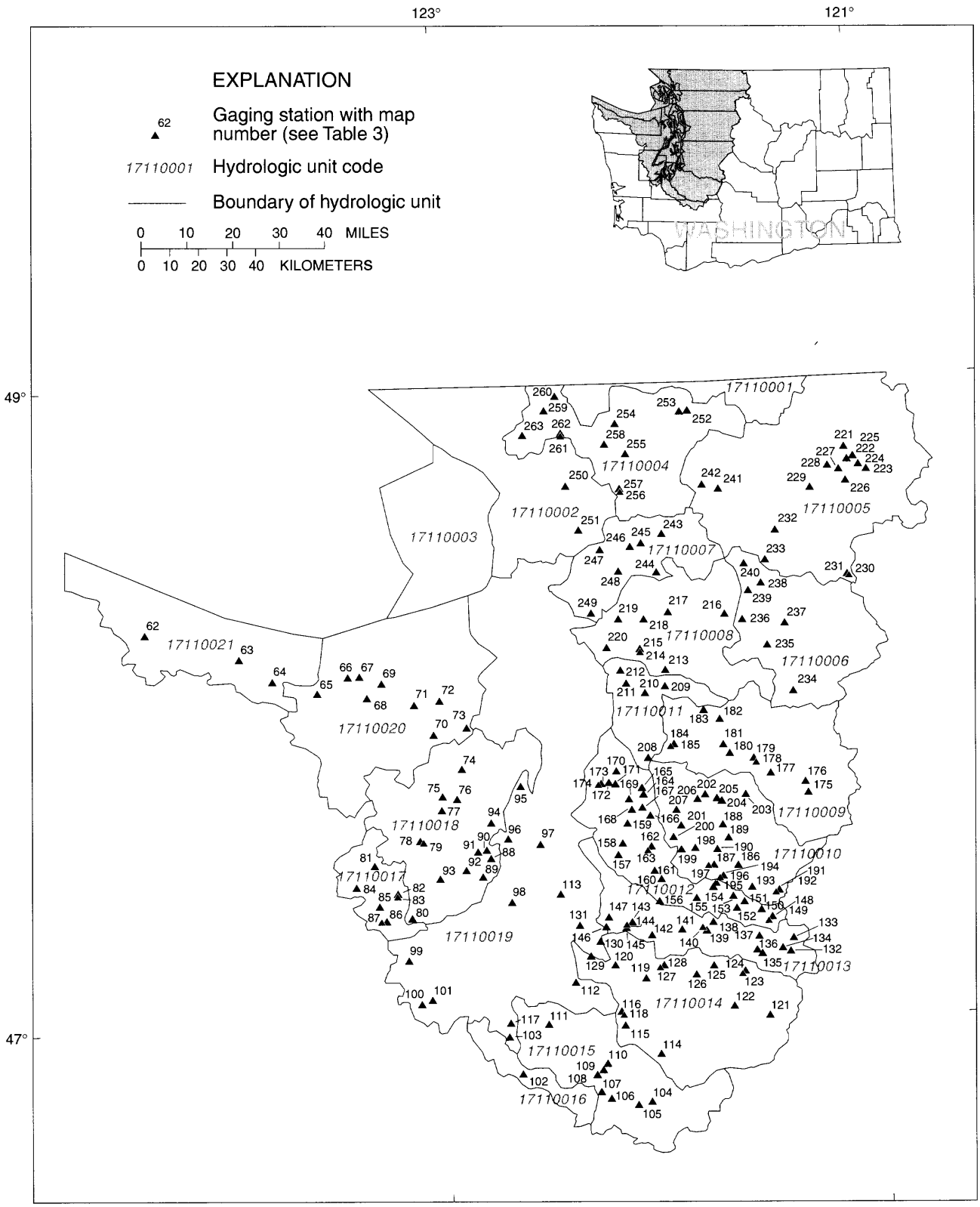

Figure 3 . Distribution of gaging stations used in the development of the regression equation for region 2.

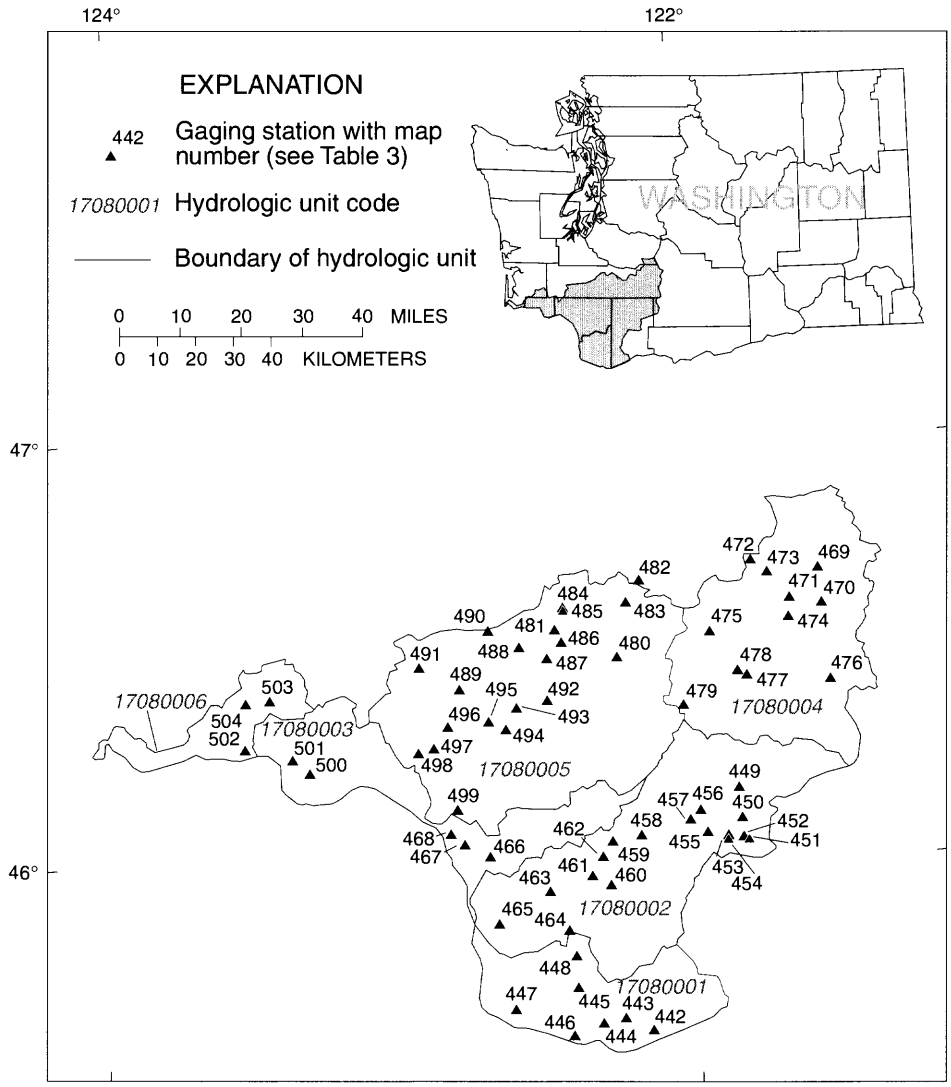

Figure 4. Distribution of gaging stations used in the development of the regression equation for region 3.

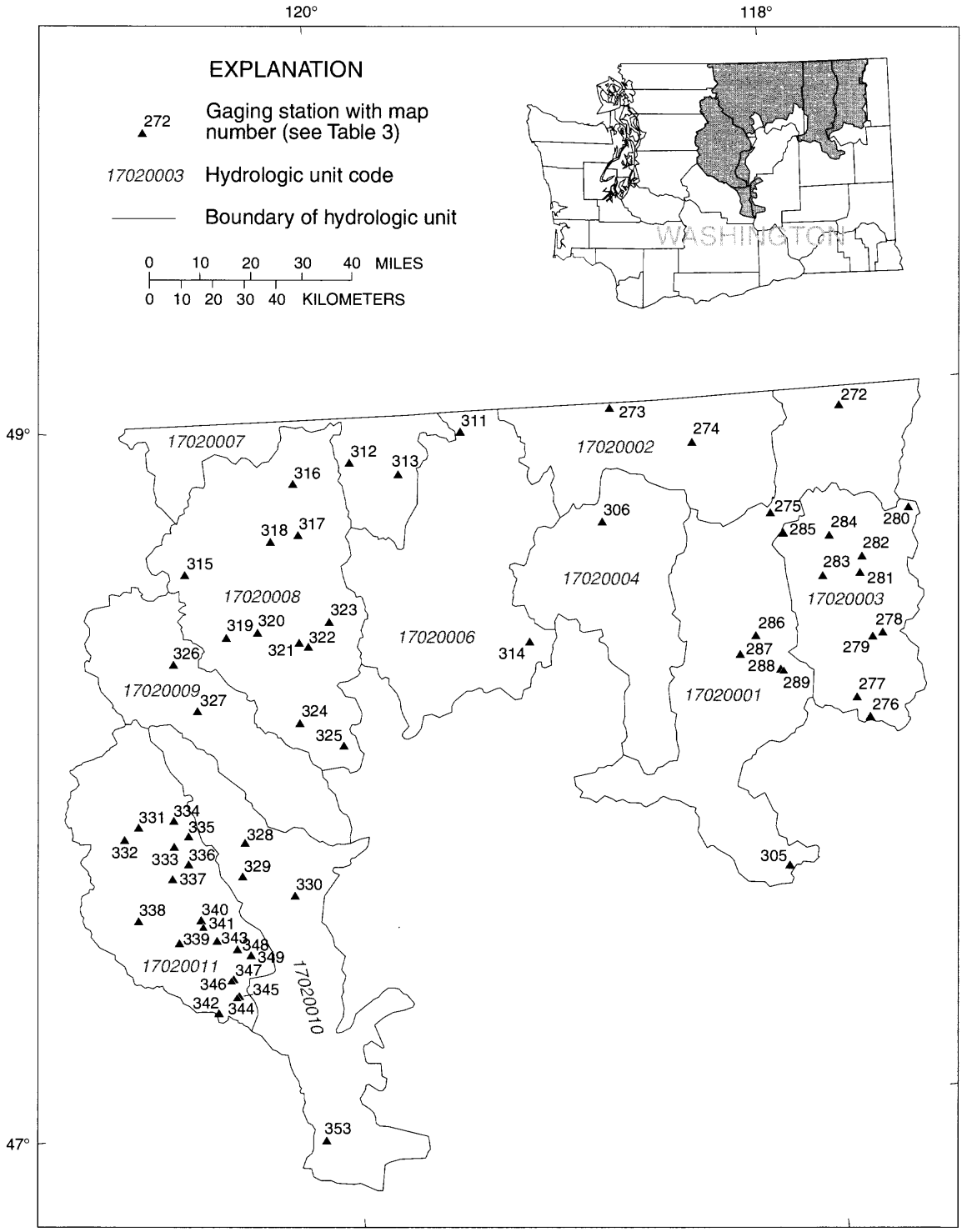

Figure 5. Distribution of gaging stations used in the development of the regression equation for region 4.

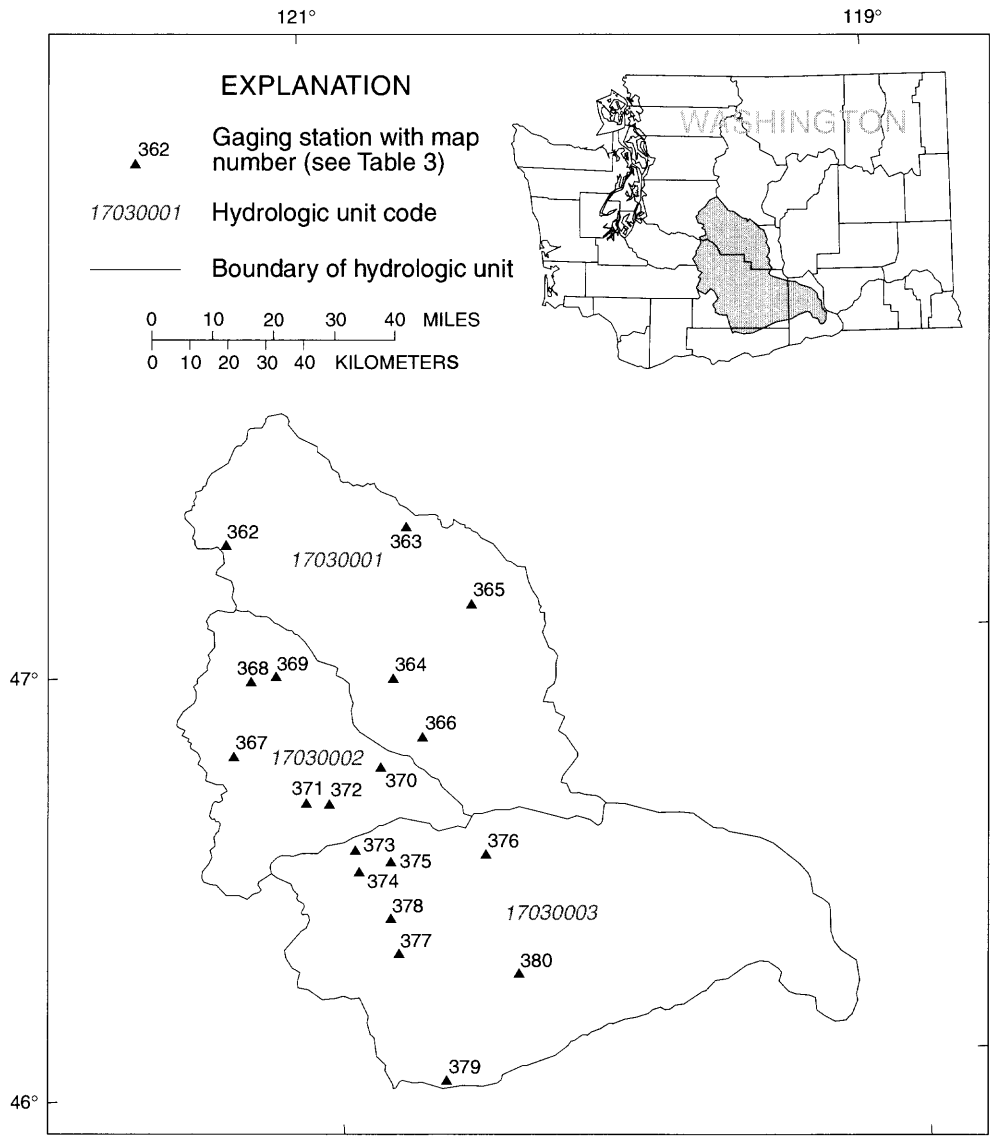

Figure 6. Distribution of gaging stations used in the development of the regression equation for region 5.

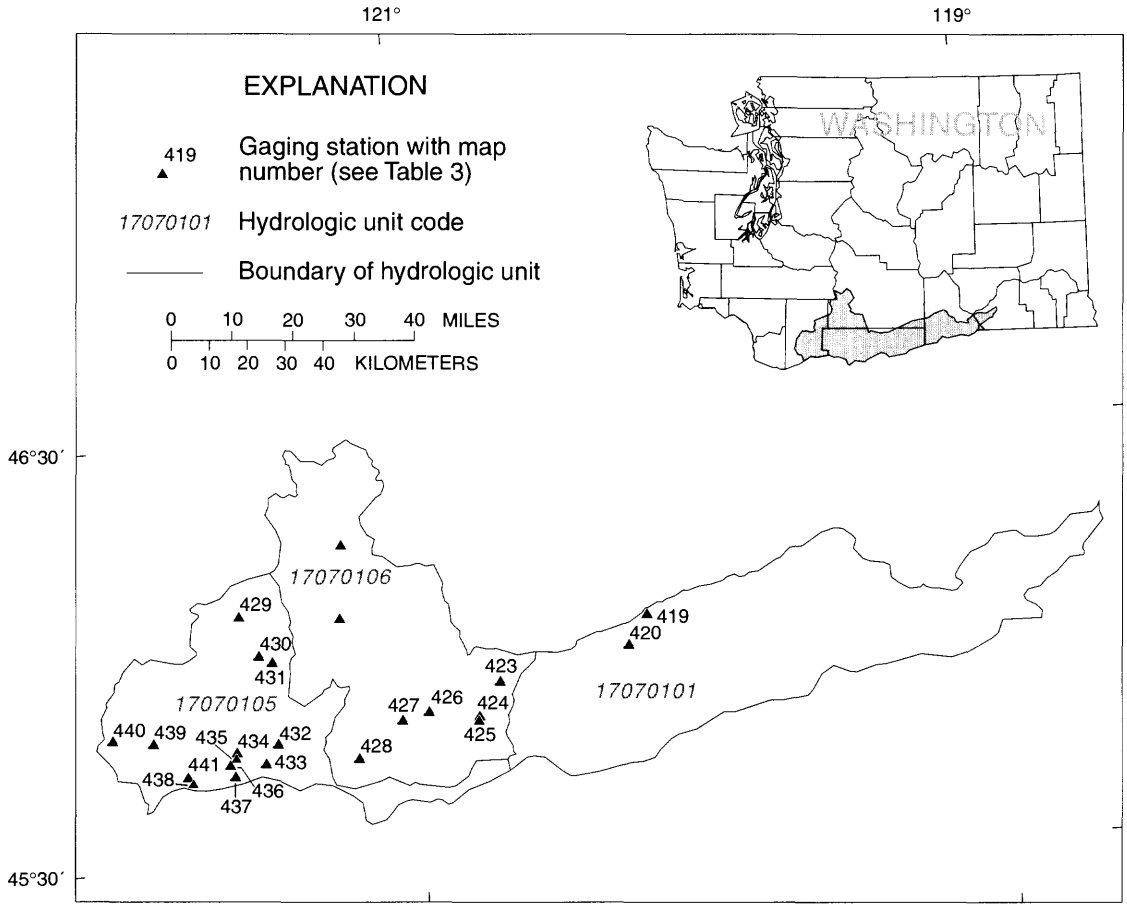

Figure 7. Distribution of gaging stations used in development of the regression equation for region 6.

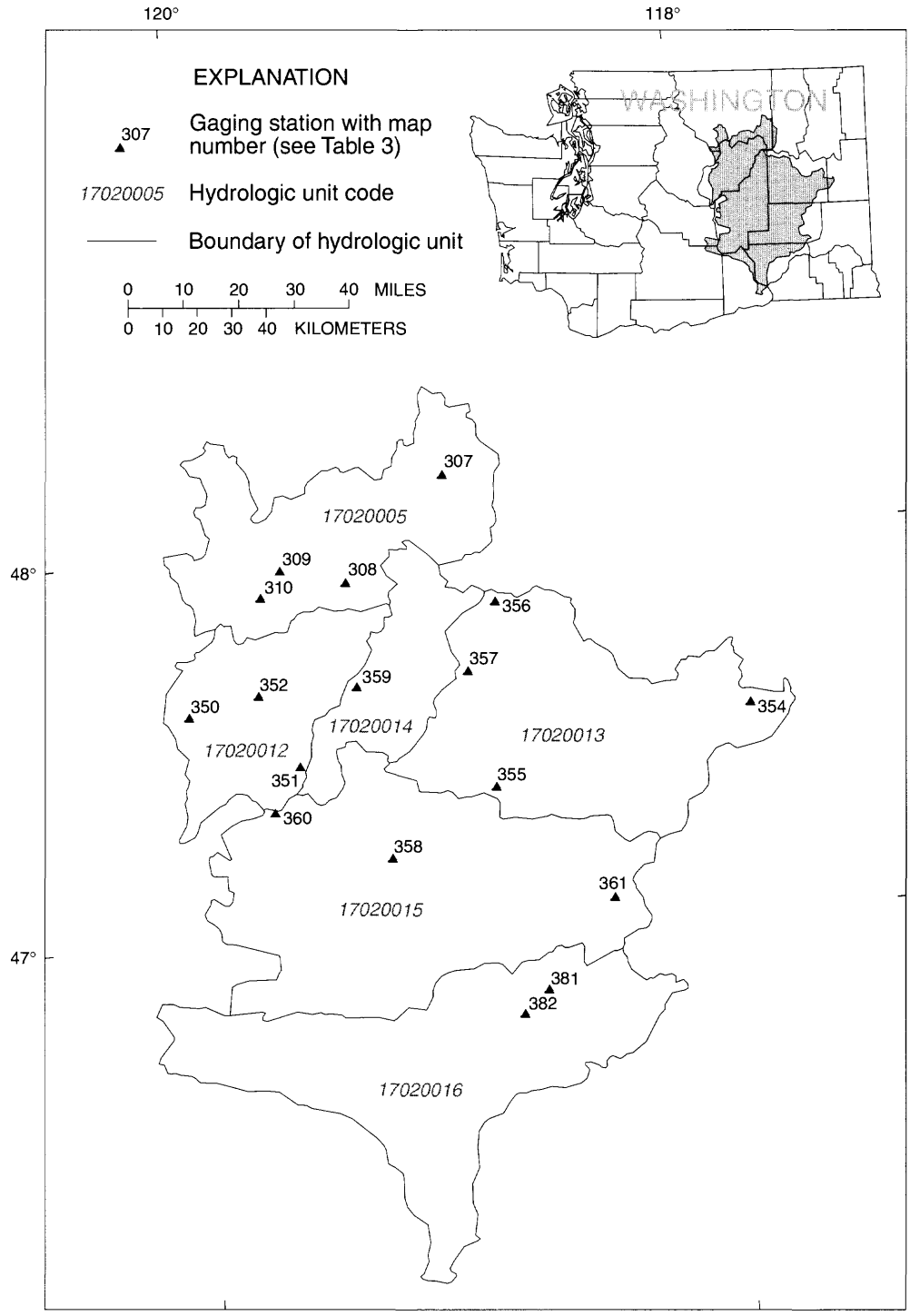

Figure 8. Distribution of gaging stations used in the development of the regression equation for region 7.

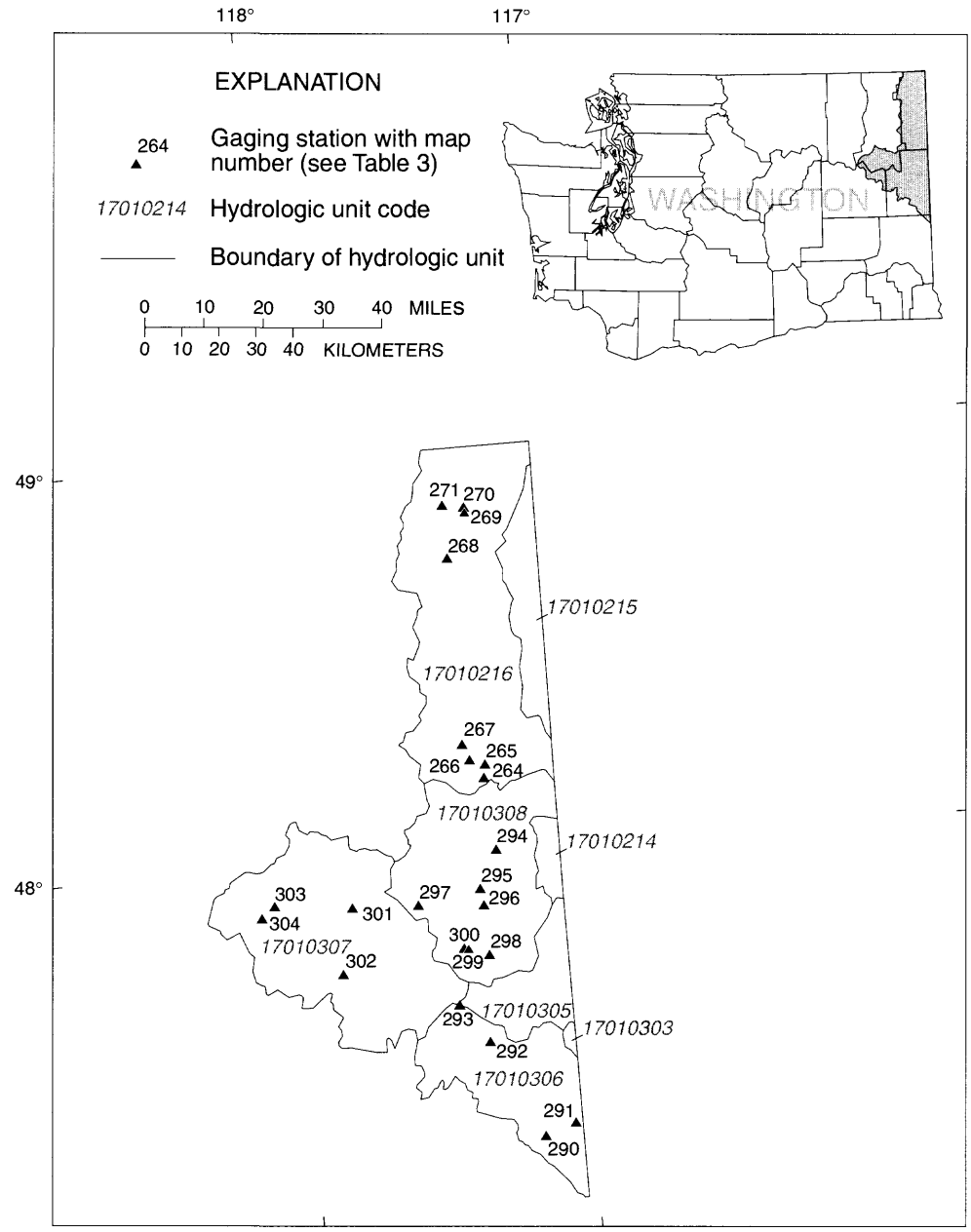

Figure 9. Distribution of gaging stations used in the development of the regression equation for region 8.

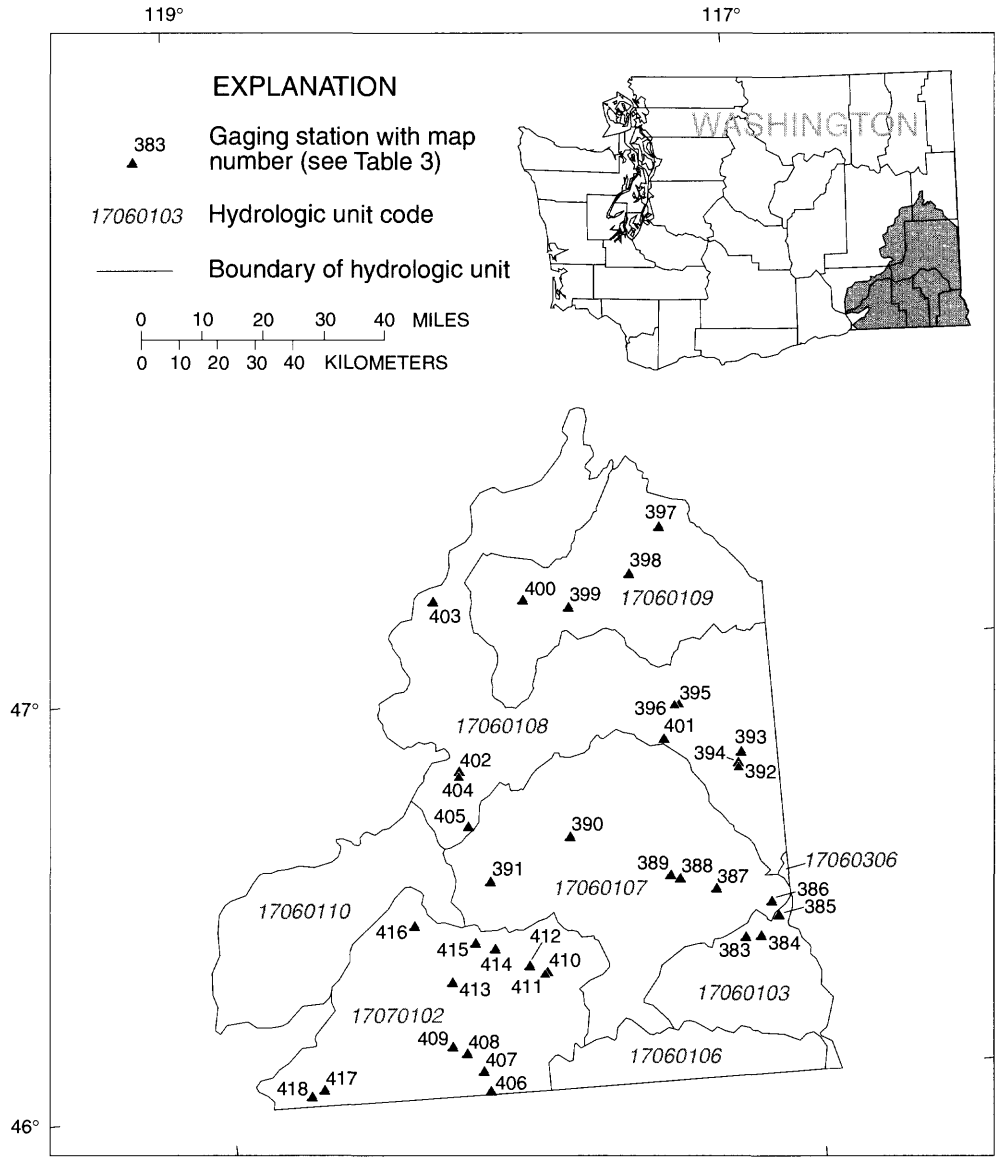

Figure 10. Distribution of gaging stations used in the development of the regression equation for region 9.

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data

[R, water years for which peak discharges were affected by regulation]

Station number	Station name	Years of peak record (Water years)
12009500	Bear Branch near Naselle, Wash.	(1964-79)
12010000	Naselle River near Naselle, Wash.	(1930-96)
12010500	Salmon Creek near Naselle, Wash.	(1954-65)
12010600	Lane Creek near Naselle, Wash.	(1950-70)
12010700	South Fork Naselle River near Naselle, Wash.	(1965-79)
12010800	South Nemah River near Naselle, Wash.	(1962-77)
12011000	North Nemah River near South Bend, Wash.	(1947-58, 1960-61, 1965-68, 1977)
12011100	North Nemah River Tributary near South Bend, Wash.	(1949-66)
12011200	Williams Creek near South Bend, Wash.	(1965-79)
12011500	Willapa River at Lebam, Wash.	(1949-74)
12012000	Fork Creek near Lebam, Wash.	(1954-79)
12012200	Green Creek near Lebam, Wash.	(1950-69)
12013500	Willapa River near Willapa, Wash.	(1949-56, 1958-59, 1962-96)
12014500	South Fork Willapa River near Raymond, Wash.	(1954-76, 1978-79)
12015100	Clearwater Creek near Raymond, Wash.	(1965-79)
12015500	North River near Brooklyn, Wash.	(1954-65)
12016700	Joe Creek near Cosmopolis, Wash.	(1949-70)
12017000	North River near Raymond, Wash.	(1928-34R, 1935-79, 1996)
12019600	Water Mill Creek near Pe Ell, Wash.	(1950-70)
12020000	Chehalis River near Doty, Wash.	(1940-96)
12020500	Elk Creek near Doty, Wash.	(1945-50, 1952-72, 1974-79)
12020900	South Fork Chehalis River near Boistfort, Wash.	(1966-80)
12021000	South Fork Chehalis River at Boistfort, Wash.	(1945-65)
12024000	South Fork Newaukum River near Onalaska, Wash.	(1945-48, 1958-76, 1978-79,1996)
12025000	Newaukum River near Chehalis, Wash.	(1929-31, 1943-81, 1983-96)
12025300	Salzer Creek near Centralia, Wash.	(1969-79)
12025700	Skookumchuck River near Vail, Wash.	(1968-96)
12026000	Skookumchuck River near Centralia, Wash.	(1930-33, 1940-69)
12026300	Skookumchuck River Tributary near Bucoda, Wash.	(1960-75)
12027500	Chehalis River near Grand Mound, Wash.	(1929-96)
12029700	Chehalis River near Oakville, Wash.	(1947-76)
12030000	Rock Creek at Cedarville, Wash.	(1945-74)
12031000	Chehalis River at Porter, Wash.	(1947-85, 1987-96)
12032500	Cloquallum River at Elma, Wash.	(1945-79)
12034200	East Fork Satsop River near Elma, Wash.	(1958-73)
12034700	West Fork Satsop River Tributary near Matlock, Wash.	(1958-77)
12035000	Satsop River near Satsop, Wash.	(1930-96)
12035450	Big Creek near Grisdale, Wash.	(1973-96)
12035500	Wynoochee River at Oxbow, near Aberdeen, Wash.	(1926-52)
12036000	Wynoochee River above Save Creek, near Aberdeen, Wash.	(1926-72, 1973-96R)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
12036400	Schafer Creek near Grisdale,Wash.	(1987-96)
12036650	Anderson Creek near Montesano, Wash.	(1973-85)
12037400	Wynoochee River above Black Creek near Montesano, Wash.	(1957-72, 1973-96R)
12038750	Gibson Creek near Quinault, Wash.	(1965-75)
12039000	Humptulips River near Humptulips, Wash.	(1934-35, 1943-79)
12039050	Big Creek near Hoquiam, Wash.	(1949-70)
12039100	Big Creek Tributary near Hoquiam, Wash.	(1949-68)
12039300	North Fork Quinault River near Amanda Park, Wash.	(1965-86)
12039400	Higley Creek near Amanda Park, Wash.	(1955-74)
12039500	Quinault River at Quinault Lake, Wash.	(1910, 1912-22, 1926-96)
12040000	Clearwater River near Clearwater, Wash.	(1932, 1935, 1938-46, 1948-67)
12040500	Queets River near Clearwater, Wash.	(1931-67, 1975-96)
12041000	Hoh River near Forks, Wash.	(1927-64)
12041200	Hoh River at U.S. Highway 101 near Forks, Wash.	(1961-96)
12041500	Soleduck River near Fairholm, Wash.	(1918-21, 1934-80)
12041600	Solduck River Tributary near Fairholm, Wash.	(1956-75)
12042700	May Creek near Forks, Wash.	(1950-68)
12042900	Grader Creek near Forks, Wash.	(1950-88)
12043000	Calawah River near Forks, Wash.	(1898-1901, 1976-80, 1985-96)
12043100	Dickey River near La Push, Wash.	(1963-80)
12043163	Sooes River below Miller Creek near Ozette, Wash.	(1976-86)
12043300	Hoko River near Sekiu, Wash.	(1963-78,1996)
12043430	East Twin River near Pysht, Wash.	(1963-78)
12044000	Lyre River at Piedmont, Wash.	(1918-27)
12045500	Elwha River at Mcdonald Bridge near Port Angeles, Wash.	(1898-1902, 1920-26, 1927-96R)
12046800	East Valley Creek at Port Angeles, Wash.	(1950-63)
12047100	Lees Creek at Port Angeles, Wash.	(1949-70)
12047300	Morse Creek near Port Angeles, Wash.	(1967-79)
12047500	Siebert Creek near Port Angeles, Wash.	(1953-69)
12047700	Gold Creek near Blyn, Wash.	(1965-75)
12048000	Dungeness River near Sequim, Wash.	(1924-30, 1938-96)
12049400	Dean Creek at Blyn, Wash.	(1949-70)
12050500	Snow Creek near Maynard, Wash.	(1953-79)
12052400	Penny Creek near Quilcene, Wash.	(1949-68)
12053000	Dosewallips River near Brinnon, Wash.	(1931-68)
12053400	Dosewallips River Tributary near Brinnon, Wash.	(1951-70)
12054000	Duckabush River near Brinnon, Wash.	(1939-96)
12054500	Hamma Hamma River near Eldon, Wash.	(1952-79)
12054600	Jefferson Creek near Eldon, Wash.	(1958-79)
12056300	Annas Bay Tributary near Potlatch, Wash.	(1950-70)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
12056500	N.F. Skokomish R. blw Staircase Rapids nr Hoodsport, Wash.	(1925-96)
12057500	North Fork Skokomish River near Hoodsport, Wash.	(1914-25, 1926-30R)
12058000	Deer Meadow Creek near Hoodsport, Wash.	(1953-79)
12059800	South Fork Skokomish River near Hoodsport, Wash.	(1964-70, 1972-79)
12060000	South Fork Skokomish River near Potlatch, Wash.	(1924-32, 1947-64)
12060500	South Fork Skokomish River near Union, Wash.	(1932-84,1996)
12061200	Fir Creek Tributary near Potlatch, Wash.	(1955-74)
12063000	Union River near Bremerton, Wash.	(1946-56, 1957-59R)
12063500	Union River near Belfair, Wash.	(1948-57, 1958-59R)
12065500	Gold Creek near Bremerton, Wash.	(1946-70, 1972-79)
12066000	Tahuya River near Bremerton, Wash.	(1946-56)
12067500	Tahuya River near Belfair, Wash.	(1946-49, 1951-56)
12068500	Dewatto River near Dewatto, Wash.	(1948-57, 1959-79)
12069550	Big Beef Creek near Seabeck, Wash.	(1970-81)
12070000	Dogfish Creek near Poulsbo, Wash.	(1948-73)
12072000	Chico Creek near Bremerton, Wash.	(1948-50, 1962-79)
12072600	Beaver Creek near Manchester, Wash.	(1967-76)
12073500	Huge Creek near Wauna, Wash.	(1948-69, 1978-96)
12076500	Goldsborough Creek near Shelton, Wash.	(1952-79)
12078400	Kennedy Creek near Kamilche, Wash.	(1961-74, 1976-79, 1992-93)
12078600	Schneider Creek Tributary near Shelton, Wash.	(1950-69)
12079000	Deschutes River near Rainier, Wash.	(1950-79, 1981-82, 1988-96)
12080000	Deschutes River near Olympia, Wash.	(1946-64)
12081000	Woodland Creek near Olympia, Wash.	(1950-69)
12081300	Eaton Creek near Yelm, Wash.	(1960-88)
12082500	Nisqually River near National, Wash.	(1943-96)
12083000	Mineral Creek near Mineral, Wash.	(1943-96)
12084000	Nisqually River near Alder, Wash.	(1932-44)
12084500	Little Nisqually River near Alder, Wash.	(1921-43)
12086500	Nisqually River at La Grande, Wash.	(1907-08, 1910-11, 1920-31, 1945-96R)
12087000	Mashel River near La Grande, Wash.	(1941-57, 1992-96)
12088000	Ohop Creek near Eatonville, Wash.	(1928-32, 1942-74, 1993-96)
12090200	Muck Creek at Roy, Wash.	(1957-76, 1996)
12090400	North Fork Clover Creek near Parkland, Wash.	(1960-75, 1995-96)
12091700	Judd Creek near Burton, Wash.	(1969-79)
12092000	Puyallup River near Electron, Wash.	(1912-26, 1945-49, 1958-96)
12093000	Kapowsin Creek near Kapowsin, Wash.	(1928-32, 1942-70)
12093500	Puyallup River near Orting, Wash.	(1932-96)
12093900	Carbon River at Fairfax, Wash.	(1966-78)
12094000	Carbon River near Fairfax, Wash.	(1930-78, 1991-96)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
12095000	South Prairie Creek at South Prairie, Wash.	(1950-79, 1988-96)
12096500	Puyallup River at Alderton, Wash.	(1916-27, 1944-57, 1996)
12096800	Dry Creek near Greenwater, Wash.	(1957-75)
12096950	Jim Creek near Greenwater, Wash.	(1965-75)
12097000	White River at Greenwater, Wash.	(1930-76, 1978)
12097500	Greenwater River at Greenwater, Wash.	(1912, 1930-78, 1993-96)
12097700	Cyclone Creek near Enumclaw, Wash.	(1950-72)
12097850	White River below Clearwater River near Buckley Wash.	(1975-76, 1983-96)
12099600	Boise Creek at Buckley, Wash.	(1978-96)
12100000	White River at Buckley, Wash.	(1900-02, 1911-12, 1914-19, 1921-23, 1935-38, 1978-96R)
12101500	Puyallup River at Puyallup, Wash.	(1915-41, 1942-96R)
12102800	South Fork Hylebos Creek near Puyallup, Wash.	(1949-66)
12103200	Joes Creek at Tacoma, Wash.	(1958-73)
12103400	Green River below Intake Creek near Lester, Wash.	(1967-77)
12103500	Snow Creek near Lester, Wash.	(1946-65)
12104000	Friday Creek near Lester, Wash.	(1946-77)
12104500	Green River near Lester, Wash.	(1946-90)
12104700	Green Canyon Creek near Lester, Wash.	(1961-70, 1972-74)
12105000	Smay Creek near Lester, Wash.	(1948, 1950-70, 1972-73)
12105710	North Fork Green River near Lemolo, Wash.	(1957-65 (Station 12105700), 1966-87)
12106000	Bear Creek near Eagle Gorge, Wash	(1947-56)
12106500	Green River near Palmer, Wash.	(1918, 1932-61, 1962-63R)
12107200	Deep Creek near Cumberland, Wash.	(1950-70)
12108500	Newaukum Creek near Black Diamond, Wash.	(1945-96)
12112500	Big Soos Creek near Auburn, Wash.	(1945-56)
12112600	Big Soos Creek above Hatchery, near Auburn, Wash.	(1961-96)
12113000	Green River near Auburn, Wash.	(1937-61, 1962-96R)
12113200	Mill Creek near Auburn, Wash.	(1949-70)
12113300	Mill Creek Tributary near Auburn, Wash.	(1959-75)
12113500	North Fork Cedar River near Lester, Wash.	(1945-52, 1954-64)
12114000	South Fork Cedar River near Lester, Wash.	(1945-83)
12114500	Cedar River below Bear Creek, near Cedar Falls, Wash.	(1946-64, 1976-96)
12115000	Cedar River near Cedar Falls, Wash.	(1946-96)
12115300	Green Point Creek near Cedar Falls, Wash.	(1957-88)
12115500	Rex River near Cedar Falls, Wash.	(1946, 1948-96)
12115700	Boulder Creek near Cedar Falls, Wash.	(1985-96)
12116100	Canyon Creek near Cedar Falls, Wash.	(1946-96)
12117000	Taylor Creek near Selleck, Wash.	(1957-96)
12118500	Rock Creek near Maple Valley, Wash.	(1946-76)
12119600	May Creek at mouth, near Renton, Wash.	(1946-50, 1956-58, 1965-71, 1973-79)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
12119700	Coal Creek near Bellevue, Wash.	(1964-79)
12119800	Valley (North Branch Mercer) Creek near Bellevue, Wash.	(1949-67, 1970-77)
12120600	Issaquah Creek near Hobart, Wash.	(1987-96)
12121000	Issaquah Creek near Issaquah, Wash.	(1946-64)
12121600	Issaquah Creek near mouth, near Issaquah, Wash.	(1964-96)
12121700	Tibbetts Creek near Issaquah, Wash.	(1964-68, 1972-77)
12122500	Bear Creek near Redmond, Wash.	(1946-49, 1980-81, 1985-91, 1994-96)
12123000	Cottage Lake Creek near Redmond, Wash.	(1956-65)
12123300	Evans Creek Tributary near Redmond, Wash.	(1949-69)
12124000	Evans Creek (above mouth) near Redmond, Wash.	(1956-77)
12125000	Sammamish River near Redmond, Wash.	(1940-57)
12125200	Sammamish River near Woodinville, Wash.	(1966-96)
12126000	North Creek near Bothell, Wash.	(1946-74)
12126500	Sammamish River at Bothell, Wash.	(1940-63)
12127100	Swamp Creek at Kenmore, Wash.	(1964-89, 1990R)
12127300	Lyon Creek at Lake Forest Park, Wash.	(1964-75)
12127600	McAleer Creek at Lake Forest Park, Wash.	(1964-74)
12130500	South Fork Skykomish River near Skykomish, Wash.	(1930-31, 1947-70)
12131000	Beckler River near Skykomish, Wash.	(1930-33, 1947-70)
12132700	South Fork Skykomish River Tributary at Baring, Wash.	(1951-70)
12133000	South Fork Skykomish River near Index, Wash.	(1897, 1903-05, 1912, 1914-82)
12133500	Troublesome Creek near Index, Wash.	(1930-41)
12134000	North Fork Skykomish River at Index, Wash.	(1911-12, 1914-21, 1930-38, 1947-48)
12134500	Skykomish River near Gold Bar, Wash.	(1929-96)
12135000	Wallace River at Gold Bar, Wash.	(1930-33, 1947-78, 1989-91)
12135500	Olney Creek near Gold Bar, Wash.	(1947-51, 1953-68)
12137500	Sultan River near Startup, Wash.	(1935-45, 1948-65, 1966-74R)
12141000	Woods Creek near Monroe, Wash.	(1947-78)
12141100	Skykomish River at Monroe, Wash.	(1922, 1951, 1958-75)
12141300	Middle Fork Snoqualmie River near Tanner, Wash.	(1961-96)
12141500	Middle Fork Snoqualmie River near North Bend, Wash.	(1909-10, 1912-26, 1930-32)
12142000	N.F. Snoqualmie River near Snoqualmie Falls, Wash.	(1930-54, 1956-57, 1959-96)
12142300	Hancock Creek near Snoqualmie, Wash.	(1965-79)
12143000	N.F. Snoqualmie River near North Bend, Wash.	(1909-12, 1914-20, 1922-26, 1930-38, 1961-78)
12143300	S.F. Snoqualmie River Tributary near North Bend, Wash.	(1951-70)
12143310	S. F. Snoqualmie River Trib. No.9 near North Bend, Wash.	(1962-72)
12143400	S. F. Snoqualmie River above Alice Creek near Garcia, Wash.	(1961-96)
12143600	S. F. Snoqualmie River at Edgewick Wash	(1964-65, 1984-96)
12143700	Boxley Creek near Cedar Falls, Wash.	(1946-96)
12143900	Boxley Creek near Edgewick, Wash.	(1982-96)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
12144000	South Fork Snoqualmie River at North Bend, Wash.	(1909, 1911-12, 1914-26, 1930-38, 1946-50, 1961-78, 1985-96)
12144500	Snoqualmie River near Snoqualmie, Wash.	(1959-96)
12145500	Raging River near Fall City, Wash.	(1946-51, 1953-96)
12146000	Patterson Creek near Fall City, Wash.	(1948-50, 1956-79)
12147000	Griffin Creek near Carnation, Wash.	(1946-70, 1972-79)
12147500	North Fork Tolt River near Carnation, Wash.	(1953-65, 1968-96)
12147600	South Fork Tolt River near Index, Wash.	(1960-63, 1968-96)
12148000	South Fork Tolt River near Carnation, Wash.	(1953-63, 1970-96R)
12148100	South Fork Tolt River Tributary near Carnation, Wash.	(1955-74)
12148500	Tolt River near Carnation, Wash.	(1929, 1931, 1938-96)
12149000	Snoqualmie River near Carnation, Wash.	(1930-96)
12150800	Snohomish River near Monroe, Wash.	(1964-96)
12152500	Pilchuck River near Granite Falls, Wash.	(1944-80)
12153000	Little Pilchuck Creek near Lake Stevens, Wash.	(1947-51, 1953-74)
12155500	Snohomish River at Snohomish, Wash.	(1906, 1917, 1921, 1932-33, 1942-66)
12156400	Munson Creek near Marysville, Wash.	(1949-69)
12157000	Quilceda Creek near Marysville, Wash.	(1947-69)
12161000	South Fork Stillaguamish River near Granite Falls, Wash.	(1929-80)
12162500	S.F. Stillaguamish R. above Jim Creek near Arlngtpn, Wash.	(1938-57)
12164000	Jim Creek near Arlington, Wash.	(1938-51, 1953-69)
12165000	Squire Creek near Darrington, Wash.	(1951-69)
12166500	Deer Creek at Oso, Wash.	(1918-30)
12167000	North Fork Stillaguamish River near Arlington, Wash.	(1929-96)
12168500	Pilchuck Creek near Bryant, Wash.	(1930-31, 1951, 1953-79)
12169500	Fish Creek near Arlington, Wash.	(1951-53, 1955-72)
12172000	Big Beaver Creek near Newhalem, Wash.	(1941-48, 1963-69)
12172500	Skagit River near Newhalem, Wash.	(1922, 1930-39)
12173500	Ruby Creek below Panther Creek near Newhalem, Wash.	(1949-56, 1963-69)
12174000	Ruby Creek near Newhalem, Wash.	(1929-49)
12174500	Skagit River below Ruby Creek, near Newhalem, Wash.	(1920-30)
12175500	Thunder Creek near Newhalem, Wash.	(1920-96)
12176000	Thunder Creek near Marblemount, Wash.	(1920-30)
12177500	Stetattle Creek near Newhalem, Wash.	(1934-83)
12178100	Newhalem Creek near Newhalem, Wash.	(1961-96)
12181100	S.F. Cascade R. at S. Cascade Gl., near Marblemount, Wash.	(1961-96)
12181200	Salix Creek at South Cascade Gl near Marblemount, Wash.	(1963-96)
12182500	Cascade River at Marblemount, Wash.	(1815, 1898, 1910-12, 1918, 1929-79)
12184300	Iron Creek near Rockport, Wash.	(1965-75)
12185300	Elliot Creek at Goat Lake Outlet, near Monte Cristo	(1983-93)
12186000	Sauk River above Whitechuck River near Darrington, Wash.	(1918-22, 1929-96)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
12187500	Sauk River at Darrington, Wash.	(1815, 1897, 1910, 1915-26, 1929-32)
12188300	Straight Creek near Darrington, Wash.	(1965-75)
12189000	Suiattle River near Mansford, Wash.	(1939-50)
12189400	Sauk River Tributary near Darrington, Wash.	(1951-70, 1978-88)
12189500	Sauk River near Sauk, Wash.	(1912, 1929-96)
12191500	Baker River below Anderson Creek, North Concrete, Wash.	(1815, 1897, 1910-24, 1929-31, 1956-59)
12191800	Sulphur Creek near Concrete, Wash.	(1964-76, 1982)
12196000	Alder Creek near Hamilton, Wash.	(1944-79)
12196200	Day Creek Below Day Lake, near Lyman, Wash.	(1964-79)
12196500	Day Creek near Lyman, Wash.	(1944-61)
12197200	Parker Creek near Lyman, Wash.	(1951-70)
12199000	Skagit River near Sedro Woolley, Wash.	(1815, 1856, 1897-98, 1907, 1909-19, 1922-23, 1976-80R)
12199800	East Fork Nookachamps Creek near Big Lake, Wash.	(1962-72, 1974-78)
12200700	Carpenter Creek Tributary near Mount Vernon, Wash.	(1949-70)
12200800	Lake Creek near Bellingham, Wash.	(1949-63, 1965-68)
12201500	Samish River near Burlington, Wash.	(1944-83)
12204400	Nooksack River Tributary near Glacier, Wash.	(1956-60, 1962-88)
12205000	N.F. Nooksack R. below Cascade Creek near Glacier, Wash.	(1938-96)
12207200	North Fork Nooksack River near Deming, Wash.	(1965-75)
12208000	Middle Fork Nooksack River near Deming, Wash.	(1965-77, 1992-96)
12209000	South Fork Nooksack River near Wickersham, Wash.	(1935-79, 1989-91, 1994-96)
12209500	Skookum Creek near Wickersham, Wash.	(1949-69)
12210500	Nooksack River at Deming, Wash.	(1908, 1910, 1932, 1935-48, 1950-96)
12211500	Nooksack River near Lynden, Wash.	(1918, 1922, 1924, 1932, 1935, 1945-67)
12212000	Fishtrap Creek at Lynden, Wash.	(1949-74)
12212700	Tenmile Creek Tributary near Bellingham, Wash.	(1949-67)
12212800	Tenmile Creek Tributary No. 2 near Bellingham, Wash.	(1956-87)
12213100	Nooksack River at Ferndale, Wash.	(1918, 1922, 1932, 1935, 1946, 1950-96)
12323000	Columbia River at Birchbank, British Columbia	(1913-68, 1969-96R)
12395500	Pend Oreille River at Newport, Idaho	(1894, 1904-41, 1953-96R)
12395800	Deer Creek near Dalkena, Wash.	(1954-73)
12395900	Davis Creek near Dalkena, Wash.	(1954-73)
12396000	Calispell Creek near Dalkena, Wash.	(1951-77, 1979-96)
12396100	Winchester Creek near Cusick, Wash.	(1954-88)
12396450	Little Muddy Creek at Ione, Wash.	(1954-73)
12396900	Sullivan Creek abv Outlet Creek near Metaline Falls, Wash.	(1958-74, 1994-96)
12397500	Sullivan Creek near Metaline Falls, Wash.	(1913-24)
12398000	Sullivan Creek at Metaline Falls, Wash.	(1954-68, 1970, 1994-96)
12398500	Pend Oreille River blw Z Canyon near Metaline Falls, Wash.	(1894, 1913-51, 1952-64R)
12399500	Columbia River at International Boundary	(1894, 1938-57, 1958-96R)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
12400500	Sheep Creek near Northport, Wash.	(1930-42, 1948)
12401500	Kettle River near Ferry, Wash.	(1929-96)
12403700	Third Creek near Curlew, Wash.	(1954-73)
12404500	Kettle River near Laurier, Wash.	(1894, 1930-96)
12405400	Nancy Creek near Kettle Falls, Wash.	(1952, 1954-72)
12405500	Columbia River at Kettle Falls, Wash.	(1894, 1913, 1916-40)
12407500	Sheep Creek at Springdale, Wash.	(1953-72)
12407520	Deer Creek near Valley, Wash.	(1960-79)
12407600	Thomason Creek near Chewelah, Wash.	(1954-73)
12407700	Chewelah Creek at Chewelah, Wash.	(1957-74)
12408200	Patchen (Bighorn) Creek near Tiger, Wash.	(1954-73)
12408300	Little Pend Oreille River near Colville, Wash.	(1958-79)
12408400	Narcisse Creek near Colville, Wash.	(1954-73)
12408420	Haller Creek near Arden, Wash.	(1960-79)
12408500	Mill Creek near Colville, Wash.	(1940-86)
12409000	Colville River at Kettle Falls, Wash.	(1923-96)
12409500	Hall Creek at Inchelium, Wash.	(1913-29, 1948, 1972-73)
12410000	Stranger Creek at Meteor, Wash.	(1917-29)
12410600	South Fork Harvey Creek near Cedonia, Wash.	(1954-73)
12410650	North Fork Harvey Creek near Cedonia, Wash.	(1954-73)
12423550	Hangman Creek Tributary near Latah, Wash.	(1961-76)
12423700	South Fork Rock Creek Tributary near Fairfield, Wash.	(1962-76)
12423900	Stevens Creek Tributary near Moran, Wash.	(1954-73)
12424000	Hangman Creek at Spokane, Wash.	(1948-96)
12427000	Little Spokane River at Elk, Wash.	(1949-79)
12429200	Bear Creek near Milan, Wash.	(1963-75)
12429600	Deer Creek near Chattaroy, Wash.	(1962-75)
12429800	Mud Creek near Deer Park, Wash.	(1954-73)
12430370	Bigelow Gulch near Spokane, Wash.	(1950, 1962-75)
12431000	Little Spokane River at Dartford, Wash.	(1929-32, 1947-96)
12431100	Little Creek at Dartford, Wash.	(1963-77)
12433200	Chamokane Creek below falls near Long Lake, Wash.	(1971-79, 1988-96)
12433300	Spring Creek Tributary near Reardan, Wash.	(1954-73)
12433542	Blue Creek above Midnight Mine, Wash	(1985-96)
12433556	Midnight Mine Drainage	(1985-96)
12433561	Blue Creek near Mouth near Midnight Mine	(1985-96)
12433580	Cottonwood (Hawk) Creek at Davenport, Wash.	(1957, 1959, 1963-77)
12433800	Granite Creek near Republic, Wash.	(1954-73)
12434500	Sanpoil River near Keller, Wash.	(1953-59, 1972-79)
12437500	Nespelem River at Nespelem, Wash.	(1911-29)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
12437930	East Fork Foster Creek at Leahy, Wash.	(1959, 1963-77)
12437950	East Fork Foster Creek Tributary near Bridgeport, Wash.	(1957-77)
12437960	West Fork Foster Creek near Bridgeport, Wash.	(1957, 1963-77)
12439200	Dry Creek Tributary near Molson, Wash.	(1958-77)
12439300	Tonasket Creek at Oroville, Wash.	(1950, 1967-91)
12441700	Middle Fork Toats Coulee Creek near Loomis, Wash.	(1965-70, 1972-75)
12442000	Toats Coulee Creek near Loomis, Wash.	(1920-26, 1948, 1957-79)
12445800	Omak Creek Tributary near Disautel, Wash.	(1955-75)
12447380	Pine Creek near Mazama, Wash.	(1966-88)
12447390	Andrews Creek near Mazama, Wash.	(1969-96)
12447400	Doe Creek near Winthrop, Wash.	(1957-75)
12447430	Ortell Creek near Winthrop, Wash.	(1965-75)
12448700	Williams Creek near Twisp, Wash.	(1965-75)
12448900	Little Bridge Creek near Twisp, Wash.	(1965-75)
12448998	Twisp River near Twisp	(1948, 1975-79, 1990-96)
12449500	Methow River at Twisp, Wash.	(1920-29, 1934-62, 1991-96)
12449600	Beaver Creek below South Fork, near Twisp, Wash.	(1960-79)
12449790	Rainy Creek near Methow, Wash.	(1965-75)
12449950	Methow River near Pateros, Wash.	(1948, 1959-96)
12450500	Methow River at Pateros, Wash.	(1904-20, 1948, 1959-74)
12451000	Stehekin River at Stehekin, Wash.	(1911-15, 1927-96)
12451500	Railroad Creek at Lucerne, Wash.	(1911-13, 1927-57)
12452800	Entiat River near Ardenvoir, Wash.	(1958-96)
12452880	Tillicum Creek near Ardenvoir, Wash.	(1965-75)
12453000	Entiat River at Entiat, Wash.	(1911-25, 1948, 1952-58)
12454000	White River near Plain, Wash.	(1955-83)
12454290	Little Wenatchee River Tributary near Telma, Wash.	(1965-75)
12455000	Wenatchee River below Wenatchee Lake, Wash.	(1932-79)
12456300	Brush Creek near Telma, Wash.	(1965-75)
12456500	Chiwawa River near Plain, Wash.	(1914, 1937-49, 1955-57, 1991-96)
12457000	Wenatchee River at Plain, Wash.	(1911-29, 1932-79, 1990-96)
12457300	Skinney Creek at Winton, Wash.	(1954-73)
12457900	Chatter Creek near Leavenworth, Wash.	(1966-75)
12458000	Icicle Creek above Snow Creek near Leavenworth, Wash.	(1912-14, 1937-79, 1994-96)
12458900	Posey Canyon near Leavenworth, Wash.	(1954-73)
12459000	Wenatchee River at Peshastin, Wash.	(1929-96)
12459400	Tronsen Creek near Peshastin, Wash.	(1960-75)
12461000	Wenatchee River at Dryden, Wash.	(1905-06, 1910-18, 1948)
12461100	East Branch Mission Creek near Cashmere, Wash.	(1955-74)
12461200	East Branch Mission Creek Tributary near Cashmere, Wash.	(1955-88)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
12461400	Mission Creek above Sand Creek near Cashmere, Wash.	(1959-79)
12461500	Sand Creek near Cashmere, Wash.	(1954-73)
12462000	Mission Creek at Cashmere, Wash.	(1948, 1954-73)
12462500	Wenatchee River at Monitor, Wash.	(1963-96)
12462800	Moses Creek at Douglas, Wash.	(1955-76)
12463000	Douglas Creek near Alstown, Wash.	(1948, 1950-60, 1963-68)
12463600	Rattlesnake Creek Tributary near Soap Lake, Wash.	(1959, 1961-77)
12463700	McCarteney Creek Tributary near Farmer, Wash.	(1960, 1962-76)
12464500	Columbia River at Trinidad, Wash.	(1894, 1913-37, 1938-63R)
12464600	Schnebly Coulee Tributary near Vantage, Wash.	(1955-74)
12464650	South Fork Crab Creek Tributary at Waukon, Wash.	(1954-73)
12465000	Crab Creek at Irby, Wash.	(1943-96)
12465300	Broadax Draw Tributary near Wilbur, Wash.	(1955-74)
12465400	Wilson Creek below Corbett Draw near Almira, Wash.	(1969-79, 1992-94)
12465500	Wilson Creek at Wilson Creek, Wash.	(1951-57, 1959-79)
12467000	Crab Creek near Moses Lake, Wash.	(1943-96)
12467400	Haynes Canyon near Coulee City, Wash.	(1959-76)
12470300	Iron Springs Creek near Winchester, Wash.	(1959-76)
12471100	Paha Coulee Tributary near Ritzville, Wash.	(1962-76)
12471200	Lind Coulee Tributary near Lind, Wash.	(1956. 1961-77)
12474700	Mosquito Creek near Easton, Wash.	(1968-77)
12480700	Hovey Creek near Cle Elum, Wash.	(1955-74)
12483300	S.F. Manastash Creek Tributary near Ellensburg, Wash.	(1955-74)
12483800	Naneum Creek near Ellensburg, Wash.	(1957-72, 1974-78)
12485900	Pine Canyon near Naches, Wash.	(1961-76)
12487400	Deep Creek near Goose Prairie, Wash.	(1966-75)
12488300	American River Tributary near Nile, Wash.	(1955-74)
12488500	American River near Nile, Wash.	(1940-96)
12489500	Naches River at Oak Flat near Nile, Wash.	(1905-17)
12491700	Hause Creek near Rimrock, Wash.	(1955-88)
12492500	Tieton River at Canal Headworks near Naches, Wash.	(1908-25, 1926-78R)
12500500	North Fork Ahtanum Creek near Tampico, Wash.	(1908, 1910-21, 1932-79)
12501000	S.F. Ahtanum Creek at Conrad Ranch near Tampico, Wash.	(1915-24, 1931-78)
12502000	Ahtanum Creek at The Narrows near Tampico, Wash.	(1909-13, 1960-68)
12502500	Ahtanum Creek at Union Gap, Wash.	(1908, 1910, 1912-14, 1952, 1960-96)
12506000	Toppenish Creek near Fort Simcoe, Wash.	(1910-24)
12506500	Simcoe Creek below Spring Creek near Fort Simcoe, Wash.	(1909-23)
12507600	Shinando Creek Tributary near Goldendale, Wash.	(1955-74)
12507660	Satus Creek Tributary near Toppenish, Wash.	(1953, 1956, 1961, 1963-77)
12508500	Satus Creek Below Dry Creek near Toppenish, Wash.	(1914-24)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
12512550	Providence Coulee near Cunningham, Wash.	(1978-96)
12512600	Hatton Coulee Tributary No.2 near Cunningham, Wash.	(1961-76)
12512700	Hatton Coulee Tributary near Hatton, Wash.	(1956 -75)
12513000	Esquatzel Coulee at Connell, Wash.	(1953-96)
13334500	Asotin Creek near Asotin, Wash.	(1904, 1929-59)
13334700	Asotin Creek below Kearney Gulch near Asotin, Wash.	(1960-82, 1990-96)
13335200	Critchfield Draw near Clarkston, Wash.	(1959-76)
13343450	Dry Creek at mouth near Clarkston, Wash.	(1963-77)
13343520	Clayton Gulch near Alpowa, Wash.	(1961-76)
13343620	South Fork Deadman Creek Tributary near Pataha, Wash.	(1961-76)
13343660	Smith Gulch Tributary near Pataha, Wash.	(1955-74)
13343800	Meadow Creek near Central Ferry, Wash.	(1964-78)
13344500	Tucannon River near Starbuck, Wash.	(1915-17, 1929-31, 1959-90, 1995-96)
13346100	Palouse River at Colfax, Wash.	(1956-79)
13348000	South Fork Palouse River at Pullman, Wash.	(1934-42, 1948, 1959-81, 1996)
13348400	Missouri Flat Creek Tributary near Pullman, Wash.	(1955-74)
13348500	Missouri Flat Creek at Pullman, Wash.	(1935-40, 1948, 1960-79, 1996)
13349210	Palouse River below South Fork at Colfax, Wash.	(1963-96)
13349300	Palouse River Tributary at Colfax, Wash.	(1955-88)
13349350	Hardman Draw Tributary at Plaza, Wash.	(1955-74)
13349400	Pine Creek at Pine City, Wash.	(1962-79)
13349500	Rock Creek near Ewan, Wash.	(1904-05, 1915-17, 1959, 1963, 1965-75)
13349800	Imbler Creek Tributary near Lamont, Wash.	(1967-77)
13350500	Union Flat Creek near Colfax, Wash.	(1954-79)
13351000	Palouse River at Hooper, Wash.	(1898-99, 1901-07, 1909-16, 1948, 1951-96)
13352200	Cow Creek Tributary near Ritzville, Wash.	(1951, 1955-73)
13352500	Cow Creek at Hooper, Wash.	(1952-53, 1962-76, 1978-79)
13352550	Stewart Canyon Tributary near Riparia, Wash.	(1958-75)
14013000	Mill Creek near Walla Walla, Wash.	(1914-17, 1931, 1940-96)
14013500	Blue Creek near Walla Walla, Wash.	(1940-42, 1944-71)
14015900	Spring Creek Tributary near Walla Walla, Wash.	(1955-74)
14016000	Dry Creek near Walla Walla, Wash.	(1949-53, 1955-67)
14016500	East Fork Touchet River near Dayton, Wash.	(1944-51, 1956-68)
14016600	Hatley Creek near Dayton, Wash.	(1955-74)
14016650	Davis Hollow near Dayton, Wash.	(1956-75)
14017000	Touchet River at Bolles, Wash.	(1925-29, 1952-89, 1996)
14017040	Thorn Hollow near Dayton, Wash.	(1962-76)
14017070	East Fork McKay Creek near Huntsville, Wash.	(1963-77)
14017200	Badger Hollow near Clyde, Wash.	(1955-74)
14017500	Touchet River near Touchet, Wash.	(1942, 1944, 1946-53, 1955-59, 1965)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
14018500	Walla Walla River near Touchet, Wash.	(1949, 1952-96)
14034250	Glade Creek Tributary near Bickleton, Wash.	(1961-76)
14034325	Alder Creek near Bickleton, Wash.	(1963-77)
14107000	Klickitat River above West Fork near Glenwood, Wash.	(1945-78, 1992-96)
14110000	Klickitat River near Glenwood, Wash.	(1910-56, 1958-79)
14111800	West Prong Little Klickitat River near Goldendale, Wash.	(1961-75)
14112000	Little Klickitat River near Goldendale, Wash.	(1911-12, 1947-50, 1958-78)
14112200	Little Klickitat River Tributary near Goldendale, Wash.	(1960-88)
14112400	Mill Creek near Blockhouse, Wash.	(1965-78)
14112500	Little Klickitat River near Wahkiacus, Wash	(1945-49, 1951-81)
14113000	Klickitat River near Pitt, Wash.	(1910-12, 1929-96)
14121300	White Salmon R. blw Cascades Creek nr Trout Lake, Wash.	(1958-78)
14121500	Trout Lake Creek near Trout Lake, Wash.	(1910-11, 1960-69)
14122000	White Salmon River near Trout Lake, Wash.	(1929-31, 1958-67)
14123000	White Salmon River at Husum, Wash.	(1910-18, 1930-41, 1958-62)
14123500	White Salmon River near Underwood, Wash.	(1916-30, 1936-96)
14124500	Little White Salmon River at Willard, Wash.	(1945-61)
14125000	Little White Salmon R. abv Lapham Creek, Willard, Wash.	(1950-63)
14125200	Rock Creek near Willard, Wash.	(1949-68)
14125500	Little White Salmon River near Cook, Wash.	(1957-77)
14126300	Columbia River Tributary at Home Valley, Wash.	(1950-70)
14127000	Wind River above Trout Creek near Carson, Wash.	(1945-69)
14127200	Layout Creek near Carson, Wash.	(1966-75)
14128500	Wind River near Carson, Wash.	(1935-79)
14143200	Canyon Creek near Washougal, Wash.	(1949-70)
14143500	Washougal River near Washougal, Wash.	(1945-81, 1996)
14144000	Little Washougal River near Washougal, Wash.	(1952-68)
14144550	Shanghai Creek near Hockinson, Wash.	(1950-70)
14144600	Groeneveld Creek near Camas, Wash.	(1958-81, 1986)
14211900	Burntbridge Creek at Vancouver, Wash.	(1949-71)
14212000	Salmon Creek near Battle Ground, Wash.	(1944-79, 1989)
14213200	Lewis River near Trout Lake, Wash.	(1959-72)
14213500	Big Creek blw Skookum Meadow near Trout Lake, Wash.	(1929-31, 1956-79)
14214000	Rush Creek above Meadow Creek near Trout Lake, Wash.	(1956-65)
14214500	Meadow Creek blw Lone Butte Meadow nr Trout Lake, Wash.	(1929-31, 1956-65)
14215000	Rush Creek above falls near Cougar, Wash.	(1929-31, 1956-62, 1964-74)
14215500	Curly Creek near Cougar, Wash.	(1956-74)
14216000	Lewis River above Muddy River near Cougar, Wash.	(1928-34, 1955-70, 1972-75, 1977)
14216500	Muddy River below Clear Creek near Cougar, Wash.	(1928-34, 1955-73, 1984-96)
14216800	Pine Creek near Cougar, Wash.	(1958-70, 1972)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
14218000	Lewis River near Cougar, Wash.	(1918, 1925-45, 1947-58, 1959-78R)
14218300	Dog Creek at Cougar, Wash.	(1956, 1958-74)
14219000	Canyon Creek near Amboy, Wash.	(1923-34)
14219500	Lewis River near Amboy, Wash.	(1912-31)
14219800	Speelyai Creek near Cougar, Wash.	(1960-96)
14221500	Cedar Creek near Ariel, Wash.	(1952-55, 1962-69, 1989)
14222500	East Fork Lewis River near Heisson, Wash.	(1930-96)
14222700	East Fork Lewis River Tributary near Woodland, Wash.	(1950-67)
14223000	Kalama River near Kalama, Wash.	(1912-13, 1917-34, 1936-45, 1947)
14223500	Kalama River below Italian Creek near Kalama, Wash.	(1947-79, 1996)
14223800	Columbia River Tributary at Carrolls, Wash.	(1950-70)
14224500	Clear Fork Cowlitz River near Packwood, Wash.	(1908-11, 1913-17, 1931-41, 1943, 1950)
14225500	Lake Creek near Packwood, Wash.	(1912-17, 1919-24, 1931-42, 1950-54, 1960-63, 1964-80R)
14226500	Cowlitz River at Packwood, Wash.	(1912-20, 1930-96)
14226800	Skate Creek Tributary near Packwood, Wash.	(1959-77)
14226900	Skate Creek Tributary No. 2 near Packwood, Wash.	(1959-75, 1978-88)
14230000	Johnson Creek near Packwood, Wash.	(1908-14, 1919-24, 1947-48)
14231100	Miller Creek at Randle, Wash.	(1950-70)
14231700	Chambers Creek near Packwood, Wash.	(1966-75)
14232000	Niggerhead Creek near Randle, Wash.	(1951-63)
14232500	Cispus River near Randle, Wash.	(1911-12, 1930-41, 1943-96)
14233200	Quartz Creek near Kosmos, Wash.	(1965-75)
14233500	Cowlitz River near Kosmos, Wash.	(1949-68, 1969-95 (Station14233400), 1996)
14235000	Cowlitz River at Mossyrock, Wash.	(1907, 1913-17, 1927-32, 1934-35, 1948-60)
14235300	Tilton River near Mineral, Wash.	(1950-70)
14235500	West Fork Tilton River near Morton, Wash.	(1951-79)
14236200	Tilton River abv Bear Canyon Creek near Cinebar, Wash.	(1957-96)
14236500	Tilton River near Cinebar, Wash.	(1942-59)
14237000	Klickitat Creek at Mossyrock, Wash.	(1949-72)
14237500	Winston Creek near Silver Lake, Wash.	(1950-77)
14238000	Cowlitz River below Mayfield Dam, Wash.	(1912, 1935-62, 1963-96R)
14239000	Salmon Creek near Toledo, Wash.	(1962-79)
14239100	North Fork Lacamas Creek near Ethel, Wash.	(1950-69)
14239700	Olequa Creek Tributary near Winlock, Wash.	(1950-69)
14240800	Green River above Beaver Creek near Kid Valley, Wash.	(1981-94)
14241100	North Fork Toutle River at Kid Valley, Wash.	(1980-94)
14241490	South Fork Toutle River at Camp 12 near Toutle, Wash.	(1940-57 (Station 14241500), 1981-96)
14242500	Toutle River near Silver Lake, Wash.	(1910-12, 1920-23, 1930-79, 1982-96 (Station 14242580))
14242600	Toutle River Tributary near Castle Rock, Wash.	(1950-70)
14243000	Cowlitz River at Castle Rock, Wash.	(1927-62, 1963-96R)

Table 1. Gaging stations with at least 10 years of unregulated peak-flow data--Continued

Station number	Station name	Years of peak record (Water years)
14243500	Delameter Creek near Castle Rock, Wash.	(1950-69, 1996)
14245000	Coweman River near Kelso, Wash.	(1950-84, 1996)
14247500	Elochoman River near Cathlamet, Wash.	(1941-79)
14248100	Risk Creek near Skamokawa, Wash.	(1949-70)
14248200	Jim Crow Creek near Grays River, Wash.	(1965-79)
14249000	Grays River above South Fork nr Grays River, Wash.	(1956-79)
14250500	West Fork Grays River near Grays River, Wash.	(1949-69)

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12009500	16	1,130 (936-1,360) 1,110	2,000 (1,630-2,740) 1,910	2,490 (1,960-3,690) 2,330	2,880 (2,210-4,520) 2,660	3,300 (2,470-5,440) 3,000	2,450
12010000	67	5,800 (5,410-6,220) 5,780	8,870 (8,140-9,840) 8,820	10,300 (9,310-11,600) 10,200	11,300 (10,100-12,900) 11,200	12,200 (10,900-14,200) 12,100	11,300
12010500	12	1,730 (1,550-1,920) 1,690	2,320 (2,070-2,820) 2,300	2,640 (2,300-3,380) 2,630	2,870 (2,460-3,850) 2,870	3,110 (2,620-4,340) 3,120	3,210
12010600	21	176 (165-188) 179	219 (203-243) 231	236 (217-268) 256	248 (226-286) 274	258 (234-302) 290	249
12010700	15	2,280 (1,940-2,680) 2,190	3,670 (3,080-4,840) 3,430	4,400 (3,580-6,200) 4,040	4,960 (3,950-7,320) 4,490	5,520 (4,310-8,530) 4,940	4,310
12010800	16	235 (208-266) 233	331 (290-407) 331	373 (320-477) 377	401 (340-527) 408	428 (359-576) 439	344
12011000	19	1,400 (1,310-1,510) 1,420	1,770 (1,640-1,990) 1,850	1,930 (1,760-2,220) 2,070	2,030 (1,840-2,390) 2,210	2,140 (1,920-2,550) 2,370	2,000
12011100	18	49 (42-56) 50	75 (64-95) 78	88 (74-117) 92	97 (80-133) 102	106 (86-150) 113	101
12011200	15	691 (544-874) 701	1,400 (1,080-2,110) 1,390	1,840 (1,360-3,070) 1,790	2,210 (1,570-3,950) 2,120	2,600 (1,800-4,980) 2,450	1,660
12011500	26	2,860 (2,600-3,150) 2,850	4,140 (3,700-4,840) 4,140	4,740 (4,160-5,710) 4,760	5,160 (4,480-6,360) 5,190	5,570 (4,780-7,000) 5,620	4,930
12012000	26	2,310 (2,090-2,560) 2,280	3,480 (3,090-4,090) 3,410	4,080 (3,550-4,980) 3,980	4,530 (3,890-5,700) 4,410	5,000 (4,220-6,450) 4,850	4,400
12012200	20	126 (111-142) 126	196 (170-240) 197	234 (198-303) 236	264 (219-355) 266	295 (240-412) 297	233
12013500	45	8,330 (7,800-8,900) 8,320	11,600 (10,700-12,800) 11,600	13,000 (11,900-14,600) 13,100	14,000 (12,700-16,000) 14,100	15,000 (13,400-17,300) 15,200	14,800
12014500	25	1,640 (1,430-1,880) 1,670	2,760 (2,360-3,430) 2,820	3,350 (2,800-4,370) 3,430	3,800 (3,110-5,130) 3,900	4,260 (3,430-5,940) 4,370	3,400

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12015100	15	265 (213-329) 269	495 (390-718) 498	624 (474-985) 622	724 (536-1,210) 718	829 (600-1,470) 816	625
12015500	12	1,660 (1,400-1,990) 1,660	2,560 (2,120-3,500) 2,550	2,980 (2,420-4,350) 2,980	3,280 (2,600-5,000) 3,290	3,570 (2,790-5,680) 3,590	2,640
12016700	22	152 (133-174) 155	246 (211-306) 253	295 (247-385) 305	331 (272-448) 344	368 (298-514) 383	329
12017000	46	8,210 (7,490-8,980) 8,290	14,000 (12,500-16,000) 14,200	17,600 (15,400-21,000) 17,800	20,600 (17,700-25,400) 20,900	24,000 (20,200-30,400) 24,200	[1]24,000
12019600	21	89 (79-102) 92	138 (119-170) 144	161 (136-207) 170	177 (148-235) 188	193 (159-263) 207	147
12020000	57	9,610 (8,710-10,600) 9,560	17,700 (15,700-20,500) 17,400	22,600 (19,600-27,200) 22,100	26,600 (22,700-32,900) 25,800	31,000 (25,900-39,300) 29,900	28,900
12020500	33	1,710 (1,520-1,920) 1,740	2,920 (2,540-3,510) 2,990	3,590 (3,050-4,510) 3,690	4,120 (3,440-5,340) 4,240	4,680 (3,830-6,230) 4,820	4,600
12020900	15	2,800 (2,300-3,410) 2,790	5,040 (4,060-7,080) 4,930	6,330 (4,910-9,670) 6,100	7,350 (5,560-11,900) 7,010	8,440 (6,210-14,500) 7,950	6,200
12021000	21	3,200 (2,900-3,530) 3,180	4,550 (4,060-5,350) 4,540	5,200 (4,560-6,360) 5,210	5,690 (4,920-7,140) 5,720	6,160 (5,260-7,940) 6,210	5,700
12024000	26	2,280 (2,030-2,570) 2,270	3,480 (3,050-4,190) 3,470	4,030 (3,460-5,030) 4,020	4,420 (3,740-5,640) 4,410	4,790 (4,010-6,260) 4,790	4,310
12025000	56	5,780 (5,340-6,260) 5,780	9,160 (8,310-10,300) 9,140	10,800 (9,680-12,500) 10,800	12,100 (10,700-14,200) 12,100	13,300 (11,600-15,900) 13,300	13,300
12025300	11	304 (295-313) 310	325 (315-343) 353	332 (321-354) 376	337 (324-362) 395	341 (328-368) 412	320
12025700	29	2,600 (2,170-3,100) 2,570	5,440 (4,410-7,210) 5,240	7,160 (5,620-10,100) 6,770	8,570 (6,560-12,600) 7,990	10,100 (7,540-15,500) 9,280	9,020
12026000	34	3,590 (3,270-3,940) 3,570	5,390 (4,830-6,240) 5,340	6,230 (5,490-7,420) 6,170	6,840 (5,960-8,300) 6,780	7,420 (6,400-9,180) 7,360	6,710

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12026300	16	35 (30-42) 35	57 (48-75) 55	68 (55-95) 65	76 (60-110) 72	84 (66-126) 79	64
12027500	68	25,000 (23,100-27,200) 25,100	43,400 (39,200-49,100) 43,500	54,000 (47,900-62,900) 54,100	62,600 (54,700-74,300) 62,700	71,600 (61,700-86,700) 71,600	74,800
12029700	30	28,800 (26,400-31,400) 29,100	41,900 (37,900-48,100) 42,700	48,500 (43,100-57,500) 49,700	53,500 (46,800-64,800) 55,100	58,500 (50,500-72,400) 60,500	53,400
12030000	30	1,120 (1,050-1,200) 1,120	1,480 (1,360-1,640) 1,500	1,620 (1,480-1,850) 1,650	1,720 (1,560-1,990) 1,760	1,820 (1,630-2,120) 1,880	1,640
12031000	49	29,100 (26,900-31,500) 29,300	46,100 (41,800-52,100) 46,600	55,500 (49,400-64,600) 56,300	62,900 (55,200-74,800) 63,800	70,700 (61,200-85,800) 71,800	80,700
12032500	35	3,130 (2,860-3,430) 3,130	4,650 (4,180-5,360) 4,680	5,340 (4,720-6,310) 5,390	5,820 (5,090-7,000) 5,890	6,280 (5,440-7,680) 6,380	5,080
12034200	16	3,000 (2,610-3,460) 3,110	4,510 (3,860-5,720) 4,810	5,210 (4,360-6,940) 5,670	5,710 (4,710-7,870) 6,300	6,190 (5,030-8,790) 6,830	5,030
12034700	20	40 (32-49) 41	78 (62-110) 79	99 (76-150) 100	115 (86-182) 115	132 (96-217) 131	77
12035000	67	24,700 (23,000-26,600) 24,800	38,200 (35,000-42,500) 38,400	44,400 (40,100-50,300) 44,700	48,800 (43,700-56,000) 49,200	53,000 (47,100-61,500) 53,500	50,600
12035450	24	2,260 (2,030-2510) 2,220	3,330 (2,940-3,960) 3,270	3,820 (3,310-4,700) 3,740	4,170 (3,570-5,250) 4,080	4,500 (3,810-5,790) 4,410	3,880
12035500	27	9,840 (8,910-10,900) 9,970	14,600 (13,000-17,100) 15,000	16,800 (14,700-20,300) 17,500	18,400 (15,900-22,800) 19,300	19,900 (17,000-25,200) 21,000	18,000
12036000	47	10,900 (9,970-11,900) 11,000	17,500 (15,800-20,000) 17,700	21,000 (18,500-24,700) 21,200	23,600 (20,600-28,400) 23,900	26,400 (22,700-32,300) 26,700	23,600
12036400	10	1,650 (1,350-2,030)	2,600 (2,110-3,780) 1,670	3,060 (2,410-4,840) 2,650	3,390 (2,610-5,680) 3,140	3,720 (2,810-6,570) 3,4903,850	2,640
12036650	13	254 (207-311) 260	436 (350-622) 449	532 (414-824) 549	605 (460-994) 624	680 (505-1,180) 700	452

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12037400	16	16,400 (14,200-19,000) 16,500	25,200 (21,500-32,400) 25,600	29,400 (24,400-39,700) 30,100	32,400 (26,500-45,400) 33,300	35,400 (28,400-51,200) 36,500	25,500
12038750	11	272 (232-317) 269	406 (344-539) 405	476 (393-685) 476	531 (428-808) 531	587 (463-942) 586	495
12039000	39	18,900 (17,300-20,600) 18,800	28,400 (25,600-32,500) 28,200	32,800 (29,100-38,500) 32,600	35,900 (31,500-42,900) 35,700	38,900 (33,800-47,200) 38,700	33,000
12039050	22	60 (51-71) 61	108 (90-142) 108	134 (108-186) 134	154 (121-223) 153	175 (135-262) 173	123
12039100	20	16 (15-18) 17	24 (21-29) 25	27 (23-34) 28	29 (25-38) 31	31 (26-41) 33	24
12039300	22	16,100 (13,800-18,700) 15,900	27,200 (22,900-34,800) 26,500	32,800 (26,900-44,100) 31,700	37,000 (29,800-51,400) 35,500	41,000 (32,500-58,900) 39,100	30,000
12039400	20	177 (149-210) 172	316 (260-419) 300	393 (314-555) 365	453 (354-669) 415	515 (394-792) 465	409
12039500	83	21,900 (20,300-23,700) 22,100	37,300 (33,900-41,800) 37,900	45,100 (40,400-51,600) 45,900	50,900 (45,100-59,100) 52,000	56,600 (49,700-66,700) 57,900	52,600
12040000	31	19,800 (17,900-21,800) 19,600	30,700 (27,300-36,000) 30,100	36,300 (31,600-44,200) 35,500	40,600 (34,800-50,700) 39,500	45,000 (38,000-57,500) 43,700	37,400
12040500	59	65,700 (61,400-70,300) 65,300	98,000 (90,300-108,500) 97,200	114,000 (103,000-128,000) 113,000	125,000 (112,000-143,000) 124,000	136,000 (122,000-158,000) 135,000	130,000
12041000	38	18,800 (17,000-20,900) 19,000	30,900 (27,300-36,200) 31,600	37,200 (32,300-45,200) 38,200	42,100 (36,000-52,400) 43,300	47,100 (39,600-60,000) 48,500	38,700
12041200	36	32,200 (28,900-35,900) 32,200	51,100 (45,000-60,400) 51,000	59,700 (51,700-72,600) 59,600	65,700 (56,200-81,500) 65,700	71,400 (60,500-90,100) 71,500	54,500
12041500	51	9,460 (8,570-10,400) 9,320	16,200 (14,400-18,900) 15,900	19,800 (17,200-23,700) 19,200	22,500 (19,300-27,400) 21,800	25,200 (21,300-31,400) 24,300	23,500
12041600	20	26 (22-31) 27	48 (39-64) 50	60 (47-86) 62	69 (54-105) 73	80 (60-125) 83	52

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12042700	19	485 (429-549) 465	708 (617-865) 666	804 (688-1,020) 749	870 (736-1,130) 806	932 (780-1,240) 862	759
12042900	39	323 (296-352) 317	481 (435-549) 469	555 (494-649) 538	607 (534-724) 587	658 (574-797) 635	597
12043000	21	18,400 (16,000-21,100) 17,900	29,300 (25,000-36,700) 27,900	34,400 (28,800-45,200) 32,300	38,200 (31,400-51,700) 35,600	41,800 (33,900-58,300) 38,700	34,500
12043100	18	8,220 (7,130-9,450) 8,060	13,200 (11,200-16,700) 12,700	15,900 (13,200-21,400) 15,200	18,000 (14,700-25,400) 17,000	20,300 (16,100-29,700) 19,100	17,300
12043163	11	3,490 (2,820-4,340) 3,400	5,780 (4,610-8,520) 5,500	6,900 (5,340-11,100) 6,470	7,720 (5,840-13,100) 7,180	8,520 (6,320-15,200) 7,870	5,610
12043300	17	7,050 (6,000-8,250) 6,890	11,700 (9,810-15,300) 11,300	14,300 (11,600-20,000) 13,700	16,300 (12,900-23,800) 15,500	18,300 (14,200-28,100) 17,300	14,100
12043430	16	940 (840-1,060) 934	1,280 (1,130-1,550) 1,300	1,420 (1,240-1,780) 1,470	1,510 (1,300-1,940) 1,590	1,600 (1,360-2,080) 1,710	1,220
12044000	10	714 (560-915) 779	1,220 (944-1,900) 1,450	1,460 (1,100-2,510) 1,840	1,640 (1,210-3,010) 2,170	1,820 (1,310-3,530) 2,500	1,180
12045500	12	14,700 (10,600-20,300) 14,700	34,300 (24,200-61,400) 34,000	47,400 (31,600-98,000) 46,400	58,500 (37,500-134,000) 56,700	71,000 (43,700-179,000) 68,100	41,600
12046800	14	20 (15-28) 20	45 (33-74) 40	59 (41-108) 50	70 (47-137) 57	81 (53-169) 64	52
12047100	22	92 (71-120) 89	238 (176-365) 218	340 (240-576) 298	430 (293-780) 363	533 (350-1,030) 433	338
12047300	13	1,280 (938-1,730) 1,280	2,920 (2,090-5,000) 2,850	3,970 (2,710-7,760) 3,790	4,860 (3,200-10,400) 4,560	5,840 (3,700-13,600) 5,360	3,160
12047500	17	430 (297-625) 422	1,330 (878-2,480) 1,230	1,990 (1,240-4,250) 1,750	2,580 (1,540-6,040) 2,180	3,250 (1,860-8,270) 2,640	1,620
12047700	11	65 (48-88) 66	133 (97-230) 134	172 (120-336) 173	203 (137-430) 204	235 (154-537) 234	173

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12048000	66	2,920 (2,600-3,280) 2,930	5,720 (4,970-6,780) 5,740	7,140 (6,090-8,710) 7,180	8,180 (6,890-10,200) 8,230	9,210 (7,660-11,600) 9,270	7,120
12049400	22	27 (22-34) 28	60 (46-86) 61	80 (60-124) 82	96 (70-158) 98	114 (80-196) 117	108
12050500	27	209 (168-260) 209	480 (372-680) 475	640 (479-970) 628	768 (561-1,220) 748	901 (643-1,490) 870	733
12052400	20	207 (160-269) 208	461 (345-702) 459	600 (432-982) 593	702 (495-1,210) 691	806 (556-1,450) 790	557
12053000	38	4,350 (3,800-4,980) 4,360	8,180 (6,960-10,100) 8,200	10,300 (8,540-13,200) 10,300	11,900 (9,710-15,800) 11,900	13,600 (10,900-18,500) 13,600	13,200
12053400	20	38 (33-43) 37	57 (50-70) 57	67 (57-86) 67	74 (62-98) 74	81 (66-110) 82	66
12054000	58	4,490 (4,100-4,930) 4,490	7,310 (6,550-8,370) 7,340	8,540 (7,550-9,990) 8,610	9,390 (8,220-11,100) 9,510	10,200 (8,830-12,200) 10,400	9,240
12054500	28	3,460 (3,060-3,910) 3,460	5,560 (4,820-6,740) 5,600	6,560 (5,580-8,260) 6,650	7,280 (6,110-9,400) 7,430	7,990 (6,610-10,600) 8,200	6,010
12054600	22	2,300 (2,100-2,540) 2,270	3,110 (2,800-3,620) 3,080	3,420 (3,030-4,080) 3,420	3,610 (3,180-4,380) 3,640	3,790 (3,310-4,660) 3,860	3,160
12056300	20	51 (39-68) 51	134 (97-213) 131	192 (133-340) 185	244 (162-464) 230	302 (194-616) 280	228
12056500	72	6,570 (5,930-7,270) 6,570	13,000 (11,400-15,100) 13,000	16,700 (14,400-20,100) 16,700	19,800 (16,800-24,300) 19,800	23,000 (19,200-28,900) 22,900	27,000
12057500	12	7,820 (6,540-9,310) 7,880	12,400 (10,300-17,000) 12,800	14,800 (11,900-22,000) 15,600	16,600 (13,100-26,100) 17,700	18,500 (14,200-30,600) 19,900	14,000
12058000	26	114 (93-142) 112	249 (196-348) 256	326 (247-486) 348	386 (286-600) 423	448 (324-724) 504	[2]355
12059800	15	3,700 (3,170-4,330) 3,680	5,570 (4,700-7,240) 5,650	6,360 (5,270-8,680) 6,560	6,910 (5,640-9,710) 7,240	7,410 (5,970-10,700) 7,900	5,340

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12060000	27	8,520 (7,320-9,930) 8,490	15,400 (12,900-19,700) 15,300	19,100 (15,600-25,600) 19,000	21,900 (17,500-30,400) 21,800	24,800 (19,500-35,400) 24,600	19,300
12060500	54	11,800 (10,900-12,800) 11,700	18,200 (16,500-20,500) 18,100	21,000 (18,800-24,200) 20,900	23,000 (20,400-26,900) 23,000	24,800 (21,800-29,400) 24,800	21,600
12061200	20	139 (120-160) 136	228 (194-290) 223	276 (228-371) 268	313 (253-437) 304	350 (278-507) 339	280
12063000	11	292 (237-361) 276	476 (382-694) 434	565 (440-894) 502	629 (480-1,050) 550	692 (518-1,220) 598	476
12063500	10	926 (776-1,100) 896	1,390 (1,160-1,920) 1,250	1,620 (1,320-2,440) 1,560	1,800 (1,430-2,860) 1,730	1,970 (1,530-3,300) 1,900	1,610
12065500	33	118 (103-136) 116	209 (178-259) 204	252 (210-325) 244	283 (232-374) 273	313 (253-423) 301	242
12066000	11	331 (274-401) 322	510 (418-717) 495	591 (472-891) 574	648 (509-1,020) 631	702 (542-1,160) 687	504
12067500	10	709 (601-835) 692	1,030 (871-1,400) 1,010	1,190 (978-1,740) 1,180	1,300 (1,050-2,000) 1,290	1,410 (1,120-2,280) 1,410	1,210
12068500	31	1,030 (923-1,160) 1,020	1,680 (1,470-2,010) 1,640	2,010 (1,720-2,490) 1,960	2,250 (1,900-2,870) 2,180	2,500 (2,080-3,270) 2,420	2,160
12069550	12	551 (482-631) 540	767 (664-972) 758	861 (732-1,150) 860	927 (777-1,280) 934	990 (819-1,410) 1,010	757
12070000	26	129 (113-147) 128	219 (188-270) 215	270 (226-350) 264	310 (254-417) 301	352 (283-491) 340	333
12072000	21	473 (400-557) 469	876 (724-1,150) 860	1,130 (900-1,590) 1,100	1,340 (1,040-1,990) 1,290	1,570 (1,180-2,460) 1,490	1,640
12072600	10	47 (39-57) 48	72 (59-102) 74	84 (68-129) 89	93 (73-150) 99	102 (78-173) 111	74
12073500	41	128 (106-153) 129	316 (254-419) 317	442 (343-623) 441	550 (415-807) 547	670 (494-1,020) 662	547

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12076500	28	802 (710-906) 819	1,300 (1,130-1,570) 1,360	1,540 (1,310-1,950) 1,650	1,720 (1,440-2,230) 1,870	1,900 (1,570-2,530) 2,100	1,430
12078400	20	725 (622-845) 717	1,230 (1,030-1,590) 1,210	1,500 (1,230-2,060) 1,470	1,720 (1,370-2,450) 1,670	1,940 (1,520-2,870) 1,880	1,380
12078600	20	54 (46.8-63.0) 55	88 (74.5-112) 91	105 (86.4-140) 110	116 (94.6-162) 124	128 (102-184) 137	106
12079000	41	3,810 (3,430-4,240) 3,780	6,360 (5,610-7,490) 6,270	7,660 (6,620-9,310) 7,520	8,630 (7,350-10,700) 8,450	9,600 (8,070-12,200) 9,370	9,600
12080000	19	3,820 (3,390-4,310) --	5,630 (4,920-6,860) --	6,460 (5,540-8,220) --	7,060 (5,960-9,240) --	7,640 (6,370-10,300) --	6,650
12081000	20	91 (78-106) --	152 (128-194) --	183 (150-249) --	208 (167-293) --	232 (183-340) --	204
12081300	29	30 (27-33) 31	46 (41-54) 47	54 (47-65) 57	60 (52-74) 64	66 (56-84) 71	58
12082500	54	6,160 (5,460-6,960) 6,160	12,200 (10,600-14,700) 12,200	15,700 (13,300-19,600) 15,600	18,500 (15,300-23,700) 18,400	21,400 (17,400-28,000) 21,200	21,200
12083000	54	4,840 (4,350-5,380) 4,830	8,840 (7,760-10,400) 8,800	11,000 (9,470-13,400) 10,900	12,700 (10,800-15,800) 12,600	14,400 (12,000-18,300) 14,300	14,900
12084000	13	9,940 (8,080-12,200) 9,980	17,500 (14,000-25,200) 17,700	21,800 (16,800-34,400) 22,000	25,200 (18,900-42,400) 25,500	28,800 (21,000-51,500) 29,100	25,000
12084500	23	1,880 (1,720-2,060) 1,860	2,590 (2,340-3,000) 2,570	2,910 (2,590-3,460) 2,900	3,130 (2,750-3,800) 3,150	3,340 (2,910-4,140) 3,390	2,920
12086500	16	10,600 (8,910-12,500) 10,600	17,200 (14,200-22,900) 17,300	20,300 (16,400-28,600) 20,700	22,500 (17,900-33,100) 23,100	24,700 (19,300-37,600) 25,500	[3]19,500
12087000	22	2,760 (2,340-3,240) 2,760	5,050 (4,180-6,600) 5,030	6,390 (5,130-8,920) 6,330	7,480 (5,860-10,900) 7,380	8,640 (6,600-13,200) 8,470	7,980
12088000	42	620 (544-707) 624	1,250 (1,060-1,530) 1,260	1,660 (1,370-2,140) 1,670	2,000 (1,620-2,680) 2,010	2,390 (1,890-3,310) 2,390	2,620

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12090200	21	403 (340-475) 414	727 (601-959) 766	919 (735-1,300) 983	1,070 (838-1,600) 1,160	1,240 (944-1,930) 1,350	1,670
12090400	16	148 (138-158) 145	179 (166-200) 176	191 (175-218) 190	199 (182-231) 200	206 (187-242) 209	190
12091700	11	92 (77-110) 93	144 (120-200) 147	172 (138-260) 178	194 (152-311) 202	216 (165-366) 227	200
12092000	59	4,310 (3,840-4,830) 4,320	8,470 (7,370-10,000) 8,510	10,900 (9,240-13,300) 11,000	12,800 (10,700-16,100) 12,900	14,800 (12,200-19,000) 14,900	16,000
12093000	34	337 (296-385) 341	590 (506-723) 605	716 (600-912) 742	808 (668-1,060) 844	900 (733-1,200) 947	681
12093500	65	6,500 (5,880-7,190) 6,500	11,700 (10,300-13,500) 11,700	14,200 (12,400-16,900) 14,200	16,000 (13,800-19,400) 16,000	17,800 (15,200-21,900) 17,900	18,300
12093900	13	4,440 (3,310-5,970) 4,400	9,380 (6,840-15,600) 9,090	12,200 (8,510-22,600) 11,600	14,300 (9,730-28,600) 13,500	16,600 (10,900-35,300) 15,400	10,000
12094000	55	4,200 (3,700-4,770) 4,200	8,520 (7,310-10,300) 8,480	11,000 (9,180-13,800) 10,900	12,900 (10,600-16,600) 12,800	14,800 (12,000-19,500) 14,600	13,000
12095000	39	2,990 (2,630-3,410) 2,980	5,520 (4,730-6,750) 5,460	6,870 (5,750-8,740) 6,770	7,910 (6,500-10,300 7,770	8,960 (7,250-12,000) 8,770	8,200
12096500	27	13,200 (11,800-14,700) 13,200	21,000 (18,400-25,200) 21,100	25,200 (21,600-31,600) 25,400	28,500 (24,000-36,800) 28,700	31,900 (26,400-42,400) 32,200	41,500
12096800	19	21 (17-26) 22	43 (34-63) 47	58 (43-91) 64	70 (51-117) 79	83 (58-148) 95	67
12096950	11	164 (137-197) 165	254 (210-353) 262	299 (240-448) 314	332 (261-525) 354	365 (282-607) 394	291
12097000	48	4,750 (4,150-5,440) 4,780	10,200 (8,690-12,600) 10,300	14,000 (11,500-18,100) 14,100	17,200 (13,800-23,000) 17,300	20,800 (16,300-28,900) 20,800	18,100
12097500	54	1,300 (1,120-1,500) 1,320	3,280 (2,740-4,100) 3,350	4,890 (3,930-6,500) 4,990	6,450 (5,020-8,980) 6,570	8,390 (6,330-12,200) 8,510	10,500

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12097700	22	143 (119-172) 142	294 (238-401) 288	397 (307-587) 384	487 (365-765) 466	589 (427-981) 555	470
12097850	15	9,450 (7,190-12,500) 9,580	20,200 (15,000-32,300) 20,400	26,400 (18,800-46,500) 26,600	31,200 (21,600-58,600) 31,300	36,200 (24,400-72,200) 36,100	22,800
12099600	19	485 (394-600) 486	935 (739-1,320) 932	1,170 (897-1,770) 1,160	1,350 (1,010-2,130) 1,340	1,530 (1,120-2,520) 1,520	1,200
12100000	18	11,500 (9,700-13,700) 11,600	19,200 (15,800-25,400) 19,400	22,600 (18,300-31,700) 23,100	25,100 (19,900-36,400) 25,800	27,500 (21,500-41,000) 28,500	23,100
12101500	27	21,000 (17,700-24,800) 21,100	40,500 (33,300-52,900) 40,600	51,400 (41,100-71,000) 51,500	59,900 (46,900-86,000) 59,900	68,800 (52,700-102,000) 68,700	57,000
12102800	17	4.6 (4.1-5.1) 4.7	6.3 (5.6-7.5) 6.7	7.1 (6.3-8.8) 7.8	7.8 (6.7-9.9) 8.8	8.4 (7.1-11) 9.8	7.4
12103200	16	10 (9.0-11) 10	14 (13-17) 15	16 (14-20) 18	17 (15-23) 20	19 (16-25) 22	17
12103400	11	1,190 (829-1,690) 1,230	2,900 (1,990-5,550) 2,980	4,110 (2,650-9,300) 4,170	5,170 (3,190-13,200) 5,180	6,390 (3,760-18,300) 6,280	4,690
12103500	20	892 (714-1,110) 887	1,890 (1,470-2,730) 1,850	2,500 (1,870-3,920) 2,420	3,000 (2,180-4,980) 2,870	3,540 (2,500-6,190) 3,350	3,400
12104000	32	274 (227-328) 274	656 (527-879) 647	947 (727-1,370) 919	1,220 (904-1,870) 1,160	1,540 (1,100-2,500) 1,440	1,660
12104500	45	4,720 (3,990-5,580) 4,710	11,500 (9,370-14,800) 11,300	16,100 (12,700-22,000) 15,600	20,100 (15,400-28,600) 19,300	24,600 (18,500-36,400) 23,300	22,000
12104700	13	173 (139-215) 172	305 (242-446) 303	375 (287-597) 372	428 (320-722) 425	482 (352-858) 478	324
12105000	24	464 (379-566) 468	1,020 (804-1,410) 1,030	1,382 (1,050-2,080) 1,390	1,700 (1,250-2,700) 1,700	2,060 (1,470-3,450) 2,040	2,380
12105710	31	1,100 (934-1,300) 1,100	2,070 (1,710-2,670) 2,070	2,540 (2,050-3,410) 2,550	2,870 (2,280-3,970) 2,880	3,200 (2,500-4,520) 3,230	2,400

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12106000	10	416 (310-556) 402	822 (606-1,410) 764	1,060 (750-2,100) 957	1,260 (858-2,740) 1,110	1,470 (968-3,500) 1,270	1,010
12106500	32	11,300 (9,880-12,900) 11,200	19,900 (17,000-24,500) 19,700	24,500 (20,400-31,500) 24,200	27,900 (22,900-37,000) 27,400	31,500 (25,400-42,800) 30,900	27,800
12107200	21	65 (56-77) 66	110 (92-142) 115	131 (107-178) 139	146 (117-206) 157	161 (127-233) 176	128
12108500	52	641 (568-722) 640	1,300 (1,130-1,570) 1,290	1,740 (1,460-2,180) 1,710	2,110 (1,730-2,730) 2,060	2,520 (2,030-3,370) 2,450	2,640
12112500	12	647 (520-804) 661	1,130 (895-1,670) 1,180	1,390 (1,060-2,250) 1,470	1,590 (1,190-2,750) 1,690	1,800 (1,310-3,300) 1,930	1,570
12112600	36	686 (593-792) 691	1,380 (1,160-1,740) 1,400	1,830 (1,490-2,420) 1,860	2,200 (1,750-3,030) 2,230	2,610 (2,030-3,740) 2,640	4,200
12113000	25	11,700 (10,000-13,700) 11,700	20,700 (17,400-26,600) 20,600	25,400 (20,700-34,200) 25,200	28,900 (23,100-40,200) 28,600	32,300 (25,400-46,400) 31,900	28,100
12113200	22	44 (40-52) 47	72 (62-89) 74	84 (71-110) 89	93 (77-125) 100	102 (83-140) 110	112
12113300	17	5.2 (4.3-6.1) 5.3	9.2 (7.6-12) 9.6	12 (9.3-17) 12	14 (11-21) 15	16 (12-26) 17	15
12113500	19	817 (643-1,040) 819	1,840 (1,410-2,740) 1,820	2,530 (1,840-4,140) 2,470	3,100 (2,190-5,480) 3,000	3,770 (2,570-7,080) 3,590	3,160
12114000	39	447 (384-520) 450	981 (817-1,240) 988	1,350 (1,090-1,820) 1,350	1,680 (1,320-2,360) 1,670	2,060 (1,570-3,020) 2,040	2,340
12114500	40	1,640 (1,410-1,910) 1,650	3,490 (2,900-4,420) 3,520	4,640 (3,750-6,190) 4,680	5,600 (4,420-7,750) 5,640	6,650 (5,130-9,510) 6,670	7,620
12115000	50	2,700 (2,370-3,070) 2,710	5,330 (4,570-6,470) 5,360	6,790 (5,680-8,560) 6,830	7,920 (6,520-10,200) 7,970	9,090 (7,360-12,000) 9,140	9,490
12115300	32	79 -- --	117 -- --	126 -- --	132 -- --	138 -- --	125

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12115500	50	1,660 (1,470-1,880) 1,650	3,150 (2,720-3,790) 3,110	3,940 (3,330-4,900) 3,870	4,530 (3,770-5,780) 4,430	5,130 (4,210-6,680) 5,010	4,200
12115700	12	550 (367-825) 545	1,520 (989-3,130) 1,430	2,210 (1,350-5,390) 2,000	2,800 (1,630-7,580) 2,450	3,470 (1,940-10,400) 2,940	1,800
12116100	51	48 (43-54) 47	89 (78-106) 86	112 (95-138) 107	129 (109-163) 122	147 (122-190) 137	131
12117000	40	884 (758-1,030) 883	1,910 (1,590-2,420) 1,900	2,560 (2,060-3,430) 2,520	3,110 (2,440-4,320) 3,050	3,710 (2,850-5,340) 3,610	3,130
12118500	31	82 (68-98) 84	167 (135-221) 177	211 (166-293) 227	244 (189-350) 267	276 (210-408) 306	221
12119600	22	218 (185-257) 219	380 (315-497) 385	460 (372-633) 468	519 (412-738) 531	577 (450-846) 593	510
12119700	16	154 (131-180) 154	256 (214-336) 257	314 (255-445) 316	362 (286-539) 365	412 (318-646) 415	362
12119800	27	42 (36-50) 43	86 (71-112) 88	116 (92-163) 120	143 (110-211) 147	173 (129-270) 178	241
12120600	10	640 (428-964) 652	1,550 (1,020-3,260) 1,550	2,120 (1,320-5,220) 2,090	2,570 (1,540-7,070) 2,500	3,060 (1,760-9,260) 2,930	1,360
12121000	19	662 (546-799) 670	1,300 (1,040-1,780) 1,320	1,700 (1,320-2,560) 1,730	2,050 (1,540-3,270) 2,080	2,440 (1,770-4,120) 2,460	2,610
12121600	33	1,470 (1,260-1,730) 1,470	2,760 (2,300-3,520) 2,740	3,380 (2,750-4,480) 3,340	3,820 (3,060-5,200) 3,770	4,240 (3,350-5,910) 4,180	3,200
12121700	11	153 (113-208) 151	310 (226-536) 299	398 (277-774) 378	466 (315-980) 437	535 (351-1,210) 495	359
12122500	16	161 (125-208) 165	334 (252-512) 345	429 (312-719) 446	503 (356-893) 524	578 (399-1,080) 604	420
12123000	10	78 (61-100) 83	135 (105-213) 153	165 (123-288) 194	187 (136-351) 227	209 (149-419) 260	132

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12123300	21	24 (20-29) 25	42 (34-56) 45	51 (40-71) 55	57 (44-82) 63	62 (48.2-93) 71	60
12124000	22	126 (112-141) 129	186 (163-224) 197	213 (184-266) 231	233 (198-298) 258	252 (212-329) 284	222
12125000	18	738 (624-874) 775	1,240 (1,030-1,650) 1,370	1,500 (1,210-2,110) 1,710	1,690 (1,340-2,470) 1,980	1,880 (1,460-2,850) 2,260	1,520
12125200	31	1,440 (1,290-1,600) 1,460	2,190 (1,940-2,590) 2,260	2,520 (2,190-3,070) 2,640	2,750 (2,360-3,400) 2,910	2,960 (2,520-3,730) 3,170	2,470
12126000	29	304 (278-333) 305	445 (400-513) 452	515 (455-614) 528	566 (494-691) 584	618 (532-771) 642	680
12126500	24	1,140 (1,020-1,280) 1,170	1,690 (1,490-2,020) 1,810	1,940 (1,680-2,400) 2,130	2,110 (1,800-2,670) 2,370	2,280 (1,920-2,940) 2,620	1,910
12127100	26	440 (390-496) 438	704 (612-853) 700	838 (713-1,060) 833	939 (786-1,220) 934	1,040 (858-1,390) 1,030	1,090
12127300	12	109 (97.1-123) 106	147 (129-181) 144	162 (141-210) 160	174 (148-231) 174	184 (155-252) 186	154
12127600	11	142 (119-170) 142	215 (178-294) 217	248 (202-365) 253	273 (217-421) 282	297 (232-478) 310	214
12130500	26	6,410 (5,410-7,580) 6,480	12,600 (10,300-16,500) 12,800	16,300 (12,900-22,700) 16,600	19,300 (15,000-28,200) 19,700	22,500 (17,100-34,300) 22,900	20,000
12131000	28	5,580 (4,790-6,490) 5,620	10,500 (8,800-13,400) 10,600	13,400 (10,900-18,100) 13,600	15,800 (12,500-22,100) 16,100	18,300 (14,200-26,600) 18,700	17,100
12132700	20	107 (91-127) 107	183 (152-240) 185	220 (178-304) 224	246 (196-353) 252	272 (213-404) 281	217
12133000	73	23,000 (21,000-25,300) 23,200	42,700 (38,000-49,200) 43,900	53,400 (46,700-63,200) 55,500	61,700 (53,200-74,300) 64,500	71,000 (59,700-86,000) 73,800	[4]55,000
12133500	12	937 (699-1,250) --	2,000 (1,460-3,370) --	2,670 (1,860-5,110) --	3,220 (2,170-6,760) --	3,830 (2,480-8,740) --	2,300

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12134000	21	13,700 (11,600-16,300) 13,700	24,700 (20,300-32,700) 24,800	30,600 (24,400-43,000) 30,800	35,100 (27,400-51,400) 35,400	39,700 (30,400-60,400) 40,100	28,400
12134500	68	39,200 (35,500-43,400) 39,100	73,000 (64,500-84,700) 72,700	90,900 (78,900-108,000) 90,400	104,000 (89,400-127,000) 103,000	118,000 (100,000-146,000) 117,000	102,000
12135000	39	2,120 (1,960-2,300) 2,090	3,160 (2,870-3,580) 3,100	3,680 (3,290-4,300) 3,600	4,080 (3,590-4,850) 3,980	4,470 (3,890-5,420) 4,350	4,210
12135500	21	972 (792-1,190) 942	2,080 (1,650-2,920) 1,940	2,860 (2,170-4,390) 2,570	3,560 (2,600-5,830) 3,110	4,360 (3,080-7,620) 3,700	4,020
12137500	29	15,600 (13,400-18,200) 15,200	28,400 (23,800-36,100) 27,100	35,000 (28,600-46,500) 32,800	39,900 (32,000-54,700) 37,000	44,800 (35,400-63,100) 41,100	34,600
12141000	32	1,290 (1,150-1,450) 1,280	2,100 (1,830-2,520) 2,090	2,490 (2,130-3,090) 2,480	2,770 (2,340-3,520) 2,760	3,050 (2,540-3,960) 3,040	2,350
12141100	17	56,000 (49,600-63,000) 55,200	82,200 (71,900-101,000) 81,000	95,400 (81,600-123,000) 94,100	105,000 (88,500-140,000) 104,000	115,000 (95,300-159,000) 114,000	106,000
12141300	35	16,500 (14,700-18,700) 16,400	27,200 (23,600-32,700) 27,000	31,900 (27,300-39,600) 31,700	35,200 (29,700-44,600) 35,100	38,300 (32,000-49,400) 38,300	30,200
12141500	20	12,500 (10,400-15,100) 12,500	23,700 (19,200-32,400) 23,700	30,100 (23,500-44,000) 30,100	35,100 (26,700-53,900) 35,000	40,300 (30,000-64,800) 40,100	26,700
12142000	65	7,520 (6,890-8,220) 7,490	12,600 (11,300-14,400) 12,500	15,000 (13,300-17,500) 14,900	16,800 (14,700-19,800) 16,700	18,400 (16,000-22,100) 18,300	15,800
12142300	15	440 (368-526) 432	734 (603-996) 714	884 (706-1,290) 855	998 (780-1,520) 961	1,110 (852-1,770) 1,070	910
12143000	43	8,570 (7,640-9,620) 8,710	14,700 (12,800-17,500) 14,600	17,600 (15,100-21,600) 17,500	19,700 (16,700-24,700) 19,600	21,800 (18,200-27,700) 21,700	15,800
12143300	20	23 (19-28) 23	41 (33-55) 41	49 (39-70) 50	55 (43-80) 56	60 (46-91) 63	44
12143310	11	18 (14-22) 19	30 (24-47) 36	37 (28-63) 46	42 (31-76) 54	47 (34-89) 62	31

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12143400	36	3,800 (3,280-4,400) 3,790	7,190 (6,050-9,010) 7,140	8,940 (7,350-11,700) 8,860	10,200 (8,280-13,800) 10,100	11,500 (9,180-15,900) 11,400	8,450
12143600	15	6,000 (4,970-7,280) 5,920	10,100 (8,170-13,900) 9,930	12,000 (9,480-17,600) 11,800	13,400 (10,400-20,500) 13,200	14,700 (11,200-23,400) 14,500	10,800
12143700	51	81 (71-92) 81	158 (135-191) 160	198 (166-248) 202	227 (188-292) 232	257 (210-337) 264	189
12143900	15	123 (100-151) 127	227 (181-325) 242	287 (220-448) 313	335 (250-565) 370	386 (280-678) 432	256
12144000	60	5,050 (4,530-5,620) 5,040	9,360 (8,210-11,000) 9,370	11,600 (9,970-14,000) 11,600	13,300 (11,300-16,400) 13,300	14,900 (12,500-18,700) 14,900	13,000
12144500	38	31,100 (27,100-35,600) 30,900	56,300 (48,000-69,300) 55,600	68,700 (57,300-87,600) 67,600	77,600 (63,900-101,000) 76,200	86,400 (70,100-115,000) 84,600	78,800
12145500	50	1,920 (1,720-2,140) 1,910	3,590 (3,140-4,260) 3,550	4,580 (3,910-5,640) 4,500	5,380 (4,510-6,800) 5,260	6,240 (5,140-8,090) 6,070	6,220
12146000	27	226 (207-247) 228	331 (298-381) 341	387 (342-463) 404	431 (375-530) 454	477 (408-602) 507	480
12147000	33	369 (324-420) 370	668 (572-820) 685	840 (701-1,080) 847	977 (799-1,300) 985	1,120 (900-1,540) 1,130	1,000
12147500	42	4,710 (4,270-5,190) 4,650	7,500 (6,680-8,700) 7,350	8,820 (7,720-10,500) 8,600	9,770 (8,450-11,900) 9,500	10,700 (9,150-13,200) 10,400	9,560
12147600	33	1,140 (1,020-1,280) 1,100	1,840 (1,610-2,190) 1,720	2,180 (1,870-2,680) 2,000	2,420 (2,060-3,050) 2,190	2,660 (2,230-3,430) 2,370	2,190
12148000	11	3,420 (2,810-4,160) 3,300	5,590 (4,540-8,000) 5,280	6,770 (5,320-10,600) 6,300	7,670 (5,880-12,800) 7,060	8,610 (6,430-15,300) 7,840	6,500
12148100	20	124 (106-146) 125	214 (178-280) 217	261 (211-361) 267	296 (235-426) 305	331 (258-495) 344	242
12148500	61	6,610 (5,970-7,310) 6,570	11,900 (10,500-13,900) 11,800	14,700 (12,700-17,500) 14,500	16,700 (14,300-20,400) 16,400	18,800 (15,900-23,300) 18,400	17,400

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12149000	67	30,100 (27,400-33,000) 30,100	52,800 (47,100-60,500) 52,600	64,200 (56,400-75,500) 64,000	72,600 (63,100-86,900) 72,300	81,000 (69,600-98,400) 80,700	65,200
12150800	33	63,000 (56,600-70,200) 63,000	101,000 (88,900-119,000) 101,000	120,000 (104,000-147,000) 121,000	134,000 (114,000-168,000) 136,000	148,000 (124,000-190,000) 150,000	150,000
12152500	37	5,100 (4,650-5,600) 5,000	7,760 (6,960-8,950) 7,510	9,010 (7,940-10,700) 8,630	9,900 (8,630-12,000) 9,430	10,800 (9,290-13,300) 10,200	10,500
12153000	27	265 (231-304) 266	450 (384-560) 454	544 (453-707) 551	614 (503-823) 624	684 (552-942) 697	625
12155500	25	56,200 (50,700-62,200) --	83,200 (73,900-98,200) --	96,400 (84,000-118,000) --	106,000 (91,100-133,000) --	116,000 (98,000-148,000) --	136,000
12156400	21	25 (21-28) 24	40 (34-50) 40	47 (39-63) 48	53 (43-72) 53	58 (47-82) 59	50
12157000	23	163 (147-180) 165	235 (210-276) 242	270 (236-329) 282	295 (255-369) 312	320 (273-411) 343	306
12161000	52	16,100 (15,000-17,400) 15,900	24,200 (22,100-27,200) 23,800	27,800 (25,000-31,900) 27,200	30,300 (27,000-35,200) 29,600	32,700 (28,900-38,500) 31,900	32,400
12162500	20	19,300 (17,500-21,400) 18,800	26,600 (23,700-31,400) 25,700	29,600 (26,000-36,000) 28,600	31,600 (27,500-39,200) 30,500	33,400 (28,800-42,200) 32,400	27,700
12164000	31	2,780 (2,530-3,060) 2,770	4,130 (3,690-4,800) 4,140	4,740 (4,170-5,680) 4,780	5,180 (4,500-6,320) 5,250	5,600 (4,820-6,970) 5,710	4,730
12165000	19	2,950 (2,560-3,410) 2,860	4,720 (4,010-6,000) 4,490	5,600 (4,640-7,490) 5,260	6,250 (5,090-8,660) 5,830	6,890 (5,520-9,880) 6,390	6,440
12166500	13	7,320 (6,670-8,020) 7,000	9,370 (8,490-11,000) 8,910	10,300 (9,170-12,600) 9,780	10,900 (9,630-13,700) 10,400	11,600 (10,100-14,900) 11,100	10,400
12167000	68	23,000 (21,600-24,600) 22,800	32,700 (30,400-35,900) 32,200	36,500 (33,500-40,500) 35,900	38,900 (35,500-43,500) 38,200	41,000 (37,300-46,300) 40,300	36,700
12168500	30	4,090 (3,720-4,500) 4,000	6,080 (5,450-7,060) 5,870	7,050 (6,200-8,440) 6,740	7,750 (6,730-9,500) 7,370	8,450 (7,250-10,600) 7,990	7,440

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12169500	20	91 (76-109) 92	165 (135-221) 168	204 (161-290) 209	233 (181-347) 239	263 (200-406) 271	245
12172000	15	2,390 (1,980-2,900) 2,390	4,150 (3,360-5,750) 4,150	5,080 (4,000-7,590) 5,080	5,800 (4,450-9,120) 5,800	6,530 (4,900-10,800) 6,540	4,420
12172500	11	14,100 (11,400-17,200) 14,400	23,300 (18,700-34,400) 24,500	28,500 (22,100-47,000) 30,500	32,700 (24,600-58,200) 35,400	37,100 (27,200-71,100) 40,500	33,000
12173500	15	4,710 (4,090-5,410) 4,790	7,110 (6,100-9,050) 7,450	8,320 (6,960-11,200) 8,910	9,220 (7,570-12,900) 10,000	10,100 (8,170-14,800) 11,200	8,640
12174000	21	4,210 (3,750-4,720) 4,280	6,400 (5,610-7,740) 6,670	7,540 (6,460-9,560) 8,010	8,410 (7,080-11,000) 9,060	9,300 (7,700-12,600) 10,100	9,920
12174500	11	18,700 (14,300-24,400) 19,100	35,200 (26,600-57,000) 36,200	44,100 (32,000-79,700) 45,700	51,000 (36,000-99,200) 53,100	58,100 (39,900-121,000) 60,600	45,700
12175500	77	4,230 (3,850-4,650) 4,260	8,500 (7,550-9,800) 8,600	11,300 (9,810-13,500) 11,500	13,700 (11,700-16,800) 13,900	16,400 (13,800-20,600) 16,700	15,400
12176000	11	5,040 (3,700-6,820) 5,230	10,900 (7,910-19,100) 11,500	14,800 (10,200-30,100) 15,600	18,200 (12,000-41,000) 19,100	21,900 (13,800-54,600) 22,800	15,400
12177500	50	2,050 (1,770-2,360) 2,030	4,780 (4,020-5,960) 4,670	6,810 (5,510-8,970) 6,560	8,650 (6,820-11,900) 8,230	10,800 (8,300-15,500) 10,100	9,540
12178100	36	1,960 (1,660-2,310) 1,970	4,300 (3,540-5,550) 4,310	5,840 (4,650-8,010) 5,840	7,170 (5,550-10,300) 7,140	8,650 (6,530-12,900) 8,560	8,430
12181100	36	163 (145-183) 166	293 (255-352) 306	376 (318-474) 398	446 (368-583) 477	523 (423-708) 564	454
12181200	34	10 (9.0-12) 10	19 (16-24) 20	25 (21-33) 26	30 (24-40) 31	35 (27-49) 37	29
12182500	55	6,910 (6,150-7,750) 6,970	14,200 (12,300-17,000) 14,400	19,200 (16,100-24,000) 19,500	23,600 (19,400-30,400) 24,000	28,600 (23,000-38,100) 29,000	46,000
12184300	11	199 (171-232) 199	282 (240-370) 293	317 (265-441) 339	341 (281-492) 375	364 (296-543) 410	288

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12185300	11	427 (256-720) 435	1,380 (806-3,480) 1,340	2,070 (1,130-6,290) 1,920	2,660 (1,380-9,180) 2,390	3,310 (1,640-12,800) 2,880	1,380
12186000	73	9,220 (8,300-10,200) 9,250	19,400 (17,000-22,600) 19,500	26,300 (22,500-31,900) 26,400	32,300 (27,100-40,300) 32,400	39,100 (32,200-50,200) 39,100	40,100
12187500	17	16,000 (12,800-19,700) 16,100	32,500 (25,500-47,000) 32,800	44,000 (33,000-70,900) 44,200	54,200 (39,100-94,600) 54,000	65,900 (45,800-124,000) 65,000	48,000
12188300	11	295 (250-349) 305	437 (367-590) 481	503 (412-726) 580	550 (443-831) 657	596 (472-939) 737	494
12189000	12	10,400 (7,960-13,400) 10,900	20,900 (15,800-33,400) 22,700	27,500 (19,800-49,900) 30,400	33,000 (22,900-65,400) 36,900	39,100 (26,200-84,200) 43,900	30,700
12189400	31	107 (93.9-121) 106	179 (154-219) 178	214 (180-271) 213	239 (198-310) 238	263 (216-350) 263	184
12189500	69	29,900 (27,000-33,100) 30,000	58,400 (51,500-68,000) 58,700	75,300 (65,000-90,500) 75,800	89,000 (75,600-110,000) 89,600	104,000 (86,700-130,000) 105,000	98,600
12191500	23	16,600 (13,800-20,000) 16,500	31,700 (25,700-42,900) 31,400	40,000 (31,400-57,600) 39,500	46,400 (35,600-69,800) 45,600	53,100 (39,800-83,100) 52,000	50,000
12191800	14	412 (327-520) 429	783 (609-1,170) 845	994 (744-1,630) 1,100	1,160 (844-2,030) 1,300	1,330 (944-2,470) 1,520	885
12196000	36	315 (275-361) 315	577 (492-712) 578	715 (595-918) 717	819 (670-1,080) 821	925 (744-1,250) 927	714
12196200	16	552 (484-629) 539	812 (703-1,010) 790	934 (792-1,220) 908	1,020 (853-1,390) 994	1,110 (912-1,550) 1,080	977
12196500	18	4,390 (4,080-4,710) 4,200	5,490 (5,070-6,190) 5,180	5,960 (5,440-6,890) 5,590	6,280 (5,680-7,390) 5,880	6,580 (5,900-7,870) 6,170	6,000
12197200	20	135 (122-149) 132	187 (167-220) 183	210 (185-255) 206	226 (196-281) 222	241 (208-306) 238	233
12199000	14	94,400 (75,100-117,000) 91,500	183,000 (144,000-272,000) 171,000	245,000 (183,000-411,000) 221,000	299,000 (215,000-551,000) 263,000	362,000 (249,000-729,000) 310,000	400,000

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12199800	16	511 (474-551) 476	639 (588-725) 579	693 (630-810) 619	731 (658-871) 648	766 (684-930) 678	676
12200700	22	34 (28-41) 34	66 (53-89) 66	83 (65-120) 84	97 (74-146) 98	111 (83-174) 112	86.0
12200800	19	118 (97-143) 115	222 (179-306) 212	281 (218-415) 264	326 (248-507) 302	374 (277-608) 342	250
12201500	40	2,590 (2,230-3,000) 2,570	5,330 (4,460-6,710) 5,220	6,950 (5,650-9,170) 6,740	8,250 (6,570-11,200) 7,940	9,630 (7,520-13,500) 9,190	8,440
12204400	32	53 (46-60) 53	99 (84-124) 101	128 (106-169) 131	152 (123-209) 156	179 (141-254) 183	181
12205000	59	5,640 (5,230-6,070) 5,650	8,760 (8,000-9,800) 8,820	10,300 (9,260-11,800) 10,400	11,400 (10,200-13,300) 11,600	12,500 (11,000-14,800) 12,800	11,200
12207200	11	9,680 (8,340-11,200) 9,780	13,900 (11,900-18,200) 14,500	16,000 (13,300-22,300) 17,200	17,500 (14,300-25,600) 19,200	19,000 (15,300-29,000) 21,200	16,000
12208000	14	5,660 (4,550-7,010) 4,950	10,400 (8,230-15,200) 9,130	13,100 (10,000-20,900) 11,500	15,300 (11,300-26,000) 13,400	17,600 (12,600-31,600) 15,500	13,100
12209000	51	9,700 (8,880-10,700) 9,610	16,400 (14,600-19,000) 16,100	19,700 (17,200-23,500) 19,300	22,200 (19,100-26,900) 21,600	24,600 (21,000-30,400) 23,900	22,400
12209500	21	1,160 (1,050-1,290) 1,170	1,730 (1,540-2,060) 1,770	2,060 (1,780-2,580) 2,140	2,320 (1,970-3,010) 2,430	2,600 (2,160-3,500) 2,740	3,050
12210500	62	24,400 (22,800-26,100) 24,400	37,000 (34,000-41,000) 37,100	43,100 (39,100-48,700) 43,300	47,600 (42,700-54,600) 47,900	52,000 (46,300-60,600) 52,400	49,300
12211500	23	28,800 (25,600-32,500) 28,600	43,700 (38,100-53,000) 43,500	50,400 (43,200-63,400) 50,400	55,100 (46,600-71,100) 55,300	59,700 (49,800-78,800) 60,200	46,200
12212000	26	358 (324-396) 359	519 (462-608) 526	589 (517-712) 603	638 (554-788) 659	685 (588-861) 714	550
12212700	19	25 (21-30) 25	46 (37-62) 45	57 (45-83) 55	66 (50-100) 63	75 (56-119) 71	56

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12212800	32	23 (19-27) 22	46 (38-60) 44	59 (47-81) 54	68 (54-97) 62	78 (60-114) 70	67
12213100	47	24,800 (22,800-26,900) 24,800	39,900 (36,100-45,300) 39,900	48,700 (43,200-57,200) 48,700	55,800 (48,700-67,100) 55,800	63,400 (54,400-78,100) 63,500	57,000
12323000	56	248,000 (236,000-260,000) --	321,000 (303,000-345,000) --	349,000 (327,000-380,000) --	368,000 (342,000-403,000) --	384,000 (356,000-424,000) --	377,000
12395500	39	85,000 (77,400-93,500) --	129,000 (115,000-149,000) --	148,000 (130,000-175,000) --	161,000 (140,000-194,000) --	173,000 (150,000-212,000) --	200,000
12395800	20	45 (38-52) 44	71 (60 -91) 72	83 (68 -110) 85	90 (74 -124) 94	98 (79 -138) 103	78
12395900	20	88 (77 -102) 88	139 (119-175) 142	163 (136-215) 168	180 (148-246) 187	198 (160-276) 208	175
12396000	45	525 (457-602) 523	1,100 (934-1,360) 1,090	1,480 (1,210-1,920) 1,470	1,790 (1,440-2,410) 1,770	2,150 (1,680-2,980) 2,120	3,190
12396100	35	80 (70 -91) 80	146 (125-180) 147	183 (152-235) 186	211 (173-280) 215	240 (193-328) 245	250
12396450	20	92 (73 -117) 92	200 (154-294) 199	265 (196-422) 264	317 (228-534) 316	372 (260-660) 371	300
12396900	20	1,010 (909-1,120) 993	1,460 (1,300-1,740) 1,430	1,690 (1,470-2,100) 1,650	1,860 (1,590-2,380) 1,810	2,300 (1,710-2,670) 1,980	2,290
12397500	12	989 (776-1,270) 973	1,770 (1,370-2,720) 1,720	2,160 (1,610-3,610) 2,090	2,440 (1,780-4,320) 2,360	2,710 (1,940-5,060) 2,620	1,650
12398000	18	1,260 (1,050-1,520) 1,250	2,270 (1,840-3,090) 2,220	2,800 (2,210-4,090) 2,730	3,220 (2,480-4,910) 3,130	3,640 (2,740-5,800) 3,530	3,550
12398500	39	89,500 (80,900-99,300) --	137,000 (122,000-160,000) --	156,000 (137,000-186,000) --	169,000 (146,000-204,000) --	180,000 (155,000-221,000) --	[5]171,300
12399500	21	328,000 (296,000-365,000) --	464,000 (412,000-552,000) --	525,000 (458,000-647,000) --	568,000 (490,000-717,000) --	609,000 (519,000-786,000) --	680,000

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12400500	14	1,720 (1,480-2,010) 1,660	2,510 (2,140-3,260) 2,430	2,850 (2,380-3,900) 2,760	3,090 (2,540-4,370) 3,010	3,310 (2,680-4,840) 3,240	3,070
12401500	68	12,300 (11,800-12,900) 12,200	16,200 (15,300-17,400) 16,100	17,800 (16,700-19,300) 17,800	18,900 (17,600-20,600) 18,900	19,900 (18,400-21,800) 19,900	21,200
12403700	19	9.5 (8.1-11) 9.3	15 (13-20) 15	17 (14-24) 18	19 (15-26) 20	20 (16-29) 21	16
12404500	67	21,100 (20,200-22,100) --	27,700 (26,200-29,600) --	30,500 (28,600-33,000) --	32,300 (30,200-35,200) --	34,000 (31,600-37,400) --	35,000
12405400	20	54 (42-70) 53	126 (94-190) 123	170 (122-282) 165	207 (144-364) 200	246 (167-458) 236	154
12405500	26	343,000 (320,000-367,000) --	445,000 (411,000-498,000) --	490,000 (447,000-561,000) --	522,000 (472,000-607,000) --	552,000 (494,000-652,000) --	700,000
12407500	20	44 (36-53) 45	78 (63-106) 85	94 (74-134) 106	105 (82-156) 121	116 (89-177) 137	82
12407520	20	119 (92-155) 118	285 (212-438) 281	391 (279-660) 384	480 (331-862) 485	576 (385-1,100) 561	454
12407600	20	6.0 (5.2-6.9) 6.2	10 (8.5-13) 11	12 (10-16) 14	14 (11-20) 17	16 (12-23) 19	14
12407700	18	165 (133-204) 168	318 (250-453) 331	400 (305-613) 423	463 (344-745) 495	527 (383-887) 570	392
12408200	20	9.3 (7.2-12) 9.5	21 (16-31) 21	27 (20-44) 28	32 (22-55) 33	37 (26-67) 39	41
12408300	22	301 (235-388) 306	688 (518-1,030) 703	906 (659-1,460) 930	1,070 (761-1,810) 1,100	1,240 (863-2,200) 1,280	1,060
12408400	20	28 (23-35) 29	58 (46-83) 61	76 (57-116) 80	89 (66-145) 95	104 (75-176) 112	80
12408420	20	41 (30-56) 43	118 (82-197) 123	172 (115-324) 181	221 (141-448) 233	276 (170-601) 292	148

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12408500	47	298 (261-341) 298	562 (480-685) 564	690 (578-868) 695	782 (646-1,000) 790	870 (710-1,140) 881	694
12409000	74	1,140 (1,020-1,280) 1,140	2,260 (1,960-2,670) 2,280	2,800 (2,390-3,390) 2,830	3,170 (2,680-3,910) 3,220	3,540 (2,960-4,420) 3,600	3,440
12409500	19	390 (295-519) 389	897 (656-1,420) 893	1,170 (825-2,000) 1,170	1,370 (946-2,470) 1,370	1,580 (1,060-2,970) 1,580	[6]1,010
12410000	13	56 (32-100) 59	226 (122-607) 235	358 (181-1,160) 369	476 (228-1,740) 487	608 (278-2,480) 617	180
12410600	20	22 (19-26) 23	36 (30-46) 39	41 (34-56) 47	45 (37-63) 53	49 (39-69) 59	41
12410650	20	5.7 (4.7-7.0) 6.1	10 (8.4-14) 12	13 (10-18) 15	14 (11-22) 18	16 (12-25) 20	15
12423550	15	55 (35-88) 54	171 (104-363) 161	240 (140-576) 221	293 (166-758) 267	346 (190-956) 313	155
12423700	15	25 (22-30) 24	37 (32-48) 36	42 (35-57) 41	45 (37-63) 45	48 (39-68) 48	41
12423900	20	18 (12-28) 18	67 (42-133) 67	103 (60-230) 101	133 (75-321) 130	166 (91-430) 161	125
12424000	49	6,510 (5,620-7,560) 6,480	13,300 (11,100-16,500) 13,100	16,600 (13,700-21,400) 16,400	19,000 (15,400-25,100) 18,700	21,400 (17,100-28,700) 21,000	20,600
12427000	31	110 (102-118) 111	150 (138-168) 155	169 (153-194) 177	182 (163-213) 194	195 (173-232) 207	205
12429200	13	50 (41-61) 50	82 (67-115) 86	98 (77-147) 104	109 (84-172) 118	120 (91-199) 132	98.0
12429600	14	138 (115-165) 139	232 (191-318) 237	284 (226-422) 294	325 (252-510) 339	368 (278-608) 386	391
12429800	20	12 (10-15) 13	23 (18-30) 23	28 (22-40) 29	32 (24-47) 34	36 (27-55) 38	27

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12430370	15	23 (13-40) 23	126 (67-349) 120	252 (119-912) 231	400 (174-1,760) 354	614 (245-3,260) 525	1,510
12431000	54	1,300 (1,160-1,450) 1,300	2,300 (2,010-2,710) 2,310	2,760 (2,380-3,340) 2,770	3,080 (2,630-3,800) 3,090	3,400 (2,860-4,250) 3,420	3,170
12431100	15	39 (21-73) 40	226 (114-653) 224	422 (194-1,530) 409	629 (270-2,670) 597	898 (360-4,400) 836	325
12433200	18	373 (253-551) 376	1,230 (795-2,340) 1,230	1,860 (1,140-4,400) 1,850	2,420 (1,420-5,730) 2,400	3,050 (1,720-7,840) 3,000	2,200
12433300	20	48 (39-61) 47	101 (78-146) 96	131 (98-204) 124	155 (113-254) 146	180 (128-309) 169	135
12433542	12	5.6 (3.0-10) 6.0	24 (13-73) 27	40 (19-148) 45	54 (25-232) 61	71 (31-344) 80	33
12433556	12	1.3 (0.9-1.9) --	3.6 (2.3-7.3) --	5.1 (3.1-12) --	6.4 (3.8-17) --	7.9 (4.4-23) --	5.7
12433561	12	16 (8.3-33) 17	89 (43-298) 94	161 (70-706) 171	236 (96-1,240) 248	331 (126-2,040) 343	101
12433580	15	176 (94-337) 161	901 (454-2,600) 732	1,510 (704-5,220) 1,130	2,050 (911-8,000) 1,460	2,670 (1,130-11,500) 1,800	[7]897
12433800	20	12 (9.5-14) 12	24 (19-34) 25	32 (24-49) 33	38 (28-61) 40	44 (31-75) 47	36
12434500	15	1,510 (1,180-1,930) --	3,160 (2,410-4,830) --	4,210 (3,070-7,160) --	5,090 (3,590-9,340) --	6,060 (4,130-11,900) --	4,790
12437500	19	171 (120-245) 172	498 (335-890) 580	706 (453-1,400) 949	875 (542-1,860) 1,280	1,050 (632-2,370) 1,630	483
12437930	16	73 (46-118) 74	260 (156-576) 306	398 (224-1,030) 530	519 (278-1,480) 738	654 (336-2,050) 967	355
12437950	21	24 (16-36) 24	102 (64-201) 108	178 (103-415) 194	258 (141-675) 282	363 (187-1,060) 389	982

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12437960	16	60 (41-86) 61	172 (115-322) 218	255 (161-552) 384	329 (198-787) 541	414 (239-1,090) 711	756
12439200	20	21 -- --	42 -- --	50 -- --	56 -- --	62 -- --	47
12439300	25	54 (38-78) 55	214 (142-382) 216	357 (221-724) 355	498 (293-1,100) 490	674 (378-1,620) 653	[8]455
12441700	10	206 (140-305) 199	490 (328-1,000) 458	667 (422-1,600) 608	812 (494-2,180) 728	967 (567-2,860) 852	528
12442000	31	523 (431-633) 524	1,220 (971-1,660) 1,220	1,700 (1,300-2,490) 1,690	2,120 (1,570-3,270) 2,100	2,600 (1,870-4,220) 2,570	6,010
12445800	19	6.2 (5.0-7.7) 6.4	12 (9.7-18) 14	16 (12-25) 18	19 (14-30) 21	21 (15-36) 25	14
12447380	22	158 (133-188) 158	294 (241-390) 293	371 (295-524) 369	431 (335-636) 429	494 (376-760) 490	386
12447390	28	368 (324-415) 362	638 (551-779) 625	805 (675-1,040) 784	945 (774-1,270) 916	1,100 (879-1,540) 1,060	1,120
12447400	19	24 (19-32) 23	56 (42-88) 53	75 (53-127) 71	89 (62-161) 84	104 (70-198) 97	89
12447430	11	54 (41-72) 50	100 (75-164) 89	122 (88-218) 108	137 (97-261) 121	151 (105-304) 133	103
12448700	11	59 (51-68) 56	86 (73-112) 81	98 (82-138) 94	108 (88-159) 103	118 (95-181) 113	97
12448900	11	132 (103-169) 132	232 (179-359) 234	281 (211-479) 285	318 (232-576) 325	354 (253-678) 365	232
12448998	13	1,910 (1,490-2,450) 1,900	3,570 (2,740-5,550) 3,540	4,480 (3,320-7,710) 4,430	5,190 (3,730-9,560) 5,130	5,920 (4,140-11,600) 6,160	9,440
12449500	45	11,200 (9,990-12,500) 11,100	18,500 (16,200-21,800) 18,400	21,700 (18,800-26,300) 21,500	23,900 (20,400-29,400) 23,700	25,900 (21,900-32,300) 25,700	40,800

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12449600	20	133 (96.5-185) 135	374 (260-635) 379	533 (353-1000) 539	665 (426-1,340) 662	808 (501-1,730) 814	535
12449790	11	55 (41-72) 55	112 (82-188) 112	148 (104-284) 149	178 (120-376) 179	211 (138-488) 211	168
12449950	39	11,800 (10,500-13,300) 11,700	20,600 (17,900-24,800) 20,400	25,300 (21,500-31,500) 25,000	28,800 (24,000-36,800) 28,500	32,300 (26,600-42,400) 31,900	46,700
12450500	34	12,100 (10,700-13,600) --	20,400 (17,700-24,500) --	24,600 (21,000-30,900) --	27,900 (23,300-35,900) --	31,100 (25,600-41,100) --	46,700
12451000	75	9,600 (9,000-10,200) 9,600	14,600 (13,400-16,000) 14,600	16,800 (15,300-18,800) 16,800	18,400 (16,600-20,800) 18,400	19,900 (17,900-22,800) 19,900	21,000
12451500	34	1,270 (1,130-1,420) 1,260	2,150 (1,880-2,580) 2,130	2,650 (2,260-3,320) 2,630	3,050 (2,550-3,940) 3,020	3,470 (2,850-4,610) 3,430	3,900
12452800	39	2,680 (2,420-2,970) 2,680	4,370 (3,870-5,120) 4,370	5,230 (4,540-6,330) 5,230	5,880 (5,030-7,270) 5,880	6,520 (5,510-8,240) 6,520	6,430
12452880	11	32 (24-44) 34	67 (49-118) 71	87 (60-173) 94	103 (69-222) 112	120 (77-278) 131	69
12453000	23	3,380 (3,030-3,760) 3,380	4,940 (4,380-5,890) 4,960	5,700 (4,940-7,500) 5,740	6,240 (5,340-7,930) 6,290	6,780 (5,720-8,830) 6,860	10,800
12454000	29	4,640 (4,250-5,050) 4,650	6,910 (6,240-7,940) 6,920	8,250 (7,280-9,860) 8,260	9,330 (8,090-11,500) 9,330	10,500 (8,930-13,300) 10,500	19,100
12454290	11	96 (84-109) 85	132 (115-167) 113	149 (128-200) 124	162 (136-226) 133	174 (144-253) 141	153
12455000	48	7,040 (6,590-7,510) 7,050	10,000 (9,240-11,100) 10,000	11,400 (10,400-12,900) 11,400	12,400 (11,200-14,200) 12,400	13,400 (12,000-15,600) 13,400	13,700
12456300	11	66 (47-93) 65	158 (110-298) 150	223 (146-496) 206	280 (175-701) 254	346 (206-966) 307	205
12456500	23	3,140 (2,690-3,650) 3,150	5,470 (4,590-7,000) 5,470	6,720 (5,490-9,080) 6,720	7,680 (6,150-10,800) 7,670	8,660 (6,800-12,600) 8,640	7,030

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12457000	74	11,600 (10,800-12,400) 11,600	18,700 (17,200-20,700) 18,700	22,500 (20,400-25,500) 22,500	25,500 (22,800-29,400) 25,400	28,600 (25,300-33,500) 28,500	36,100
12457300	20	28 (23-34) 28	55 (43-77) 55	69 (53-104) 70	81 (61-128) 82	93 (68-153) 94	75
12457900	10	54 (44-67) 55	87 (70-128) 89	103 (80.6-166) 106	115 (87.9-196) 119	127 (94.8-228) 132	93
12458000	49	4,420 (3,990-4,890) 4,420	7,930 (7,010-9,270) 7,930	10,000 (8,660-12,200) 9,990	11,800 (9,970-14,700) 11,800	13,600 (11,400-17,500) 13,700	19,800
12458900	20	2.3 (1.4-3.6) 2.4	9.4 (5.6-20) 9.8	15 (8.4-36) 16	20 (11-52) 21	26 (13-72) 26	11
12459000	68	16,100 (15,000-17,200) 16,100	25,000 (23,000-27,600) 25,000	29,600 (26,800-33,400) 29,600	33,100 (29,700-38,000) 33,000	36,600 (32,500-42,700) 36,500	41,300
12459400	16	27 (20-36) 27	62 (45-99) 60	82 (57-146) 80	98 (66-186) 95	114 (75-231) 110	107
12461000	12	17,400 (14,700-20,600) 17,300	25,800 (21,600-34,800) 25,600	29,600 (24,300-42,800) 29,400	32,400 (26,100-49,000) 32,200	35,100 (27,800-55,300) 34,900	34,600
12461100	20	22 (16-29) 23	61 (44-101) 65	91 (61-169) 97	118 (76-238) 126	150 (92-325) 160	114
12461200	34	6.8 (5.3-8.9) 6.9	21 (15-31) 21	30 (21-48) 30	37 (26-63) 38	45 (30-80) 46	35
12461400	21	181 (134-242) 180	559 (398-916) 545	902 (599-1,700) 861	1,250 (788-2,600) 1,170	1,700 (1,020-3,910) 1,560	2,090
12461500	20	64 (49-82) 64	158 (118-242) 159	228 (162-388) 228	290 (198-534) 288	363 (238-720) 358	325
12462000	20	182 (150-219) 183	361 (2922-494) 367	480 (372-714) 491	581 (436-921) 597	696 (506-1,170) 716	560
12462500	34	17,500 (15,800-19,300) 17,500	28,200 (25,100-32,900) 28,100	34,500 (30,000-42,000) 34,400	39,600 (33,800-49,700) 39,400	45,200 (37,800-58,300) 44,900	47,500

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12462800	22	55	219	302	355	398	257
		--	--	--	--	--	
		--	--	--	--	--	
12463000	18	490	2,770	4,930	7,060	9,640	6,420
		(270-901)	(1,420-7,500)	(2,340-16,200)	(3,160-26,200)	(4,080-40,000)	
		446	1,890	2,770	3,620	4,740	
12463600	18	9.0	70	147	238	366	129
		(4.7-17)	(34-206)	(64-549)	(96-1,040)	(136-1,870)	
		9.4	73	146	222	319	
12463700	16	5.3	45	95	152	229	114
		(2.5-11)	(20-160)	(37-432)	(55-818)	(77-1,440)	
		5.3	40	74	109	155	
12464500	26	393,000	535,000	595,000	636,000	674,000	740,000
		(361,000-428,000)	(485,000-612,000)	(532,000-699,000)	(564,000-760,000)	(593,000-819,000)	
		--	--	--	--	--	
12464600	20	6.6	49	94	139	194	160
		(3.5-13)	(24-142)	(41-324)	(58-541)	(77-842)	
		5.7	35	58	79	101	
12464650	20	18	50	73	93	117	111
		(13-24)	(35-82)	(49-135)	(60-186)	(73-250)	
		17	47	73	98	128	
12465000	54	814	4,580	7,640	10,300	13,100	8,370
		(570-1,170)	(3,000--7,740)	(4,770-13,800)	(6,240-19,500)	(7,780-25,900)	
		810	4,370	7,060	9,390	11,900	
12465300	20	23	86	134	176	224	205
		(15-35)	(54-170)	(79-300)	(100-430)	(122-590)	
		22	77	119	160	209	
12465400	14	1,040	3,070	3,750	4,100	4,340	3,220
		(567-2,050)	(1,610-8,110)	(1,920-10,600)	(2,070-12,000)	(2,180-13,000)	
		911	2,360	3,070	3,730	4,440	
12465500	28	894	3,830	6,130	8,160	10,400	12,900
		(604-1,340)	(2,430-7,090)	(3,680-12,600)	(4,720-18,000)	(5,830-24,500)	
		840	3,840	6,350	8,790	11,800	
12467000	54	312	2,160	4,570	7,480	11,800	10,400
		(224-433)	(1,450-3,580)	(2,840-8,430)	(4,410-15,000)	(6,580-25,300)	
		322	2,340	4,950	7,900	11,900	
12467400	18	5.8	36	68	100	140	154
		(3.2-11)	(18-100)	(31-226)	(44-377)	(58-594)	
		6.4	49	101	152	212	
12470300	18	17	64	100	133	170	127
		(11-27)	(40-130)	(58-235)	(74-341)	(90-476)	
		17	65	107	149	196	

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12471100	15	114 (86-152) 101	245 (180-396) 221	317 (224-562) 315	372 (256-701) 406	427 (286-851) 508	264
12471200	18	7.2 -- --	36 -- --	65 -- --	96 -- --	132 -- --	60
12474700	10	82 (65-105) 75	144 (112-224) 113	177 (133-309) 125	203 (148-382) 136	230 (163-464) 148	166
12480700	20	31 (27-37) 31	51 (43-66) 53	61 (50-81) 66	67 (55-94) 77	74 (59-106) 88	68
12483300	20	33 (26-40) 32	69 (54-98) 68	92 (69-143) 91	111 (81-183) 110	132 (94-231) 131	102
12483800	21	412 (348-487) 413	733 (606-965) 751	905 (727-1,260) 951	1,040 (816-1,510) 1,120	1,170 (903-1,770) 1,290	968
12485900	16	12 (7.5-18) 12	48 (29-101) 50	84 (47-219) 86	124 (65-373) 121	178 (87-615) 164	137
12487400	10	464 (376-575) 433	742 (596-1,100) 620	876 (683-1,410) 685	972 (743-1,660) 736	1,070 (799-1,920) 780	811
12488300	20	17 (15-20) 17	28 (23-35) 28	33 (27-44) 35	36 (30-50) 41	40 (32-56) 47	36
12488500	57	1,460 (1,330-1,600) 1,450	2,530 (2,260-2,910) 2,460	3,100 (2,720-3,680) 2,960	3,550 (3,070-4,300) 3,350	4,010 (3,420-5,000) 3,750	4,230
12489500	13	5,930 (4,940-7,060) 5,810	10,000 (8,250-13,800) 9,460	12,500 (9,940-19,000) 11,500	14,600 (11,200-23,700) 13,100	16,900 (12,600-29,300) 14,900	21,900
12491700	34	26 (21-31) 26	63 (50-85) 65	89 (68-129) 93	113 (84-172) 120	140 (101-224) 149	133
12492500	18	2,390 (1,990-2,880) 2,370	4,330 (3,520-5,900) 4,220	5,410 (4,260-7,900) 5,210	6,260 (4,810-9,600) 5,970	7,130 (5,360-11,500) 6,800	[9]6,150
12500500	61	380 (345-419) 381	694 (616-804) 702	872 (757-1,040) 892	1,010 (866-1,240) 1,040	1,160 (978-1,450) 1,210	1,580

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
12501000	58	96 (82-113) 97	253 (209-322) 258	370 (294-496) 381	476 (368-662) 493	599 (452-866) 621	1,230
12502000	14	538 (408-704) 543	1,210 (896-1,950) 1,240	1,680 (1,180-3,090) 1,730	2,100 (1,410-4,230) 2,160	2,580 (1,660-5,680) 2,640	1,900
12502500	42	421 (341-521) 425	1,190 (923-1,640) 1,210	1,730 (1,290-2,550) 1,780	2,190 (1,590-3,380) 2,260	2,720 (1,920-4,370) 2,810	3,100
12506000	15	696 (539-897) 697	1,460 (1,100-2,270) 1,470	1,930 (1,400-3,320) 1,950	2,310 (1,620-4,270) 2,340	2,730 (1,850-5,370) 2,760	1,680
12506500	15	241 (155-376) 247	850 (522-1,810) 876	1,340 (768-3,370) 1,360	1,790 (977-5,060) 1,790	2,330 (1,210-7,300) 2,270	1,750
12507600	20	3.5 (2.2-5.6) 3.6	16 (9.6-35) 16	28 (15-71) 27	40 (21-112) 37	54 (27-168) 49	33
12507660	18	110 -- --	832 -- --	1,150 -- --	1,350 -- --	1,700 -- --	955
12508500	11	1,410 (1,000-1,990) 1,430	3,260 (2,270-6,070) 3,360	4,450 (2,940-9,630) 4,630	5,450 (3,450-13,100) 5,690	6,540 (3,990-17,300) 6,830	3,870
12512550	19	135 -- --	740 -- --	830 -- --	890 -- --	910 -- --	711
12512600	16	3.0 (1.0-9.4) 3.6	70 (20-453) 75	202 (51-1,890) 177	393 (88-4,690) 288	704 (143-10,400) 441	86
12512700	20	4.1 (1.8-9.2) 4.8	53 (21-194) 66	126 (45-598) 153	217 (72-1,220) 244	351 (108-2,300) 361	186
12513000	44	56 -- --	1,780 -- --	2,820 -- --	7,080 -- --	14,100 -- --	5,560
13334500	32	338 (285-401) 351	715 (584-937) 819	952 (752-1,330) 1,170	1,150 (885-1,670) 1,490	1,360 (1,020-2,070) 1,830	1,180
13334700	30	413 (310-548) 427	1,450 (1,040-2,290) 1,550	2,380 (1,600-4,180) 2,570	3,310 (2,120-6,300) 3,550	4,490 (2,760-9,200) 4,760	3,700

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
13335200	18	17 (6.2-45) 17	296 (99-1,500) 220	757 (222-5,140) 441	1,340 (360-11,000) 661	2,210 (544-21,400) 942	705
13343450	15	78 (42-140) 75	473 (244-1,360) 386	996 (455-3,860) 697	1,650 (686-7,920) 1,010	2,650 (1,000-15,600) 1,430	8,150
13343520	16	100 (72-142) 93	261 (180-462) 260	361 (237-713) 390	442 (280-940) 511	527 (324-1,200) 653	298
13343620	16	26 (16-44) 24	107 (60-253) 92	168 (89-466) 145	222 (112-678) 197	281 (137-940) 258	192
13343660	20	50 (30-83) 47	246 (139-560 207	422 (222-1,120) 338	590 (295-1,740) 461	790 (377-2,560) 609	656
13343800	15	676 (460-991) 617	1,830 (1,220-3,460) 1,590	2,550 (1,610-5,400) 2,230	3,110 (1,900-7,130) 2,770	3,710 (2,220-9,100) 3,390	2,380
13344500	40	1,510 (1,180-1,920) 1,520	4,670 (3,500-6,770) 4,660	6,940 (4,990-10,800) 6,880	8,910 (6,220-14,500) 8,780	11,100 (7,550-18,900) 10,900	7,980
13346100	24	4,610 (3,900-5,440) --	8,390 (6,940-11,000) --	10,400 (8,350-14,300) --	11,900 (9,380-17,000) --	13,400 (10,400-19,800) --	12,600
13348000	34	1,060 (873-1,290) 1,050	2,590 (2,060-3,540) 2,540	3,680 (2,800-5,410) 3,600	4,650 (3,430-7,210) 4,540	5,770 (4,120-9,400) 5,610	5,000
13348400	20	36 (26-49) 34	110 (76-187) 109	169 (110-328) 172	225 (140-477) 234	292 (174-675) 309	234
13348500	27	398 (332-476) 388	841 (681-1,130) 839	1,140 (886-1,640) 1,170	1,390 (1,050-2,140) 1,450	1,680 (1,240-2,700) 1,790	1,500
13349210	34	5,950 (4,890-7,280) 5,840	13,000 (10,400-17,600) 12,400	16,600 (12,900-23,600) 15,600	19,200 (14,600-28,100) 17,900	21,800 (16,300-32,700) 20,300	23,900
13349300	34	29 (22-39) 30	98 (71-151) 108	152 (105-255) 176	202 (134-358) 241	260 (167-487) 319	183
13349350	20	32 (23-45) 32	112 (77-195) 119	193 (122-394) 208	280 (167-647) 299	400 (223-1,040) 418	1,780

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
13349400	18	1,970 (1,400-2,780) 1,880	5,780 (3,940-10,200) 5,130	8,530 (5,500-17,100) 7,250	11,000 (6,770-23,900) 9,070	13,700 (8,150-32,300) 11,100	10,600
13349500	18	1,140 (759-1,750) 1,160	3,680 (2,320-7,240) 3,770	5,280 (3,180-11,600) 5,500	6,540 (3,810-15,400) 6,900	7,840 (4,430-19,700) 8,400	4,000
13349800	11	59 (44-79) 45	124 (91-215) 113	166 (115-331) 175	202 (134-443) 237	240 (154-580) 313	198
13350500	26	889 (710-1,120) 882	2,050 (1,580-2,920) 2,100	2,720 (2,030-4,170) 2,880	3,260 (2,370-5,230) 3,550	3,820 (2,710-6,380) 4,270	2,930
13351000	63	7,930 (6,780-9,310) 7,860	19,200 (15,800-24,200) 18,700	25,500 (20,600-33,400) 24,600	30,300 (24,000-40,700) 29,100	35,200 (27,500-48,200) 33,800	33,500
13352200	20	22 (13-36) 22	100 (58-224) 102	167 (89.5-435) 177	229 (117-662) 250	302 (147-957) 339	200
13352500	19	123 (76-201) 146	603 (347-1,360) 882	1,070 (569-2,870) 1,720	1,550 (776-4,680) 2,590	2,160 (1,020-7,270) 3,660	1,150
13352550	18	21 (12-36) 20	119 (65-291) 108	225 (113-674) 195	341 (159-1,180) 285	496 (217-1,950) 399	277
14013000	62	878 (760-1,010) 880	2,300 (1,920-2,860) 2,290	3,460 (2,790-4,560) 3,420	4,590 (3,590-6,320) 4,510	5,980 (4,540-8,590) 5,830	11,000
14013500	31	324 (266-394) 324	719 (572-977) 732	947 (730-1,360) 981	1,130 (849-1,690) 1,190	1,310 (968-2,040) 1,400	1,320
14015900	20	22 (13-38) 24	140 (76-336) 146	277 (138-818) 276	435 (201-1,480) 413	654 (282-2,540) 587	228
14016000	18	548 (392-791) 547	1,660 (1,100-3,020) 1,620	2,430 (1,530-4,990) 2,350	3,080 (1,880-6,870) 2,960	3,810 (2,230-9,140) 3,630	3,340
14016500	21	862 (679-1,090) 864	2,050 (1,560-3,030) 2,080	2,880 (2,090-4,700) 2,940	3,620 (2,530-6,330) 3,700	4,460 (3,020-8,350) 4,550	5,450
14016600	20	77 (51-117) 77	267 (168-520) 271	396 (237-861) 412	502 (290-1,170) 536	614 (343-1,530) 674	253

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
14016650	20	10 (4.9-21) 12	111 (49-368) 131	260 (102-1,100) 289	448 (160-2,240) 464	726 (240-4,250) 694	305
14017000	44	2,700 (2,320-3,140) 2,670	5,790 (4,820-7,300) 5,680	7,630 (6,180-10,100) 7,460	9,100 (7,220-12,400) 8,890	10,700 (8,300-15,000) 10,500	9,350
14017040	15	35 (19-67) 37	182 (92-520) 186	308 (144-1,060) 314	424 (188-1,660) 433	558 (236-2,430) 573	218
14017070	15	59 (31-111) 60	366 (183-1,080) 332	717 (323-2,720) 590	1,110 (462-4,980) 843	1,640 (634-8,620) 1,150	733
14017200	20	47 (29-76) 48	264 (152-590) 253	524 (274-1,440) 466	829 (402-2,630) 688	1,270 (570-4,610) 977	1,560
14017500	15	3,520 (2,660-4,650) 3,400	7,820 (5,760-12,600) 7,380	10,500 (7,380-18,800) 9,820	12,700 (8,620-24,500) 11,800	15,000 (9,890-31,100) 14,000	13,300
14018500	45	6,110 (5,140-7,250) 6,060	14,900 (12,100-19,400) 14,500	20,800 (16,300-28,500) 20,000	25,700 (19,700-36,800) 24,500	31,300 (23,400-46,300) 29,600	33,400
14034250	16	7.3 (4.8-11) 7.8	25 (16-50) 27	38 (22-90) 43	50 (28-131) 57	64 (35-184) 74	43
14034325	15	207 (138-308) 171	693 (445-1,380) 530	1,110 (663-2,650) 805	1,520 (858-4,110) 1,060	2,030 (1,080-6,170) 1,370	992
14107000	39	1,840 (1,660-2,040) 1,850	3,130 (2,760-3,690) 3,170	3,880 (3,340-4,750) 3,950	4,480 (3,790-5,640) 4,580	5,110 (4,250-6,620) 5,250	5,500
14110000	69	3,180 (2,930-3,450) 3,190	5,500 (4,970-6,220) 5,550	6,820 (6,050-7,930) 6,900	7,870 (6,880-9,330) 7,990	8,970 (7,740-10,800) 9,130	9,870
14111800	15	105 (74-149) 110	302 (206-554) 321	459 (292-981) 491	605 (366-1,440) 647	781 (450-2,070) 832	569
14112000	26	1,070 (822-1,390) 1,050	3,060 (2,250-4,670) 2,950	4,560 (3,190-7,680) 4,330	5,940 (4,000-10,700) 5,570	7,550 (4,900-14,500) 6,990	5,200
14112200	29	25 (19-33) 25	88 (63-140) 85	148 (99-263) 140	208 (132-404) 192	287 (174-603) 259	229

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
14112400	14	113 (84-152) 126	250 (182-415) 310	331 (230-613) 442	397 (267-791) 560	466 (304-993) 694	430
14112500	36	3,260 (2,560-4,150) 3,190	9,250 (6,970-13,400) 8,860	13,200 (9,550-20,400) 12,500	16,400 (11,600-26,600) 15,400	19,900 (13,700-33,600) 18,500	17,500
14113000	71	7,840 (6,790-9,040) 7,840	20,500 (17,200-25,400) 20,400	29,700 (24,100-38,500) 29,500	37,800 (30,000-50,700) 37,400	47,200 (36,600-65,300) 46,600	51,000
14121300	21	699 (605-807) 709	1,150 (978-1,460) 1,170	1,390 (1,150-1,850) 1,420	1,560 (1,270-2,160) 1,610	1,740 (1,390-2,500) 1,800	1,510
14121500	12	1,590 (1,300-1,930) 1,600	2,610 (2,120-3,700) 2,650	3,140 (2,470-4,830) 3,200	3,540 (2,720-5,760) 3,630	3,940 (2,970-6,770) 4,060	2,900
14122000	13	1,970 (1,620-2,400) 2,020	3,380 (2,730-4,790) 3,530	4,150 (3,240-6,410) 4,390	4,750 (3,610-7,780) 5,070	5,360 (3,980-9,300) 5,770	3,860
14123000	26	2,760 (2,380-3,180) 2,790	5,020 (4,240-6,330) 5,120	6,410 (5,250-8,590) 6,570	7,570 (6,050-10,600) 7,790	8,830 (6,880-12,900) 9,110	10,800
14123500	75	4,600 (4,190-5,050) 4,610	8,500 (7,580-9,760) 8,520	10,600 (9,270-12,500) 10,600	12,200 (10,500-14,600) 12,200	13,800 (11,800-16,900) 13,900	[10]15,300
14124500	17	2,780 (2,510-3,090) 2,760	3,780 (3,360-4,490) 3,800	4,190 (3,680-5,160) 4,270	4,480 (3,890-5,640) 4,610	4,740 (4,080-6,100) 4,940	4,140
14125000	14	2,520 (2,220-2,840) 2,510	3,600 (3,140-4,460) 3,650	4,150 (3,540-5,440) 4,250	4,560 (3,820-6,220) 4,720	4,970 (4,100-7,040) 5,220	4,330
14125200	20	192 (162-226) 191	345 (286-455) 345	435 (348-614) 436	508 (396-752) 510	585 (446-909) 588	491
14125500	21	3,300 (2,710-4,000) 3,280	6,770 (5,420-9,350) 6,650	9,040 (6,950-13,600) 8,810	11,000 (8,180-17,500) 10,600	13,200 (9,490-22,200) 12,600	9,560
14126300	21	44 (38-51) 44	75 (63-96) 75	91 (74-124) 92	104 (83-147) 106	116 (92-171) 118	103
14127000	25	5,240 (4,710-5,830 5,190	7,780 (6,880-9,220) 7,680	8,950 (7,780-11,000) 8,810	9,790 (8,400-12,300) 9,610	10,600 (8,990-13,600) 10,400	8,880

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
14127200	10	342 (270-434) 335	578 (452-890) 556	696 (528-1,180) 661	783 (580-1,420) 737	871 (630-1,680) 812	575
14128500	45	13,800 (12,200-15,600) 13,700	25,900 (22,300-31,200) 25,400	32,400 (27,400-40,600) 31,500	37,600 (31,200-48,300) 36,400	42,800 (35,000-56,400) 41,200	45,700
14143200	22	128 (110-147) 129	220 (186-279) 223	274 (225-369) 279	317 (255-447) 325	364 (285-534) 374	281
14143500	37	14,200 (12,900-15,500) 13,900	22,000 (19,800-25,400) 21,200	26,200 (23,000-31,200) 24,900	29,300 (25,400-35,800) 27,600	32,600 (27,900-40,600) 30,400	40,400
14144000	17	1,250 (1,060-1,460) 1,240	2,020 (1,700-2,630) 1,990	2,420 (1,980-3,340) 2,380	2,720 (2,180-3,910) 2,670	3,010 (2,370-4,510) 2,960	2,430
14144550	21	76 (65-88) 77	128 (107-165) 131	154 (126-209) 159	174 (140-244) 181	193 (152-281) 202	127
14144600	25	42 (37-47) 41	68 (59-82) 66	82 (70-105) 79	94 (78-124) 89	106 (86-145) 100	103
14211900	23	77 (67-88) 80	130 (110-162) 142	159 (132-210) 179	182 (148-251) 210	207 (165-295) 245	176
14212000	37	832 (746-927) 832	1,370 (1,210-1,620) 1,370	1,640 (1,420-2,010) 1,650	1,850 (1,570-2,310) 1,860	2,050 (1,720-2,620) 2,070	2,600
14213200	14	5,900 (4,720-7,340) 5,910	11,100 (8,730-16,400) 11,100	14,200 (10,700-23,000) 14,200	16,700 (12,200-29,000) 16,600	19,400 (13,800-35,800) 19,200	15,600
14213500	27	398 (337-469) 406	759 (627-987) 790	960 (770-1,320) 1,020	1,120 (878-1,590) 1,200	1,280 (985-1,890) 1,390	1,070
14214000	10	471 (344-648) 463	952 (686-1,700) 905	1,220 (842-2,490) 1,130	1,430 (956-3,190) 1,310	1,650 (1,070-3,980) 1,480	1,180
14214500	13	278 (234-329) 290	447 (371-604) 493	539 (434-788) 620	610 (480-944) 725	684 (526-1,120) 839	528
14215000	21	720 (602-858) 735	1,390 1,130-1,860) 1,440	1,810 (1,420-2,620) 1,900	2,170 (1,660-3,320) 2,290	2,560 (1,900-4,140) 2,720	2,750

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
14215500	19	582 (443-764) 588	1,450 (1,060-2,270) 1,450	2,040 (1,430-3,560) 2,020	2,550 (1,720-4,800) 2,490	3,130 (2,040-6,310) 3,020	1,880
14216000	28	9,310 (7,690-11,300) 9,340	19,500 (15,600-26,400) 19,500	25,200 (19,600-36,100) 25,100	29,600 (22,500-44,100) 29,500	34,200 (25,400-52,800) 34,000	27,000
14216500	39	6,450 (5,670-7,310) 6,470	12,400 (10,600-15,100) 12,500	16,100 (13,400-20,600) 16,200	19,300 (15,700-25,600) 19,400	22,800 (18,200-31,300) 22,900	30,600
14216800	13	978 (817-1,170) 1,010	1,590 (1,310-2,180) 1,720	1,900 (1,520-2,820) 2,130	2,150 (1,680-3,350) 2,480	2,390 (1,830-3,920) 2,850	1,840
14218000	33	18,500 (16,300-21,000) 18,600	32,500 (28,000-39,700) 32,900	40,100 (33,600-51,100) 40,800	45,900 (37,800-60,300) 47,000	51,900 (42,100-70,100) 53,500	54,400
14218300	18	311 (268-359) 307	507 (430-648) 497	616 (508-838) 601	702 (566-999) 686	792 (625-1,180) 773	724
14219000	12	5,910 (4,750-7,340) 5,750	10,400 (8,240-15,400) 9,860	12,900 (9,860-21,000) 12,000	14,900 (11,000-25,800) 13,700	16,900 (12,200-31,300) 15,300	11,700
14219500	20	33,600 (27,800-40,700) 33,500	62,200 (50,100-85,000) 61,600	77,000 (60,300-112,000) 76,300	88,100 (67,600-134,000) 87,000	99,200 (74,600-156,000) 97,900	79,300
14219800	37	1,700 (1,500-1,940) 1,670	3,000 (2,580-3,660) 2,900	3,640 (3,070-4,600) 3,480	4,110 (3,410-5,320) 3,900	4,580 (3,740-6,050) 4,330	3,600
14221500	13	1,480 (1,290-1,690) 1,490	2,150 (1,860-2,730) 2,220	2,490 (2,100-3,360) 2,630	2,750 (2,270-3,880) 2,950	3,000 (2,440-4,420) 3,290	2,230
14222500	67	8,900 (8,220-9,640) 8,860	14,700 (13,400-16,600) 14,600	17,700 (15,800-20,400) 17,500	19,900 (17,600-23,400) 19,700	22,200 (19,400-26,400) 21,900	28,600
14222700	18	36 (28-44) 35	77 (60-113) 74	105 (78-171) 98	130 (93-228) 118	159 (109-298) 140	192
14223000	31	7,580 (6,780-8,430) 7,590	12,800 (11,200-15,200) 12,900	16,100 (13,700-20,100) 16,200	18,900 (15,700-24,500) 19,000	21,900 (17,900-29,600) 22,000	42,000
14223500	34	10,400 (9,580-11,400) 10,300	15,600 (14,100-17,900) 15,500	18,400 (16,300-21,800) 18,300	20,600 (18,000-25,100) 20,500	22,900 (19,700-28,500) 22,800	24,000

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
14223800	21	52 (45-58) 51	82 (71-101) 81	98 (82-127) 97	110 (91-149) 109	123 (100-172) 121	112
14224500	22	1,630 (1,380-1,910) 1,660	3,110 (2,580-4,080) 3,230	4,130 (3,290-5,860) 4,330	5,020 (3,870-7,560) 5,290	6,050 (4,520-9,640) 6,390	8,030
14225500	33	425 (370-487) 432	798 (678-993) 823	1,020 (841-1,330) 1,060	1,200 (968-1,630) 1,260	1,390 (1,100-1,950) 1,480	1,400
14226500	76	13,700 (12,500-15,000) 13,700	25,800 (23,000-29,600) 25,700	32,600 (28,500-38,500) 32,400	37,900 (32,700-45,600) 37,700	43,500 (37,000-53,300) 43,100	36,600
14226800	19	60 (49-72) 61	116 (94-160) 120	151 (117-226) 157	181 (136-286) 189	213 (156-356) 224	147
14226900	28	109 (93-128) 110	220 (185-289) 222	302 (241-421) 301	373 (288-547) 370	453 (340-700) 447	542
14230000	15	1,360 (1,090-1,690) 1,400	2,590 (2,040-3,770) 2,740	3,310 (2,500-5,280) 3,570	3,890 (2,860-6,620) 4,250	4,510 (3,220-8,150) 4,990	2,990
14231100	21	81 (73-89) 81	113 (101-132) 117	129 (113-156) 136	140 (122-174) 151	151 (130-193) 166	133
14231700	10	227 (189-270) 231	349 (290-487) 368	416 (335-637) 450	468 (367-766) 517	522 (399-910) 588	455
14232000	13	2,610 (2,250-3,040) 2,610	3,860 (3,280-5,010) 3,920	4,420 (3,680-6,090) 4,560	4,830 (3,960-6,910) 5,050	5,220 (4,210-7,740) 5,550	4,150
14232500	68	8,150 (7,340-9,050) 8,180	15,900 (14,000-18,600) 16,000	20,400 (17,600-24,600) 20,500	24,000 (20,300-29,600) 24,200	27,700 (23,100-34,900) 27,900	31,600
14233200	11	90 (74-109) 91	147 (120-210) 154	178 (140-280) 190	203 (155-341) 220	228 (170-408) 252	169
14233500	48	28,800 (25,700-32,200) 28,900	54,800 (47,800-65,100) 54,900	71,200 (60,500-88,400) 71,300	85,100 (70,800-109,000) 85,000	100,000 (81,800-132,000) 99,700	103,000
14235000	26	26,800 (23,900-30,000) 26,900	43,700 (38,200-52,700) 44,100	53,800 (45,800-68,300) 54,400	62,100 (51,700-81,800) 62,900	71,000 (57,900-97,100) 72,000	83,500

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
14235300	21	86 (76-96) 85	124 (109-148) 123	140 (122-174) 140	152 (130-193) 153	163 (138-212) 165	142
14235500	28	2,110 (1,860-2,390) 2,070	3,640 (3,140-4,450) 3,500	4,560 (3,820-5,870) 4,310	5,310 (4,360-7,110) 4,950	6,130 (4,920-8,520) 5,640	6,620
14236200	40	10,600 (9,250-12,100) 10,500	19,200 (16,400-23,500) 18,800	23,500 (19,700-29,700) 22,800	26,600 (22,000-34,500) 25,600	29,600 (24,100-39,200) 28,400	27,100
14236500	18	10,900 (9,310-12,700) 10,700	18,200 (15,300-23,700) 17,500	22,200 (18,100-30,800) 21,100	25,400 (20,200-36,800) 23,900	28,600 (22,300-43,300) 26,700	23,200
14237000	24	104 (91-118) 105	161 (139-198) 164	187 (158-238) 193	205 (171-267) 214	222 (183-295) 234	170
14237500	28	1,200 (1,050-1,360) 1,200	2,080 (1,780-2,560) 2,080	2,580 (2,150-3,340) 2,580	2,980 (2,440-4,010) 2,980	3,410 (2,730-4,740) 3,410	3,510
14238000	28	32,600 (29,300-36,200) 32,700	50,600 (44,800-60,000) 50,900	60,000 (51,900-73,900) 60,700	67,200 (57,200-85,100) 68,200	74,500 (62,400-96,800) 75,900	67,000
14239000	18	3,610 (2,910-4,500) 3,560	6,940 (5,450-9,940) 6,680	8,660 (6,590-13,300) 8,180	9,940 (7,400-16,000) 9,260	11,200 (8,180-18,800) 10,300	7,480
14239100	20	24 (21-26) 23	34 (30-41) 34	39 (34-48) 38	42 (36-54) 42	45 (38-60) 45	34
14239700	20	22 (19-26) 22	37 (31-48) 37	45 (37-62) 44	52 (41-74) 50	58 (46-86) 56	47
14240800	14	5,220 (3,920-6,980) 5,200	11,400 (8,300-18,700) 11,100	14,900 (10,500-27,300) 14,200	17,800 (12,100-35,000) 16,700	20,800 (13,700-43,600) 19,200	14,500
14241100	12	9,450 (6,720-13,300) 9,500	22,300 (15,500-40,800) 21,900	30,500 (20,100-64,100) 29,300	37,200 (23,700-86,200) 35,200	44,600 (27,300-113,000) 41,400	[11]25,600
14241490	32	6,660 (5,860-7,570) 6,630	11,800 (10,100-14,400) 11,700	14,700 (12,300-18,800) 14,500	16,900 (13,900-22,400) 16,600	19,300 (15,600-26,400) 19,000	19,200
14242500	72	17,400 (15,900-19,000) 17,400	31,300 (28,100-35,700) 31,300	39,100 (34,400-45,800) 39,000	45,200 (39,200-54,000) 45,100	51,600 (44,200-62,800) 51,400	59,300

Table 2. Flood discharges for selected exceedance probabilities at gaging stations on streams with unregulated flow--Continued

Station number	Number of peaks used in analysis	Flood discharge, in cubic feet per second (95-percent confidence interval) Weighted estimate of flood discharge, in cubic feet per second				At indicated exceedance probabilities	Maximum peak used in analysis (cubic feet per second)
		0.5	0.1	0.04	0.02	0.01	
14242600	21	39 (33-47) 39	76 (62-104) 75	98 (77-143) 95	116 (88-178) 112	135 (100-217) 129	99
14243000	36	51,200 (46,900-56,000) 51,200	75,700 (68,200-86,800) 76,100	86,700 (76,900-102,000) 87,500	94,400 (82,900-113,000) 95,700	102,000 (88,500-124,000) 104,000	139,000
14243500	21	1,280 (1,090-1,500) 1,270	2,220 (1,860-2,880) 2,170	2,750 (2,230-3,800) 2,660	3,170 (2,520-4,590) 3,040	3,620 (2,800-5,460) 3,440	3,500
14245000	36	4,970 (4,510-5,470) 4,950	7,950 (7,080-9,260) 7,900	9,610 (8,380-11,600) 9,530	10,900 (9,360-13,600) 10,800	12,300 (10,400-15,700) 12,200	11,700
14247500	39	4,900 (4,500-5,350) 4,860	7,400 (6,670-8,460) 7,320	8,590 (7,620-10,100) 8,490	9,450 (8,290-11,300) 9,360	10,300 (8,930-12,500) 10,200	8,900
14248100	22	78 (64-94) 79	148 (120-201) 150	186 (146-268) 190	214 (164-322) 221	243 (183-379) 252	151
14248200	15	560 (473-663) 548	918 (762-1,230) 884	1,110 (892-1,580) 1,060	1,250 (986-1,880) 1,180	1,400 (1,080-2,190) 1,320	1,020
14249000	24	5,370 (4,760-6,060) 5,260	8,320 (7,240-10,100) 8,060	9,720 (8,290-12,300) 7,170	10,700 (9,030-13,900) 10,300	11,700 (9,730-15,600) 11,200	9,280
14250500	21	2,420 (2,130-2,740) 2,350	3,820 (3,310-4,710) 3,640	4,590 (3,870-5,950) 4,290	5,180 (4,290-6,980) 4,800	5,800 (4,710-8,100) 5,320	4,770

[1] Maximum peak of record (35,000 ft^3/s on December 10, 1933) was not used in analysis because it resulted from a dam failure.

[2] Maximum peak of record (445 ft^3/s on January 15, 1961) was not used in analysis because it was caused in part by failure of a large beaver dam.

[3] Maximum peak of record (39,500 ft^3/s on February 8, 1996) was not used in analysis because it was affected by regulation.

[4] Historic peak of 1897 (about 70,000 ft^3/s) was not used in analysis because it is significantly below the high-outlier threshold.

[5] Historic peak of June 1984 (195,000 ft^3/s) was not used in analysis because it is significantly below the high-outlier threshold.

[6] Historic peak of May 6, 1948 (1,770 ft^3/s) was not used in analysis because it is significantly below the high-outlier threshold.

[7] Historic peaks of February 26, 1957 (2,200 ft^3/s) and January 24, 1959 (1,010 ft^3/s) were not used in analysis because both are significantly below the high-outlier threshold.

[8] Historic peak of April 12, 1950 (484 ft^3/s) was not used in analysis because it is significantly below the high-outlier threshold.

[9] Maximum peak of record (8,910 ft^3/s on December 22, 1933) was not used in analysis because it was affected by regulation.

[10] Maximum peak of record (45,200 ft^3/s on February 8, 1996) was not used in analysis because it resulted from the failure of a flashboard on Condit Dam.

[11] Maximum peak of record (34,000 ft^3/s on March 19, 1982) was not used in analysis because it was affected by an eruption of Mount St. Helens.

Table 3. Basin characteristics used in the regression analyses

[Map numbers identify gaging station locations on figures 2-10]

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12009500	1	1	11.7	58	8.5	545	0	96	87	4	30
12010000	1	2	54.8	42	20.5	910	0	77	109	4	30
12010500	1	3	16.4	43	15.5	480	0	93	99	4	31
12010600	1	4	2.15	435	3.7	750	0	90	110	4	31
12010700	1	5	17.9	28	5.8	385	0	99	92	4	30
12010800	1	6	1.99	564	2.3	555	0	100	105	4.5	30
12011000	1	7	18	52	8.0	689	0	97	110	4	33
12011100	1	8	46	107	1.11	250	0	95	120	4	33
12011200	1	9	9.43	101	7.5	740	0	97	100	4	30
12011500	1	10	41.4	95	11.6	754	0	79	84	4	30
12012000	1	11	20.4	113	9.3	111	0	92	100	4	30
12012200	1	12	1.79	117	2.5	340	0	85	79	4	30
12013500	1	13	130	16	27.3	641	0	84	87	4	30
12014500	1	14	27.8	45	12.4	585	0	88	100	4	30
12015100	1	15	3.98	206	3.1	665	0	100	90	3.5	30
12015500	1	16	29.8	38	10.1	660	0	99	72	4	30
12016700	1	17	2.05	213	2.0	460	0	95	102	4	31
12017000	1	18	219	5	57.5	250	0	93	84	3.5	30
12019600	1	19	1.98	85	2.65	680	0	95	76	4	32
12020000	1	20	113	44	26	1,000	0	90	91	4	32
12020500	1	21	46.7	17	13.4	810	0	95	80	4	30
12020900	1	22	44.9	31	20.5	925	0	88	80	3	30
12021000	1	23	48	29	2.37	830	0	82	80	3.5	32
12024000	1	24	42.4	118	14.9	1,280	0.02	91	69	3	29
12025000	1	25	155	35	33.6	900	.01	90	57	3	30
12025300	1	26	12.6	32	7.6	430	0	90	45	2.5	30
12025700	1	27	40	123	11.2	1,620	0	95	65	3	30
12026000	1	28	61.7	90	18.1	1,700	0	89	68	3	29
12026300	1	29	.58	217	1.2	420	0	95	46	3	33
12027500	1	30	895	13	67.9	800	.03	80	63	3	32

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12029700	1	31	1,155	--	--	--	--	--	61	--	--
12030000	1	32	24.8	68	10	525	0	98	62	3	31
12031000	1	33	1,294	8	9.45	700	.11	78	60	3	32
12032500	1	34	64.9	21	19.8	410	.62	89	72	3.5	32
12034200	1	35	65.9	13	14.4	650	.76	99	98	4	30
12034700	1	36	.33	1,720	1.15	1,600	0	90	135	5.5	28
12035000	1	37	299	14	28	500	.24	93	128	5	29
12035450	1	38	9.57	--	--	--	--	--	175	--	--
12035500	1	39	70.7	64	22.7	2,000	.04	89	201	5.5	27
12036000	1	40	74.1	58	25.3	1,950	.04	86	199	5.5	27
12036400	1	41	17.1	--	--	--	--	--	120	--	--
12036650	1	42	2.72	--	--	--	--	--	97	--	--
12037400	1	43	155	17	60.8	1,710	.03	90	150	5.5	28
12038750	1	44	1.16	1,556	1.9	2,450	0	100	180	8	28
12039000	1	45	130	23	36	1,000	.01	97	155	5.5	28
12039050	1	46	.56	147	.9	310	0	95	110	4.5	31
12039100	1	47	.15	127	.95	290	0	90	110	4.5	31
12039300	1	48	74.1	238	12.6	3,410	.03	98	200	8	24
12039400	1	49	.77	1,140	1.9	1,080	0	95	135	6	28
12039500	1	50	264	64	36.5	2,700	2.08	92	186	6.5	26
12040000	1	51	140	30	34.9	1,500	0	98	136	6.5	28
12040500	1	52	445	31	48.7	1,700	0	89	152	6.5	28
12041000	1	53	208	91	34.4	3,000	.1	79	167	6	26
12041200	1	54	253	66	44.8	2,440	.17	85	160	6	27
12041500	1	55	83.8	147	16.9	2,900	.48	82	99	5	27
12041600	1	56	.42	1,250	1.1	1,840	0	95	98	4	29
12042700	1	57	2.03	272	2.45	650	0	95	120	6	32
12042900	1	58	1.67	149	2.6	530	0	95	110	6	32
12043000	1	59	129	--	--	--	--	--	114	--	--
12043100	1	60	86.3	12	17.6	440	1.2	100	95	6	32

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12043163	1	61	32.0	--	--	--	--	--	104	--	--
12043300	2	62	51.2	30	18.4	805	0	100	124	5	32
12043430	2	63	14	297	6.5	1,280	0	100	90	3.5	32
12044000	2	64	48.6	242	16.7	2,190	16.69	98	91	3	29
12045500	2	65	269	64	36.6	3,700	.23	82	112	4	25
12046800	2	66	.69	590	2.45	1,110	0	85	27	3.5	31
12047100	2	67	4.77	274	5	780	0	65	23	3.5	29
12047300	2	68	46.6	381	9.9	3,000	1	99	60	3	28
12047500	2	69	15.5	298	9	1,550	0	97	41	2.5	28
12047700	2	70	2.28	358	4.6	2,740	0	100	55	3	29
12048000	2	71	156	196	22.4	4,500	.06	83	62	3.5	26
12049400	2	72	2.96	583	4	1,490	0	95	35	2	29
12050500	2	73	11.2	435	6.5	1,800	0	91	43	2.5	29
12052400	2	74	6.78	127	4.75	1,450	1.02	95	60	3	28
12053000	2	75	93.5	204	21.6	4,700	.11	80	97	5	25
12053400	2	76	.62	1,840	1.63	1,770	0	95	60	2.5	29
12054000	2	77	66.5	150	19.7	4,700	.3	95	113	3.5	26
12054500	2	78	51.3	325	11.8	3,830	.49	89	110	5	27
12054600	2	79	21.6	384	10	2,660	.28	88	103	4	28
12056300	2	80	.82	341	2.05	500	0	95	78	2.6	34
12056500	2	81	57.2	190	13.9	3,700	.17	92	161	6	26
12057500	2	82	93.7	94	23.5	3,100	6.4	93	145	5	27
12058000	2	83	1.83	--	--	--	--	--	99	--	--
12059800	2	84	26	220	8.8	2,450	.4	99.5	160	7.7	24
12060000	2	85	65.6	80	18	2,505	.16	98	161	5.5	27
12060500	2	86	76.3	64	24.5	2,100	.26	98	153	5.5	28
12061200	2	87	.76	408	1.8	870	0	95	110	2.6	30
12063000	2	88	3.16	118	3.4	924	0	100	57	3.5	34
12063500	2	89	19.2	--	--	--	--	--	60	--	--
12065500	2	90	1.51	295	1.85	1,120	0	99	61	3.5	34

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12066000	2	91	5.99	153	4.45	930	1.67	96	61	3.5	34
12067500	2	92	15	39	10.1	684	3.53	97	62	3.5	34
12068500	2	93	18.4	36	7.6	376	.71	98	61	4	34
12069550	2	94	13.8	43	9.3	490	3.35	88	55	3	32
12070000	2	95	5.01	43	3.7	289	0	80	37	3	34
12072000	2	96	15.3	100	6.1	400	4.58	98	50	3	34
12072600	2	97	1.61	108	2.4	280	.33	80	50	2.25	32
12073500	2	98	6.47	58	7.6	316	.15	77	54	3	34
12076500	2	99	39.3	26	8.4	420	1.07	96	84	4	30
12078400	2	100	17.4	54	8.6	600	4.85	98	59	3	31
12078600	2	101	1.12	289	1.9	470	0	95	57	3.3	31
12079000	2	102	89.8	50	27.8	1,340	.62	88	61	3	29
12081300	2	103	2.28	37	2.5	280	0	80	42	3	31
12082500	2	104	133	192	25.9	4,020	.38	82	94	3.5	25
12083000	2	105	75.2	155	13	2,740	.66	92	98	3.5	27
12084000	2	106	252	120	32.6	3,300	.33	85	92	3.5	26
12084500	2	107	28	145	8.6	2,600	.36	99	81	3.5	28
12086500	2	108	292	73	43.3	3,200	1.75	85	89	3.5	26
12087000	2	109	80.7	117	18.4	2,300	0	93	71	3.5	27
12088000	2	110	34.5	177	11.4	1,600	1.77	97	54	3.5	28
12090200	2	111	86.8	17	24.6	350	1	45	37	3	34
12090400	2	112	5.26	14	4.4	410	0	15	35	2.5	33
12091700	2	113	4.41	128	2.4	325	.05	60	43	2.25	32
12092000	2	114	92.8	630	15.5	4,100	.54	70	105	3.5	24
12093000	2	115	25.9	126	12.9	1,500	2.7	94	53	3	27
12093500	2	116	172	214	31.1	3,000	.82	90	85	3.5	26
12093900	2	117	76.2	--	--	--	--	--	93	--	--
12094000	2	118	78.9	289	22.6	4,000	.25	68	92	3.5	24
12095000	2	119	79.5	174	16.5	2,300	.63	97	65	3	28
12096500	2	120	438	105	45.3	2,200	.78	84	75	3	28

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12096800	2	121	1.01	1,480	2.4	4,410	0	95	80	2.8	21
12096950	2	122	4.31	873	2.6	4,150	.02	99	65	3.5	26
12097000	2	123	216	139	32.7	4,700	.46	77	80	3	22
12097500	2	124	73.5	143	20.3	4,200	.27	93	94	3	22
12097700	2	125	2.35	860	2.3	2,810	0	25	70	2.8	27
12097850	2	126	375	--	--	--	--	--	82	--	--
12099600	2	127	15.4	--	--	--	--	--	61	--	--
12100000	2	128	427	--	--	--	--	--	78	--	--
12101500	2	129	948	84	50.9	2,500	.31	79	74	3	25
12102800	2	130	.27	215	.9	350	.03	70	42	--	--
12103200	2	131	.78	117	1.6	350	0	95	39	2.7	33
12103400	2	132	34.8	309	8.3	3,500	0	100	95	2.5	18
12103500	2	133	11.5	557	4.6	3,370	0	61	97	3	20
12104000	2	134	4.67	630	3.6	3,190	.43	99	84	3	20
12104500	2	135	96.2	120	16.2	3,190	.02	91	88	3	20
12104700	2	136	3.23	760	3.1	3,200	0	100	70	3	24
12105000	2	137	8.56	377	4.6	3,220	0	82	99	3	23
12105710	2	138	16.7	198	10.1	2,890	.78	61	101	3	24
12106000	2	139	4.1	627	4.0	2,400	0	100	85	3	29
12106500	2	140	230	41	34.2	3,100	.09	90	85	3	25
12107200	2	141	2.17	352	3.6	1,330	0	95	70	2.9	30
12108500	2	142	27.4	54	14.1	883	0	47	48	2.5	30
12112500	2	143	53.4	19	12.5	496	4	81	48	2.5	30
12112600	2	144	63.0	2.5	14.1	450	1.7	80	47	--	34
12113000	2	145	399	33	64.3	2,400	.6	70	70	3	28
12113200	2	146	3.14	110	2.85	420	2.54	70	41	2.6	31
12113300	2	147	.3	25	.83	420	0	50	40	2.6	31
12113500	2	148	9.3	317	3.7	3,830	5.38	78	118	3	21
12114000	2	149	6.0	317	4	3,500	0	78	118	3	21
12114500	2	150	25.4	189	7.1	3,460	1.97	71	124	3	22

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12115000	2	151	40.7	116	12.2	3,230	1.47	77	120	3	23
12115500	2	152	13.4	386	6.4	3,360	0	87	119	3	25
12115700	2	153	4.64	--	--	--	--	--	119	--	--
12116100	2	154	.19	--	--	--	--	--	90	--	--
12117000	2	155	17.2	289	8.2	2,300	0	100	82	2.5	29
12118500	2	156	12.6	46	6.3	750	.13	83	53	2	30
12119600	2	157	12.7	221	6.4	770	0	91	45	2	29
12119700	2	158	6.8	206	6.6	770	0	95	45	2	31
12119800	2	159	3.05	95	2.6	360	0	75	47	2	32
12120600	2	160	17.6	--	--	--	--	--	80	--	--
12121000	2	161	27	144	10.6	940	.07	91	66	2.5	30
12121600	2	162	54.7	232	19.5	940	.04	88	53	2.5	30
12121700	2	163	3.9	290	3.3	880	0	97	55	2.5	31
12122500	2	164	13.9	--	--	--	--	--	45	--	--
12123000	2	165	10.7	42	7.5	375	1.4	87	43	2	32
12123300	2	166	2.46	127	3.25	450	0	90	45	2	31
12124000	2	167	13	74	8.6	365	.08	92	45	2	32
12125000	2	168	150	23	30.1	600	5.69	87	53	2.5	31
12125200	2	169	157	21	33	645	18.6	78	48	2.25	30
12126000	2	170	24.6	49	9.9	390	2.07	82	38	2	33
12126500	2	171	212	16	34.3	500	4.25	80	49	2.5	31
12127100	2	172	23.1	43	13.5	390	.17	55	39	1.7	32
12127300	2	173	3.67	108	4.2	340	.03	76	38	1.7	32
12127600	2	174	7.8	109	3.1	340	0	65	38	1.7	32
12130500	2	175	135	211	16.6	3,870	1.38	95	119	4	21
12131000	2	176	96.5	173	18.6	3,600	.52	95	126	4	21
12132700	2	177	.95	2,010	1.9	2,260	0	95	97	4	24
12133000	2	178	355	98	33.8	3,800	.9	85	122	4	21
12134000	2	179	146	132	27	3,800	.41	85	151	4.5	21
12134500	2	180	535	87	42.4	3,700	.73	85	128	4.5	22

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12135000	2	181	19	300	9.35	2,660	.84	75	88	4	26
12135500	2	182	8.31	610	5.9	1,800	0	90	75	4	28
12137500	2	183	74.5	80	19.2	3,120	.4	83	120	4	25
12141000	2	184	56.4	40	15.1	625	2.11	91	48	3	31
12141100	2	185	834	65	40.3	3,560	1.45	98	105	4.5	26
12141300	2	186	154	117	29.6	3,710	1.3	75	137	4	23
12141500	2	187	169	91	37.2	3,500	1.3	74	132	3.5	23
12142000	2	188	64	85	17.3	3,200	.78	77	131	3.5	26
12142300	2	189	7.67	210	4.4	3,380	13.8	76	65	2.5	29
12143000	2	190	95.7	68	24.2	3,100	1.67	75	119	3	26
12143300	2	191	.15	2,800	1.15	2,850	0	70	121	3.9	21
12143310	2	192	.34	2,530	1.45	3,900	0	20	121	4	26
12143400	2	193	41.6	760	2.25	3,390	.31	80	120	4	22
12143600	2	194	65.9	--	--	--	--	--	114	--	--
12143700	2	195	1.57	--	--	--	--	--	94	--	--
12143900	2	196	3.64	--	--	--	--	--	88	--	--
12144000	2	197	81.7	102	27.2	2,900	.37	81	110	3.5	25
12144500	2	198	375	72	44.8	3,300	1.23	76	118	3	25
12145500	2	199	30.6	179	12.5	1,330	0	99	77	2.7	29
12146000	2	200	15.5	52	8.4	410	.06	90	47	2.5	31
12147000	2	201	17.1	50	11.2	781	.23	97	53	2	30
12147500	2	202	39.9	103	15.2	2,590	.03	73	97	3.5	28
12147600	2	203	5.34	225	3.9	3,230	1.2	98	66	2.5	29
12148000	2	204	19.7	162	10.2	2,940	7.11	59	112	5	27
12148100	2	205	2.19	610	4.1	2,290	0	99	80	3.2	29
12148500	2	206	81.4	115	18.2	2,300	1.79	73	94	5	28
12149000	2	207	603	40	60.8	2,400	1.16	79	99	4.5	26
12150800	2	208	1,537	57	44.7	3,320	1.74	96	105	4	25
12152500	2	209	54.5	46	20.5	1,500	.18	96	68	4	29
12153000	2	210	17	40	8.7	376	.12	94	42	3	30

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12156400	2	211	.97	193	1.8	300	0	10	38	2.1	34
12157000	2	212	15.4	78	6	220	.06	75	37	3	31
12161000	2	213	119	46	36	2,600	.08	94	106	3.5	25
12162500	2	214	199	43	47.2	2,300	.05	94	94	3.5	26
12164000	2	215	46.2	132	18.7	1,400	.87	92	91	3	29
12165000	2	216	20	308	10.2	2,530	0	70	100	4.5	24
12166500	2	217	65.9	101	22.6	2,540	0	98	89	3	30
12167000	2	218	262	33	42	2,300	0	92	83	3.5	28
12168500	2	219	52	75	16.3	1,290	2.48	91	64	2.5	30
12169500	2	220	7.52	74	6	270	3.45	60	37	2.1	36
12172000	2	221	63.2	115	18.5	4,400	0	76	74	3.5	18
12172500	2	222	780	38	56	4,800	.2	78	75	3	16
12173500	2	223	206	194	19.6	5,700	.05	79	77	3	18
12174000	2	224	210	190	20.5	5,700	.05	79	77	3	18
12174500	2	225	999	34	59	4,990	.16	78	75	3	17
12175500	2	226	105	257	15.2	5,800	.1	61	129	4	22
12176000	2	227	114	218	18.2	5,600	.09	63	128	4	22
12177500	2	228	22	560	7.8	5,000	.45	84	88	3.5	24
12178100	2	229	27.9	578	7.7	4,140	.31	77	125	4	26
12181100	2	230	2.36	876	2.6	6,240	.05	1	154	5.5	16
12181200	2	231	.08	36	.3	5,390	0	67	150	5.5	16
12182500	2	232	172	156	28.6	4,400	.17	78	131	4.5	23
12184300	2	233	1.7	1,640	2	4,020	.02	99	100	3.5	28
12185300	2	234	3.03	--	--	--	--	--	168	--	--
12186000	2	235	152	125	24.5	3,700	.13	81	139	4.5	21
12187500	2	236	293	89	34.4	3,800	.07	80	128	4.5	21
12188300	2	237	4.32	861	3.2	3,750	.14	99	125	5	25
12189000	2	238	335	96	42	4,500	.15	74	132	4.5	20
12189400	2	239	1.3	842	2.6	1,620	0	80	79	4	28
12189500	2	240	714	69	54.9	3,900	.1	79	125	4.5	21

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12191500	2	241	211	89	23.3	3,900	.71	69	126	3.5	20
12191800	2	242	8.36	667	6.8	3,960	0	90	125	4.5	22
12196000	2	243	10.7	203	7.1	1,280	0	99	58	3	29
12196200	2	244	6.56	422	3.8	2,470	.6	85	75	3	31
12196500	2	245	34.2	143	12.6	2,310	.64	88	77	3	31
12197200	2	246	1.82	1,080	3.6	1,970	0	90	60	2.4	31
12199000	2	247	3,020	--	--	--	--	--	46	--	--
12199800	2	248	3.56	435	3.8	2,700	0	62	60	2.5	33
12200700	2	249	2.58	166	2.9	490	0	70	35	2	37
12200800	2	250	2.35	398	2.35	1,220	0	95	48	2.5	31
12201500	2	251	87.8	14	22.2	904	1.82	87	49	2	30
12204400	2	252	1.15	1,700	2.2	4,070	0	95	80	3.8	22
12205000	2	253	105	106	17.6	4,300	.19	71	109	3.5	19
12207200	2	254	282	68	38.2	3,200	.02	93	90	4	22
12208000	2	255	73.3	349	17.4	3,540	.04	97	90	4	22
12209000	2	256	103	58	25.8	3,000	.29	84	92	3.5	25
12209500	2	257	23.1	334	9.5	3,020	.09	90	93	3	24
12210500	2	258	584	62	43.1	3,000	.24	86	92	3	22
12211500	2	259	648	41	63.1	2,760	.23	82	88	3	23
12212000	2	260	22.3	23	8.2	154	1.35	20	42	2.5	28
12212700	2	261	.74	78	1.45	290	0	25	40	2.7	29
12212800	2	262	.24	115	1.1	230	0	20	40	2.7	29
12213100	2	263	786	12	64.6	1,750	.03	89	79	2.6	28
12395800	8	264	4.75	60	5.2	2,430	0	85	36	1.5	17
12395900	8	265	16.8	67	8.7	2,490	1.48	86	36	1.5	16
12396000	8	266	68.3	109	16.2	3,650	.41	99	38	1.4	16
12396100	8	267	16.8	167	11.2	3,630	0	99	37	1.5	17
12396450	8	268	11.3	225	7.7	3,510	0	99	29	1.5	17
12396900	8	269	70.2	140	17.4	4,760	1.7	100	45	1.4	18
12397500	8	270	122	19.6	16.6	4,900	3.9	96	37	2	16

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12398000	8	271	142	15	21	4,660	4.01	96	37	2	16
12400500	4	272	225	93	34.8	4,120	.05	96	25	2	15
12401500	4	273	2,220	20	125.4	4,560	.2	96	27	2	13
12403700	4	274	1.18	645	1.8	4,560	0	80	24	1.4	14
12405400	4	275	11.9	703	5.2	3,180	0	99	20	1.3	15
12407500	4	276	48.2	53	18.5	2,390	7.26	85	18	1.3	16
12407520	4	277	36	71	13.6	3,160	0	97	20	1.3	14
12407600	4	278	4.08	520	3.55	3,210	0	90	20	1.3	16
12407700	4	279	94.1	109	18.7	3,160	.01	94	22	1.3	16
12408200	4	280	1.65	295	2.25	3,690	0	99	34	1.5	17
12408300	4	281	132	54	23.2	3,475	.61	98	29	1.3	16
12408400	4	282	11.1	250	5.5	3,420	0	99	25	1.4	16
12408420	4	283	37	237	9.8	2,570	0	95	20	1.3	16
12408500	4	284	83	121	15.8	3,510	0	96	26	1.3	16
12409000	4	285	1,007	16	71.3	3,000	.63	89	21	1.3	16
12409500	4	286	160	99	27.8	3,650	0	87	20	1.4	16
12410000	4	287	56	126	14.6	3,260	16.1	82	22	1.4	16
12410600	4	288	18.1	237	7.2	3,770	0	90	21	1.4	15
12410650	4	289	6.96	317	4.3	3,330	0	90	22	1.4	15
12423550	8	290	2.18	109	3.55	2,710	0	2	20	1.5	17
12423700	8	291	.59	178	1.95	2,730	0	5	22	1.5	16
12423900	8	292	2.02	453	2.7	2,680	0	10	22	1.4	19
12424000	8	293	689	12.5	76.6	2,710	.04	78	20	1.5	20
12427000	8	294	115	63	12.2	2,800	1.33	91	30	1.9	17
12429200	8	295	10.5	20	7.2	2,040	.5	63	22	1.8	16
12429600	8	296	31.9	118	13.9	2,680	0	80	28	1.4	19
12429800	8	297	1.83	355	2.4	2,600	0	80	18	1.4	16
12430370	8	298	2.07	160	2.2	2,340	0	30	18	1.4	17
12431000	8	299	665	13	47.9	2,400	.54	60	25	1.5	17
12431100	8	300	11.9	143	6.3	2,200	0	25	20	1.5	18

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12433200	8	301	179	27	35.9	2,380	0	65	20	1.4	16
12433300	8	302	1.14	230	1.8	2,580	0	.01	15	1.3	18
12433542	8	303	6.00	--	--	--	--	90	20	--	--
12433561	8	304	19.1	--	--	--	--	90	18	--	--
12433580	4	305	23.2	7.5	8	2,570	0	0	15	1.3	17
12433800	4	306	4.25	173	6	4,030	0	95	19	1.4	13
12437500	7	307	122	84	17.1	3,100	.2	91	21	1.2	15
12437930	7	308	35.4	57	10.1	2,260	0	0	12	1.2	15
12437950	7	309	4.75	350	3.05	2,100	0	0	12	1.2	17
12437960	7	310	28	75	10.7	2,700	0	.1	12	1.2	14
12439300	4	311	60.1	237	13.8	3,280	.15	35	15	1.2	15
12441700	4	312	17.1	207	6.8	6,250	.05	25	32	1.5	9
12442000	4	313	130	273	16.6	5,520	0	79	29	1.9	10
12445800	4	314	4.12	379	4.15	3,740	0	99	18	1.3	15
12447380	4	315	4.63	837	3.6	5,790	0	63	80	3.5	11
12447390	4	316	22.1	292	8.4	6,300	.12	79	35	2	8
12447400	4	317	3.8	814	5.15	4,760	0	99	19	1.9	7
12447430	4	318	4.05	508	4.2	4,770	0	87	22	2	8
12448700	4	319	3.15	1,149	3.4	5,320	.09	73	30	1.8	8
12448900	4	320	16.6	508	7.8	4,390	0	74	35	2	9
12448998	4	321	245	--	--	--	--	90	40	--	--
12449500	4	322	1,301	72	58.8	5,180	.13	76	35	1.7	9
12449600	4	323	62	331	9.6	5,090	.4	2.4	24	2	12
12449790	4	324	8.51	66	6.6	4,630	0	100	30	1.5	14
12449950	4	325	1,772	42	92.1	4,780	.11	78	32	1.7	10
12451000	4	326	321	137	28.7	5,130	.31	83	99	2.8	16
12451500	4	327	64.8	239	19.7	4,930	.42	68	52	2.8	16
12452800	4	328	203	91	40.4	5,230	.1	91	59	2	16
12452880	4	329	7.15	818	3.8	3,990	0	93	40	1.8	16
12453000	4	330	419	68	58.2	4,390	.05	92	45	2	17

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12454000	4	331	150	89	23.1	4,590	.07	51	108	3.5	17
12454290	4	332	1.02	1,623	1.9	4,620	0	77	35	1.6	15
12455000	4	333	273	46	34	4,720	2.29	64	100	3.5	17
12456300	4	334	3.34	509	3.8	3,080	.01	96	40	2	14
12456500	4	335	172	56	32.1	4,440	.4	87	78	2.6	16
12457000	4	336	591	26	41.9	4,540	1.06	76	69	3.1	16
12457300	4	337	2.55	495	2.8	2,760	0	95	41	2	15
12457900	4	338	2.25	1,491	2.9	5,590	0	84	80	3	15
12458000	4	339	193	81	28.2	5,260	.48	85	88	3.3	17
12458900	4	340	1.36	663	2.25	2,140	0	90	23	1.4	16
12459000	4	341	1,000	25	66.6	4,590	.93	80	67	2.8	16
12459400	4	342	3.44	1,400	2.4	4,830	3.7	90	27	3.5	16
12461000	4	343	1,160	24	71.9	4,500	1.01	76	62	3	17
12461100	4	344	15.4	456	7.4	3,530	0	90	25	1.5	17
12461200	4	345	2.49	574	3.6	2,980	0	99	22	1.5	17
12461400	4	346	39.8	309	11.1	3,400	0	88	25	1.5	17
12461500	4	347	18.6	432	6.1	3,060	0	95	24	1.5	16
12462000	4	348	81.2	185	17.4	3,100	0	80	21	1.5	17
12462500	4	349	1,301	26.5	72.5	3,890	1.13	75	60	3	18
12463000	7	350	99.9	30	19.8	2,800	0	0	11	1.1	18
12463600	7	351	2.22	235	2.1	2,280	0	0	10	0.9	18
12463700	7	352	.4	105	1.4	2,500	0	0	10	.9	18
12464600	4	353	.82	192	2.3	2,460	0	0	12	.9	17
12464650	7	354	.68	54	1.6	2,480	0	0	17	1.3	18
12465000	7	355	1,042	13	76.8	2,200	.39	2.9	13	1	18
12465300	7	356	1.12	209	2.3	2,450	0	0	13	.9	18
12465400	7	357	327	21	30.2	2,100	.33	0	12	1	17
12467000	7	358	2,228	10	125.3	2,150	13	0	11	1	19
12467400	7	359	2.7	180	2.2	2,400	0	0	10	.9	18
12470300	7	360	1.57	100	1.95	2,620	0	.01	10	.9	19

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
12471100	7	361	8.52	24	6.6	1,960	0	0	12	.9	18
12474700	5	362	1.07	652	--	--	--	--	--	--	--
12480700	5	363	2.65	548	3.5	3,990	0	95	30	1.4	17
12483300	5	364	2.12	503	3.4	3,280	0	25	18	1.5	18
12483800	5	365	69.5	180	18.7	4,830	0	90	25	1.5	17
12485900	5	366	2.26	494	4.15	3,290	0	0	13	1	16
12487400	5	367	12.7	189	4.5	4,960	7.8	68	55	3.5	16
12488300	5	368	1.1	1,300	2	4,800	0	99	48	2.5	19
12488500	5	369	78.9	64	22.6	4,860	.18	91	74	3.5	19
12489500	5	370	638	44	44.8	4,100	0	94	45	1	18
12491700	5	371	3.91	1,070	3.1	4,300	0	99	25	2.4	18
12492500	5	372	239	42	30.4	4,740	2.07	90	57	2.2	19
12500500	5	373	68.9	193	17.3	4,700	0	95	53	1.5	18
12501000	5	374	24.8	286	11.2	4,280	0	98	54	1.5	18
12502000	5	375	119	140	24.9	3,870	.1	94	49	2	19
12502500	5	376	173	86	45.1	3,200	0	65	38	1.5	18
12506000	5	377	122	132	25.7	3,550	0	80	29	1.5	16
12506500	5	378	81.5	178	18.9	2,990	0	60	39	1.5	16
12507600	5	379	.38	925	1.6	3,520	0	95	24	1.5	21
12508500	5	380	434	98	32	2,910	0	40	18	1.3	20
12512600	7	381	2.44	110	2.9	1,520	0	0	10	.9	22
12512700	7	382	3.71	61	5	1,300	0	0	10	.9	21
13334500	9	383	156	150	23.7	3,760	0	55	22	1.5	22
13334700	9	384	170	140	27.1	3,550	0	45	24	1.5	21
13335200	9	385	1.8	296	3.2	1,520	0	0	14	1.2	24
13343450	9	386	6.83	171	5.6	1,430	0	0	14	1.1	24
13343520	9	387	5.6	281	4.6	2,490	0	0	15	1.2	23
13343620	9	388	.54	100	1.75	2,640	0	0	17	1.2	25
13343660	9	389	1.85	80	1.85	2,540	0	0	16	1.5	25
13343800	9	390	66.2	89	19.6	1,980	0	0	15	1.2	25

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
13344500	9	391	431	72	50.6	3,000	0	35	23	1.5	25
13348000	9	392	132	19	23.6	2,770	0	8.3	22	1.3	26
13348400	9	393	.88	80	1.5	2,570	0	0	21	1.5	24
13348500	9	394	27.1	28	15	2,670	0	.4	21	1.3	24
13349210	9	395	796	19	58.9	2,990	0	34	25	1.4	23
13349300	9	396	2.1	145	2.12	2,270	0	0	20	1.3	22
13349350	9	397	1.64	79	1.85	2,500	0	0	18	1.4	21
13349400	9	398	302	13	49.6	2,200	.02	5.3	18	1.4	22
13349500	9	399	523	23	28.2	2,200	6.1	37	17	1.3	20
13349800	9	400	1.33	67	1.3	2,120	0	15	13.5	1.1	21
13350500	9	401	189	19	48.1	2,680	0	.1	18	1.3	26
13351000	9	402	2,500	12	147.7	2,410	.28	15	18	1.3	22
13352200	9	403	1.51	48	2.1	1,900	0	0	13	1.2	20
13352500	9	404	679	19	68.7	1,870	4.85	7	13	1	20
13352550	9	405	1.27	166	2.65	1,640	0	0	12	1	25
14013000	9	406	59.6	160	13.3	3,860	0	87	40	2.4	20
14013500	9	407	17	294	8.4	3,140	0	33	36	2.4	21
14015900	9	408	1.94	214	2.8	1,850	0	0	20	2	25
14016000	9	409	48.4	176	16.4	2,360	0	81	29	2	25
14016500	9	410	102	151	17.7	3,750	.09	85	30	1.8	25
14016600	9	411	4.12	376	4.3	2,850	0	5	23	1.5	24
14016650	9	412	3.01	275	5	2,440	0	0	21	1.6	24
14017000	9	413	361	82	35.4	2,950	0	40	25	1.8	25
14017040	9	414	2.68	167	3.2	2,080	0	0	19	1.4	24
14017070	9	415	4.92	77	4	1,950	0	0	18	1.4	24
14017200	9	416	4.16	91	3.8	1,730	0	0	16	1	27
14017500	9	417	733	38	68.6	2,200	0	30	20	1.2	23
14018500	9	418	1,657	60	59.4	1,600	.15	25	22	1.5	19
14034250	6	419	.5	280	1.1	2,750	0	0	13	1	19
14034325	6	420	8.35	100	6.1	3,260	.02	0	10	1.4	20

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
14107000	6	421	151	52	31	4,690	.07	88	58	2.5	19
14110000	6	422	360	53	45.2	4,520	.28	87	56	2.5	20
14111800	6	423	10.4	380	7.2	4,290	0	95	25	1.7	20
14112000	6	424	83.5	116	17	3,160	0	92	25	1.3	21
14112200	6	425	.71	156	2.4	1,890	0	5	20	1.6	22
14112400	6	426	26.9	205	11.6	3,060	.2	81	21	1.7	20
14112500	6	427	280	68	34.7	2,600	.04	70	25	1.4	21
14113000	6	428	1,297	46	88.7	3,140	.09	77	36	2.5	21
14121300	6	429	32.4	428	10.3	5,190	0	77	106	2.8	22
14121500	6	430	69.3	123	14.6	3,450	.58	92	82	3.2	23
14122000	6	431	185	195	21.7	3,940	.2	84	82	4.2	21
14123000	6	432	294	101	39.5	3,380	.02	88	71	2.9	23
14123500	6	433	386	93	45.2	3,220	.26	86	66	2.9	23
14124500	6	434	114	135	21.3	2,960	0	93	70	3.8	24
14125000	6	435	117	135	16	2,910	0	93	70	3.8	24
14125200	6	436	4.1	412	4.4	1,910	0	95	55	3.3	25
14125500	6	437	134	140	25.9	2,770	.02	92	70	3.5	24
14126300	6	438	.54	590	1.4	710	0	80	70	3.5	25
14127000	6	439	108	103	20	2,740	.03	98	103	4	25
14127200	6	440	1.8	253	3.1	2,270	0	98	116	5	30
14128500	6	441	225	62	29.6	2,460	.03	52	99	4	25
14143200	3	442	2.74	292	4.2	1,310	0	80	75	4	29
14143500	3	443	108	57	23.9	1,610	0	94	100	4	28
14144000	3	444	23.8	120	10.7	810	0	85	70	3.9	29
14144550	3	445	2.14	337	2.3	750	0	95	62	2.9	30
14144600	3	446	.51	240	1.3	560	0	50	44	3	31
14211900	3	447	21.6	17	10.5	240	0	10	42	2.5	31
14212000	3	448	18.3	285	5.2	3,010	0	93	73	3.5	29
14213200	3	449	127	227	25.4	3,950	.08	93	100	3	26
14213500	3	450	13.2	144	6.9	3,950	.15	93	106	3.5	23

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
14214000	3	451	5.87	303	5.2	4,490	3.41	92	86	3.5	25
14214500	3	452	11.7	356	5.5	3,980	.17	96	88	3.5	25
14215000	3	453	26	294	8.8	4,000	1.54	96	90	3.5	25
14215500	3	454	11.6	200	4.2	2,960	.86	100	105	3.5	25
14216000	3	455	227	141	36.7	3,540	.44	95	104	4	24
14216500	3	456	131	80	19.1	3,180	.15	95	119	4	26
14216800	3	457	22.4	367	11.4	2,920	0	78	132	4	27
14218000	3	458	481	68	51.9	3,120	1.91	93	113	3.7	25
14218300	3	459	2.31	832	2.6	1,660	0	99	115	4.1	28
14219000	3	460	64.9	128	16.2	2,410	.02	98	102	4	27
14219500	3	461	665	50	67.8	2,830	2.56	95	112	3.7	27
14219800	3	462	12.6	455	5.5	2,100	0	100	105	4.8	28
14221500	3	463	40.8	94	17.9	980	.12	91	76	3.5	29
14222500	3	464	125	78	23.3	1,940	.01	99	93	3.5	28
14222700	3	465	.53	80	1.5	250	0	35	45	2.9	31
14223000	3	466	179	83	39.1	2,100	.28	99	96	4	29
14223500	3	467	198	73	45.2	1,880	.01	98	82	4	29
14223800	3	468	1.06	525	2.05	580	0	95	46	3.8	32
14224500	3	469	56.5	188	16.6	4,330	.02	91	102	3	20
14225500	3	470	19.2	354	8.2	4,700	4.17	74	107	3	21
14226500	3	471	287	111	24	4,230	.45	88	95	3	21
14226800	3	472	1.22	1,250	2.15	4,360	0	95	95	4	24
14226900	3	473	1.82	1,080	2.25	3,760	0	95	100	4	24
14230000	3	474	50	275	12.1	4,010	.02	94	99	3	22
14231100	3	475	2.29	1,080	3	2,460	0	80	65	3.3	26
14231700	3	476	5.25	358	4.1	4,090	.5	96	80	3.5	16
14232000	3	477	66.3	123	15.5	3,740	0	75	75	3	25
14232500	3	478	321	84	38.1	4,130	.15	76	84	3.5	23
14233200	3	479	1.48	1,031	1.8	4,060	0	100	95	3.7	24
14233500	3	480	1,040	30	62.6	3,760	.2	86	86	4	24

Table 3. Basin characteristics used in the regression analyses--Continued

Station number	Regression region	Map number	Contributing drainage area (square miles)	Main channel slope (feet per mile)	Stream length (miles)	Elevation (feet above sea level	Storage, percent of contributing drainage area	Forest, percent of contributing drainage area	Mean annual precipitation, (inches)	24-hour, 2-day precipitation (inches)	Mean minimum January air temperature (degrees Fahrenheit)
14235000	3	481	1,162	16.5	89.4	3,430	.18	86	72	4	25
14235300	3	482	.79	890	1.8	2,580	0	99	85	3.9	28
14235500	3	483	16.4	276	5.7	2,450	.12	76	87	3.5	28
14236200	3	484	141	43	22.7	2,330	.01	90	84	3.5	28
14236500	3	485	156	39	27	1,990	.01	90	83	3.5	28
14237000	3	486	3.29	178	2.7	985	0	52	56	3	29
14237500	3	487	37.8	136	10.8	1,640	0	76	60	3	29
14238000	3	488	1,400	14	99.9	3,150	.15	86	72	3.5	26
14239000	3	489	77.6	35	26.4	630	0	91	56	3.5	28
14239100	3	490	.36	105	1.15	650	0	95	48	3	30
14239700	3	491	.38	390	1.1	470	0	80	46	3.9	31
14240800	3	492	129	--	--	--	--	--	75	--	--
14241100	3	493	284	--	--	--	--	--	84	--	--
14241490	3	494	117	--	--	--	--	--	97	--	--
14242500	3	495	474	78	43.9	2,310	.93	94	84	3.5	29
14242600	3	496	.64	29.8	12.5	540	0	80	57	4.1	31
14243000	3	497	2,198	11	133.2	2,540	.26	88	71	3.7	27
14243500	3	498	19.6	284	8.6	906	0	97	72	4	32
14245000	3	499	119	49	28.8	1,390	.08	99	69	3.5	31
14247500	3	500	65.8	48	19.4	1,190	.02	88	94	4	32
14248100	3	501	1.13	266	1.6	280	0	90	107	4.1	32
14248200	3	502	5.48	269	4.1	575	0	100	85	3.5	34
14249000	3	503	39.9	142	10.6	1,350	0	90	116	4	31
14250500	3	504	15.7	150	7	1,180	0	99	103	4	30

Table 4. Regression equations for estimating flood discharges at ungaged sites in Washington

[Q, flood magnitude, in cubic feet per second; A, total drainage area, in square miles; P, mean annual precipitation, in inches; F, forest cover, in percent of contributing drainage area; a, regression constant; b, c, and d, regression coefficients; --, regression coefficient not determined; <, less than]

Region	Number of stations used in analysis	Regression equation	Exceedance probability	Constant a	Coefficients b	Coefficients c	Equivalent years of record	Standard error of prediction, percent
1	61	$Q = aA^bP^c$	0.5	0.350	0.923	1.24	1	32
			.1	.502	.921	1.26	2	33
			.04	.590	.921	1.26	3	34
			.02	.666	.921	1.26	3	36
			.01	.745	.922	1.26	4	37
2	202	$Q = aA^bP^c$	.5	.090	.877	1.51	1	56
			.1	.129	.868	1.57	1	53
			.04	.148	.864	1.59	2	53
			.02	.161	.862	1.61	2	53
			.01	.174	.861	1.62	3	54
3	63	$Q = aA^bP^c$	.5	.817	.877	1.02	1	57
			.1	.845	.875	1.14	1	55
			.04	.912	.874	1.17	2	54
			.02	.808	.872	1.23	2	54
			.01	.801	.871	1.26	3	55
4	60	$Q = aA^bP^c$	.5	.025	.880	1.70	1	82
			.1	.179	.856	1.37	1	84
			.04	.341	.850	1.26	1	87
			.02	.505	.845	1.20	2	90
			.01	.703	.842	1.15	2	92
5	19	$Q = aA^b$	.5	14.7	.815	--	1	96
			.1	35.2	.787	--	2	63
			.04	48.2	.779	--	3	56
			.02	59.1	.774	--	5	53
			.01	71.2	.769	--	6	52
6	23	$Q = aA^bP^c$	.5	2.24	.719	.833	1	63
			.1	17.8	.716	.487	2	69
			.04	38.6	.714	.359	2	72
			.02	63.6	.713	.276	3	74
			.01	100	.713	.201	3	77
7	17	$Q = aA^b$	.5	8.77	.629	--	2	128
			.1	50.9	.587	--	7	63
			.04	91.6	.574	--	12	54
			.02	131	.566	--	15	53
			.01	179	.558	--	16	56

Table 4. Regression equations for estimating flood discharges at ungaged sites in Washington--Continued

Region	Number of stations used in analysis	Regression equation	Exceedance probability	Constant a	Coefficients b	Coefficients c	Equivalent years of record	Standard error of prediction, percent
8	23	$Q = aA^b$	0.5	12.0	0.761	--	<1	133
			.1	32.6	.706	--	1	111
			.04	46.2	.687	--	1	114
			.02	57.3	.676	--	1	119
			.01	69.4	.666	--	1	126
9	36	$Q = aA^bP^c$	.5	0.803	.672	1.16	2	80
			.1	15.4	.597	.662	6	57
			.04	41.1	.570	.508	8	55
			.02	74.7	.553	.420	10	55
			.01	126	.538	.344	12	56

Table 5. Maximum and minimum values of basin characteristics used in the regression analysis, by regions

[--, basin characteristics not used in regression equation]

Region[1]	Contributing drainage area (square miles)	Mean annual precipitation (inches)
Region 1		
Maximum	1,294	201
Minimum	0.15	45.0
Region 2		
Maxmimum	3,020	170
Minimum	.08	23.0
Region 3		
Maximum	2,198	132
Minimum	.36	42.0
Region 4		
Maximum	2,220	108
Minimum	.66	12.0
Region 5		
Maximum	638	--
Minimum	.38	--
Region 6		
Maximum	1,297	116
Minimum	.5	10.0
Region 7		
Maximum	2,228	--
Minimum	.21	--
Region 8		
Maximum	689	--
Minimum	.59	--
Region 9		
Maximum	2,500	40.0
Minimum	.54	12.0

[1]See figure 1 for location.

☆ U.S. GOVERNMENT PRINTING OFFICE: 1998 - 689-108 / 40918 REGION NO. 10