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Methods for Estimating Selected Low-Flow Statistics and Development of Annual Flow-Duration Statistics for Ohio

Scientific Investigations Report 2012–5138

U.S. Department of the Interior
U.S. Geological Survey

Cover. Stream channel during low-flow conditions on Big Walnut Creek at Sunbury, Ohio. (Rendering based on original photograph by Al Dillenburg, U.S. Geological Survey.)

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By G.F. Koltun and Stephanie P. Kula

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KEN SALAZAR, Secretary

U.S. Geological Survey
Marcia K. McNutt, Director

U.S. Geological Survey, Reston, Virginia: 2013

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Suggested citation:
Koltun, G.F., and Kula, S.P., 2013, Methods for estimating selected low-flow statistics and development of annual flow-duration statistics for Ohio: U.S. Geological Survey Scientific Investigations Report 2012–5138, 195 p.

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Conversion Factors

Inch/Pound to SI

Multiply	By	To obtain
	Length	
inch (in.)	2.54	centimeter (cm)
centimeter (cm)	0.3937	inch (in.)
inch (in.)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
	Area	
square foot (ft^2)	929.0	square centimeter (cm^2)
square foot (ft^2)	0.09290	square meter (m^2)
square mile (mi^2)	259.0	hectare (ha)
square mile (mi^2)	2.590	square kilometer (km^2)
	Flow rate	
cubic foot per second (ft^3/s)	0.02832	cubic meter per second (m^3/s)
cubic foot per second per square mile [$(ft^3/s)/mi^2$]	0.01093	cubic meter per second per square kilometer [$(m^3/s)/km^2$]
	Hydraulic gradient	
foot per mile (ft/mi)	0.1894	meter per kilometer (m/km)

Temperature in degrees Fahrenheit (°F) may be converted to degrees Celsius (°C) as follows:

°C=(°F-32)/1.8

Horizontal coordinate information is referenced to the North American Datum of 1983 (NAD 83).

A climatic year is defined as the 12-month period from April 1 to March 31 and is designated by the calendar year in which it ends.

A water year is the 12-month period from October 1 through September 30 and is designated by the calendar year in which it ends.

Abbreviations

APE average absolute percent error

APEE annual percentage equaled or exceeded

ESRI Environmental Systems Research Institute

FDC flow-duration curves

HUC hydrologic unit code

IDW inverse-distance weighted

LCTR long-term continuous record

LFPR low-flow partial record

SAS Statistical Analysis System

SVI streamflow-variability index

USGS U.S. Geological Survey

WLS weighted least squares

Methods for Estimating Selected Low-Flow Statistics and Development of Annual Flow-Duration Statistics for Ohio

By G.F. Koltun and Stephanie P. Kula

Abstract

This report presents the results of a study to develop methods for estimating selected low-flow statistics and for determining annual flow-duration statistics for Ohio streams. Regression techniques were used to develop equations for estimating 10-year recurrence-interval (10-percent annual-nonexceedance probability) low-flow yields, in cubic feet per second per square mile, with averaging periods of 1, 7, 30, and 90-day(s), and for estimating the yield corresponding to the long-term 80-percent duration flow. These equations, which estimate low-flow yields as a function of a streamflow-variability index, are based on previously published low-flow statistics for 79 long-term continuous-record streamgages with at least 10 years of data collected through water year 1997. When applied to the calibration dataset, average absolute percent errors for the regression equations ranged from 15.8 to 42.0 percent. The regression results have been incorporated into the U.S. Geological Survey (USGS) *StreamStats* application for Ohio (*http://water.usgs.gov/osw/streamstats/ohio.html*) in the form of a yield grid to facilitate estimation of the corresponding streamflow statistics in cubic feet per second. Logistic-regression equations also were developed and incorporated into the USGS *StreamStats* application for Ohio for selected low-flow statistics to help identify occurrences of zero-valued statistics.

Quantiles of daily and 7-day mean streamflows were determined for annual and annual-seasonal (September–November) periods for each complete climatic year of streamflow-gaging station record for 110 selected streamflow-gaging stations with 20 or more years of record. The quantiles determined for each climatic year were the 99-, 98-, 95-, 90-, 80-, 75-, 70-, 60-, 50-, 40-, 30-, 25-, 20-, 10-, 5-, 2-, and 1-percent exceedance streamflows. Selected exceedance percentiles of the annual-exceedance percentiles were subsequently computed and tabulated to help facilitate consideration of the annual risk of exceedance or nonexceedance of annual and annual-seasonal-period flow-duration values. The quantiles are based on streamflow data collected through climatic year 2008.

Introduction

To address the needs for estimating low-flow statistics at ungaged locations in Ohio and for stochastically relevant annual flow-duration statistics, a study was conducted by the U.S. Geological Survey (USGS), in cooperation with the Ohio Water Development Authority, to develop methods for estimating selected low-flow statistics with regulatory significance[1] and to compute and report stochastically relevant annual flow-duration statistics for Ohio streams.

Streamflow statistics are used for a variety of purposes. Among other uses, both low-flow and flow-duration statistics are particularly useful for making decisions about the suitability of a stream to act as an industrial or public water supply or as a suitable destination for waste effluents. These suitability questions frequently hinge on the impact of these uses on aquatic biota in the affected streams; thus, the statistics that have been adopted for regulatory purposes typically are biologically relevant. In spite of the widespread need for such statistics, the streamflow data required to compute these statistics have been collected only at a small number of locations in Ohio. Consequently, it is important that streamflow statistics be determined for gaged locations and that, whenever possible, suitable methods are developed to permit estimation of those statistics at ungaged locations.

Traditional flow-duration curves (FDCs) show the percentage of time that daily mean streamflow of a given magnitude was equaled or exceeded over a long period of time (many years). While traditional FDCs provide useful information about long-term streamflow exceedance characteristics, their utility is diminished when trying to answer questions about exceedance characteristics within a typical year. Another drawback of traditional FDCs is that they are not appropriate for extracting stochastic hydrologic information to address water-resources problems (Sugiyama and others, 2003).

[1]For the purposes of this report, regulatory-significant statistics are defined as those statistics that are used by regulators because of legal mandate or because of recommended best-management practices.

Purpose and Scope

The purpose of this report is to (1) describe analytical methods and resulting equations for estimating 10-percent annual-nonexceedance probability of the 1-, 7-, 30-, and 90-day low-flow yields and 80-percent flow-duration yield and (2) describe methods used to compute annual flow-duration-frequency statistics for selected streamgages in Ohio and present the computed annual and annual-seasonal period flow-duration frequency statistics. Information is provided to help the reader evaluate the accuracy and limitations of the regression equations, which have been incorporated into the USGS *StreamStats* application for Ohio (Koltun and others, 2006).

Previous Studies

Previous studies that produced regression equations for estimating one or more low-flow statistics for Ohio streams include those by Koltun and Whitehead (2002) and Koltun and Schwartz (1987). This report updates equations for estimating two of the low-flow statistics (the 7-day, 10-year and 30-day, 10-year low flows) presented by Koltun and Schwartz (1987) and includes equations for additional low-flow statistics (the 1-day, 10-year and 90-day, 10-year low flows, and the 80-percent duration streamflow) that were not addressed in either study.

Sources of Low-Flow Statistics and Flow-Duration Data

Regression equations presented in this report are based on low-flow and duration statistics for selected Ohio streamgages with 10 or more years of record as reported by Straub (2001). The low-flow statistics and flow-duration characteristics reported by Straub (2001) were based on streamflow data collected through water year 1997. In contrast to the long-term flow-duration characteristics reported by Straub (2001), this report presents annual flow-duration characteristics in a stochastic framework based on a new analysis of daily streamflow data from streamgages with a minimum of 20 years of record.

Methods for Estimating Low-Flow Statistics

Equations for estimating low-flow statistics frequently are developed by means of regression techniques employing basin and (or) climatic characteristics as explanatory variables. Forty-three potential explanatory variables[2] were determined for this study and plotted against low-flow statistics and low-flow yields computed from long-term streamflow records to assess the nature and strength of covariate relations. Correlation and regression analyses were used to supplement the plots and explore secondary and interaction effects between explanatory variables.

Selection of Explanatory Variables

Ultimately, relations between a streamflow-variability index (*SVI*) and low-flow yields (that is, the low flow with a *D*-day averaging period, and a *T*-year recurrence interval, in cubic feet per second, divided by the drainage area, in square miles) were found to be much stronger than any other covariate relations. *SVI* is a measure of the variability in streamflow resulting from variability in precipitation as mitigated by characteristics of the basin such as surface storage and groundwater discharge. All other things being equal, unregulated streams with relatively small *SVI*s tend to have proportionally more flow contributed from groundwater discharge (and (or) surface storage) than streams with larger *SVI*s (Searcy, 1959).

The *SVI* is defined as the standard deviation of the logarithms of the 19 streamflow values at 5-percent class intervals from 5 to 95 percent on the daily flow-duration curve for the analysis period (Searcy, 1959). The formula for the *SVI* discussed in this report is

$$SVI = \sqrt{\frac{\sum_{i=5,5}^{95} (\log_{10}(D_i) - \overline{\log_{10}(D)})^2}{18}} \quad (1)$$

where

SVI is the streamflow-variability index,

D_i is the ith percent duration streamflow (i=5, 10, 15, ... 95), and

$\overline{\log_{10}(D)}$ is the mean of the base 10 logarithms of the 19 streamflow values at 5-percent class intervals from 5 to 95 percent on the flow-duration curve of daily mean streamflows.

In those rare cases where $D_i = 0$, a value of 0.001 was substituted and the resulting *SVI* was considered less well defined. Low-flow yield variables are identified in this document by the addition of an "m" to the low-flow statistic name (for example, the7-day, 10-year low-flow (*Q7,10*) yield is referred to as *Q7,10m*).

[2]All the potential explanatory variables considered for this study—grouped into major categories of land cover, surficial soils and geology, climate, basin and channel morphology, hydrogeology, and streamflow variability—are discussed in appendix 2.

Table 1. Data used to develop equations for estimating selected low-flow yield statistics for Ohio.

[mi^2, square mile; ft^3/s, cubic foot per second; Q1,10m, 1-day, 10-year low-flow yield; Q7,10m, 7-day, 10-year low-flow yield; Q30,10m, 30-day, 10-year low-flow yield; Q90,10m, 90-day, 10-year low-flow yield; D80m, 80-percent duration streamflow yield; SVI, streamflow-variability index; yields and SVIs computed based on statistics reported by Straub (2001)]

Station number	Station name	Decimal latitude	Decimal longitude	Drainage area from StreamStats (mi^2)	Region code	Streamflow-variability index ($log10(ft^3/s)$)	Q1,10m [$(ft^3/s)/mi^2$]	Q7,10m [$(ft^3/s)/mi^2$]	Q30,10m [$(ft^3/s)/mi^2$]	Q90,10m [$(ft^3/s)/mi^2$]	D80m [$(ft^3/s)/mi^2$]
03089500	Mill Creek near Berlin Center, Ohio	41.0003	−80.9684	19.13	A	0.6880	0.0000	0.0000	0.0052	0.0157	0.0366
03092000	Kale Creek near Pricetown, Ohio	41.1398	−80.9951	21.68	A	0.8076	0.0000	0.0000	0.0046	0.0092	0.0277
03092090	West Branch Mahoning River near Ravenna, Ohio	41.1614	−81.1970	21.81	A	0.5068	0.0138	0.0229	0.0550	0.1101	0.1697
03102950	Pymatuning Creek at Kinsman, Ohio	41.4428	−80.5881	96.62	B	0.6267	0.0021	0.0041	0.0145	0.0466	0.1242
03109500	Little Beaver Creek near East Liverpool, Ohio	40.6759	−80.5406	495.57	B	0.4812	0.0363	0.0404	0.0565	0.0848	0.1655
03110000	Yellow Creek near Hammondsville, Ohio	40.5378	−80.7251	147.22	B	0.5439	0.0122	0.0149	0.0265	0.0557	0.1359
03111500	Short Creek near Dillonvale, Ohio	40.1934	−80.7342	122.95	B	0.3795	0.0586	0.0740	0.1057	0.1545	0.2684
03111548	Wheeling Creek below Blaine, Ohio	40.0670	−80.8084	97.60	B	0.3280	0.0932	0.1014	0.1230	0.2152	0.3689
03114000	Captina Creek at Armstrongs Mills, Ohio	39.9087	−80.9240	133.69	B	0.6797	0.0000	0.0000	0.0037	0.0254	0.0972
03115400	Little Muskingum River at Bloomfield, Ohio	39.5631	−81.2037	209.94	B	0.7516	0.0010	0.0014	0.0033	0.0152	0.0714
03115500	Little Muskingum River at Fay, Ohio	39.4801	−81.2857	258.25	B	0.7834	0.0000	0.0000	0.0023	0.0213	0.0542
03117500	Sandy Creek at Waynesburg, Ohio	40.6726	−81.2598	253.15	B	0.4399	0.0672	0.0711	0.0869	0.1067	0.2054
03123000	Sugar Creek above Beach City Dam at Beach City, Ohio	40.6567	−81.5768	159.99	B	0.5406	0.0156	0.0188	0.0300	0.0456	0.0938
03130500	Touby Run at Mansfield, Ohio	40.7648	−82.5452	5.48	A	0.5120	0.0000	0.0183	0.0365	0.0730	0.1096
03134000	Jerome Fork at Jeromeville, Ohio	40.8020	−82.2002	120.01	A	0.5689	0.0175	0.0208	0.0325	0.0483	0.0683
03139000	Killbuck Creek at Killbuck, Ohio	40.4815	−81.9860	463.22	A	0.4484	0.0648	0.0669	0.0799	0.0993	0.1727
03140000	Mill Creek near Coshocton, Ohio	40.3628	−81.8624	27.22	A	0.6403	0.0037	0.0037	0.0073	0.0220	0.0808
03144000	Wakatomika Creek near Frazeysburg, Ohio	40.1326	−82.1479	140.14	B	0.5223	0.0257	0.0285	0.0385	0.0592	0.1284
03146000	North Fork Licking River at Utica, Ohio	40.2281	−82.4515	116.26	B	0.5981	0.0138	0.0181	0.0275	0.0439	0.0860
03149500	Salt Creek near Chandlersville, Ohio	39.9087	−81.8604	75.55	B	0.6552	0.0000	0.0013	0.0093	0.0529	0.0715
03156000	Hunters Run at Lancaster	39.7085	−82.6221	10.13	B	0.4223	0.0296	0.0395	0.0790	0.0987	0.1875
03157000	Clear Creek near Rockbridge, Ohio	39.5884	−82.5785	88.83	B	0.3758	0.0901	0.1036	0.1238	0.1576	0.2364
03157500	Hocking River at Enterprise, Ohio	39.5651	−82.4746	458.38	B	0.4455	0.0654	0.0698	0.0829	0.1047	0.1745
03159540	Shade River near Chester, Ohio	39.0637	−81.8818	154.60	B	0.6870	0.0026	0.0032	0.0058	0.0175	0.0712
03201600	Sandy Run at Big Four Hollow Creek near Lake Hope, Ohio	39.3626	−82.3129	0.97	B	0.5812	0.0000	0.0000	0.0000	0.1031	0.1031

Table 1. Data used to develop equations for estimating selected low-flow yield statistics for Ohio.—Continued

[mi², square mile; ft³/s, cubic foot per second; Q1,10m, 1-day, 10-year low-flow yield; Q7,10m, 7-day, 10-year low-flow yield; Q30,10m, 30-day, 10-year low-flow yield; Q90,10m, 90-day, 10-year low-flow yield; D80m, 80-percent duration streamflow yield; SVI, streamflow-variability index; yields and SVIs computed based on statistics reported by Straub (2001)]

Station number	Station name	Decimal latitude	Decimal longitude	Drainage area from StreamStats (mi²)	Region code	Streamflow-variability index (log10(ft³/s))	Q1,10m [(ft³/s)/mi²]	Q7,10m [(ft³/s)/mi²]	Q30,10m [(ft³/s)/mi²]	Q90,10m [(ft³/s)/mi²]	D80m [(ft³/s)/mi²]
03201700	Big Four Hollow Creek near Lake Hope, Ohio	39.3634	−82.3140	1.01	B	0.6225	0.0000	0.0000	0.0000	0.0000	0.0991
03202000	Raccoon Creek at Adamsville, Ohio	38.8756	−82.3561	584.51	B	0.6549	0.0056	0.0068	0.0103	0.0205	0.0838
03217500	Scioto River at Larue, Ohio	40.5719	−83.3842	257.43	A	0.6639	0.0101	0.0120	0.0151	0.0218	0.0466
03218000	Little Scioto River above Marion, Ohio	40.6287	−83.1696	72.32	A	1.0080	0.0000	0.0000	0.0000	0.0000	0.0083
03219500	Scioto River near Prospect, Ohio	40.4195	−83.1971	567.60	A	0.6391	0.0132	0.0169	0.0194	0.0264	0.0511
03223000	Olentangy River at Claridon, Ohio	40.5828	−82.9888	156.94	A	0.6810	0.0013	0.0019	0.0045	0.0166	0.0554
03224500	Whetstone Creek near Ashley, Ohio	40.4551	−82.9577	98.34	A	0.6184	0.0020	0.0020	0.0061	0.0264	0.0702
03230500	Big Darby Creek at Darbyville, Ohio	39.7006	−83.1102	533.76	A	0.5832	0.0096	0.0114	0.0178	0.0281	0.0768
03230800	Deer Creek at Mount Sterling, Ohio	39.7151	−83.2571	228.07	A	0.5002	0.0267	0.0338	0.0425	0.0658	0.1491
03232000	Paint Creek near Greenfield, Ohio	39.3792	−83.3755	248.97	B	0.7421	0.0008	0.0012	0.0036	0.0084	0.0442
03235000	Salt Creek at Tarlton, Ohio	39.5556	−82.7807	11.50	A	0.7962	0.0000	0.0000	0.0000	0.0000	0.0261
03236000	Salt Creek near Londonderry, Ohio	39.2562	−82.7699	285.66	A	0.6001	0.0196	0.0214	0.0280	0.0455	0.0770
03237280	Upper Twin Creek at McGaw, Ohio	38.6437	−83.2157	12.18	B	0.9206	0.0000	0.0000	0.0000	0.0082	0.0246
03237500	Ohio Brush Creek near West Union, Ohio	38.8037	−83.4210	386.98	B	0.7881	0.0008	0.0008	0.0023	0.0088	0.0413
03238500	White Oak Creek near Georgetown, Ohio	38.8581	−83.9285	217.82	B	0.8185	0.0000	0.0000	0.0005	0.0087	0.0335
03240000	Little Miami River near Oldtown, Ohio	39.7484	−83.9313	128.99	A	0.4092	0.0535	0.0667	0.0760	0.0930	0.1938
03240500	North Fork Massie Creek at Cedarville, Ohio	39.7570	−83.7902	28.91	A	0.5796	0.0000	0.0000	0.0069	0.0242	0.0865
03241000	South Fork Massie Creek near Cedarville, Ohio	39.7389	−83.7638	17.03	A	0.7273	0.0000	0.0000	0.0059	0.0117	0.0470
03241500	Massies Creek at Wilberforce, Ohio	39.7228	−83.8827	63.36	A	0.5144	0.0189	0.0221	0.0316	0.0458	0.1294
03242050	Little Miami River near Spring Valley, Ohio	39.5834	−84.0302	366.33	A	0.3232	0.0901	0.0983	0.1201	0.1419	0.3576
03242200	Anderson Fork near New Burlington, Ohio	39.5664	−83.9027	77.82	A	0.6689	0.0039	0.0039	0.0064	0.0141	0.0861
03246200	East Fork Little Miami River near Marathon, Ohio	39.1145	−84.0247	194.80	A	0.6760	0.0036	0.0041	0.0067	0.0308	0.0719
03246500	East Fork Little Miami River at Williamsburg, Ohio	39.0526	−84.0505	236.61	A	0.8812	0.0000	0.0000	0.0004	0.0025	0.0232
03260800	Stony Creek near De Graff, Ohio	40.2909	−83.9099	59.09	A	0.3583	0.1032	0.1083	0.1218	0.1354	0.2369
03265000	Stillwater River at Pleasant Hill, Ohio	40.0578	−84.3561	505.02	A	0.5207	0.0160	0.0257	0.0337	0.0475	0.1030
03266000	Stillwater River at Englewood, Ohio	39.8703	−84.2861	651.03	A	0.5325	0.0169	0.0246	0.0338	0.0476	0.1029

Table 1. Data used to develop equations for estimating selected low-flow yield statistics for Ohio.—Continued

[mi^2, square mile; ft^3/s, cubic foot per second; Q1,10m, 1-day, 10-year low-flow yield; Q7,10m, 7-day, 10-year low-flow yield; Q30,10m, 30-day, 10-year low-flow yield; Q90,10m, 90-day, 10-year low-flow yield; D80m, 80-percent duration streamflow yield; SVI, streamflow-variability index; yields and SVIs computed based on statistics reported by Straub (2001)]

Station number	Station name	Decimal latitude	Decimal longitude	Drainage area from StreamStats (mi^2)	Region code	Streamflow-variability index ($log10(ft^3/s)$)	Q1,10m [$(ft^3/s)/mi^2$]	Q7,10m [$(ft^3/s)/mi^2$]	Q30,10m [$(ft^3/s)/mi^2$]	Q90,10m [$(ft^3/s)/mi^2$]	D80m [$(ft^3/s)/mi^2$]
03266500	Mad River at Zanesfield, Ohio	40.3503	−83.6744	7.29	A	0.4024	0.0960	0.0960	0.1235	0.1372	0.2195
03267000	Mad River near Urbana, Ohio	40.1076	−83.7991	162.60	A	0.2527	0.2030	0.2153	0.2337	0.2583	0.3998
03268000	Buck Creek at New Moorefield, Ohio	39.9920	−83.7146	64.56	A	0.2428	0.2169	0.2324	0.2633	0.3098	0.4182
03270800	Wolf Creek at Trotwood, Ohio	39.7942	−84.3099	22.85	A	0.6437	0.0000	0.0044	0.0088	0.0219	0.0700
03271000	Wolf Creek at Dayton, Ohio	39.7667	−84.2366	68.79	A	0.4940	0.0189	0.0233	0.0334	0.0494	0.1119
03271800	Twin Creek near Ingomar, Ohio	39.7078	−84.5249	197.44	A	0.5738	0.0177	0.0198	0.0233	0.0324	0.0861
03272000	Twin Creek near Germantown, Ohio	39.6378	−84.4038	275.54	A	0.5765	0.0149	0.0171	0.0225	0.0323	0.0835
03272700	Sevenmile Creek at Camden, Ohio	39.6292	−84.6444	68.97	A	0.5601	0.0189	0.0218	0.0305	0.0479	0.0986
03272800	Sevenmile Creek at Collinsville, Ohio	39.5231	−84.6108	120.35	A	0.5782	0.0141	0.0166	0.0199	0.0266	0.0706
04184500	Bean Creek at Powers, Ohio	41.6595	−84.2491	206.04	A	0.4950	0.0345	0.0379	0.0466	0.0582	0.1165
04185440	Unnamed Tributary to Lost Creek near Farmer, Ohio	41.3617	−84.6911	4.52	A	0.8249	0.0000	0.0000	0.0000	0.0000	0.0221
04188500	Eagle Creek near Findlay, Ohio	40.9931	−83.6513	54.32	A	1.1227	0.0000	0.0000	0.0000	0.0000	0.0037
04189500	Blanchard River at Glandorf, Ohio	41.0445	−84.0819	644.55	A	0.6714	0.0085	0.0123	0.0202	0.0341	0.0543
04196500	Sandusky River near Upper Sandusky, Ohio	40.8506	−83.2563	295.51	A	0.6602	0.0044	0.0058	0.0095	0.0190	0.0474
04197000	Sandusky River near Mexico, Ohio	41.0442	−83.1949	773.79	A	0.6370	0.0072	0.0100	0.0155	0.0233	0.0504
04197100	Honey Creek at Melmore, Ohio	41.0223	−83.1096	149.31	A	0.7650	0.0013	0.0020	0.0033	0.0087	0.0335
04197170	Rock Creek at Tiffin, Ohio	41.1137	−83.1683	34.50	A	0.5533	0.0145	0.0174	0.0203	0.0290	0.0638
04198000	Sandusky River near Fremont, Ohio	41.3078	−83.1588	1250.93	A	0.6439	0.0088	0.0104	0.0152	0.0232	0.0496
04198500	East Branch Huron River near Norwalk, Ohio	41.2495	−82.6477	85.35	A	0.5672	0.0047	0.0070	0.0141	0.0281	0.0668
04199000	Huron River at Milan, Ohio	41.3009	−82.6082	370.23	A	0.5820	0.0113	0.0135	0.0194	0.0324	0.0675
04199500	Vermilion River near Vermilion, Ohio	41.3820	−82.3168	261.64	A	0.7656	0.0004	0.0004	0.0015	0.0076	0.0363
04200000	East Branch Black River at Elyria, Ohio	41.3475	−82.0943	216.64	A	0.9035	0.0000	0.0000	0.0005	0.0023	0.0171
04209000	Chagrin River at Willoughby, Ohio	41.6309	−81.4034	247.04	B	0.4267	0.0445	0.0567	0.0850	0.1174	0.2348
04210000	Phelps Creek near Windsor, Ohio	41.5156	−80.9351	25.50	B	0.7352	0.0039	0.0078	0.0157	0.0196	0.0471
04212000	Grand River near Madison, Ohio	41.7406	−81.0465	580.31	B	0.8020	0.0007	0.0016	0.0050	0.0119	0.0362
04212100	Grand River near Painesville, Ohio	41.7189	−81.2279	684.47	B	0.6330	0.0121	0.0131	0.0219	0.0526	0.1315
04212500	Ashtabula River near Ashtabula, Ohio	41.8556	−80.7620	120.43	B	1.0617	0.0000	0.0000	0.0000	0.0017	0.0216
04213000	Conneaut Creek at Conneaut, Ohio	41.9270	−80.6040	175.99	B	0.6263	0.0085	0.0125	0.0233	0.0398	0.1250

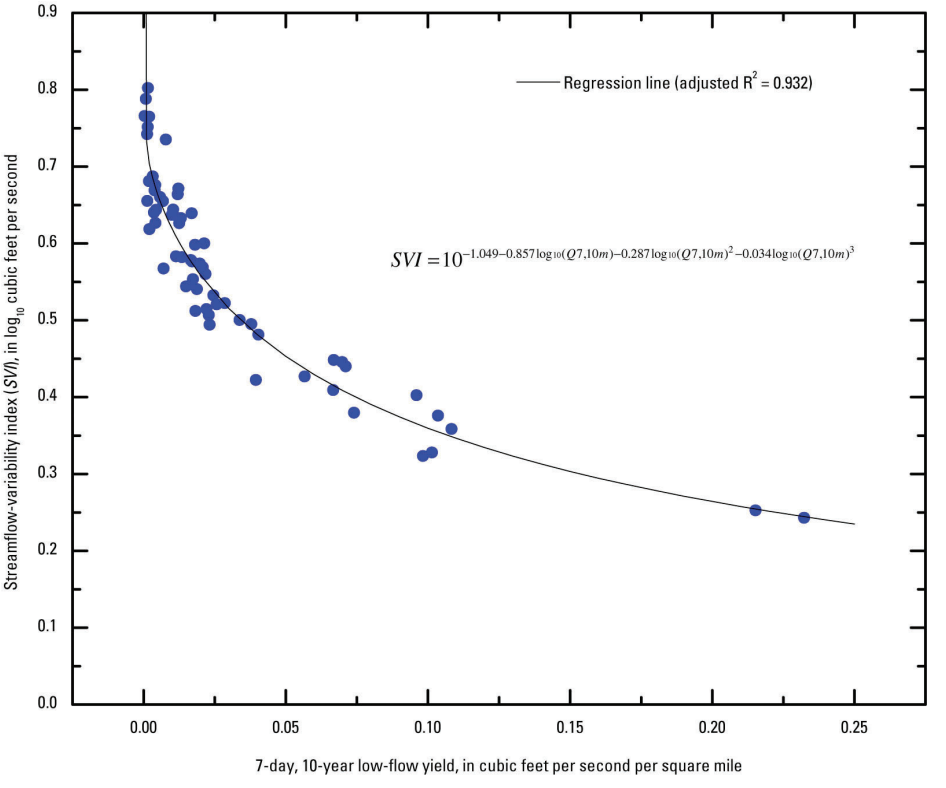

Figure 1. Graph showing plot of streamflow-variability index as a function of 7-day, 10-year low-flow yield.

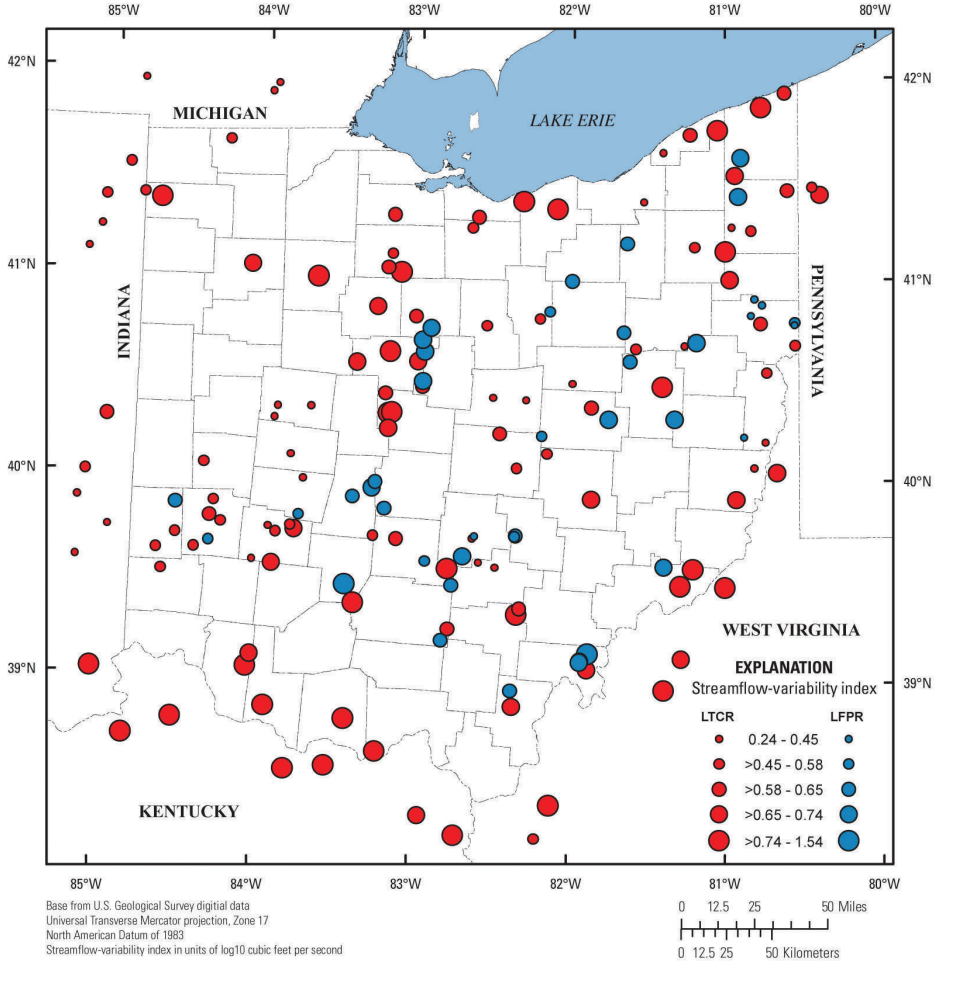

Figure 2. Map showing spatial distribution of streamflow-variability index values determined from streamflow records for streamgages in Ohio and nearby portions of adjacent States (LTCR, long-term continuous record; LFPR, low-flow partial record).

Data Used in Streamflow-Variability Index (*SVI*) Related Analyses

A variety of data sources were used to examine the relation between *SVI* and low-flow statistics and to facilitate the estimation of *SVI* at ungaged sites. *SVIs* were obtained, computed, or estimated for a total of 162 sites (see appendix 1). Of those 162 sites, 121 were long-term continuous record (LTCR) sites with 10 or more years of record (93 in Ohio, 11 in Indiana, 6 in Kentucky, 6 in West Virginia, 3 in Michigan, and 2 in Pennsylvania) and 41 were low-flow partial record[3] (LFPR) sites located in Ohio with published low-flow statistics. *SVIs* for LTCR and LFPR sites in Ohio are based on the low-flow statistics and periods of record published in Straub (2001). *SVIs* for LTCR sites in Indiana, Kentucky, West Virginia, Michigan, and Pennsylvania were either provided by the USGS Water Science Center in that State (in the cases of Indiana, Kentucky, and West Virginia) or were computed from approved streamflow records or statistics (in the cases of Michigan and Pennsylvania). As noted in subsequent discussions, subsets of the 162 site *SVI* dataset were used for some analyses.

Estimating *SVI* at Ungaged Sites

SVI must be regionalized in some fashion to permit its estimation at ungaged sites. Koltun and Whitehead (2002) developed a generalized grid-based spatial coverage of *SVI* for Ohio that they used for that purpose. *SVI* was used by Koltun and Whitehead (2002) as an explanatory variable in equations they developed to estimate June–October mean monthly streamflows; the 25th-, 50th-, and 75th-percentile streamflows; and the harmonic mean streamflow. For this study, a new *SVI* grid coverage was created that is more spatially refined and reflects at-site *SVI* information from more streamgages than the coverage developed by Koltun and Whitehead (2002).

The geostatistical techniques of kriging and cokriging were both examined as possible mechanisms for regionalizing *SVI*; however, a lack of wide-sense stationarity in *SVI* (possibly owing to localized hydrogeologic features that are poorly represented by available covariate datasets) made those methods unsuitable. This result is consistent with similar findings from a recent study by Martin and Arihood (2010) in which they observed LTCR streamgage data from Kentucky often indicated a change in *SVI* values even though lithologic characteristics of surface geology did not change. They further concluded that specific lithologies did not necessarily result in consistent effects on groundwater discharge and low flow.

Examination of semivariogram plots (not shown) prepared when exploring options for kriging and cokriging indicated that sites that are closer together tend to have more similar *SVI* values than sites that are further apart. Consequently, the decision was made to develop a spatial grid of *SVI* by use of an inverse-distance-weighted (IDW) interpolation (Environmental Systems Research Institute, 2008) of the point *SVI* data. The IDW model, as applied, assumes that observations further away from a given location have their contributions to its spatial average reduced as a function of the square of the distance from that location. The IDW interpolation, which was based on the 12 nearest neighbors (in this case, sites with defined *SVIs*) to each 1 square kilometer (km^2) grid cell, was done with the Environmental Systems Research Institute (ESRI) Spatial Analyst software.

To prepare the *SVI* grid, LTCR sites (sites with 10 or more years of daily record) were selected from Ohio that were thought to be predominately free of low-flow regulation (that is, they had no significant regulation from upstream dams or other controlled lakes, and no significant low-flow regulation from water-supply withdrawals or wastewater discharges), along with comparable LTCR sites from adjacent States that were located near the State border of Ohio. *SVIs* determined from long-term streamflow records for the LTCR sites initially were plotted on a map (not shown) to assess spatial trends. Although there were visually identifiable spatial trends (for example a cluster of low *SVIs* at streamgages in a watershed known for relatively high groundwater discharge), it was apparent that, in some areas, *SVIs* can change appreciably over relatively short distances. Consequently, it was deemed important to obtain and use as much *SVI* data as possible to prepare the grid.

Since *SVI* was strongly related to the target low-flow statistics, a relation between *SVI* and *Q7,10m* was determined and used to estimate *SVI* at 41 LFPR sites (table 1-1) where *Q7,10* previously had been estimated by Straub (2001) in order to expand the *SVI* dataset. Only data from LFPR sites with highly correlated LFPR-LTCR streamflow-measurement pairings (Pearson's r greater than 0.95) were used to help ensure high-quality *SVI* estimates. The following polynomial equation relating *Q7,10m* to *SVI* was determined by use of ordinary least-square regression using data from 62 LTCR sites in Ohio (table 1) with non-zero *Q7,10* flows:

$$SVI = 10^{-1.049 - 0.857X - 0.287X^2 - 0.034X^3} \quad (2)$$

where

$$X = \log_{10}(Q7,10m) .$$

Equation 2, which has an adjusted Pearson's correlation coefficient (R^2) of 0.93, is plotted as the curve in figure 1, along with the observed values used to develop the equation.

The spatial distribution of *SVIs* for the 121 LTCR and 41 LFPR sites used to create the *SVI* grid is shown in figure 2. Spatial gaps in the data are owing to either a lack of available or suitable streamgage data or areas where low flows are significantly regulated (and thus *SVIs* for streamgages in those areas are not representative of natural flows). The statewide spatial variation in estimated *SVI* (as represented in the *SVI* grid) is illustrated in figure 3.

[3]Low-flow partial record (LFPR) sites are sites where periodic low-flow measurements are made for the purpose of developing a statistical relation with concurrent low flows at a long-term continuous record (LTCR) site. That statistical relation is used to estimate low-flow statistics for the LFPR site as a function of low-flow statistics computed for the LTCR site.

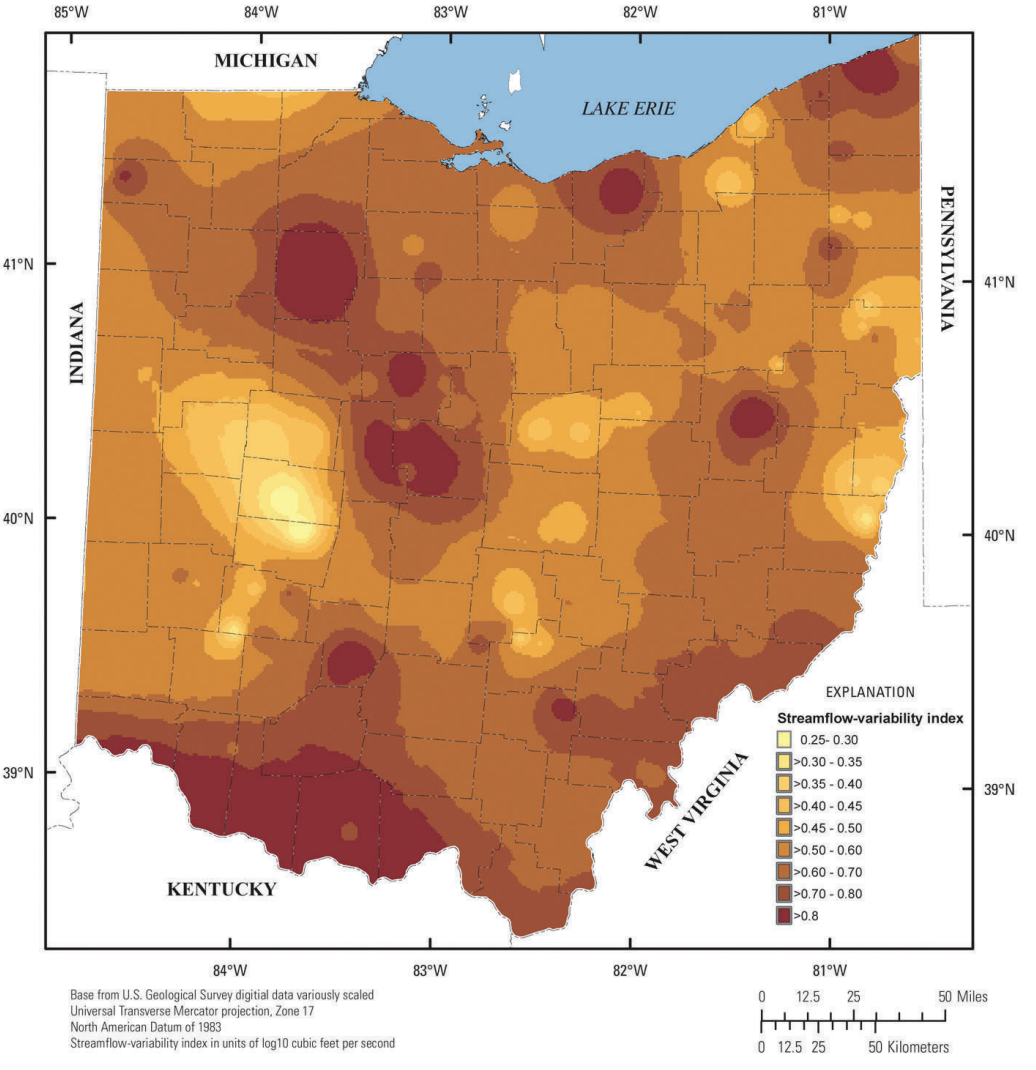

Figure 3. Generalized map of Ohio showing estimated spatial variation in streamflow-variability index.

Errors Associated with Estimating *SVI* at Ungaged Sites

A leave-one-out cross-validation technique was used to assess the nature of potential errors in *SVI* when using the grid to estimate *SVI* at ungaged locations. Leave-one-out cross-validation was done by (1) omitting the *SVI* observation for a single streamgage, (2) using the IDW interpolation method to develop a new *SVI* grid based on the remaining streamgage data, (3) determining the new *SVI* grid value at the omitted streamgage location, and (4) computing the residual, which is the difference between the *SVI* value determined from the original grid (typically about equal to the *SVI* value observed for the streamgage) and the *SVI* value determined in step 3. These 4 steps were repeated for each of the 162 streamgages whose data were used to create the original *SVI* grid, resulting in a set of 162 residuals. The residuals ranged from −0.51 to 0.63 with a mean and standard deviation of 0.01 and 0.16, respectively. Fifty percent of the residuals were in the range of −0.08 to 0.06 equating to estimate errors ranging from about −15.4 to 8.5 percent of the observed at-site *SVI* values (figure 4).

Equations for Estimating Low-Flow Yield Statistics as a Function of *SVI*

The relations between *SVI* and low-flow yields were determined by use of ordinary least-squares regression based on data collected through water year 1997 from 79 LTCR sites in Ohio (table 2). LFPR and LTCR sites in other States, sites with any known regulation (even if considered minor), and sites with less well defined *SVI*s were not used in developing the low-flow yield equations.

Weighted least-squares (WLS) regression is sometimes used to develop low-flow equations (Martin and Arihood, 2010; Wright and Ensminger, 2004); however, we chose not to use WLS regression because (a) there is considerable uncertainty about how best to weight low-flow estimates,

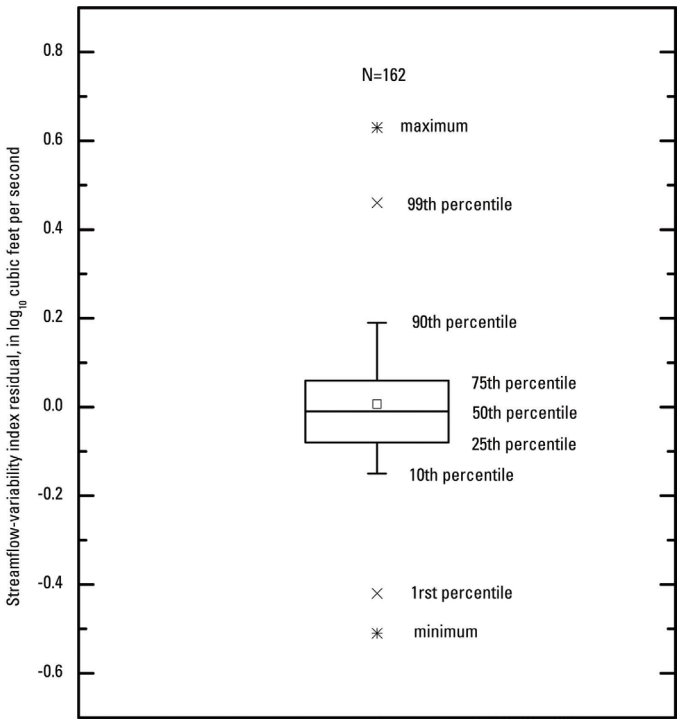

Figure 4. Boxplot showing streamflow-variability index residuals from the leave-one-out cross-validation analysis.

(b) common weighting schemes that give more weight to observations determined from longer record lengths also will have the side effect of weighting the regressions toward characteristics associated with larger basins,[4] and (c) examination of the relation between the standard deviation of the logs of annual 7-day low flows versus the years of record for LTCR sites in Ohio indicated that although the standard deviation appeared to decrease somewhat with longer record length (as indicated by the downward-sloping regression line in figure 5, the decrease was not statistically significant (the slope of the regression line was not significantly different than 0) and record length explained only about 2 percent of the variation in standard deviation.

The relations between *SVI* and the low-flow yields (in cubic feet per second per square mile ($ft^3/s)/mi^2$) were not linear (for example, see fig. 6). Consequently, options for developing equations to estimate low-flow yields as a function of *SVI* involve either transformations of the model variables to fit a linear equation or fitting data to a non-linear or curvilinear equation. While logarithmic and square root transformations did a reasonable job of linearizing the relations for data pairs

[4]Because of their importance as water supplies and (or) flooding sources, streamgages in Ohio with large drainage areas also tend to have relatively long periods of record as compared to streamgages on smaller drainages.

Table 2. Equations for estimating selected low-flow yield statistics for Ohio.

[R^2, Pearson's correlation coefficient; all statistics are in units of cubic feet per second per square mile; Q1,10m, 1-day, 10-year low-flow yield; Q7,10m, 7-day, 10-year low-flow yield; Q30,10m, 30-day, 10-year low-flow yield; Q90,10m, 90-day, 10-year low-flow yield; D80m, 80-percent duration streamflow yield; R, low-flow region, use 0 for region A and 1 for region B; *SVI*, streamflow-variability index in units of base-10 logarithms of cubic feet per second; absolute percent errors do not reflect application of the logistic equations]

Equation number	Equation	Average absolute percent error ($\overline{APE}$)	Adjusted R^2
1	$Q1,10m = 0.795 - 3.740SVI + 6.633SVI^2 - 5.234SVI^3 + 1.543SVI^4$; if SVI ≤ 0.80 $Q1,10m = 0.0$; if SVI >0.80	38.7	0.93
2	$Q7,10m = 0.806 - 3.687SVI + 6.384SVI^2 - 4.938SVI^3 + 1.433SVI^4$; if SVI ≤ 0.80 $Q7,10m = 0.0$; if SVI >0.80	42.0	.94
3	$Q30,10m = 0.783 - 3.245SVI + 5.073SVI^2 - 3.535SVI^3 + 0.924SVI^4$; if SVI ≤ 0.91 $Q30,10m = 0.0$; if SVI >0.91	34.2	.95
4	$Q90,10m = 0.911 - 3.868SVI + 6.488SVI^2 - 5.041SVI^3 + 1.504SVI^4$ +0.013R; if SVI ≤ 1.0 $Q90,10m = 0.0$; if SVI >1.0	27.2	.94
5	$D80m = e^{(0.221 - 4.715SVI + 0.350R)}$	15.8	.97

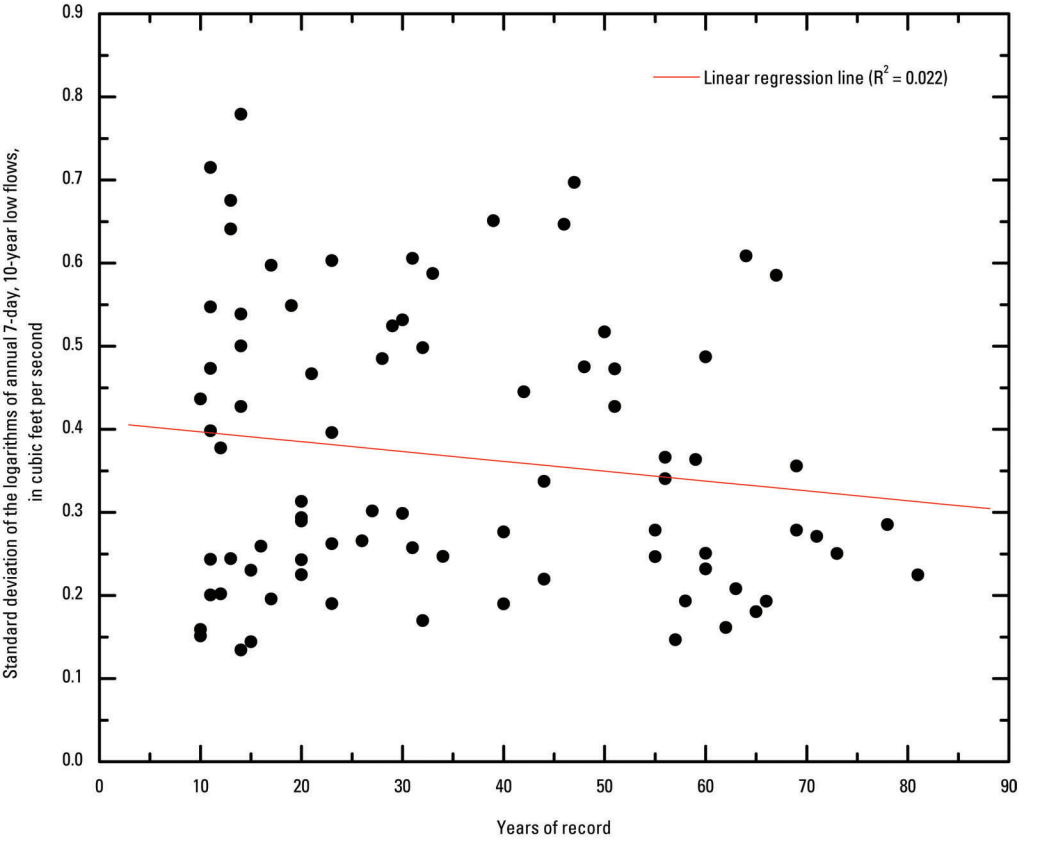

Figure 5. Graph showing plot of the standard deviation of logarithms of annual 7-day, 10-year low-flow values as a function of years of streamgage record.

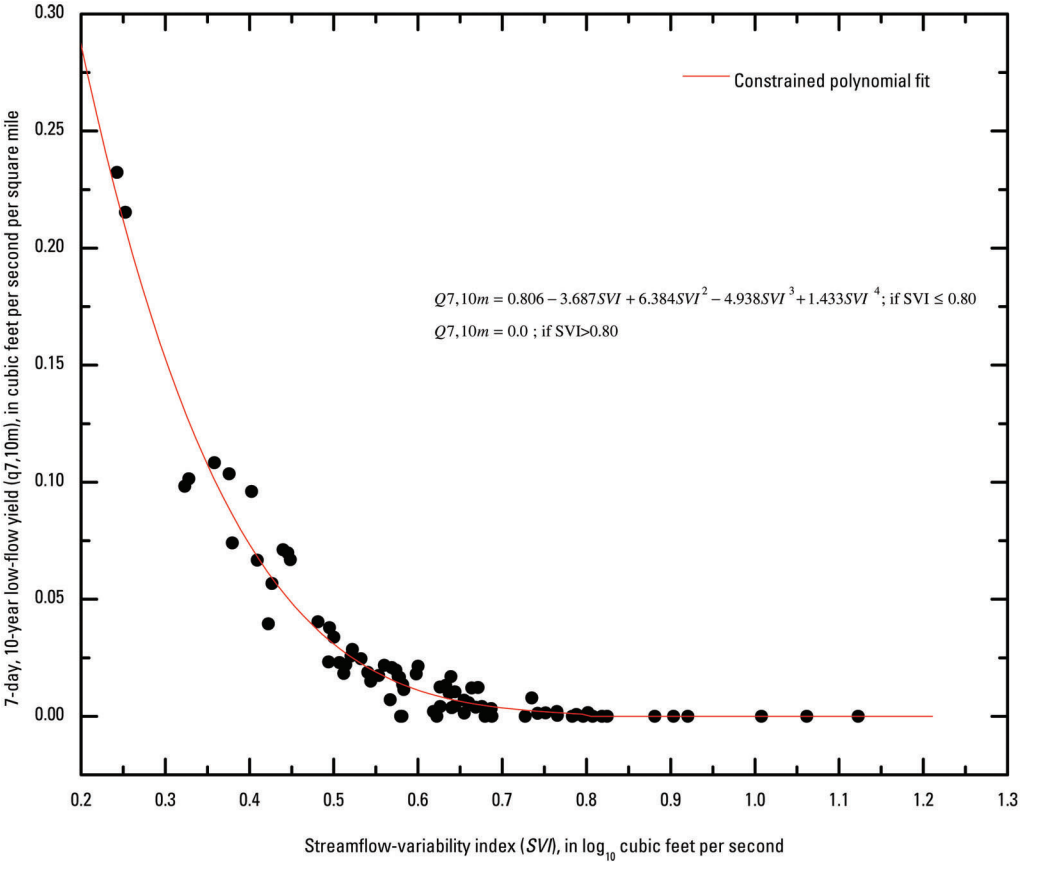

Figure 6. Graph showing plot of 7-day, 10-year low-flow yield as a function of streamflow-variability index, illustrating fit of the constrained polynomial equation.

that did not contain zero-valued flow statistics, the logarithm of zero is undefined so data pairs with zero-valued statistics had to be omitted or a constant had to be added to the statistics for a logarithmic transformation to be used. Zeros are not a problem mathematically when using a square-root transformation; however, they can (and in this case did) produce undesirable effects on the regression owing to having a fairly wide range of *SVI* values associated with zero-valued yields. Ultimately, it was decided that a polynomial model was the best model for most of the low-flow yield statistics because it permits all data pairs to be used without modification. For most low-flow yield statistics, a 4th degree polynomial equation was fit; however, for *D80m* (the 80-percent duration yield), a logarithmic equation was fit because all of the *D80m* values in the calibration dataset were nonzero.

Residuals from all regression analyses were examined for normality and homoscedasticity (uniform variance around the regression line), and to assess spatial bias. The residuals for the statistics showed some indication of heteroscedasticity (fig. 1–1), in these cases indicating that estimate variance tended to increase somewhat with increasing predicted yields. Shapiro-Wilk tests (Shapiro and Wilk, 1965) indicated that, with the exception of *D80m*, the residuals for the low-flow statistics also deviated from normal at an alpha level of 0.05, but normal quantile plots (not shown) indicated that they were only moderately aberrant in that respect. Several linearizing transformations (such as log and square root) were reexamined because of these issues; however, residuals from those models showed similar or worse indications of heteroscedasticity than the original model, so the original form of equation was selected. The regression analysis was repeated for the model forms shown in table 2 using an option to estimate the asymptotic covariance matrix of the estimates under the hypothesis of heteroscedasticity. Using that option results in the same parameter estimates as the ordinary least-squares regression but provides more robust estimates of their standard errors. Using robust standard errors did not change any of the conclusions from the original ordinary least-squares regression. It is worth noting that the regression models are valid for prediction in spite of the issues with heteroscedasticity and normality of the residuals; however, the variance of the prediction cannot be accurately determined.

The initial regression equations developed for *Q90,10m* and *D80m* had residuals that exhibited noticeable spatial bias (no appreciable spatial bias was evident for the other statistics); consequently, the State was ultimately broken up into two low-flow regions (*A* and *B*, fig. 7), and an indicator variable (*R*), set to equal 0 for region A and set to equal 1 for region B, was added to the regressions for these two statistics to account and correct for the observed bias. The regions were divided along 8-digit hydrologic unit code (HUC) boundaries. A variety of spatial datasets (for example, physiographic provinces, boundaries of glaciations, and maps of glacial-drift thickness) were examined in an attempt to help explain and locate appropriate boundaries for the observed regional trends in residuals. Ultimately, the transition in residual pattern from predominately positive residuals to predominately negative residuals appeared to most closely align with boundaries between areas of relatively high glacial-drift thickness and areas of relatively low or no glacial-drift thickness as defined by the Ohio Division of Geological Survey (2004).

The low-flow yield estimation equations were checked to ensure that estimated yields either decreased monotonically or were constant with increasing *SVI* over the range of anticipated *SVI* values for Ohio. This was found to be true except at relatively high *SVI* values for the polynomial equations. Examination of observed low-flow yields for *Q1,10* through *Q30,10* at LTCR sites showed that yields typically were zero when *SVI* values exceeded thresholds ranging from about 0.8 to 1.0, depending on the statistic being examined. Consequently, a constraint was applied to the yield equations that forced yields to be zero when those *SVI* thresholds were exceeded. This resulted in low-flow yield estimates that were monotonically decreasing or constant (when yields reached zero) with increasing *SVI*. The yield curves also were examined to ensure that the progression of yield estimates for the 1-, 7-, 30-, and 90-day low flows at a given *SVI* was logical with respect to the statistics and durations being considered (for example, the yield for a given duration was always less than or equal to the yield for a longer duration for a particular *SVI* level).

The predictive equations are summarized in table 2, and the underlying data used to develop those equations are listed in table 1. Values of *SVI* and streamflow yields reported in table 2–1 are based on the low-flow statistics and periods of record listed for those streamgages in Straub (2001). The equations in table 2 are based on observations with *SVI* magnitudes ranging from about 0.24 to 1.12 $\log_{10}$ (cubic feet per second (ft^3/s)) for streamgages ranging in drainage area from approximately 0.97 to 1,250 square miles (mi^2). Figure 6, which shows a scatter plot of observed *SVI* and *Q7,10m* along with a curve representing the corresponding constrained polynomial equation (table 1, equation 2), is typical of the fit associated with the constrained polynomial equations. The equations shown in table 2 were used to estimate low-flow yields for each cell in the *SVI* grid discussed earlier, resulting in grids of low-flow yield estimates whose values can be multiplied by drainage area to estimate low-flow statistics (in ft^3/s) at ungaged sites.

Model Error for Low-Flow-Yield Statistic Estimation Equations

The low-flow yield grids were used to estimate low-flow yields at sites used for model calibration in order to assess the relation between observed and predicted values. Low-flow yields for the LTCR sites were estimated by determining the value corresponding to the low-flow yield grid cell at the location of the site. The low-flow yield estimates were used along

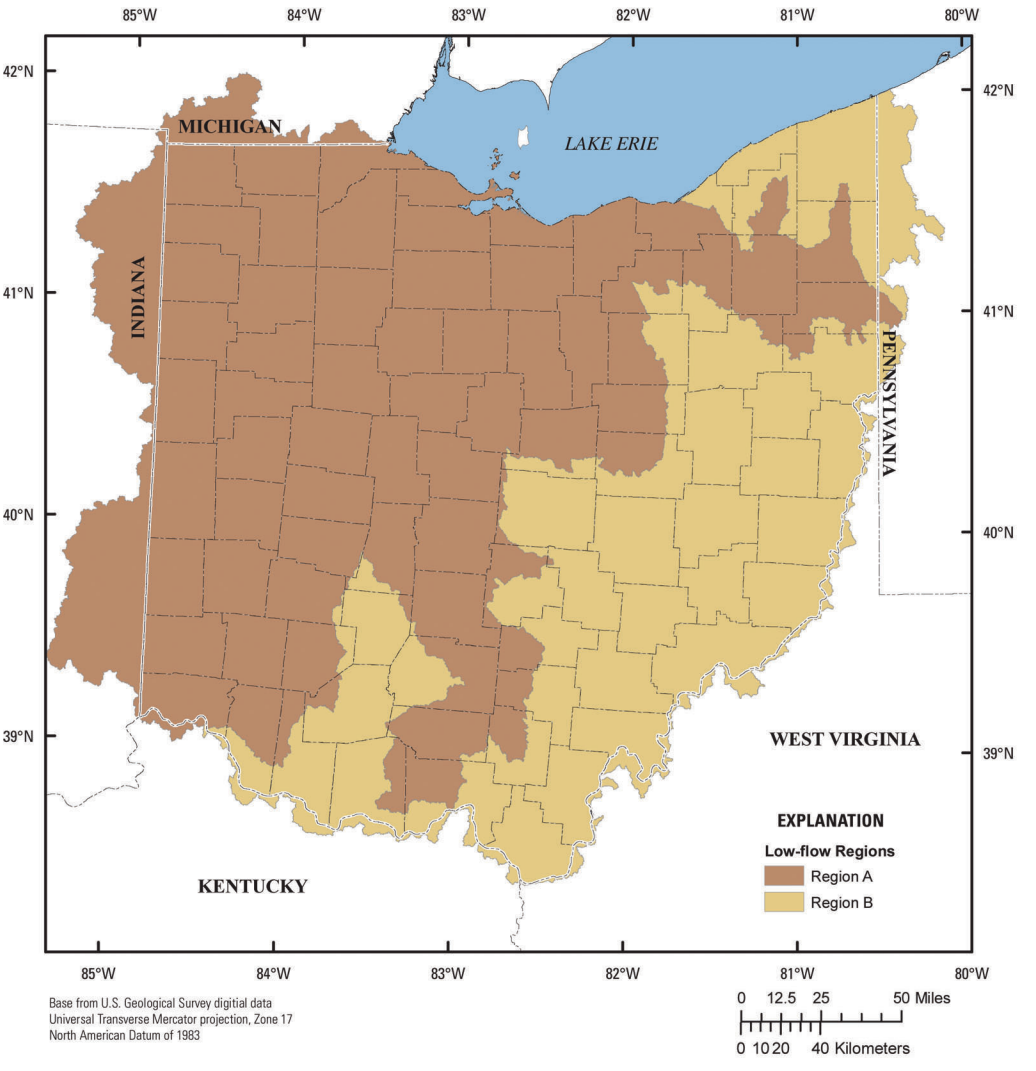

Figure 7. Map showing low-flow regions used in regression equations for Q90,10m, and D80m.

with the observed values to compute a measure of model error called the average absolute percent error ($\overline{APE}$). The $\overline{APE}$, which is reported in table 2, was determined as

$$\overline{APE} = \frac{1}{n}\sum_{i=1}^{n}\left|100 * \frac{(Y_i - \hat{Y}_i)}{Y_i}\right| \quad (3)$$

where

Y_i and $\hat{Y}_i$ are the *i*th observed and predicted low-flow yields, and

n is the number of observations.

When computing the $\overline{APE}$s, two allowances were made. First, if the observed and predicted flows were both zero, the percent error for that pair was said to be zero. Second, if the predicted flow was nonzero and the observed flow was zero, the percent error was undefined and therefore not used in the computation of the $\overline{APE}$. $\overline{APE}$s ranged from a high of 42.0 percent for *Q7,10m* to a low of 15.8 percent for *D80m*. It should be remembered that model error is not the only source of error for the low-flow yield estimate. There also will be error associated with the estimate of *SVI*.

Logistic-Regression Equations for Identification of Zero-Valued Low-Flow Statistics

Although the polynomial equations, coupled with the *SVI* threshold constraint, produce zero-valued statistic estimates for sites with high *SVI* values, there remained some sites (11 for *Q1,10m*, 8 for *Q7,10m*, 4 for *Q30,10m*, and 3 for *Q90,10m*) in the calibration dataset with *SVI* values lower than the thresholds that also had zero-valued statistics. In an attempt to improve identification of zero-valued statistics, logistic-regression equations (table 3) were developed to estimate the annual probability that the N-day, 10-year low flow is zero. Explanatory variables in the logistic-regression equations include the *SVI* and the drainage area (*A*). The results of the equations should be compared to the corresponding annual-nonexceedance probability (in this case 0.10) because the logistic-regression equations were all developed for statistics

with 10-year recurrence intervals. All zero-valued statistics in the calibration dataset occurred in association with *SVI* values greater than 0.50; therefore, at a minimum, the logistic-regression equations should be used whenever a site has an estimated *SVI* greater than 0.50 and a non-zero statistic is computed for the statistics listed in table 3. It is recommended that the estimate for the statistic be revised to zero if the computed probability is greater than or equal to 0.10.

Logistic-regression equations were developed for the *Q1,10*, *Q7,10*, and *Q30,10* statistics (table 3). Table 3 includes information about equation specificity (the percentage of non-zero statistics correctly identified), equation sensitivity (the percentage of zero-valued statistics correctly identified), and the overall percentage of correct classifications when classifying based on an annual-nonexceedance probability of 0.10. No logistic-regression equations were developed for the *Q90,10* and *D80* statistics because there were either too few zero-valued statistics in the calibration dataset with which to develop reliable logistic equations (in the case of *Q90,10*) or there were no zero-valued statistics (in the case of *D80*) .

The low-flow yield equations (table 2) and logistic-regression equations (table 3) have been incorporated into the *StreamStats* application for Ohio, which can accessed at *http://water.usgs.gov/osw/streamstats/ohio.html*. The *StreamStats* application for Ohio will automatically compute the drainage areas and low-flow statistics listed in table 2 using the same site-selection procedures used for other Ohio streamflow statistics, as described by Koltun and others (2006). *StreamStats* will convert the computed yields to streamflows, in units of cubic feet per second, by taking the product of the drainage area and yields.

Limitations of the Estimating Equations

The regression models are applicable to unregulated streams in Ohio that are not appreciably affected by local diversions or other forms of streamflow regulation. Large springs and sinks common to karst terrain in areas underlain by limestone can appreciably affect low flows. The regression models do not directly account for karst terrain, so model results can be erroneous when applied to basins with karst areas. The *StreamStats* application for Ohio makes no determination of streamflow regulation and provides no information on the presence of karst terrain; consequently, it is the user's responsibility to determine where and when the regression models can be suitably applied.

The estimating equations were developed by regressing streamflow statistics on explanatory variables. The *SVI* was an explicit explanatory variable in the regression, and drainage area was an implicit explanatory variable in that it was used to compute the low-flow yields. *SVI* values for stations used in the regression analysis ranged from about 0.24 to 1.12 $\log_{10}$ (ft^3/s), and drainage areas ranged from about 1 to 1,250 mi^2 (table 1). The applicability of the regression equations is unknown when applied to basins with characteristics outside these ranges.

The *SVI* appeared to be much more strongly related to the low-flow statistics than the more traditional basin characteristics that were tested; however, there are some drawbacks to using *SVI* as an explanatory variable. Unlike many traditional basin characteristics, *SVI* is not a physical feature of a basin but instead reflects a variety of hydrologic processes integrated over an area draining to the point of interest. Consequently, *SVI* could not be determined from readily available spatial datasets, so a new spatial dataset for *SVI,* consisting of a grid

Table 3. Logistic-regression equations for estimating the annual probability of zero flow for selected low-flow statistics for unregulated streams in Ohio.

[*A*, drainage area, in square miles; *p*, probability that the N-day, 10-year low flow does not exceed zero; *Q1,10*, 1-day, 10-year low flow; *Q7,10*, 7-day, 10-year low flow; *Q30,10*, 30-day, 10-year low flow; *SVI*, streamflow-variability index; specificity, percentage of non-zero statistics correctly identified; sensitivity, percentage of zero-valued statistics correctly identified]

Statistic	Equation	Percent correct at $p=0.10$	Specificity at $p=0.10$ (percent)	Sensitivity at $p=0.10$ (percent)
Q1,10	$p = \frac{e^{(-8.680+9.576SVI-5.650x10^{-3}A)}}{(1+e^{(-8.680+9.576SVI-5.650x10^{-3}A)})}$	90.6	91.5	74.7
Q7,10	$p = \frac{e^{(-9.973+10.35SVI-5.020x10^{-3}A)}}{(1+e^{(-9.973+10.35SVI-5.020x10^{-3}A)})}$	93.7	94.6	73.6
Q30,10	$p = \frac{e^{(-14.26+12.35SVI)}}{(1+e^{(-14.26+12.35SVI)})}$	97.2	97.5	69.0

composed of 1 km^2 grid cells, was constructed to facilitate its estimation throughout the State. Although every effort was made to produce the best possible *SVI* spatial dataset, it must be remembered that *SVI* is being estimated and so is subject to error. Those errors will be reflected in the low-flow yield estimates computed by *StreamStats*. Operation of a LTCR or LFPR streamgage at a site should be considered to provide a streamflow-based estimate of *SVI* for applications where uncertainties in the low-flow estimates will be poorly tolerated.

Methods for Annual Flow-Duration Analyses

Instead of using the traditional class-interval-based approach for defining FDCs described by Searcy (1959), a more direct and efficient quantile-estimation procedure, as recommend by Vogel and Fennessey (1994), was used to the compute annual flow-duration statistics discussed in this report. A program was written in the Statistical Analysis System (SAS) programming language (Version 9.1, SAS Institute Inc.) that computed and output selected quantiles of daily and 7-day-average streamflows for annual and seasonal periods for each climatic year in the station record that was complete (that is, it had no missing record). The season examined in this study is the period September–November, which, in Ohio, frequently contains the lowest streamflows during the year. The quantiles that were computed and output for each climatic year include the 99-, 98-, 95-, 90-, 80-, 75-, 70-, 60-, 50-, 40-, 30-, 25-, 20-, 10-, 5-, 2-, and 1-percent exceedance streamflows [defined as $100P\{Q>q_p\}$, where Q represents the daily mean (or 7-day average) streamflows during the climatic year or season, and q_p is the value of the daily mean (or 7-day average) streamflow that equaled or exceeded P percent of the time in the climatic year or season]. The q_p values that were equaled or exceeded n percent of the time over the analytical period are presented in data tables in appendixes 2–4 with n shown in the first column labeled APEE (annual percentage equaled or exceeded).

The flow-duration quantiles were computed from the observed Q time series by ranking the observed streamflows [$q(i)$, i=1,...,n where n = the number of days (or averaging periods) in the climatic year or season] and computing the quantiles (exceedance percentiles) using the type 4 quantile-estimator option of the SAS UNIVARIATE procedure (SAS Institute Inc., 2011). The SAS type 4 quantile estimator is an L-moment-type estimator that provides weighted averages of adjacent order statistics (Vogel and Fennessey, 1994). The quantile estimator is defined as

$$q_p = (1-\theta)q(i) + \theta q(i+1) \qquad (4)$$

where

θ equals the fractional portion of $(n+1)p/100$ and

i equals the integer portion of $(n+1)p/100$ and where

$q(n+1)$ is taken to be $q(n)$.

To permit assessment of whether a single theoretical distribution could be used to describe the distribution of annual q_p series (that is, $q_p(i)$, i=1,..., m, where m = the number of complete years of record), the SAS program was designed to plot ordered values of the observed distribution of annual q_p values versus percentiles of selected theoretical distributions. The distributions plotted included the lognormal, Weibull, and gamma (also called Pearson Type III) distributions. These distributions were chosen, in part, based on recommendations made by Kroll and Vogel (2002). Ultimately, many of the annual q_p series appeared to be reasonably well fit by one or more of the three distributions (with Weibull and gamma distributions providing good fit to many of the annual q_p series); however, none of the distributions fit the annual series well for all annual-exceedance probabilities at all of the LTCR sites (including some unregulated sites with long periods (>50 years) of record. In particular, few of the high-percent exceedance-level series (such as the 95- or 98-percent exceeds series) were well fit.

A second program, written in the MATLAB programming language (The MathWorks Inc., 2010), was used to take the annual q_p values determined with the SAS program and compute quantiles of those estimates. For example, assume a streamflow-gaging station had 30 complete climatic years of record. The SAS program would compute q_p estimates for selected exceedance percentiles for each of the 30 years. The MATLAB program would then order the annual q_p values and compute quantiles of the 30-year q_p series. Quantiles of the annual q_p series are represented by the symbol $q_{p,k}$; where k is the percentage of time over the n years of record that the annual q_p value was exceeded (for example, $q_{50,90}$ is the annual 50th percentile streamflow that was equaled or exceeded 90 percent of the time over the 30-year period). Initially, it was hoped that the $q_{p,k}$ estimates could be determined by fitting a theoretical distribution to the annual q_p series; however, because the annual q_p series for some annual-exceedance probabilities were poorly fit by the theoretical distributions for some LTCR streamflow-gaging stations, that approach was rejected in favor of estimating $q_{p,k}$ using the same quantile estimator (equation 4) used when analyzing the individual climatic-year series.

One of two predetermined sets of exceedance percentiles of the annual q_p values were computed depending on the number of climatic years of record analyzed. If there were 50 or more years of record, the following exceedance percentiles were computed: 2, 5, 10, 20, 50, 80, 90, 95, and 98 percent. If there were less than 50 years of record, but greater than or equal to 20 years of record, exceedance percentiles of 5, 10,

20, 30, 50, 70, 80, 90, and 95 percent were computed (streamflow-gaging stations with less than 20 complete climatic years of record were not used). These two sets of exceedance percentiles were chosen so as to maximize the range of exceedance percentiles computed for a given record length yet still base all calculations on interpolations from computed quantiles.

The process used to compute the $q_{p,k}$ values is illustrated in figure 8 using data from the streamflow-gaging station on Wheeling Creek below Blaine, Ohio (station 03111548). The black lines in the lower plot of figure 8 represent the annual-exceedance plots for each complete climatic year from 1983 through 2008. If one examines the magnitudes of streamflows corresponding to the annual 50-percent exceedance value (those lying along the red line in the lower plot), one can see that they range from 38 to 152 ft^3/s. The computed exceedance percentiles for the annual values lying along that line (that is the $q_{50,k}$ values) are plotted as the red line in the upper left-hand plot and are tabulated in the row corresponding to an APEE value of 50 in appendix 3 (top table on page 381). If instead one examines the magnitudes of streamflows corresponding to the annual 90-percent exceedance value (those lying along the blue line in the lower plot), one can see that the computed exceedance percentiles range from 14 to about 70.2 ft^3/s. The computed exceedance percentiles for the annual 90-percent exceedance streamflows (that is the $q_{90,k}$ values) are plotted as the blue line in the upper right-hand plot and are tabulated in the row corresponding to an APEE value of 90 in appendix 3 (top table on page 38). If the top two plots were combined into one plot, one would observe that the blue line would lie below the red line, which is consistent with the expectation that the 90-percent exceedance streamflows should be less than or equal to the 50-percent exceedance streamflows.

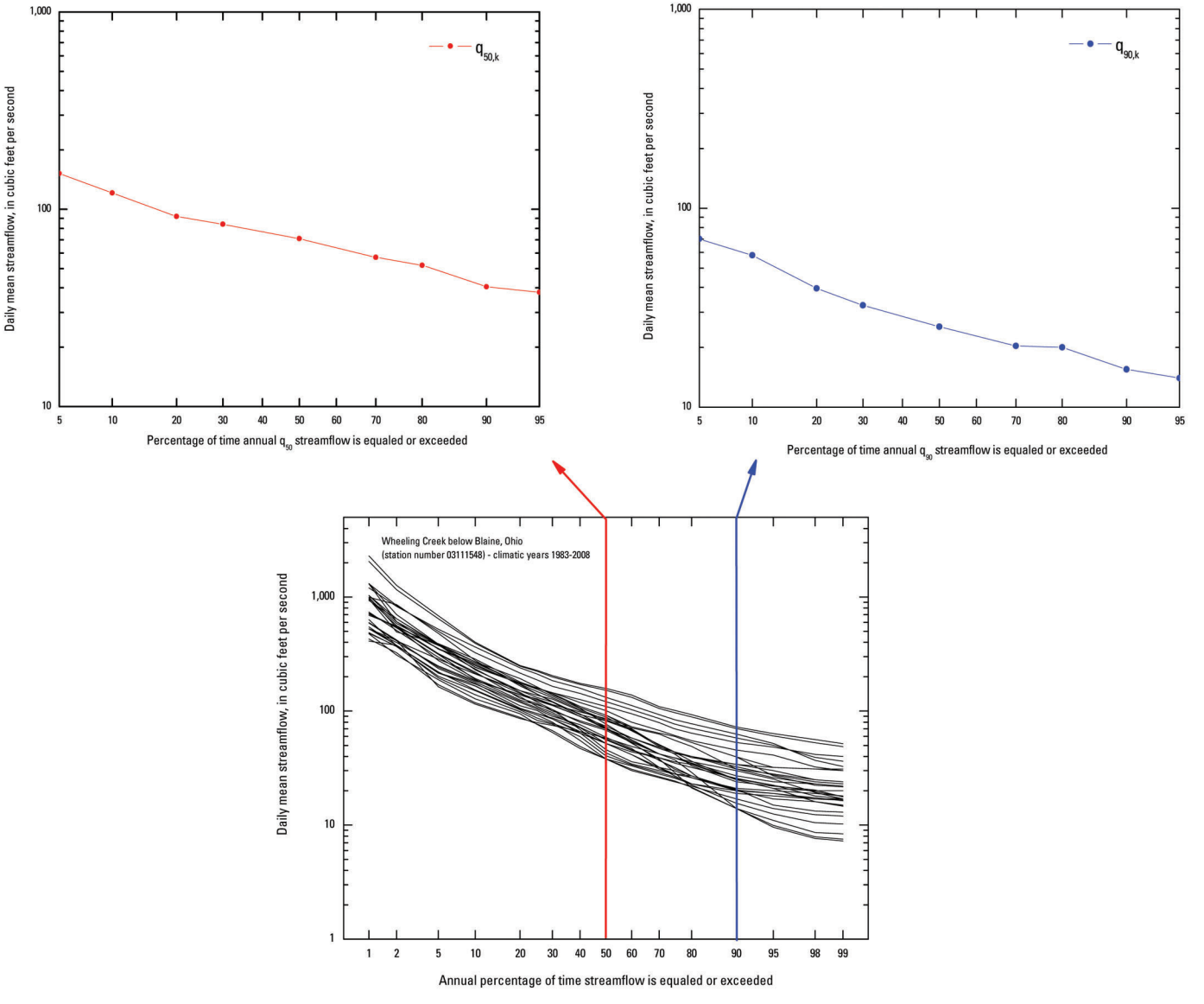

Figure 8. Graphs illustrating the process used to compute selected quantiles of the annual q_p series.

Results and Discussion of Annual Flow-Duration Analyses

Results of the annual and annual seasonal-period flow-duration analyses are presented in appendixes 3–6. Appendixes 3 and 4 contain results from the annual and annual seasonal-period analyses, respectively, for 67 to 70 LTCR sites[5] that have no or minimal regulation, whereas appendixes 5 and 6 contain results from the annual and annual seasonal-period analyses, respectively, for 40 LTCR sites with streamflows that are subject to appreciable regulation. Maps showing the location of flow-duration sites that were thought to have no or minimal streamflow regulation and flow-duration sites that have streamflows that are subject to appreciable regulation are shown in figures 9 and 10, respectively.

The annual flow-duration characteristics presented in this report offer some advantages over traditional flow-duration characteristics. For example, one could construct a flow-duration curve composed of medians of the annual-exceedance percentiles (that is $q_{50,k}$ values) to represent the distribution of daily streamflows in a median hypothetical year. Although the likelihood of actually observing such a year in nature is small (because all of the flow percentiles for the year would have to have a common annual-exceedance probability), the data support such analyses. Also, if a design calls for use of a specific annual-flow duration, one can consider the annual risk of exceedance or nonexceedance of that flow-duration value. Although risk-based assessments are possible, one should be particularly cautious of such interpretations for streams that are subject to regulation given that future changes in regulation could alter the flow-duration characteristics.

The following is an example of how the flow-duration data presented in this report might be used. For example, a side-channel reservoir is being designed for a location adjacent to Wheeling Creek below Blaine, Ohio (station 03111548), and there is a flow-by requirement[6] equal to the annual 80-percent duration streamflow or the total streamflow, whichever is smaller. The amount of water that is required to flow by the reservoir can affect how rapidly the reservoir can be filled (since the flow-by requirement reduces the amount available for withdrawal); however, too small of a flow-by requirement may negatively impact downstream water quality and the health of aquatic biota.

If we examine the column corresponding to the annual 80-percent duration streamflow (that is, the daily mean streamflow that is equaled or exceeded 80 percent of the time in a given year) for Wheeling Creek below Blaine, Ohio (appendix 3, top table on page 38), we see that 50 percent of the time (row corresponding to APEE = 50) the streamflow magnitude equaled or exceeded 52 ft^3/s. That means that in about one-half of the years, the annual 80-percent duration streamflow was greater than 52 ft^3/s. Should we wish to be more protective of the stream by assuring that the annual 80-percent duration streamflow that occurs in most years is allowed to pass by the reservoir, then we may wish to use an annual 80-percent duration streamflow that has a smaller annual-exceedance probability. For example, we could choose an annual 80-percent duration streamflow that was exceeded in only 10 percent of the years (row corresponding to APEE = 10), which would increase the flow-by requirement to 166 ft^3/s. Although increasing the flow-by requirement may provide greater downstream protection, it also may necessitate increasing the pump capacity and (or) volume of the reservoir so that there is sufficient water to meet demand at all times.

[5] Three sites had sufficient record to do annual seasonal-period analyses but did not have sufficient record to do annual analyses.

[6] A flow-by requirement is the minimum quantity of streamflow that must be allowed to flow by a point on a stream. Flow-by requirements typically are established to help ensure that there is sufficient streamflow downstream from an impoundment or withdrawal point on a stream to support ecological or water-use demands, or to supply other legally mandated minimum in-stream flows.

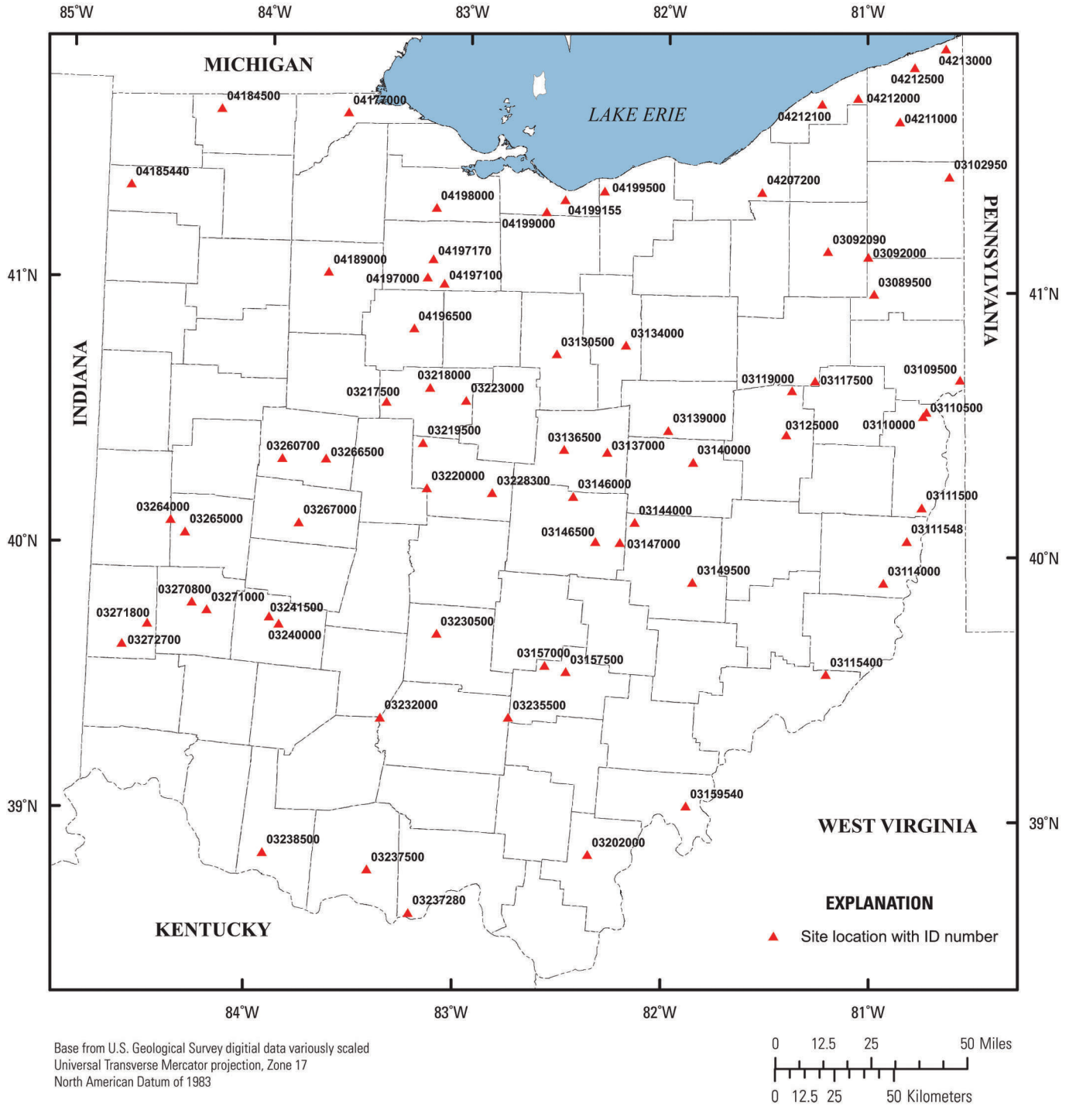

Figure 9. Map showing locations of streamflow-gaging stations with annual flow-duration analyses that have no or minimal streamflow regulation.

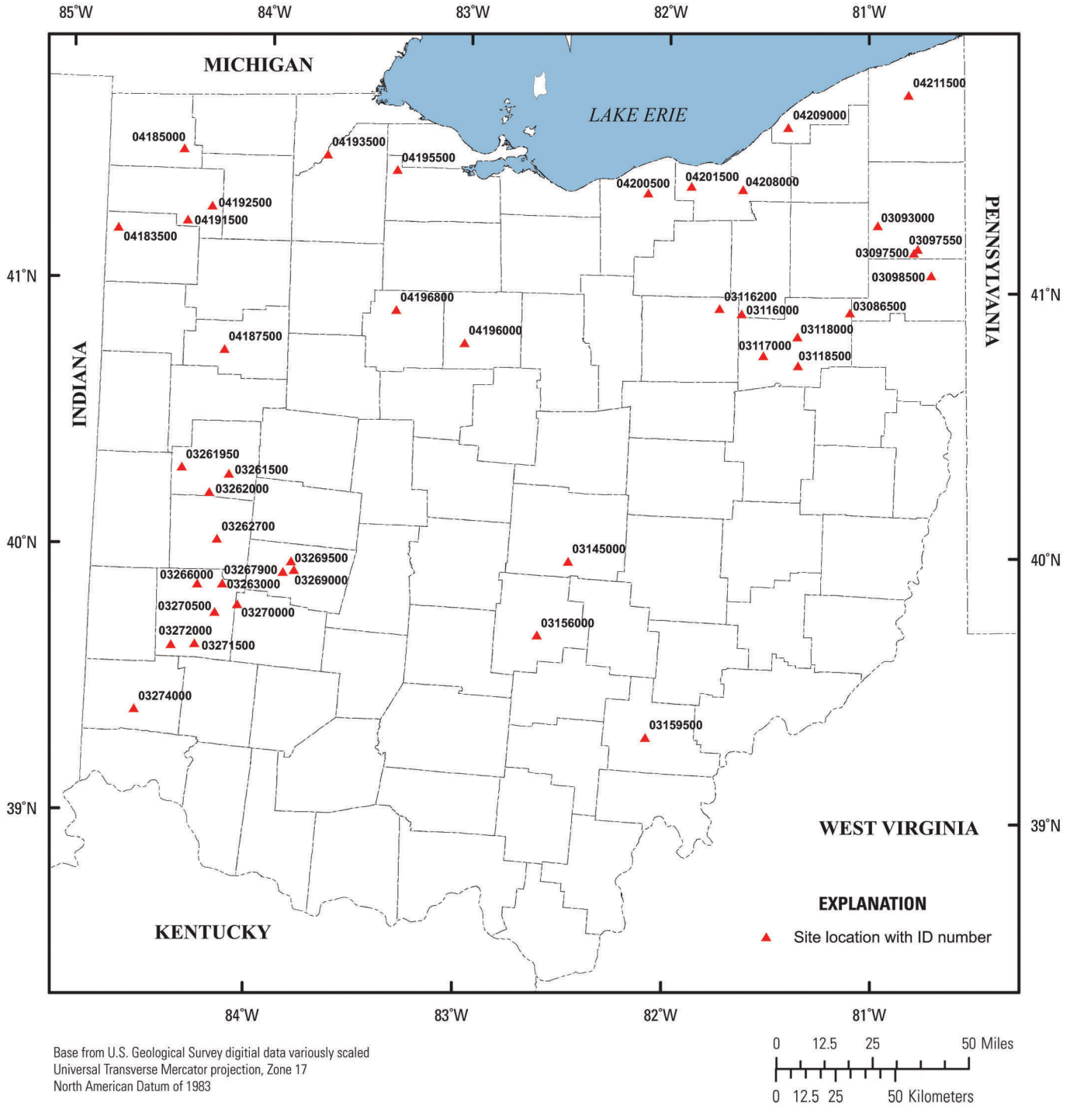

Figure 10. Map showing locations of streamflow-gaging stations with annual flow-duration analyses that have streamflows that are subject to appreciable regulation.

Summary

Streamflow statistics are used for a variety of purposes. Among other uses, both low-flow and flow-duration statistics are particularly useful for making decisions about the suitability of a stream to act as an industrial or public water supply or as a suitable destination for waste effluents. In spite of the widespread need for such statistics, precomputed statistics are available for only a small number of locations in Ohio. Consequently, it is important that streamflow statistics be determined for suitable gaged locations, and it is highly desirable that methods be developed to permit estimation of those statistics at ungaged locations.

Ordinary least-squares regression techniques were used to develop equations for estimating 10-year recurrence-interval (10-percent annual-nonexceedance probability) low-flow yields, in cubic feet per second per square mile, with averaging periods of 1, 7, 30, and 90 day(s), and for estimating the yield corresponding to the long-term 80-percent duration flow. These equations, which estimate low-flow yields as a function of a streamflow-variability index (*SVI*), are based on low-flow statistics published by Straub (2001) for 79 long-term continuous record streamgages with data collected through water year 1997. Constraints were applied to the equations to ensure that zero-valued yields were computed when *SVI* magnitudes exceeded thresholds above which all low-flow yields for a given statistic were observed to be zero in the calibration dataset. The average absolute percent error for the constrained regression equations, when applied to the calibration dataset, ranged from 15.8 to 42.0 percent. The regression results have been incorporated into the U.S. Geological Survey *StreamStats* application for Ohio in the form of a yield grid to facilitate estimation of the corresponding streamflow statistics in cubic feet per second. Although the constrained polynomial regression equations presented in this report can produce zero-valued estimates, logistic-regression equations also were developed for selected low-flow statistics to help identify occurrences of zero-valued statistics.

Traditional flow-duration curves (FDCs) show the percentage of time that daily mean streamflow of a given magnitude was equaled or exceeded over a long period of time. While these traditional FDCs provide useful information about long-term streamflow-exceedance characteristics, their utility is diminished when trying to answer questions about exceedance characteristics within a typical year. To address the need for stochastically relevant annual flow-duration statistics, quantiles of daily and 7-day mean streamflows were determined for annual and annual-seasonal (September–November) periods for each complete climatic year of streamflow-gaging station record for 110 selected streamflow-gaging stations with 20 or more years of record. The quantiles determined for each climatic year were the 99-, 98-, 95-, 90-, 80-, 75-, 70-, 60-, 50-, 40-, 30-, 25-, 20-, 10-, 5-, 2-, and 1-percent exceedance streamflows. Selected exceedance percentiles of the annual-exceedance percentiles were computed and are tabulated in this report to help facilitate consideration of the annual risk of exceedance or nonexceedance of annual and annual seasonal-period flow-duration values.

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Appendix 1. Miscellaneous Supporting Data

Table 1-1. Streamflow-variability index (*SVI*) values for locations in Ohio and adjacent States used for *SVI*-related analyses.

[Streamflow-variability index, in units of base-10 logarithms of cubic feet per second; LTCR, long-term continuous record; LFPR, low-flow partial record]

Station number	Station name	Decimal latitude	Decimal longitude	Streamflow-variability index	Site type
03089500	Mill Creek near Berlin Center, Ohio	41.000	-80.968	0.688	LTCR
03092000	Kale Creek near Pricetown, Ohio	41.140	-80.995	0.808	LTCR
03092090	West Branch Mahoning River near Ravenna, Ohio	41.161	-81.197	0.507	LTCR
03093000	Eagle Creek at Phalanx Station, Ohio	41.261	-80.954	0.449	LTCR
03094500	Mahoning River at Warren, Ohio	41.244	-80.827	0.478	LTCR
03102000	Shenango River near Jamestown Pennsylvania	41.458	-80.425	0.492	LTCR
03102500	Little Shenango River at Greenville Pennsylvania	41.422	-80.376	0.673	LTCR
03102950	Pymatuning Creek at Kinsman, Ohio	41.443	-80.588	0.627	LTCR
03108980	Middle Fork Little Beaver Creek near Salem, Ohio	40.906	-80.805	0.379	LFPR
03108985	Cherry Valley Run at Leetonia, Ohio	40.876	-80.756	0.448	LFPR
03108996	Middle Fork Little Beaver Creek at Teegarden, Ohio	40.822	-80.827	0.439	LFPR
03109000	Lisbon Creek at Lisbon, Ohio	40.782	-80.765	0.621	LTCR
03109395	Bull Creek at Negley, Ohio	40.788	-80.545	0.484	LFPR
03109400	North Fork Little Beaver Creek near Negley, Ohio	40.775	-80.543	0.434	LFPR
03109500	Little Beaver Creek near East Liverpool, Ohio	40.676	-80.541	0.481	LTCR
03110000	Yellow Creek near Hammondsville, Ohio	40.538	-80.725	0.544	LTCR
03111465	Short Creek at Adena, Ohio	40.219	-80.873	0.395	LFPR
03111500	Short Creek near Dillonvale, Ohio	40.193	-80.734	0.380	LTCR
03111548	Wheeling Creek below Blaine, Ohio	40.067	-80.808	0.328	LTCR
03112000	Wheeling Creek at Elm Grove West Virginia	40.045	-80.661	0.708	LTCR
03114000	Captina Creek at Armstrongs Mills, Ohio	39.909	-80.924	0.680	LTCR
03114500	Middle Island Creek at Little, West Virginia	39.475	-80.997	0.751	LTCR
03115400	Little Muskingum River at Bloomfield, Ohio	39.563	-81.204	0.752	LTCR
03115500	Little Muskingum River at Fay, Ohio	39.480	-81.286	0.783	LTCR
03115650	East Fork Duck Creek at Lower Salem, Ohio	39.574	-81.390	0.669	LFPR
03117310	Pipe Run at Malvern, Ohio	40.688	-81.184	0.679	LFPR
03117500	Sandy Creek at Waynesburg, Ohio	40.673	-81.260	0.440	LTCR
03122900	Sugar Creek near West Lebanon, Ohio	40.737	-81.653	0.609	LFPR
03123000	Sugar Creek above Beach City Dam at Beach City, Ohio	40.657	-81.577	0.541	LTCR
03123300	South Fork Sugar Creek near Dundee, Ohio	40.593	-81.614	0.613	LFPR
03125000	Home Creek near New Philadelphia, Ohio	40.468	-81.403	1.037	LTCR
03127100	Crooked Creek near Stillwater, Ohio	40.308	-81.324	0.690	LFPR
03129100	White Eyes Creek near Fresno, Ohio	40.305	-81.750	0.673	LFPR
03130500	Touby Run at Mansfield, Ohio	40.765	-82.545	0.512	LTCR
03134000	Jerome Fork at Jeromeville, Ohio	40.802	-82.200	0.569	LTCR
03134300	Muddy Fork near Rowsburg, Ohio	40.836	-82.138	0.549	LFPR
03136500	Kokosing River at Mount Vernon, Ohio	40.406	-82.500	0.424	LTCR
03137000	Kokosing River at Millwood, Ohio	40.398	-82.286	0.434	LTCR

Table 1-1. Streamflow-variability index (*SVI*) values for locations in Ohio and adjacent States used for *SVI*-related analyses.—Continued

[Streamflow-variability index, in units of base-10 logarithms of cubic feet per second; LTCR, long-term continuous record; LFPR, low-flow partial record]

Station number	Station name	Decimal latitude	Decimal longitude	Streamflow-variability index	Site type
03138790	Killbuck Creek at Burbank, Ohio	40.990	-81.995	0.650	LFPR
03139000	Killbuck Creek at Killbuck, Ohio	40.481	-81.986	0.448	LTCR
03140000	Mill Creek near Coshocton, Ohio	40.363	-81.862	0.640	LTCR
03143760	Wakatomika Creek near Perryton, Ohio	40.220	-82.181	0.511	LFPR
03144000	Wakatomika Creek near Frazeysburg, Ohio	40.133	-82.148	0.522	LTCR
03146000	North Fork Licking River at Utica, Ohio	40.228	-82.452	0.598	LTCR
03146500	Licking River near Newark, Ohio	40.059	-82.340	0.467	LTCR
03149500	Salt Creek near Chandlersville, Ohio	39.909	-81.860	0.655	LTCR
03154500	Reedy Creek near Reedy, West Virginia	38.961	-81.390	0.862	LTCR
03155500	Hughes River at Cisco, West Virginia	39.119	-81.277	0.739	LTCR
03155895	Hocking River at Union St at Lancaster, Ohio	39.718	-82.610	0.415	LFPR
03156000	Hunters Run at Lancaster, Ohio	39.709	-82.622	0.422	LTCR
03156549	Center Branch Rush Creek near Junction City, Ohio	39.723	-82.343	0.632	LFPR
03156550	Rush Creek near Junction City, Ohio	39.720	-82.350	0.552	LFPR
03156900	Clear Creek at Clearport, Ohio	39.618	-82.680	0.667	LFPR
03157000	Clear Creek near Rockbridge, Ohio	39.588	-82.578	0.376	LTCR
03157500	Hocking River at Enterprise, Ohio	39.565	-82.475	0.445	LTCR
03159536	West Branch Shade River at Chester, Ohio	39.100	-81.926	0.689	LFPR
03159538	Middle Branch Shade River at Chester, Ohio	39.104	-81.923	0.704	LFPR
03159540	Shade River near Chester, Ohio	39.064	-81.882	0.687	LTCR
03159555	East Branch Shade River near Tuppers Plains, Ohio	39.141	-81.877	0.753	LFPR
03201600	Sandy Run ab Big Four Hollow Creek near Lake Hope, Ohio	39.363	-82.313	0.581	LTCR
03201700	Big Four Hollow Creek near Lake Hope, Ohio	39.363	-82.314	0.623	LTCR
03201800	Sandy Run near Lake Hope, Ohio	39.334	-82.332	1.077	LTCR
03201990	Little Raccoon Creek near Vinton, Ohio	38.953	-82.366	0.616	LFPR
03202000	Raccoon Creek at Adamsville, Ohio	38.876	-82.356	0.655	LTCR
03204000	Guyandotte River at Branchland, West Virginia	38.221	-82.203	0.545	LTCR
03204500	Mud River near Milton, West Virginia	38.388	-82.113	0.820	LTCR
03216500	Little Sandy River at Grayson, Kentucky	38.330	-82.939	0.720	LTCR
03216540	East Fork Little Sandy River near Fallsburg, Kentucky	38.234	-82.709	0.800	LTCR
03217500	Scioto River at Larue, Ohio	40.572	-83.384	0.664	LTCR
03218000	Little Scioto River above Marion, Ohio	40.629	-83.170	1.008	LTCR
03219500	Scioto River near Prospect, Ohio	40.420	-83.197	0.639	LTCR
03219590	Bokes Creek near Warrensburg, Ohio	40.322	-83.175	1.539	LTCR
03219600	Eagon Run near Warrensburg, Ohio	40.328	-83.153	0.914	LTCR
03220000	Mill Creek near Bellepoint, Ohio	40.248	-83.174	0.689	LTCR
03222500	Olentangy River near New Winchester, Ohio	40.747	-82.905	0.670	LFPR
03222700	Mud Run near Caledonia, Ohio	40.689	-82.962	0.671	LFPR
03222800	Flat Run near Caledonia, Ohio	40.631	-82.948	0.715	LFPR
03223000	Olentangy River at Claridon, Ohio	40.583	-82.989	0.681	LTCR

Table 1-1. Streamflow-variability index (*SVI*) values for locations in Ohio and adjacent States used for *SVI*-related analyses.—Continued

[Streamflow-variability index, in units of base-10 logarithms of cubic feet per second; LTCR, long-term continuous record; LFPR, low-flow partial record]

Station number	Station name	Decimal latitude	Decimal longitude	Streamflow-variability index	Site type
03224000	Shaw Creek at Shawtown, Ohio	40.483	-82.957	0.690	LFPR
03224500	Whetstone Creek near Ashley, Ohio	40.455	-82.958	0.618	LTCR
03230230	Big Darby Creek near West Jefferson, Ohio	39.980	-83.249	0.642	LFPR
03230310	Little Darby Creek at West Jefferson, Ohio	39.951	-83.269	0.651	LFPR
03230400	Big Darby Creek at Darbydale, Ohio	39.850	-83.189	0.630	LFPR
03230500	Big Darby Creek at Darbyville, Ohio	39.701	-83.110	0.583	LTCR
03230600	Hominy Creek at Circleville, Ohio	39.591	-82.924	0.542	LFPR
03230745	Deer Creek at US Route 142 near London, Ohio	39.905	-83.393	0.586	LFPR
03230800	Deer Creek at Mount Sterling, Ohio	39.715	-83.257	0.500	LTCR
03231800	Sugar Creek near Rock Mills, Ohio	39.470	-83.435	0.987	LFPR
03232000	Paint Creek near Greenfield, Ohio	39.379	-83.375	0.742	LTCR
03235000	Salt Creek at Tarlton, Ohio	39.556	-82.781	0.796	LTCR
03235090	Salt Creek at Adelphi, Ohio	39.473	-82.750	0.624	LFPR
03236000	Salt Creek near Londonderry, Ohio	39.256	-82.770	0.600	LTCR
03236800	Salt Creek at Richmond Dale, Ohio	39.200	-82.811	0.630	LFPR
03237280	Upper Twin Creek at McGaw, Ohio	38.644	-83.216	0.921	LTCR
03237500	Ohio Brush Creek near West Union, Ohio	38.804	-83.421	0.788	LTCR
03237900	Cabin Creek near Tollesboro, Kentucky	38.568	-83.537	1.150	LTCR
03238500	White Oak Creek near Georgetown, Ohio	38.858	-83.929	0.818	LTCR
03239000	Little Miami River near Selma, Ohio	39.810	-83.739	0.531	LFPR
03240000	Little Miami River near Oldtown, Ohio	39.748	-83.931	0.409	LTCR
03240500	North Fork Massie Creek at Cedarville, Ohio	39.757	-83.790	0.580	LTCR
03241000	South Fork Massie Creek near Cedarville, Ohio	39.739	-83.764	0.727	LTCR
03241500	Massies Creek at Wilberforce, Ohio	39.723	-83.883	0.514	LTCR
03242050	Little Miami River near Spring Valley, Ohio	39.583	-84.030	0.323	LTCR
03242200	Anderson Fork near New Burlington, Ohio	39.566	-83.903	0.669	LTCR
03246200	East Fork Little Miami River near Marathon, Ohio	39.115	-84.025	0.676	LTCR
03246500	East Fork Little Miami River at Williamsburg, Ohio	39.053	-84.050	0.881	LTCR
03251000	North Fork Licking River near Lewisburg, Kentucky	38.549	-83.794	1.250	LTCR
03254400	North Fork Grassy Creek near Piner, Kentucky	38.792	-84.514	1.350	LTCR
03260700	Bokengehalas Creek near De Graff, Ohio	40.347	-83.891	0.371	LTCR
03260800	Stony Creek near De Graff, Ohio	40.291	-83.910	0.358	LTCR
03265000	Stillwater River at Pleasant Hill, Ohio	40.058	-84.356	0.521	LTCR
03266000	Stillwater River at Englewood, Ohio	39.870	-84.286	0.533	LTCR
03266500	Mad River at Zanesfield, Ohio	40.350	-83.674	0.402	LTCR
03267000	Mad River near Urbana, Ohio	40.108	-83.799	0.253	LTCR
03268000	Buck Creek at New Moorefield, Ohio	39.992	-83.715	0.243	LTCR
03270800	Wolf Creek at Trotwood, Ohio	39.794	-84.310	0.644	LTCR
03271000	Wolf Creek at Dayton, Ohio	39.767	-84.237	0.494	LTCR
03271400	Bear Creek at Ellerton, Ohio	39.673	-84.310	0.545	LFPR
03271736	Twin Creek at Lewisburg, Ohio	39.855	-84.532	0.600	LFPR

Table 1-1. Streamflow-variability index (*SVI*) values for locations in Ohio and adjacent States used for *SVI*-related analyses.—Continued

[Streamflow-variability index, in units of base-10 logarithms of cubic feet per second; LTCR, long-term continuous record; LFPR, low-flow partial record]

Station number	Station name	Decimal latitude	Decimal longitude	Streamflow-variability index	Site type
03271800	Twin Creek near Ingomar, Ohio	39.708	-84.525	0.574	LTCR
03272000	Twin Creek near Germantown, Ohio	39.638	-84.404	0.577	LTCR
03272700	Sevenmile Creek at Camden, Ohio	39.629	-84.644	0.560	LTCR
03272800	Sevenmile Creek at Collinsville, Ohio	39.523	-84.611	0.578	LTCR
03274650	Whitewater River near Economy, Indiana	40.004	-85.116	0.577	LTCR
03274750	Whitewater River near Hagerstown, Indiana	39.874	-85.163	0.332	LTCR
03275000	Whitewater River near Alpine, Indiana	39.579	-85.158	0.397	LTCR
03275600	East Fork Whitewater River at Abington, Indiana	39.733	-84.960	0.397	LTCR
03276700	South Hogan Creek near Dillsboro, Indiana	39.030	-85.038	0.818	LTCR
03291500	Eagle Creek at Glencoe, Kentucky	38.705	-84.824	1.350	LTCR
03325500	Mississinewa River near Ridgeville, Indiana	40.280	-84.992	0.644	LTCR
04096515	South Branch Hog Creek near Allen, Michigan	41.949	-84.828	0.395	LTCR
04175700	River Raisin near Tecumseh, Michigan	41.944	-83.945	0.316	LTCR
04176000	River Raisin near Adrian, Michigan	41.905	-83.981	0.343	LTCR
04177720	Fish Creek at Hamilton, Indiana	41.532	-84.904	0.500	LTCR
04178000	St. Joseph River near Newville, Indiana	41.385	-84.802	0.518	LTCR
04179500	Cedar Creek at Auburn, Indiana	41.366	-85.052	0.551	LTCR
04180000	Cedar Creek near Cedarville, Indiana	41.219	-85.076	0.447	LTCR
04182810	Spy Run Creek at Fort Wayne, Indiana	41.105	-85.153	0.415	LTCR
04184500	Bean Creek at Powers, Ohio	41.659	-84.249	0.495	LTCR
04185440	Unnamed Tributary to Lost Creek near Farmer, Ohio	41.362	-84.691	0.825	LTCR
04188500	Eagle Creek near Findlay, Ohio	40.993	-83.651	1.123	LTCR
04189500	Blanchard River at Glandorf, Ohio	41.044	-84.082	0.671	LTCR
04196000	Sandusky River near Bucyrus, Ohio	40.804	-83.006	0.632	LTCR
04196500	Sandusky River near Upper Sandusky, Ohio	40.851	-83.256	0.660	LTCR
04197000	Sandusky River near Mexico, Ohio	41.044	-83.195	0.637	LTCR
04197100	Honey Creek at Melmore, Ohio	41.022	-83.110	0.765	LTCR
04197170	Rock Creek at Tiffin, Ohio	41.114	-83.168	0.553	LTCR
04198000	Sandusky River near Fremont, Ohio	41.308	-83.159	0.644	LTCR
04198500	East Branch Huron River near Norwalk, Ohio	41.249	-82.648	0.567	LTCR
04199000	Huron River at Milan, Ohio	41.301	-82.608	0.582	LTCR
04199500	Vermilion River near Vermilion, Ohio	41.382	-82.317	0.766	LTCR
04200000	East Branch Black River at Elyria, Ohio	41.348	-82.094	0.903	LTCR
04206211	Park Creek at Bath Center, Ohio	41.179	-81.636	0.583	LFPR
04207200	Tinkers Creek at Bedford, Ohio	41.384	-81.527	0.420	LTCR
04209000	Chagrin River at Willoughby, Ohio	41.631	-81.403	0.427	LTCR
04209500	Grand River near North Bristol, Ohio	41.413	-80.912	0.661	LFPR
04210000	Phelps Creek near Windsor, Ohio	41.516	-80.935	0.735	LTCR
04210500	Grand River near Rome, Ohio	41.606	-80.894	0.653	LFPR
04212000	Grand River near Madison, Ohio	41.741	-81.046	0.802	LTCR
04212100	Grand River near Painesville, Ohio	41.719	-81.228	0.633	LTCR

Table 1-1. Streamflow-variability index (*SVI*) values for locations in Ohio and adjacent States used for *SVI*-related analyses.—Continued

[Streamflow-variability index, in units of base-10 logarithms of cubic feet per second; LTCR, long-term continuous record; LFPR, low-flow partial record]

Station number	Station name	Decimal latitude	Decimal longitude	Streamflow-variability index	Site type
04212500	Ashtabula River near Ashtabula, Ohio	41.856	-80.762	1.062	LTCR
04213000	Conneaut Creek at Conneaut, Ohio	41.927	-80.604	0.626	LTCR

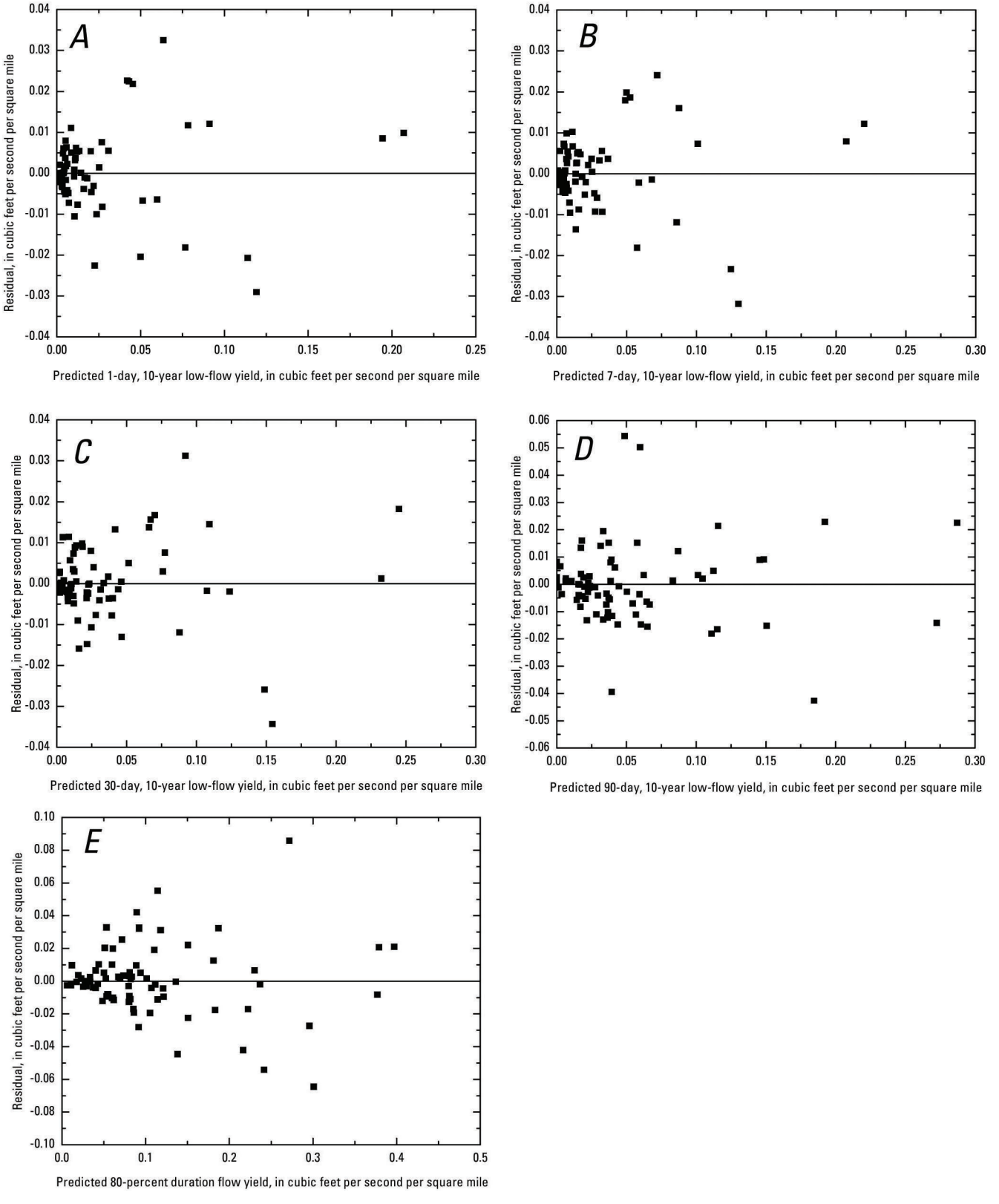

Figure 1-1. Scatter plots of regression residuals as a function of predicted low-flow yields. *A,* 1-day, 10-year. *B,* 7-day, 10-year. *C,* 30-day, 10-year. *D,* 90-day, 10-year. *E,* 80-percent duration low-flow yields.

Appendix 2. Basin Characteristics Tested for Use in Low-Flow Regression Analyses in Ohio

Location Variables

Latitude of basin centroid (Lat_c)—latitude of basin centroid, in decimal degrees.

Longitude of basin centroid ($Long_c$)—longitude of basin centroid, in decimal degrees. Although all decimal longitudes in the study are west of the Prime Meridian and conventionally expressed as negative values, they were converted to positive values for the regression analyses.

Hydrologic Variables

Streamflow-variability index (*SVI*)—streamflow-variability index at the outlet of the basin (index value)—determined by interpolating a grid (with 1,000 ft^2 cells) from at-site values for the streamflow-variability index computed for 163 rural, unregulated streamflow-gaging stations in Ohio and nearby areas of adjacent States. Grid interpolation was done using an inverse distance-weighting (IDW) technique in the Spatial Analyst extension of ArcInfo. Interpolation was based on the 12 nearest neighboring streamflow-gaging stations. For further discussion on streamflow-variability index, see Koltun and Whitehead (2002).

$Slope_{10-85}$ (SL_{10-85})—channel slope, in feet per mile—computed by (1) determining the longest flow path from the point of interest to a topographic divide (which generally corresponded to the basin divide), (2) determining the elevation at 10 percent of the distance along the longest flow path upstream from the point at which the flow statistic is desired (E_{10}), (3) determining the elevation at 85 percent of the distance along the longest flow path upstream from the point at which the flow statistic is desired (E_{85}), (4) determining the length of the stream segment between points 10 and 85 percent of the distance along the longest flow path upstream from the point at which the flow statistic is desired (L_{10-85}), and then (5) dividing the change in elevation (E_{85}-E_{10}) by L_{10-85}.

Drainage area (DA_SS)—area, in square miles—determined by use of the *StreamStats* application for Ohio (Koltun and others, 2006). *StreamStats* uses a specially processed digital elevation model to determine drainage areas. *StreamStats* will compute drainage areas that are comparable to map-based determinations in most cases; however, limitations associated with digital elevation model resolution and (or) scale, as well as other possible factors, may result in erroneous drainage area determinations. It is the user's responsibility to verify that the drainage boundaries (and consequently the drainage area) derived by *StreamStats* are correct.

Longest flow path (LFPath)—flow path, the length, in miles—computed by determining the longest flow path from the point of interest to a topographic divide (which generally corresponded to the basin divide). *StreamStats* determines the longest flow path based on a specially processed digital elevation model that includes the streams of the 1:100,000 National Hydrography Dataset (U.S. Geological Survey, 2004).

Land-Cover Variables

Agriculture (Agric)—percentage of the basin classified as agriculture—determined by (1) summing the areas of the 2001 National Land Cover Dataset (NLCD) grid cells (U.S. Geological Survey, 2007) contained within the basin boundary that are classified as pasture/hay or cultivated crops (land-cover class codes 81 and 82, respectively), (2) dividing by the area of the basin, and then (3) multiplying by 100.

Impervious (Imperv)—percentage of the basin classified as having impervious surfaces—determined by (1) summing the per-pixel estimates of the imperviousness of the land cover for all the areas of the 2001 NLCD (U.S. Geological Survey, 2007) contained within the basin boundary, (2) dividing by the number of cells in the basin, and then (3) multiplying by 100.

Open water (OpenWater)—percentage of the basin classified as open water—determined by (1) summing the areas of the 2001 NLCD grid cells (U.S. Geological Survey, 2007) contained within the basin boundary that are classified as open water (land-cover class code 1), (2) dividing by the area of the basin, and then (3) multiplying by 100.

Storage (W)—percentage of the basin classified as water and wetlands—determined by (1) summing the areas of the 2001 NLCD grid cells (U.S. Geological Survey, 2007) contained within the basin boundary that are classified as water, woody wetlands, and emergent herbaceous wetlands (land-cover class codes 11, 90, and 95, respectively), (2) dividing by the area of the basin, and then (3) multiplying by 100.

Wetland (Wetland)—percentage of the basin classified as wetlands—determined by (1) summing the areas of the 2001 NLCD grid cells (U.S. Geological Survey, 2007) contained within the basin boundary that are classified as woody wetlands and emergent herbaceous wetlands (land-cover class codes 90 and 95, respectively), (2) dividing by the area of the basin, and then (3) multiplying by 100.

Vegetated (Veg)—percentage of the basin classified as vegetated—determined by (1) summing the areas of the 2001 NLCD grid cells (U.S. Geological Survey, 2007) contained within the basin boundary that are classified as deciduous forest, evergreen forest, mixed forest, developed, open space (lawn grasses), shrub/scrub, and grassland/herbaceous (land-cover class codes 41, 42, 43, 21, 52, and 71 respectively), (2) dividing by the area of the basin, and then (3) multiplying by 100.

Forest (Forest)—percentage of the basin classified as forest—determined by (1) summing the areas of the 2001 NLCD grid cells (U.S. Geological Survey, 2007) contained within the basin boundary that are classified as deciduous forest, evergreen forest, or mixed forest (land-cover class codes 41, 42, and 43 respectively), (2) dividing by the area of the basin, and then (3) multiplying by 100.

Tree canopy (TreeCanopy)—percentage of the basin classified as having tree canopy—determined by (1) summing the per-pixel density of the tree cover of the 2001 NLCD (U.S. Geological Survey, 2007) contained within the basin boundary, (2) dividing by the number of cells in the basin, and then (3) multiplying by 100.

Geologic Variables

Primary rock carbonate or evaporite (CarbEvap1)—percentage of the basin classified as carbonate or evaporite for the primary rock type—determined by (1) summing the areas of the Preliminary Integrated Geologic Map Databases for the United States (Nicholson and others, 2005a; Nicholson and others, 2005b; Dicken and others, 2005) contained within the basin boundary that are classified as carbonate or evaporite rock for the primary rock type, (2) dividing by the area of the basin, and then (3) multiplying by 100.

Primary/secondary rock carbonate or evaporite rock (CarbEvap12)—percentage of the basin classified as carbonate or evaporite for the primary or secondary rock type—determined by (1) summing the areas of the Preliminary Integrated Geologic Map Databases for the United States (Nicholson and others, 2005a; Nicholson and others, 2005b; Dicken and others, 2005) contained within the basin boundary that are classified as carbonate or evaporite rock for the primary or secondary rock type, (2) dividing by the area of the basin, and then (3) multiplying by 100.

Known karst (KarstKnown)—percentage of the basin classified as known karst areas—determined by (1) summing the areas of the State Geological Survey karst maps (Pavey and others, 1999; Shaffer and others, 2007) contained within the basin boundary that are classified as known karst, (2) dividing by the area of the basin, and then (3) multiplying by 100.

Probable karst (KarstProb)—percentage of the basin classified as probable karst areas—determined by (1) summing the areas of the State Geological Survey karst maps (Pavey and others, 1999; Shaffer and others, 2007; Michigan Department of Environmental Quality and others, 2004) contained within the basin boundary that are classified as probable karst, (2) dividing by the area of the basin, and then (3) multiplying by 100.

Drift thickness 0–50 feet (Drift_gt50)—percentage of the basin classified as having a 0–50 feet glacial-drift thickness—determined by (1) standardizing and summing the areas of the State Geological Survey drift thickness maps (Ohio Department of Natural Resources, 2000; Dintaman and Gray, 2002; Michigan Department of Environmental Quality and others, 2004) contained within the basin boundary that are classified as having drift thickness of 0–50 feet, (2) dividing by the area of the basin, and then (3) multiplying by 100.

Drift thickness greater than 50 feet (Drift_0_50)—percentage of the basin classified as having greater than 50 feet glacial-drift thickness—determined by (1) standardizing and summing the areas of the State Geological Survey drift thickness maps (Ohio Department of Natural Resources, 2000; Dintaman and Gray, 2002; Michigan Department of Environmental Quality and others, 2004) contained within the basin boundary that are classified as having drift thickness of greater than 50 feet, (2) dividing by the area of the basin, and then (3) multiplying by 100.

Glaciated (Glaciated)—percentage of the basin classified as having been glaciated—determined by (1) summing the glaciated areas (Soller and Packard, 1998) contained within the basin boundary that are classified as having been glaciated, (2) dividing by the area of the basin, and then (3) multiplying by 100.

Soil Variables

Depth to water table (DpthWatTab)—area-weighted average STATSGO2 depth to water table, in centimeters—determined by (1) multiplying each depth value, aggregated by dominant component, of the 2006 U.S. General Soil Map (STATSGO2) (U.S. Department of Agriculture–National Resources Conservation Service, 2006) as defined by the NRCS Soil Data Viewer 5.2 (U.S. Department of Agriculture–National Resources Conservation Service, 2008) by its area of the basin, (2) summing those values, and then (3) dividing by the total area of the basin.

Hydrologic soil group percentages (SoilGroupA, SoilGroupB, SoilGroupC, SoilGroupD, SoilGroupCD, or SoilGroupBD)—percentage of basin classified in each of the six STATSGO2 soil groups—determined by (1) summing the gridded areas of the 2006 U.S. General Soil Map

(STATSGO2) (U.S. Department of Agriculture–National Resources Conservation Service, 2006) contained within the basin boundary that are classified as soil group A, B, C, D, CD, or BD, aggregated by dominant component, as defined by the Natural Resources Conversation Service (NRCS) Soil Data Viewer 5.2 (U.S. Department of Agriculture–National Resources Conservation Service, 2008), (2) dividing by the area of the basin, and then (3) multiplying by 100.

Mean hydrologic soil group index (SoilGroupMean)—area weighted average STATSGO2 soil group index—determined by (1) assigning each soil group, aggregated by dominant component, of the 2006 U.S. General Soil Map (STATSGO2) (U.S. Department of Agriculture–National Resources Conservation Service, 2006) as defined by the NRCS Soil Data Viewer 5.2 (U.S. Department of Agriculture–National Resources Conservation Service, 2008) a numeric value: A[1], B[3], C or BD[5], CD[6], and D[7], (2) multiplying each numeric class by its area of the basin, (3) summing those values, and then (4) dividing by the total area of the basin.

Soil drainage class percentages (DrainCl1, DrainCl2, DrainCl3, DrainCl4, DrainCl5)—percentage of basin classified in each of the five STATSGO2 soil drainage classes—determined by (1) summing the gridded areas of the 2006 U.S. General Soil Map (STATSGO2) (U.S. Department of Agriculture–National Resources Conservation Service, 2006), aggregated by dominant component as defined by the NRCS Soil Data Viewer 5.2 (U.S. Department of Agriculture–National Resources Conservation Service, 2008) contained within the basin boundary that are classified as drainage class Well drained, Moderately well drained, Somewhat poorly drained, Poorly drained, or Very poorly drained, (2) dividing by the area of the basin, and then (3) multiplying by 100.

Mean soil drainage class index (DrainClMean)—area weighted average STATSGO2 soil group index—determined by (1) assigning each soil drainage class of the 2006 U.S. General Soil Map (STATSGO2) (U.S. Department of Agriculture–National Resources Conservation Service, 2006) as defined by the NRCS Soil Data Viewer 5.2 (U.S. Department of Agriculture–National Resources Conservation Service, 2008) a numeric value: well drained [1], Moderately well drained [2] Somewhat poorly drained [3], Poorly drained [4], or Very poorly drained [5], (2) multiplying each numeric class by its area of the basin, (3) summing those values, and then (4) dividing by the total area of the basin.

Climatic Variables

Mean annual precipitation 1 at the basin centroid (Precip1)—the value, in inches, of the grid cell from Whitehead's (2002) rasterized triangular irregular network of Harstine's (1991) isoline map of mean annual precipitation for the period 1931–80 that is collocated with the basin centroid.

Mean annual precipitation 2 at the basin centroid (Precip2)—the value, in inches, of the grid cell from the Parameter-elevation Regressions on Independent Slopes Model (PRISM) dataset of mean annual precipitation for the period 1971–2000 (PRISM Climate Group, 2006a) that is collocated with the basin centroid.

Basin-mean annual precipitation (MeanAnnP)—the value, in inches, determined by summing and averaging grid-cell values from the 1971–2000 mean annual precipitation PRISM dataset (PRISM Climate Group, 2006a) that are contained within the basin boundary.

Basin-mean July precipitation (MeanJulP)—the value, in inches, determined by summing and averaging grid-cell values from the 1971–2000 mean July temperature PRISM dataset (PRISM Climate Group, 2006a) that are located within the basin boundary.

Basin-minimum Autumn precipitation (MinAutP)—the value, in inches, determined by (1) summing, for each grid cell, the values assigned to the average minimum September, October, and November grid cells from the 1971–2000 monthly average minimum precipitation PRISM datasets (PRISM Climate Group, 2006a) that are located within the basin boundary, and (2) selecting the minimum value of those grid-cell sums.

Basin-mean minimum Autumn precipitation (MinAutP2)—the value, in inches, determined by (1) summing, for each grid cell, the values assigned to the average minimum September, October, and November grid cells from the 1971–2000 monthly average minimum precipitation PRISM datasets (PRISM Climate Group, 2006a) that are located within the basin boundary, and (2) dividing by the number of cells in the basin.

Basin-maximum Autumn temperature (MaxAutT)—the value, in degrees F, determined by (1) for each grid cell located within the basin, selecting the maximum temperature value from the average maximum September, October, and November temperature grids from the 1971–2000 PRISM dataset (PRISM Climate Group, 2006b), and (2) selecting the largest of the grid-cell maximum values.

Basin-mean maximum Autumn temperature (MaxAutT2)—the value, in degrees F, determined by (1) for each grid cell located within the basin, selecting the maximum temperature value from the average maximum September, October, and November temperature grids from the 1971–2000 PRISM datasets (PRISM Climate Group, 2006b), (2) summing the maximum values for each grid cell, and then, (3) dividing by the number of cells in the basin.

Table 2–1. Basin characteristics determined for selected streamgages in Ohio and adjacent States. (Available in Excel format. Click here to open table.

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Appendix 3. Annual 1-Day and 7-Day Mean Flow-Duration Results for Sites with Streamflows that have No or Minimal Regulation

03089500 Mill Creek near Berlin Center, Ohio

Years analyzed = 29
Climatic year range = 1942–70

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	139.	179.	199.	217.	234.	300.	329.	385.	476.
2	76.2	94.4	101.	123.	162.	194.	225.	273.	292.
5	34.7	42.0	45.4	57.1	69.5	94.8	101.	114.	130.
10	15.0	19.4	24.8	27.0	32.0	44.3	48.8	63.0	72.8
20	4.84	8.96	10.0	11.0	15.0	20.0	23.2	26.0	28.3
25	3.23	6.00	7.03	8.40	10.0	14.5	18.0	19.5	21.0
30	2.30	4.00	4.70	5.70	8.00	11.0	13.0	15.0	17.0
40	1.68	2.00	2.60	3.00	4.26	6.80	8.06	8.80	11.8
50	1.05	1.20	1.40	1.90	2.60	4.00	5.00	6.40	7.80
60	0.75	0.84	1.00	1.20	1.80	2.48	2.94	4.90	5.25
70	0.50	0.60	0.70	0.80	1.20	1.31	1.70	3.40	3.79
75	0.40	0.40	0.56	0.60	0.90	1.20	1.40	2.28	3.13
80	0.30	0.40	0.40	0.50	0.80	1.00	1.10	1.64	2.42
90	0.10	0.19	0.20	0.30	0.40	0.60	0.80	1.00	1.75
95	0.05	0.10	0.10	0.20	0.30	0.50	0.55	0.80	1.50
98	0.00	0.00	0.10	0.10	0.21	0.40	0.50	0.70	1.32
99	0.00	0.00	0.03	0.10	0.20	0.33	0.47	0.60	1.23

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	80.1	91.7	103.	105.	135.	166.	231.	261.	300.
2	54.9	57.9	82.1	90.4	105.	127.	139.	149.	177.
5	38.5	50.1	58.0	63.3	73.7	90.1	101.	120.	138.
10	19.4	25.6	31.3	38.3	50.4	59.4	68.1	78.3	80.0
20	5.64	9.86	12.0	14.4	21.7	32.3	33.5	39.0	51.9
25	3.37	6.93	8.46	9.57	16.4	22.1	28.0	31.5	35.5
30	2.60	4.23	5.94	7.57	11.1	16.7	20.4	23.9	24.8
40	1.71	1.93	2.89	3.24	5.11	9.86	11.6	16.3	18.9
50	1.19	1.30	1.56	2.27	3.17	4.51	7.69	10.2	11.5
60	0.81	0.96	1.13	1.56	2.17	3.09	4.00	6.81	7.76
70	0.51	0.70	0.80	0.93	1.44	1.84	2.31	4.89	5.46
75	0.42	0.46	0.63	0.72	1.27	1.46	1.71	4.29	4.42
80	0.34	0.40	0.49	0.54	0.87	1.19	1.40	2.71	3.35
90	0.19	0.20	0.26	0.31	0.47	0.88	0.92	1.10	1.92
95	0.07	0.11	0.16	0.24	0.36	0.59	0.71	0.93	1.79
98	0.03	0.06	0.08	0.16	0.27	0.45	0.50	0.77	1.58
99	0.01	0.03	0.04	0.11	0.23	0.39	0.49	0.67	1.46

03092000 Kale Creek near Pricetown, Ohio

Years analyzed = 51
Climatic year range = 1942–92

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	75.4	182.	211.	261.	367.	494.	577.	727.	883.
2	59.7	105.	122.	151.	245.	311.	401.	446.	492.
5	38.7	39.9	54.4	68.4	104.	144.	165.	189.	221.
10	18.0	21.2	25.0	31.0	46.2	76.4	89.1	94.6	97.9
20	5.06	6.65	9.02	12.9	21.6	29.8	35.8	40.9	43.9
25	3.51	4.30	5.21	8.64	13.5	21.0	26.8	28.8	35.8
30	2.60	2.65	3.53	6.13	10.2	16.6	19.2	20.9	28.7
40	1.11	1.52	1.81	2.98	6.32	10.4	11.2	13.8	17.9
50	0.70	0.80	1.01	1.42	3.50	6.90	7.50	9.08	12.9
60	0.34	0.40	0.60	0.80	2.00	4.56	5.60	7.00	9.72
70	0.10	0.21	0.30	0.40	1.20	2.59	4.12	5.15	6.58
75	0.10	0.18	0.20	0.30	0.81	2.23	3.40	4.13	5.26
80	0.04	0.10	0.20	0.23	0.59	1.76	2.68	3.16	3.70
90	0.00	0.06	0.10	0.10	0.30	0.98	1.43	1.75	2.19
95	0.00	0.02	0.07	0.10	0.20	0.73	0.93	1.16	1.82
98	0.00	0.00	0.00	0.05	0.13	0.49	0.80	0.94	1.39
99	0.00	0.00	0.00	0.03	0.11	0.36	0.70	0.91	1.26

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	53.0	80.3	109.	139.	178.	233.	286.	337.	359.
2	41.1	69.5	90.9	119.	142.	195.	216.	268.	311.
5	32.2	53.2	61.8	77.1	105.	141.	156.	180.	197.
10	21.9	25.2	30.3	45.4	68.1	96.0	103.	114.	130.
20	5.40	9.02	13.5	19.2	33.1	53.2	61.9	67.0	72.9
25	4.12	4.90	7.27	13.5	21.9	40.2	48.8	52.0	59.1
30	2.85	3.37	4.43	9.79	16.6	31.8	37.2	39.7	45.2
40	1.52	1.68	2.19	3.77	8.80	17.1	21.2	29.0	30.6
50	0.82	0.91	1.37	1.71	4.57	9.60	12.5	18.1	23.3
60	0.43	0.57	0.64	0.90	2.54	6.35	7.48	11.9	15.7
70	0.12	0.25	0.35	0.45	1.49	3.79	5.36	8.39	11.7
75	0.06	0.20	0.27	0.35	0.88	3.26	4.27	6.49	9.05
80	0.05	0.14	0.20	0.25	0.67	2.35	3.45	4.03	7.36
90	0.00	0.06	0.10	0.14	0.34	1.19	1.65	2.34	3.73
95	0.00	0.05	0.07	0.10	0.22	0.85	1.06	1.62	2.10
98	0.00	0.02	0.05	0.06	0.16	0.66	0.90	1.10	1.79
99	0.00	0.00	0.02	0.04	0.14	0.59	0.76	1.01	1.54

03092090 West Branch Mahoning River near Ravenna, Ohio

Years analyzed = 27
Climatic year range = 1966–92

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	127.	190.	218.	256.	287.	366.	391.	451.	475.
2	87.8	119.	160.	175.	213.	244.	250.	304.	353.
5	52.9	69.6	80.2	83.8	116.	149.	166.	177.	198.
10	30.3	39.5	44.4	47.7	65.0	78.4	89.8	107.	112.
20	16.8	20.4	24.9	26.3	32.0	38.1	42.0	49.2	53.2
25	13.2	16.2	19.8	21.4	23.5	29.6	34.0	39.0	42.3
30	10.2	13.6	16.3	17.9	19.0	24.9	30.0	32.9	33.1
40	7.21	9.80	11.6	12.0	14.6	18.6	21.0	23.5	25.8
50	4.86	6.80	8.46	8.76	11.0	13.6	16.4	18.0	19.2
60	3.34	4.68	6.00	6.60	8.20	9.94	12.0	13.4	16.2
70	2.40	3.03	4.12	4.54	5.78	6.92	7.46	10.1	12.1
75	2.04	2.60	3.32	3.84	4.85	5.76	6.20	9.11	9.82
80	1.76	2.00	2.68	3.21	4.12	4.40	4.85	7.86	8.05
90	0.82	1.19	1.40	1.78	2.50	2.93	3.26	4.13	4.63
95	0.44	1.05	1.12	1.34	1.80	2.40	2.75	3.10	3.68
98	0.31	0.71	0.94	0.99	1.40	1.90	2.14	2.76	3.12
99	0.23	0.49	0.85	0.93	1.20	1.81	1.94	2.48	2.92

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	78.2	91.1	126.	160.	181.	206.	219.	234.	268.
2	64.7	80.5	95.7	123.	136.	157.	175.	188.	203.
5	51.4	64.5	83.2	85.0	96.0	114.	128.	141.	151.
10	34.5	47.1	54.1	59.6	72.4	82.4	94.9	107.	116.
20	16.5	25.4	29.6	30.7	41.0	54.5	60.2	70.0	79.8
25	12.7	20.9	24.4	25.7	34.3	47.4	50.2	57.7	60.0
30	10.4	16.6	19.7	21.7	25.7	37.2	41.0	47.3	49.1
40	7.62	10.2	13.2	14.6	17.3	26.3	29.1	35.7	37.7
50	5.67	7.63	9.50	10.5	12.8	17.3	20.6	25.4	27.0
60	3.75	5.48	6.99	8.57	9.74	12.4	14.8	18.4	20.9
70	2.50	3.29	4.77	5.30	7.08	7.95	9.54	12.4	17.1
75	2.15	2.84	3.93	4.63	5.80	6.57	7.99	10.4	14.9
80	1.91	2.48	3.24	3.84	4.61	5.54	6.06	8.51	12.0
90	1.30	1.51	1.86	2.17	3.24	3.60	3.94	4.91	6.44
95	0.71	1.07	1.25	1.46	2.33	2.88	3.23	3.71	4.37
98	0.43	0.89	1.06	1.13	2.01	2.25	2.71	3.38	3.82
99	0.33	0.62	0.97	1.05	1.64	2.07	2.35	3.09	3.51

03102950 Pymatuning Creek at Kinsman, Ohio

Years analyzed = 28
Climatic year range = 1966–93

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	466.	642.	746.	862.	985.	1030.	1110.	1240.	1470.
2	390.	550.	612.	635.	749.	799.	836.	855.	872.
5	290.	363.	408.	451.	514.	568.	623.	680.	707.
10	186.	240.	272.	281.	344.	407.	437.	501.	518.
20	87.6	117.	138.	178.	194.	228.	255.	274.	308.
25	65.4	95.8	106.	132.	154.	188.	207.	235.	269.
30	48.3	76.8	83.8	97.7	121.	155.	168.	201.	225.
40	31.9	47.6	57.8	68.1	79.6	98.9	112.	150.	158.
50	21.1	32.3	40.0	44.1	51.0	71.5	79.2	110.	114.
60	15.4	20.6	23.3	27.1	36.9	48.7	55.3	77.7	90.9
70	8.42	9.57	12.6	16.0	22.0	33.0	37.0	51.2	61.6
75	5.04	7.93	9.70	11.0	15.3	27.6	28.8	42.6	50.5
80	3.43	6.22	7.06	8.20	11.1	18.6	24.0	31.2	34.4
90	1.29	2.00	3.17	3.71	5.32	10.9	12.2	14.1	16.1
95	0.43	1.07	1.47	2.26	3.40	6.58	7.04	7.44	8.80
98	0.21	0.23	0.84	1.32	2.40	3.83	5.09	5.48	5.92
99	0.13	0.17	0.71	1.07	2.10	3.23	3.99	4.38	4.79

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	321.	502.	546.	641.	766.	873.	904.	1070.	1160.
2	309.	442.	476.	535.	604.	705.	750.	807.	869.
5	251.	326.	380.	411.	446.	503.	530.	595.	615.
10	183.	219.	292.	299.	333.	368.	418.	443.	471.
20	94.4	126.	154.	170.	230.	252.	270.	300.	305.
25	65.4	101.	118.	140.	180.	200.	209.	258.	260.
30	49.9	73.6	91.6	113.	138.	169.	174.	225.	234.
40	33.0	50.5	63.0	75.0	88.0	118.	126.	174.	184.
50	21.2	34.8	42.8	49.7	57.6	83.3	92.0	136.	142.
60	15.3	20.1	25.7	31.5	39.7	55.5	63.3	104.	111.
70	9.80	10.6	16.1	19.5	22.9	37.7	45.9	70.2	78.1
75	5.37	8.41	11.0	14.1	17.7	31.6	36.3	55.6	59.7
80	3.65	6.54	7.59	9.53	11.9	22.7	27.3	41.1	43.8
90	1.38	2.15	3.84	4.27	6.23	14.0	15.2	16.9	20.1
95	0.64	1.17	2.27	2.68	3.87	7.65	8.27	10.2	11.6
98	0.26	0.35	0.93	1.80	3.06	4.51	5.78	6.91	8.48
99	0.21	0.24	0.81	1.40	2.62	4.09	5.33	5.66	6.84

03109500 Little Beaver Creek near East Liverpool, Ohio

Years analyzed = 93
Climatic year range = 1916–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1230.	2090.	2520.	2860.	4110.	5250.	6260.	7050.	9230.
2	960.	1290.	1940.	2120.	2940.	3910.	4520.	5030.	6730.
5	709.	876.	1110.	1300.	1830.	2440.	2740.	2920.	3330.
10	517.	643.	749.	866.	1230.	1540.	1740.	1900.	2110.
20	268.	372.	429.	494.	700.	936.	1040.	1150.	1260.
25	206.	301.	350.	403.	570.	767.	900.	1000.	1100.
30	161.	222.	289.	328.	479.	670.	765.	864.	962.
40	106.	134.	192.	225.	321.	494.	593.	674.	777.
50	67.6	98.7	127.	160.	245.	392.	453.	525.	665.
60	50.2	77.6	87.0	111.	176.	290.	343.	413.	566.
70	38.7	54.5	64.7	83.6	130.	206.	264.	314.	477.
75	35.0	48.0	54.7	69.8	110.	180.	221.	281.	434.
80	30.4	41.7	46.4	58.4	92.0	131.	182.	249.	391.
90	21.4	30.6	33.2	38.0	61.7	93.1	132.	175.	272.
95	17.5	24.5	26.4	31.8	47.4	78.6	106.	136.	207.
98	14.0	19.9	22.0	25.8	39.6	66.3	91.3	124.	172.
99	12.9	17.1	20.7	24.0	35.7	60.2	81.5	109.	155.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	970.	1340.	1740.	2040.	2820.	3970.	4450.	5060.	6230.
2	844.	1130.	1420.	1670.	2460.	2970.	3420.	3810.	4640.
5	700.	834.	1030.	1280.	1720.	2150.	2540.	2760.	3050.
10	496.	636.	759.	901.	1220.	1620.	1790.	2010.	2230.
20	278.	391.	429.	512.	802.	1040.	1240.	1390.	1530.
25	195.	320.	375.	431.	632.	890.	1010.	1190.	1280.
30	161.	241.	309.	341.	526.	777.	835.	1090.	1150.
40	107.	145.	201.	231.	358.	591.	669.	790.	911.
50	76.6	110.	131.	172.	270.	430.	520.	591.	733.
60	52.1	80.9	93.8	115.	189.	310.	399.	467.	612.
70	40.0	58.1	71.2	85.2	136.	236.	289.	337.	530.
75	37.3	52.2	58.7	72.5	120.	196.	232.	312.	487.
80	30.6	43.1	50.9	60.7	101.	155.	207.	287.	427.
90	24.3	31.2	35.3	40.7	64.6	103.	146.	210.	349.
95	17.8	26.6	30.2	34.2	50.4	86.3	120.	147.	232.
98	14.6	21.5	24.7	28.9	43.1	75.7	105.	137.	196.
99	14.0	20.6	23.0	26.2	40.0	69.4	93.9	133.	180.

03110000 Yellow Creek near Hammondsville, Ohio

Years analyzed = 68
Climatic year range = 1941–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	594.	719.	832.	926.	1290.	1710.	1890.	2170.	2980.
2	406.	488.	618.	682.	863.	1170.	1350.	1490.	1740.
5	267.	325.	339.	425.	561.	734.	858.	916.	1170.
10	186.	223.	241.	288.	386.	464.	565.	586.	699.
20	104.	120.	131.	160.	235.	286.	317.	361.	403.
25	76.6	95.1	101.	126.	186.	248.	267.	313.	352.
30	49.4	68.1	81.1	102.	153.	206.	229.	265.	306.
40	27.6	39.3	54.0	69.4	104.	160.	181.	216.	239.
50	17.1	24.1	35.7	42.0	73.0	121.	146.	164.	192.
60	10.8	16.6	22.4	30.0	49.7	85.4	108.	130.	159.
70	7.44	10.5	15.0	20.0	35.9	59.6	73.8	100.	125.
75	6.03	8.63	12.0	16.0	28.5	46.0	61.5	87.9	114.
80	5.04	7.05	8.99	13.0	22.3	38.0	46.0	79.5	98.6
90	3.11	3.98	4.78	6.20	13.0	22.0	30.1	51.8	68.7
95	1.71	2.52	3.43	4.08	9.30	16.3	25.1	37.3	56.2
98	1.02	1.92	2.18	3.09	7.43	13.2	19.1	26.2	47.2
99	0.88	1.66	1.90	2.86	6.25	12.1	16.8	24.2	42.9

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	419.	495.	521.	645.	871.	1150.	1440.	1650.	1800.
2	364.	406.	473.	558.	740.	865.	962.	1210.	1520.
5	281.	310.	347.	403.	554.	702.	776.	873.	1160.
10	184.	227.	242.	294.	408.	514.	579.	624.	738.
20	98.8	115.	143.	172.	269.	333.	372.	429.	464.
25	66.2	93.9	112.	133.	214.	281.	320.	369.	407.
30	49.5	69.1	83.6	106.	171.	232.	262.	325.	354.
40	31.0	42.3	57.6	77.4	115.	180.	204.	237.	278.
50	15.4	26.2	36.6	43.8	77.8	129.	161.	180.	217.
60	11.6	17.2	23.7	32.8	55.3	94.7	123.	143.	185.
70	7.69	12.0	17.6	21.3	39.9	64.5	81.6	113.	145.
75	6.76	9.54	13.4	18.5	31.5	54.3	69.0	101.	129.
80	5.84	7.47	10.2	13.3	25.9	41.9	54.5	87.0	117.
90	3.39	4.21	5.44	6.54	15.4	25.3	33.8	59.2	75.9
95	2.20	2.67	3.66	4.56	10.6	18.8	28.0	46.3	63.1
98	1.58	2.02	2.81	3.80	8.81	15.0	23.7	32.5	54.2
99	1.02	1.89	2.36	3.40	7.46	13.6	19.9	28.7	52.0

03111500 Short Creek near Dillonvale, Ohio

Years analyzed = 67
Climatic year range = 1942–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	366.	410.	483.	541.	749.	1210.	1390.	1530.	2690.
2	278.	294.	337.	401.	542.	821.	925.	1180.	1420.
5	187.	200.	227.	254.	369.	480.	579.	715.	760.
10	136.	147.	167.	194.	265.	335.	408.	429.	479.
20	94.5	103.	111.	125.	176.	222.	271.	291.	315.
25	80.5	81.9	93.4	106.	148.	197.	235.	256.	287.
30	62.8	67.5	81.4	92.4	130.	178.	202.	233.	257.
40	37.7	43.8	55.5	68.6	99.2	143.	162.	195.	220.
50	25.7	34.6	42.4	50.0	71.0	114.	134.	153.	194.
60	19.1	28.6	30.0	37.4	58.4	91.7	113.	127.	171.
70	16.4	22.8	25.0	27.6	46.0	67.9	95.5	103.	141.
75	14.7	20.4	22.4	24.6	39.0	60.4	85.6	93.6	129.
80	13.4	19.0	19.3	21.6	36.0	52.2	73.2	85.8	118.
90	12.0	13.0	14.9	16.6	26.0	39.4	55.6	68.6	89.3
95	8.30	10.0	12.0	15.0	23.0	33.4	47.4	63.6	75.1
98	4.84	7.28	9.96	13.0	20.0	29.6	42.8	56.5	70.8
99	3.92	5.88	9.28	12.0	19.0	28.3	40.5	53.6	67.2

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	249.	288.	313.	384.	573.	833.	972.	1340.	1470.
2	220.	262.	274.	327.	467.	685.	782.	872.	1210.
5	189.	194.	207.	244.	363.	481.	577.	655.	844.
10	139.	162.	166.	187.	269.	350.	430.	463.	482.
20	95.1	101.	114.	126.	185.	249.	296.	334.	348.
25	79.1	84.1	94.3	112.	155.	212.	248.	284.	311.
30	64.5	69.5	79.2	93.0	138.	189.	223.	250.	286.
40	37.7	45.6	59.6	70.2	103.	154.	178.	204.	245.
50	26.0	35.4	45.3	51.0	79.1	122.	146.	165.	212.
60	20.6	29.9	33.7	39.3	63.1	96.8	122.	138.	190.
70	17.1	24.2	27.1	29.9	48.3	75.8	102.	118.	164.
75	15.4	22.0	24.5	25.8	44.3	68.1	91.2	108.	147.
80	14.3	20.0	21.0	23.1	38.3	56.3	79.5	96.9	132.
90	12.4	13.6	16.8	18.2	28.3	42.0	61.5	77.9	104.
95	8.86	11.0	13.0	15.6	24.1	35.9	49.8	67.6	87.1
98	6.42	8.56	11.5	13.9	21.4	32.0	46.0	62.4	80.1
99	5.46	7.46	10.7	13.5	20.4	30.2	44.4	60.8	77.0

03111548 Wheeling Creek below Blaine, Ohio

Years analyzed = 24
Climatic year range = 1983–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	428.	481.	526.	593.	720.	976.	1030.	1310.	2050.
2	324.	371.	378.	415.	539.	585.	645.	842.	1160.
5	170.	195.	216.	242.	316.	379.	386.	501.	644.
10	118.	139.	166.	180.	215.	250.	270.	325.	392.
20	88.0	98.6	106.	122.	143.	173.	176.	216.	248.
25	76.9	83.0	95.0	107.	126.	148.	159.	187.	224.
30	67.4	76.5	85.2	93.5	113.	131.	142.	165.	199.
40	49.0	59.6	66.0	71.9	89.8	103.	110.	143.	171.
50	38.0	40.5	52.0	57.0	71.0	84.0	92.0	121.	152.
60	30.8	33.7	41.4	46.0	54.7	69.0	73.0	103.	132.
70	26.5	29.0	32.0	37.4	42.0	50.4	64.0	86.0	105.
75	24.4	26.4	28.0	31.0	39.0	44.0	60.0	77.0	97.1
80	21.4	22.5	26.0	27.0	34.5	40.0	53.0	70.6	89.0
90	14.0	15.5	20.0	20.3	25.4	32.5	39.6	58.0	70.2
95	9.94	12.5	17.0	19.0	22.2	27.5	32.0	50.2	60.5
98	7.88	10.5	16.0	17.0	19.7	24.0	31.0	39.3	52.7
99	7.54	10.2	14.7	16.5	17.8	23.0	30.0	36.3	48.7

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	290.	303.	344.	375.	481.	609.	729.	1090.	1220.
2	237.	255.	290.	328.	401.	472.	553.	756.	1030.
5	182.	195.	223.	247.	325.	372.	406.	515.	692.
10	127.	144.	172.	186.	222.	262.	286.	343.	388.
20	92.6	97.6	114.	130.	153.	178.	187.	235.	272.
25	77.6	82.9	100.	119.	133.	164.	169.	207.	253.
30	70.4	78.2	86.3	98.9	115.	146.	151.	193.	236.
40	52.0	61.8	68.3	74.9	90.7	111.	121.	163.	200.
50	41.2	44.1	52.6	62.1	74.4	95.0	100.	135.	167.
60	33.1	34.4	45.3	49.0	59.4	76.2	81.9	119.	145.
70	27.3	30.4	32.9	38.8	47.0	52.8	66.1	101.	120.
75	25.0	28.1	29.3	33.4	43.2	47.6	61.9	89.1	110.
80	23.1	24.1	26.6	28.7	37.6	41.7	55.9	78.9	98.4
90	15.4	18.5	20.9	22.2	28.3	34.6	40.4	64.7	80.6
95	10.1	12.5	18.4	19.9	24.6	30.9	33.4	58.5	67.0
98	8.20	11.1	17.1	18.9	21.8	25.9	32.0	48.7	61.8
99	7.83	10.6	16.0	18.0	19.4	25.0	31.9	40.8	59.9

03114000 Captina Creek at Armstrongs Mills, Ohio

Years analyzed = 52
Climatic year range = 1927–2002

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	344.	1020.	1120.	1170.	1530.	1980.	2380.	2700.	3360.
2	197.	667.	776.	848.	1070.	1320.	1480.	1730.	1800.
5	144.	320.	412.	481.	615.	754.	854.	966.	1090.
10	101.	185.	239.	289.	373.	469.	550.	571.	592.
20	34.5	110.	127.	150.	207.	284.	301.	342.	359.
25	30.3	84.9	100.	115.	165.	232.	254.	272.	326.
30	21.6	61.9	79.8	89.9	130.	191.	210.	232.	288.
40	11.0	36.4	47.9	57.8	91.8	140.	158.	182.	230.
50	5.59	20.0	30.6	37.6	62.5	103.	126.	153.	179.
60	2.20	9.58	16.0	21.5	38.6	71.4	93.0	119.	141.
70	0.96	4.15	6.28	11.6	23.8	37.9	62.4	82.7	108.
75	0.35	3.00	4.27	9.29	17.0	29.5	52.1	67.4	95.9
80	0.17	1.88	2.63	7.00	12.7	22.4	40.0	51.5	80.7
90	0.01	0.29	1.08	2.08	5.97	12.8	20.1	31.7	58.0
95	0.00	0.07	0.40	1.02	3.93	8.48	12.5	18.6	40.6
98	0.00	0.00	0.03	0.36	2.13	5.48	7.40	10.6	29.0
99	0.00	0.00	0.00	0.09	1.60	4.30	5.29	9.70	27.0

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	202.	600.	655.	701.	928.	1380.	1720.	1760.	1870.
2	172.	498.	580.	632.	745.	999.	1090.	1190.	1290.
5	131.	329.	390.	461.	547.	724.	809.	944.	1060.
10	100.	199.	273.	327.	420.	511.	545.	609.	705.
20	36.9	120.	151.	182.	247.	307.	364.	413.	430.
25	26.6	88.5	115.	137.	197.	267.	320.	344.	372.
30	22.4	68.3	86.7	104.	159.	231.	271.	310.	338.
40	13.3	36.4	50.7	67.2	109.	174.	199.	231.	276.
50	6.25	20.8	32.5	42.4	77.2	123.	155.	185.	223.
60	3.10	10.9	17.5	26.1	48.0	81.1	117.	144.	170.
70	1.33	4.68	8.18	13.9	28.7	47.6	79.3	97.2	134.
75	0.69	3.17	5.29	10.2	21.2	35.5	61.2	82.7	116.
80	0.24	2.17	3.80	9.05	16.4	27.3	49.4	62.5	98.0
90	0.01	0.50	1.41	2.66	7.98	15.5	25.9	36.2	73.8
95	0.00	0.10	0.84	1.33	5.31	11.0	17.8	26.3	56.4
98	0.00	0.00	0.09	0.69	3.56	7.64	10.2	17.2	42.0
99	0.00	0.00	0.03	0.42	1.96	6.09	7.71	11.4	35.9

03115400 Little Muskingum River at Bloomfield, Ohio

Years analyzed = 35
Climatic year range = 1959–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1920.	2040.	2200.	2340.	2740.	3430.	3680.	4240.	5470.
2	1270.	1400.	1430.	1600.	1970.	2350.	2660.	2950.	4080.
5	680.	748.	830.	934.	1060.	1250.	1420.	1610.	1780.
10	354.	402.	460.	518.	579.	722.	816.	941.	1010.
20	184.	199.	220.	271.	311.	400.	444.	483.	579.
25	112.	136.	168.	221.	246.	342.	351.	396.	449.
30	81.2	99.4	134.	165.	200.	280.	297.	342.	379.
40	41.6	57.8	75.9	83.7	126.	186.	216.	257.	310.
50	22.4	28.5	40.2	44.0	81.0	117.	168.	199.	239.
60	10.3	13.8	19.8	24.6	50.0	73.5	115.	154.	179.
70	3.35	6.46	11.2	14.8	26.8	44.4	66.2	111.	124.
75	2.52	4.06	6.48	10.5	20.0	31.6	49.9	89.6	105.
80	1.84	2.75	4.20	5.16	13.0	22.6	38.8	69.7	83.9
90	0.56	0.73	1.47	2.10	4.72	9.32	18.9	32.2	52.4
95	0.23	0.42	0.80	1.16	3.73	6.14	9.88	19.7	40.0
98	0.08	0.19	0.40	0.71	2.47	4.13	5.35	9.59	26.4
99	0.05	0.08	0.32	0.56	2.10	3.08	4.00	8.22	19.8

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	894.	980.	1210.	1470.	1730.	1970.	2380.	3280.	5150.
2	825.	895.	1120.	1220.	1320.	1570.	1790.	2230.	2880.
5	693.	699.	765.	854.	1050.	1090.	1150.	1490.	1800.
10	411.	497.	590.	598.	685.	805.	860.	959.	1150.
20	211.	244.	277.	365.	398.	522.	568.	632.	698.
25	115.	171.	221.	264.	317.	445.	487.	548.	608.
30	87.7	126.	150.	199.	252.	368.	403.	448.	505.
40	47.8	67.5	87.2	98.5	165.	226.	273.	345.	419.
50	27.5	33.2	44.7	49.5	93.0	156.	212.	259.	328.
60	12.5	16.8	22.5	28.5	61.4	95.7	143.	206.	246.
70	4.07	7.32	12.9	17.0	31.1	61.3	86.2	153.	174.
75	2.81	4.44	7.61	13.1	23.7	41.3	70.3	120.	142.
80	2.12	2.84	5.44	6.87	17.4	28.2	52.1	93.9	114.
90	0.61	0.88	1.57	2.42	6.74	11.8	24.8	45.4	68.0
95	0.28	0.47	0.92	1.36	3.97	7.92	12.1	26.7	50.3
98	0.16	0.27	0.46	0.84	3.40	6.03	8.76	13.4	35.7
99	0.11	0.23	0.40	0.65	2.63	4.73	6.16	12.0	26.1

03117500 Sandy Creek at Waynesburg, Ohio

Years analyzed = 70
Climatic year range = 1939–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	756.	929.	1240.	1410.	1990.	2520.	2800.	3290.	4100.
2	617.	756.	863.	1170.	1440.	1850.	2170.	2330.	2880.
5	409.	477.	573.	651.	920.	1220.	1380.	1470.	1970.
10	292.	350.	401.	450.	633.	820.	922.	1040.	1290.
20	159.	188.	225.	257.	368.	509.	592.	664.	764.
25	106.	156.	190.	222.	303.	414.	491.	565.	638.
30	81.5	120.	154.	179.	263.	360.	417.	498.	570.
40	56.3	72.0	92.8	122.	197.	275.	338.	386.	458.
50	40.4	52.8	61.2	88.2	141.	205.	254.	304.	375.
60	31.5	40.2	46.0	62.1	108.	164.	199.	246.	319.
70	23.5	33.5	36.1	48.4	79.8	126.	150.	203.	262.
75	22.9	32.0	33.0	42.1	71.5	107.	132.	185.	232.
80	21.4	30.0	31.0	36.2	60.8	96.0	114.	168.	204.
90	19.0	23.6	25.0	29.0	44.8	68.8	89.2	132.	161.
95	15.5	20.2	22.0	24.7	38.0	57.3	79.6	106.	128.
98	14.1	17.7	20.0	23.0	33.2	52.9	74.8	85.0	110.
99	13.5	16.8	17.4	21.1	31.7	50.3	71.7	79.3	99.4

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	572.	738.	897.	1100.	1470.	1940.	2170.	2500.	2930.
2	541.	666.	706.	892.	1180.	1520.	1720.	1780.	2190.
5	396.	455.	548.	676.	876.	1140.	1270.	1370.	1750.
10	281.	340.	415.	450.	630.	829.	968.	1060.	1230.
20	154.	183.	231.	266.	400.	562.	625.	734.	856.
25	105.	148.	195.	229.	335.	469.	532.	611.	742.
30	85.7	124.	159.	197.	294.	404.	463.	547.	629.
40	57.6	73.8	107.	126.	213.	303.	364.	436.	522.
50	41.8	58.0	64.6	93.5	153.	231.	293.	357.	438.
60	30.2	40.3	47.4	61.1	114.	181.	208.	296.	352.
70	24.6	34.4	36.8	49.7	84.9	133.	167.	233.	288.
75	23.0	31.7	33.8	42.2	73.6	119.	146.	214.	261.
80	21.8	29.4	31.4	38.4	64.6	102.	127.	192.	237.
90	18.5	23.8	25.6	29.7	47.7	74.4	94.3	145.	184.
95	16.2	20.8	22.7	25.7	39.1	63.8	81.3	118.	147.
98	14.9	19.0	21.2	24.8	35.1	56.1	77.0	95.6	121.
99	14.5	18.2	19.8	24.1	33.7	54.0	75.6	83.7	116.

03119000 Sandy Creek at Sandyville, Ohio

Years analyzed = 23
Climatic year range = 1924–46

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1140.	2270.	2530.	2920.	3270.	4050.	4430.	5490.	7490.
2	897.	1700.	1870.	2130.	2400.	3230.	3730.	4260.	4710.
5	629.	1020.	1210.	1260.	1570.	1980.	2030.	2160.	2390.
10	471.	692.	752.	809.	1080.	1220.	1310.	1440.	1680.
20	268.	399.	447.	479.	656.	770.	830.	911.	1120.
25	226.	333.	376.	393.	555.	675.	693.	760.	932.
30	176.	268.	300.	314.	481.	554.	598.	663.	801.
40	135.	163.	210.	248.	354.	424.	461.	541.	658.
50	112.	129.	167.	187.	268.	326.	352.	423.	530.
60	96.8	109.	133.	155.	211.	247.	281.	324.	412.
70	89.8	99.3	117.	129.	174.	198.	206.	248.	298.
75	86.8	92.8	106.	114.	161.	178.	186.	205.	254.
80	83.3	88.2	93.0	105.	139.	156.	166.	171.	214.
90	72.8	74.6	81.6	89.3	115.	126.	136.	146.	158.
95	65.1	67.6	76.2	83.7	103.	113.	123.	132.	138.
98	57.4	59.7	72.3	80.2	98.0	103.	111.	118.	122.
99	53.4	56.9	71.6	74.3	90.0	98.3	102.	113.	118.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	883.	1390.	1700.	2330.	2950.	3150.	3630.	4080.	5940.
2	799.	1180.	1460.	1670.	2000.	2540.	2860.	3100.	4480.
5	576.	1010.	1130.	1240.	1380.	1800.	1890.	2190.	2380.
10	430.	727.	819.	879.	1070.	1250.	1330.	1430.	1650.
20	263.	386.	453.	537.	734.	850.	903.	1090.	1260.
25	224.	340.	369.	437.	632.	738.	772.	940.	1120.
30	185.	286.	308.	351.	516.	607.	657.	788.	935.
40	136.	167.	234.	273.	348.	459.	528.	639.	738.
50	110.	128.	183.	203.	286.	330.	383.	453.	551.
60	95.2	108.	140.	161.	228.	278.	309.	354.	455.
70	90.2	99.7	123.	134.	183.	216.	231.	271.	331.
75	87.8	96.8	112.	126.	164.	190.	202.	224.	273.
80	85.6	93.7	101.	110.	147.	168.	179.	188.	237.
90	77.2	79.0	87.6	92.2	120.	137.	145.	153.	172.
95	68.6	73.0	80.5	88.2	110.	118.	132.	142.	151.
98	60.7	66.0	77.5	86.2	105.	108.	120.	131.	133.
99	58.4	63.1	75.3	84.3	101.	104.	111.	124.	128.

03125000 Home Creek near New Philadelphia, Ohio

Years analyzed = 42
Climatic year range = 1937–78

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	8.67	8.86	9.34	11.3	15.3	18.8	21.5	25.1	30.4
2	4.88	5.62	6.92	7.50	9.84	12.4	12.7	15.6	18.0
5	2.49	3.14	3.27	3.73	5.14	6.10	6.85	7.53	8.17
10	1.52	1.71	1.94	2.23	2.99	3.37	3.78	4.06	5.08
20	0.71	0.82	1.08	1.12	1.55	1.90	1.99	2.27	2.82
25	0.51	0.60	0.70	0.89	1.27	1.56	1.64	1.87	2.16
30	0.32	0.40	0.53	0.64	0.93	1.23	1.45	1.58	1.86
40	0.12	0.21	0.30	0.36	0.55	0.90	0.98	1.17	1.29
50	0.05	0.10	0.14	0.20	0.30	0.60	0.71	0.83	0.87
60	0.00	0.01	0.08	0.10	0.20	0.36	0.47	0.60	0.65
70	0.00	0.00	0.02	0.06	0.10	0.20	0.27	0.39	0.45
75	0.00	0.00	0.00	0.03	0.10	0.14	0.20	0.30	0.40
80	0.00	0.00	0.00	0.02	0.07	0.10	0.12	0.25	0.32
90	0.00	0.00	0.00	0.00	0.02	0.04	0.07	0.10	0.15
95	0.00	0.00	0.00	0.00	0.00	0.02	0.05	0.09	0.10
98	0.00	0.00	0.00	0.00	0.00	0.01	0.04	0.06	0.10
99	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.04	0.06

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	5.27	5.37	6.25	7.28	9.22	11.5	13.9	16.9	20.1
2	3.94	4.74	4.94	5.88	7.16	8.82	9.56	11.1	12.2
5	2.45	3.22	3.82	3.96	5.22	6.71	7.05	8.00	8.67
10	1.56	1.76	2.35	2.66	3.44	4.03	4.30	5.29	6.00
20	0.72	0.80	1.13	1.28	1.99	2.39	2.62	2.73	3.56
25	0.44	0.59	0.80	0.94	1.51	1.92	2.12	2.31	3.06
30	0.35	0.42	0.64	0.71	1.18	1.51	1.67	1.90	2.57
40	0.14	0.23	0.29	0.37	0.66	1.03	1.27	1.42	1.62
50	0.07	0.10	0.18	0.24	0.41	0.67	0.92	1.10	1.15
60	0.05	0.06	0.12	0.13	0.26	0.45	0.66	0.78	0.86
70	0.00	0.02	0.04	0.08	0.16	0.29	0.40	0.48	0.60
75	0.00	0.01	0.03	0.05	0.13	0.20	0.29	0.38	0.52
80	0.00	0.00	0.01	0.03	0.10	0.16	0.21	0.34	0.43
90	0.00	0.00	0.00	0.01	0.02	0.08	0.10	0.16	0.29
95	0.00	0.00	0.00	0.00	0.01	0.03	0.07	0.11	0.14
98	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.09	0.10
99	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.07	0.09

03130500 Touby Run at Mansfield, Ohio

Years analyzed = 31
Climatic year range = 1947–77

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	28.9	30.7	41.5	52.8	64.3	80.6	85.1	106.	139.
2	21.2	24.5	29.5	32.5	42.7	49.5	54.4	58.2	66.5
5	10.2	12.7	15.1	18.3	21.0	24.5	25.5	27.6	30.9
10	6.00	6.91	7.26	9.35	11.4	13.0	14.0	16.0	17.0
20	2.78	2.97	3.70	4.32	5.92	6.38	7.08	8.33	9.74
25	1.90	2.21	2.75	3.54	4.25	5.23	5.50	6.38	8.25
30	1.60	1.76	1.94	2.50	3.40	4.05	4.40	4.93	7.10
40	0.86	1.00	1.34	1.72	2.20	2.60	2.91	3.46	5.20
50	0.52	0.62	0.94	1.20	1.60	1.90	2.18	2.58	3.64
60	0.36	0.50	0.75	0.96	1.10	1.34	1.60	2.00	2.20
70	0.26	0.30	0.52	0.70	0.93	1.00	1.29	1.50	1.64
75	0.20	0.30	0.44	0.60	0.79	1.00	1.06	1.30	1.48
80	0.20	0.22	0.33	0.50	0.71	0.80	0.92	1.02	1.34
90	0.16	0.20	0.22	0.30	0.50	0.61	0.64	0.79	0.97
95	0.10	0.14	0.20	0.22	0.40	0.50	0.58	0.62	0.74
98	0.08	0.10	0.15	0.20	0.30	0.40	0.50	0.50	0.74
99	0.06	0.10	0.10	0.12	0.30	0.36	0.48	0.50	0.61

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	19.0	25.2	29.7	30.5	33.4	41.3	44.7	62.1	68.4
2	13.1	16.1	21.5	23.0	25.8	32.1	35.9	40.7	47.9
5	9.54	10.5	14.9	17.1	18.8	20.9	24.2	31.2	35.5
10	6.53	6.67	9.41	11.7	13.8	14.6	17.0	17.8	19.2
20	3.17	3.53	5.09	5.56	7.40	9.30	10.6	12.8	13.0
25	2.47	3.00	3.48	4.31	6.07	6.72	7.60	9.71	11.5
30	1.84	2.08	2.83	3.36	4.89	5.48	6.02	7.52	9.50
40	1.01	1.20	1.75	2.33	2.94	3.93	4.23	4.67	6.89
50	0.61	0.81	1.16	1.61	2.07	2.80	3.21	3.61	5.00
60	0.44	0.55	0.94	1.25	1.47	2.16	2.43	2.83	3.63
70	0.33	0.39	0.66	0.87	1.23	1.58	1.80	2.30	2.45
75	0.27	0.33	0.50	0.77	1.04	1.31	1.51	1.88	2.19
80	0.23	0.27	0.45	0.63	0.90	1.18	1.34	1.56	1.75
90	0.20	0.21	0.30	0.50	0.74	0.82	0.88	1.02	1.16
95	0.16	0.20	0.20	0.34	0.47	0.64	0.68	0.80	0.96
98	0.13	0.15	0.18	0.26	0.40	0.53	0.58	0.68	0.87
99	0.10	0.11	0.16	0.23	0.36	0.49	0.52	0.58	0.79

03134000 Jerome Fork at Jeromeville, Ohio

Years analyzed = 23
Climatic year range = 1926–48

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	371.	664.	889.	947.	1290.	1600.	1940.	2270.	2440.
2	293.	467.	526.	736.	916.	1130.	1310.	1430.	1650.
5	127.	190.	310.	369.	420.	520.	580.	788.	901.
10	71.8	98.4	148.	169.	203.	260.	288.	398.	479.
20	39.4	43.9	60.2	67.5	95.2	130.	149.	197.	237.
25	26.8	32.4	43.1	51.0	70.0	106.	114.	162.	195.
30	16.8	24.2	30.8	37.6	55.0	86.8	91.8	127.	167.
40	10.1	13.8	18.5	21.6	34.6	58.6	69.0	81.5	106.
50	7.84	10.2	12.0	15.2	25.0	40.8	46.0	60.2	79.4
60	6.30	7.66	8.88	11.6	19.0	25.8	33.1	39.5	51.0
70	4.98	5.90	6.98	9.44	15.0	18.0	23.8	28.1	30.4
75	4.88	5.31	6.00	7.52	12.0	15.6	18.0	22.6	23.4
80	4.46	4.80	5.59	6.36	11.0	12.8	15.4	19.6	20.0
90	3.30	3.74	4.08	5.16	6.20	8.80	9.49	10.6	14.2
95	2.91	3.16	3.50	3.84	5.00	6.04	7.16	9.60	11.6
98	2.27	2.46	2.85	3.12	4.00	5.52	6.26	8.24	9.95
99	2.04	2.28	2.65	2.91	4.00	4.96	6.16	7.92	9.57

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	242.	400.	558.	646.	733.	917.	1000.	1260.	1370.
2	193.	314.	433.	536.	657.	780.	886.	1100.	1250.
5	121.	212.	304.	377.	423.	615.	667.	709.	767.
10	82.9	126.	188.	226.	259.	312.	339.	421.	486.
20	41.1	50.1	64.8	80.2	134.	165.	198.	248.	298.
25	30.6	32.7	49.3	61.5	96.3	137.	161.	218.	243.
30	22.0	26.2	39.2	45.9	68.4	109.	129.	180.	212.
40	10.6	15.0	20.0	27.3	43.3	76.7	86.7	106.	141.
50	8.32	10.3	14.5	19.0	28.9	50.2	58.9	69.9	103.
60	6.97	8.40	9.27	12.1	23.4	32.3	43.8	49.2	71.3
70	5.87	6.70	7.76	9.99	17.7	22.2	24.8	35.3	40.2
75	5.29	5.73	6.80	8.77	14.1	17.0	21.0	29.1	29.7
80	4.89	5.09	6.12	7.75	12.9	14.0	17.0	22.2	25.4
90	3.91	4.26	4.45	5.46	7.30	9.85	11.4	12.6	15.3
95	3.40	3.59	3.95	4.86	5.70	7.64	8.79	10.9	13.7
98	2.80	3.08	3.21	3.38	4.49	5.79	7.41	10.1	11.8
99	2.57	2.71	2.95	3.24	4.00	5.51	6.75	9.65	11.0

03136500 Kokosing River at Mount Vernon, Ohio

Years analyzed = 57
Climatic year range = 1953–2009

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	821.	946.	1110.	1380.	1840.	2590.	2870.	3220.	3680.
2	562.	745.	839.	945.	1330.	1710.	1910.	1990.	2350.
5	306.	414.	448.	536.	757.	1070.	1120.	1310.	1550.
10	180.	223.	301.	328.	463.	652.	745.	837.	1040.
20	80.0	118.	168.	198.	275.	371.	418.	446.	499.
25	63.2	97.1	124.	164.	221.	305.	337.	367.	406.
30	49.8	75.2	104.	126.	188.	260.	300.	315.	356.
40	37.8	54.2	61.6	89.6	143.	185.	235.	255.	283.
50	30.8	39.5	45.6	64.6	110.	145.	188.	215.	234.
60	27.0	31.5	38.2	48.8	78.6	109.	149.	169.	180.
70	24.0	26.7	29.0	38.2	58.0	83.1	111.	129.	146.
75	21.3	23.0	27.0	32.8	50.0	76.2	99.8	111.	134.
80	20.2	21.9	24.4	30.0	44.2	69.8	86.9	91.2	121.
90	15.3	18.8	20.8	25.6	35.0	56.0	62.4	71.3	85.6
95	13.4	14.3	18.4	23.2	32.0	49.6	52.5	59.0	70.3
98	11.4	12.3	16.4	20.0	28.3	42.7	47.3	49.3	58.9
99	10.6	10.7	14.8	18.0	27.7	40.2	46.2	48.0	56.9

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	414.	616.	678.	871.	1370.	1670.	1970.	2560.	3450.
2	378.	523.	603.	760.	991.	1370.	1530.	1620.	2170.
5	287.	397.	449.	553.	735.	953.	1060.	1180.	1180.
10	199.	221.	326.	374.	494.	667.	723.	799.	898.
20	74.5	130.	158.	222.	313.	439.	481.	574.	599.
25	63.6	107.	124.	170.	253.	370.	435.	489.	509.
30	53.9	85.1	111.	138.	216.	304.	364.	403.	454.
40	38.3	56.1	62.5	94.5	159.	219.	274.	292.	353.
50	31.6	39.2	47.7	65.7	117.	164.	210.	242.	284.
60	27.3	32.4	36.5	49.1	83.1	121.	161.	206.	216.
70	22.7	27.9	30.0	37.7	60.3	90.8	124.	145.	156.
75	21.5	23.3	27.4	34.0	53.6	79.5	106.	121.	142.
80	20.5	22.0	25.4	30.8	47.0	74.6	93.8	99.9	136.
90	16.1	19.2	21.0	26.4	36.7	59.4	68.1	77.5	91.2
95	14.0	14.7	18.4	24.7	33.0	51.9	56.6	64.2	78.3
98	11.8	13.3	17.0	20.7	31.0	45.7	50.1	53.5	67.3
99	10.9	12.7	15.7	19.1	29.6	42.9	48.6	51.0	63.5

03137000 Kokosing River at Millwood, Ohio

Years analyzed = 52
Climatic year range = 1922–73

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	696.	1410.	2370.	3020.	4500.	6160.	6960.	7710.	9070.
2	572.	825.	1780.	2280.	2840.	3920.	4700.	5180.	5310.
5	383.	523.	943.	1290.	1740.	2210.	2750.	2850.	2940.
10	245.	373.	545.	735.	1080.	1360.	1570.	1730.	1850.
20	141.	203.	287.	419.	619.	750.	952.	1040.	1160.
25	128.	146.	235.	322.	502.	641.	802.	886.	1000.
30	108.	112.	189.	251.	418.	553.	676.	787.	798.
40	72.2	88.4	117.	159.	278.	404.	467.	609.	638.
50	64.0	69.2	86.0	114.	199.	298.	345.	442.	498.
60	55.1	59.0	70.0	92.4	152.	213.	278.	332.	400.
70	51.1	53.3	62.8	78.3	117.	160.	209.	247.	319.
75	49.1	51.0	60.5	72.6	97.8	136.	181.	210.	292.
80	46.0	48.7	54.7	65.2	86.9	120.	157.	177.	259.
90	42.0	43.5	45.3	58.6	75.0	96.9	122.	137.	173.
95	38.1	39.6	42.2	54.4	70.0	85.4	107.	122.	154.
98	36.0	36.8	39.0	46.2	64.8	80.8	94.6	113.	130.
99	35.1	36.0	38.3	45.2	62.0	77.9	92.2	110.	128.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	504.	868.	1550.	2230.	2840.	4220.	5570.	6350.	8980.
2	453.	716.	1310.	1970.	2330.	3050.	3860.	4760.	4900.
5	362.	485.	1120.	1290.	1710.	2170.	2570.	2710.	2920.
10	249.	398.	534.	860.	1160.	1450.	1730.	1890.	1940.
20	142.	186.	292.	449.	700.	938.	1090.	1240.	1270.
25	121.	149.	237.	364.	578.	739.	869.	1050.	1140.
30	108.	116.	194.	251.	472.	645.	741.	911.	1050.
40	76.2	88.1	123.	167.	327.	462.	571.	678.	722.
50	63.9	70.4	93.7	119.	222.	347.	389.	493.	581.
60	57.1	59.2	71.7	94.6	160.	237.	314.	389.	469.
70	51.3	54.2	63.7	81.6	126.	176.	238.	272.	338.
75	50.0	51.0	61.3	73.1	103.	150.	190.	222.	309.
80	48.0	49.1	56.5	65.5	93.4	128.	165.	191.	283.
90	40.6	43.9	48.2	59.5	77.4	100.	130.	143.	190.
95	37.9	40.6	44.6	55.3	73.4	89.1	111.	127.	169.
98	37.3	38.0	42.9	48.7	67.5	82.9	99.1	121.	142.
99	37.0	37.2	41.6	46.4	65.3	80.4	96.5	117.	133.

03139000 Killbuck Creek at Killbuck, Ohio

Years analyzed = 78
Climatic year range = 1931–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1260.	1340.	1630.	2000.	2530.	3460.	4200.	4850.	9010.
2	1010.	1150.	1440.	1620.	2100.	2780.	3140.	3340.	3970.
5	660.	783.	913.	1110.	1470.	1920.	2220.	2520.	2630.
10	472.	501.	569.	707.	1020.	1390.	1510.	1690.	1800.
20	218.	287.	320.	402.	588.	879.	1040.	1170.	1230.
25	157.	216.	238.	320.	489.	713.	937.	992.	1050.
30	119.	178.	205.	274.	409.	585.	769.	832.	928.
40	81.9	96.5	133.	177.	305.	443.	511.	632.	676.
50	59.0	71.8	94.5	115.	221.	315.	385.	501.	558.
60	47.3	61.4	76.8	89.7	158.	231.	315.	405.	458.
70	39.7	51.8	58.6	71.0	121.	179.	266.	317.	375.
75	35.9	46.8	51.0	65.3	103.	154.	229.	277.	352.
80	33.7	43.1	46.9	60.2	92.2	134.	193.	257.	316.
90	29.2	31.0	38.9	47.8	74.0	104.	135.	197.	256.
95	26.6	30.0	36.9	43.3	63.6	93.1	120.	157.	231.
98	24.3	28.0	33.3	38.0	57.0	81.8	99.4	144.	176.
99	24.2	26.6	32.0	36.6	56.0	79.3	96.4	135.	149.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	983.	1020.	1350.	1700.	2160.	2920.	3640.	4930.	9130.
2	824.	962.	1190.	1470.	1820.	2480.	2800.	3960.	5540.
5	585.	710.	862.	1030.	1390.	1820.	2110.	2280.	2450.
10	443.	503.	538.	709.	991.	1330.	1530.	1620.	1730.
20	216.	292.	319.	404.	616.	896.	1040.	1110.	1220.
25	156.	228.	256.	341.	523.	785.	901.	984.	1070.
30	134.	189.	213.	282.	442.	645.	796.	857.	915.
40	83.3	102.	138.	176.	329.	475.	575.	690.	748.
50	60.4	81.6	103.	126.	238.	338.	412.	559.	618.
60	48.4	65.3	78.3	95.8	166.	253.	342.	432.	521.
70	40.1	55.2	60.3	76.3	131.	188.	286.	343.	412.
75	36.5	47.2	54.4	67.0	109.	165.	247.	308.	380.
80	33.8	43.6	49.6	62.6	93.7	147.	206.	269.	346.
90	29.5	33.5	41.3	51.2	75.8	114.	143.	214.	293.
95	26.7	30.4	37.1	44.7	67.6	96.6	124.	183.	261.
98	25.2	29.1	35.2	40.5	57.8	89.9	111.	163.	211.
99	24.7	27.4	34.3	38.7	57.3	88.0	102.	150.	176.

03140000 Mill Creek near Coshocton, Ohio

Years analyzed = 72
Climatic year range = 1937–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	130.	144.	165.	193.	291.	408.	462.	478.	571.
2	64.9	92.2	101.	128.	184.	255.	283.	345.	408.
5	38.9	49.3	55.8	71.2	97.3	136.	152.	160.	212.
10	26.1	32.7	39.0	44.9	61.0	83.7	93.6	99.1	119.
20	14.5	16.5	19.6	25.5	37.1	48.0	53.2	56.4	64.1
25	9.39	11.8	14.2	19.3	30.8	39.7	44.7	49.7	52.6
30	6.79	7.78	11.0	14.6	25.1	32.5	38.1	40.3	44.5
40	3.00	3.67	6.45	9.33	16.3	24.0	27.9	31.1	34.9
50	1.84	2.15	3.32	5.00	10.8	18.4	20.7	24.0	28.2
60	1.00	1.28	2.10	3.16	7.00	12.4	15.7	17.7	22.9
70	0.55	0.83	1.22	1.78	4.28	7.78	10.0	13.3	18.2
75	0.30	0.61	0.80	1.40	3.10	6.05	8.32	11.7	16.6
80	0.25	0.44	0.60	1.20	2.20	4.89	7.11	10.2	13.6
90	0.10	0.20	0.30	0.56	1.25	2.70	4.57	6.84	10.0
95	0.10	0.10	0.15	0.30	1.00	2.03	3.11	5.48	8.80
98	0.10	0.10	0.11	0.20	0.62	1.64	2.43	4.35	7.84
99	0.08	0.10	0.10	0.20	0.51	1.51	2.05	4.10	7.16

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	72.2	93.7	102.	119.	171.	230.	306.	402.	460.
2	63.1	78.6	90.1	101.	143.	190.	222.	256.	289.
5	37.2	49.4	65.7	76.5	103.	137.	150.	168.	212.
10	25.7	36.3	41.5	49.9	69.0	93.8	101.	114.	134.
20	13.4	18.7	21.4	27.2	42.6	57.3	67.5	71.4	77.3
25	9.49	12.3	16.3	21.7	34.7	48.1	55.4	60.8	67.3
30	7.27	8.11	12.1	16.1	29.2	38.2	44.9	49.7	61.2
40	3.36	3.92	7.12	10.6	18.9	28.3	33.6	38.6	44.9
50	2.27	2.52	4.35	5.73	11.6	20.4	24.3	27.4	36.1
60	1.30	1.44	2.55	3.90	7.42	14.8	18.1	20.4	28.6
70	0.61	0.98	1.58	2.22	4.68	9.27	12.2	16.4	22.1
75	0.33	0.71	1.04	1.65	3.69	6.97	10.0	13.8	19.8
80	0.21	0.52	0.76	1.32	2.73	5.65	8.02	11.7	17.6
90	0.11	0.27	0.36	0.70	1.59	3.31	5.73	8.34	12.4
95	0.10	0.14	0.22	0.38	1.14	2.43	4.19	6.41	10.1
98	0.10	0.10	0.14	0.26	0.81	1.91	3.02	5.22	9.35
99	0.08	0.10	0.11	0.22	0.62	1.70	2.72	4.91	8.91

03144000 Wakatomika Creek near Frazeysburg, Ohio

Years analyzed = 72
Climatic year range = 1937–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	577.	813.	944.	1070.	1430.	2020.	2590.	3190.	3250.
2	374.	511.	575.	764.	974.	1250.	1480.	1870.	2070.
5	218.	269.	355.	400.	540.	680.	761.	849.	1090.
10	137.	174.	203.	256.	332.	435.	478.	531.	649.
20	57.8	91.7	119.	151.	194.	253.	297.	319.	357.
25	36.3	72.4	95.6	119.	161.	213.	244.	261.	284.
30	27.2	53.1	72.0	95.3	134.	179.	206.	218.	248.
40	18.7	27.9	45.4	63.5	96.1	131.	151.	163.	188.
50	12.9	17.6	23.6	42.2	65.0	96.4	111.	134.	151.
60	9.52	13.7	15.0	25.0	46.0	65.0	78.0	106.	122.
70	7.95	9.93	11.2	17.5	30.3	47.9	59.1	75.5	96.2
75	7.09	8.71	10.3	14.0	25.0	38.9	47.4	63.0	87.0
80	6.31	7.45	9.21	11.0	20.0	31.5	40.7	53.8	73.2
90	4.49	5.30	6.24	8.06	12.8	21.8	28.0	34.2	51.9
95	3.44	4.16	4.80	6.93	9.45	15.9	21.8	27.4	37.4
98	2.84	3.37	4.16	5.61	8.32	13.8	18.7	23.4	31.0
99	2.75	3.20	3.69	5.35	8.00	12.8	17.9	21.6	29.1

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	381.	537.	600.	721.	1020.	1480.	1910.	2040.	2890.
2	324.	462.	509.	573.	772.	1040.	1180.	1380.	1610.
5	241.	299.	324.	423.	548.	705.	829.	970.	1070.
10	143.	184.	219.	294.	371.	477.	549.	574.	707.
20	50.2	95.2	119.	160.	225.	291.	343.	348.	409.
25	38.2	69.1	102.	129.	179.	243.	288.	301.	372.
30	25.2	57.9	73.3	109.	153.	199.	240.	259.	322.
40	18.6	27.3	46.4	66.8	107.	149.	175.	189.	247.
50	13.3	17.9	25.8	44.1	74.1	107.	133.	145.	194.
60	10.2	14.3	16.0	28.6	50.5	74.0	93.4	117.	148.
70	8.24	10.4	12.1	18.6	33.6	51.6	68.2	81.9	113.
75	7.13	8.81	10.8	15.6	26.9	44.4	52.6	70.1	102.
80	6.53	7.93	9.54	12.5	22.1	35.6	45.1	58.0	88.2
90	4.51	5.52	7.42	8.54	13.6	23.5	30.7	38.4	61.2
95	3.50	4.33	5.33	7.38	10.6	18.2	24.1	32.2	44.2
98	2.95	3.69	4.40	6.18	9.26	14.9	20.7	25.3	36.0
99	2.83	3.47	3.97	5.69	8.71	13.8	19.4	24.3	32.2

03146000 North Fork Licking River at Utica, Ohio

Years analyzed = 20
Climatic year range = 1940–81

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	814.	904.	1430.	1540.	1820.	2260.	2510.	2950.	2990.
2	573.	753.	863.	993.	1270.	1440.	1710.	1770.	1780.
5	290.	313.	428.	500.	560.	778.	820.	852.	863.
10	142.	172.	198.	238.	292.	402.	455.	482.	506.
20	68.0	73.5	95.0	120.	148.	194.	221.	234.	263.
25	45.7	58.6	70.5	96.8	111.	150.	169.	179.	201.
30	25.4	44.6	54.6	75.6	90.5	119.	135.	153.	174.
40	8.91	30.1	34.5	50.9	61.6	82.0	89.7	111.	127.
50	6.08	19.3	24.2	33.6	45.5	53.9	63.7	81.8	84.8
60	4.25	7.38	16.4	21.2	29.5	37.0	44.7	62.0	62.0
70	3.55	4.77	10.8	14.0	17.4	27.7	30.6	42.7	51.6
75	3.43	4.23	8.28	10.6	13.5	22.5	24.0	31.3	45.3
80	3.04	3.98	7.16	8.73	12.0	15.8	19.8	20.2	37.5
90	1.86	3.04	4.65	6.09	7.14	9.77	11.8	14.9	25.2
95	1.48	2.46	3.79	4.83	5.42	8.28	9.58	11.2	20.5
98	1.06	2.24	3.46	3.86	4.34	5.92	7.44	8.92	15.0
99	0.95	1.92	3.01	3.18	3.85	5.44	6.59	7.44	13.7

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	556.	596.	696.	773.	967.	1200.	1350.	1430.	1490.
2	426.	495.	633.	670.	765.	970.	1040.	1130.	1280.
5	248.	323.	416.	448.	536.	679.	767.	826.	894.
10	163.	244.	294.	304.	362.	496.	528.	554.	559.
20	87.7	94.1	132.	175.	201.	273.	288.	365.	408.
25	58.7	74.5	87.6	138.	170.	204.	236.	276.	330.
30	25.8	56.1	71.6	103.	123.	172.	196.	208.	286.
40	9.70	33.9	42.4	61.8	82.4	107.	129.	139.	166.
50	6.30	21.6	29.8	41.3	55.9	70.3	91.3	107.	108.
60	4.21	8.00	18.5	26.0	37.5	43.6	63.6	75.1	80.4
70	3.51	4.79	11.1	16.2	19.6	32.8	40.8	48.4	64.9
75	3.31	4.07	8.98	12.8	15.0	26.4	30.0	37.1	58.1
80	2.99	3.87	7.67	9.79	13.1	19.3	22.9	27.9	53.0
90	2.12	3.17	5.20	6.29	7.61	11.1	13.0	15.7	30.9
95	1.86	2.71	4.32	5.11	5.91	8.86	10.2	12.3	24.4
98	1.47	2.50	3.59	4.48	5.31	7.88	8.93	9.58	18.3
99	1.34	2.42	3.19	4.00	4.62	6.88	7.49	8.59	16.0

03146500 Licking River near Newark, Ohio

Years analyzed = 67
Climatic year range = 1940–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	2110.	2990.	3540.	4240.	5570.	6960.	8070.	9230.	10100.
2	1330.	1930.	2480.	2880.	3890.	5180.	5500.	5920.	7520.
5	725.	935.	1300.	1620.	2310.	2980.	3360.	3540.	4700.
10	435.	547.	775.	950.	1450.	1850.	2090.	2240.	2880.
20	194.	306.	384.	525.	755.	1060.	1210.	1310.	1650.
25	161.	234.	301.	418.	631.	889.	990.	1110.	1420.
30	131.	191.	245.	337.	530.	768.	843.	943.	1280.
40	82.7	123.	155.	234.	375.	532.	636.	707.	953.
50	64.8	90.0	108.	168.	271.	388.	501.	564.	745.
60	54.0	62.9	85.0	128.	191.	282.	359.	454.	578.
70	45.1	53.0	72.4	93.5	141.	197.	271.	314.	433.
75	42.4	50.4	67.2	78.6	120.	172.	224.	262.	373.
80	42.1	46.8	59.9	70.8	100.	149.	179.	227.	336.
90	40.0	44.2	53.3	60.8	78.0	114.	135.	168.	248.
95	36.7	40.0	51.0	54.3	68.0	99.4	116.	141.	195.
98	33.3	38.6	48.3	52.0	63.0	91.0	102.	125.	176.
99	31.8	37.2	45.5	49.9	61.0	88.0	99.2	118.	171.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1120.	1770.	2240.	2660.	3540.	5130.	6270.	6720.	7260.
2	970.	1600.	1920.	2250.	2950.	3940.	4350.	4510.	4950.
5	690.	1080.	1330.	1720.	2190.	2690.	3150.	3450.	4020.
10	472.	576.	866.	1130.	1530.	1920.	2040.	2310.	2880.
20	209.	325.	419.	593.	928.	1250.	1440.	1590.	1980.
25	171.	260.	331.	444.	736.	1050.	1190.	1400.	1750.
30	131.	217.	254.	389.	623.	927.	1010.	1150.	1490.
40	83.2	133.	154.	251.	422.	644.	777.	838.	1170.
50	64.4	97.2	111.	177.	303.	483.	559.	657.	939.
60	53.4	62.5	90.3	138.	216.	349.	421.	528.	683.
70	45.9	54.8	77.3	98.4	153.	233.	310.	377.	496.
75	43.5	51.7	68.9	88.2	125.	193.	252.	321.	439.
80	41.9	48.8	63.3	75.1	109.	173.	214.	254.	396.
90	39.6	45.5	53.6	61.8	81.9	121.	144.	193.	291.
95	37.9	41.2	52.0	56.8	69.3	101.	123.	154.	214.
98	34.9	39.7	49.3	54.5	65.7	93.6	111.	131.	181.
99	33.6	38.6	48.4	52.9	63.0	91.7	105.	125.	178.

03147000 Licking River at Toboso, Ohio

Years analyzed = 41
Climatic year range = 1904–60

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1950.	2890.	4980.	5420.	6420.	7470.	8260.	9850.	11500.
2	1000.	2120.	3340.	3660.	4600.	5510.	6200.	6900.	7890.
5	605.	1270.	1930.	2030.	2580.	3170.	3460.	3850.	4020.
10	371.	819.	1130.	1270.	1510.	1800.	2050.	2190.	2390.
20	250.	453.	541.	693.	834.	1000.	1110.	1270.	1430.
25	191.	356.	437.	516.	665.	827.	932.	1050.	1170.
30	150.	279.	350.	385.	560.	687.	784.	897.	958.
40	107.	158.	234.	270.	402.	511.	576.	613.	675.
50	82.5	111.	153.	193.	299.	345.	387.	451.	505.
60	69.3	80.2	116.	134.	224.	261.	300.	322.	343.
70	59.8	69.4	96.0	105.	162.	191.	207.	223.	248.
75	56.8	66.4	89.4	95.9	138.	159.	178.	199.	208.
80	55.7	64.4	81.0	87.2	115.	135.	145.	169.	177.
90	52.4	59.0	68.0	75.3	92.0	102.	108.	128.	146.
95	50.2	53.0	61.2	70.2	81.5	90.2	99.2	112.	138.
98	47.7	48.7	54.8	66.4	73.0	82.8	95.6	104.	119.
99	46.0	47.0	53.3	63.5	70.0	80.4	93.0	99.3	116.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1060.	2320.	2810.	3150.	4360.	5390.	6010.	7760.	9260.
2	848.	1910.	2330.	2620.	3220.	4200.	4510.	5260.	5750.
5	707.	1230.	1920.	2080.	2320.	3010.	3160.	3470.	4080.
10	392.	827.	1260.	1450.	1750.	2090.	2300.	2370.	2520.
20	277.	492.	644.	819.	1020.	1260.	1390.	1490.	1620.
25	233.	403.	508.	634.	809.	971.	1100.	1280.	1330.
30	181.	301.	399.	446.	666.	770.	913.	1100.	1170.
40	111.	170.	226.	280.	459.	561.	636.	725.	829.
50	88.1	118.	167.	199.	326.	407.	449.	504.	566.
60	68.7	82.3	120.	150.	247.	293.	340.	365.	412.
70	59.4	71.6	101.	111.	173.	219.	241.	267.	279.
75	57.4	67.9	95.1	100.	143.	173.	200.	229.	234.
80	55.8	66.0	86.4	92.0	119.	148.	159.	194.	208.
90	53.5	60.8	70.7	76.7	95.6	105.	111.	135.	154.
95	50.5	57.7	63.5	71.4	83.6	94.8	100.	119.	138.
98	48.8	50.3	58.3	70.5	78.6	88.3	97.4	113.	128.
99	48.1	48.5	57.0	68.9	73.0	85.6	96.2	112.	122.

03157000 Clear Creek near Rockbridge, Ohio

Years analyzed = 69
Climatic year range = 1940–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	215.	345.	518.	580.	768.	1100.	1400.	1560.	1720.
2	152.	248.	313.	375.	523.	733.	857.	1030.	1140.
5	90.6	135.	167.	210.	300.	402.	442.	508.	556.
10	67.2	93.7	105.	125.	170.	243.	273.	300.	377.
20	47.4	57.0	68.0	75.2	102.	144.	163.	189.	222.
25	41.0	47.5	56.3	63.5	88.5	125.	140.	159.	176.
30	32.8	38.0	47.9	55.2	76.2	105.	122.	136.	154.
40	21.4	27.0	33.6	43.0	58.0	81.0	97.0	107.	122.
50	18.8	21.3	25.0	34.0	44.0	66.0	76.0	87.0	97.2
60	16.0	17.0	19.0	25.0	33.0	48.4	68.0	71.2	81.0
70	13.4	15.0	16.0	19.0	27.0	36.0	46.0	59.0	68.6
75	13.0	14.0	15.0	18.0	24.0	31.0	42.0	53.5	61.7
80	12.0	13.0	14.0	17.0	22.0	28.0	38.0	48.3	55.6
90	9.40	11.0	11.0	13.0	17.0	21.6	30.0	38.5	45.0
95	8.21	9.70	11.0	12.0	16.0	20.0	27.0	32.6	38.6
98	7.40	8.10	9.80	11.0	14.3	19.0	25.0	28.0	33.7
99	5.98	7.70	9.20	10.0	14.0	18.0	22.0	25.8	32.1

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	159.	237.	288.	365.	513.	739.	980.	1050.	1400.
2	136.	192.	260.	287.	412.	548.	631.	838.	1020.
5	101.	137.	169.	221.	292.	395.	461.	491.	608.
10	66.5	91.5	108.	138.	200.	268.	313.	335.	372.
20	49.4	59.9	69.7	80.9	119.	170.	189.	219.	246.
25	44.4	49.3	59.9	69.3	97.3	149.	160.	189.	225.
30	36.0	40.2	49.6	62.1	84.0	125.	136.	157.	201.
40	21.2	28.3	36.3	46.7	63.7	90.3	110.	129.	152.
50	18.9	22.5	27.7	36.0	48.7	69.0	84.6	105.	119.
60	16.5	17.0	20.1	26.3	35.9	54.5	71.3	81.7	95.1
70	14.0	15.1	17.0	19.9	28.0	42.0	51.1	67.4	81.6
75	13.5	14.1	15.9	18.7	25.1	35.4	45.7	59.4	71.9
80	12.7	12.9	14.7	17.4	23.3	30.9	42.3	52.6	61.6
90	9.57	11.3	12.0	14.1	17.9	24.1	35.0	42.4	50.9
95	8.78	10.2	11.0	12.0	16.3	20.6	29.9	35.9	42.6
98	8.38	9.33	10.4	11.1	15.3	19.1	27.0	31.4	37.8
99	7.71	8.42	10.0	11.0	14.9	18.7	26.0	28.0	35.3

03157500 Hocking River at Enterprise, Ohio

Years analyzed = 77
Climatic year range = 1932–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1200.	1580.	2210.	2920.	3940.	5650.	6940.	7450.	8940.
2	752.	1210.	1770.	2100.	2800.	3780.	4800.	5570.	5890.
5	479.	763.	962.	1190.	1680.	2240.	2380.	3000.	3250.
10	345.	506.	571.	723.	1030.	1440.	1660.	1760.	1880.
20	221.	280.	326.	430.	586.	815.	958.	1030.	1200.
25	174.	231.	268.	342.	468.	661.	811.	856.	1020.
30	132.	179.	216.	278.	387.	563.	681.	743.	862.
40	87.2	118.	145.	193.	279.	430.	524.	589.	682.
50	66.0	85.7	103.	134.	209.	335.	416.	469.	550.
60	54.6	64.4	70.8	93.6	151.	255.	333.	381.	436.
70	46.5	52.8	58.4	70.5	116.	187.	258.	283.	352.
75	42.8	47.8	53.2	63.8	101.	161.	222.	249.	311.
80	39.8	42.9	47.0	57.7	88.4	135.	197.	218.	266.
90	32.0	35.5	39.8	48.5	68.0	97.8	129.	162.	203.
95	28.6	31.0	36.6	43.2	61.0	84.0	104.	139.	164.
98	28.6	29.3	32.0	38.3	55.3	77.4	97.2	120.	144.
99	27.4	28.3	30.9	37.6	50.0	71.3	92.7	118.	127.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	872.	1230.	1600.	2040.	2830.	3720.	5750.	6790.	7820.
2	750.	948.	1270.	1610.	2250.	3040.	3660.	4180.	5360.
5	439.	771.	927.	1060.	1560.	2060.	2430.	2580.	2750.
10	333.	491.	628.	769.	1090.	1450.	1630.	1880.	2050.
20	234.	265.	327.	463.	646.	930.	1080.	1160.	1280.
25	199.	224.	267.	361.	499.	795.	918.	946.	1130.
30	149.	184.	216.	306.	407.	660.	783.	830.	1030.
40	90.1	121.	162.	217.	305.	488.	591.	679.	833.
50	68.2	88.8	120.	146.	227.	382.	470.	537.	646.
60	56.9	70.2	78.5	104.	170.	304.	381.	449.	498.
70	46.5	55.0	63.3	77.1	126.	210.	290.	342.	431.
75	43.4	52.3	57.3	67.2	109.	175.	258.	285.	363.
80	40.5	47.5	51.6	60.5	94.7	155.	222.	248.	298.
90	32.6	37.6	43.8	52.1	73.1	109.	140.	185.	228.
95	29.4	34.5	37.6	45.2	64.4	95.3	118.	151.	187.
98	28.7	30.7	35.2	41.5	60.0	85.3	107.	128.	162.
99	28.2	29.8	31.7	38.4	56.7	80.0	102.	121.	144.

03159540 Shade River near Chester, Ohio

Years analyzed = 42
Climatic year range = 1966–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1100.	1220.	1530.	1780.	2060.	2380.	2560.	3380.	3530.
2	768.	801.	1130.	1330.	1530.	1680.	1710.	2080.	2230.
5	386.	443.	515.	597.	723.	893.	1010.	1100.	1240.
10	176.	228.	255.	306.	358.	434.	524.	596.	659.
20	93.6	112.	130.	147.	182.	230.	276.	307.	324.
25	77.9	81.5	98.8	116.	146.	187.	222.	252.	262.
30	58.5	66.0	74.8	93.3	109.	158.	177.	201.	231.
40	28.2	45.9	51.6	60.2	75.1	108.	127.	155.	161.
50	10.4	24.3	31.6	39.8	45.5	79.5	91.2	124.	132.
60	4.07	11.0	19.6	20.4	28.0	51.1	59.4	89.2	102.
70	1.42	5.80	8.32	9.36	18.0	30.5	41.2	67.8	81.7
75	1.23	4.09	5.64	7.56	13.9	26.0	30.2	49.8	67.6
80	0.95	3.27	4.06	5.11	11.0	17.3	23.2	32.3	57.4
90	0.53	1.30	1.84	2.44	5.46	9.33	13.0	20.1	36.6
95	0.37	0.72	1.17	1.69	3.26	6.75	9.16	14.8	28.1
98	0.26	0.41	0.85	1.21	1.93	4.94	6.56	10.0	22.2
99	0.21	0.35	0.72	0.90	1.58	4.20	5.87	7.95	14.4

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	589.	598.	814.	945.	1060.	1350.	1560.	1990.	2600.
2	534.	563.	692.	800.	890.	1020.	1160.	1590.	1800.
5	403.	436.	542.	599.	690.	761.	833.	948.	993.
10	264.	286.	346.	392.	450.	527.	557.	642.	722.
20	114.	145.	172.	188.	264.	326.	352.	398.	463.
25	92.8	103.	122.	139.	196.	243.	304.	358.	368.
30	60.5	81.1	94.2	109.	138.	199.	264.	279.	331.
40	32.9	52.9	64.1	70.8	90.8	135.	177.	198.	225.
50	13.0	26.8	37.3	44.2	58.2	98.7	116.	156.	173.
60	5.26	13.1	23.9	27.6	33.8	64.0	75.1	122.	135.
70	1.54	7.86	11.4	12.3	22.9	42.6	54.6	92.0	111.
75	1.33	5.21	6.84	8.71	17.5	31.3	42.3	79.7	102.
80	1.15	3.76	4.64	6.95	13.6	23.4	31.3	52.4	86.0
90	0.64	1.49	2.11	2.72	6.80	12.5	19.0	26.4	49.5
95	0.38	0.79	1.27	1.77	4.85	9.05	12.1	19.8	37.2
98	0.31	0.51	0.97	1.37	2.78	6.97	8.51	14.0	28.1
99	0.27	0.44	0.89	1.16	2.10	5.57	7.70	9.91	24.2

03202000 Raccoon Creek at Adamsville, Ohio

Years analyzed = 82
Climatic year range = 1916–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1550.	2580.	2820.	3800.	4900.	6800.	8230.	8980.	13200.
2	1310.	2230.	2430.	3210.	4070.	5140.	5810.	6630.	7120.
5	867.	1230.	1620.	2090.	2790.	3480.	3640.	3940.	4170.
10	457.	784.	951.	1240.	1730.	2230.	2400.	2510.	2840.
20	214.	367.	454.	611.	905.	1170.	1310.	1520.	1630.
25	161.	270.	342.	478.	699.	934.	1030.	1190.	1350.
30	120.	185.	260.	378.	567.	758.	873.	948.	1140.
40	66.1	106.	157.	212.	361.	602.	649.	727.	874.
50	32.5	59.8	78.7	96.4	224.	422.	494.	538.	625.
60	18.8	26.0	42.1	63.8	132.	265.	373.	423.	477.
70	10.4	13.3	28.3	42.0	77.3	165.	230.	266.	395.
75	8.39	11.0	22.3	34.0	61.5	130.	178.	220.	363.
80	6.71	8.10	16.3	26.3	50.0	107.	132.	175.	330.
90	2.53	5.41	8.28	14.6	29.5	66.2	94.2	118.	200.
95	1.90	3.36	6.20	9.51	23.5	46.0	64.9	89.4	164.
98	1.65	2.61	5.09	7.06	19.3	39.8	54.1	69.4	134.
99	1.47	2.42	4.03	6.15	17.8	35.4	51.7	60.7	114.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1260.	1940.	2170.	3000.	3840.	5670.	6850.	7600.	10500.
2	1060.	1640.	1850.	2600.	3290.	4450.	4830.	6040.	7420.
5	881.	1210.	1530.	1780.	2430.	2890.	3270.	3500.	3900.
10	462.	865.	960.	1250.	1660.	2150.	2310.	2430.	2610.
20	201.	360.	507.	701.	985.	1330.	1460.	1530.	1740.
25	159.	297.	362.	520.	771.	1030.	1160.	1330.	1480.
30	113.	176.	276.	392.	638.	880.	973.	1130.	1290.
40	63.0	112.	166.	231.	386.	684.	724.	778.	979.
50	36.2	58.3	74.1	111.	247.	496.	573.	631.	740.
60	16.8	27.4	45.4	70.9	142.	287.	409.	464.	520.
70	10.3	13.5	30.0	47.9	82.0	186.	265.	304.	436.
75	8.07	11.7	22.2	33.6	64.9	153.	196.	255.	394.
80	6.91	8.31	17.3	27.4	52.9	125.	158.	222.	367.
90	2.65	5.66	9.19	14.7	31.9	76.2	102.	138.	244.
95	2.00	3.43	6.76	11.2	25.1	52.0	78.3	108.	182.
98	1.74	2.73	5.61	7.78	21.8	43.7	64.2	96.4	151.
99	1.58	2.58	4.69	6.79	19.0	39.8	56.0	77.2	136.

03217500 Scioto River at La Rue, Ohio

Years analyzed = 20
Climatic year range = 1927–50

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	439.	585.	1710.	1950.	2570.	3190.	3780.	3960.	4680.
2	283.	378.	1110.	1340.	1700.	2290.	2500.	2610.	3170.
5	168.	214.	633.	715.	955.	1340.	1490.	1690.	1840.
10	105.	145.	281.	359.	481.	679.	857.	955.	974.
20	50.0	74.1	122.	142.	213.	320.	375.	497.	533.
25	35.5	56.1	88.4	98.4	154.	244.	284.	378.	416.
30	24.8	41.5	58.6	76.6	106.	188.	233.	306.	350.
40	11.3	17.0	34.2	42.1	69.0	116.	155.	223.	232.
50	9.10	11.7	21.0	29.3	43.0	74.3	100.	153.	159.
60	6.98	8.76	14.6	19.1	26.2	47.8	70.2	105.	110.
70	5.73	6.58	10.4	12.3	16.5	24.3	38.7	63.3	74.4
75	3.98	5.80	8.56	10.3	14.0	17.4	30.4	48.7	63.3
80	3.93	4.79	7.20	8.95	12.0	15.8	24.5	41.3	45.8
90	3.81	3.93	5.00	5.78	8.25	10.7	16.8	23.5	29.4
95	3.02	3.49	3.92	4.55	6.00	8.53	11.8	14.9	23.5
98	3.01	3.21	3.71	3.93	4.60	7.64	8.90	14.8	15.9
99	3.01	3.15	3.66	3.93	4.20	7.40	8.63	13.8	14.9

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	227.	377.	1220.	1410.	1500.	2020.	2230.	2460.	3460.
2	193.	349.	878.	969.	1380.	1530.	1940.	2070.	2570.
5	164.	206.	584.	716.	901.	1240.	1320.	1550.	1590.
10	99.2	120.	331.	386.	552.	780.	897.	962.	1000.
20	54.3	75.0	148.	168.	261.	417.	518.	589.	614.
25	41.3	55.6	109.	122.	187.	337.	393.	463.	513.
30	32.9	45.0	68.7	93.5	142.	236.	339.	400.	448.
40	13.2	18.9	44.8	52.2	82.6	149.	199.	292.	337.
50	7.96	12.7	25.3	31.3	55.6	89.8	125.	208.	237.
60	6.67	8.68	17.1	19.9	30.4	57.5	88.4	152.	166.
70	5.71	6.61	11.3	13.1	18.1	35.6	45.7	86.1	108.
75	4.97	6.00	9.43	10.8	15.3	27.4	35.3	60.8	85.9
80	4.44	5.19	8.17	9.83	12.7	20.4	28.6	50.1	65.7
90	3.91	4.19	5.46	6.61	8.62	11.5	17.4	27.3	29.9
95	3.31	3.75	4.21	5.54	6.88	9.27	12.3	16.3	24.7
98	3.02	3.35	3.80	4.74	5.58	8.75	10.1	15.3	16.9
99	3.01	3.24	3.73	4.32	5.15	8.49	9.33	15.0	16.6

03218000 Little Scioto River above Marion, Ohio

Years analyzed = 32
Climatic year range = 1939–70

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	274.	305.	408.	515.	596.	739.	803.	892.	1210.
2	168.	205.	320.	356.	427.	490.	546.	617.	744.
5	86.4	116.	144.	175.	229.	299.	325.	353.	383.
10	38.3	55.9	77.1	87.2	130.	169.	178.	195.	221.
20	16.0	19.6	30.7	38.6	57.5	79.3	89.6	94.5	111.
25	11.2	15.2	19.4	28.9	43.4	59.3	69.3	75.8	88.8
30	5.76	8.15	12.0	21.7	30.0	47.2	55.7	63.0	71.8
40	1.44	2.82	7.55	9.58	16.0	29.2	36.2	42.7	45.7
50	0.46	0.80	3.00	4.94	9.80	18.2	24.0	30.0	31.3
60	0.00	0.13	1.12	2.29	5.10	11.1	15.0	20.4	22.7
70	0.00	0.00	0.66	0.80	2.05	5.42	7.52	13.1	14.9
75	0.00	0.00	0.40	0.49	1.45	3.45	4.59	9.68	12.3
80	0.00	0.00	0.30	0.30	0.75	1.98	3.28	7.80	10.0
90	0.00	0.00	0.00	0.10	0.30	0.94	1.16	3.88	4.94
95	0.00	0.00	0.00	0.00	0.15	0.41	0.71	2.43	3.87
98	0.00	0.00	0.00	0.00	0.10	0.30	0.48	1.60	3.28
99	0.00	0.00	0.00	0.00	0.03	0.20	0.37	1.08	2.50

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	178.	236.	291.	313.	380.	519.	611.	738.	1030.
2	146.	189.	237.	253.	314.	370.	452.	533.	573.
5	77.9	112.	163.	209.	229.	272.	297.	353.	419.
10	39.2	44.6	87.7	125.	148.	187.	197.	224.	238.
20	17.3	20.4	36.2	45.1	69.7	101.	111.	121.	135.
25	11.3	15.0	19.4	33.9	51.2	71.3	80.4	94.2	107.
30	6.69	8.34	13.7	25.1	36.9	55.0	68.3	74.2	85.3
40	1.65	2.78	7.18	10.3	17.5	35.2	44.5	52.7	57.8
50	0.62	0.94	3.62	5.18	10.4	21.1	26.7	37.3	39.5
60	0.03	0.22	1.17	2.31	5.28	12.8	19.0	27.4	29.2
70	0.00	0.00	0.66	1.02	2.26	6.54	9.26	15.5	17.8
75	0.00	0.00	0.41	0.61	1.53	3.74	5.63	12.5	13.2
80	0.00	0.00	0.28	0.40	0.86	2.22	4.07	9.39	10.8
90	0.00	0.00	0.07	0.17	0.37	0.97	1.57	5.08	6.33
95	0.00	0.00	0.00	0.01	0.19	0.50	0.76	2.94	4.12
98	0.00	0.00	0.00	0.00	0.14	0.39	0.61	1.63	3.69
99	0.00	0.00	0.00	0.00	0.09	0.25	0.44	1.40	3.37

03219500 Scioto River near Prospect, Ohio

Years analyzed = 75
Climatic year range = 1926–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1070.	1670.	2290.	3180.	4610.	6330.	7060.	7690.	8440.
2	719.	1190.	1950.	2340.	3640.	4710.	5540.	6030.	7010.
5	410.	682.	919.	1470.	2140.	3070.	3690.	4030.	4850.
10	270.	315.	486.	744.	1300.	1970.	2400.	2700.	2850.
20	127.	152.	258.	296.	589.	984.	1230.	1370.	1510.
25	94.2	115.	173.	215.	434.	739.	921.	1040.	1230.
30	72.4	90.8	126.	171.	346.	555.	706.	817.	977.
40	28.5	52.4	68.0	100.	217.	382.	450.	527.	652.
50	22.2	27.8	41.2	55.8	140.	264.	304.	371.	459.
60	17.0	21.0	29.2	38.2	87.2	177.	216.	256.	346.
70	15.0	17.0	20.2	28.2	49.8	118.	147.	189.	276.
75	13.8	15.0	17.0	23.2	39.0	93.6	118.	150.	251.
80	13.2	14.0	16.0	21.0	31.0	75.8	97.6	122.	218.
90	10.4	12.0	13.0	15.0	21.0	39.0	62.8	73.6	158.
95	8.31	10.2	11.0	13.0	19.0	27.2	45.5	55.7	118.
98	7.33	8.84	9.64	11.5	17.0	21.8	35.3	48.2	81.6
99	6.51	7.99	8.69	11.0	16.0	20.5	29.9	46.3	66.8

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	770.	1140.	1810.	2420.	3530.	4860.	5700.	5900.	7140.
2	582.	930.	1550.	1980.	2920.	3720.	4190.	5030.	6050.
5	421.	604.	850.	1360.	2060.	2770.	3230.	3810.	4300.
10	230.	275.	539.	864.	1290.	1930.	2160.	2650.	2880.
20	123.	150.	256.	359.	720.	1110.	1420.	1540.	1610.
25	89.4	116.	175.	260.	534.	882.	1150.	1240.	1320.
30	72.8	98.8	124.	201.	417.	704.	883.	973.	1110.
40	26.7	57.3	75.4	109.	262.	445.	567.	708.	805.
50	22.1	28.5	42.3	65.9	150.	305.	392.	475.	638.
60	17.9	22.3	30.3	41.3	94.1	209.	264.	312.	470.
70	15.4	17.5	21.5	28.2	54.3	139.	172.	236.	335.
75	14.4	15.5	18.5	23.6	42.3	109.	140.	196.	288.
80	13.4	14.2	16.1	21.6	31.6	86.9	115.	159.	249.
90	11.1	12.2	13.4	16.2	22.8	45.5	72.4	88.7	181.
95	8.98	10.7	11.1	13.6	20.1	30.1	54.6	69.1	148.
98	7.70	9.68	10.4	12.2	17.9	23.3	41.6	50.1	107.
99	7.56	9.10	9.91	11.8	17.0	21.7	36.2	47.1	89.5

03220000 Mill Creek near Bellepoint, Ohio

Years analyzed = 65
Climatic year range = 1944–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	746.	899.	1260.	1600.	2290.	2930.	3500.	3870.	3990.
2	349.	592.	901.	976.	1710.	2170.	2580.	2780.	2950.
5	131.	226.	356.	511.	797.	1240.	1310.	1550.	1630.
10	72.0	79.0	168.	211.	344.	596.	720.	788.	1010.
20	29.3	36.4	53.9	81.7	145.	232.	271.	342.	362.
25	23.3	27.3	34.3	57.0	97.0	152.	191.	233.	254.
30	15.7	20.9	24.6	40.4	74.4	123.	142.	185.	208.
40	7.02	11.6	14.0	25.8	46.0	75.5	94.0	122.	128.
50	4.50	6.50	9.96	15.4	32.0	53.7	62.0	77.6	84.4
60	3.09	4.22	6.84	10.4	20.4	37.8	43.2	56.3	64.6
70	2.06	3.05	5.23	6.73	12.0	24.8	30.0	38.7	47.4
75	1.70	2.42	4.33	5.32	9.80	20.0	25.8	30.3	39.9
80	1.36	2.00	3.43	4.48	7.70	16.0	19.8	25.7	34.8
90	0.73	1.10	1.46	3.02	5.34	10.0	12.4	17.4	22.2
95	0.53	0.80	0.96	1.28	4.34	7.42	9.26	13.6	17.6
98	0.20	0.43	0.60	0.97	3.40	6.29	7.54	9.48	14.4
99	0.10	0.22	0.49	0.87	3.23	5.63	6.41	7.22	12.5

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	457.	567.	731.	958.	1410.	1990.	2100.	2230.	3490.
2	412.	431.	568.	705.	1050.	1380.	1630.	1730.	1800.
5	132.	223.	389.	487.	731.	1020.	1220.	1340.	1450.
10	66.3	82.6	214.	286.	466.	710.	772.	882.	992.
20	30.1	37.8	65.3	117.	213.	393.	469.	511.	553.
25	24.2	26.8	43.9	80.5	149.	297.	357.	405.	442.
30	17.7	23.0	28.8	48.5	109.	214.	269.	326.	365.
40	6.99	13.5	14.9	30.4	69.7	120.	156.	194.	241.
50	4.70	7.41	10.7	18.7	41.2	77.0	103.	118.	157.
60	3.20	4.56	7.79	12.4	26.0	44.6	61.4	81.6	89.3
70	2.12	3.32	5.08	7.30	14.2	31.5	38.8	50.8	64.2
75	1.75	2.39	4.43	5.58	10.6	24.1	31.4	40.3	50.2
80	1.45	2.07	3.47	5.07	8.41	20.3	23.5	30.0	43.8
90	0.87	1.16	1.49	3.41	5.84	12.3	14.8	20.5	29.0
95	0.56	0.79	1.05	1.60	4.43	8.49	11.0	15.4	23.1
98	0.37	0.58	0.74	1.08	4.06	7.13	8.90	13.4	18.1
99	0.27	0.38	0.70	1.03	3.79	6.75	7.75	10.8	15.8

03223000 Olentangy River at Claridon, Ohio

Years analyzed = 51
Climatic year range = 1947–97

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	487.	859.	1020.	1290.	1740.	2250.	2520.	3040.	3560.
2	367.	599.	745.	972.	1310.	1590.	1820.	2120.	2220.
5	245.	284.	382.	500.	752.	995.	1100.	1210.	1260.
10	124.	152.	171.	228.	408.	553.	692.	749.	774.
20	43.2	65.8	75.2	106.	169.	253.	317.	348.	383.
25	28.0	45.6	56.2	77.3	128.	196.	245.	269.	290.
30	19.6	33.6	40.4	57.9	98.4	155.	191.	213.	247.
40	9.96	19.0	23.4	30.2	62.0	101.	118.	147.	178.
50	6.13	9.56	13.6	18.4	46.0	70.4	81.2	106.	137.
60	4.04	5.38	8.34	11.4	27.4	45.8	59.4	71.0	111.
70	2.62	3.12	5.78	7.30	17.0	32.2	41.4	54.1	93.7
75	1.91	2.26	4.24	5.88	13.0	21.8	34.4	47.0	83.8
80	1.50	1.60	2.90	4.54	9.60	17.6	28.6	39.2	69.9
90	0.42	0.92	1.44	2.20	6.00	11.0	16.8	23.4	39.0
95	0.01	0.32	0.72	1.24	4.53	9.15	13.0	16.6	26.3
98	0.00	0.08	0.26	0.74	3.40	7.32	9.25	13.7	17.0
99	0.00	0.05	0.22	0.63	2.97	6.37	7.89	9.26	15.8

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	318.	452.	685.	866.	1160.	1680.	1970.	2490.	3420.
2	291.	359.	531.	703.	937.	1230.	1500.	1570.	1690.
5	231.	272.	347.	448.	680.	839.	956.	1110.	1290.
10	130.	149.	182.	289.	427.	588.	632.	707.	747.
20	43.3	68.1	98.2	134.	216.	348.	415.	469.	482.
25	31.9	53.3	72.9	92.4	168.	255.	355.	393.	438.
30	21.0	38.0	44.0	68.7	124.	207.	283.	312.	362.
40	11.7	21.1	23.9	34.2	75.9	137.	159.	192.	250.
50	6.77	11.0	13.2	19.9	54.3	91.6	103.	139.	165.
60	3.95	5.43	8.84	12.0	32.3	57.4	72.1	98.3	134.
70	2.58	3.45	5.87	8.13	18.4	39.3	53.7	68.5	117.
75	2.12	2.53	4.58	6.39	15.0	27.5	41.9	60.7	104.
80	1.58	1.95	3.41	5.30	10.8	19.2	32.1	49.4	90.5
90	0.56	1.05	1.77	2.64	6.64	12.7	20.2	35.7	55.5
95	0.01	0.47	0.81	1.69	5.23	9.75	14.2	18.6	29.4
98	0.00	0.19	0.47	0.88	3.83	8.67	11.3	15.9	24.9
99	0.00	0.10	0.29	0.71	3.24	7.51	9.00	14.3	19.9

03228300 Big Walnut Creek at Sunbury, Ohio

Years analyzed = 20
Climatic year range = 1989–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	572.	707.	1010.	1110.	1570.	1800.	1890.	2060.	2870.
2	342.	623.	652.	727.	1060.	1220.	1290.	1510.	1610.
5	158.	299.	319.	359.	539.	778.	790.	829.	1040.
10	94.1	135.	170.	176.	252.	329.	384.	424.	517.
20	33.0	53.6	78.1	85.1	111.	155.	170.	197.	212.
25	22.9	38.0	57.4	66.3	91.3	116.	132.	140.	148.
30	15.5	25.8	43.2	52.5	71.6	91.5	97.5	111.	121.
40	2.96	11.6	28.6	36.3	46.5	59.6	65.9	74.9	81.7
50	0.84	5.12	16.4	21.3	32.0	39.5	45.6	53.8	57.8
60	0.34	1.53	8.10	10.2	16.5	25.3	29.2	38.1	43.7
70	0.02	0.30	2.41	3.67	7.23	13.5	17.0	25.4	29.8
75	0.01	0.11	0.96	1.92	5.00	10.8	13.0	20.3	22.4
80	0.00	0.03	0.46	0.89	2.61	7.39	9.95	11.9	17.7
90	0.00	0.00	0.06	0.13	0.49	3.56	3.86	5.34	8.02
95	0.00	0.00	0.00	0.03	0.09	1.44	2.43	3.26	4.38
98	0.00	0.00	0.00	0.00	0.03	0.34	1.16	2.29	2.97
99	0.00	0.00	0.00	0.00	0.01	0.14	0.60	1.18	1.74

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	426.	508.	562.	608.	765.	868.	926.	1170.	1640.
2	276.	439.	489.	516.	639.	743.	806.	882.	1160.
5	160.	289.	318.	359.	523.	597.	646.	741.	813.
10	109.	181.	203.	210.	354.	399.	443.	475.	484.
20	39.6	83.8	100.	109.	164.	251.	282.	321.	324.
25	23.0	48.2	78.9	86.3	134.	198.	222.	249.	278.
30	17.2	30.0	62.9	73.2	106.	144.	171.	186.	242.
40	2.79	13.6	34.3	46.9	68.1	80.6	96.9	128.	170.
50	0.96	7.15	18.9	27.2	41.8	53.3	70.4	76.3	100.
60	0.33	1.68	10.8	12.5	20.7	32.4	41.1	52.4	64.0
70	0.03	0.37	3.03	5.00	10.4	17.1	26.0	34.7	36.5
75	0.02	0.20	1.09	2.59	6.84	13.0	19.0	26.0	29.6
80	0.01	0.09	0.64	1.47	3.38	9.86	13.3	17.5	22.5
90	0.00	0.01	0.08	0.18	0.92	3.92	5.20	9.11	11.3
95	0.00	0.00	0.01	0.05	0.22	1.87	2.74	5.06	6.94
98	0.00	0.00	0.00	0.01	0.08	1.01	1.64	4.16	4.91
99	0.00	0.00	0.00	0.01	0.05	0.41	1.27	3.32	3.42

03230500 Big Darby Creek at Darbyville, Ohio

Years analyzed = 83
Climatic year range = 1922–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	459.	1910.	2470.	3150.	5130.	6540.	7280.	8380.	10200.
2	340.	1260.	1640.	2150.	3440.	4640.	5340.	5940.	7470.
5	227.	609.	941.	1180.	1890.	2720.	3090.	3650.	3880.
10	134.	383.	519.	654.	1060.	1750.	1920.	2110.	2280.
20	62.4	179.	258.	360.	546.	918.	1080.	1130.	1240.
25	50.6	141.	195.	265.	425.	730.	857.	891.	975.
30	42.0	95.0	155.	215.	350.	597.	708.	733.	820.
40	27.8	39.4	88.0	144.	250.	399.	509.	551.	599.
50	21.4	30.0	54.2	93.6	180.	281.	354.	398.	453.
60	17.4	20.2	39.6	52.0	110.	194.	249.	306.	361.
70	14.6	18.0	29.4	37.8	76.0	133.	173.	246.	276.
75	12.4	15.2	26.2	32.8	61.0	105.	143.	211.	248.
80	9.64	13.3	20.3	27.0	48.0	83.4	126.	181.	211.
90	6.17	7.38	12.8	18.5	33.0	55.2	81.2	110.	163.
95	4.08	5.55	8.22	14.5	27.0	44.0	59.7	84.9	132.
98	2.54	4.39	6.00	11.9	23.0	39.3	46.8	74.0	107.
99	2.19	3.12	5.39	10.5	21.7	38.0	43.0	68.5	89.8

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	376.	1350.	1640.	1980.	3260.	4790.	5480.	6450.	9740.
2	281.	1120.	1240.	1720.	2680.	3610.	4080.	4390.	6050.
5	228.	663.	897.	1150.	1950.	2510.	3020.	3200.	3590.
10	128.	392.	593.	772.	1210.	1710.	1930.	2090.	2250.
20	62.8	184.	246.	387.	631.	1070.	1220.	1390.	1570.
25	50.8	137.	190.	285.	501.	882.	998.	1180.	1290.
30	40.8	88.7	145.	237.	371.	704.	853.	952.	1100.
40	26.8	41.8	92.3	152.	268.	485.	600.	661.	750.
50	21.5	30.9	54.9	99.6	193.	321.	441.	512.	552.
60	17.6	20.5	41.1	52.3	119.	218.	293.	371.	425.
70	14.4	18.1	29.6	40.6	79.7	145.	208.	278.	322.
75	13.0	15.6	25.6	33.9	64.7	117.	160.	243.	276.
80	10.2	13.8	21.2	27.4	47.7	94.7	133.	211.	234.
90	6.09	7.71	13.5	18.4	35.6	60.3	87.7	118.	180.
95	4.32	5.92	8.34	15.4	28.3	45.7	61.5	89.5	149.
98	3.39	4.67	6.78	12.8	24.6	41.4	56.4	77.1	131.
99	2.67	3.89	6.23	11.4	23.9	39.6	44.8	73.8	103.

03232000 Paint Creek near Greenfield, Ohio

Years analyzed = 51
Climatic year range = 1927–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	273.	538.	772.	1480.	2560.	3970.	4430.	5630.	6190.
2	174.	359.	687.	1050.	1760.	2660.	3000.	3520.	4000.
5	97.0	175.	407.	619.	970.	1430.	1670.	1950.	2330.
10	52.6	118.	208.	432.	589.	877.	983.	1190.	1330.
20	25.1	55.2	112.	212.	293.	475.	565.	600.	661.
25	16.9	42.4	88.9	151.	220.	384.	443.	462.	521.
30	11.8	31.2	68.1	103.	180.	308.	355.	376.	426.
40	5.46	14.2	29.8	62.4	128.	207.	256.	261.	324.
50	3.22	6.78	11.7	35.8	85.0	147.	178.	200.	243.
60	2.47	3.16	5.70	22.6	51.0	106.	130.	156.	196.
70	1.41	2.08	4.54	11.3	26.0	76.6	91.5	123.	130.
75	0.72	1.46	3.78	7.58	20.0	58.2	73.4	107.	111.
80	0.44	1.16	2.52	4.55	15.0	40.1	60.8	89.7	95.3
90	0.20	0.29	1.04	2.21	8.04	19.0	35.2	56.1	69.9
95	0.10	0.17	0.60	1.40	4.29	9.60	23.9	44.8	57.2
98	0.03	0.12	0.25	0.90	2.80	7.50	13.1	29.8	40.9
99	0.00	0.10	0.21	0.46	2.50	6.69	12.0	24.8	36.7

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	206.	452.	630.	1030.	1880.	3080.	3390.	4350.	5290.
2	127.	299.	473.	912.	1360.	2100.	2420.	2760.	3540.
5	86.0	187.	397.	621.	939.	1370.	1740.	1820.	1860.
10	47.8	120.	240.	441.	650.	910.	1050.	1110.	1190.
20	20.9	58.9	114.	219.	323.	558.	607.	715.	789.
25	14.5	43.8	90.4	181.	249.	447.	509.	622.	690.
30	12.2	32.9	62.5	127.	205.	370.	433.	504.	534.
40	5.79	16.6	28.5	70.8	149.	248.	294.	336.	356.
50	3.08	7.17	11.7	41.8	90.7	166.	223.	243.	273.
60	2.63	3.28	5.85	23.7	57.7	125.	151.	190.	217.
70	1.31	2.03	4.79	10.7	32.0	84.7	104.	145.	173.
75	0.86	1.69	4.18	8.42	24.0	68.4	84.2	121.	133.
80	0.48	1.11	3.27	5.61	17.1	47.5	69.0	97.8	118.
90	0.27	0.67	1.66	2.42	8.44	20.1	38.9	62.7	84.1
95	0.16	0.50	0.78	1.75	5.19	10.6	27.3	48.9	68.1
98	0.09	0.17	0.41	1.15	3.43	8.68	18.6	32.4	54.9
99	0.05	0.14	0.24	0.77	2.73	7.90	12.8	27.4	49.5

03235500 Tar Hollow Creek at Tar Hollow State Park, Ohio

Years analyzed = 31
Climatic year range = 1947–77

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	6.40	7.88	10.3	12.7	16.0	21.9	25.8	28.0	31.1
2	4.19	5.61	6.59	7.97	9.84	13.4	15.4	16.4	21.1
5	1.87	2.65	3.32	3.83	5.26	7.26	7.77	8.69	9.50
10	1.12	1.62	2.06	2.30	2.93	3.84	4.24	4.80	5.20
20	0.45	0.72	1.00	1.07	1.48	1.78	2.22	2.78	2.94
25	0.20	0.42	0.57	0.75	1.00	1.44	1.82	2.24	2.38
30	0.00	0.04	0.32	0.48	0.70	1.14	1.40	1.74	2.05
40	0.00	0.00	0.01	0.20	0.40	0.69	0.80	1.24	1.52
50	0.00	0.00	0.00	0.00	0.20	0.35	0.48	0.60	1.20
60	0.00	0.00	0.00	0.00	0.06	0.16	0.20	0.29	0.64
70	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.18	0.30
75	0.00	0.00	0.00	0.00	0.00	0.02	0.06	0.10	0.17
80	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.10	0.14
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	4.17	4.81	5.70	6.86	9.16	11.8	14.1	18.7	25.1
2	3.58	4.42	4.83	5.80	7.47	10.1	10.5	12.5	14.6
5	2.87	3.44	3.63	3.96	5.47	7.05	7.78	8.33	9.37
10	1.32	1.64	2.52	2.56	3.17	4.51	5.48	6.18	6.63
20	0.35	0.81	1.23	1.37	1.74	2.29	2.99	3.45	3.95
25	0.23	0.48	0.70	0.87	1.20	1.90	2.26	2.80	3.03
30	0.05	0.11	0.48	0.61	0.84	1.66	2.01	2.20	2.55
40	0.00	0.00	0.04	0.24	0.51	0.84	1.12	1.50	1.85
50	0.00	0.00	0.00	0.08	0.24	0.46	0.54	0.83	1.32
60	0.00	0.00	0.00	0.00	0.10	0.21	0.28	0.33	0.73
70	0.00	0.00	0.00	0.00	0.01	0.09	0.14	0.19	0.37
75	0.00	0.00	0.00	0.00	0.00	0.05	0.10	0.14	0.24
80	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.10	0.19
90	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.03	0.07
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03
98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

03237280 Upper Twin Creek at McGaw, Ohio

Years analyzed = 45
Climatic year range = 1964–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	64.0	73.2	104.	126.	156.	224.	260.	326.	352.
2	43.6	53.6	66.8	74.0	104.	138.	162.	190.	212.
5	25.3	31.1	39.8	42.7	55.7	65.0	71.3	101.	113.
10	15.3	16.8	23.6	26.1	30.0	40.0	42.0	53.0	56.7
20	7.30	9.88	11.0	14.0	17.0	22.8	24.8	28.1	30.9
25	5.88	7.44	8.27	9.74	14.0	17.4	19.9	23.4	24.7
30	4.32	5.48	6.09	7.08	10.2	14.0	17.0	19.1	20.0
40	1.00	1.90	2.93	3.70	5.96	9.08	11.5	13.4	15.4
50	0.34	0.47	1.26	1.70	3.10	6.12	7.30	8.94	11.0
60	0.10	0.19	0.48	0.80	1.54	2.62	3.79	5.22	7.97
70	0.06	0.12	0.21	0.36	0.69	1.38	1.82	2.56	5.80
75	0.01	0.05	0.13	0.21	0.42	0.89	1.18	1.68	4.55
80	0.00	0.02	0.07	0.10	0.25	0.54	0.80	1.30	3.13
90	0.00	0.00	0.00	0.04	0.09	0.29	0.38	0.61	1.70
95	0.00	0.00	0.00	0.00	0.05	0.13	0.22	0.48	1.20
98	0.00	0.00	0.00	0.00	0.02	0.11	0.15	0.35	0.88
99	0.00	0.00	0.00	0.00	0.02	0.09	0.15	0.28	0.69

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	34.6	46.0	60.1	73.2	95.3	126.	138.	168.	200.
2	33.0	40.2	51.8	59.0	72.6	93.9	105.	134.	151.
5	23.2	29.3	38.5	41.2	52.6	68.5	80.7	92.3	96.6
10	16.9	18.9	26.3	30.4	39.3	44.0	48.2	56.4	67.2
20	8.22	12.0	14.5	17.9	22.3	27.3	31.1	37.6	43.2
25	6.70	9.55	11.3	12.9	15.4	20.8	24.2	30.3	37.8
30	4.97	7.00	7.83	9.19	12.3	17.2	18.9	26.6	28.6
40	1.67	2.71	3.79	4.31	7.31	11.9	13.6	19.6	20.5
50	0.39	0.77	1.91	2.18	3.61	7.27	8.81	12.3	15.7
60	0.13	0.21	0.70	1.01	1.97	3.49	5.37	6.93	11.0
70	0.07	0.11	0.25	0.45	0.81	1.74	2.63	3.81	7.32
75	0.04	0.06	0.15	0.27	0.64	1.13	1.80	2.59	6.45
80	0.01	0.03	0.08	0.16	0.34	0.78	1.19	1.70	4.23
90	0.00	0.00	0.01	0.04	0.11	0.40	0.48	0.83	2.21
95	0.00	0.00	0.00	0.01	0.06	0.15	0.29	0.54	1.38
98	0.00	0.00	0.00	0.00	0.04	0.13	0.22	0.46	1.03
99	0.00	0.00	0.00	0.00	0.02	0.11	0.16	0.40	0.91

03237500 Ohio Brush Creek near West Union, Ohio

Years analyzed = 76
Climatic year range = 1927–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	2000.	3270.	3760.	4280.	6130.	8790.	9930.	11100.	13200.
2	1040.	1980.	2390.	2860.	4180.	5540.	6540.	6860.	7990.
5	487.	857.	1060.	1310.	2000.	2500.	2880.	3380.	3820.
10	231.	374.	505.	677.	988.	1310.	1610.	1940.	2050.
20	123.	177.	232.	316.	451.	617.	796.	895.	1020.
25	89.1	135.	183.	228.	352.	470.	618.	685.	765.
30	58.8	104.	142.	174.	264.	374.	486.	549.	611.
40	24.1	58.5	75.8	99.8	174.	254.	345.	373.	447.
50	11.7	16.0	24.9	54.8	108.	168.	236.	265.	301.
60	3.51	5.82	9.97	32.6	62.5	122.	151.	197.	222.
70	1.38	2.90	5.07	13.8	35.9	73.2	99.4	129.	168.
75	0.81	2.09	3.94	8.44	22.3	54.8	82.2	109.	139.
80	0.63	1.48	2.58	6.12	16.0	38.8	68.9	76.1	110.
90	0.22	0.75	1.02	2.37	7.90	18.0	35.3	51.2	64.4
95	0.13	0.26	0.55	0.88	4.78	11.2	22.0	31.5	49.2
98	0.05	0.13	0.28	0.59	3.32	8.68	15.6	18.2	40.2
99	0.05	0.13	0.20	0.46	2.55	8.00	12.9	14.5	36.2

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1080.	1390.	1980.	2280.	3090.	4630.	6300.	6700.	11200.
2	922.	1290.	1590.	1970.	2510.	3620.	4480.	5480.	6750.
5	508.	990.	1110.	1340.	1820.	2450.	2640.	2830.	3310.
10	270.	553.	693.	853.	1230.	1640.	1860.	2040.	2200.
20	141.	234.	329.	438.	661.	957.	1080.	1310.	1390.
25	107.	177.	242.	336.	516.	739.	917.	1140.	1200.
30	60.1	126.	204.	246.	400.	587.	755.	861.	941.
40	32.4	64.2	92.9	129.	246.	382.	512.	595.	661.
50	13.8	19.6	33.2	74.4	152.	262.	356.	400.	516.
60	4.11	6.07	11.7	44.6	86.0	169.	219.	299.	334.
70	1.49	2.88	5.41	19.0	46.3	96.5	149.	186.	251.
75	0.92	2.06	4.03	10.9	31.9	72.0	112.	135.	213.
80	0.72	1.51	3.09	7.53	21.7	55.6	87.8	114.	168.
90	0.22	0.79	1.17	2.97	10.1	30.1	48.5	66.4	82.9
95	0.14	0.32	0.67	1.03	5.22	16.5	34.4	41.0	66.0
98	0.09	0.19	0.35	0.79	3.95	11.2	20.6	29.2	55.4
99	0.05	0.14	0.26	0.65	3.18	9.60	17.1	22.6	50.9

03238500 White Oak Creek near Georgetown, Ohio

Years analyzed = 79
Climatic year range = 1925–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1280.	2220.	2520.	3140.	4500.	5760.	6400.	7230.	8180.
2	655.	973.	1650.	2030.	2930.	3750.	4310.	5250.	5460.
5	194.	375.	518.	784.	1220.	1760.	2140.	2450.	3010.
10	83.2	136.	245.	362.	517.	793.	1010.	1140.	1330.
20	36.4	62.0	101.	130.	193.	281.	387.	430.	535.
25	24.4	46.5	82.0	91.0	140.	210.	277.	312.	346.
30	16.1	34.0	58.7	68.0	109.	155.	216.	225.	260.
40	8.04	19.0	26.0	41.0	71.6	102.	138.	147.	173.
50	3.24	7.40	11.0	26.0	43.0	70.0	97.0	103.	124.
60	0.72	3.58	6.28	14.0	26.0	46.0	60.0	75.6	89.0
70	0.12	1.00	3.40	7.93	16.0	27.8	43.0	55.0	60.4
75	0.06	0.50	2.50	5.50	12.0	23.0	34.0	45.0	50.0
80	0.00	0.10	0.90	3.64	7.86	18.0	26.6	35.0	39.4
90	0.00	0.00	0.00	0.60	3.32	9.60	14.0	18.0	25.4
95	0.00	0.00	0.00	0.22	1.60	5.13	11.0	13.0	18.2
98	0.00	0.00	0.00	0.00	0.69	2.80	7.53	8.96	12.4
99	0.00	0.00	0.00	0.00	0.46	2.57	4.99	7.02	9.74

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	633.	936.	1180.	1460.	2180.	2930.	3580.	3910.	4490.
2	532.	760.	1020.	1240.	1650.	2110.	2730.	3330.	3600.
5	267.	623.	760.	887.	1220.	1540.	1660.	2080.	2180.
10	118.	199.	406.	561.	756.	1040.	1160.	1330.	1520.
20	46.2	93.1	156.	235.	353.	577.	675.	798.	865.
25	27.6	67.6	125.	156.	256.	423.	554.	630.	780.
30	17.5	47.3	78.7	111.	188.	326.	475.	491.	644.
40	8.66	22.8	33.6	52.1	112.	213.	289.	315.	364.
50	3.76	9.33	16.4	34.0	64.0	120.	169.	211.	270.
60	1.41	4.15	7.09	18.1	37.6	75.1	106.	137.	152.
70	0.32	1.46	4.40	9.16	21.1	38.6	67.6	85.1	111.
75	0.09	1.02	2.90	6.54	15.4	30.4	52.4	71.7	92.3
80	0.05	0.32	1.39	4.56	11.8	22.9	37.7	52.6	73.4
90	0.00	0.00	0.22	0.89	3.91	13.9	22.3	26.0	38.3
95	0.00	0.00	0.00	0.40	2.27	7.39	13.8	17.7	29.3
98	0.00	0.00	0.00	0.22	1.50	5.00	10.6	14.6	21.8
99	0.00	0.00	0.00	0.14	0.85	3.97	7.53	11.4	17.7

03240000 Little Miami River near Oldtown, Ohio

Years analyzed = 56
Climatic year range = 1953–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	183.	391.	431.	552.	970.	1540.	2030.	2300.	2800.
2	135.	279.	313.	393.	654.	933.	1200.	1300.	1350.
5	92.9	166.	210.	236.	387.	549.	597.	690.	774.
10	74.2	126.	135.	160.	233.	349.	409.	433.	505.
20	50.3	68.5	85.3	106.	149.	225.	264.	279.	282.
25	40.0	58.4	67.8	86.5	129.	190.	227.	240.	249.
30	34.5	48.8	55.1	73.6	112.	165.	201.	208.	215.
40	25.4	30.8	38.4	54.5	86.1	129.	152.	166.	177.
50	18.4	21.9	28.8	39.2	69.0	104.	126.	134.	149.
60	14.3	17.7	21.8	27.8	48.7	81.8	96.6	118.	134.
70	11.4	14.9	16.1	21.4	36.0	59.9	77.9	99.9	123.
75	11.3	13.0	14.9	19.0	29.5	53.4	68.8	84.3	115.
80	10.1	11.8	13.3	17.0	27.5	46.9	57.6	76.5	108.
90	8.43	9.11	10.9	13.8	20.8	36.0	45.1	57.2	91.5
95	6.87	8.21	9.26	12.0	19.0	31.2	41.2	49.2	83.5
98	5.91	7.49	8.09	10.4	17.0	27.3	36.2	41.8	72.7
99	5.68	7.17	7.89	9.98	16.0	25.7	35.6	38.0	68.1

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	145.	292.	328.	406.	729.	1140.	1560.	1710.	1810.
2	129.	228.	261.	341.	511.	805.	1070.	1160.	1280.
5	92.2	171.	191.	245.	393.	538.	622.	769.	789.
10	73.2	127.	140.	175.	260.	379.	431.	476.	519.
20	50.7	67.0	87.3	109.	163.	260.	294.	309.	318.
25	39.7	57.3	64.0	93.4	138.	223.	248.	272.	286.
30	34.0	46.9	56.3	76.6	120.	193.	218.	234.	256.
40	26.3	30.9	40.4	55.9	92.4	140.	169.	183.	215.
50	20.1	22.0	30.2	39.4	70.7	109.	132.	154.	164.
60	13.2	17.3	22.7	27.8	52.1	87.4	110.	129.	150.
70	11.7	14.4	16.2	21.5	37.9	66.4	84.5	104.	137.
75	11.2	13.2	14.6	19.6	30.7	57.6	75.4	90.2	130.
80	10.6	11.8	13.2	17.2	27.9	49.9	61.3	81.8	122.
90	8.74	9.48	10.9	13.5	21.4	36.4	45.7	61.9	103.
95	7.33	8.36	9.48	12.0	18.9	33.0	41.7	51.5	94.1
98	6.30	7.60	8.80	11.1	17.9	28.1	39.6	45.2	84.6
99	5.85	7.47	8.20	10.6	17.4	27.2	38.3	43.3	73.1

03241500 Massies Creek at Wilberforce, Ohio

Years analyzed = 56
Climatic year range = 1953–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	95.2	210.	287.	357.	583.	904.	1040.	1130.	1720.
2	68.4	146.	217.	251.	379.	599.	699.	780.	884.
5	41.9	90.8	128.	152.	236.	336.	389.	427.	484.
10	30.1	56.8	79.3	93.9	144.	209.	241.	261.	301.
20	18.5	35.6	41.0	52.3	79.6	118.	140.	158.	173.
25	14.5	24.9	30.5	43.1	66.3	96.9	112.	130.	138.
30	11.6	20.0	21.7	34.0	53.5	81.4	96.1	109.	113.
40	6.70	11.2	16.4	24.4	40.6	62.0	72.5	77.3	91.3
50	3.56	7.42	11.4	16.8	30.8	49.2	54.9	65.2	72.9
60	2.25	5.16	6.81	11.4	21.0	35.2	42.3	54.3	57.7
70	2.02	3.91	4.67	7.37	14.0	25.6	34.6	42.1	49.9
75	1.98	3.10	4.17	6.25	11.5	21.2	30.6	38.1	46.7
80	1.45	2.62	3.75	5.22	8.49	18.0	25.0	30.9	42.2
90	0.81	1.78	2.64	3.62	5.96	10.6	16.3	19.3	33.8
95	0.57	1.34	2.10	2.84	4.65	8.38	12.1	17.9	29.9
98	0.48	1.11	1.69	2.40	4.35	7.29	10.0	15.3	22.5
99	0.39	0.99	1.47	2.11	4.13	6.83	9.20	15.0	18.2

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	75.3	161.	201.	262.	426.	605.	834.	963.	1060.
2	62.3	121.	171.	216.	305.	490.	522.	641.	697.
5	43.9	82.1	116.	143.	226.	325.	372.	409.	520.
10	31.1	64.9	76.4	96.5	157.	226.	271.	282.	300.
20	17.7	35.4	41.4	56.4	94.2	135.	166.	175.	208.
25	14.2	25.4	30.3	44.4	74.9	115.	138.	154.	177.
30	11.5	21.2	24.1	35.7	60.6	95.0	118.	133.	144.
40	7.50	12.2	16.8	26.1	45.8	70.6	87.0	90.6	111.
50	3.19	7.13	12.4	16.7	32.6	52.7	61.1	72.3	85.2
60	2.51	5.45	7.11	11.8	21.7	39.1	47.0	58.9	67.2
70	2.13	3.91	4.58	7.36	14.8	28.9	37.8	47.8	56.1
75	2.01	3.21	4.18	6.49	11.7	23.1	33.5	42.1	52.6
80	1.65	2.83	3.93	5.25	9.00	19.6	27.9	36.7	50.2
90	0.97	1.78	2.82	3.91	6.61	11.9	17.0	21.6	39.9
95	0.71	1.42	2.29	3.17	4.92	9.02	12.6	17.8	35.1
98	0.50	1.19	1.89	2.59	4.56	7.97	11.3	17.0	28.1
99	0.43	1.16	1.67	2.31	4.40	7.46	10.4	15.9	25.5

03260700 Bokengehalas Creek near De Graff, Ohio

Years analyzed = 33
Climatic year range = 1958–90

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	109.	151.	176.	217.	277.	324.	356.	390.	507.
2	78.5	92.8	108.	138.	178.	204.	246.	265.	297.
5	42.8	59.2	68.5	78.8	105.	125.	137.	170.	196.
10	30.4	34.5	44.0	53.8	66.8	82.6	89.9	117.	130.
20	18.9	19.4	25.8	32.2	43.0	49.4	60.0	69.9	84.1
25	14.1	16.4	21.4	27.4	37.5	41.6	51.8	61.5	71.9
30	12.1	13.8	19.0	23.4	33.0	37.5	45.5	52.6	63.2
40	8.68	10.0	14.0	16.2	23.6	29.0	36.4	43.0	50.3
50	6.84	8.00	10.7	12.2	18.0	23.6	27.4	35.8	41.3
60	5.61	6.60	7.97	9.82	15.0	18.8	22.0	28.8	31.5
70	5.21	5.76	7.10	7.90	12.0	14.8	18.4	21.6	25.8
75	4.70	5.60	6.66	7.56	11.0	13.0	16.6	20.0	22.6
80	4.67	5.20	6.14	7.16	9.60	11.8	14.2	18.0	20.5
90	4.11	4.57	5.60	6.00	7.96	9.41	11.2	13.8	14.6
95	3.88	4.34	5.01	5.34	7.20	8.92	10.1	12.0	13.6
98	3.41	4.00	4.29	4.72	6.40	7.98	9.56	10.2	13.3
99	3.22	3.72	3.89	4.36	6.40	7.73	8.70	9.93	12.6

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	68.0	84.6	109.	157.	180.	241.	259.	295.	364.
2	58.8	78.4	95.5	129.	145.	170.	183.	234.	248.
5	43.4	53.1	67.7	82.1	105.	124.	133.	168.	186.
10	29.5	32.8	46.3	50.0	69.3	90.1	95.4	114.	136.
20	16.9	20.3	27.3	33.6	47.9	55.7	63.2	85.4	93.6
25	14.6	18.2	22.7	29.9	40.9	47.9	55.6	71.6	78.5
30	12.5	14.5	20.1	25.4	35.7	40.0	50.0	59.9	69.8
40	8.87	10.1	14.9	17.9	23.4	32.5	37.8	49.8	56.6
50	6.67	8.12	10.8	13.5	18.7	25.9	31.3	39.4	48.0
60	5.90	6.69	8.17	10.0	15.7	20.1	23.9	30.5	34.6
70	5.35	6.02	7.40	8.39	12.6	15.9	20.5	23.1	29.0
75	5.09	5.74	6.95	7.81	11.4	14.3	17.0	20.9	23.4
80	4.80	5.53	6.49	7.28	9.86	12.5	15.2	19.3	21.4
90	4.26	4.98	5.65	6.19	8.44	10.1	12.7	15.0	15.7
95	3.96	4.43	5.30	5.55	7.29	9.55	11.1	12.8	14.4
98	3.70	4.26	4.77	5.23	6.74	8.23	9.83	11.7	13.7
99	3.47	3.93	4.40	5.01	6.57	8.13	9.60	10.5	13.4

03264000 Greenville Creek near Bradford, Ohio

Years analyzed = 75
Climatic year range = 1931–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	321.	488.	855.	1190.	1840.	2490.	3170.	3390.	4000.
2	239.	347.	542.	775.	1310.	1760.	2120.	2590.	2720.
5	145.	234.	279.	420.	732.	1030.	1160.	1300.	1400.
10	98.9	149.	176.	216.	426.	569.	677.	719.	748.
20	58.3	84.2	101.	121.	211.	314.	372.	399.	456.
25	45.6	68.6	82.6	101.	175.	253.	295.	329.	374.
30	35.9	57.9	67.8	84.1	147.	211.	250.	272.	303.
40	21.6	37.2	50.2	57.1	105.	154.	182.	202.	221.
50	16.0	27.2	34.6	44.6	76.0	116.	141.	154.	182.
60	14.7	21.7	28.2	35.5	58.0	91.9	105.	118.	152.
70	13.5	18.4	22.4	27.0	42.1	68.0	87.0	96.0	128.
75	13.5	15.0	20.8	24.0	38.0	58.6	70.0	87.2	118.
80	12.0	13.8	18.1	22.0	34.0	49.0	59.8	79.3	111.
90	9.85	12.6	14.0	17.0	27.0	37.6	46.6	64.5	89.0
95	8.62	9.63	11.7	14.0	23.3	31.3	38.4	58.3	70.9
98	7.18	8.25	10.7	12.1	21.0	28.9	33.6	51.1	58.1
99	6.66	7.67	9.19	11.1	21.0	27.5	32.3	48.6	55.0

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	213.	396.	508.	833.	1330.	1720.	2040.	2670.	2900.
2	197.	324.	403.	693.	966.	1330.	1570.	1910.	2380.
5	152.	227.	290.	422.	674.	930.	1050.	1280.	1390.
10	98.3	145.	172.	236.	455.	626.	723.	769.	866.
20	53.5	86.7	101.	137.	262.	363.	450.	493.	524.
25	44.2	70.9	88.4	107.	198.	301.	369.	402.	440.
30	35.2	62.1	76.3	85.2	161.	239.	309.	328.	369.
40	21.2	37.3	52.2	63.9	124.	181.	220.	242.	290.
50	16.5	26.9	34.9	49.0	88.4	136.	165.	187.	217.
60	15.4	21.3	27.9	35.5	60.1	104.	123.	138.	179.
70	14.4	18.9	22.9	28.4	45.5	77.9	93.3	109.	149.
75	13.9	15.3	21.2	25.1	38.4	66.4	77.3	92.1	131.
80	13.0	13.9	19.4	22.8	34.9	55.0	65.3	84.6	122.
90	10.3	12.7	14.4	17.7	28.1	39.3	47.0	68.4	101.
95	9.00	10.3	11.9	14.4	24.2	34.4	41.1	61.6	84.9
98	7.97	8.79	11.1	13.8	22.1	30.2	38.3	57.9	64.4
99	7.14	8.20	10.5	13.0	21.7	29.3	35.5	54.1	60.7

03265000 Stillwater River at Pleasant Hill, Ohio

Years analyzed = 85
Climatic year range = 1917–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1180.	2460.	3000.	3820.	5500.	6590.	8100.	9890.	12100.
2	712.	1380.	1840.	2400.	3810.	5120.	6270.	7040.	8020.
5	457.	648.	847.	1190.	1940.	2870.	3310.	3560.	3800.
10	288.	330.	456.	554.	1040.	1450.	1730.	2090.	2180.
20	151.	167.	200.	267.	544.	713.	899.	1030.	1100.
25	120.	140.	169.	206.	404.	567.	694.	781.	846.
30	89.6	110.	145.	167.	329.	451.	538.	609.	680.
40	48.4	72.0	90.2	112.	224.	323.	366.	423.	479.
50	36.9	47.8	63.0	86.2	152.	228.	267.	328.	353.
60	26.3	34.9	47.2	65.3	106.	171.	209.	236.	289.
70	21.4	29.3	37.9	48.2	76.6	126.	164.	182.	232.
75	20.2	25.9	34.2	39.2	67.8	108.	142.	157.	210.
80	18.6	24.0	29.1	34.6	57.2	91.3	113.	141.	190.
90	12.9	17.3	19.0	24.1	42.0	62.2	80.2	107.	149.
95	10.8	12.5	14.2	18.0	34.0	56.0	66.8	85.8	125.
98	8.72	9.46	10.9	14.5	28.0	44.8	55.0	79.0	99.0
99	7.63	8.76	9.98	12.2	27.3	42.8	53.5	73.6	86.2

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	943.	1260.	1650.	2350.	3790.	4870.	5250.	6040.	8040.
2	773.	1040.	1240.	2020.	2680.	3670.	4150.	4830.	6590.
5	402.	630.	932.	1260.	1830.	2620.	2880.	3510.	3940.
10	305.	361.	475.	666.	1220.	1700.	1950.	2210.	2450.
20	149.	180.	221.	327.	656.	931.	1160.	1310.	1410.
25	111.	140.	185.	233.	486.	735.	902.	1070.	1080.
30	93.8	118.	147.	188.	402.	585.	720.	874.	962.
40	48.0	73.1	96.5	128.	260.	408.	519.	596.	709.
50	34.5	46.9	64.3	90.7	170.	287.	340.	421.	457.
60	25.2	35.9	47.9	66.4	116.	203.	245.	290.	349.
70	21.7	30.3	37.2	48.8	84.3	153.	186.	217.	273.
75	20.7	26.1	33.6	41.0	70.0	124.	159.	177.	240.
80	18.7	24.8	27.9	36.1	57.9	100.	128.	161.	222.
90	15.1	18.7	20.6	24.9	44.3	69.6	91.4	111.	175.
95	12.7	15.4	16.7	20.3	37.0	60.5	71.6	92.5	153.
98	9.73	11.1	14.1	16.7	32.1	49.9	59.5	85.0	122.
99	8.65	9.71	12.8	16.3	30.0	47.3	56.1	81.5	97.7

03266500 Mad River at Zanesfield, Ohio

Years analyzed = 32
Climatic year range = 1947–78

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	28.1	43.0	45.3	60.0	70.2	88.5	95.1	106.	127.
2	22.6	31.5	34.4	37.8	45.3	59.2	65.9	70.6	82.6
5	11.1	12.6	15.9	17.9	24.0	30.2	35.0	45.0	52.9
10	6.36	7.72	9.54	12.2	15.0	19.5	20.4	22.8	28.8
20	4.13	4.51	5.64	7.00	9.54	10.3	14.0	14.7	16.7
25	3.36	3.67	4.78	5.66	7.57	9.56	12.4	13.0	14.4
30	2.52	2.93	3.84	4.79	6.30	8.22	11.0	12.0	13.0
40	1.83	2.10	2.58	3.49	4.70	6.71	8.57	9.41	10.3
50	1.43	1.53	1.86	2.58	3.60	5.10	5.74	6.72	7.89
60	1.23	1.30	1.56	1.92	2.75	3.37	4.30	5.07	6.16
70	0.96	1.10	1.26	1.77	2.09	2.62	3.18	4.10	4.96
75	0.88	1.03	1.26	1.59	1.80	2.31	2.68	3.78	4.68
80	0.84	1.00	1.11	1.49	1.60	2.20	2.42	3.39	4.23
90	0.79	0.83	1.00	1.19	1.40	1.90	2.04	2.76	3.37
95	0.71	0.80	0.90	1.10	1.30	1.80	1.96	2.35	2.87
98	0.67	0.73	0.87	1.00	1.20	1.61	1.80	1.92	2.74
99	0.64	0.73	0.82	0.90	1.15	1.51	1.76	1.88	2.58

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	19.7	27.9	30.5	34.4	44.8	57.2	61.7	72.4	101.
2	14.2	20.4	26.6	28.5	32.2	42.3	44.5	55.4	63.3
5	11.1	16.6	18.6	20.0	25.0	29.8	33.4	42.2	46.5
10	6.34	6.80	11.0	13.6	15.5	19.7	24.7	27.8	31.5
20	4.18	4.74	5.98	7.84	10.5	13.1	16.0	19.0	22.0
25	3.54	4.05	5.18	6.22	8.90	10.9	14.2	15.9	18.7
30	2.63	3.29	3.94	5.21	7.66	9.15	12.2	13.5	15.5
40	1.82	2.16	2.49	3.92	5.10	7.23	9.16	10.1	12.2
50	1.45	1.61	1.97	2.60	3.91	5.51	6.43	7.03	9.02
60	1.19	1.32	1.66	2.06	2.76	3.56	4.89	5.63	7.10
70	0.98	1.15	1.33	1.73	2.19	2.80	3.39	4.52	5.50
75	0.94	1.09	1.25	1.64	1.96	2.48	2.98	3.99	5.02
80	0.87	1.03	1.19	1.52	1.67	2.21	2.63	3.57	4.50
90	0.79	0.89	1.07	1.22	1.46	1.93	2.13	2.98	3.63
95	0.73	0.82	0.94	1.13	1.31	1.87	2.01	2.54	3.06
98	0.69	0.79	0.90	1.04	1.24	1.78	1.86	2.06	2.84
99	0.64	0.72	0.86	0.99	1.21	1.68	1.80	2.03	2.80

03267000 Mad River near Urbana, Ohio

Years analyzed = 69
Climatic year range = 1926–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	233.	315.	410.	488.	808.	1260.	1440.	1520.	2100.
2	201.	233.	259.	353.	550.	792.	941.	1090.	1150.
5	155.	160.	178.	233.	345.	497.	579.	629.	666.
10	111.	121.	139.	164.	241.	362.	409.	444.	468.
20	79.4	88.0	107.	127.	183.	275.	298.	309.	326.
25	68.0	82.3	94.0	113.	173.	240.	267.	288.	295.
30	58.0	74.5	85.0	98.8	158.	219.	246.	265.	271.
40	48.9	61.8	71.0	79.0	137.	184.	207.	231.	245.
50	42.6	53.0	58.0	70.5	120.	160.	182.	197.	221.
60	37.6	46.5	52.0	62.0	104.	139.	164.	171.	202.
70	35.3	44.0	46.8	57.0	90.0	121.	144.	153.	189.
75	34.8	43.0	44.0	54.5	81.0	117.	133.	144.	181.
80	33.8	41.2	43.0	52.0	78.0	106.	123.	134.	173.
90	32.6	38.6	40.0	44.6	70.0	98.7	106.	122.	154.
95	30.4	35.3	37.3	41.0	67.0	90.0	98.3	116.	149.
98	26.0	33.2	35.0	39.0	62.7	85.0	95.3	108.	141.
99	25.4	31.5	34.7	39.0	60.7	83.0	94.0	103.	138.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	182.	204.	289.	410.	562.	885.	1020.	1230.	1540.
2	171.	191.	246.	338.	466.	647.	775.	877.	1160.
5	143.	167.	183.	241.	350.	514.	599.	660.	759.
10	107.	120.	140.	177.	274.	397.	438.	449.	500.
20	75.9	91.1	106.	130.	199.	288.	314.	336.	351.
25	67.4	84.7	95.0	115.	180.	257.	295.	306.	323.
30	56.9	77.9	86.6	101.	170.	236.	265.	278.	292.
40	50.0	63.8	72.1	80.7	140.	195.	221.	238.	260.
50	42.2	53.7	58.0	70.0	126.	166.	189.	210.	234.
60	37.4	46.9	52.9	62.9	106.	148.	167.	180.	211.
70	35.7	44.6	46.9	56.7	91.0	130.	149.	159.	199.
75	34.9	43.1	45.3	54.6	83.1	119.	137.	149.	189.
80	34.1	41.8	43.4	52.4	79.0	109.	125.	138.	182.
90	33.0	39.1	40.3	44.9	70.5	100.	107.	123.	161.
95	31.1	36.6	38.3	42.1	67.4	93.7	101.	118.	154.
98	26.3	33.9	36.3	40.0	64.0	88.7	97.7	112.	148.
99	25.9	32.4	36.0	38.9	62.3	87.0	97.3	105.	144.

03270800 Wolf Creek at Trotwood, Ohio

Years analyzed = 23
Climatic year range = 1963–85

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	115.	161.	223.	243.	307.	386.	441.	460.	463.
2	51.4	82.1	128.	157.	205.	222.	261.	349.	378.
5	28.9	40.8	70.2	77.8	107.	126.	136.	154.	177.
10	15.6	20.3	31.2	44.2	50.2	64.8	75.9	85.3	87.0
20	6.50	8.62	15.4	18.8	22.8	31.5	36.6	38.6	40.3
25	4.52	6.86	11.6	12.6	18.5	23.8	29.1	30.8	31.0
30	3.34	5.78	8.88	10.5	15.0	19.6	24.9	25.2	25.8
40	2.00	3.26	5.54	7.04	11.0	12.8	17.1	18.6	19.8
50	0.94	1.78	3.88	4.92	8.30	9.36	11.4	13.0	14.6
60	0.57	1.07	1.96	3.71	5.60	6.68	8.39	9.71	10.8
70	0.42	0.53	1.16	2.32	3.40	4.58	5.13	6.17	8.20
75	0.40	0.45	0.96	1.80	2.90	3.79	3.90	5.00	7.40
80	0.32	0.43	0.70	1.32	2.10	2.68	3.20	3.74	6.33
90	0.22	0.32	0.37	0.63	1.10	1.27	1.52	2.20	4.60
95	0.11	0.17	0.29	0.35	0.70	0.89	1.01	1.86	3.48
98	0.01	0.07	0.20	0.25	0.46	0.70	0.84	1.62	2.33
99	0.00	0.03	0.18	0.21	0.41	0.69	0.83	1.55	1.86

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	64.5	85.2	139.	153.	193.	228.	258.	275.	304.
2	53.8	70.5	110.	126.	136.	182.	194.	204.	228.
5	33.3	51.4	66.9	85.3	97.7	114.	121.	142.	154.
10	19.9	23.8	41.1	52.5	65.0	73.5	78.0	102.	108.
20	5.90	9.39	19.9	26.5	31.6	40.2	55.8	58.3	58.7
25	4.22	6.75	15.2	17.1	25.3	31.4	41.2	46.0	47.3
30	3.23	5.86	10.7	12.7	19.0	27.7	31.8	38.6	39.1
40	2.17	3.45	6.14	8.69	13.7	16.9	22.1	23.7	27.7
50	1.24	2.16	4.22	5.37	9.24	11.2	14.5	16.1	17.9
60	0.71	1.42	2.40	3.85	5.91	7.47	10.3	12.5	13.5
70	0.50	0.62	1.50	2.55	3.95	5.34	6.08	7.87	10.3
75	0.39	0.50	1.16	2.11	3.39	4.10	4.81	6.25	9.13
80	0.29	0.47	0.95	1.51	2.66	3.10	4.05	4.68	7.85
90	0.19	0.35	0.43	0.67	1.24	1.49	1.86	2.53	5.59
95	0.12	0.24	0.31	0.46	0.87	1.07	1.26	2.07	4.43
98	0.06	0.18	0.28	0.41	0.65	0.87	0.95	1.90	3.15
99	0.02	0.10	0.21	0.30	0.59	0.80	0.87	1.78	2.80

03271000 Wolf Creek at Dayton, Ohio

Years analyzed = 26
Climatic year range = 1939–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	380.	417.	510.	599.	786.	1180.	1280.	1510.	1630.
2	223.	238.	305.	385.	489.	675.	787.	947.	1070.
5	98.1	114.	131.	197.	245.	324.	394.	436.	506.
10	53.4	59.3	72.7	95.2	129.	164.	207.	233.	268.
20	31.6	34.2	37.9	45.5	72.0	89.2	107.	116.	124.
25	24.0	26.8	30.2	38.5	59.3	72.0	82.2	92.4	99.6
30	18.4	23.0	25.3	32.6	49.1	58.0	65.3	77.9	82.4
40	7.15	13.1	18.2	23.3	32.0	44.4	49.2	62.0	63.7
50	5.01	8.57	13.8	17.0	21.5	33.0	38.2	49.3	51.9
60	3.95	6.89	10.0	13.0	14.7	24.9	26.6	40.3	42.7
70	3.51	5.55	6.80	9.82	12.0	16.9	20.6	30.3	34.6
75	3.28	5.05	5.52	8.17	11.5	14.9	18.6	25.5	30.8
80	2.91	4.40	4.54	7.26	10.0	13.0	16.0	22.8	27.6
90	2.09	3.15	3.53	5.90	7.69	9.99	12.0	16.9	20.1
95	1.59	2.28	2.82	5.15	6.35	8.83	10.5	14.0	16.2
98	1.34	1.75	2.30	3.43	5.17	7.90	9.57	11.1	14.4
99	1.24	1.35	2.16	3.40	5.00	7.66	8.67	10.7	12.8

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	215.	247.	366.	389.	502.	604.	731.	883.	1050.
2	165.	221.	260.	314.	345.	517.	529.	614.	752.
5	129.	146.	163.	185.	240.	363.	384.	447.	547.
10	71.0	79.5	96.4	129.	161.	228.	245.	284.	328.
20	33.5	37.3	46.0	53.7	94.6	116.	136.	155.	181.
25	25.2	31.5	37.3	41.9	77.4	89.3	99.6	122.	152.
30	20.1	25.8	28.8	36.1	60.1	73.5	80.4	107.	135.
40	7.22	14.5	20.8	26.2	38.8	53.9	58.8	76.3	82.8
50	4.79	9.93	15.2	20.7	27.5	40.1	46.8	57.8	62.9
60	4.02	7.25	10.7	14.4	17.0	31.5	34.1	48.8	55.3
70	3.53	5.72	6.89	11.2	14.0	21.4	25.2	36.8	45.8
75	3.25	5.21	5.92	9.17	12.6	17.9	22.9	33.4	40.4
80	2.94	4.41	4.80	7.98	11.5	14.9	19.9	28.7	35.5
90	2.16	3.20	3.76	6.02	8.18	11.1	13.8	20.4	23.9
95	1.75	2.54	3.03	5.40	6.88	9.31	12.5	18.0	19.5
98	1.54	1.81	2.50	3.69	5.94	8.60	10.4	13.5	16.5
99	1.42	1.60	2.19	3.57	5.40	8.38	9.73	11.4	15.0

03271800 Twin Creek near Ingomar, Ohio

Years analyzed = 36
Climatic year range = 1963–98

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	930.	1110.	1910.	2110.	2490.	2880.	3580.	4070.	4130.
2	434.	719.	943.	1360.	1710.	2050.	2330.	2470.	2700.
5	239.	310.	501.	654.	897.	1060.	1160.	1350.	1470.
10	143.	190.	270.	325.	421.	534.	592.	766.	862.
20	59.7	91.4	135.	154.	202.	264.	303.	366.	418.
25	48.4	74.4	102.	118.	162.	204.	231.	296.	341.
30	37.8	61.6	81.0	97.5	136.	167.	192.	230.	266.
40	20.4	38.6	52.0	67.4	98.5	110.	135.	163.	184.
50	12.9	25.6	35.2	41.1	71.5	82.7	89.6	106.	126.
60	9.32	13.4	20.6	24.2	48.2	60.6	65.0	75.5	106.
70	7.00	8.12	12.8	17.1	29.8	35.9	44.2	53.2	79.3
75	6.08	6.94	11.4	15.1	23.8	29.5	33.2	45.7	68.1
80	5.76	6.41	9.88	12.1	19.0	22.1	26.9	37.8	56.2
90	4.09	4.63	6.14	8.03	11.5	16.0	18.6	24.0	33.4
95	3.46	3.97	5.24	6.55	9.55	14.0	15.6	20.5	27.6
98	2.99	3.54	4.72	5.93	8.45	12.3	13.2	18.1	21.0
99	2.87	3.37	4.63	5.57	7.65	11.0	12.9	15.8	19.3

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	567.	672.	1040.	1310.	1540.	1900.	2180.	2290.	2690.
2	477.	591.	841.	984.	1160.	1350.	1490.	1760.	1970.
5	291.	373.	611.	734.	856.	962.	1040.	1230.	1330.
10	150.	191.	326.	443.	535.	643.	724.	851.	890.
20	65.4	98.3	172.	202.	278.	383.	410.	492.	557.
25	50.7	79.2	122.	158.	204.	290.	311.	402.	456.
30	40.5	65.7	90.0	117.	167.	220.	250.	329.	386.
40	20.3	40.5	56.1	74.0	119.	144.	176.	230.	252.
50	12.9	26.9	36.5	45.2	82.1	99.4	105.	148.	157.
60	9.56	12.4	22.1	25.1	52.2	69.1	77.3	84.3	125.
70	6.94	8.10	13.3	18.4	34.3	42.0	51.1	62.3	96.0
75	6.25	6.81	10.9	15.2	26.2	32.3	37.0	53.1	81.7
80	5.71	6.35	10.1	13.1	19.3	24.8	28.8	41.2	70.7
90	3.95	4.75	6.39	8.33	12.0	17.1	19.2	24.7	36.7
95	3.44	4.01	5.53	6.96	10.1	14.7	16.5	21.4	31.4
98	3.21	3.65	4.94	6.38	9.11	12.9	14.5	20.1	24.3
99	3.09	3.42	4.91	5.76	8.63	12.1	13.8	18.2	21.2

03272700 Sevenmile Creek at Camden, Ohio

Years analyzed = 35
Climatic year range = 1971–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	389.	433.	570.	652.	844.	1060.	1290.	1510.	1730.
2	216.	250.	304.	450.	570.	672.	769.	952.	1060.
5	102.	123.	162.	241.	294.	356.	401.	480.	511.
10	65.5	73.4	101.	121.	170.	198.	213.	284.	293.
20	29.8	40.6	50.4	62.9	83.4	109.	112.	141.	164.
25	23.4	32.9	42.0	50.2	68.0	83.3	95.3	113.	132.
30	19.3	27.1	35.2	41.6	56.9	66.7	79.2	96.3	108.
40	12.4	16.4	22.9	31.8	41.6	49.1	57.8	69.4	74.2
50	7.82	10.6	15.2	21.9	29.0	36.2	42.6	51.6	58.6
60	5.02	5.79	7.39	10.7	20.0	24.5	29.9	40.0	47.2
70	3.76	3.96	4.42	7.40	12.0	16.0	19.0	33.8	40.2
75	3.10	3.31	3.88	5.91	9.00	11.0	15.0	30.8	35.2
80	2.50	2.96	3.56	4.74	7.04	9.37	12.8	25.2	28.8
90	1.86	1.99	2.61	3.04	4.92	6.30	7.15	17.4	18.7
95	1.56	1.70	2.10	2.61	3.70	5.17	6.28	13.2	15.0
98	1.27	1.57	1.77	2.08	3.10	4.78	5.17	11.1	12.5
99	1.20	1.49	1.67	1.85	2.97	4.43	4.90	10.0	12.0

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	224.	293.	341.	427.	515.	670.	723.	1080.	1400.
2	209.	239.	266.	313.	388.	515.	611.	664.	856.
5	133.	151.	171.	218.	292.	360.	387.	456.	525.
10	69.3	83.0	107.	156.	178.	239.	260.	301.	327.
20	31.9	46.4	66.7	72.8	107.	131.	143.	182.	252.
25	24.0	39.1	49.0	59.0	82.8	104.	111.	154.	202.
30	20.1	30.7	38.5	46.2	64.4	88.5	91.5	135.	151.
40	14.1	16.7	23.8	35.8	46.9	60.8	69.1	93.7	105.
50	9.74	11.2	16.4	22.8	32.9	41.5	47.3	62.8	79.9
60	5.30	6.36	8.10	11.4	20.8	27.3	32.4	50.4	57.7
70	4.08	4.34	4.78	8.48	12.5	16.9	20.7	41.1	50.5
75	3.51	3.60	4.04	6.74	9.99	13.9	17.2	37.8	43.0
80	3.01	3.16	3.81	4.93	8.36	11.1	13.9	31.9	38.8
90	2.02	2.21	2.77	3.34	5.63	6.65	7.91	20.6	21.2
95	1.61	1.84	2.33	2.74	4.03	5.41	6.95	16.1	17.4
98	1.42	1.65	2.01	2.30	3.26	5.05	6.18	12.2	14.3
99	1.33	1.59	1.81	2.14	3.14	4.73	5.73	10.9	13.3

04177000 Ottawa River at University of Toledo, Toledo, Ohio

Years analyzed = 35
Climatic year range = 1945–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	461.	831.	994.	1110.	1250.	1610.	1730.	2090.	2350.
2	408.	555.	741.	789.	908.	1230.	1470.	1600.	1910.
5	243.	302.	422.	460.	550.	772.	832.	980.	1040.
10	122.	150.	226.	250.	310.	398.	472.	525.	590.
20	47.1	72.1	106.	111.	158.	179.	200.	231.	285.
25	35.5	55.9	75.5	90.1	119.	131.	151.	180.	210.
30	28.8	46.3	53.6	69.6	92.6	100.	115.	139.	164.
40	17.2	30.6	38.2	44.6	61.0	67.8	75.2	97.6	105.
50	10.5	19.4	25.6	30.0	45.0	49.0	55.0	69.4	73.2
60	7.43	13.8	19.4	22.4	32.0	37.2	40.6	53.4	57.2
70	5.48	9.83	14.2	15.0	18.0	27.2	30.8	38.2	48.6
75	4.60	7.45	11.1	12.0	15.0	22.2	25.0	32.6	44.6
80	3.90	5.72	8.73	9.68	12.0	17.7	21.8	28.3	39.8
90	0.82	3.48	4.33	5.44	8.70	11.2	13.9	20.2	27.7
95	0.00	2.22	2.94	4.30	7.03	8.98	10.8	16.5	20.0
98	0.00	0.95	2.45	3.66	5.76	7.43	9.39	13.5	16.6
99	0.00	0.69	2.10	2.94	5.16	7.12	9.23	12.4	15.6

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	324.	525.	587.	703.	860.	1050.	1140.	1480.	1730.
2	274.	446.	551.	609.	683.	861.	978.	1240.	1360.
5	206.	310.	377.	428.	477.	646.	736.	859.	1020.
10	151.	182.	235.	277.	319.	447.	482.	551.	583.
20	61.8	72.2	120.	149.	182.	228.	258.	325.	349.
25	39.1	59.3	86.7	112.	138.	172.	186.	230.	287.
30	25.9	48.6	60.7	84.3	109.	133.	152.	190.	230.
40	17.2	30.8	40.4	52.0	73.1	84.8	94.1	129.	158.
50	11.9	21.5	29.9	32.9	49.4	61.0	70.1	89.7	101.
60	9.44	15.2	21.3	23.3	35.0	42.3	48.6	65.3	67.8
70	7.51	11.8	16.3	17.7	22.8	31.4	34.7	47.1	55.2
75	6.24	9.86	12.6	14.4	18.6	26.1	29.4	38.5	50.1
80	4.31	6.92	9.54	12.1	15.0	20.6	25.6	32.8	45.1
90	1.28	4.96	5.97	7.22	9.86	12.9	17.6	24.5	35.6
95	0.05	2.89	4.04	5.24	7.81	10.6	14.2	20.9	29.4
98	0.01	1.80	3.07	4.11	6.90	9.07	12.0	17.6	21.9
99	0.00	1.30	2.96	3.91	6.24	8.68	9.61	16.1	19.1

04184500 Bean Creek at Powers, Ohio

Years analyzed = 48
Climatic year range = 1941–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	701.	777.	978.	1110.	1350.	1750.	2110.	2380.	2720.
2	478.	536.	731.	784.	1060.	1310.	1470.	1800.	1990.
5	254.	302.	452.	497.	686.	844.	998.	1160.	1210.
10	159.	193.	263.	338.	430.	523.	608.	700.	756.
20	71.0	110.	139.	182.	241.	295.	316.	387.	408.
25	53.0	89.6	113.	139.	195.	240.	259.	302.	332.
30	43.9	64.9	81.8	112.	161.	186.	219.	239.	266.
40	25.8	36.5	47.4	67.0	111.	132.	146.	178.	185.
50	20.4	23.0	37.0	47.5	74.0	94.6	106.	132.	145.
60	15.4	19.7	26.8	36.7	53.2	70.6	78.6	98.0	112.
70	13.4	17.7	22.0	25.7	38.5	49.5	54.0	63.8	87.4
75	12.9	14.9	19.0	22.7	32.5	41.0	46.0	57.5	75.8
80	11.0	13.9	17.8	20.1	27.6	35.0	38.6	45.5	63.8
90	8.66	10.0	14.0	15.7	20.0	24.3	28.4	35.1	39.5
95	6.85	8.33	11.0	13.0	16.0	20.3	23.1	30.0	31.7
98	6.38	7.19	9.82	11.7	14.0	18.5	20.1	26.1	28.5
99	5.97	6.78	9.18	10.5	13.0	17.2	20.0	25.1	27.5

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	519.	642.	741.	890.	1040.	1330.	1520.	1750.	1840.
2	356.	518.	609.	683.	852.	1040.	1260.	1510.	1590.
5	227.	281.	430.	492.	626.	787.	947.	1060.	1190.
10	155.	168.	302.	344.	425.	553.	611.	756.	789.
20	65.2	118.	147.	200.	266.	317.	351.	435.	482.
25	52.7	98.2	112.	161.	211.	263.	292.	343.	395.
30	41.9	60.9	81.5	122.	171.	202.	247.	274.	303.
40	24.0	35.8	48.9	68.4	119.	147.	163.	203.	216.
50	20.3	24.5	38.7	49.9	75.1	104.	115.	148.	161.
60	16.0	19.2	27.3	36.0	51.9	74.8	84.2	104.	131.
70	13.3	17.7	23.1	27.0	39.6	50.7	56.0	69.9	103.
75	12.5	14.7	19.7	23.0	33.9	42.8	47.7	59.6	86.8
80	11.0	13.9	17.8	20.4	28.3	37.1	41.6	48.6	70.7
90	8.78	10.5	14.5	16.5	20.6	25.5	29.7	36.7	41.5
95	7.11	8.73	11.7	14.1	16.4	20.5	25.1	30.8	34.5
98	6.72	7.33	10.8	12.2	14.5	18.9	21.6	27.2	30.2
99	6.68	7.02	10.2	11.7	13.6	18.6	20.8	26.2	29.1

04185440 Unnamed Tributary to Lost Creek near Farmer, Ohio

Years analyzed = 20
Climatic year range = 1986–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	32.1	41.2	50.2	58.3	74.4	88.0	101.	136.	149.
2	17.4	25.9	28.3	36.8	46.1	56.5	63.5	66.9	83.8
5	8.33	9.76	15.5	15.9	18.3	27.1	28.3	32.0	33.9
10	3.43	4.04	5.69	6.87	8.97	11.3	12.0	13.7	14.0
20	1.11	1.33	2.27	2.65	3.48	4.19	4.72	5.43	5.93
25	0.80	0.89	1.66	1.76	2.28	3.14	3.25	4.10	4.25
30	0.46	0.59	1.12	1.33	1.65	2.27	2.66	3.11	3.50
40	0.26	0.36	0.65	0.71	0.99	1.49	1.76	1.98	2.09
50	0.12	0.20	0.34	0.38	0.70	0.89	1.10	1.37	1.49
60	0.09	0.10	0.15	0.21	0.46	0.57	0.70	0.95	1.09
70	0.05	0.06	0.09	0.13	0.23	0.40	0.46	0.67	0.70
75	0.02	0.05	0.07	0.09	0.18	0.35	0.40	0.55	0.60
80	0.00	0.04	0.05	0.06	0.12	0.28	0.31	0.46	0.50
90	0.00	0.00	0.02	0.03	0.07	0.12	0.16	0.28	0.30
95	0.00	0.00	0.00	0.01	0.04	0.08	0.09	0.19	0.25
98	0.00	0.00	0.00	0.00	0.03	0.06	0.08	0.13	0.21
99	0.00	0.00	0.00	0.00	0.02	0.05	0.07	0.11	0.17

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	19.3	21.2	26.2	31.0	35.5	42.5	48.0	59.7	67.1
2	14.3	16.8	19.5	22.0	27.3	30.3	32.1	41.8	51.2
5	9.16	10.6	14.0	16.3	20.5	25.2	26.3	34.4	35.0
10	4.78	6.92	8.14	10.6	12.8	15.8	16.8	17.2	19.5
20	1.65	2.09	4.19	4.84	6.30	9.04	10.2	10.9	11.1
25	1.32	1.54	3.00	3.48	4.84	6.52	7.33	8.87	9.94
30	0.90	1.10	1.97	2.59	3.47	4.48	5.38	6.41	8.13
40	0.38	0.48	0.97	1.27	1.85	2.54	3.33	3.94	4.28
50	0.15	0.28	0.49	0.62	1.04	1.29	1.98	2.64	3.36
60	0.11	0.12	0.19	0.25	0.60	0.77	1.01	1.68	1.86
70	0.06	0.08	0.09	0.15	0.30	0.54	0.64	0.94	1.02
75	0.05	0.05	0.07	0.11	0.25	0.44	0.50	0.73	0.77
80	0.03	0.04	0.05	0.08	0.18	0.35	0.42	0.58	0.62
90	0.00	0.01	0.02	0.03	0.09	0.14	0.22	0.37	0.41
95	0.00	0.00	0.01	0.02	0.06	0.09	0.14	0.24	0.31
98	0.00	0.00	0.00	0.00	0.04	0.08	0.10	0.16	0.28
99	0.00	0.00	0.00	0.00	0.03	0.07	0.08	0.13	0.27

04189000 Blanchard River near Findlay, Ohio

Years analyzed = 79
Climatic year range = 1924–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	626.	941.	1430.	1900.	3320.	4330.	5570.	6180.	8210.
2	484.	791.	1070.	1340.	2350.	3240.	3820.	4900.	5620.
5	236.	332.	552.	753.	1170.	1960.	2380.	2860.	3350.
10	128.	163.	216.	346.	574.	1060.	1330.	1650.	1740.
20	46.0	64.4	93.6	126.	253.	476.	539.	659.	874.
25	33.8	54.0	67.0	91.5	185.	346.	405.	471.	615.
30	25.3	47.2	55.0	71.0	150.	257.	323.	394.	475.
40	11.8	17.2	36.6	44.0	96.0	175.	221.	241.	309.
50	7.44	11.0	21.0	30.0	64.0	120.	157.	172.	204.
60	5.36	9.50	13.0	22.0	45.0	75.0	95.0	125.	157.
70	4.44	7.50	9.00	15.8	30.0	54.1	71.8	90.1	126.
75	3.70	6.50	8.20	12.0	26.0	44.8	66.0	77.0	112.
80	2.87	3.90	7.40	11.0	22.4	38.0	55.0	65.0	102.
90	1.80	3.20	5.40	7.40	15.4	24.6	40.0	46.6	74.8
95	1.30	2.80	4.40	5.80	12.0	21.3	30.3	38.0	60.3
98	1.14	2.20	3.30	4.30	10.0	18.0	24.3	33.3	48.2
99	0.95	1.80	2.90	4.13	9.00	17.0	23.0	30.3	41.7

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	372.	711.	922.	1270.	2170.	2990.	3560.	4100.	4730.
2	350.	583.	812.	1050.	1650.	2260.	3130.	3730.	3980.
5	223.	347.	550.	720.	1210.	1620.	2200.	2510.	2710.
10	106.	165.	245.	407.	752.	1160.	1440.	1520.	1740.
20	48.5	72.6	105.	169.	305.	644.	791.	909.	1030.
25	37.0	60.7	73.3	118.	228.	446.	584.	773.	892.
30	26.8	52.9	57.6	79.4	182.	364.	460.	580.	704.
40	13.5	17.9	39.9	50.9	115.	220.	275.	343.	496.
50	7.05	11.4	21.8	32.6	76.0	137.	183.	232.	297.
60	5.29	9.71	12.7	24.1	51.7	96.7	123.	153.	207.
70	4.60	7.37	9.77	16.6	32.9	63.9	79.4	119.	159.
75	4.01	5.10	8.03	14.0	27.9	50.1	75.3	105.	141.
80	3.23	4.50	7.50	11.9	24.3	44.4	65.3	84.7	128.
90	2.28	3.50	6.33	7.86	17.9	26.7	44.0	53.6	94.1
95	1.74	3.01	4.73	6.26	13.3	22.0	34.4	43.0	73.8
98	1.52	2.46	4.09	5.37	11.1	19.6	26.3	40.4	59.1
99	1.35	2.21	3.43	4.86	10.7	18.7	25.6	37.0	57.8

04196500 Sandusky River near Upper Sandusky, Ohio

Years analyzed = 64
Climatic year range = 1922–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	577.	1300.	1670.	1940.	3040.	3920.	5000.	5380.	6240.
2	463.	756.	1230.	1500.	2190.	2780.	3180.	4230.	5160.
5	247.	341.	537.	780.	1140.	1590.	1910.	2300.	2880.
10	158.	189.	267.	357.	652.	896.	1090.	1230.	1330.
20	56.1	77.8	122.	155.	285.	431.	536.	582.	648.
25	34.1	57.3	84.8	112.	219.	337.	413.	468.	484.
30	25.1	48.7	61.0	81.2	169.	271.	315.	365.	414.
40	13.5	21.7	31.5	49.6	114.	179.	209.	243.	268.
50	9.60	13.3	17.0	30.0	66.8	117.	143.	155.	195.
60	7.00	8.30	11.9	21.0	41.6	82.4	107.	121.	139.
70	4.85	6.44	8.82	14.0	24.5	49.2	69.4	87.1	103.
75	3.93	5.33	7.65	11.0	20.5	40.0	56.5	68.9	90.0
80	3.19	4.50	5.85	9.00	16.0	34.0	46.6	56.3	78.3
90	1.88	2.63	3.40	5.60	11.0	21.0	26.4	32.3	51.0
95	1.11	1.85	2.30	3.90	8.10	14.3	20.1	24.0	35.7
98	0.89	1.22	1.90	2.80	6.45	12.0	16.2	20.3	29.7
99	0.76	1.13	1.65	2.43	5.33	10.0	14.3	17.5	25.2

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	383.	779.	1090.	1340.	2010.	2630.	2890.	3570.	3790.
2	322.	700.	850.	1130.	1520.	1990.	2290.	3020.	3230.
5	229.	357.	570.	866.	1140.	1420.	1690.	2250.	2710.
10	165.	175.	270.	464.	722.	934.	1070.	1310.	1720.
20	63.3	79.7	139.	175.	353.	564.	664.	744.	848.
25	31.0	60.0	92.7	138.	280.	461.	531.	644.	724.
30	24.0	48.0	63.2	88.4	207.	388.	451.	515.	609.
40	13.9	23.2	32.9	53.0	140.	222.	294.	348.	368.
50	9.95	14.4	18.1	33.4	84.7	147.	185.	220.	261.
60	7.56	8.86	12.3	22.6	47.9	101.	125.	145.	179.
70	5.12	7.01	9.86	13.4	27.1	61.4	87.6	103.	137.
75	4.46	5.49	8.26	11.2	23.1	42.9	64.9	86.5	117.
80	3.62	4.78	6.79	10.1	18.5	35.1	57.5	75.0	102.
90	2.03	2.77	3.68	6.39	12.5	24.1	33.1	40.9	66.3
95	1.42	2.14	2.36	4.60	8.95	17.7	22.4	27.9	41.8
98	0.91	1.53	1.95	3.23	7.36	13.4	18.7	22.0	36.7
99	0.86	1.34	1.77	2.76	6.60	12.3	16.4	20.9	35.5

04197000 Sandusky River near Mexico, Ohio

Years analyzed = 55
Climatic year range = 1923–81

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1320.	2530.	3720.	4220.	6010.	8120.	9060.	10700.	10900.
2	1000.	1690.	2590.	3280.	4980.	6430.	7110.	8570.	9180.
5	545.	730.	1160.	1760.	2930.	4100.	4400.	4900.	5930.
10	373.	431.	589.	801.	1380.	2300.	2740.	3170.	4190.
20	166.	185.	249.	331.	623.	1140.	1470.	1660.	1930.
25	82.9	141.	186.	244.	499.	800.	1070.	1220.	1520.
30	59.7	110.	137.	175.	359.	598.	779.	916.	1170.
40	37.4	53.6	75.4	105.	239.	387.	466.	596.	726.
50	27.0	34.9	48.0	68.2	141.	264.	332.	409.	507.
60	21.0	26.6	34.0	49.2	94.6	173.	223.	281.	317.
70	16.6	21.0	25.6	34.4	57.4	106.	146.	195.	220.
75	14.4	18.6	22.6	30.8	45.8	91.3	124.	154.	184.
80	12.4	15.8	19.6	26.0	39.0	75.0	97.5	136.	141.
90	9.00	11.4	13.2	18.0	26.6	51.9	60.5	79.9	106.
95	7.94	9.80	10.2	13.0	20.0	40.7	51.4	56.1	87.8
98	4.82	7.44	8.50	9.93	17.0	37.4	43.0	47.0	73.6
99	3.44	5.54	6.66	8.92	15.3	34.0	39.9	43.1	67.7

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	839.	1850.	2440.	3140.	4700.	6380.	7230.	8540.	9800.
2	734.	1400.	2070.	2430.	3570.	5030.	5510.	7140.	7270.
5	468.	654.	1250.	1810.	2680.	3650.	4070.	4670.	5440.
10	347.	411.	601.	943.	1630.	2320.	2690.	3010.	3490.
20	176.	188.	268.	391.	755.	1350.	1520.	1890.	2200.
25	73.6	136.	199.	270.	551.	1060.	1300.	1520.	1820.
30	56.7	105.	149.	195.	441.	818.	1060.	1260.	1480.
40	37.1	52.3	75.8	116.	245.	454.	650.	844.	919.
50	29.6	36.4	48.6	72.2	156.	320.	428.	543.	605.
60	22.8	27.3	35.1	47.6	106.	204.	270.	360.	397.
70	17.7	22.1	27.1	35.2	63.7	134.	175.	229.	286.
75	15.5	17.6	24.5	31.5	46.4	99.8	146.	200.	223.
80	13.4	16.3	21.5	27.5	39.6	86.9	111.	176.	185.
90	9.50	11.5	14.4	18.0	29.4	59.2	65.9	85.9	126.
95	7.99	9.60	11.6	13.8	20.7	45.0	55.7	58.7	103.
98	5.76	7.88	9.30	12.3	17.6	39.7	49.2	50.8	98.3
99	5.09	7.01	8.00	10.0	16.9	37.1	44.9	47.7	93.7

04197100 Honey Creek at Melmore, Ohio

Years analyzed = 33
Climatic year range = 1976–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	604.	828.	919.	1230.	1610.	1880.	2160.	2700.	2800.
2	381.	719.	795.	930.	1160.	1290.	1600.	1990.	2220.
5	194.	326.	477.	501.	678.	847.	912.	1110.	1250.
10	104.	140.	216.	285.	340.	469.	566.	718.	792.
20	43.5	50.6	80.0	102.	130.	213.	249.	290.	327.
25	31.9	38.2	57.4	72.6	101.	155.	173.	213.	228.
30	26.0	31.4	44.5	57.5	75.2	109.	126.	151.	167.
40	12.7	17.2	26.6	34.3	49.2	64.6	76.8	96.9	116.
50	5.91	9.50	16.2	20.2	30.0	42.0	51.5	60.8	82.7
60	3.68	5.04	9.42	13.0	20.4	31.4	37.4	41.2	65.0
70	1.71	2.60	3.76	7.02	10.0	20.2	24.0	30.6	47.8
75	1.13	1.66	2.92	4.73	8.98	13.6	20.0	26.6	39.2
80	0.86	1.26	2.02	2.92	6.32	9.82	16.2	22.6	31.5
90	0.44	0.78	1.34	1.50	3.20	5.38	7.73	14.6	17.0
95	0.29	0.58	1.00	1.11	2.23	3.48	4.11	10.1	12.1
98	0.17	0.45	0.67	0.95	1.63	2.76	3.25	6.54	9.34
99	0.14	0.37	0.55	0.87	1.17	2.55	2.95	4.17	7.30

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	422.	524.	678.	786.	1020.	1290.	1450.	1680.	1830.
2	312.	416.	525.	634.	817.	943.	1310.	1500.	1680.
5	178.	344.	389.	467.	633.	707.	918.	1080.	1160.
10	120.	155.	268.	317.	382.	496.	524.	666.	803.
20	48.1	64.3	99.6	123.	188.	276.	312.	390.	419.
25	36.6	46.1	74.7	95.8	145.	193.	245.	310.	335.
30	26.3	35.6	58.0	67.4	110.	157.	189.	234.	291.
40	14.7	17.7	34.8	41.1	65.6	98.2	118.	150.	171.
50	6.79	10.3	18.5	23.2	36.6	54.5	74.6	96.1	112.
60	4.16	6.05	10.0	14.7	22.7	38.4	50.7	56.2	85.5
70	1.98	2.85	4.07	7.47	13.6	23.7	30.2	37.5	65.0
75	1.21	1.91	3.35	5.31	11.0	17.3	23.9	31.9	55.9
80	0.90	1.36	2.39	3.20	7.01	12.1	19.2	27.3	44.8
90	0.47	0.81	1.52	1.82	3.53	6.14	10.8	17.8	25.5
95	0.30	0.62	1.06	1.25	2.36	3.91	4.76	13.5	14.3
98	0.19	0.51	0.79	0.98	1.90	2.98	3.83	9.12	11.6
99	0.16	0.47	0.64	0.93	1.63	2.70	3.23	6.07	10.4

04197170 Rock Creek at Tiffin, Ohio

Years analyzed = 25
Climatic year range = 1984–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	147.	221.	347.	449.	491.	590.	731.	942.	1050.
2	107.	133.	204.	268.	345.	383.	504.	608.	704.
5	37.0	57.8	88.0	104.	139.	183.	234.	259.	303.
10	16.6	19.8	34.5	36.2	60.0	84.5	86.0	119.	149.
20	7.40	8.61	13.4	15.9	23.0	27.0	32.1	42.5	56.0
25	6.27	6.88	10.2	12.8	15.5	19.6	20.8	29.6	38.6
30	4.91	5.68	9.20	9.94	13.0	16.0	16.2	22.1	30.7
40	3.13	3.54	6.18	7.00	8.32	11.0	11.0	14.0	17.8
50	2.20	2.44	3.22	4.95	6.60	7.76	8.81	11.0	13.0
60	1.73	1.86	2.32	3.33	4.38	5.41	6.12	8.72	9.85
70	1.29	1.55	1.88	2.36	3.20	4.04	4.34	7.18	7.72
75	1.19	1.40	1.70	1.99	2.80	3.28	3.76	6.57	6.81
80	1.03	1.20	1.44	1.70	2.40	2.90	3.28	5.79	5.98
90	0.77	0.88	1.10	1.28	1.80	2.12	2.54	4.02	4.44
95	0.56	0.68	0.93	1.15	1.40	1.90	2.15	3.03	3.63
98	0.39	0.47	0.78	1.00	1.13	1.53	1.93	2.44	3.27
99	0.35	0.43	0.72	0.92	1.10	1.37	1.66	2.12	2.95

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	106.	138.	166.	192.	289.	333.	364.	428.	474.
2	65.3	90.1	125.	167.	207.	256.	323.	378.	419.
5	47.3	67.5	110.	128.	154.	189.	198.	262.	276.
10	26.6	34.9	48.1	75.9	90.3	109.	126.	186.	206.
20	8.89	11.7	17.7	26.1	35.6	51.5	70.0	76.0	98.9
25	7.13	8.30	15.1	21.0	28.4	38.3	46.5	60.2	79.4
30	5.95	6.61	12.5	14.0	21.1	28.4	33.3	52.1	65.9
40	3.20	3.56	7.47	8.89	12.8	16.8	17.7	29.1	34.7
50	2.32	2.53	4.12	5.66	9.13	10.8	11.3	16.3	22.0
60	1.83	1.93	2.56	3.72	4.91	7.06	8.47	12.8	17.6
70	1.38	1.62	2.03	2.50	3.43	4.56	5.33	9.63	12.4
75	1.24	1.52	1.74	2.16	2.93	3.87	4.44	7.84	9.87
80	1.05	1.28	1.53	1.82	2.54	3.12	3.63	6.86	7.96
90	0.84	0.92	1.17	1.37	1.83	2.25	2.70	4.76	5.17
95	0.60	0.74	0.96	1.19	1.53	1.95	2.19	3.55	4.14
98	0.47	0.64	0.84	1.12	1.21	1.79	2.10	2.63	3.34
99	0.43	0.57	0.81	1.04	1.16	1.62	1.83	2.35	3.20

04198000 Sandusky River near Fremont, Ohio

Years analyzed = 81
Climatic year range = 1924–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	2670.	4490.	6220.	7320.	10900.	14600.	16800.	20000.	22300.
2	1780.	3270.	4350.	5730.	8240.	10800.	13600.	15300.	16400.
5	912.	1670.	2280.	3290.	5060.	6840.	7920.	9900.	11000.
10	650.	883.	1170.	1510.	2500.	4080.	5040.	6030.	7090.
20	283.	321.	476.	634.	1150.	1970.	2600.	2970.	3430.
25	163.	253.	343.	447.	890.	1460.	1980.	2250.	2420.
30	121.	209.	258.	358.	680.	1100.	1460.	1630.	1860.
40	69.3	101.	150.	201.	437.	684.	874.	1010.	1210.
50	48.6	65.7	81.6	120.	286.	477.	564.	706.	825.
60	36.6	45.9	59.4	85.8	199.	347.	396.	506.	637.
70	28.1	37.0	43.4	59.5	121.	229.	298.	368.	486.
75	24.6	33.5	40.2	47.8	86.0	181.	256.	307.	439.
80	21.6	28.6	33.0	40.0	71.2	140.	212.	265.	404.
90	12.6	21.2	24.0	28.0	46.0	78.7	118.	198.	269.
95	9.94	13.1	17.1	22.9	39.3	66.2	88.8	132.	193.
98	7.32	10.2	13.7	19.4	33.3	55.6	63.9	93.5	157.
99	6.20	10.1	12.4	17.1	30.0	49.5	59.1	89.2	140.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1710.	2970.	4240.	5230.	7710.	10900.	12700.	14400.	17800.
2	1580.	2290.	3280.	4230.	6110.	8280.	10200.	12000.	13400.
5	782.	1790.	2320.	3050.	4630.	6150.	7210.	8760.	9180.
10	560.	841.	1140.	1730.	2820.	4150.	4800.	5570.	6500.
20	280.	331.	561.	755.	1390.	2350.	3000.	3570.	3940.
25	146.	252.	376.	548.	1080.	1830.	2520.	2890.	3200.
30	118.	221.	296.	413.	816.	1460.	1910.	2340.	2610.
40	67.7	122.	158.	220.	518.	845.	1240.	1460.	1530.
50	49.6	61.9	83.8	132.	314.	588.	755.	891.	1080.
60	38.6	48.0	58.6	92.5	217.	403.	481.	640.	821.
70	31.1	39.5	43.6	60.7	132.	261.	349.	462.	624.
75	25.7	35.4	40.0	50.4	97.9	210.	304.	401.	545.
80	22.5	31.0	34.2	42.6	77.3	170.	245.	321.	476.
90	12.9	21.9	24.6	28.9	49.7	87.3	134.	221.	354.
95	11.0	15.8	18.1	24.4	40.6	69.4	97.1	138.	239.
98	7.62	11.3	14.6	22.1	36.3	59.4	72.7	109.	179.
99	7.00	10.9	13.3	20.8	33.9	53.7	69.4	97.9	162.

04199000 Huron River at Milan, Ohio

Years analyzed = 52
Climatic year range = 1950–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1340.	1460.	1990.	2890.	4100.	5610.	6620.	7620.	8540.
2	831.	1170.	1400.	1740.	2780.	3960.	4430.	5330.	6110.
5	503.	513.	618.	808.	1390.	1990.	2280.	2920.	3490.
10	212.	234.	307.	430.	677.	1070.	1310.	1580.	1630.
20	69.5	128.	151.	201.	334.	527.	624.	797.	845.
25	49.3	98.2	122.	144.	258.	424.	507.	627.	656.
30	34.6	82.5	92.6	116.	201.	341.	403.	486.	503.
40	20.8	49.6	55.7	71.4	129.	242.	271.	326.	364.
50	14.8	29.0	35.5	45.6	90.0	163.	190.	237.	257.
60	12.5	20.6	22.6	33.0	58.5	113.	151.	172.	180.
70	10.2	15.8	19.0	24.9	39.5	72.7	86.0	125.	141.
75	9.25	13.3	16.8	21.3	33.5	55.8	66.0	106.	126.
80	7.99	11.7	15.0	17.1	28.0	47.5	58.2	93.0	110.
90	5.64	7.90	9.60	11.6	18.5	34.2	39.9	65.1	65.6
95	5.02	5.56	6.55	9.02	15.0	25.2	33.8	43.7	50.1
98	3.65	4.50	5.11	7.16	12.5	21.4	28.7	31.9	40.8
99	3.18	4.04	4.49	6.30	11.0	20.0	24.7	29.2	37.2

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	952.	1190.	1400.	1710.	2340.	3190.	3980.	4260.	6450.
2	782.	890.	1060.	1400.	1930.	2700.	3390.	3530.	3810.
5	478.	509.	687.	1010.	1340.	1880.	2250.	2460.	2630.
10	301.	331.	354.	495.	888.	1300.	1510.	1750.	2020.
20	66.1	139.	174.	242.	433.	700.	864.	1010.	1260.
25	46.9	100.	136.	187.	335.	541.	711.	856.	962.
30	36.2	88.5	106.	138.	259.	462.	567.	660.	728.
40	21.1	59.0	66.8	83.6	167.	332.	402.	464.	544.
50	14.8	30.0	38.0	52.0	112.	207.	273.	337.	368.
60	13.1	21.6	26.4	38.6	68.3	150.	185.	233.	258.
70	10.5	15.8	20.5	25.7	47.0	93.4	134.	164.	202.
75	9.36	14.0	18.6	22.1	37.7	68.4	87.2	142.	180.
80	8.20	12.8	15.7	18.1	31.0	53.5	70.4	124.	149.
90	5.84	8.65	10.3	12.0	21.0	38.7	46.3	77.3	95.7
95	5.39	5.79	7.28	9.60	16.2	30.3	38.0	52.4	61.1
98	4.02	4.66	5.75	8.58	12.9	25.5	34.3	40.2	48.3
99	3.88	4.49	5.11	7.57	12.4	23.3	30.0	34.9	47.2

04199500 Vermilion River near Vermilion, Ohio

Years analyzed = 39
Climatic year range = 1950–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1500.	2240.	2410.	2620.	3280.	3610.	4470.	5580.	7650.
2	763.	1250.	1580.	1890.	2230.	2490.	2830.	4350.	5740.
5	320.	520.	722.	893.	1240.	1310.	1710.	2250.	2710.
10	168.	254.	312.	495.	582.	860.	1020.	1150.	1220.
20	83.6	117.	145.	208.	269.	360.	411.	532.	625.
25	57.5	94.0	104.	151.	200.	264.	309.	421.	455.
30	45.2	65.2	74.0	112.	153.	213.	234.	341.	361.
40	22.6	29.2	47.6	60.2	98.8	130.	152.	202.	254.
50	12.0	17.0	29.0	39.0	62.5	95.0	111.	137.	170.
60	8.00	8.04	14.4	23.0	39.0	63.0	76.4	101.	120.
70	3.30	4.88	8.21	15.0	22.0	41.0	46.8	60.6	72.8
75	2.55	3.85	5.55	10.0	15.5	28.5	33.0	42.5	62.8
80	1.20	3.06	4.30	7.42	11.2	20.0	26.0	35.0	56.0
90	0.07	1.00	2.26	3.00	5.10	11.0	13.6	20.7	28.0
95	0.00	0.30	1.24	1.94	3.40	7.72	9.20	14.0	16.4
98	0.00	0.10	0.70	1.20	2.30	5.50	6.93	9.63	11.0
99	0.00	0.10	0.50	0.95	2.03	4.73	6.16	8.87	9.87

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1190.	1220.	1550.	1640.	1990.	2380.	3090.	3490.	7260.
2	830.	898.	1140.	1330.	1520.	1950.	2260.	3030.	3410.
5	319.	580.	813.	947.	1150.	1210.	1300.	2030.	2510.
10	227.	265.	374.	516.	640.	849.	1040.	1510.	1570.
20	85.3	126.	175.	236.	358.	543.	614.	719.	752.
25	68.3	96.6	132.	180.	254.	411.	481.	567.	613.
30	47.6	65.6	89.6	146.	198.	294.	388.	447.	478.
40	25.6	29.9	50.4	72.6	125.	187.	216.	290.	334.
50	13.9	19.6	31.4	45.4	76.6	114.	145.	195.	208.
60	8.43	9.97	16.4	28.9	48.0	86.6	98.7	132.	139.
70	3.61	4.89	10.2	15.3	25.7	52.9	61.4	78.4	103.
75	2.43	3.97	6.89	10.6	18.4	36.1	42.9	55.3	78.7
80	1.51	3.29	4.94	8.67	13.4	22.7	30.8	42.0	63.7
90	0.19	1.44	2.63	3.64	6.65	14.1	16.4	25.5	45.5
95	0.00	0.39	1.68	2.14	3.84	8.71	11.3	17.4	21.4
98	0.00	0.19	0.99	1.47	2.60	6.67	8.19	12.7	15.3
99	0.00	0.11	0.96	1.11	2.41	5.81	6.97	11.3	13.4

04207200 Tinkers Creek at Bedford, Ohio

Years analyzed = 46
Climatic year range = 1963–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	641.	735.	815.	941.	1140.	1230.	1280.	1430.	1540.
2	557.	573.	634.	718.	800.	918.	957.	1030.	1130.
5	289.	349.	400.	435.	490.	595.	644.	739.	826.
10	189.	208.	253.	279.	307.	381.	436.	475.	519.
20	105.	118.	129.	143.	175.	209.	236.	264.	283.
25	88.0	93.3	99.7	120.	135.	166.	180.	206.	215.
30	70.3	75.9	85.0	96.3	115.	140.	149.	178.	181.
40	42.4	54.6	61.4	68.9	86.8	100.	112.	134.	140.
50	25.4	41.6	48.1	55.1	70.0	77.8	85.0	105.	113.
60	17.7	28.8	38.9	43.0	53.0	61.8	68.4	81.0	90.1
70	14.1	21.5	32.0	35.0	41.0	49.9	53.0	60.6	66.0
75	11.7	18.5	28.8	30.1	35.4	43.0	46.3	52.2	58.2
80	10.3	15.1	24.4	29.0	31.6	37.0	39.7	46.7	49.7
90	8.86	11.0	19.0	21.6	25.0	27.9	30.6	35.0	36.5
95	7.80	10.4	17.0	19.0	22.0	24.9	26.7	29.2	31.0
98	7.20	9.12	14.4	16.1	20.0	22.0	23.0	26.3	27.6
99	6.96	8.76	13.4	15.2	18.8	21.6	22.6	25.3	26.6

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	411.	473.	550.	606.	703.	814.	852.	981.	1070.
2	372.	429.	464.	497.	583.	637.	704.	778.	835.
5	252.	300.	318.	359.	421.	487.	520.	569.	619.
10	174.	210.	241.	264.	306.	355.	403.	424.	464.
20	115.	124.	157.	164.	200.	235.	278.	306.	321.
25	97.9	108.	119.	135.	158.	200.	222.	264.	293.
30	77.8	84.4	99.5	116.	137.	169.	190.	219.	244.
40	46.4	57.6	71.5	86.5	101.	127.	144.	171.	194.
50	28.4	47.2	56.1	65.4	82.0	95.8	105.	135.	143.
60	18.7	35.7	46.4	51.9	63.0	73.5	80.6	106.	114.
70	15.6	26.2	37.2	42.3	49.6	61.6	65.5	81.3	83.2
75	13.9	22.0	33.3	37.7	43.5	54.2	57.5	67.6	71.0
80	12.4	18.8	29.1	33.0	38.6	46.4	52.1	57.6	63.2
90	10.5	14.0	22.9	25.7	29.6	35.7	39.3	44.6	45.9
95	9.25	11.7	18.5	21.9	25.8	30.0	31.1	35.4	36.6
98	7.65	10.7	16.0	18.4	23.5	26.1	28.5	31.3	32.4
99	7.24	9.71	14.9	17.6	21.9	24.0	25.7	28.7	29.8

04211000 Rock Creek near Rock Creek, Ohio

Years analyzed = 24
Climatic year range = 1942–65

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	500.	542.	698.	784.	931.	1160.	1260.	1410.	1490.
2	249.	353.	505.	570.	695.	810.	921.	973.	981.
5	161.	181.	287.	336.	408.	452.	560.	608.	652.
10	74.5	103.	147.	157.	205.	243.	300.	344.	365.
20	26.4	34.1	53.6	61.3	86.9	105.	119.	133.	158.
25	18.3	22.8	36.0	41.6	60.8	73.8	81.0	99.4	116.
30	14.0	14.6	24.2	29.4	42.6	56.0	63.4	76.5	89.0
40	5.28	9.37	12.0	12.5	23.5	35.0	38.2	45.0	50.4
50	2.63	3.20	5.35	6.50	10.3	18.5	21.0	28.0	31.0
60	0.63	1.10	1.30	2.44	4.28	9.98	16.0	18.5	19.0
70	0.00	0.05	0.30	0.95	1.94	2.77	5.80	10.1	11.6
75	0.00	0.00	0.20	0.28	0.93	1.40	4.00	7.18	8.39
80	0.00	0.00	0.00	0.00	0.60	0.85	2.60	4.80	5.57
90	0.00	0.00	0.00	0.00	0.15	0.30	1.00	2.65	3.99
95	0.00	0.00	0.00	0.00	0.00	0.15	0.30	1.71	2.98
98	0.00	0.00	0.00	0.00	0.00	0.02	0.10	1.05	2.34
99	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.68	2.22

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	282.	365.	397.	497.	556.	699.	746.	822.	932.
2	252.	292.	318.	354.	461.	556.	655.	712.	752.
5	146.	185.	236.	254.	337.	399.	425.	501.	565.
10	88.9	108.	189.	204.	237.	268.	305.	351.	386.
20	33.0	44.1	77.4	106.	128.	154.	173.	208.	239.
25	21.9	26.1	51.9	67.5	89.7	123.	126.	164.	208.
30	16.4	17.4	30.5	47.6	61.4	90.7	103.	133.	172.
40	5.68	9.93	15.6	20.2	37.6	54.8	62.0	79.1	103.
50	2.79	3.70	5.34	7.74	19.1	27.2	33.6	41.0	58.6
60	0.62	1.27	1.33	3.06	4.88	12.6	18.7	27.1	32.0
70	0.01	0.15	0.50	1.35	2.01	4.41	9.09	15.5	18.1
75	0.00	0.00	0.20	0.36	1.21	2.11	5.39	9.90	12.1
80	0.00	0.00	0.00	0.09	0.63	1.02	4.21	7.35	8.10
90	0.00	0.00	0.00	0.00	0.24	0.45	1.21	3.75	4.91
95	0.00	0.00	0.00	0.00	0.03	0.21	0.39	2.15	3.89
98	0.00	0.00	0.00	0.00	0.00	0.08	0.19	1.54	2.79
99	0.00	0.00	0.00	0.00	0.00	0.02	0.13	1.06	2.53

04212000 Grand River near Madison, Ohio

Years analyzed = 48
Climatic year range = 1923–73

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	3720.	4300.	4970.	5370.	6250.	6690.	7330.	7740.	8590.
2	2680.	3160.	3660.	4180.	4830.	5190.	5550.	6360.	6780.
5	1450.	1690.	2370.	2630.	3090.	3510.	3630.	4560.	4690.
10	908.	1080.	1320.	1620.	2010.	2300.	2590.	2790.	2890.
20	395.	417.	639.	749.	1010.	1220.	1420.	1600.	1710.
25	242.	317.	398.	516.	673.	932.	1020.	1290.	1330.
30	158.	208.	271.	368.	513.	689.	796.	955.	1010.
40	82.1	109.	144.	200.	295.	388.	459.	580.	625.
50	48.7	59.9	79.8	93.2	173.	252.	294.	393.	432.
60	26.4	27.9	40.0	48.0	73.2	159.	184.	255.	277.
70	13.9	15.0	18.9	24.6	35.9	76.7	103.	134.	187.
75	9.89	12.0	15.8	17.9	25.4	49.3	70.4	108.	146.
80	8.16	9.98	12.0	12.1	19.5	32.0	47.8	80.1	94.8
90	3.26	4.64	6.36	7.52	10.5	16.5	22.8	31.0	43.0
95	1.20	2.10	4.32	4.74	8.30	12.0	14.6	23.1	26.6
98	0.42	1.20	2.14	3.14	6.90	9.40	11.1	17.2	24.2
99	0.17	0.77	1.59	2.60	5.33	9.05	10.0	15.1	22.6

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	2390.	2700.	3180.	3670.	4270.	4770.	5510.	6160.	6360.
2	1990.	2280.	2710.	3040.	3580.	4110.	4320.	5010.	5160.
5	1410.	1710.	2060.	2420.	2670.	3060.	3210.	3820.	3970.
10	948.	1080.	1390.	1740.	2000.	2210.	2390.	2600.	2890.
20	460.	546.	720.	949.	1170.	1330.	1550.	1770.	1950.
25	282.	357.	522.	661.	897.	1100.	1200.	1520.	1620.
30	181.	241.	368.	493.	648.	896.	1010.	1220.	1340.
40	89.8	109.	192.	236.	352.	514.	623.	750.	914.
50	50.7	61.5	86.0	99.8	193.	310.	347.	521.	601.
60	24.9	27.8	43.5	50.6	87.3	190.	212.	350.	376.
70	13.5	15.3	21.6	25.9	38.0	100.	130.	161.	239.
75	10.4	12.1	16.8	19.0	30.0	58.5	74.7	125.	177.
80	8.51	9.62	12.6	13.6	22.0	38.0	59.1	95.5	131.
90	4.17	5.26	6.97	7.78	11.8	18.7	26.2	34.7	47.8
95	1.88	2.98	4.89	5.67	8.88	12.8	16.1	25.2	29.1
98	0.99	1.39	2.67	4.14	7.23	10.5	12.2	21.4	24.8
99	0.36	1.04	2.01	3.44	6.31	9.99	11.3	17.9	23.9

04212100 Grand River near Painesville, Ohio

Years analyzed = 34
Climatic year range = 1975–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	5160.	5600.	6480.	7030.	7950.	9580.	10000.	10300.	10600.
2	3890.	4350.	5270.	5470.	6140.	6900.	7640.	8160.	8880.
5	2350.	2620.	3080.	3580.	3960.	4760.	5190.	5730.	6220.
10	1470.	1730.	1990.	2240.	2690.	3340.	3530.	3940.	4170.
20	822.	914.	1020.	1220.	1410.	1900.	2160.	2350.	2730.
25	603.	699.	786.	970.	1090.	1550.	1750.	1890.	2210.
30	379.	488.	669.	732.	863.	1100.	1390.	1610.	1870.
40	202.	289.	373.	471.	596.	699.	921.	1170.	1320.
50	119.	181.	223.	332.	410.	503.	640.	841.	975.
60	60.4	104.	151.	204.	264.	323.	412.	583.	629.
70	42.3	62.4	89.8	109.	156.	218.	243.	356.	438.
75	30.1	38.3	70.0	78.0	109.	174.	202.	284.	327.
80	22.8	29.6	43.0	56.7	87.7	130.	165.	205.	234.
90	11.7	14.5	25.0	29.0	50.5	73.3	82.4	95.8	115.
95	8.71	10.4	17.0	20.3	35.1	44.3	51.6	67.7	76.5
98	6.33	7.70	13.0	15.3	26.2	35.7	38.3	51.6	58.2
99	5.04	7.23	11.7	13.7	22.8	30.6	32.7	47.5	53.9

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	3000.	3550.	4230.	4860.	6620.	7310.	7540.	7920.	8740.
2	2810.	3020.	3960.	4460.	4910.	5710.	6130.	6590.	7120.
5	2180.	2410.	2830.	3130.	3340.	3770.	4380.	4770.	5400.
10	1350.	1840.	2040.	2250.	2580.	3070.	3340.	3570.	3950.
20	862.	960.	1170.	1410.	1630.	2040.	2140.	2600.	3040.
25	698.	761.	879.	1100.	1280.	1670.	1820.	2260.	2600.
30	396.	598.	762.	859.	1070.	1290.	1650.	1810.	2240.
40	201.	365.	435.	562.	752.	880.	1150.	1370.	1700.
50	116.	195.	266.	400.	482.	586.	842.	1050.	1190.
60	57.3	113.	176.	235.	321.	406.	470.	779.	877.
70	44.1	70.0	101.	111.	193.	267.	297.	517.	639.
75	36.5	44.2	82.0	90.2	135.	218.	257.	422.	504.
80	24.5	31.8	49.0	67.5	99.6	168.	223.	287.	401.
90	13.7	17.1	26.6	32.3	57.2	84.0	114.	136.	154.
95	10.3	12.0	17.6	22.7	40.9	54.5	65.6	76.2	90.1
98	7.76	9.46	14.6	18.7	31.1	45.1	54.6	58.1	71.9
99	6.35	7.71	13.1	15.2	27.6	36.9	41.3	52.8	68.3

04212500 Ashtabula River near Ashtabula, Ohio

Years analyzed = 47
Climatic year range = 1925–78

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	960.	1110.	1340.	1470.	1690.	1930.	2130.	2600.	2670.
2	710.	756.	940.	1110.	1250.	1440.	1540.	1690.	1820.
5	416.	447.	532.	617.	743.	857.	936.	1010.	1080.
10	207.	237.	270.	350.	395.	481.	501.	551.	643.
20	82.0	103.	132.	147.	196.	234.	258.	288.	335.
25	60.8	64.5	90.5	106.	135.	171.	192.	217.	237.
30	46.1	49.6	67.1	78.2	110.	132.	144.	170.	191.
40	22.0	30.8	36.8	45.2	70.0	84.2	97.0	119.	125.
50	12.0	13.0	18.2	28.0	43.0	55.0	65.0	76.4	87.6
60	4.28	4.78	6.75	8.24	21.0	32.4	42.4	48.2	56.0
70	0.95	1.48	2.00	3.12	9.00	16.5	20.4	31.2	37.3
75	0.18	0.62	1.16	1.50	4.00	10.0	13.0	24.0	26.8
80	0.04	0.28	0.47	0.80	2.04	6.66	8.08	17.0	19.8
90	0.00	0.00	0.00	0.12	0.50	1.62	2.72	6.52	8.14
95	0.00	0.00	0.00	0.00	0.20	0.86	1.56	3.50	4.73
98	0.00	0.00	0.00	0.00	0.00	0.49	1.04	2.55	3.44
99	0.00	0.00	0.00	0.00	0.00	0.41	0.76	1.89	2.80

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	536.	668.	736.	834.	1080.	1230.	1350.	1500.	1550.
2	469.	566.	657.	685.	813.	930.	994.	1130.	1210.
5	335.	408.	482.	541.	609.	682.	729.	870.	892.
10	243.	285.	322.	398.	432.	488.	528.	618.	632.
20	120.	129.	177.	219.	259.	317.	354.	399.	443.
25	82.9	98.7	140.	164.	212.	257.	281.	314.	351.
30	50.3	59.3	105.	123.	160.	198.	238.	268.	287.
40	25.7	34.6	51.3	63.0	92.9	111.	147.	195.	205.
50	14.4	15.4	23.4	33.9	53.4	67.5	84.4	115.	124.
60	4.48	5.12	7.42	9.19	26.8	41.9	51.9	76.6	80.9
70	0.96	1.54	2.43	3.25	10.2	20.3	31.4	42.9	54.3
75	0.31	0.77	1.37	2.02	4.73	14.1	21.0	32.9	43.3
80	0.10	0.32	0.64	0.98	2.66	9.62	13.0	24.1	29.8
90	0.00	0.00	0.06	0.20	0.61	1.88	3.31	8.71	10.0
95	0.00	0.00	0.00	0.03	0.35	0.89	1.91	4.20	6.28
98	0.00	0.00	0.00	0.00	0.06	0.67	1.27	3.58	4.12
99	0.00	0.00	0.00	0.00	0.01	0.57	1.11	2.44	3.61

04213000 Conneaut Creek at Conneaut, Ohio

Years analyzed = 71
Climatic year range = 1923–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1030.	1530.	1680.	2050.	2670.	3350.	3680.	3940.	5390.
2	859.	1180.	1310.	1440.	1950.	2530.	2640.	2790.	3510.
5	580.	691.	737.	902.	1200.	1470.	1680.	1820.	2030.
10	358.	381.	427.	526.	713.	892.	984.	1180.	1400.
20	182.	190.	204.	247.	344.	471.	554.	608.	691.
25	133.	154.	163.	198.	273.	370.	444.	488.	535.
30	97.5	120.	126.	151.	220.	302.	351.	406.	452.
40	56.9	68.3	78.3	100.	150.	205.	229.	286.	314.
50	33.7	35.0	45.5	66.2	105.	142.	165.	198.	224.
60	15.0	17.6	22.2	38.0	69.0	107.	119.	140.	157.
70	7.27	9.01	14.2	18.0	36.8	72.2	89.2	102.	115.
75	5.64	7.30	10.2	14.3	28.8	62.0	70.0	80.0	92.1
80	4.50	5.64	7.64	11.0	21.0	49.8	55.8	59.4	67.9
90	2.41	3.38	4.66	6.98	13.6	29.0	33.7	39.6	43.0
95	1.43	2.42	3.45	5.08	11.0	19.6	24.9	30.4	39.3
98	0.81	1.62	2.66	3.68	7.56	15.2	18.3	25.5	35.1
99	0.53	1.46	2.28	3.25	7.00	13.0	17.8	23.2	34.0

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	648.	835.	1150.	1240.	1750.	2290.	2640.	2920.	3380.
2	624.	745.	811.	1040.	1350.	1570.	1780.	1990.	2520.
5	546.	600.	673.	807.	972.	1200.	1310.	1390.	1950.
10	389.	416.	452.	560.	724.	884.	1010.	1080.	1120.
20	204.	258.	279.	318.	463.	588.	664.	742.	808.
25	140.	187.	220.	259.	373.	487.	585.	637.	740.
30	105.	149.	158.	202.	301.	421.	478.	544.	657.
40	58.3	77.2	89.6	120.	187.	283.	344.	405.	503.
50	30.9	37.3	48.8	74.8	129.	194.	243.	294.	362.
60	13.3	17.2	21.0	39.0	80.7	133.	165.	202.	260.
70	7.90	9.80	14.0	18.9	42.4	92.9	106.	136.	161.
75	6.15	7.91	11.2	15.9	33.1	80.7	91.8	114.	126.
80	4.93	5.98	8.50	11.0	24.1	62.2	76.0	80.9	100.
90	2.94	4.09	5.36	7.23	15.7	33.5	39.6	44.4	49.8
95	2.10	2.80	3.90	5.66	12.3	21.8	28.9	37.9	42.5
98	1.54	2.04	3.24	4.30	9.04	17.9	24.0	30.2	39.2
99	0.97	1.89	2.65	3.91	8.24	15.3	21.2	26.3	37.6

Appendix 4. Annual Seasonal-Period Flow-Duration Results for Sites with Streamflows that have No or Minimal Regulation

03089500 Mill Creek near Berlin Center, Ohio

Years analyzed = 30
Climatic year range = 1941–70

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	2.24	2.80	8.78	10.0	22.5	46.8	83.8	141.	373.
2	1.51	1.92	5.62	7.84	16.0	30.8	59.9	122.	325.
5	1.08	1.30	2.58	4.22	6.97	14.2	23.7	46.0	76.8
10	0.94	1.00	1.52	2.60	3.87	7.55	13.0	28.7	31.1
20	0.66	0.81	1.02	1.76	2.48	3.38	5.62	15.2	18.9
25	0.60	0.80	0.90	1.60	2.05	2.70	4.34	11.4	16.0
30	0.56	0.68	0.72	1.39	1.80	2.27	3.77	9.09	12.4
40	0.46	0.50	0.64	0.93	1.32	1.68	2.38	4.88	7.56
50	0.35	0.40	0.60	0.73	1.15	1.37	1.84	3.42	5.19
60	0.30	0.30	0.42	0.59	0.90	1.16	1.38	2.25	3.29
70	0.20	0.30	0.31	0.43	0.60	0.81	1.05	1.38	2.32
75	0.16	0.20	0.30	0.40	0.55	0.70	0.98	1.29	2.25
80	0.16	0.20	0.21	0.40	0.50	0.60	0.89	1.28	1.85
90	0.10	0.10	0.20	0.29	0.35	0.41	0.58	0.88	1.47
95	0.06	0.10	0.11	0.20	0.30	0.40	0.50	0.77	1.31
98	0.00	0.00	0.10	0.18	0.28	0.30	0.40	0.76	1.26
99	0.00	0.00	0.10	0.10	0.20	0.30	0.40	0.68	1.21

03092000 Kale Creek near Pricetown, Ohio

Years analyzed = 52
Climatic year range = 1941–92

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	0.52	0.93	1.61	11.0	114.	326.	446.	689.	789.
2	0.43	0.85	1.49	8.98	70.7	202.	328.	512.	639.
5	0.35	0.58	0.98	4.52	29.5	103.	120.	185.	228.
10	0.31	0.40	0.78	2.46	11.3	39.7	70.0	96.3	140.
20	0.30	0.36	0.47	1.22	5.16	16.4	27.6	42.6	58.7
25	0.25	0.30	0.40	1.00	3.90	12.4	19.0	32.1	48.2
30	0.20	0.27	0.36	0.76	2.91	8.88	16.3	26.2	34.8
40	0.10	0.19	0.24	0.50	1.91	5.12	11.1	14.9	22.6
50	0.05	0.13	0.20	0.37	1.30	3.88	8.50	11.0	16.8
60	0.04	0.10	0.12	0.26	0.88	3.31	6.71	9.28	13.6
70	0.00	0.09	0.10	0.20	0.54	2.04	4.10	7.50	10.8
75	0.00	0.07	0.10	0.20	0.40	1.74	3.34	6.98	9.76
80	0.00	0.06	0.10	0.18	0.37	1.25	2.55	6.18	7.88
90	0.00	0.01	0.06	0.10	0.22	0.76	1.82	3.45	5.87
95	0.00	0.00	0.01	0.06	0.20	0.61	1.47	2.14	5.81
98	0.00	0.00	0.00	0.04	0.17	0.59	1.30	1.78	5.47
99	0.00	0.00	0.00	0.04	0.14	0.57	1.27	1.67	4.43

03092090 West Branch Mahoning River near Ravenna, Ohio

Years analyzed = 28
Climatic year range = 1965–92

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	17.6	24.7	58.0	89.1	158.	255.	330.	540.	1180.
2	17.2	22.3	42.0	69.7	88.3	208.	225.	355.	465.
5	12.6	16.6	23.9	30.4	51.7	98.6	143.	176.	212.
10	9.15	11.4	15.0	18.6	33.0	52.9	68.2	98.6	135.
20	5.09	6.97	8.97	12.0	17.0	26.3	33.1	42.4	52.7
25	4.24	6.18	7.42	11.7	14.0	20.6	24.2	27.6	38.5
30	3.90	5.49	6.08	8.82	11.0	16.4	18.1	22.7	29.0
40	2.64	3.64	4.36	5.45	8.79	10.4	15.0	16.9	24.2
50	1.36	2.79	3.08	4.36	6.80	7.56	9.60	14.4	19.1
60	1.05	2.05	2.60	3.57	4.63	5.83	7.35	12.2	15.6
70	0.78	1.49	2.21	2.73	3.64	4.40	5.74	10.6	13.2
75	0.71	1.39	1.94	2.37	3.20	3.81	5.10	9.73	12.2
80	0.64	1.33	1.63	2.15	2.77	3.35	4.76	8.94	11.4
90	0.49	0.98	1.22	1.40	2.05	2.70	4.16	6.02	9.25
95	0.45	0.95	1.00	1.18	1.60	2.10	2.96	4.10	4.82
98	0.41	0.82	0.88	0.99	1.39	1.93	2.54	3.32	4.62
99	0.39	0.74	0.83	0.93	1.30	1.93	2.50	3.08	4.40

03102950 Pymatuning Creek at Kinsman, Ohio

Years analyzed = 29
Climatic year range = 1965–93

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	35.0	107.	146.	260.	443.	603.	723.	1070.	2280.
2	34.6	75.1	144.	240.	424.	559.	664.	923.	1730.
5	29.5	52.4	138.	197.	347.	464.	506.	682.	782.
10	25.3	44.8	93.2	135.	256.	290.	338.	445.	555.
20	19.0	33.2	48.2	72.2	101.	184.	208.	272.	393.
25	17.5	29.0	37.0	44.0	88.0	144.	169.	207.	282.
30	16.0	23.4	27.0	33.8	69.8	111.	150.	196.	265.
40	9.25	12.2	16.4	23.0	44.4	78.2	107.	139.	203.
50	5.95	7.80	11.0	14.0	24.0	41.0	83.0	93.0	157.
60	5.03	6.48	8.80	11.0	16.8	33.0	56.0	64.8	129.
70	4.28	5.20	6.22	7.90	11.0	28.0	39.0	56.0	103.
75	3.60	4.50	5.10	5.70	9.60	20.0	37.0	50.0	87.0
80	3.17	3.74	4.80	5.20	8.48	16.0	30.6	45.4	73.9
90	1.11	2.00	2.56	3.26	5.72	11.0	24.0	36.0	50.9
95	0.66	1.36	1.68	2.66	4.40	8.06	17.2	24.0	25.4
98	0.46	0.99	1.38	1.85	3.20	6.78	11.6	19.5	22.2
99	0.39	0.94	1.10	1.60	3.20	5.70	9.80	17.0	20.5

03109500 Little Beaver Creek near East Liverpool, Ohio

Years analyzed = 94
Climatic year range = 1915–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	121.	157.	291.	394.	882.	2480.	3950.	6400.	14800.
2	97.7	138.	200.	334.	728.	2200.	3490.	4950.	8440.
5	68.7	87.8	140.	206.	449.	1320.	2140.	2880.	4040.
10	53.1	69.8	112.	159.	275.	803.	1340.	1460.	2670.
20	44.9	54.2	82.8	108.	186.	408.	787.	855.	1300.
25	42.5	50.3	71.5	94.0	160.	354.	638.	778.	1070.
30	39.7	47.3	66.1	82.4	142.	278.	551.	666.	958.
40	37.5	39.2	52.8	65.2	113.	220.	395.	512.	734.
50	33.7	35.8	45.5	59.0	96.5	199.	290.	416.	587.
60	28.8	33.0	39.9	49.0	80.4	159.	226.	379.	510.
70	26.7	31.6	34.3	43.6	68.5	129.	191.	321.	440.
75	25.1	29.8	32.5	42.0	58.5	112.	168.	310.	422.
80	24.0	29.1	31.1	38.4	53.2	102.	148.	299.	384.
90	21.1	24.8	26.6	32.0	46.5	82.8	132.	267.	337.
95	19.2	22.5	24.0	29.2	40.8	72.0	128.	199.	293.
98	18.2	21.4	22.0	27.0	38.2	64.5	122.	175.	254.
99	17.4	19.8	22.0	27.0	36.0	61.0	105.	144.	249.

03110000 Yellow Creek near Hammondsville, Ohio

Years analyzed = 68
Climatic year range = 1941–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	20.0	39.5	71.1	135.	313.	789.	1050.	1960.	5840.
2	16.8	35.8	62.6	97.8	243.	580.	798.	1290.	4290.
5	14.1	24.8	42.5	66.1	143.	368.	530.	706.	1160.
10	9.73	17.0	32.2	44.4	92.2	251.	292.	475.	839.
20	7.13	11.8	22.9	27.2	58.1	163.	197.	274.	320.
25	6.61	9.98	19.9	24.0	49.5	128.	171.	225.	286.
30	5.71	8.87	15.4	21.4	42.5	107.	140.	195.	241.
40	4.91	6.57	10.2	15.8	31.7	69.4	107.	164.	196.
50	4.20	5.45	8.37	12.8	26.0	56.4	93.8	131.	145.
60	3.50	4.64	6.14	9.30	19.9	38.4	74.2	105.	124.
70	2.38	4.03	4.76	7.07	15.8	31.4	59.9	88.9	106.
75	2.04	3.75	4.17	6.62	13.0	27.2	55.2	81.3	101.
80	1.71	3.14	3.70	5.18	12.0	25.2	48.0	74.2	89.5
90	1.13	2.09	2.48	4.26	9.03	20.3	31.0	59.6	69.3
95	0.88	1.81	1.99	3.48	7.67	16.2	28.0	49.8	62.7
98	0.88	1.48	1.88	2.92	6.65	13.9	26.1	47.9	59.4
99	0.88	1.44	1.80	2.68	6.35	13.2	26.1	46.9	57.5

03110000 Yellow Creek at Hammondsville, Ohio

Years analyzed = 20
Climatic year range = 1915–34

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	17.3	65.7	146.	181.	314.	1090.	1860.	4690.	7130.
2	13.3	64.4	98.3	153.	246.	789.	1660.	2600.	4220.
5	10.2	32.9	51.2	65.8	129.	404.	624.	1360.	2070.
10	6.75	20.4	41.0	49.2	86.1	261.	327.	689.	1010.
20	4.35	11.9	26.8	30.3	54.1	91.8	197.	427.	592.
25	3.63	9.20	21.6	24.6	38.5	76.3	94.0	332.	528.
30	3.63	8.98	18.9	21.2	31.7	64.7	89.0	288.	393.
40	3.01	7.13	12.4	15.9	24.7	52.5	73.6	173.	321.
50	1.83	2.57	9.14	12.5	22.0	35.6	67.8	124.	269.
60	1.57	2.12	7.19	9.26	17.9	26.4	57.2	82.0	224.
70	1.17	1.59	4.45	7.47	14.0	20.0	48.7	60.4	196.
75	1.01	1.39	4.30	6.52	13.0	18.0	40.4	57.2	167.
80	0.81	1.20	4.24	6.00	12.2	16.3	35.4	55.0	167.
90	0.54	1.01	3.25	5.24	10.1	13.7	23.6	52.1	138.
95	0.42	0.83	3.06	3.98	9.15	12.0	20.5	48.5	116.
98	0.22	0.63	2.00	2.49	7.13	10.5	17.4	44.7	84.6
99	0.22	0.55	1.28	2.03	7.00	10.0	16.6	42.0	45.8

03111500 Short Creek near Dillonvale, Ohio

Years analyzed = 68
Climatic year range = 1941–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	98	95	90	80	50	20	10	5	2
1	48.9	67.5	94.3	118.	285.	468.	972.	1870.	3230.
2	37.9	54.7	73.3	97.2	177.	339.	635.	1580.	2790.
5	25.6	38.2	56.9	64.0	114.	225.	359.	555.	994.
10	19.6	31.3	39.2	46.1	82.3	159.	235.	284.	499.
20	16.9	24.8	27.0	32.8	55.9	104.	170.	200.	289.
25	16.5	23.0	25.0	30.0	51.0	93.4	150.	187.	233.
30	15.1	20.4	23.0	27.3	47.8	82.8	134.	149.	214.
40	14.1	18.6	20.9	24.0	40.6	71.2	111.	130.	184.
50	13.4	17.5	19.0	22.0	35.5	63.0	100.	106.	148.
60	12.8	14.9	18.0	20.0	31.8	53.2	80.2	96.9	132.
70	12.0	13.9	16.9	18.0	29.5	47.1	69.7	88.6	120.
75	11.0	12.4	16.0	18.0	28.0	43.4	66.0	84.0	116.
80	9.35	11.9	14.9	16.8	25.7	40.5	59.5	81.0	113.
90	6.25	9.96	12.9	14.0	22.5	35.8	52.8	73.5	106.
95	4.57	8.10	11.5	13.0	21.0	32.8	49.7	71.1	97.2
98	3.64	7.47	9.75	12.7	19.3	31.0	47.5	64.2	82.9
99	3.26	6.35	9.75	12.0	18.5	30.8	45.1	62.2	79.5

03111548 Wheeling Creek below Blaine, Ohio

Years analyzed = 25
Climatic year range = 1983–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	54.1	90.6	142.	194.	243.	475.	554.	1550.	3590.
2	48.4	56.3	107.	136.	202.	313.	447.	901.	2420.
5	39.4	43.6	76.3	83.8	131.	205.	234.	535.	935.
10	33.4	34.9	41.8	60.7	98.6	130.	168.	281.	429.
20	24.9	28.3	31.7	44.4	68.0	85.9	106.	142.	224.
25	23.6	26.2	28.6	40.4	64.0	77.6	92.2	105.	180.
30	22.9	24.6	27.5	38.1	58.8	68.4	73.8	96.4	164.
40	21.3	22.6	23.6	26.8	44.2	49.5	64.2	84.1	142.
50	18.6	20.0	22.0	24.8	36.0	43.4	59.4	73.6	123.
60	15.5	19.0	21.0	23.6	29.6	38.0	53.0	68.6	106.
70	13.9	16.6	18.4	20.8	26.0	35.8	44.9	63.0	94.8
75	11.9	14.6	18.4	20.0	24.0	34.6	40.4	61.2	92.1
80	10.9	14.0	15.6	18.8	24.0	31.4	37.3	57.6	89.9
90	8.01	10.7	14.4	17.8	20.0	26.6	34.4	50.3	78.6
95	7.74	10.6	13.4	16.6	20.0	24.4	31.4	36.6	62.2
98	7.33	9.98	12.9	13.8	18.8	23.4	30.7	35.2	56.6
99	7.33	9.84	12.2	13.8	18.0	23.4	30.0	35.2	55.4

03114000 Captina Creek at Armstrongs Mills, Ohio

Years analyzed = 54
Climatic year range = 1926–2002

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	98	95	90	80	50	20	10	5	2
1	15.0	66.3	88.0	197.	423.	1340.	2050.	3830.	4950.
2	6.58	38.9	64.7	117.	333.	689.	1180.	2610.	4610.
5	3.46	18.8	40.9	60.8	167.	417.	615.	1260.	1980.
10	2.34	12.6	22.8	38.0	88.5	253.	361.	543.	720.
20	1.46	5.22	11.8	21.6	51.8	124.	206.	287.	395.
25	1.18	4.90	9.55	18.0	42.5	102.	153.	239.	349.
30	1.15	4.15	8.55	15.0	35.8	80.0	128.	204.	278.
40	0.71	2.66	4.65	9.84	21.3	47.0	85.2	141.	199.
50	0.42	1.20	2.80	6.90	16.5	32.0	65.5	124.	156.
60	0.11	0.65	1.94	5.24	11.4	24.0	56.4	105.	125.
70	0.10	0.33	1.44	3.40	7.82	19.0	46.1	90.5	109.
75	0.10	0.25	1.21	2.30	6.85	17.0	42.5	83.5	101.
80	0.01	0.10	0.64	1.64	6.04	16.4	39.0	76.3	89.8
90	0.00	0.07	0.21	0.92	4.59	11.0	29.3	63.1	70.5
95	0.00	0.00	0.12	0.37	3.64	8.60	24.0	46.0	59.0
98	0.00	0.00	0.00	0.28	2.72	7.44	18.7	38.0	54.4
99	0.00	0.00	0.00	0.28	2.15	7.10	18.0	37.8	52.9

03115400 Little Muskingum River at Bloomfield, Ohio

Years analyzed = 37
Climatic year range = 1958–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	45.1	84.0	339.	403.	900.	1280.	2190.	5110.	8720.
2	42.2	71.1	210.	330.	655.	940.	1690.	4550.	5760.
5	20.6	44.5	103.	146.	262.	493.	932.	1290.	2260.
10	15.1	25.3	32.5	79.8	140.	266.	462.	604.	945.
20	4.67	6.07	13.2	36.4	68.2	130.	227.	345.	563.
25	3.26	4.68	9.84	28.8	60.0	103.	191.	281.	420.
30	2.65	4.16	8.20	20.0	47.4	79.8	156.	226.	339.
40	1.25	2.14	5.73	12.0	28.6	49.7	106.	160.	246.
50	0.95	1.74	4.76	6.88	20.0	33.6	63.6	118.	196.
60	0.67	1.00	3.13	4.94	14.8	21.5	30.2	90.7	143.
70	0.32	0.72	1.99	3.08	9.64	14.4	20.0	65.3	114.
75	0.30	0.60	1.32	2.64	8.20	11.8	19.2	53.4	102.
80	0.29	0.48	0.96	1.95	5.22	9.89	18.4	48.3	93.1
90	0.18	0.31	0.60	1.15	3.50	7.02	13.0	37.9	64.0
95	0.08	0.11	0.39	0.81	2.60	4.77	7.16	31.8	46.0
98	0.03	0.09	0.32	0.65	1.75	3.78	5.98	27.0	37.3
99	0.02	0.09	0.31	0.54	1.50	3.06	5.50	25.8	36.2

03117500 Sandy Creek at Waynesburg, Ohio

Years analyzed = 70
Climatic year range = 1939–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	36.9	45.8	95.7	234.	459.	980.	1720.	2590.	4460.
2	34.8	40.5	86.7	168.	435.	819.	1470.	2130.	3900.
5	27.8	38.1	61.6	110.	238.	652.	952.	1400.	2210.
10	24.6	36.5	44.0	79.6	166.	409.	617.	888.	1240.
20	22.6	33.8	38.0	53.0	112.	257.	408.	553.	679.
25	22.2	31.7	36.0	50.2	102.	228.	355.	433.	513.
30	21.8	31.1	35.0	44.2	93.7	206.	309.	391.	466.
40	21.2	27.1	31.0	37.6	79.5	160.	229.	332.	353.
50	20.4	25.6	28.0	34.6	68.0	130.	186.	272.	303.
60	19.0	24.3	26.1	33.0	54.0	108.	167.	234.	264.
70	17.1	22.8	24.6	30.0	46.3	82.4	131.	183.	235.
75	15.9	21.0	23.1	28.0	44.0	78.6	119.	164.	226.
80	15.5	20.7	23.1	26.7	42.0	72.6	116.	154.	213.
90	14.6	19.2	21.0	24.0	36.2	61.4	77.8	120.	188.
95	13.7	17.0	19.0	21.9	34.5	54.9	71.9	116.	152.
98	12.4	16.0	19.0	21.1	33.3	51.8	70.6	109.	138.
99	12.0	15.6	18.0	20.4	32.5	50.8	68.5	108.	134.

03119000 Sandy Creek at Sandyville, Ohio

Years analyzed = 24
Climatic year range = 1923–46

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	132.	238.	457.	597.	914.	1720.	2030.	3170.	4500.
2	130.	225.	420.	445.	767.	1580.	1940.	3040.	4040.
5	115.	141.	230.	332.	401.	743.	1180.	1480.	2460.
10	103.	122.	165.	236.	295.	490.	682.	984.	1720.
20	96.2	105.	142.	150.	206.	301.	380.	629.	1040.
25	93.8	102.	128.	141.	193.	244.	282.	540.	893.
30	92.2	100.	123.	134.	180.	215.	252.	488.	840.
40	88.8	93.2	113.	122.	151.	187.	213.	405.	660.
50	86.5	90.5	103.	116.	131.	161.	200.	330.	572.
60	78.0	84.0	95.0	106.	123.	153.	189.	252.	482.
70	72.5	80.6	88.0	99.4	114.	143.	162.	196.	415.
75	69.8	79.0	86.0	95.0	109.	138.	159.	170.	367.
80	67.5	75.1	85.0	89.3	108.	128.	138.	151.	323.
90	58.8	69.7	80.2	82.1	99.9	109.	124.	133.	269.
95	54.8	66.0	75.6	77.5	93.7	103.	117.	128.	239.
98	49.1	59.8	68.4	73.7	84.9	97.2	110.	121.	207.
99	46.0	58.5	65.0	72.0	79.0	95.0	99.0	110.	120.

03125000 Home Creek near New Philadelphia, Ohio

Years analyzed = 43
Climatic year range = 1937–79

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	0.32	0.54	0.93	1.24	3.20	7.80	12.6	18.2	23.0
2	0.15	0.42	0.52	0.87	2.04	5.37	9.01	10.6	13.9
5	0.04	0.11	0.29	0.49	0.94	2.99	3.53	4.73	5.03
10	0.01	0.07	0.12	0.30	0.50	1.58	2.08	2.68	3.12
20	0.00	0.02	0.08	0.17	0.27	0.71	1.17	1.44	1.49
25	0.00	0.00	0.05	0.10	0.22	0.56	0.97	1.20	1.28
30	0.00	0.00	0.04	0.10	0.20	0.46	0.73	1.03	1.17
40	0.00	0.00	0.02	0.04	0.12	0.29	0.50	0.70	0.87
50	0.00	0.00	0.00	0.03	0.10	0.15	0.40	0.56	0.69
60	0.00	0.00	0.00	0.02	0.08	0.12	0.25	0.41	0.56
70	0.00	0.00	0.00	0.00	0.04	0.10	0.14	0.31	0.45
75	0.00	0.00	0.00	0.00	0.03	0.10	0.10	0.26	0.43
80	0.00	0.00	0.00	0.00	0.02	0.08	0.10	0.23	0.41
90	0.00	0.00	0.00	0.00	0.01	0.06	0.10	0.12	0.20
95	0.00	0.00	0.00	0.00	0.00	0.04	0.07	0.10	0.13
98	0.00	0.00	0.00	0.00	0.00	0.03	0.05	0.10	0.12
99	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.10	0.12

03130500 Touby Run at Mansfield, Ohio

Years analyzed = 32
Climatic year range = 1946–77

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	1.75	3.64	6.06	7.95	14.0	44.0	57.0	90.9	113.
2	0.84	2.39	4.20	5.02	13.2	27.5	32.2	44.1	65.7
5	0.63	1.19	2.17	3.12	6.65	9.20	15.2	19.7	23.7
10	0.47	0.89	1.36	1.89	3.74	5.03	7.58	12.0	14.4
20	0.30	0.53	0.86	1.28	1.90	2.50	3.70	4.73	7.71
25	0.27	0.50	0.76	1.27	1.60	1.90	2.32	3.28	6.35
30	0.27	0.34	0.71	0.98	1.37	1.60	1.84	2.75	5.04
40	0.20	0.30	0.70	0.79	1.05	1.31	1.48	2.28	3.09
50	0.20	0.20	0.50	0.54	0.93	1.11	1.24	1.67	2.11
60	0.20	0.20	0.42	0.50	0.80	0.97	1.22	1.37	1.62
70	0.17	0.20	0.30	0.40	0.65	0.77	0.98	1.27	1.43
75	0.17	0.20	0.30	0.40	0.57	0.76	0.86	1.14	1.33
80	0.10	0.14	0.20	0.29	0.50	0.62	0.83	1.03	1.23
90	0.09	0.10	0.20	0.24	0.40	0.50	0.62	0.78	1.00
95	0.08	0.10	0.20	0.20	0.38	0.50	0.51	0.66	0.81
98	0.05	0.10	0.11	0.20	0.30	0.41	0.50	0.53	0.79
99	0.04	0.09	0.10	0.19	0.30	0.40	0.50	0.50	0.73

03134000 Jerome Fork at Jeromeville, Ohio

Years analyzed = 24
Climatic year range = 1925–48

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	20.0	29.0	71.0	119.	224.	505.	658.	952.	1090.
2	18.1	27.7	35.7	72.8	155.	361.	462.	694.	1050.
5	10.9	15.3	21.4	35.1	60.4	209.	262.	437.	633.
10	7.68	10.5	13.8	17.0	32.2	86.3	167.	221.	298.
20	6.28	8.00	9.10	11.8	17.8	42.0	56.0	111.	160.
25	6.13	7.65	8.00	10.2	15.5	29.5	42.0	90.0	140.
30	5.68	7.20	7.80	9.95	14.5	24.5	37.0	79.9	114.
40	5.05	6.25	6.80	8.70	12.1	17.2	28.0	67.7	88.0
50	4.88	5.50	6.00	7.40	10.0	14.0	22.0	50.0	63.8
60	4.05	4.50	5.40	6.45	8.52	11.9	19.0	38.9	47.8
70	3.63	3.90	4.80	5.75	7.60	10.9	15.0	26.9	36.2
75	3.63	3.90	4.80	5.30	6.80	10.7	13.0	23.3	31.4
80	3.43	3.60	4.70	5.20	6.20	10.0	12.0	20.9	27.4
90	3.05	3.45	4.10	4.45	5.65	7.65	11.0	14.0	20.6
95	2.35	2.90	3.68	3.91	4.45	6.88	9.20	11.3	15.3
98	2.23	2.70	3.20	3.45	4.43	6.20	7.70	9.82	11.8
99	2.10	2.70	3.20	3.45	4.35	6.20	7.70	9.40	9.85

03136500 Kokosing River at Mount Vernon, Ohio

Years analyzed = 57
Climatic year range = 1953–2009

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	98	95	90	80	50	20	10	5	2
1	24.5	40.5	56.0	90.6	325.	1090.	1500.	2220.	5130.
2	24.5	31.4	53.0	80.3	292.	769.	1290.	1900.	3720.
5	22.7	26.9	42.3	57.0	187.	412.	912.	1310.	1470.
10	21.3	24.8	37.6	48.3	126.	234.	418.	866.	962.
20	21.2	22.9	31.6	40.7	83.8	143.	216.	330.	428.
25	20.2	22.8	30.0	38.6	74.0	123.	170.	252.	357.
30	20.2	22.8	29.0	37.2	66.8	104.	141.	188.	310.
40	19.2	22.7	28.0	32.6	48.0	85.2	121.	141.	247.
50	18.3	21.8	24.8	30.0	43.0	71.0	93.2	123.	205.
60	17.3	20.8	23.4	28.0	39.0	62.9	87.2	106.	178.
70	15.8	18.8	21.0	25.8	35.6	59.6	76.9	97.0	153.
75	15.2	17.8	19.8	25.0	34.0	56.4	71.6	93.1	139.
80	13.7	15.9	19.8	24.0	33.0	54.4	64.6	87.3	128.
90	12.3	14.0	18.0	21.1	31.0	49.5	57.6	72.1	106.
95	11.5	14.0	16.7	19.6	29.0	45.8	52.2	59.2	77.0
98	9.90	13.0	15.6	17.9	27.0	43.5	49.4	53.2	70.3
99	9.47	13.0	14.8	17.6	27.0	43.2	49.2	52.3	69.3

03137000 Kokosing River at Millwood, Ohio

Years analyzed = 53
Climatic year range = 1921–73

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	98	95	90	80	50	20	10	5	2
1	55.8	86.0	127.	185.	769.	1820.	3620.	5430.	7800.
2	55.6	85.0	105.	153.	618.	1470.	2680.	4610.	6760.
5	53.0	65.4	84.2	110.	342.	780.	1520.	2470.	3250.
10	52.2	59.9	71.9	90.5	218.	438.	640.	1560.	1950.
20	50.0	53.6	63.9	79.6	144.	276.	368.	800.	1080.
25	49.1	52.1	61.8	76.4	124.	223.	281.	636.	782.
30	48.2	50.7	61.4	74.0	113.	191.	247.	533.	732.
40	45.2	48.0	59.8	70.9	96.2	156.	214.	334.	614.
50	43.2	46.0	56.8	66.2	84.0	123.	154.	267.	577.
60	42.2	44.0	52.4	63.2	81.0	111.	133.	229.	492.
70	39.2	43.2	49.4	58.6	78.0	100.	120.	211.	307.
75	38.2	42.8	47.2	57.8	77.0	95.6	117.	193.	274.
80	38.1	39.7	45.6	55.6	74.0	92.0	113.	172.	248.
90	37.0	37.7	41.8	51.6	69.0	85.3	101.	142.	180.
95	35.6	36.0	41.4	49.6	66.0	80.2	98.2	123.	130.
98	34.2	36.0	39.8	46.8	64.0	78.0	96.1	107.	126.
99	34.2	36.0	38.0	46.0	64.0	77.2	95.2	106.	121.

03139000 Killbuck Creek at Killbuck, Ohio

Years analyzed = 79
Climatic year range = 1930–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	47.2	104.	160.	273.	681.	1120.	1570.	2210.	4880.
2	45.1	93.9	124.	229.	577.	955.	1450.	2120.	3620.
5	43.2	61.8	89.2	144.	367.	663.	1070.	1850.	2820.
10	39.2	51.6	70.8	123.	224.	481.	752.	1300.	1720.
20	37.0	48.0	59.6	93.8	140.	332.	564.	804.	1050.
25	35.6	47.0	57.0	77.0	128.	284.	490.	640.	873.
30	35.0	47.0	53.0	71.4	122.	223.	338.	543.	693.
40	32.3	44.0	51.0	64.0	100.	170.	299.	434.	542.
50	30.4	43.0	47.0	62.0	89.0	151.	224.	382.	436.
60	29.2	38.0	44.0	53.0	82.0	134.	198.	300.	378.
70	28.0	33.0	42.0	50.6	76.0	118.	168.	261.	348.
75	26.6	31.0	40.0	47.0	72.0	107.	153.	245.	334.
80	26.6	30.4	38.0	45.0	71.0	99.8	144.	235.	321.
90	25.2	30.0	35.2	42.0	61.8	92.0	125.	178.	275.
95	24.2	28.6	34.0	38.6	54.0	87.4	114.	157.	250.
98	24.1	27.5	33.0	37.0	52.8	83.5	107.	153.	232.
99	23.6	27.0	32.0	37.0	52.0	82.0	107.	149.	222.

03140000 Mill Creek near Coshocton, Ohio

Years analyzed = 72
Climatic year range = 1937–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1.92	5.17	7.81	23.2	65.0	167.	408.	556.	1400.
2	1.34	4.38	7.32	15.3	49.8	107.	266.	350.	430.
5	0.71	2.28	2.90	7.84	22.2	51.5	103.	134.	192.
10	0.44	1.50	1.93	4.46	11.9	29.0	55.0	84.1	124.
20	0.30	0.74	1.34	2.34	6.80	18.4	36.1	44.8	51.3
25	0.30	0.60	1.20	2.00	5.80	16.4	28.4	36.4	43.8
30	0.25	0.53	1.13	1.85	5.04	12.3	23.8	30.4	37.3
40	0.20	0.42	0.82	1.41	3.22	9.24	16.5	24.4	30.6
50	0.10	0.36	0.50	1.20	2.50	7.20	13.1	18.3	23.6
60	0.10	0.27	0.46	0.95	2.09	5.46	12.1	15.2	19.1
70	0.10	0.20	0.30	0.69	1.60	4.13	8.69	12.0	16.2
75	0.10	0.17	0.26	0.63	1.30	3.74	6.97	11.3	15.2
80	0.10	0.10	0.24	0.54	1.12	2.87	5.66	9.93	14.1
90	0.10	0.10	0.17	0.33	0.93	2.04	3.87	8.47	11.6
95	0.10	0.10	0.10	0.25	0.72	1.90	3.48	8.11	10.8
98	0.05	0.10	0.10	0.20	0.58	1.72	3.11	7.87	9.39
99	0.05	0.10	0.10	0.20	0.52	1.62	2.94	7.51	9.02

03144000 Wakatomika Creek near Frazeysburg, Ohio

Years analyzed = 73
Climatic year range = 1936–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	12.9	18.1	36.0	97.6	387.	803.	1320.	1750.	5480.
2	10.9	14.6	32.1	89.1	248.	609.	949.	1280.	3460.
5	9.06	12.0	26.9	45.1	126.	310.	561.	656.	923.
10	8.06	11.0	20.2	26.4	69.2	196.	278.	355.	420.
20	7.10	9.20	13.9	19.4	45.2	111.	150.	192.	218.
25	6.64	9.02	11.8	17.0	40.0	92.0	136.	159.	182.
30	6.52	8.56	10.8	16.4	34.0	83.5	118.	141.	159.
40	6.05	7.55	9.88	13.2	26.0	56.7	85.3	103.	121.
50	5.24	6.28	8.56	11.0	21.0	48.2	69.0	88.9	101.
60	4.82	5.73	7.96	10.0	17.8	37.7	53.6	70.8	88.7
70	4.03	5.19	6.72	8.70	13.6	31.0	45.0	52.2	80.0
75	3.59	4.79	5.88	8.18	12.0	27.0	37.8	48.5	74.8
80	3.44	4.32	5.33	7.53	11.0	24.0	32.6	45.7	68.4
90	2.86	3.64	4.72	6.77	9.48	19.6	25.3	32.2	59.9
95	2.75	3.20	4.18	5.99	8.62	17.7	21.2	29.4	51.9
98	2.65	3.20	3.74	5.48	8.08	15.9	19.1	27.5	47.4
99	2.65	3.20	3.48	5.20	8.00	15.2	18.6	25.9	46.6

03146000 North Fork Licking River at Utica, Ohio

Years analyzed = 22
Climatic year range = 1939–81

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	5.43	19.4	75.6	270.	413.	829.	1520.	3000.	6200.
2	5.35	17.2	62.5	187.	303.	621.	1160.	2190.	3220.
5	4.53	10.1	41.5	68.1	138.	236.	332.	1070.	1530.
10	4.31	6.32	24.0	43.2	83.7	144.	150.	406.	531.
20	4.00	5.38	15.2	22.7	44.7	72.4	80.7	166.	218.
25	3.66	5.02	11.0	19.5	36.5	56.3	66.4	135.	181.
30	3.63	4.82	9.03	17.6	30.1	47.0	51.1	120.	159.
40	3.52	4.41	7.24	13.8	22.2	32.3	35.8	89.3	113.
50	3.23	4.06	6.56	9.09	13.0	20.0	25.6	66.7	93.9
60	2.83	3.66	5.95	8.08	10.4	16.1	18.0	56.6	81.0
70	2.36	3.13	5.45	6.42	8.45	12.3	15.4	46.4	67.1
75	2.09	2.83	5.00	5.94	7.90	10.3	14.4	30.7	61.2
80	1.89	2.61	4.58	5.49	7.05	9.87	12.6	19.7	53.3
90	1.44	2.32	3.55	4.20	5.95	8.31	9.58	17.2	47.4
95	1.26	2.19	3.12	3.45	5.18	6.68	8.59	15.9	35.3
98	1.11	2.08	2.60	2.98	4.73	6.46	7.34	11.4	26.2
99	0.96	2.08	2.60	2.98	4.65	6.43	7.04	11.4	24.7

03146500 Licking River near Newark, Ohio

Years analyzed = 69
Climatic year range = 1939–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	67.8	126.	201.	299.	1700.	3440.	5180.	7240.	13100.
2	60.7	116.	200.	265.	1270.	2600.	4830.	6020.	12200.
5	55.7	86.3	137.	224.	625.	1410.	2940.	3780.	4880.
10	51.0	63.7	77.2	188.	378.	869.	1150.	2140.	3160.
20	44.4	54.6	64.6	110.	249.	544.	733.	1130.	1270.
25	44.4	51.5	62.0	99.0	205.	416.	622.	793.	1110.
30	42.4	50.7	62.0	83.0	153.	315.	518.	634.	972.
40	42.4	48.0	57.0	68.4	108.	209.	367.	523.	714.
50	40.8	47.0	55.0	66.0	93.0	167.	268.	395.	538.
60	40.4	45.5	54.0	62.0	81.8	151.	226.	317.	453.
70	40.0	42.5	53.0	58.0	77.0	141.	182.	260.	394.
75	37.4	42.0	52.0	56.0	75.0	127.	162.	212.	352.
80	36.9	42.0	52.0	54.4	70.8	108.	146.	186.	316.
90	34.0	39.5	49.0	53.0	66.2	93.4	125.	158.	271.
95	32.0	38.6	48.4	51.2	65.0	92.0	107.	150.	232.
98	31.7	36.0	43.0	50.0	62.8	87.0	99.7	142.	214.
99	30.0	36.0	43.0	49.0	62.0	87.0	98.0	137.	212.

03147000 Licking River at Toboso, Ohio

Years analyzed = 42
Climatic year range = 1904–60

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	90.8	183.	286.	424.	1050.	2090.	2830.	4340.	5710.
2	81.5	175.	267.	350.	849.	1450.	2190.	3840.	4190.
5	74.5	124.	206.	256.	475.	836.	1050.	2200.	3220.
10	68.9	91.4	138.	171.	303.	490.	622.	1130.	1810.
20	65.8	73.8	116.	130.	201.	315.	383.	554.	699.
25	65.3	70.6	101.	123.	175.	285.	303.	471.	528.
30	63.2	68.9	96.5	116.	148.	237.	268.	414.	442.
40	61.2	66.0	83.4	98.9	118.	167.	215.	284.	353.
50	57.3	64.2	78.0	85.0	109.	134.	153.	214.	294.
60	54.8	60.2	74.7	84.6	97.3	111.	133.	190.	235.
70	51.8	59.0	71.5	80.4	92.5	100.	112.	141.	197.
75	50.6	55.6	69.2	73.9	88.0	98.2	104.	140.	188.
80	50.3	53.5	64.6	72.9	85.2	94.4	102.	136.	173.
90	48.1	50.5	61.0	69.4	77.3	90.9	98.1	116.	156.
95	46.1	49.0	60.2	68.0	74.0	86.4	94.8	112.	149.
98	44.3	48.3	58.9	64.9	72.8	84.4	92.7	111.	129.
99	44.3	46.6	57.2	64.0	72.0	84.1	92.4	108.	128.

03149500 Salt Creek near Chandlersville, Ohio

Years analyzed = 20
Climatic year range = 1935–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	25.3	31.7	82.0	109.	285.	601.	864.	2000.	4000.
2	19.2	21.8	47.0	88.2	192.	306.	794.	1110.	3230.
5	7.18	9.40	31.0	50.5	86.0	152.	374.	511.	762.
10	6.15	7.13	11.8	26.1	40.9	86.1	169.	242.	290.
20	5.11	5.29	8.38	12.5	21.7	43.1	87.7	130.	152.
25	4.41	4.67	7.38	11.0	19.0	33.7	69.4	115.	134.
30	4.14	4.31	6.36	8.91	16.5	28.1	58.0	91.2	113.
40	3.13	3.49	5.49	6.74	12.5	23.2	46.2	62.6	68.9
50	2.71	2.82	3.44	5.83	9.05	17.4	31.6	48.4	50.0
60	1.51	1.79	3.04	4.39	5.74	13.8	24.0	37.7	42.4
70	0.72	1.00	2.26	3.00	3.54	7.74	16.5	29.0	34.0
75	0.49	0.81	2.10	2.52	3.10	7.33	14.6	22.9	30.6
80	0.35	0.80	1.02	2.16	2.60	6.71	10.5	18.4	27.0
90	0.04	0.13	0.42	1.14	1.86	4.22	5.72	16.0	22.9
95	0.03	0.11	0.29	0.81	1.49	3.74	4.42	12.5	19.7
98	0.03	0.10	0.24	0.74	1.30	3.34	3.99	10.3	16.4
99	0.01	0.10	0.24	0.73	1.30	3.21	3.96	9.04	14.7

03157000 Clear Creek near Rockbridge, Ohio

Years analyzed = 70
Climatic year range = 1939–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	98	95	90	80	50	20	10	5	2
1	20.4	22.1	32.2	70.6	165.	365.	771.	1150.	2020.
2	17.9	21.3	28.1	50.1	128.	282.	569.	960.	1140.
5	15.4	18.1	22.8	35.1	70.4	156.	376.	446.	625.
10	14.0	16.1	19.8	25.5	48.3	102.	160.	282.	332.
20	13.4	15.0	18.0	20.7	35.9	62.9	93.8	139.	191.
25	13.0	15.0	17.1	19.2	32.0	55.0	79.2	113.	157.
30	13.0	14.6	16.1	18.1	28.5	47.7	67.6	98.6	134.
40	12.4	13.6	15.1	18.0	23.1	34.8	53.3	69.8	108.
50	12.0	13.0	14.1	17.0	21.0	31.0	48.0	60.8	93.1
60	12.0	12.0	14.0	16.0	19.0	27.0	42.9	54.5	83.4
70	10.1	11.6	12.6	14.1	18.0	24.9	39.0	46.3	74.5
75	9.84	11.0	12.0	14.0	17.5	23.8	35.4	42.8	70.7
80	9.00	11.0	11.0	13.0	16.5	22.0	31.2	39.6	67.8
90	8.16	9.53	10.3	11.4	15.0	19.2	28.0	35.1	55.7
95	7.86	8.13	9.93	11.0	14.6	19.0	25.5	33.0	45.5
98	6.27	7.98	9.44	10.2	13.9	18.0	23.8	30.7	41.3
99	6.27	7.98	9.43	10.0	13.5	17.8	23.0	28.0	40.7

03157500 Hocking River at Enterprise, Ohio

Years analyzed = 78
Climatic year range = 1931–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	70.3	93.3	145.	345.	929.	2200.	3780.	4620.	7650.
2	63.1	91.6	110.	240.	689.	1930.	3230.	3550.	5460.
5	55.0	74.1	83.6	154.	365.	933.	1650.	2200.	3500.
10	47.8	62.6	76.3	98.2	252.	538.	815.	1350.	1580.
20	44.2	53.4	62.0	72.9	148.	313.	449.	800.	891.
25	43.1	50.8	59.7	68.0	139.	247.	370.	706.	753.
30	40.3	49.8	57.8	66.2	127.	214.	338.	612.	654.
40	38.6	48.7	51.9	62.2	105.	161.	284.	465.	528.
50	36.5	41.9	46.9	56.0	88.0	134.	228.	300.	446.
60	35.5	39.0	44.8	54.0	77.8	129.	184.	262.	374.
70	32.3	36.5	39.9	51.8	70.5	118.	166.	225.	338.
75	30.2	33.9	38.7	45.8	68.0	107.	154.	206.	319.
80	29.0	32.4	37.7	44.9	66.0	99.3	151.	188.	292.
90	28.6	30.0	36.5	41.8	60.1	82.2	120.	158.	226.
95	28.0	29.0	33.7	39.6	55.5	76.8	114.	132.	202.
98	26.5	27.0	30.9	36.8	53.3	75.2	106.	117.	179.
99	26.2	27.0	30.9	36.8	52.0	75.0	101.	116.	175.

03159540 Shade River near Chester, Ohio

Years analyzed = 44
Climatic year range = 1965–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	31.3	64.0	205.	347.	479.	898.	1780.	2490.	2860.
2	26.2	61.1	138.	211.	411.	796.	1280.	2130.	2340.
5	16.3	35.5	59.4	79.4	204.	425.	556.	1060.	1670.
10	12.1	18.9	26.8	41.6	99.3	224.	295.	448.	771.
20	5.27	9.05	14.6	21.4	49.5	83.8	108.	228.	250.
25	4.45	7.80	12.0	15.0	37.5	67.0	84.0	189.	200.
30	3.26	6.62	9.04	12.7	28.2	51.9	66.8	163.	172.
40	1.43	4.45	6.06	8.24	18.1	29.8	44.4	108.	133.
50	0.98	2.50	4.10	5.15	10.2	22.5	37.0	82.5	108.
60	0.66	1.80	3.08	3.68	7.80	16.5	32.0	65.4	96.1
70	0.45	1.13	1.96	3.06	5.95	13.0	24.6	39.0	75.5
75	0.45	1.00	1.80	2.45	5.55	12.0	18.0	32.0	68.8
80	0.42	0.82	1.50	2.09	5.30	11.0	15.4	27.4	59.5
90	0.32	0.56	1.10	1.45	3.66	7.58	12.0	18.2	36.5
95	0.25	0.47	0.89	1.13	3.18	6.10	7.84	13.0	27.4
98	0.22	0.39	0.70	0.85	2.32	5.29	5.87	11.1	23.8
99	0.21	0.38	0.68	0.77	2.20	4.70	5.80	11.1	21.5

03202000 Raccoon Creek at Adamsville, Ohio

Years analyzed = 86
Climatic year range = 1915–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	14.7	30.9	72.4	132.	721.	2060.	3850.	4880.	6750.
2	14.5	27.9	65.2	102.	647.	1970.	3760.	4750.	6660.
5	13.5	22.8	49.0	86.4	383.	1280.	2850.	3350.	5260.
10	11.7	15.1	34.4	63.5	216.	793.	1620.	2240.	2740.
20	7.55	11.2	25.8	40.4	113.	465.	703.	1020.	1330.
25	6.74	9.48	23.4	35.4	96.0	368.	577.	793.	928.
30	5.08	8.79	21.5	32.8	76.5	287.	497.	652.	817.
40	4.05	7.92	16.0	25.6	60.6	186.	365.	458.	591.
50	3.32	7.15	13.7	22.0	44.5	139.	238.	324.	523.
60	2.55	5.78	8.67	18.4	35.3	109.	176.	247.	439.
70	2.11	4.49	6.88	16.2	29.8	77.2	137.	189.	377.
75	1.97	4.00	6.51	12.4	28.0	73.0	125.	168.	349.
80	1.90	3.45	6.43	9.80	25.8	64.8	110.	152.	256.
90	1.72	2.67	5.64	7.59	21.2	51.4	79.1	99.5	214.
95	1.61	2.51	4.17	6.80	19.3	41.6	65.2	86.5	173.
98	1.38	2.19	3.77	6.44	17.3	38.9	56.9	82.2	156.
99	1.32	2.10	3.77	6.44	16.0	37.6	54.8	80.9	154.

03217500 Scioto River at La Rue, Ohio

Years analyzed = 22
Climatic year range = 1926–50

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	13.0	22.3	48.4	78.9	282.	1130.	1290.	2610.	3550.
2	11.4	17.2	43.2	68.2	220.	830.	1060.	2080.	3160.
5	9.37	14.2	28.1	30.8	157.	341.	803.	1060.	1680.
10	7.64	10.7	19.0	21.8	60.4	249.	348.	558.	1200.
20	6.91	8.85	14.0	16.9	22.0	103.	183.	335.	587.
25	5.82	8.15	13.0	15.9	19.5	67.8	150.	222.	444.
30	5.78	7.34	12.0	12.9	18.5	56.8	118.	186.	341.
40	4.37	6.05	9.60	11.9	14.2	25.8	74.6	143.	251.
50	4.01	5.77	9.00	10.0	12.0	18.3	36.2	111.	186.
60	3.95	5.04	7.63	8.47	10.5	17.8	26.0	76.8	152.
70	3.82	3.93	5.95	7.90	8.90	16.0	22.2	44.8	121.
75	3.65	3.93	5.44	6.90	8.75	14.0	15.8	31.1	114.
80	3.09	3.69	5.21	6.00	8.50	12.6	14.8	28.9	102.
90	3.05	3.48	4.12	4.95	6.50	9.10	13.9	25.1	78.6
95	3.02	3.29	3.90	4.18	5.80	8.55	13.0	23.9	62.0
98	2.83	3.18	3.90	3.98	4.60	8.05	11.3	22.8	50.4
99	2.80	2.80	3.36	3.89	4.20	8.00	11.1	22.8	46.9

03218000 Little Scioto River above Marion, Ohio

Years analyzed = 33
Climatic year range = 1938–70

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	0.00	0.22	2.18	11.6	31.0	99.0	164.	347.	400.
2	0.00	0.15	1.99	11.6	27.0	72.5	144.	269.	333.
5	0.00	0.00	1.40	4.27	13.8	38.4	75.0	136.	160.
10	0.00	0.00	0.96	2.81	8.82	27.8	40.8	75.0	91.6
20	0.00	0.00	0.76	1.26	3.14	10.0	20.2	32.8	46.6
25	0.00	0.00	0.58	0.84	2.00	7.10	15.0	24.6	36.2
30	0.00	0.00	0.40	0.63	1.70	5.35	10.9	18.0	24.9
40	0.00	0.00	0.26	0.40	1.10	3.03	6.86	12.4	16.5
50	0.00	0.00	0.18	0.30	0.90	1.76	5.10	8.88	11.3
60	0.00	0.00	0.08	0.20	0.60	1.32	3.07	5.44	7.26
70	0.00	0.00	0.00	0.02	0.40	0.85	1.27	4.27	5.36
75	0.00	0.00	0.00	0.00	0.40	0.66	0.91	3.88	4.64
80	0.00	0.00	0.00	0.00	0.30	0.58	0.73	3.57	4.32
90	0.00	0.00	0.00	0.00	0.20	0.41	0.62	1.90	3.66
95	0.00	0.00	0.00	0.00	0.10	0.35	0.53	1.39	3.00
98	0.00	0.00	0.00	0.00	0.00	0.30	0.46	1.24	2.77
99	0.00	0.00	0.00	0.00	0.00	0.28	0.45	1.12	1.93

03219500 Scioto River near Prospect, Ohio

Years analyzed = 77
Climatic year range = 1925–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	26.8	39.0	45.8	65.2	483.	2300.	3950.	4970.	5870.
2	24.8	33.5	43.1	59.0	395.	2110.	3600.	4550.	5410.
5	20.9	27.4	34.2	43.5	229.	1380.	2370.	3600.	4260.
10	19.1	22.2	25.8	36.0	152.	815.	1650.	2300.	3080.
20	16.6	17.9	19.9	28.0	79.8	344.	657.	1210.	1970.
25	15.6	16.9	19.6	25.6	57.0	257.	484.	877.	1530.
30	15.0	16.8	17.3	24.2	47.4	219.	346.	630.	1090.
40	13.6	14.9	16.2	21.0	36.2	129.	245.	407.	724.
50	12.1	13.9	15.0	18.6	29.0	85.6	210.	290.	449.
60	11.0	12.7	13.8	16.5	25.0	70.1	137.	228.	350.
70	9.78	11.0	12.0	14.0	23.0	52.0	110.	177.	270.
75	9.62	11.0	11.8	13.0	21.0	45.8	91.4	166.	234.
80	8.37	10.9	11.0	13.0	20.4	41.4	77.6	114.	207.
90	7.53	9.21	10.0	12.0	18.0	32.3	46.6	81.2	163.
95	7.03	8.33	8.96	11.0	17.0	26.2	43.7	58.2	117.
98	5.80	7.03	8.24	10.9	15.8	21.3	40.4	46.7	81.5
99	5.06	6.74	7.58	9.38	15.0	21.0	32.6	46.5	73.6

03220000 Mill Creek near Bellepoint, Ohio

Years analyzed = 66
Climatic year range = 1943–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	6.27	10.1	14.4	33.4	303.	1510.	2390.	3340.	3900.
2	5.49	8.06	12.0	26.0	203.	1370.	2100.	2800.	3250.
5	3.79	5.19	8.73	15.5	113.	645.	1240.	1630.	1970.
10	2.65	4.27	6.55	10.9	51.5	203.	405.	720.	1140.
20	2.04	3.36	5.64	8.11	22.9	78.6	138.	232.	260.
25	1.97	3.04	5.55	7.70	20.0	62.6	110.	168.	230.
30	1.93	2.44	5.09	6.39	15.5	43.0	87.3	121.	169.
40	1.70	1.96	3.67	5.38	11.0	25.8	45.6	75.2	101.
50	1.37	1.64	2.31	4.78	8.45	18.2	32.9	55.2	69.2
60	1.02	1.30	1.58	4.18	7.40	15.6	26.5	47.7	51.3
70	0.85	1.02	1.30	3.42	6.41	12.6	21.6	37.8	41.9
75	0.80	0.90	1.20	2.92	5.95	10.5	18.3	30.6	34.3
80	0.67	0.81	1.06	1.96	5.74	9.68	14.9	25.2	30.1
90	0.31	0.60	0.70	1.47	4.38	7.52	11.1	15.9	22.8
95	0.12	0.50	0.70	1.06	3.60	6.83	7.93	13.5	17.7
98	0.03	0.37	0.64	0.80	2.98	5.87	6.80	10.3	15.4
99	0.03	0.24	0.40	0.80	2.80	5.46	6.46	9.65	14.7

03223000 Olentangy River at Claridon, Ohio

Years analyzed = 52
Climatic year range = 1946–97

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	8.14	11.5	24.2	41.2	229.	1160.	1450.	1850.	2580.
2	5.12	9.11	22.4	30.9	205.	968.	1380.	1630.	2350.
5	3.54	6.54	13.6	17.7	111.	421.	906.	1190.	1320.
10	2.70	4.66	8.65	11.9	58.1	238.	361.	764.	928.
20	2.20	3.23	6.01	8.09	27.8	127.	189.	298.	405.
25	1.71	2.68	5.51	7.46	22.5	90.8	156.	212.	306.
30	1.41	2.23	4.94	6.46	19.2	70.2	117.	169.	260.
40	0.86	1.69	3.32	5.15	13.6	31.5	69.4	109.	197.
50	0.73	1.40	2.86	4.36	9.70	20.0	48.6	93.0	125.
60	0.44	1.06	2.00	3.40	6.80	16.0	32.9	74.0	104.
70	0.14	0.86	1.33	2.51	6.16	12.0	27.4	58.3	95.7
75	0.03	0.57	0.96	1.83	5.60	11.0	24.6	51.1	73.8
80	0.01	0.46	0.86	1.34	5.09	9.94	17.7	39.8	42.7
90	0.00	0.15	0.43	0.88	3.66	8.41	11.8	24.9	32.1
95	0.00	0.06	0.30	0.72	3.11	6.94	10.4	19.1	26.6
98	0.00	0.03	0.23	0.54	2.70	6.39	9.27	17.4	21.6
99	0.00	0.02	0.23	0.53	2.70	6.32	9.07	17.4	20.0

03228300 Big Walnut Creek at Sunbury, Ohio

Years analyzed = 21
Climatic year range = 1988–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1.25	12.0	28.2	175.	407.	691.	896.	1540.	3050.
2	0.93	8.24	23.7	106.	258.	510.	742.	1240.	1920.
5	0.53	3.62	11.3	26.9	124.	239.	353.	712.	943.
10	0.21	1.90	6.22	13.8	68.2	110.	162.	272.	318.
20	0.08	0.84	3.79	5.98	16.0	56.5	71.7	106.	121.
25	0.04	0.52	2.96	4.28	9.40	46.0	50.6	76.6	88.7
30	0.04	0.44	1.20	3.02	7.20	35.0	43.6	51.7	70.0
40	0.01	0.15	0.66	2.27	3.80	24.4	32.2	34.8	48.9
50	0.00	0.06	0.34	0.72	2.60	12.4	19.6	29.4	39.0
60	0.00	0.02	0.14	0.26	1.08	6.63	12.1	21.6	32.0
70	0.00	0.01	0.05	0.09	0.67	5.14	8.15	11.2	25.5
75	0.00	0.00	0.02	0.07	0.40	3.04	6.36	8.98	22.5
80	0.00	0.00	0.01	0.06	0.30	2.38	4.69	7.14	20.0
90	0.00	0.00	0.00	0.01	0.16	0.86	2.19	4.10	16.6
95	0.00	0.00	0.00	0.01	0.05	0.38	1.80	2.52	7.55
98	0.00	0.00	0.00	0.00	0.04	0.24	0.92	1.46	6.68
99	0.00	0.00	0.00	0.00	0.04	0.22	0.67	1.14	5.97

03230500 Big Darby Creek at Darbyville, Ohio

Years analyzed = 85
Climatic year range = 1921–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	22.6	26.2	46.2	96.0	527.	2400.	5030.	5540.	7530.
2	21.8	25.4	41.4	81.8	466.	1980.	4460.	4750.	6860.
5	19.9	24.5	36.2	64.5	278.	1210.	2990.	3650.	3900.
10	16.2	22.0	34.5	51.6	160.	547.	1560.	1950.	2690.
20	14.8	18.0	29.4	40.4	85.6	264.	669.	941.	1100.
25	12.7	17.3	28.6	37.2	68.0	222.	429.	705.	861.
30	10.7	15.3	25.9	33.7	63.0	170.	361.	607.	711.
40	8.83	12.4	21.7	28.2	47.4	133.	266.	393.	490.
50	7.88	11.0	18.0	24.0	41.0	98.8	159.	294.	398.
60	6.19	8.98	15.8	19.4	35.8	85.7	125.	257.	341.
70	5.24	8.27	12.0	18.4	32.6	69.4	102.	214.	279.
75	4.52	7.56	11.2	16.2	31.0	63.6	91.4	182.	248.
80	4.19	6.39	9.78	15.5	29.0	50.1	81.5	168.	228.
90	3.49	4.61	7.52	13.0	25.0	44.1	69.8	132.	194.
95	2.58	3.72	6.48	12.0	23.0	40.9	60.8	95.6	155.
98	1.85	3.48	6.00	11.6	21.0	40.0	56.3	73.9	129.
99	1.76	3.42	5.80	10.2	21.0	39.0	56.0	69.4	123.

03232000 Paint Creek near Greenfield, Ohio

Years analyzed = 55
Climatic year range = 1926–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	5.11	6.88	15.4	60.6	360.	1160.	1980.	4610.	5180.
2	3.66	4.88	14.3	41.8	248.	863.	1880.	3730.	4640.
5	2.43	4.52	8.30	18.7	132.	571.	1300.	1800.	2570.
10	1.46	3.39	5.88	13.0	77.8	335.	665.	1230.	1900.
20	1.10	2.60	4.28	8.40	35.6	144.	299.	567.	821.
25	0.97	2.32	3.54	6.46	29.0	129.	259.	448.	558.
30	0.95	2.09	3.08	5.41	24.2	119.	233.	393.	476.
40	0.69	1.46	2.61	4.50	18.0	85.4	172.	302.	320.
50	0.51	1.00	1.82	3.84	14.0	56.0	95.0	235.	240.
60	0.32	0.50	1.37	2.92	11.8	43.4	73.9	183.	201.
70	0.21	0.37	1.08	2.40	8.30	34.6	58.0	143.	165.
75	0.20	0.29	0.96	1.96	7.00	28.4	53.8	132.	149.
80	0.15	0.28	0.78	1.40	5.62	18.8	47.6	122.	148.
90	0.11	0.19	0.46	1.02	3.46	14.8	32.7	70.0	114.
95	0.02	0.15	0.36	0.62	2.60	9.10	28.5	55.8	99.3
98	0.01	0.10	0.25	0.45	2.20	7.25	25.8	45.2	96.0
99	0.01	0.10	0.21	0.40	2.20	7.12	24.8	44.4	95.9

03235500 Tar Hollow Creek at Tar Hollow State Park, Ohio

Years analyzed = 32
Climatic year range = 1946–77

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	0.00	0.00	0.00	0.27	1.65	4.13	6.96	11.7	14.0
2	0.00	0.00	0.00	0.27	1.24	3.92	4.79	5.90	8.43
5	0.00	0.00	0.00	0.00	0.42	1.07	1.41	2.62	5.01
10	0.00	0.00	0.00	0.00	0.24	0.44	0.59	0.98	3.16
20	0.00	0.00	0.00	0.00	0.05	0.21	0.34	0.49	1.91
25	0.00	0.00	0.00	0.00	0.01	0.20	0.33	0.40	1.64
30	0.00	0.00	0.00	0.00	0.00	0.12	0.24	0.40	1.27
40	0.00	0.00	0.00	0.00	0.00	0.06	0.14	0.27	0.64
50	0.00	0.00	0.00	0.00	0.00	0.03	0.11	0.20	0.35
60	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.10	0.21
70	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.10	0.13
75	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.09	0.11
80	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04	0.11
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.07
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.05
98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.04
99	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.04

03237280 Upper Twin Creek at McGaw, Ohio

Years analyzed = 46
Climatic year range = 1963–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	0.61	0.90	3.78	9.91	36.0	103.	184.	297.	374.
2	0.53	0.84	3.53	5.00	18.9	83.6	98.8	189.	246.
5	0.23	0.56	1.51	3.11	8.47	27.3	43.3	73.4	80.7
10	0.12	0.21	0.73	1.37	5.41	13.1	19.4	31.2	37.3
20	0.04	0.11	0.27	0.64	2.89	4.70	7.40	17.2	24.2
25	0.01	0.09	0.21	0.48	1.80	3.76	6.00	13.6	20.6
30	0.00	0.08	0.16	0.41	1.16	3.07	4.06	12.5	15.4
40	0.00	0.00	0.08	0.21	0.77	1.85	2.28	5.97	9.34
50	0.00	0.00	0.04	0.13	0.43	0.78	1.62	2.65	7.21
60	0.00	0.00	0.02	0.09	0.24	0.58	1.15	2.04	5.77
70	0.00	0.00	0.01	0.05	0.13	0.34	0.79	1.78	4.18
75	0.00	0.00	0.00	0.03	0.11	0.29	0.63	1.60	3.26
80	0.00	0.00	0.00	0.02	0.07	0.27	0.51	1.41	2.62
90	0.00	0.00	0.00	0.00	0.03	0.18	0.30	0.69	1.10
95	0.00	0.00	0.00	0.00	0.02	0.14	0.22	0.51	0.85
98	0.00	0.00	0.00	0.00	0.02	0.10	0.19	0.43	0.65
99	0.00	0.00	0.00	0.00	0.02	0.10	0.18	0.42	0.64

03237500 Ohio Brush Creek near West Union, Ohio

Years analyzed = 78
Climatic year range = 1926–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	3.49	11.8	63.8	330.	1920.	4900.	8080.	8890.	13400.
2	3.22	8.72	49.7	191.	1330.	3360.	4990.	8150.	10200.
5	2.27	4.90	22.7	82.9	483.	1480.	2080.	2950.	5500.
10	2.05	4.35	14.1	33.2	210.	668.	947.	1330.	2210.
20	1.27	2.98	7.35	16.9	85.1	244.	429.	555.	906.
25	1.00	2.65	6.64	15.2	61.5	178.	307.	435.	700.
30	0.93	2.35	4.16	10.3	48.5	151.	256.	343.	579.
40	0.82	1.97	2.89	6.88	30.7	104.	172.	223.	353.
50	0.32	1.10	1.68	4.60	15.5	58.4	123.	154.	263.
60	0.22	0.90	1.20	3.47	11.2	44.4	82.7	124.	203.
70	0.19	0.67	0.95	1.97	7.44	29.4	63.5	95.3	161.
75	0.14	0.54	0.80	1.58	6.05	25.6	57.9	81.5	141.
80	0.13	0.48	0.68	1.34	5.28	22.8	49.5	76.1	123.
90	0.06	0.20	0.32	0.87	3.94	18.2	34.1	64.1	84.0
95	0.06	0.13	0.20	0.83	3.27	13.5	27.1	51.1	66.8
98	0.06	0.11	0.20	0.74	2.59	10.8	21.6	49.2	57.5
99	0.06	0.11	0.20	0.57	2.55	10.0	18.4	49.1	56.4

03238500 White Oak Creek near Georgetown, Ohio

Years analyzed = 81
Climatic year range = 1924–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	5.76	9.03	22.4	116.	970.	4510.	5920.	7190.	9130.
2	5.60	7.31	18.7	104.	705.	2910.	4210.	5580.	6610.
5	2.54	4.14	11.2	30.7	218.	1150.	1890.	3000.	3800.
10	0.72	2.54	6.26	14.4	91.2	451.	637.	938.	1400.
20	0.10	0.79	3.28	8.88	34.2	148.	196.	303.	383.
25	0.06	0.51	2.80	8.12	27.0	99.2	144.	203.	282.
30	0.06	0.40	2.24	6.66	22.0	77.2	111.	164.	200.
40	0.00	0.21	1.51	5.18	13.2	46.8	72.4	106.	124.
50	0.00	0.11	0.42	3.58	9.00	32.6	53.2	75.4	92.8
60	0.00	0.00	0.20	1.96	4.80	22.7	34.1	46.3	74.5
70	0.00	0.00	0.10	0.78	3.72	16.0	25.2	35.5	46.9
75	0.00	0.00	0.10	0.72	3.00	12.6	22.4	29.6	42.1
80	0.00	0.00	0.00	0.40	1.90	11.0	19.3	23.0	36.8
90	0.00	0.00	0.00	0.10	0.92	7.22	11.8	18.3	27.9
95	0.00	0.00	0.00	0.00	0.62	4.97	9.10	15.0	20.6
98	0.00	0.00	0.00	0.00	0.40	3.76	7.62	13.9	17.7
99	0.00	0.00	0.00	0.00	0.40	3.12	7.38	13.7	16.7

03240000 Little Miami River near Oldtown, Ohio

Years analyzed = 57
Climatic year range = 1952–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	13.5	19.6	23.0	34.0	209.	570.	939.	1660.	2910.
2	13.3	16.5	22.0	32.0	164.	458.	756.	1490.	2360.
5	12.7	14.9	20.8	25.0	99.8	220.	519.	587.	715.
10	12.2	13.9	19.0	23.9	60.8	133.	237.	371.	385.
20	11.3	13.0	17.6	20.6	42.0	75.5	131.	200.	232.
25	11.2	12.0	16.6	20.0	34.0	68.8	112.	168.	209.
30	11.2	12.0	15.6	18.6	31.0	64.6	99.5	151.	187.
40	10.2	11.9	14.6	17.1	29.0	53.5	74.4	127.	165.
50	9.28	10.9	13.0	16.6	26.0	48.8	64.6	118.	146.
60	8.61	10.8	12.6	14.6	23.0	41.9	58.0	97.1	129.
70	8.18	9.81	11.0	13.0	21.0	37.8	53.6	74.1	119.
75	7.88	9.61	10.8	13.0	20.0	36.4	51.4	69.3	115.
80	7.01	8.80	9.56	12.0	19.0	36.0	49.4	64.6	109.
90	6.06	7.85	8.58	11.7	18.0	32.0	42.0	48.5	101.
95	5.77	7.29	7.98	10.8	16.6	27.8	38.2	47.8	96.3
98	5.34	6.76	7.43	9.80	15.8	26.5	36.2	46.2	93.4
99	3.76	5.28	7.18	9.42	15.0	26.0	36.0	45.1	91.5

03241500 Massies Creek at Wilberforce, Ohio

Years analyzed = 57
Climatic year range = 1952–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	3.32	5.90	10.8	17.0	123.	378.	608.	998.	1350.
2	3.11	5.67	8.43	14.3	99.6	325.	531.	781.	1230.
5	2.74	5.02	6.78	10.3	59.8	142.	336.	445.	570.
10	2.27	4.37	5.75	8.26	34.6	91.6	144.	225.	312.
20	2.11	4.06	5.06	7.02	21.0	46.5	82.3	118.	151.
25	2.11	3.74	4.88	6.46	16.0	35.8	58.8	102.	124.
30	1.99	3.31	4.67	6.22	13.4	30.2	51.6	93.4	94.1
40	1.99	3.09	4.10	5.52	11.0	21.0	41.3	66.2	84.6
50	1.62	2.89	3.76	5.12	9.70	19.0	34.4	54.7	65.2
60	1.49	2.59	3.20	4.22	8.78	16.4	27.0	46.5	57.2
70	1.12	1.71	2.46	3.84	7.00	14.8	21.4	38.8	49.0
75	0.68	1.55	2.26	3.60	6.00	13.0	20.2	36.2	45.6
80	0.60	1.37	1.90	3.18	6.00	10.4	16.5	32.9	43.2
90	0.50	1.18	1.76	2.66	5.30	7.97	14.2	22.3	36.8
95	0.41	1.05	1.50	2.36	4.02	7.22	12.6	19.2	34.1
98	0.40	0.98	1.48	2.25	3.78	6.82	9.60	15.3	31.1
99	0.39	0.90	1.48	2.12	3.70	6.50	8.82	15.2	29.6

03260700 Bokengehalas Creek near De Graff, Ohio

Years analyzed = 34
Climatic year range = 1957–90

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	11.8	13.0	19.0	29.5	52.5	103.	149.	309.	375.
2	8.96	10.8	15.6	24.4	42.5	76.8	85.9	226.	333.
5	6.81	8.42	12.0	16.5	26.4	45.3	56.8	116.	186.
10	5.80	7.20	8.88	13.0	19.9	29.8	38.2	51.1	116.
20	5.68	6.47	7.80	9.84	14.3	19.0	22.0	34.5	68.8
25	5.27	6.35	7.50	9.20	13.0	16.5	21.0	30.0	59.5
30	5.27	6.13	7.30	8.84	11.6	15.5	20.0	24.6	53.5
40	4.88	5.24	6.50	7.51	9.82	14.0	17.0	20.5	41.1
50	4.50	5.10	6.20	6.95	8.85	12.5	15.0	19.0	31.3
60	4.43	4.90	5.80	6.48	8.39	10.5	14.0	17.0	26.8
70	4.10	4.60	5.60	6.10	7.88	10.5	12.6	16.0	24.6
75	4.10	4.50	5.50	5.80	7.80	9.95	12.0	15.0	23.0
80	3.95	4.45	5.30	5.65	7.47	9.86	12.0	13.0	15.8
90	3.49	4.20	4.92	5.30	6.86	9.10	10.0	12.0	13.8
95	3.47	3.94	4.76	5.07	6.48	8.65	9.80	11.5	13.0
98	3.25	3.85	4.27	4.93	6.37	8.14	9.07	10.9	12.8
99	3.25	3.85	4.10	4.85	6.15	8.10	9.00	10.4	12.0

03264000 Greenville Creek near Bradford, Ohio

Years analyzed = 77
Climatic year range = 1930–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	98	95	90	80	50	20	10	5	2
1	23.4	26.9	38.8	65.6	230.	1140.	1890.	2830.	4130.
2	22.5	25.9	35.3	59.8	198.	969.	1780.	2430.	3760.
5	19.5	22.9	30.8	44.8	123.	476.	861.	1220.	2100.
10	17.1	21.5	26.0	36.5	72.4	261.	434.	527.	820.
20	15.6	19.7	25.2	30.6	52.6	134.	206.	237.	385.
25	15.0	18.7	23.8	29.0	45.0	94.8	169.	194.	326.
30	14.6	18.6	23.6	27.8	42.0	79.0	138.	160.	267.
40	14.0	16.9	21.8	25.0	37.0	60.6	98.8	124.	194.
50	12.1	14.9	18.8	23.2	34.0	52.4	84.4	108.	150.
60	12.1	13.9	15.6	21.0	29.0	47.7	63.7	89.0	134.
70	10.9	12.0	13.5	19.0	27.0	41.0	54.0	79.0	121.
75	10.5	11.0	12.8	18.0	26.0	38.2	51.4	76.5	116.
80	9.46	10.9	12.0	15.8	24.0	35.4	47.8	73.7	111.
90	8.37	9.00	11.0	14.6	22.0	31.5	41.0	65.3	102.
95	7.73	8.29	9.97	13.0	21.2	29.6	36.8	62.5	94.6
98	6.49	7.40	9.07	12.1	20.0	28.0	34.7	61.5	86.7
99	6.20	7.38	8.20	10.6	19.0	27.4	33.0	60.5	82.5

03265000 Stillwater River at Pleasant Hill, Ohio

Years analyzed = 87
Climatic year range = 1916–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	98	95	90	80	50	20	10	5	2
1	27.6	41.4	68.8	116.	608.	4040.	6740.	8320.	11200.
2	26.9	37.4	67.2	107.	375.	3100.	5860.	6440.	8740.
5	23.6	32.4	56.8	78.6	215.	1350.	3170.	4150.	5200.
10	22.5	30.2	45.0	64.5	133.	719.	1250.	1870.	2660.
20	22.0	27.6	37.6	50.6	106.	338.	526.	932.	1350.
25	22.0	26.2	35.8	47.6	84.0	265.	448.	755.	1230.
30	21.8	25.4	34.3	44.8	78.2	206.	311.	566.	1010.
40	20.8	24.2	30.5	40.0	62.0	139.	232.	414.	659.
50	15.0	21.0	26.8	36.0	55.0	105.	203.	291.	418.
60	13.6	19.0	23.4	31.5	49.0	91.9	159.	203.	317.
70	12.5	17.0	19.9	26.0	43.0	73.6	117.	186.	264.
75	11.8	16.0	18.6	24.0	40.0	68.0	110.	175.	236.
80	11.0	14.0	16.3	22.6	38.0	64.8	97.2	166.	214.
90	8.91	10.1	13.8	16.2	33.0	52.7	64.6	145.	167.
95	7.93	9.87	11.5	14.0	28.6	48.0	60.9	128.	153.
98	7.13	8.50	9.54	12.8	25.7	41.9	55.2	116.	141.
99	5.52	7.88	9.00	12.0	24.0	41.0	55.0	112.	137.

03266500 Mad River at Zanesfield, Ohio

Years analyzed = 34
Climatic year range = 1946–79

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1.68	2.25	3.20	4.80	10.4	22.5	32.0	79.5	114.
2	1.36	1.79	2.80	4.19	7.59	13.9	22.8	41.3	67.0
5	1.28	1.52	1.94	2.80	5.19	8.35	11.2	16.2	30.0
10	1.17	1.40	1.80	2.15	3.67	4.62	7.08	9.36	17.6
20	1.08	1.23	1.56	1.85	2.71	3.25	4.10	5.54	9.52
25	0.97	1.20	1.50	1.80	2.40	3.10	3.70	5.00	8.13
30	0.97	1.20	1.50	1.62	2.20	2.85	3.14	4.55	7.07
40	0.95	1.16	1.50	1.50	2.00	2.35	2.60	3.92	6.01
50	0.95	1.10	1.30	1.40	1.75	2.20	2.30	3.60	4.85
60	0.93	1.00	1.10	1.40	1.55	2.05	2.20	3.40	4.49
70	0.90	1.00	1.10	1.30	1.45	1.95	2.16	2.95	4.14
75	0.80	0.95	1.00	1.20	1.40	1.90	2.10	2.80	4.00
80	0.80	0.84	1.00	1.20	1.35	1.90	2.10	2.74	3.32
90	0.77	0.80	0.99	1.05	1.30	1.80	1.90	2.10	3.03
95	0.70	0.78	0.90	0.98	1.20	1.65	1.80	2.05	2.95
98	0.68	0.77	0.90	0.93	1.18	1.55	1.80	1.94	2.85
99	0.68	0.77	0.90	0.93	1.10	1.55	1.80	1.90	2.85

03267000 Mad River near Urbana, Ohio

Years analyzed = 72
Climatic year range = 1925–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	39.4	52.0	71.6	92.4	177.	639.	950.	1070.	1490.
2	39.0	50.9	66.1	79.1	153.	409.	670.	844.	1160.
5	38.1	49.4	60.6	70.6	121.	231.	401.	562.	780.
10	37.9	48.2	55.7	66.1	103.	166.	255.	349.	514.
20	37.0	46.0	50.3	58.6	90.0	144.	163.	258.	342.
25	36.0	45.0	48.0	57.0	85.0	133.	159.	229.	285.
30	36.0	43.6	47.3	55.6	80.5	122.	152.	221.	256.
40	35.1	42.7	46.0	53.2	78.0	117.	138.	186.	229.
50	35.1	41.0	45.0	51.6	75.5	111.	131.	166.	215.
60	33.6	40.0	43.0	50.6	73.0	107.	122.	157.	203.
70	32.2	38.7	42.1	48.6	71.5	101.	118.	147.	179.
75	32.2	38.3	39.3	47.6	70.0	100.	115.	134.	173.
80	31.9	36.4	38.3	47.6	68.4	97.6	114.	129.	163.
90	31.8	35.0	38.3	45.2	65.1	96.0	101.	117.	148.
95	30.3	34.7	37.0	43.6	63.8	93.2	99.1	114.	146.
98	29.8	34.0	35.6	42.8	62.9	92.3	98.6	111.	143.
99	29.8	34.0	35.3	41.6	62.5	91.8	98.1	111.	142.

03270800 Wolf Creek at Trotwood, Ohio

Years analyzed = 24
Climatic year range = 1962–85

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	0.85	3.40	14.0	24.5	63.0	126.	259.	517.	597.
2	0.75	3.06	11.5	15.8	44.1	96.9	204.	368.	421.
5	0.67	2.32	6.00	7.54	15.2	42.5	95.8	151.	268.
10	0.53	1.39	4.00	4.62	8.66	20.6	31.0	66.6	94.2
20	0.42	1.13	2.20	3.18	5.54	12.3	14.0	25.4	30.5
25	0.40	0.85	1.70	2.50	3.95	8.35	11.0	18.0	26.3
30	0.40	0.80	1.60	2.20	3.42	6.08	9.30	13.5	20.1
40	0.40	0.67	1.40	1.72	2.66	4.22	6.16	9.05	13.2
50	0.25	0.58	1.20	1.40	2.00	3.10	3.90	5.45	9.65
60	0.25	0.48	0.86	1.05	1.53	2.43	3.10	4.23	9.39
70	0.16	0.36	0.43	0.69	1.08	1.45	2.16	3.65	8.43
75	0.13	0.25	0.36	0.54	1.00	1.30	1.90	3.30	7.80
80	0.13	0.23	0.34	0.54	0.86	1.20	1.90	2.61	7.10
90	0.01	0.09	0.28	0.34	0.64	0.89	1.14	1.80	5.54
95	0.01	0.06	0.24	0.30	0.53	0.81	0.90	1.74	4.58
98	0.00	0.02	0.18	0.29	0.45	0.64	0.78	1.55	3.89
99	0.00	0.02	0.17	0.29	0.40	0.57	0.78	1.55	3.58

03271000 Wolf Creek at Dayton, Ohio

Years analyzed = 29
Climatic year range = 1938–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	6.35	10.0	22.0	59.0	144.	410.	509.	1010.	1250.
2	5.89	8.99	17.8	50.6	84.4	327.	485.	660.	1030.
5	4.83	6.96	14.4	30.0	71.1	117.	192.	337.	580.
10	4.50	6.10	13.0	20.0	32.6	62.2	83.2	153.	226.
20	4.20	5.40	8.84	12.0	19.6	36.0	40.2	68.0	73.4
25	4.00	5.40	8.10	10.0	17.0	28.0	34.0	47.0	62.5
30	3.80	5.08	7.60	10.0	14.0	24.4	26.4	45.0	55.9
40	3.40	4.80	5.82	7.90	12.0	17.0	21.0	36.4	47.1
50	2.85	4.20	5.10	7.00	11.0	15.0	18.0	34.0	39.5
60	2.60	3.40	4.80	6.40	9.78	13.0	16.8	26.0	33.9
70	2.25	2.90	4.08	6.06	8.56	12.6	14.0	21.0	29.3
75	2.15	2.70	3.90	5.90	8.00	12.0	12.0	20.0	27.0
80	1.99	2.50	3.60	5.54	7.70	11.0	12.0	18.0	24.4
90	1.46	1.92	3.02	5.02	6.70	9.60	11.0	17.0	19.5
95	1.31	1.58	2.40	4.58	6.22	9.06	11.0	14.6	16.6
98	1.15	1.30	2.37	4.10	6.00	8.10	9.95	13.0	15.5
99	1.15	1.20	2.20	4.10	6.00	8.10	9.70	13.0	15.5

03271800 Twin Creek near Ingomar, Ohio

Years analyzed = 37
Climatic year range = 1962–98

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	11.6	16.8	36.8	89.2	248.	1210.	1560.	2880.	4370.
2	10.8	15.9	25.5	74.1	177.	817.	1430.	2570.	3250.
5	10.6	12.3	19.3	48.6	104.	440.	650.	1130.	1700.
10	9.31	11.6	15.0	25.7	64.8	192.	287.	402.	638.
20	6.20	9.69	11.0	20.2	35.2	92.2	112.	157.	219.
25	6.20	8.72	10.6	19.4	27.0	42.4	85.4	110.	195.
30	6.20	8.05	10.6	17.7	24.4	32.4	64.7	92.5	162.
40	5.80	7.42	9.61	15.0	19.0	24.7	36.1	64.8	91.2
50	4.96	6.28	8.48	13.0	17.0	20.6	27.2	46.6	79.3
60	4.25	5.08	6.73	8.95	14.8	18.0	21.4	38.0	69.0
70	3.87	4.49	6.05	8.27	13.0	16.6	19.4	28.1	44.7
75	3.60	4.14	5.88	7.60	12.0	15.6	18.4	25.4	38.5
80	3.49	3.98	5.38	7.22	11.0	15.0	16.2	25.0	30.8
90	3.28	3.66	5.09	6.55	9.12	13.0	15.0	19.4	27.4
95	3.12	3.39	4.80	6.12	8.20	11.8	14.2	16.4	26.2
98	2.77	3.14	4.60	5.87	7.52	10.6	12.8	15.4	24.3
99	2.77	3.14	4.48	5.52	7.10	10.0	12.8	15.4	23.5

03272700 Sevenmile Creek at Camden, Ohio

Years analyzed = 36
Climatic year range = 1971–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	7.07	10.7	25.6	55.9	169.	511.	801.	1060.	1420.
2	6.25	9.24	15.4	36.7	118.	437.	573.	826.	1140.
5	5.65	6.97	9.82	21.9	67.6	178.	277.	384.	493.
10	4.86	5.30	7.50	13.3	33.1	86.3	118.	179.	242.
20	3.67	4.27	5.25	9.43	21.3	36.6	56.8	83.9	94.8
25	3.56	3.94	4.82	7.84	17.5	24.9	41.3	69.6	79.5
30	3.53	3.67	4.54	7.31	12.4	21.3	36.8	59.9	70.3
40	3.24	3.51	4.05	5.92	9.02	14.9	17.6	43.4	51.7
50	2.59	3.07	3.60	5.50	7.25	9.47	13.6	35.9	43.2
60	2.32	2.56	3.16	3.86	6.26	7.82	11.0	28.5	36.9
70	1.69	2.17	2.66	3.42	4.99	6.68	9.48	24.1	29.8
75	1.67	2.01	2.54	3.20	4.50	6.49	8.02	21.6	25.9
80	1.57	1.94	2.40	3.00	3.95	6.33	7.20	17.9	22.7
90	1.46	1.68	2.05	2.51	3.27	5.25	6.26	14.5	17.2
95	1.25	1.59	1.88	2.16	3.10	4.65	5.55	11.6	15.2
98	1.14	1.50	1.74	2.07	2.89	4.49	5.27	10.6	14.0
99	1.14	1.50	1.70	2.01	2.85	4.49	5.22	10.4	14.0

04177000 Ottawa River at University of Toledo, Toledo, Ohio

Years analyzed = 36
Climatic year range = 1945–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	52.7	64.1	97.0	158.	416.	650.	888.	1320.	2150.
2	35.2	56.4	83.2	148.	312.	566.	708.	1290.	2100.
5	26.5	33.8	56.4	79.6	169.	255.	495.	875.	1270.
10	18.2	28.2	35.1	60.8	96.5	152.	284.	490.	769.
20	8.51	17.6	23.6	30.2	40.1	76.8	119.	177.	266.
25	7.18	15.7	21.0	25.0	34.5	49.3	83.6	134.	215.
30	6.43	13.4	17.0	21.1	30.0	42.0	66.7	113.	172.
40	5.04	10.0	13.4	16.0	21.7	28.0	47.9	76.8	116.
50	3.76	7.19	11.0	13.0	16.5	22.9	34.0	62.9	81.2
60	2.89	5.25	9.51	10.0	11.9	16.8	26.2	48.0	56.5
70	2.48	4.16	7.17	8.32	9.06	12.9	21.4	34.7	48.6
75	0.86	3.44	5.20	7.03	8.45	11.9	19.8	32.0	44.8
80	0.00	2.48	4.00	5.71	8.15	10.8	16.9	27.9	44.3
90	0.00	1.55	3.20	4.93	6.56	8.79	13.4	19.6	36.1
95	0.00	0.76	2.26	4.04	6.10	7.47	10.6	16.4	22.6
98	0.00	0.64	1.62	2.92	4.36	7.03	9.45	14.9	19.6
99	0.00	0.56	1.54	2.43	4.10	6.65	9.04	14.6	17.9

04184500 Bean Creek at Powers, Ohio

Years analyzed = 49
Climatic year range = 1940–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	20.0	26.0	45.0	88.0	328.	539.	655.	930.	1080.
2	18.2	25.2	44.2	77.1	245.	469.	535.	766.	890.
5	16.7	24.0	39.4	56.8	139.	229.	351.	474.	520.
10	16.5	22.0	32.0	46.6	77.2	136.	238.	300.	338.
20	14.3	21.0	27.0	34.6	49.6	87.0	144.	182.	206.
25	13.5	20.0	26.0	32.0	42.0	71.0	125.	158.	172.
30	13.5	19.4	24.8	29.0	36.2	65.0	84.8	138.	154.
40	12.0	16.0	21.0	26.0	32.0	55.4	66.0	110.	121.
50	11.5	15.0	18.0	24.0	30.0	47.0	57.0	90.0	96.0
60	10.5	13.0	17.0	21.0	26.8	37.8	45.0	55.0	80.4
70	9.48	11.0	16.0	18.0	22.0	32.0	40.0	43.0	59.8
75	8.60	11.0	14.0	17.0	20.0	28.0	37.0	43.0	54.0
80	7.51	9.50	13.0	15.4	19.0	28.0	32.0	41.0	48.2
90	6.95	8.40	11.0	13.0	17.0	23.0	26.2	34.0	44.6
95	6.60	7.44	10.0	13.0	15.0	20.2	24.6	31.2	37.0
98	6.27	6.67	10.0	11.8	14.8	19.0	24.0	27.8	34.5
99	5.95	6.40	10.0	11.0	14.0	19.0	24.0	27.0	34.5

04185440 Unnamed Tributary to Lost Creek near Farmer, Ohio

Years analyzed = 22
Climatic year range = 1985–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	0.58	3.63	8.10	21.5	37.0	82.4	106.	138.	201.
2	0.22	1.44	5.38	13.4	28.5	60.3	68.8	78.0	95.1
5	0.08	0.32	1.73	2.53	11.1	21.4	24.5	44.5	46.2
10	0.05	0.15	0.46	0.74	3.50	7.82	12.4	21.4	22.6
20	0.05	0.09	0.19	0.25	0.92	2.66	4.35	6.86	11.8
25	0.04	0.07	0.17	0.22	0.61	1.33	2.70	4.84	9.15
30	0.04	0.06	0.11	0.16	0.36	1.00	2.08	2.98	6.58
40	0.04	0.04	0.06	0.12	0.20	0.52	0.72	1.53	1.87
50	0.03	0.03	0.05	0.08	0.14	0.31	0.50	1.00	1.45
60	0.02	0.03	0.03	0.04	0.12	0.22	0.38	0.71	0.94
70	0.00	0.01	0.03	0.04	0.09	0.16	0.33	0.38	0.74
75	0.00	0.00	0.02	0.03	0.08	0.15	0.30	0.32	0.66
80	0.00	0.00	0.02	0.03	0.07	0.13	0.26	0.30	0.63
90	0.00	0.00	0.01	0.01	0.05	0.10	0.17	0.27	0.38
95	0.00	0.00	0.00	0.01	0.05	0.08	0.14	0.19	0.24
98	0.00	0.00	0.00	0.01	0.04	0.08	0.10	0.16	0.24
99	0.00	0.00	0.00	0.01	0.03	0.07	0.10	0.16	0.23

04189000 Blanchard River near Findlay, Ohio

Years analyzed = 82
Climatic year range = 1923–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	11.2	18.0	20.6	50.6	506.	2110.	2840.	4470.	5130.
2	8.73	13.8	19.6	45.9	306.	1830.	2530.	3690.	4690.
5	7.37	11.5	14.7	30.6	149.	960.	1500.	2430.	3280.
10	6.55	10.0	12.1	22.8	80.1	378.	831.	1560.	2380.
20	4.83	7.15	10.0	16.4	42.5	183.	282.	626.	1420.
25	4.75	6.30	9.56	14.6	34.5	131.	212.	390.	820.
30	4.19	5.74	8.86	12.0	31.7	107.	169.	257.	635.
40	3.32	5.00	7.09	10.0	25.2	60.3	122.	174.	423.
50	2.83	4.40	6.39	9.18	22.0	47.0	93.3	112.	290.
60	2.51	3.86	5.88	7.89	19.4	40.3	63.7	97.6	194.
70	2.06	3.52	4.93	7.00	17.0	32.5	52.0	86.7	149.
75	1.92	3.12	4.65	6.84	14.5	26.4	47.7	80.1	133.
80	1.49	2.95	4.56	6.26	13.4	24.8	45.1	75.0	118.
90	1.26	2.62	3.38	4.86	11.5	20.1	35.4	50.1	74.0
95	1.07	2.03	2.94	4.17	10.5	18.4	29.1	46.9	58.4
98	0.97	1.83	2.42	3.76	9.44	17.4	23.0	39.0	55.0
99	0.86	1.66	2.26	3.66	9.40	16.4	23.0	38.7	54.4

04196500 Sandusky River near Upper Sandusky, Ohio

Years analyzed = 65
Climatic year range = 1921–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	20.3	26.0	35.6	78.4	391.	1580.	2420.	3020.	4180.
2	11.9	22.0	29.3	65.4	304.	1340.	2220.	2710.	3260.
5	7.28	16.7	23.8	32.6	141.	683.	1180.	1610.	2100.
10	5.68	13.1	16.1	21.8	71.0	450.	775.	835.	1410.
20	4.39	8.16	10.6	15.7	42.6	205.	333.	417.	698.
25	3.95	6.52	9.34	14.2	37.0	146.	264.	343.	554.
30	3.71	5.59	8.62	12.2	31.4	112.	209.	292.	452.
40	3.20	4.80	7.60	9.64	23.2	71.8	124.	187.	322.
50	2.42	4.64	6.46	8.28	19.0	39.6	96.6	151.	254.
60	2.05	3.17	4.38	7.27	14.0	29.0	70.2	105.	196.
70	1.63	2.39	3.35	6.16	12.6	26.4	59.2	80.1	144.
75	1.23	2.33	2.96	5.62	10.0	24.0	50.0	66.7	129.
80	1.12	2.12	2.46	5.02	9.94	22.2	41.8	55.8	117.
90	0.97	1.29	1.96	3.74	8.50	15.2	26.0	34.6	102.
95	0.81	1.15	1.78	2.84	6.50	13.6	19.6	27.1	81.1
98	0.68	1.11	1.56	2.24	5.43	11.8	17.3	25.3	67.0
99	0.60	1.00	1.46	1.92	4.60	11.0	16.4	24.2	31.4

04197000 Sandusky River near Mexico, Ohio

Years analyzed = 57
Climatic year range = 1923–81

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	27.5	41.7	59.6	96.6	680.	2420.	4330.	6090.	7230.
2	26.5	41.5	55.8	87.9	598.	2090.	4160.	6010.	6980.
5	23.1	36.1	47.1	57.4	232.	1460.	2780.	4860.	5390.
10	17.3	28.0	35.3	45.4	152.	770.	1320.	2210.	3830.
20	15.3	23.3	27.3	37.1	84.2	316.	554.	1050.	2020.
25	15.2	19.6	26.0	36.0	74.0	246.	404.	728.	1710.
30	15.2	16.7	25.2	31.6	66.8	190.	321.	617.	1430.
40	12.4	14.1	22.2	29.0	50.2	125.	235.	419.	1000.
50	10.3	12.0	18.6	22.6	39.0	87.6	147.	273.	574.
60	9.16	11.8	15.8	19.0	33.8	69.8	107.	188.	426.
70	8.61	10.9	13.4	17.0	28.0	58.6	86.8	154.	319.
75	8.50	10.8	12.6	16.0	24.0	57.0	73.6	142.	280.
80	7.99	9.90	10.9	14.2	24.0	52.4	71.4	131.	260.
90	5.98	7.98	9.46	12.0	19.0	45.5	58.0	102.	200.
95	4.30	5.90	7.66	9.37	16.6	37.9	49.4	87.9	174.
98	2.37	5.61	6.78	8.89	14.8	34.3	47.8	62.4	89.6
99	2.37	5.38	5.96	8.52	14.0	34.0	44.4	61.6	89.4

04197100 Honey Creek at Melmore, Ohio

Years analyzed = 33
Climatic year range = 1976–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	12.9	30.4	50.0	125.	528.	764.	1020.	1290.	2060.
2	11.3	28.6	39.1	100.	387.	685.	936.	1170.	1530.
5	6.71	10.6	20.9	58.9	142.	385.	586.	753.	959.
10	4.65	6.30	13.7	24.8	68.0	216.	265.	505.	641.
20	2.32	3.96	6.87	8.31	22.6	65.8	100.	263.	337.
25	2.09	3.40	4.02	6.78	16.0	47.2	73.0	132.	268.
30	1.74	2.31	3.33	6.10	13.4	38.6	55.3	84.9	222.
40	1.17	1.50	2.28	4.25	9.24	25.0	33.6	58.0	102.
50	0.95	1.18	1.96	2.94	6.60	20.0	24.4	38.8	69.9
60	0.65	0.96	1.60	1.96	5.30	9.86	20.2	28.0	49.4
70	0.44	0.86	1.26	1.50	3.96	8.06	16.1	22.0	36.1
75	0.38	0.73	1.10	1.34	3.60	6.36	15.2	19.6	31.8
80	0.31	0.66	1.00	1.26	3.20	5.54	10.3	17.6	28.9
90	0.19	0.53	0.75	1.01	2.40	3.20	5.11	13.6	15.6
95	0.15	0.38	0.58	0.88	1.46	2.86	4.66	11.8	13.6
98	0.13	0.30	0.51	0.71	1.27	2.63	4.14	10.5	12.6
99	0.13	0.26	0.46	0.65	1.10	2.54	4.06	9.84	12.3

04197170 Rock Creek at Tiffin, Ohio

Years analyzed = 26
Climatic year range = 1983–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	3.69	4.67	7.58	34.7	131.	295.	373.	609.	962.
2	3.52	4.39	6.77	33.4	91.1	207.	302.	386.	807.
5	2.48	3.33	4.97	10.6	26.6	80.4	118.	246.	489.
10	2.07	2.52	3.89	5.42	11.1	24.8	54.7	133.	200.
20	1.81	2.00	2.78	3.53	4.91	7.99	22.9	40.7	77.3
25	1.68	2.00	2.46	3.30	4.15	6.49	14.7	24.3	52.9
30	1.55	1.88	2.25	2.55	3.24	5.84	12.1	17.6	35.1
40	1.51	1.71	1.90	2.00	2.87	4.82	6.76	11.7	17.7
50	1.17	1.30	1.58	1.90	2.40	3.96	4.94	9.37	12.6
60	1.07	1.20	1.37	1.58	1.94	3.19	3.97	8.02	9.20
70	0.89	1.07	1.20	1.40	1.58	2.49	3.40	7.30	7.61
75	0.84	0.98	1.14	1.21	1.45	2.39	3.06	6.86	7.06
80	0.78	0.93	1.04	1.20	1.37	2.20	2.82	6.09	6.39
90	0.52	0.63	0.87	1.10	1.21	2.08	2.38	3.94	4.85
95	0.42	0.58	0.76	0.94	1.10	1.85	2.23	3.42	4.32
98	0.36	0.53	0.72	0.82	1.00	1.70	2.09	3.23	4.18
99	0.35	0.50	0.70	0.79	1.00	1.70	2.02	3.10	3.81

04198000 Sandusky River near Fremont, Ohio

Years analyzed = 83
Climatic year range = 1923–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	39.4	68.8	86.4	288.	1550.	5670.	8620.	10900.	15300.
2	38.8	61.9	76.3	263.	1190.	4770.	7930.	9620.	14200.
5	33.9	55.2	69.8	149.	694.	2770.	5330.	7160.	10000.
10	26.5	49.6	59.6	96.3	347.	1560.	3470.	4660.	6500.
20	24.4	38.2	47.3	65.3	161.	591.	1350.	2820.	3710.
25	23.0	32.6	44.2	59.8	131.	481.	877.	2330.	2750.
30	21.7	30.8	40.8	54.0	106.	365.	700.	1770.	2230.
40	19.1	28.2	34.8	46.2	83.0	244.	465.	741.	1530.
50	14.7	24.2	32.0	41.0	67.0	178.	367.	494.	1060.
60	12.7	21.4	27.8	36.3	57.0	134.	275.	402.	615.
70	12.6	19.1	22.8	29.9	51.0	107.	216.	341.	455.
75	11.7	17.4	22.0	28.0	47.0	103.	191.	309.	407.
80	11.4	15.2	18.3	26.9	43.2	91.6	151.	238.	358.
90	9.46	13.0	15.0	22.6	35.0	73.8	107.	180.	282.
95	7.41	11.1	13.0	20.4	33.0	60.8	91.6	142.	260.
98	5.41	9.92	11.3	16.5	29.2	52.3	89.1	123.	172.
99	5.41	9.52	11.0	16.0	28.0	50.2	88.8	117.	168.

04199000 Huron River at Milan, Ohio

Years analyzed = 53
Climatic year range = 1950–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	25.1	28.1	43.2	103.	976.	2150.	3960.	5160.	7720.
2	20.4	25.5	40.2	99.5	685.	1440.	3090.	4330.	5370.
5	16.5	22.3	30.8	51.7	248.	645.	1190.	2010.	3280.
10	14.6	21.4	24.8	41.0	159.	343.	567.	975.	2160.
20	13.2	15.7	19.4	33.8	73.6	159.	286.	463.	811.
25	13.1	14.0	18.4	28.8	60.0	119.	213.	383.	679.
30	12.1	13.7	18.4	27.9	51.4	96.8	182.	296.	598.
40	10.3	12.1	16.4	22.8	36.0	72.6	152.	224.	398.
50	8.77	10.6	15.4	19.8	30.0	62.2	91.8	177.	271.
60	6.79	9.63	12.9	16.0	24.8	51.0	67.1	147.	175.
70	5.87	8.17	11.0	12.0	22.0	45.0	56.7	123.	136.
75	5.59	6.60	8.86	11.0	20.0	41.2	52.4	107.	126.
80	5.21	5.58	8.50	11.0	17.4	38.0	47.0	93.0	110.
90	3.70	4.87	6.38	8.98	14.0	30.6	39.9	49.6	69.0
95	3.28	4.27	5.32	7.24	12.2	24.8	35.4	44.5	63.6
98	3.05	3.85	4.29	6.09	12.0	21.8	32.2	38.9	61.1
99	3.05	3.67	4.08	6.00	12.0	21.0	32.2	38.3	58.0

04199155 Old Woman Creek at Berlin Rd near Huron, Ohio

Years analyzed = 21
Climatic year range = 1987–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	2.76	5.68	17.6	91.8	184.	248.	335.	438.	449.
2	2.54	4.97	13.3	51.6	102.	161.	212.	306.	426.
5	1.56	3.17	5.87	15.6	46.4	71.2	85.6	113.	152.
10	0.46	1.52	2.42	5.48	20.0	31.8	42.8	59.2	60.7
20	0.26	1.08	1.28	1.94	5.18	11.8	13.6	27.5	34.6
25	0.15	0.89	1.03	1.30	4.10	8.32	9.60	20.2	23.8
30	0.08	0.58	0.78	1.10	3.08	5.99	7.62	15.4	17.0
40	0.02	0.23	0.57	0.73	2.12	3.62	5.47	9.35	12.2
50	0.00	0.06	0.22	0.53	1.30	2.64	4.04	7.02	8.23
60	0.00	0.00	0.07	0.38	0.84	1.88	2.54	4.54	6.41
70	0.00	0.00	0.00	0.14	0.59	1.37	2.18	3.20	4.22
75	0.00	0.00	0.00	0.12	0.42	1.19	1.92	2.68	3.34
80	0.00	0.00	0.00	0.02	0.26	1.05	1.68	2.37	2.81
90	0.00	0.00	0.00	0.00	0.16	0.47	1.19	1.88	2.11
95	0.00	0.00	0.00	0.00	0.00	0.23	0.44	1.00	1.86
98	0.00	0.00	0.00	0.00	0.00	0.11	0.41	0.81	1.68
99	0.00	0.00	0.00	0.00	0.00	0.08	0.41	0.73	1.52

04199500 Vermilion River near Vermilion, Ohio

Years analyzed = 39
Climatic year range = 1950–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	6.60	19.0	84.0	286.	637.	1430.	1520.	2300.	3340.
2	5.76	14.8	56.2	186.	500.	1070.	1300.	1730.	3060.
5	4.76	8.72	24.6	120.	250.	461.	588.	959.	1310.
10	3.82	7.36	20.6	63.0	132.	225.	294.	503.	563.
20	2.30	4.70	14.6	32.8	49.0	93.2	126.	191.	196.
25	2.00	4.20	13.0	18.0	37.0	70.0	115.	138.	157.
30	1.60	3.80	9.20	13.0	30.4	60.0	90.4	115.	137.
40	1.10	2.90	6.60	8.26	20.2	42.0	60.4	81.2	98.2
50	1.00	2.50	4.70	6.70	15.0	33.0	38.0	56.0	84.0
60	0.08	2.28	3.54	5.32	10.0	20.8	30.8	43.8	71.6
70	0.00	0.80	2.70	4.20	6.92	16.0	25.8	34.8	56.6
75	0.00	0.50	2.30	3.00	4.30	14.0	22.0	30.0	48.0
80	0.00	0.30	1.90	2.24	3.90	10.0	19.0	28.0	32.8
90	0.00	0.20	1.30	1.50	2.92	6.90	9.42	15.4	16.0
95	0.00	0.10	0.77	1.02	2.46	5.80	8.30	11.0	14.0
98	0.00	0.10	0.48	0.90	2.10	5.35	7.38	9.22	12.8
99	0.00	0.10	0.46	0.73	2.10	5.10	7.10	9.10	12.0

04207200 Tinkers Creek at Bedford, Ohio

Years analyzed = 46
Climatic year range = 1963–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	112.	196.	340.	485.	686.	862.	958.	1230.	2030.
2	89.8	171.	273.	361.	474.	726.	798.	1040.	1370.
5	48.8	127.	146.	226.	340.	543.	580.	631.	674.
10	38.0	83.6	103.	126.	238.	303.	349.	385.	494.
20	25.2	50.9	61.8	94.0	127.	163.	179.	237.	283.
25	21.7	43.5	52.8	72.0	103.	122.	143.	191.	215.
30	20.0	38.8	44.4	55.6	85.2	96.8	117.	150.	185.
40	15.2	25.8	37.5	45.3	62.3	73.7	81.0	110.	138.
50	11.1	22.1	32.2	39.1	48.0	60.0	65.2	81.3	117.
60	9.99	19.5	28.0	30.5	37.5	48.7	54.0	67.8	97.2
70	9.38	17.9	24.2	28.0	33.8	41.6	45.6	55.3	76.8
75	8.78	16.2	21.4	26.1	32.0	37.9	40.0	46.2	65.4
80	8.52	14.5	21.0	25.1	28.4	33.0	37.4	42.3	55.8
90	7.59	11.2	18.0	19.3	24.1	27.9	30.8	36.3	40.7
95	7.20	10.3	16.2	18.0	21.1	24.6	27.2	31.2	33.8
98	6.91	10.0	14.3	16.7	19.4	23.8	26.0	28.8	31.1
99	6.65	9.46	13.4	16.0	19.0	23.0	25.6	28.0	30.3

04211000 Rock Creek near Rock Creek, Ohio

Years analyzed = 24
Climatic year range = 1942–65

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1.40	2.70	12.0	61.0	208.	578.	904.	1090.	1680.
2	1.21	2.45	9.28	36.6	133.	366.	482.	719.	918.
5	0.72	1.70	5.14	13.6	45.9	134.	181.	419.	540.
10	0.14	1.10	2.14	3.97	21.3	68.4	101.	184.	318.
20	0.00	0.15	1.18	1.75	7.23	29.9	40.2	106.	173.
25	0.00	0.00	0.80	1.45	5.10	17.5	26.0	87.0	125.
30	0.00	0.00	0.60	1.07	2.76	13.7	18.0	64.4	94.6
40	0.00	0.00	0.30	0.51	1.49	7.45	10.2	38.7	52.7
50	0.00	0.00	0.00	0.15	0.80	4.60	7.90	21.0	35.3
60	0.00	0.00	0.00	0.10	0.49	2.58	4.90	7.84	19.3
70	0.00	0.00	0.00	0.00	0.18	0.53	2.44	4.90	14.1
75	0.00	0.00	0.00	0.00	0.10	0.25	2.00	4.60	12.5
80	0.00	0.00	0.00	0.00	0.10	0.25	1.32	4.32	10.8
90	0.00	0.00	0.00	0.00	0.00	0.05	0.40	2.25	3.65
95	0.00	0.00	0.00	0.00	0.00	0.00	0.30	1.85	3.34
98	0.00	0.00	0.00	0.00	0.00	0.00	0.20	1.75	3.08
99	0.00	0.00	0.00	0.00	0.00	0.00	0.20	1.75	2.95

04212000 Grand River near Madison, Ohio

Years analyzed = 49
Climatic year range = 1922–73

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	37.0	66.0	284.	575.	1630.	4080.	4880.	5900.	8270.
2	36.5	62.6	238.	416.	1460.	3080.	4200.	5210.	6860.
5	31.9	49.0	125.	190.	720.	1930.	2300.	3080.	3990.
10	23.8	28.4	88.2	109.	361.	951.	1670.	1910.	2820.
20	17.1	20.6	33.0	50.6	125.	327.	790.	1130.	1870.
25	15.0	18.0	21.0	35.0	96.0	252.	645.	1010.	1700.
30	13.7	15.0	19.0	31.4	74.8	208.	451.	793.	1460.
40	9.16	11.2	15.0	20.6	39.0	127.	184.	590.	910.
50	6.55	9.10	11.0	14.0	24.0	53.0	107.	352.	582.
60	4.87	6.42	9.00	11.0	18.0	40.0	59.0	150.	400.
70	3.80	5.20	7.28	8.20	13.6	28.0	33.0	112.	239.
75	3.35	4.90	6.70	7.20	12.0	22.0	30.0	87.0	159.
80	2.34	4.50	5.80	6.30	11.0	15.0	25.4	70.8	133.
90	1.33	2.34	3.90	5.42	8.08	11.4	12.2	22.0	34.5
95	0.78	1.16	3.36	4.02	7.20	10.0	11.0	19.0	33.3
98	0.20	0.77	2.02	3.75	5.95	9.00	10.0	16.8	21.5
99	0.20	0.60	1.60	3.20	5.40	8.00	9.80	16.0	21.5

04212100 Grand River near Painesville, Ohio

Years analyzed = 35
Climatic year range = 1974–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	218.	838.	1510.	3380.	4490.	6320.	7340.	8000.	11400.
2	196.	782.	1310.	2850.	4290.	5530.	6070.	7370.	8920.
5	158.	386.	921.	2050.	2630.	3880.	4510.	5590.	6620.
10	119.	283.	675.	1150.	1670.	2360.	2730.	4130.	4990.
20	82.1	152.	213.	615.	954.	1310.	1870.	2390.	2800.
25	75.4	124.	189.	385.	698.	1030.	1380.	1840.	2310.
30	70.8	92.6	159.	258.	488.	820.	1100.	1670.	1980.
40	59.5	72.5	106.	134.	314.	542.	755.	1220.	1470.
50	42.6	50.2	88.8	104.	203.	374.	454.	871.	1230.
60	27.0	34.3	54.9	79.6	118.	254.	325.	627.	907.
70	15.4	20.8	36.6	53.8	80.6	190.	231.	442.	663.
75	13.6	16.6	30.6	41.0	68.0	147.	179.	318.	524.
80	11.8	14.4	26.5	31.2	58.0	115.	139.	255.	414.
90	9.21	10.7	17.4	24.0	46.2	60.8	103.	140.	282.
95	7.16	9.15	14.7	19.2	28.6	48.6	56.4	97.7	128.
98	6.62	8.61	12.9	16.0	25.0	38.7	50.8	79.8	106.
99	6.62	8.44	12.0	15.0	25.0	38.4	49.8	74.2	97.2

04212500 Ashtabula River near Ashtabula, Ohio

Years analyzed = 51
Climatic year range = 1924–79

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	13.0	19.0	55.0	109.	900.	1680.	2290.	3790.	6050.
2	12.2	15.5	38.5	82.8	444.	1370.	1710.	2490.	3490.
5	6.10	7.53	16.0	45.2	225.	812.	1160.	1420.	2170.
10	3.45	5.52	8.18	23.3	128.	426.	722.	910.	1130.
20	1.65	3.50	4.37	7.06	66.8	204.	370.	493.	794.
25	1.41	2.54	3.28	4.38	38.0	145.	311.	404.	639.
30	1.14	1.30	2.80	3.68	22.8	113.	252.	257.	462.
40	0.14	0.51	1.41	2.40	12.0	84.6	145.	186.	318.
50	0.01	0.32	0.50	1.10	5.40	51.0	83.0	128.	224.
60	0.00	0.06	0.20	0.50	3.20	28.0	56.4	91.9	189.
70	0.00	0.00	0.10	0.18	1.80	14.4	36.0	54.9	156.
75	0.00	0.00	0.00	0.10	1.40	12.4	25.0	44.0	124.
80	0.00	0.00	0.00	0.00	1.00	8.66	14.9	36.5	106.
90	0.00	0.00	0.00	0.00	0.32	3.10	7.47	19.7	39.3
95	0.00	0.00	0.00	0.00	0.20	2.54	6.66	9.92	13.0
98	0.00	0.00	0.00	0.00	0.20	1.62	4.58	6.71	10.9
99	0.00	0.00	0.00	0.00	0.20	1.52	4.38	6.12	10.9

04213000 Conneaut Creek at Conneaut, Ohio

Years analyzed = 73
Climatic year range = 1922–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	43.4	48.5	140.	441.	1670.	2950.	3590.	7640.	9550.
2	36.4	40.7	122.	302.	1290.	2460.	3080.	4130.	6300.
5	24.5	31.2	55.0	191.	720.	1420.	1780.	2030.	2500.
10	20.8	26.6	41.8	116.	409.	855.	1220.	1420.	1540.
20	17.0	18.0	25.0	39.8	208.	433.	605.	786.	921.
25	15.0	16.0	20.0	35.2	156.	330.	518.	603.	766.
30	12.0	14.8	17.6	22.1	115.	268.	412.	506.	660.
40	8.64	10.8	12.5	17.2	61.2	187.	310.	384.	491.
50	6.18	7.64	9.76	13.8	32.0	131.	208.	261.	366.
60	4.52	6.44	7.70	11.0	23.0	86.6	147.	186.	302.
70	3.63	5.07	6.44	7.64	19.0	58.9	107.	142.	239.
75	3.28	4.38	5.88	6.88	16.0	44.6	85.8	121.	223.
80	3.08	3.95	5.05	6.28	13.4	36.5	68.8	98.4	193.
90	2.15	2.97	3.38	4.47	10.0	25.4	51.9	68.1	114.
95	1.65	2.08	2.78	3.76	8.50	20.4	40.3	44.3	71.8
98	0.91	1.71	2.30	3.09	7.00	17.2	31.7	37.3	43.8
99	0.83	1.71	2.20	3.06	7.00	17.0	29.8	37.3	42.6

Appendix 5. Annual 1-Day and 7-Day Mean Flow-Duration Results for Sites with Streamflows that are Subject to Regulation

03086500 Mahoning River at Alliance, Ohio

Years analyzed = 51
Climatic year range = 1942–92

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	190.	434.	511.	676.	937.	1210.	1360.	1820.	2880.
2	165.	299.	365.	475.	666.	867.	925.	1010.	1130.
5	96.2	148.	186.	231.	365.	493.	597.	620.	725.
10	67.0	86.6	110.	132.	204.	307.	365.	395.	423.
20	29.1	35.0	52.4	69.4	101.	154.	170.	203.	220.
25	24.0	24.0	39.6	54.0	80.0	126.	144.	163.	170.
30	18.0	20.6	30.4	40.2	64.9	104.	121.	135.	151.
40	9.77	11.7	14.4	26.0	46.2	71.2	88.6	98.0	113.
50	3.74	4.80	9.36	15.4	33.0	54.2	65.0	75.4	84.6
60	0.63	2.24	5.70	10.0	23.0	40.4	47.6	57.2	61.9
70	0.00	0.50	2.94	6.56	17.0	28.1	35.6	44.6	48.0
75	0.00	0.06	2.08	4.46	13.0	24.5	30.8	39.6	45.8
80	0.00	0.00	0.26	2.85	10.0	20.1	25.8	34.2	39.8
90	0.00	0.00	0.00	0.00	6.87	13.6	17.2	22.4	25.0
95	0.00	0.00	0.00	0.00	4.10	10.7	14.6	17.0	22.8
98	0.00	0.00	0.00	0.00	3.70	8.96	12.3	14.5	18.8
99	0.00	0.00	0.00	0.00	3.30	8.16	11.7	12.4	16.5

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	145.	275.	379.	431.	618.	751.	849.	1130.	1290.
2	126.	240.	261.	363.	486.	594.	669.	773.	1130.
5	88.5	141.	189.	231.	332.	454.	477.	562.	604.
10	57.8	96.9	119.	142.	247.	312.	384.	400.	447.
20	29.4	40.5	57.2	78.3	129.	197.	244.	272.	279.
25	23.0	29.1	42.7	63.6	94.5	166.	182.	213.	220.
30	19.2	20.2	36.8	50.5	74.9	133.	160.	170.	186.
40	9.33	11.4	16.6	25.6	50.8	91.8	114.	135.	141.
50	4.90	5.43	11.6	17.4	38.0	68.5	85.9	98.7	111.
60	1.22	3.70	6.42	11.9	27.0	50.3	57.4	70.7	81.2
70	0.61	1.66	4.32	7.59	17.1	34.2	43.3	55.3	63.5
75	0.02	0.70	3.24	5.87	14.3	27.9	38.3	49.3	55.3
80	0.00	0.24	1.82	4.06	11.9	23.4	32.7	43.8	48.9
90	0.00	0.00	0.00	0.57	7.14	16.6	22.1	28.7	34.1
95	0.00	0.00	0.00	0.22	5.51	11.9	16.2	20.2	25.2
98	0.00	0.00	0.00	0.00	4.27	9.99	13.8	17.8	20.9
99	0.00	0.00	0.00	0.00	4.07	9.13	12.9	16.2	20.6

03093000 Eagle Creek at Phalanx Station, Ohio

Years analyzed = 78
Climatic year range = 1927–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	440.	559.	735.	856.	1150.	1480.	1590.	1770.	2100.
2	315.	412.	530.	625.	760.	1060.	1180.	1260.	1410.
5	166.	219.	257.	343.	442.	590.	687.	731.	868.
10	89.2	113.	138.	175.	255.	344.	401.	481.	547.
20	47.4	55.0	65.4	93.2	132.	186.	214.	243.	277.
25	35.0	43.4	52.9	75.5	103.	147.	178.	195.	230.
30	28.9	36.8	42.9	57.9	84.4	120.	151.	160.	185.
40	21.7	26.0	30.5	39.0	62.6	88.3	110.	118.	145.
50	16.3	19.9	22.9	27.8	48.0	66.0	84.0	91.6	118.
60	13.3	16.9	18.9	22.8	35.2	52.5	62.1	72.5	94.4
70	10.7	13.0	15.6	19.4	27.0	37.2	46.2	55.3	71.6
75	9.72	12.0	13.9	16.9	23.0	33.2	38.3	49.0	65.1
80	8.30	9.99	12.8	15.0	20.0	27.0	35.1	43.0	56.1
90	6.63	7.85	9.29	11.0	15.0	20.7	24.1	28.9	34.7
95	5.19	6.69	7.12	9.36	12.0	18.1	21.1	25.1	28.1
98	3.58	5.19	6.32	8.16	11.0	16.1	19.4	23.0	25.4
99	2.64	3.90	5.76	7.05	9.90	15.2	18.0	20.8	24.0

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	260.	364.	444.	516.	725.	927.	1050.	1220.	1480.
2	200.	301.	371.	435.	606.	692.	765.	920.	1080.
5	154.	206.	256.	317.	413.	517.	564.	614.	756.
10	93.6	127.	138.	223.	284.	387.	431.	472.	482.
20	55.4	61.5	85.9	118.	168.	248.	276.	315.	355.
25	37.9	51.0	64.9	91.0	133.	197.	215.	254.	291.
30	31.6	40.0	53.3	66.8	105.	162.	185.	239.	253.
40	23.1	27.8	31.4	42.6	72.8	99.3	134.	158.	192.
50	16.9	19.9	24.4	31.8	54.5	75.8	102.	132.	146.
60	13.7	16.8	19.7	23.7	39.6	56.5	78.3	89.4	119.
70	10.6	13.2	16.1	19.4	29.0	43.1	53.0	66.4	96.1
75	9.55	12.0	14.4	17.3	25.1	37.5	43.5	59.1	83.5
80	8.69	10.8	12.7	15.6	21.1	31.5	37.9	48.6	72.6
90	7.29	8.29	9.95	12.1	15.5	23.2	28.7	35.5	48.8
95	6.55	7.16	8.05	10.4	13.5	19.1	23.1	28.7	32.9
98	5.39	6.47	7.24	9.41	12.2	17.3	21.2	25.2	27.3
99	5.02	6.14	6.89	8.76	11.5	16.9	20.2	23.3	26.3

03097500 Meander Creek at Mineral Ridge, Ohio

Years analyzed = 21
Climatic year range = 1930–50

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	121.	289.	379.	476.	641.	840.	912.	1050.	1130.
2	87.5	178.	278.	329.	445.	565.	747.	787.	791.
5	50.1	82.4	106.	121.	211.	266.	284.	417.	464.
10	7.36	17.3	41.1	56.2	88.0	147.	162.	210.	235.
20	2.05	3.44	4.29	6.64	26.0	53.6	66.2	78.4	87.2
25	1.48	1.52	2.19	3.31	8.75	27.6	39.2	55.3	59.6
30	1.16	1.20	1.58	2.11	5.40	13.1	21.8	38.6	44.8
40	0.81	0.92	1.14	1.56	2.50	5.24	6.54	15.0	22.3
50	0.62	0.80	0.94	1.28	1.60	2.04	3.10	5.20	8.73
60	0.52	0.70	0.80	0.90	1.20	1.64	1.80	3.66	4.91
70	0.51	0.62	0.70	0.70	0.80	1.44	1.66	3.32	4.15
75	0.41	0.52	0.70	0.70	0.80	1.40	1.60	3.04	3.67
80	0.41	0.50	0.60	0.61	0.70	1.30	1.46	2.72	3.09
90	0.40	0.40	0.50	0.50	0.60	1.08	1.26	1.84	2.08
95	0.30	0.32	0.40	0.40	0.60	0.98	1.12	1.60	1.78
98	0.21	0.30	0.31	0.33	0.50	0.82	1.06	1.45	1.50
99	0.03	0.12	0.30	0.30	0.47	0.71	1.00	1.39	1.50

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	110.	257.	321.	374.	537.	629.	723.	1100.	1160.
2	85.4	189.	232.	310.	368.	436.	501.	584.	819.
5	53.5	102.	141.	161.	244.	311.	366.	415.	439.
10	15.3	23.4	61.5	73.9	122.	185.	196.	266.	288.
20	1.86	3.07	5.99	8.20	32.1	70.1	94.3	121.	123.
25	1.28	1.58	2.49	3.97	14.3	47.4	62.8	76.9	92.5
30	1.04	1.09	1.61	2.07	7.63	26.8	33.7	55.3	65.0
40	0.79	0.91	1.13	1.84	3.03	7.03	10.7	28.9	33.0
50	0.69	0.83	0.96	1.39	1.80	2.70	4.44	5.55	15.6
60	0.58	0.75	0.86	0.95	1.20	1.76	2.01	4.16	5.05
70	0.53	0.67	0.73	0.79	0.89	1.50	1.69	3.50	4.27
75	0.50	0.61	0.69	0.75	0.80	1.42	1.62	3.19	3.90
80	0.48	0.55	0.65	0.71	0.76	1.39	1.55	2.85	3.44
90	0.43	0.46	0.54	0.60	0.67	1.17	1.36	1.83	2.34
95	0.37	0.40	0.48	0.51	0.64	1.05	1.26	1.65	1.93
98	0.19	0.35	0.42	0.44	0.60	0.96	1.19	1.52	1.56
99	0.15	0.21	0.39	0.41	0.59	0.93	1.18	1.46	1.55

03097550 Mahoning River at Ohio Edison P Plt at Niles, Ohio

Years analyzed = 21
Climatic year range = 1988–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1550.	2200.	2780.	3970.	5320.	5650.	5780.	7250.	7730.
2	1240.	1780.	2400.	3170.	3630.	4580.	4820.	5870.	6740.
5	805.	1150.	1750.	2420.	2700.	3560.	3770.	4500.	4960.
10	631.	795.	1150.	1760.	2060.	2970.	3070.	3370.	3700.
20	481.	523.	691.	1040.	1220.	2190.	2270.	2410.	2680.
25	456.	468.	557.	767.	982.	1730.	2060.	2180.	2380.
30	440.	442.	484.	604.	785.	1280.	1850.	1970.	2270.
40	397.	401.	431.	507.	568.	903.	1460.	1650.	1790.
50	356.	369.	393.	419.	486.	724.	1120.	1220.	1410.
60	317.	342.	362.	379.	447.	554.	831.	976.	1160.
70	262.	311.	336.	355.	390.	445.	624.	751.	876.
75	249.	298.	325.	333.	379.	428.	558.	632.	710.
80	238.	275.	302.	310.	351.	418.	510.	558.	598.
90	215.	246.	257.	273.	314.	351.	392.	420.	455.
95	204.	225.	231.	236.	276.	309.	333.	368.	404.
98	194.	201.	209.	226.	257.	282.	299.	341.	353.
99	189.	191.	204.	217.	249.	271.	289.	317.	332.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1120.	1350.	2030.	2940.	3480.	4190.	4990.	5570.	5710.
2	981.	1240.	1870.	2670.	3220.	3800.	4190.	4810.	5520.
5	744.	1060.	1540.	2200.	2550.	3310.	3330.	4300.	4730.
10	590.	826.	1140.	1680.	2070.	2870.	2900.	3270.	3820.
20	477.	561.	732.	1050.	1230.	2280.	2340.	2380.	2620.
25	454.	493.	613.	882.	1060.	1760.	2120.	2180.	2350.
30	441.	465.	522.	660.	847.	1350.	1900.	2040.	2190.
40	406.	429.	461.	531.	626.	951.	1550.	1770.	1880.
50	377.	396.	410.	461.	511.	739.	1250.	1420.	1490.
60	331.	354.	383.	404.	477.	602.	974.	1100.	1250.
70	277.	333.	346.	377.	411.	501.	733.	846.	994.
75	259.	315.	337.	359.	396.	442.	641.	733.	890.
80	248.	302.	308.	328.	370.	429.	524.	641.	763.
90	222.	252.	271.	284.	323.	384.	415.	459.	516.
95	211.	236.	239.	252.	291.	338.	376.	410.	443.
98	204.	216.	222.	235.	273.	302.	339.	378.	392.
99	200.	205.	216.	224.	259.	292.	313.	342.	358.

03116000 Tuscarawas River at Clinton, Ohio

Years analyzed = 38
Climatic year range = 1940–77

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	633.	694.	764.	850.	983.	1210.	1360.	1510.	1610.
2	367.	558.	623.	691.	817.	943.	1070.	1270.	1380.
5	209.	257.	403.	452.	546.	614.	657.	838.	892.
10	145.	161.	219.	254.	316.	398.	450.	511.	559.
20	93.4	108.	121.	143.	169.	218.	270.	289.	377.
25	87.6	91.9	105.	115.	141.	187.	221.	238.	318.
30	70.7	82.2	95.0	99.9	119.	155.	179.	198.	261.
40	59.5	68.7	74.3	82.6	96.0	120.	140.	155.	188.
50	53.4	58.9	66.8	71.0	84.5	98.6	113.	136.	154.
60	46.6	53.8	58.9	63.7	74.0	85.6	95.2	120.	132.
70	42.7	48.9	52.9	59.1	66.0	77.9	80.6	96.6	111.
75	41.6	46.5	49.8	55.5	62.4	74.7	77.6	89.6	103.
80	40.1	45.0	48.8	52.7	59.0	70.6	74.4	84.0	92.2
90	36.7	40.7	42.0	46.7	54.6	65.2	68.6	74.7	77.4
95	33.7	36.9	40.0	42.4	51.0	62.0	64.7	70.1	74.1
98	30.8	34.0	38.0	39.0	48.3	58.7	63.9	68.0	71.0
99	28.8	33.0	36.5	37.8	47.8	57.2	61.1	66.8	70.0

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	436.	542.	588.	630.	807.	962.	1010.	1120.	1160.
2	373.	432.	487.	527.	636.	741.	829.	989.	1060.
5	195.	234.	361.	396.	484.	573.	626.	739.	821.
10	133.	149.	233.	274.	337.	378.	420.	497.	564.
20	93.2	113.	134.	159.	204.	236.	275.	330.	369.
25	88.4	101.	106.	122.	164.	205.	242.	270.	331.
30	73.8	85.9	98.1	108.	138.	179.	199.	221.	286.
40	59.3	68.4	76.4	85.8	103.	133.	153.	173.	210.
50	54.3	61.6	68.6	72.9	89.6	104.	120.	145.	181.
60	46.2	54.8	59.5	66.3	77.1	89.7	102.	133.	145.
70	43.0	49.3	55.3	59.8	67.7	82.1	89.1	107.	123.
75	42.1	47.8	52.6	55.8	64.8	77.6	83.6	97.5	106.
80	41.0	45.7	50.0	53.8	60.6	73.3	80.4	88.4	94.6
90	37.3	41.6	44.3	48.5	56.2	67.2	70.9	77.2	80.4
95	35.7	39.3	41.5	45.7	52.5	63.4	67.3	72.5	75.4
98	32.8	36.1	39.5	42.4	51.3	61.0	64.9	71.0	72.3
99	31.8	35.3	38.9	41.2	50.4	60.2	64.4	69.4	71.0

03116200 Chippewa Creek at Easton, Ohio

Years analyzed = 20
Climatic year range = 1961–80

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	805.	899.	1060.	1110.	1270.	1490.	1690.	2320.	2530.
2	547.	633.	780.	886.	984.	1070.	1160.	1210.	1390.
5	212.	249.	386.	510.	580.	671.	728.	783.	871.
10	119.	127.	166.	252.	336.	415.	486.	542.	634.
20	43.2	49.3	92.4	121.	151.	194.	247.	342.	364.
25	27.7	38.6	71.8	86.3	120.	149.	200.	276.	286.
30	20.3	31.0	56.9	67.3	95.6	125.	159.	228.	242.
40	13.5	24.3	39.9	42.9	69.3	96.3	108.	162.	167.
50	11.4	20.7	27.0	27.6	52.5	77.5	85.0	110.	122.
60	10.0	14.4	19.4	22.0	39.5	54.4	61.9	64.9	98.6
70	9.05	10.3	13.2	17.0	27.9	34.1	43.8	58.5	79.8
75	8.64	9.66	12.2	14.0	24.0	26.9	38.4	49.0	68.5
80	8.22	8.65	11.2	12.3	19.5	24.2	33.2	42.4	51.5
90	6.53	7.16	8.86	9.32	14.5	18.9	22.9	30.0	32.9
95	6.20	6.22	8.04	8.67	12.5	15.7	19.6	26.4	28.9
98	4.80	4.99	6.86	7.99	10.9	13.7	16.7	25.5	27.0
99	3.93	4.60	6.29	7.69	10.3	13.2	15.6	25.2	26.0

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	562.	696.	771.	819.	991.	1240.	1360.	1470.	2400.
2	486.	524.	623.	675.	838.	907.	941.	1200.	1440.
5	208.	224.	377.	447.	551.	623.	654.	740.	747.
10	110.	131.	185.	285.	347.	399.	424.	502.	580.
20	41.1	46.9	96.2	135.	185.	234.	279.	364.	430.
25	26.3	39.9	73.1	101.	140.	174.	226.	317.	351.
30	20.3	33.5	61.3	72.8	112.	151.	168.	272.	287.
40	14.9	25.5	41.6	46.8	77.9	112.	121.	178.	197.
50	11.5	21.1	28.2	29.4	57.0	82.6	96.2	129.	153.
60	9.99	15.8	21.6	22.8	43.5	61.2	75.8	84.2	114.
70	9.33	11.5	14.4	17.6	32.4	40.2	49.7	61.2	89.6
75	8.94	10.2	13.1	15.3	27.1	30.0	45.5	58.7	76.6
80	8.23	9.34	12.5	13.7	22.9	27.2	37.7	51.5	63.0
90	7.47	8.06	10.1	10.7	15.5	20.5	25.0	32.3	38.5
95	6.16	6.58	8.32	9.12	13.9	17.0	21.6	29.0	33.4
98	5.76	6.04	7.25	8.70	11.9	15.0	18.3	27.9	31.4
99	4.92	5.89	7.08	8.23	10.8	13.9	17.5	27.2	29.8

03117000 Tuscarawas River at Massillon, Ohio

Years analyzed = 71
Climatic year range = 1938–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1390.	1840.	1930.	2470.	3380.	3980.	4910.	5610.	6540.
2	1010.	1260.	1640.	1990.	2600.	3250.	3590.	4270.	4770.
5	640.	700.	889.	1250.	1710.	2230.	2570.	2930.	3270.
10	412.	471.	541.	704.	1020.	1460.	1810.	1910.	2190.
20	207.	305.	344.	406.	584.	840.	1080.	1160.	1250.
25	172.	255.	281.	331.	469.	650.	856.	934.	977.
30	151.	208.	232.	279.	398.	541.	712.	749.	835.
40	109.	150.	177.	203.	309.	403.	529.	564.	690.
50	97.4	125.	140.	160.	246.	329.	404.	460.	580.
60	90.9	113.	121.	138.	194.	268.	313.	367.	466.
70	85.0	99.5	104.	122.	163.	219.	267.	305.	382.
75	82.0	94.0	96.8	111.	149.	200.	240.	278.	333.
80	79.2	83.6	92.6	104.	137.	183.	215.	246.	301.
90	71.1	73.9	79.7	91.4	114.	146.	170.	200.	230.
95	63.5	66.6	73.1	82.8	102.	132.	147.	173.	195.
98	55.6	62.9	67.2	75.4	95.0	120.	134.	151.	170.
99	52.9	59.1	64.2	72.5	88.7	114.	125.	140.	164.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	943.	1250.	1480.	1740.	2490.	3220.	3690.	4230.	5050.
2	890.	1060.	1150.	1550.	2010.	2570.	3050.	3500.	3940.
5	584.	697.	786.	1180.	1470.	1870.	2180.	2490.	2850.
10	402.	460.	541.	757.	988.	1410.	1610.	1740.	2020.
20	208.	316.	348.	454.	643.	907.	1130.	1200.	1290.
25	171.	268.	297.	348.	540.	788.	986.	1080.	1100.
30	157.	221.	246.	298.	450.	632.	814.	933.	982.
40	113.	161.	185.	214.	355.	452.	593.	697.	829.
50	98.4	128.	150.	167.	271.	357.	481.	559.	700.
60	91.4	117.	127.	141.	208.	294.	365.	444.	559.
70	84.8	102.	109.	130.	177.	236.	296.	336.	459.
75	83.1	96.7	101.	118.	163.	215.	275.	295.	415.
80	81.5	87.7	95.3	112.	148.	196.	236.	268.	360.
90	71.9	77.0	88.6	97.1	121.	160.	180.	224.	276.
95	64.5	71.6	76.5	88.2	110.	139.	157.	191.	227.
98	57.5	66.1	73.0	80.9	102.	132.	143.	172.	197.
99	56.2	64.0	69.2	76.9	98.7	125.	138.	145.	187.

03118000 Middle Branch Nimishillen Creek at Canton, Ohio

Years analyzed = 67
Climatic year range = 1942–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	90.5	146.	154.	237.	319.	420.	511.	589.	810.
2	67.6	98.3	109.	157.	236.	300.	351.	422.	482.
5	47.1	52.5	67.6	82.3	139.	181.	210.	231.	306.
10	30.5	36.6	42.2	51.2	80.4	122.	144.	165.	193.
20	13.4	22.8	25.8	30.0	49.6	71.3	86.3	98.6	107.
25	9.53	15.6	21.0	25.0	42.0	60.4	73.7	82.1	89.5
30	7.96	11.0	18.0	20.6	36.9	52.1	66.0	72.6	76.8
40	5.11	6.24	11.2	13.8	28.0	40.0	52.2	57.7	62.3
50	3.94	4.90	7.04	9.80	20.0	31.6	39.0	48.6	54.2
60	3.00	3.76	5.07	7.50	15.0	24.4	32.5	39.2	45.3
70	2.34	2.80	3.66	5.86	12.0	20.8	25.4	32.6	38.0
75	1.89	2.40	3.27	4.96	11.0	18.0	22.2	28.6	33.6
80	1.27	2.24	2.88	4.26	9.10	16.4	20.4	25.6	29.3
90	0.58	1.56	2.16	2.98	6.70	13.0	15.4	19.3	22.0
95	0.48	1.31	1.68	2.10	5.60	10.6	13.1	15.9	17.9
98	0.40	1.16	1.30	1.82	5.00	9.24	12.0	12.0	15.4
99	0.39	1.04	1.19	1.65	4.20	8.64	11.1	11.9	13.3

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	66.0	85.1	113.	134.	198.	271.	306.	349.	598.
2	61.9	76.5	85.5	118.	171.	218.	251.	326.	391.
5	44.7	51.9	59.0	91.2	126.	162.	195.	230.	275.
10	30.9	36.7	44.4	57.4	90.0	123.	145.	163.	181.
20	12.8	24.0	27.4	34.4	56.3	84.7	102.	109.	120.
25	9.61	17.4	23.1	27.2	47.0	69.7	86.0	96.5	104.
30	8.43	13.8	19.9	23.8	40.9	61.7	72.0	87.2	90.4
40	5.31	6.51	12.6	15.5	31.3	46.0	57.7	70.1	75.0
50	3.83	5.02	7.10	10.8	23.6	35.8	47.9	56.6	61.9
60	3.14	4.03	4.99	8.17	17.4	27.5	37.4	44.8	53.7
70	2.41	2.83	3.71	6.23	13.6	23.2	29.1	37.0	45.4
75	2.03	2.54	3.38	5.44	11.2	21.0	25.9	33.2	40.3
80	1.56	2.26	3.09	4.49	9.65	18.4	22.7	29.6	37.4
90	0.79	1.68	2.21	3.22	6.87	14.0	17.9	22.3	24.6
95	0.53	1.43	1.87	2.59	6.14	11.3	14.2	18.5	20.7
98	0.42	1.31	1.50	1.95	5.64	9.94	13.0	14.1	17.1
99	0.41	1.19	1.37	1.85	4.86	9.13	11.8	12.8	15.5

03118500 Nimishillen Creek at North Industry, Ohio

Years analyzed = 87
Climatic year range = 1922–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	373.	698.	762.	920.	1390.	1780.	2180.	2400.	3210.
2	287.	490.	563.	666.	983.	1270.	1510.	1810.	2210.
5	226.	287.	316.	374.	541.	757.	870.	1050.	1180.
10	164.	202.	215.	273.	351.	503.	551.	661.	787.
20	102.	119.	138.	173.	228.	322.	369.	420.	448.
25	89.1	97.7	115.	151.	200.	284.	322.	360.	383.
30	75.8	87.4	99.7	131.	178.	252.	288.	323.	346.
40	54.8	67.4	82.0	102.	145.	210.	238.	269.	294.
50	46.6	54.0	70.7	88.4	125.	183.	198.	229.	255.
60	40.3	47.0	62.5	71.2	107.	150.	171.	200.	220.
70	35.0	39.8	55.4	63.0	91.0	131.	149.	174.	194.
75	32.5	36.8	50.0	59.6	86.0	121.	140.	160.	186.
80	29.8	33.5	47.0	56.0	77.2	114.	130.	150.	170.
90	24.9	30.0	40.3	49.1	70.0	103.	110.	127.	144.
95	22.8	27.4	37.0	45.2	65.0	91.5	106.	116.	133.
98	20.3	24.1	33.6	42.4	59.3	87.8	98.1	110.	120.
99	19.7	23.3	29.8	40.0	57.3	85.0	93.7	106.	113.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	292.	394.	489.	618.	882.	1140.	1280.	1550.	1700.
2	267.	369.	424.	527.	674.	910.	1020.	1230.	1530.
5	221.	289.	303.	388.	531.	681.	784.	906.	1240.
10	176.	201.	226.	274.	384.	523.	601.	690.	762.
20	105.	120.	147.	189.	260.	372.	407.	477.	507.
25	91.5	104.	123.	167.	229.	316.	349.	428.	470.
30	80.5	91.1	109.	147.	202.	289.	319.	395.	429.
40	56.7	71.3	89.6	113.	159.	233.	265.	318.	355.
50	48.0	57.7	74.9	90.0	138.	197.	226.	266.	302.
60	42.4	50.7	66.1	73.8	114.	166.	189.	224.	262.
70	37.1	45.0	58.1	67.0	96.1	149.	164.	193.	227.
75	36.1	40.9	54.2	63.9	91.3	138.	155.	182.	209.
80	31.7	37.2	49.7	59.8	85.7	128.	145.	170.	193.
90	27.4	31.3	43.8	52.8	73.4	111.	124.	143.	168.
95	25.7	30.1	41.1	48.9	68.3	101.	116.	128.	141.
98	22.2	26.6	36.5	45.5	64.4	91.7	106.	118.	131.
99	21.9	25.6	35.3	44.5	62.9	90.0	99.4	110.	123.

03145000 South Fork Licking River near Hebron, Ohio

Years analyzed = 48
Climatic year range = 1940–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	848.	927.	1040.	1180.	1370.	1680.	1900.	2190.	2410.
2	619.	670.	799.	847.	1070.	1240.	1420.	1690.	1840.
5	321.	375.	435.	530.	687.	827.	889.	995.	1130.
10	179.	211.	271.	326.	407.	536.	564.	603.	675.
20	81.6	104.	131.	159.	235.	293.	348.	379.	412.
25	61.4	76.0	92.3	126.	186.	215.	282.	328.	340.
30	45.7	59.4	69.6	99.2	145.	181.	217.	266.	287.
40	25.5	36.2	52.6	57.0	87.5	110.	134.	165.	186.
50	14.3	23.4	34.8	38.7	54.0	67.6	87.5	115.	134.
60	8.55	16.4	21.9	24.8	36.4	42.3	62.0	74.4	91.0
70	6.99	9.16	15.2	18.0	21.0	29.1	39.2	53.0	61.2
75	6.15	7.69	10.7	15.0	17.0	24.0	31.0	43.3	46.4
80	4.85	5.77	8.82	11.1	14.5	20.2	25.4	35.0	37.0
90	2.70	4.20	6.24	7.58	9.56	14.0	17.2	21.7	24.4
95	1.88	3.43	4.75	6.10	8.20	10.6	15.0	17.1	18.2
98	1.49	2.18	3.82	5.38	6.80	8.35	11.5	15.0	15.2
99	0.98	1.83	3.46	4.92	6.35	7.76	9.97	14.0	14.7

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	453.	547.	643.	789.	936.	1170.	1380.	1490.	1680.
2	402.	499.	540.	614.	802.	906.	1050.	1230.	1280.
5	329.	374.	419.	475.	572.	691.	778.	907.	1000.
10	195.	238.	300.	332.	430.	508.	528.	548.	642.
20	103.	129.	160.	180.	261.	323.	376.	397.	433.
25	66.3	90.6	123.	147.	212.	279.	310.	356.	369.
30	51.2	66.9	92.9	118.	173.	244.	268.	308.	323.
40	28.4	44.7	60.3	79.6	119.	161.	186.	203.	233.
50	16.6	27.4	40.9	47.1	70.3	97.8	127.	148.	171.
60	10.3	19.6	24.5	31.6	44.4	58.0	78.7	109.	122.
70	7.75	10.8	17.8	20.8	26.6	37.5	55.5	71.7	83.3
75	5.91	8.18	14.4	17.2	20.6	29.9	42.6	62.3	65.9
80	5.31	6.86	10.2	13.0	16.1	22.4	29.3	45.5	53.5
90	3.46	4.53	6.45	8.33	10.6	15.9	19.0	26.1	32.2
95	2.51	3.98	4.95	6.77	8.49	12.3	16.6	19.7	21.9
98	1.84	3.01	4.24	5.97	7.66	9.95	13.9	15.9	16.5
99	1.64	2.75	4.06	5.68	7.24	8.88	12.5	15.0	15.3

03156000 Hunters Run at Lancaster, Ohio

Years analyzed = 23
Climatic year range = 1956–78

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	30.8	46.7	62.1	76.8	104.	123.	128.	172.	196.
2	21.2	27.6	32.9	45.5	66.7	77.8	81.5	90.2	128.
5	11.1	14.6	19.9	26.1	34.7	37.8	44.4	47.9	52.1
10	7.79	9.72	13.8	16.0	21.0	23.1	24.7	28.6	29.0
20	4.32	6.68	8.45	8.97	12.8	14.8	15.2	17.6	19.6
25	3.76	5.76	6.84	7.41	8.70	12.8	13.2	14.6	17.4
30	3.34	5.10	5.70	6.32	7.79	10.8	12.0	13.0	15.4
40	2.42	3.62	4.26	4.52	6.30	8.52	10.0	11.2	12.8
50	1.86	2.58	3.20	3.80	4.55	6.76	7.88	9.32	10.8
60	1.22	1.56	2.36	2.82	3.20	4.72	6.11	8.14	9.10
70	1.00	1.24	1.78	2.20	2.38	3.06	4.65	6.22	6.90
75	0.90	1.14	1.50	1.82	2.10	2.58	4.20	5.46	6.22
80	0.80	0.96	1.38	1.50	1.82	2.18	3.68	4.68	5.44
90	0.70	0.74	1.08	1.10	1.40	1.82	2.46	3.64	4.00
95	0.45	0.54	0.79	1.00	1.20	1.38	2.04	2.74	3.41
98	0.23	0.51	0.68	0.72	1.00	1.28	1.74	2.00	3.20
99	0.17	0.41	0.50	0.67	1.00	1.20	1.69	1.89	3.13

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	20.5	32.9	40.9	56.9	65.4	86.5	104.	140.	195.
2	18.4	27.0	30.8	38.3	52.9	58.7	64.0	82.4	111.
5	12.8	16.0	19.9	24.8	35.3	40.5	44.9	53.8	65.7
10	8.53	10.5	13.9	16.1	22.9	26.8	29.1	32.9	35.2
20	4.45	7.07	8.84	9.96	13.1	16.6	18.7	21.0	21.5
25	3.72	6.01	7.32	8.65	10.5	14.0	16.3	18.0	18.4
30	3.32	5.11	5.92	7.21	8.59	12.1	14.6	16.0	16.3
40	2.39	3.85	4.68	5.12	6.41	9.65	11.4	12.5	13.6
50	1.97	2.85	3.42	3.93	5.09	7.99	9.12	10.5	12.1
60	1.33	1.63	2.61	3.15	3.54	4.81	7.56	9.24	10.2
70	1.02	1.27	1.91	2.39	2.71	3.22	5.57	7.10	7.64
75	0.96	1.18	1.65	2.06	2.36	2.89	5.24	5.76	6.53
80	0.88	1.07	1.52	1.59	2.07	2.38	4.37	4.99	5.95
90	0.71	0.75	1.15	1.25	1.54	1.88	2.74	4.32	4.98
95	0.59	0.69	1.01	1.04	1.35	1.68	2.24	3.25	3.88
98	0.51	0.55	0.75	0.88	1.17	1.31	1.97	2.32	3.47
99	0.38	0.50	0.66	0.77	1.11	1.29	1.79	2.26	3.44

03159500 Hocking River at Athens, Ohio

Years analyzed = 46
Climatic year range = 1963–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	3940.	5760.	6750.	7320.	8420.	9700.	10600.	12500.	14000.
2	3360.	3960.	5230.	5890.	6670.	7250.	8290.	8810.	10500.
5	1890.	2240.	2770.	3170.	3960.	4530.	4810.	5560.	6400.
10	1100.	1390.	1650.	2090.	2370.	2970.	3230.	3860.	4330.
20	601.	762.	965.	1120.	1350.	1720.	1890.	2340.	2590.
25	518.	601.	779.	849.	1140.	1450.	1620.	1960.	2170.
30	436.	521.	635.	693.	938.	1210.	1380.	1680.	1770.
40	262.	306.	421.	488.	619.	848.	1060.	1300.	1400.
50	183.	218.	296.	346.	412.	689.	835.	1030.	1060.
60	114.	147.	216.	241.	302.	497.	618.	779.	855.
70	85.0	104.	157.	182.	225.	353.	452.	620.	682.
75	74.9	91.9	134.	154.	190.	263.	398.	542.	604.
80	66.9	81.2	113.	137.	157.	223.	326.	445.	496.
90	51.5	66.2	88.9	94.1	113.	163.	230.	293.	367.
95	45.6	59.7	72.5	79.3	95.1	134.	179.	238.	311.
98	43.0	56.7	61.4	71.6	87.0	118.	145.	214.	272.
99	40.0	55.2	59.5	68.2	85.0	107.	131.	199.	242.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	3130.	4120.	4640.	5110.	6110.	7200.	7950.	8960.	13200.
2	2600.	3330.	3870.	4200.	4980.	5690.	6150.	7250.	8850.
5	2000.	2120.	2850.	3310.	3780.	4240.	4560.	4970.	5360.
10	1100.	1510.	1730.	2010.	2580.	2980.	3240.	3740.	4380.
20	618.	770.	1130.	1220.	1550.	1850.	2070.	2490.	2870.
25	527.	611.	873.	960.	1240.	1560.	1810.	2150.	2440.
30	437.	525.	692.	761.	1000.	1340.	1570.	1880.	2130.
40	288.	345.	466.	509.	681.	965.	1180.	1500.	1560.
50	198.	222.	320.	362.	474.	802.	899.	1170.	1220.
60	117.	146.	222.	258.	319.	579.	710.	903.	1020.
70	86.8	112.	163.	190.	241.	387.	489.	705.	800.
75	76.8	97.4	144.	164.	211.	297.	412.	595.	732.
80	69.6	85.6	121.	139.	163.	245.	337.	538.	581.
90	53.3	66.8	94.0	97.1	116.	191.	253.	322.	439.
95	48.6	62.6	77.0	82.9	101.	145.	201.	257.	362.
98	45.7	59.3	68.8	76.4	93.6	130.	172.	230.	320.
99	44.9	56.4	62.3	71.8	88.9	121.	158.	216.	255.

03261500 Great Miami River at Sidney, Ohio

Years analyzed = 82
Climatic year range = 1927–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	587.	1730.	2520.	2930.	4360.	5660.	6960.	7520.	10100.
2	474.	1200.	1670.	2220.	3340.	4240.	5440.	5920.	7360.
5	315.	612.	1020.	1280.	1980.	2860.	3330.	3580.	4160.
10	243.	388.	511.	703.	1190.	1880.	2030.	2230.	2490.
20	148.	210.	242.	351.	611.	1000.	1240.	1390.	1500.
25	119.	168.	193.	289.	478.	782.	972.	1110.	1220.
30	98.7	139.	167.	235.	387.	600.	759.	915.	960.
40	56.4	95.8	108.	146.	240.	427.	547.	600.	699.
50	45.3	65.8	77.0	105.	179.	314.	379.	469.	515.
60	39.3	51.5	59.3	71.4	127.	214.	289.	357.	394.
70	32.7	42.2	46.3	56.1	89.5	171.	225.	248.	287.
75	30.5	38.3	43.8	50.5	79.3	151.	192.	209.	259.
80	26.7	36.1	40.3	46.6	66.1	133.	159.	180.	232.
90	21.0	30.2	33.2	36.0	53.9	89.6	118.	128.	170.
95	19.3	26.0	28.1	32.0	47.6	75.5	95.8	108.	146.
98	16.7	18.4	23.2	27.3	43.8	65.8	84.4	102.	126.
99	14.5	15.9	21.4	26.2	41.8	63.3	75.1	97.6	123.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	471.	1280.	1530.	2220.	3250.	4360.	5180.	6090.	7930.
2	370.	969.	1340.	1850.	2680.	3360.	4020.	4630.	6680.
5	309.	630.	903.	1270.	1970.	2530.	3060.	3400.	4000.
10	230.	317.	552.	764.	1220.	1830.	2020.	2280.	2520.
20	142.	230.	256.	388.	665.	1150.	1290.	1440.	1550.
25	122.	185.	196.	306.	568.	915.	1100.	1180.	1290.
30	99.0	154.	167.	249.	442.	724.	937.	1030.	1080.
40	55.5	95.7	114.	161.	292.	525.	639.	756.	813.
50	46.7	72.0	81.7	111.	198.	356.	464.	547.	608.
60	40.7	49.5	60.7	78.0	138.	261.	340.	434.	486.
70	34.2	42.6	46.8	58.1	96.9	193.	260.	304.	337.
75	31.2	38.1	43.9	53.5	81.8	172.	220.	237.	285.
80	27.7	36.7	41.2	48.2	70.7	151.	183.	199.	258.
90	22.6	30.3	33.0	37.1	55.3	98.9	124.	136.	213.
95	19.7	27.3	29.5	32.2	48.5	82.0	104.	116.	170.
98	17.6	19.4	26.2	29.5	44.5	72.8	91.5	105.	141.
99	16.7	18.6	25.4	28.7	43.0	67.1	83.6	103.	137.

03261950 Loramie Creek near Newport, Ohio

Years analyzed = 44
Climatic year range = 1965–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	455.	953.	1180.	1550.	1750.	2090.	2210.	3160.	3300.
2	365.	473.	836.	1020.	1330.	1550.	1790.	2390.	2520.
5	202.	279.	406.	548.	803.	978.	1160.	1290.	1370.
10	95.1	139.	191.	247.	360.	514.	577.	663.	766.
20	35.8	55.0	72.8	98.7	155.	218.	251.	294.	329.
25	24.4	37.1	49.5	71.3	111.	164.	183.	212.	236.
30	17.5	23.0	40.2	53.5	80.1	116.	137.	168.	191.
40	8.10	10.9	20.6	25.5	41.8	65.5	79.6	103.	122.
50	3.90	5.18	10.0	14.0	26.0	41.0	48.5	62.0	82.4
60	2.40	3.65	6.20	8.52	14.4	23.5	32.0	41.5	49.0
70	1.67	2.55	3.30	4.41	7.23	12.4	19.0	26.0	33.7
75	1.38	1.58	2.80	3.38	5.30	9.15	15.0	20.5	27.6
80	1.02	1.26	2.30	2.65	4.25	6.95	11.0	17.0	21.8
90	0.49	0.83	1.00	1.69	2.33	3.56	5.42	7.37	12.2
95	0.27	0.55	0.78	1.12	1.75	2.70	3.33	4.56	7.27
98	0.24	0.45	0.68	0.84	1.32	2.42	2.70	3.62	4.24
99	0.22	0.33	0.59	0.73	1.17	2.10	2.47	3.23	3.77

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	328.	562.	775.	925.	1160.	1460.	1570.	2130.	2500.
2	271.	393.	619.	744.	916.	1130.	1340.	1550.	1880.
5	191.	254.	401.	502.	704.	829.	928.	1100.	1200.
10	120.	160.	205.	308.	399.	525.	584.	635.	769.
20	40.7	66.5	112.	144.	190.	306.	331.	399.	456.
25	27.7	49.4	77.2	101.	141.	232.	266.	314.	347.
30	20.2	26.3	56.6	72.4	105.	176.	198.	247.	281.
40	10.8	12.2	27.3	33.3	59.3	99.6	113.	152.	193.
50	4.39	6.30	15.6	16.9	34.9	57.3	72.6	103.	129.
60	2.91	4.31	7.46	10.6	18.0	32.0	46.0	57.1	78.4
70	1.95	2.49	4.04	5.19	8.80	18.0	29.2	36.9	50.7
75	1.49	1.75	3.02	3.94	6.32	13.3	19.7	30.1	39.5
80	1.16	1.27	2.33	3.25	5.14	9.67	16.4	23.4	29.6
90	0.71	0.93	1.42	2.06	2.68	4.53	6.70	11.4	16.1
95	0.35	0.58	1.04	1.37	2.01	3.17	4.47	7.00	10.6
98	0.26	0.51	0.82	1.00	1.73	2.84	3.41	5.18	8.10
99	0.24	0.49	0.81	0.88	1.49	2.56	3.10	4.29	5.52

03262000 Loramie Creek at Lockington, Ohio

Years analyzed = 91
Climatic year range = 1916–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	406.	847.	1580.	1900.	2900.	3640.	4340.	4780.	5510.
2	311.	592.	1200.	1420.	1980.	2670.	3280.	4060.	4220.
5	165.	296.	477.	709.	1070.	1530.	1800.	2040.	2230.
10	96.5	128.	207.	318.	526.	820.	972.	1080.	1250.
20	38.0	51.7	70.1	125.	222.	338.	459.	499.	573.
25	31.3	38.0	50.0	89.9	153.	241.	336.	374.	414.
30	21.0	30.3	40.1	66.5	114.	196.	250.	292.	326.
40	12.4	17.0	20.0	39.6	67.0	121.	148.	191.	219.
50	8.74	10.0	13.2	21.8	44.0	76.7	103.	126.	148.
60	6.61	7.88	8.72	15.0	25.0	55.2	68.9	83.8	100.
70	5.54	6.92	7.53	9.78	16.8	37.6	48.8	57.4	78.2
75	4.48	6.51	6.86	8.35	13.0	30.0	41.8	50.8	68.7
80	4.25	5.41	6.12	7.44	12.0	23.8	36.8	45.8	59.3
90	3.32	3.99	4.55	5.68	8.76	15.6	22.5	34.2	42.1
95	2.49	2.97	4.02	4.60	7.50	12.0	17.3	29.0	38.6
98	1.54	2.58	3.22	3.94	6.83	9.81	15.0	23.8	33.2
99	0.91	2.08	2.88	3.70	6.27	9.42	13.0	21.9	31.1

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	298.	582.	935.	1240.	1800.	2520.	3160.	3330.	4270.
2	203.	529.	762.	986.	1480.	1930.	2330.	2700.	3020.
5	145.	288.	551.	705.	980.	1340.	1580.	1870.	1960.
10	93.2	140.	259.	379.	572.	877.	987.	1060.	1230.
20	43.1	56.0	81.9	164.	293.	464.	564.	687.	733.
25	32.2	42.7	57.3	124.	219.	358.	454.	514.	577.
30	22.4	31.4	40.7	87.8	157.	274.	375.	413.	472.
40	12.3	18.7	21.7	47.4	84.7	169.	216.	266.	330.
50	8.79	10.4	13.4	25.2	48.6	105.	133.	170.	214.
60	6.80	8.00	9.44	17.4	30.3	66.4	90.4	111.	144.
70	5.60	6.97	7.91	10.4	18.9	46.3	65.3	76.5	103.
75	4.65	6.57	6.92	8.73	15.2	35.2	52.5	63.5	87.7
80	4.24	5.36	6.19	7.53	12.4	27.1	42.4	53.5	72.7
90	3.28	4.17	4.83	5.67	9.04	17.7	26.3	39.7	49.4
95	2.59	3.37	4.11	4.77	8.04	13.3	20.6	34.5	42.2
98	2.47	2.92	3.84	4.19	7.29	11.1	18.3	29.4	38.0
99	2.40	2.78	3.71	4.01	6.84	10.1	14.9	27.6	36.2

03262700 Great Miami River at Troy, Ohio

Years analyzed = 46
Climatic year range = 1963–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	2690.	4360.	6370.	7050.	8110.	9860.	10800.	12400.	14200.
2	1890.	3160.	4120.	5030.	5910.	7260.	7670.	9940.	11400.
5	1000.	1490.	2270.	3060.	3740.	4810.	5310.	5910.	6490.
10	598.	784.	1260.	1640.	2220.	2860.	3180.	3560.	3930.
20	338.	369.	594.	767.	1030.	1420.	1730.	2080.	2290.
25	272.	323.	447.	586.	821.	1150.	1320.	1590.	1830.
30	222.	252.	394.	495.	662.	911.	1020.	1320.	1480.
40	151.	187.	274.	334.	450.	639.	696.	939.	1060.
50	109.	129.	191.	222.	350.	467.	531.	708.	761.
60	79.1	92.9	143.	161.	223.	349.	397.	516.	587.
70	66.3	69.2	104.	120.	154.	253.	313.	383.	425.
75	57.2	63.1	91.9	103.	123.	205.	274.	314.	377.
80	52.4	57.6	79.5	89.9	106.	189.	234.	267.	327.
90	35.7	45.5	61.4	74.3	86.3	131.	159.	205.	245.
95	30.5	39.1	52.3	63.1	77.5	107.	134.	180.	198.
98	28.0	33.1	44.1	53.2	69.8	97.8	114.	144.	169.
99	24.6	30.7	39.7	49.3	67.2	91.2	106.	137.	157.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1980.	2600.	4420.	5120.	5780.	6610.	7690.	8750.	11000.
2	1590.	2230.	3660.	4080.	4750.	5320.	6400.	7180.	7530.
5	1010.	1430.	2120.	2880.	3410.	4110.	4600.	5430.	6280.
10	626.	840.	1390.	1640.	2110.	2820.	3080.	3730.	4180.
20	340.	390.	625.	893.	1250.	1840.	1970.	2280.	2410.
25	271.	323.	499.	728.	973.	1320.	1610.	1930.	2090.
30	216.	251.	425.	564.	793.	1150.	1320.	1600.	1720.
40	158.	195.	296.	357.	541.	748.	879.	1210.	1270.
50	108.	136.	201.	230.	384.	544.	633.	858.	927.
60	81.4	97.6	148.	177.	245.	405.	451.	626.	706.
70	67.4	69.7	109.	123.	164.	270.	370.	461.	496.
75	56.4	64.4	88.4	108.	130.	239.	313.	363.	422.
80	52.5	60.2	83.7	94.6	107.	201.	258.	302.	371.
90	37.6	45.9	65.3	75.4	89.4	146.	178.	220.	280.
95	31.9	38.7	54.5	64.3	80.6	112.	151.	190.	228.
98	29.9	36.0	51.0	57.9	74.1	102.	134.	161.	193.
99	28.3	34.5	46.9	55.3	71.3	101.	126.	147.	187.

03263000 Great Miami River at Taylorsville, Ohio

Years analyzed = 87
Climatic year range = 1922–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1300.	3450.	5240.	6220.	9870.	12600.	15100.	17200.	19700.
2	962.	2270.	3870.	4590.	7240.	9660.	12000.	13900.	16600.
5	608.	1370.	2020.	2590.	4190.	6120.	7090.	7470.	8200.
10	475.	801.	1030.	1410.	2380.	3640.	3990.	4490.	4720.
20	313.	420.	506.	793.	1220.	1900.	2400.	2650.	2910.
25	269.	353.	421.	618.	958.	1510.	1930.	2140.	2350.
30	188.	289.	347.	503.	794.	1260.	1490.	1790.	1960.
40	123.	192.	229.	365.	554.	894.	1080.	1290.	1410.
50	91.5	140.	168.	243.	388.	665.	825.	980.	1030.
60	82.9	106.	121.	170.	275.	500.	594.	766.	824.
70	74.1	88.8	94.5	128.	191.	386.	488.	573.	647.
75	68.3	80.4	88.2	110.	166.	343.	417.	479.	568.
80	65.3	72.1	79.9	100.	146.	283.	382.	399.	509.
90	47.2	62.2	69.0	78.4	120.	200.	261.	308.	388.
95	41.3	54.6	60.6	66.7	100.	168.	223.	260.	354.
98	38.4	46.3	54.0	61.2	93.0	142.	185.	213.	325.
99	37.1	42.7	51.9	57.0	87.6	136.	176.	203.	320.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1060.	2600.	3380.	4600.	6900.	9570.	10600.	13800.	15300.
2	794.	2180.	2880.	3860.	5520.	7230.	9010.	10600.	14300.
5	568.	1380.	1940.	2540.	3950.	5580.	6390.	7550.	8110.
10	444.	712.	1090.	1570.	2530.	3710.	4220.	4610.	4830.
20	299.	429.	551.	837.	1430.	2230.	2610.	2850.	3360.
25	267.	356.	401.	647.	1150.	1810.	2230.	2390.	2690.
30	179.	301.	352.	554.	868.	1490.	1910.	2120.	2210.
40	129.	187.	252.	393.	591.	1010.	1300.	1560.	1640.
50	96.1	140.	187.	260.	421.	737.	945.	1140.	1250.
60	83.3	105.	123.	181.	293.	566.	674.	850.	992.
70	74.7	89.1	98.5	135.	207.	433.	569.	637.	743.
75	69.6	81.5	90.1	114.	178.	374.	483.	542.	679.
80	65.9	72.7	80.9	103.	151.	311.	395.	444.	625.
90	50.6	64.2	68.6	80.3	123.	206.	284.	360.	497.
95	41.8	56.2	60.5	69.9	106.	180.	246.	286.	383.
98	39.8	49.5	55.7	66.0	99.0	150.	202.	258.	354.
99	39.2	45.6	53.5	61.5	94.0	145.	187.	234.	329.

03266000 Stillwater River at Englewood, Ohio

Years analyzed = 83
Climatic year range = 1926–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	642.	1790.	2920.	4230.	6000.	7280.	7740.	8940.	9570.
2	483.	1040.	2200.	3040.	4900.	5930.	6870.	7930.	9040.
5	294.	668.	1070.	1550.	2980.	4320.	4880.	5080.	5870.
10	224.	366.	503.	701.	1450.	2390.	2960.	3140.	3460.
20	128.	220.	258.	369.	700.	1080.	1290.	1490.	1560.
25	111.	188.	211.	288.	540.	849.	1040.	1140.	1240.
30	98.4	131.	185.	235.	419.	661.	824.	929.	1000.
40	59.2	82.8	126.	152.	292.	454.	544.	604.	689.
50	42.7	51.8	80.6	112.	209.	331.	398.	459.	500.
60	34.8	43.4	59.6	81.6	146.	250.	307.	358.	399.
70	29.1	37.7	45.2	64.0	106.	182.	236.	266.	331.
75	27.0	31.2	41.2	52.9	88.5	159.	200.	243.	290.
80	24.5	27.1	36.2	46.2	73.0	121.	167.	227.	266.
90	16.0	21.4	23.8	31.8	57.0	90.2	111.	166.	220.
95	12.7	16.5	18.1	25.2	48.3	74.7	92.5	126.	183.
98	10.8	13.1	15.0	21.3	41.3	66.5	76.7	115.	152.
99	7.44	10.1	12.7	19.3	38.0	62.4	73.9	110.	141.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	431.	1500.	1820.	2750.	4490.	5610.	6250.	8080.	9080.
2	337.	1180.	1480.	2400.	3520.	4490.	5120.	6450.	8670.
5	289.	617.	1060.	1690.	2480.	3360.	3820.	4350.	5130.
10	219.	401.	528.	898.	1600.	2340.	2720.	2940.	3200.
20	122.	224.	276.	430.	836.	1350.	1560.	1760.	1810.
25	106.	176.	216.	330.	623.	1040.	1200.	1460.	1550.
30	93.9	134.	187.	243.	494.	842.	995.	1230.	1270.
40	51.6	81.3	125.	163.	330.	568.	728.	867.	899.
50	41.1	53.1	84.2	114.	219.	404.	504.	587.	651.
60	34.1	42.3	58.3	87.5	152.	285.	357.	438.	517.
70	29.9	38.8	45.0	61.6	114.	211.	273.	313.	367.
75	28.6	31.6	41.1	56.0	91.1	175.	233.	265.	328.
80	26.3	29.2	36.5	47.0	75.9	138.	190.	239.	290.
90	20.6	22.7	25.3	33.1	58.0	97.4	127.	180.	254.
95	16.0	19.3	21.0	28.3	50.3	81.6	101.	130.	218.
98	14.3	15.3	17.6	24.5	44.6	72.1	82.1	121.	174.
99	12.4	13.5	16.2	23.8	43.6	67.8	76.4	115.	154.

03267900 Mad River at St Paris Pike at Eagle City, Ohio

Years analyzed = 36
Climatic year range = 1966–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	765.	825.	1010.	1300.	1850.	2100.	2340.	2790.	3810.
2	606.	637.	742.	949.	1330.	1590.	1620.	2030.	2190.
5	409.	428.	509.	655.	812.	919.	1080.	1180.	1270.
10	302.	323.	368.	475.	553.	697.	793.	822.	856.
20	218.	233.	263.	325.	403.	482.	554.	577.	595.
25	195.	205.	238.	298.	356.	435.	479.	511.	542.
30	174.	188.	223.	270.	324.	399.	430.	459.	508.
40	154.	164.	196.	216.	286.	330.	363.	384.	442.
50	138.	144.	170.	184.	243.	297.	309.	340.	394.
60	123.	129.	145.	169.	214.	249.	272.	314.	340.
70	110.	120.	130.	154.	185.	215.	234.	284.	303.
75	107.	114.	123.	142.	172.	199.	219.	267.	280.
80	102.	110.	118.	131.	164.	188.	202.	247.	262.
90	92.0	98.8	109.	114.	149.	160.	171.	220.	241.
95	81.9	94.4	105.	111.	137.	151.	162.	209.	227.
98	75.1	88.6	100.	109.	132.	142.	150.	199.	212.
99	73.9	87.5	98.5	108.	129.	140.	148.	194.	208.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	501.	644.	832.	938.	1230.	1500.	1710.	1970.	2150.
2	437.	544.	677.	818.	1030.	1180.	1320.	1620.	1940.
5	375.	451.	488.	637.	796.	935.	1010.	1180.	1310.
10	324.	333.	391.	462.	586.	731.	791.	842.	886.
20	229.	234.	284.	336.	423.	564.	600.	621.	655.
25	199.	206.	256.	312.	382.	475.	537.	566.	598.
30	182.	191.	235.	283.	353.	434.	466.	516.	548.
40	157.	169.	204.	228.	299.	358.	385.	447.	476.
50	138.	147.	173.	189.	252.	306.	325.	366.	425.
60	120.	129.	146.	168.	222.	262.	281.	335.	379.
70	112.	120.	132.	155.	187.	235.	246.	299.	317.
75	109.	116.	125.	146.	175.	212.	228.	271.	295.
80	103.	110.	117.	133.	166.	194.	207.	252.	270.
90	95.5	100.	111.	116.	151.	161.	177.	226.	250.
95	81.5	95.6	106.	113.	139.	156.	164.	215.	238.
98	76.1	92.2	104.	111.	133.	146.	154.	205.	223.
99	75.1	89.0	103.	110.	132.	145.	151.	199.	215.

03269000 Buck Creek at Springfield, Ohio

Years analyzed = 30
Climatic year range = 1915–48

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	167.	415.	746.	770.	893.	1330.	1480.	1680.	2100.
2	120.	265.	469.	528.	588.	805.	923.	1050.	1220.
5	92.2	125.	257.	278.	318.	412.	449.	538.	692.
10	69.5	98.2	138.	168.	219.	253.	273.	282.	391.
20	49.5	72.3	101.	112.	153.	167.	179.	211.	237.
25	43.8	63.7	88.0	100.	129.	149.	165.	188.	200.
30	39.3	55.2	74.2	90.7	117.	132.	152.	169.	190.
40	32.1	34.9	59.4	75.9	97.5	112.	129.	140.	158.
50	26.1	32.5	49.4	59.0	74.5	90.7	101.	131.	141.
60	22.0	30.7	41.6	49.2	62.0	80.6	84.8	115.	123.
70	19.5	28.0	35.4	42.2	52.9	72.2	82.4	98.5	117.
75	17.6	27.0	30.8	37.9	50.0	66.8	70.8	89.4	105.
80	16.2	21.4	28.6	34.0	47.1	59.4	65.8	82.6	94.8
90	11.3	13.8	24.0	29.0	40.3	56.5	63.2	70.9	80.7
95	7.72	11.8	21.8	26.1	37.0	47.7	52.8	60.0	74.1
98	6.26	6.91	17.1	22.9	31.0	46.3	51.2	54.7	71.5
99	5.73	6.52	16.4	19.8	27.0	43.7	51.2	52.0	66.8

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	121.	226.	359.	466.	582.	712.	860.	1130.	1480.
2	110.	180.	300.	350.	477.	565.	666.	728.	1090.
5	92.2	145.	268.	276.	351.	407.	505.	579.	613.
10	77.5	103.	177.	208.	246.	292.	317.	362.	423.
20	54.5	70.1	113.	127.	168.	192.	223.	247.	311.
25	46.0	64.7	102.	109.	142.	172.	180.	217.	267.
30	41.1	51.2	85.6	97.0	126.	156.	166.	195.	225.
40	32.0	34.6	62.0	81.2	104.	127.	144.	157.	184.
50	25.8	32.7	54.0	65.0	77.8	101.	112.	133.	159.
60	23.9	31.0	44.9	53.8	65.5	86.7	97.5	124.	137.
70	20.0	28.3	39.8	43.5	54.7	76.0	80.3	109.	123.
75	18.3	27.3	32.2	38.1	50.9	71.0	76.3	96.7	115.
80	16.9	21.4	30.0	36.3	47.9	66.3	71.0	86.5	107.
90	11.5	15.0	24.5	29.8	41.6	56.1	63.2	71.9	83.8
95	7.75	12.2	22.9	27.0	37.8	50.9	56.8	62.8	77.2
98	6.52	8.72	19.5	25.0	36.0	47.8	52.0	56.9	73.2
99	5.96	6.97	17.5	24.3	30.2	46.9	52.0	55.7	71.3

03269500 Mad River near Springfield, Ohio

Years analyzed = 96
Climatic year range = 1904–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	661.	1230.	1300.	1970.	3010.	4300.	5060.	5670.	7980.
2	576.	879.	1040.	1360.	2040.	2710.	3500.	3680.	4690.
5	513.	584.	693.	825.	1210.	1590.	1920.	2280.	2390.
10	360.	442.	531.	590.	897.	1150.	1340.	1530.	1580.
20	285.	323.	356.	423.	613.	822.	921.	1000.	1060.
25	254.	293.	322.	379.	535.	726.	828.	885.	966.
30	211.	266.	291.	339.	491.	667.	753.	802.	859.
40	173.	209.	242.	280.	407.	557.	616.	674.	723.
50	155.	175.	206.	247.	346.	480.	534.	574.	664.
60	141.	160.	191.	220.	286.	407.	449.	507.	567.
70	131.	152.	171.	196.	252.	356.	386.	443.	485.
75	131.	144.	164.	185.	243.	327.	365.	414.	459.
80	128.	136.	155.	178.	224.	311.	344.	397.	431.
90	114.	128.	141.	157.	200.	263.	296.	337.	378.
95	105.	119.	131.	151.	193.	243.	271.	305.	346.
98	94.8	107.	126.	142.	184.	228.	256.	294.	315.
99	89.9	103.	122.	137.	179.	223.	253.	286.	294.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	573.	856.	984.	1370.	1960.	2880.	3700.	4310.	6000.
2	519.	758.	876.	1090.	1610.	2260.	2710.	3070.	4250.
5	500.	594.	672.	857.	1240.	1630.	2020.	2260.	2630.
10	368.	432.	515.	626.	970.	1210.	1430.	1530.	1560.
20	302.	330.	363.	443.	655.	886.	1010.	1110.	1180.
25	260.	284.	329.	391.	581.	789.	927.	970.	1050.
30	200.	259.	300.	355.	518.	701.	836.	881.	961.
40	173.	211.	243.	291.	421.	599.	676.	738.	759.
50	157.	184.	213.	253.	361.	501.	560.	623.	706.
60	139.	161.	194.	228.	309.	432.	483.	548.	611.
70	134.	154.	177.	200.	263.	374.	411.	471.	512.
75	131.	149.	167.	192.	246.	337.	381.	448.	491.
80	129.	143.	157.	184.	231.	321.	359.	422.	458.
90	116.	129.	144.	166.	206.	274.	305.	359.	401.
95	110.	120.	135.	154.	197.	257.	284.	312.	357.
98	101.	109.	132.	147.	191.	242.	266.	303.	340.
99	100.	105.	127.	142.	187.	237.	259.	296.	327.

03270000 Mad River near Dayton, Ohio

Years analyzed = 90
Climatic year range = 1915–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	858.	1610.	1810.	2410.	3870.	5500.	6610.	7900.	10000.
2	664.	1220.	1350.	1850.	2750.	3940.	4570.	4940.	6200.
5	573.	752.	924.	1100.	1710.	2210.	2690.	3030.	3310.
10	411.	567.	692.	785.	1180.	1580.	1880.	2030.	2300.
20	332.	399.	448.	582.	801.	1090.	1210.	1370.	1460.
25	292.	346.	418.	505.	705.	959.	1110.	1200.	1280.
30	254.	296.	358.	441.	642.	860.	981.	1050.	1120.
40	194.	239.	281.	352.	541.	707.	800.	892.	968.
50	173.	206.	253.	306.	460.	598.	683.	758.	837.
60	163.	179.	221.	264.	398.	519.	576.	670.	709.
70	154.	168.	202.	234.	334.	438.	491.	582.	637.
75	149.	164.	195.	222.	307.	404.	458.	549.	602.
80	147.	160.	185.	213.	279.	378.	425.	517.	564.
90	127.	138.	161.	188.	241.	328.	373.	444.	484.
95	120.	130.	150.	172.	223.	309.	341.	397.	437.
98	107.	124.	141.	164.	213.	293.	322.	347.	405.
99	104.	124.	138.	158.	204.	282.	303.	330.	392.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	648.	1090.	1290.	1760.	2600.	3780.	4370.	6260.	7410.
2	586.	998.	1150.	1490.	2140.	2980.	3650.	4510.	5370.
5	537.	726.	891.	1160.	1650.	2260.	2610.	3110.	3400.
10	433.	564.	664.	854.	1230.	1650.	1910.	2050.	2150.
20	325.	415.	456.	599.	884.	1160.	1300.	1450.	1580.
25	286.	355.	404.	526.	756.	995.	1200.	1270.	1420.
30	239.	290.	369.	451.	687.	903.	1110.	1150.	1280.
40	194.	240.	285.	357.	571.	756.	878.	948.	1050.
50	177.	212.	257.	311.	479.	618.	737.	816.	923.
60	166.	177.	224.	270.	399.	538.	635.	717.	790.
70	154.	170.	203.	244.	346.	453.	538.	610.	684.
75	151.	166.	197.	226.	313.	421.	494.	579.	653.
80	147.	161.	190.	216.	293.	398.	445.	538.	611.
90	128.	140.	165.	193.	252.	340.	389.	461.	525.
95	121.	132.	150.	176.	228.	317.	359.	402.	457.
98	109.	129.	143.	170.	222.	297.	332.	378.	429.
99	108.	128.	141.	164.	216.	294.	330.	361.	419.

03270500 Great Miami River at Dayton, Ohio

Years analyzed = 96
Climatic year range = 1913–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	2500.	7590.	10200.	12900.	18700.	24000.	28300.	34400.	36200.
2	2170.	5470.	7870.	9650.	14100.	18800.	21700.	26500.	30600.
5	1580.	3090.	4010.	5510.	9020.	13100.	14300.	14900.	16200.
10	1070.	1930.	2210.	3210.	5040.	7740.	9000.	10100.	10500.
20	800.	1070.	1360.	1880.	2740.	4300.	4860.	5540.	6020.
25	750.	864.	1170.	1510.	2310.	3520.	4090.	4710.	5000.
30	609.	719.	956.	1250.	1970.	2880.	3470.	3930.	4280.
40	354.	528.	672.	912.	1530.	2140.	2500.	2900.	3190.
50	300.	396.	520.	647.	1130.	1630.	1970.	2250.	2480.
60	258.	311.	406.	496.	849.	1330.	1620.	1850.	1980.
70	231.	255.	358.	408.	650.	997.	1270.	1400.	1580.
75	219.	237.	330.	365.	564.	887.	1110.	1270.	1400.
80	209.	219.	297.	336.	492.	796.	983.	1070.	1260.
90	164.	189.	215.	283.	396.	598.	708.	847.	1030.
95	145.	163.	187.	255.	361.	523.	625.	780.	889.
98	131.	139.	165.	233.	324.	461.	549.	697.	790.
99	119.	131.	154.	224.	316.	445.	527.	661.	757.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1980.	5620.	7080.	9600.	14500.	18400.	21700.	27000.	29500.
2	1660.	4870.	5740.	7990.	10900.	15400.	18500.	20500.	27300.
5	1490.	2790.	4090.	5110.	7950.	11000.	13300.	13800.	17200.
10	1050.	2060.	2540.	3450.	5260.	7750.	8840.	9680.	10200.
20	770.	1060.	1380.	1980.	3170.	4710.	5480.	6470.	6860.
25	702.	877.	1130.	1620.	2560.	3930.	4610.	5300.	5720.
30	531.	723.	1010.	1350.	2130.	3400.	3820.	4560.	5080.
40	354.	532.	709.	950.	1620.	2480.	2940.	3390.	3660.
50	303.	414.	533.	660.	1230.	1850.	2280.	2470.	2980.
60	269.	311.	405.	505.	873.	1500.	1770.	1920.	2380.
70	233.	257.	362.	429.	694.	1120.	1390.	1600.	1700.
75	224.	236.	344.	383.	593.	974.	1230.	1390.	1530.
80	213.	220.	306.	353.	513.	837.	1030.	1190.	1360.
90	180.	196.	209.	299.	421.	625.	738.	941.	1150.
95	151.	166.	195.	267.	375.	555.	662.	803.	976.
98	138.	149.	183.	247.	352.	484.	579.	743.	898.
99	131.	139.	169.	241.	338.	468.	539.	704.	870.

03271500 Great Miami River at Miamisburg, Ohio

Years analyzed = 52
Climatic year range = 1925–94

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	2760.	4310.	9590.	13000.	18500.	24200.	28400.	35300.	40100.
2	2050.	3340.	6180.	9200.	14300.	18500.	20800.	26300.	34400.
5	1470.	2660.	3600.	5310.	9420.	12600.	14100.	15500.	16300.
10	1070.	1510.	2320.	3050.	5350.	8320.	9840.	10400.	11100.
20	616.	1080.	1300.	1800.	2970.	4540.	5410.	6160.	6230.
25	536.	964.	1070.	1550.	2500.	3670.	4540.	5010.	5370.
30	475.	764.	932.	1380.	2160.	3130.	3850.	4420.	4630.
40	400.	582.	752.	976.	1570.	2370.	3000.	3290.	3680.
50	341.	483.	563.	743.	1210.	1920.	2420.	2550.	2940.
60	304.	397.	486.	598.	931.	1620.	1870.	2160.	2460.
70	277.	334.	417.	526.	763.	1220.	1540.	1730.	2050.
75	266.	318.	376.	485.	677.	1100.	1380.	1510.	1860.
80	253.	309.	349.	462.	616.	1000.	1220.	1310.	1720.
90	232.	265.	295.	377.	500.	752.	863.	1050.	1320.
95	209.	245.	279.	333.	456.	670.	793.	983.	1140.
98	181.	221.	250.	293.	431.	608.	715.	858.	969.
99	168.	210.	240.	280.	421.	598.	689.	824.	917.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	2060.	3070.	6280.	9610.	13700.	20100.	23800.	29600.	33700.
2	1690.	2860.	5330.	7310.	11600.	15400.	17400.	22000.	28500.
5	1390.	2380.	3390.	4740.	8350.	11300.	12500.	13800.	17600.
10	1070.	1530.	2410.	3120.	5690.	7960.	8970.	10000.	10800.
20	614.	1080.	1320.	1950.	3420.	5050.	6250.	6990.	7540.
25	541.	936.	1090.	1620.	2860.	4420.	5320.	5690.	6250.
30	478.	724.	937.	1320.	2320.	3820.	4510.	5120.	5420.
40	399.	584.	763.	979.	1690.	2640.	3460.	3640.	4220.
50	351.	470.	581.	762.	1270.	2070.	2640.	2810.	3380.
60	313.	399.	493.	617.	985.	1740.	2130.	2350.	2690.
70	279.	331.	437.	542.	802.	1390.	1710.	1870.	2060.
75	268.	323.	387.	516.	705.	1210.	1500.	1630.	1900.
80	252.	308.	358.	465.	639.	1100.	1280.	1390.	1770.
90	237.	275.	305.	389.	525.	795.	902.	1090.	1490.
95	224.	243.	286.	340.	472.	688.	850.	1020.	1260.
98	204.	237.	269.	308.	445.	624.	782.	949.	1160.
99	190.	229.	264.	301.	438.	615.	720.	907.	1050.

03272000 Twin Creek near Germantown, Ohio

Years analyzed = 84
Climatic year range = 1921–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	414.	1300.	1550.	2200.	3520.	4980.	5500.	5640.	6500.
2	232.	620.	917.	1230.	2260.	3490.	4120.	4570.	5320.
5	115.	325.	439.	639.	1080.	1650.	2050.	2410.	2760.
10	77.7	203.	242.	350.	593.	875.	1000.	1260.	1360.
20	43.3	86.0	113.	169.	293.	463.	507.	622.	711.
25	35.3	61.5	97.5	131.	232.	344.	411.	478.	547.
30	28.3	45.0	76.0	109.	192.	279.	326.	406.	458.
40	16.6	24.3	43.5	71.6	130.	200.	246.	279.	316.
50	13.8	17.3	25.8	46.0	91.5	135.	174.	205.	234.
60	9.05	11.5	15.0	28.0	61.5	95.0	126.	150.	179.
70	6.62	9.25	12.5	18.0	36.9	58.1	81.3	122.	134.
75	6.27	8.64	11.5	15.0	28.8	46.5	70.3	103.	117.
80	5.82	6.78	9.70	13.0	24.5	37.0	60.7	85.9	102.
90	4.11	4.81	6.55	9.10	15.0	26.6	34.4	55.2	74.3
95	3.78	3.95	5.22	7.23	12.0	22.3	28.6	40.0	60.9
98	3.12	3.47	4.13	5.70	11.0	19.0	23.5	33.7	45.5
99	2.82	3.17	3.85	5.30	10.0	17.7	22.5	31.4	41.7

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	179.	789.	902.	1300.	2090.	3030.	3460.	3920.	4940.
2	144.	572.	729.	1040.	1570.	2270.	2610.	3160.	4320.
5	122.	387.	500.	709.	1080.	1530.	1770.	2120.	2460.
10	91.1	212.	266.	398.	699.	1050.	1220.	1370.	1500.
20	50.3	85.1	124.	217.	378.	577.	713.	787.	980.
25	34.8	60.5	97.7	156.	291.	452.	567.	627.	808.
30	28.9	42.6	81.7	119.	234.	357.	458.	531.	636.
40	18.9	24.2	47.1	78.7	154.	242.	306.	365.	474.
50	14.1	17.5	26.1	51.7	103.	156.	204.	261.	291.
60	9.55	11.7	15.4	28.3	67.6	114.	147.	181.	228.
70	6.76	9.68	12.6	18.2	41.4	72.1	94.9	144.	180.
75	6.43	8.39	11.6	16.3	31.0	55.7	75.1	123.	147.
80	6.03	7.31	10.4	14.6	25.6	43.7	63.8	104.	126.
90	4.26	5.06	6.51	9.19	15.8	28.1	36.8	70.8	88.7
95	3.83	4.20	5.45	7.60	12.8	23.7	30.7	47.5	68.3
98	3.31	3.59	4.49	6.36	11.6	20.9	26.3	39.9	51.6
99	2.93	3.31	4.07	6.10	10.8	19.1	25.2	37.2	47.0

03274000 Great Miami River at Hamilton, Ohio

Years analyzed = 78
Climatic year range = 1931–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	6340.	11900.	13500.	16900.	26600.	33700.	38500.	45100.	57000.
2	4420.	8460.	10900.	12400.	19900.	26300.	30000.	36000.	45300.
5	3170.	4370.	6140.	7860.	13400.	17400.	20600.	22100.	23500.
10	1860.	3010.	3700.	4880.	7950.	11300.	13400.	14000.	15200.
20	1250.	1710.	1980.	2880.	4460.	6360.	7490.	8260.	9400.
25	1050.	1420.	1610.	2300.	3680.	5370.	6200.	6830.	7640.
30	789.	1210.	1400.	1930.	3120.	4330.	5400.	6050.	6430.
40	560.	785.	1070.	1340.	2430.	3250.	4150.	4400.	4910.
50	460.	624.	834.	997.	1810.	2530.	3190.	3460.	3810.
60	408.	461.	637.	802.	1360.	1990.	2370.	2770.	3200.
70	362.	420.	506.	667.	993.	1560.	1840.	2350.	2610.
75	342.	402.	448.	589.	847.	1330.	1590.	2130.	2360.
80	328.	379.	419.	536.	756.	1160.	1460.	1960.	2180.
90	286.	328.	358.	468.	605.	888.	1070.	1430.	1780.
95	258.	306.	320.	406.	556.	796.	979.	1230.	1610.
98	220.	272.	287.	377.	493.	735.	865.	1060.	1330.
99	201.	253.	279.	354.	475.	699.	826.	1000.	1260.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	4150.	8320.	10200.	12300.	19100.	26800.	29500.	38300.	47500.
2	4000.	7450.	8460.	10100.	15700.	21600.	25400.	28500.	42700.
5	2720.	4900.	6040.	6940.	11800.	15900.	19300.	21700.	23700.
10	1900.	3030.	3780.	4920.	8130.	11000.	12800.	14600.	15300.
20	1240.	1780.	2060.	3080.	4910.	7080.	7940.	9090.	10000.
25	1030.	1420.	1660.	2500.	3940.	5880.	6820.	7920.	8620.
30	769.	1240.	1460.	1950.	3330.	5100.	6010.	6830.	7340.
40	563.	815.	1120.	1400.	2550.	3690.	4560.	5220.	5500.
50	473.	644.	871.	997.	1880.	2750.	3440.	4010.	4440.
60	404.	451.	668.	832.	1370.	2170.	2610.	3100.	3740.
70	362.	415.	507.	674.	1060.	1660.	2010.	2580.	2870.
75	343.	403.	468.	603.	904.	1420.	1750.	2220.	2640.
80	328.	390.	425.	550.	782.	1280.	1490.	2030.	2430.
90	295.	331.	365.	467.	651.	943.	1140.	1700.	1950.
95	270.	318.	336.	422.	596.	828.	1030.	1360.	1750.
98	238.	290.	310.	386.	520.	761.	951.	1290.	1570.
99	220.	282.	308.	378.	505.	732.	868.	1240.	1400.

04183500 Maumee River at Antwerp, Ohio

Years analyzed = 56
Climatic year range = 1922–81

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	4860.	5440.	5920.	8690.	11700.	16300.	17800.	20900.	23700.
2	3240.	4510.	5170.	7010.	10600.	13400.	15100.	16900.	21100.
5	1620.	2650.	3850.	4980.	7210.	9240.	11300.	13600.	14100.
10	1080.	1590.	2020.	2760.	4770.	5740.	7150.	8020.	9580.
20	538.	692.	1170.	1410.	2410.	3540.	4540.	5090.	5780.
25	428.	501.	866.	1060.	1840.	2740.	3660.	4030.	4460.
30	336.	422.	679.	818.	1480.	2290.	2970.	3430.	3500.
40	220.	267.	315.	504.	946.	1530.	1850.	2170.	2570.
50	181.	197.	223.	353.	629.	1010.	1320.	1560.	1810.
60	154.	162.	171.	243.	413.	749.	950.	1120.	1360.
70	126.	135.	151.	192.	304.	527.	708.	769.	947.
75	111.	120.	134.	176.	259.	438.	548.	650.	755.
80	98.6	104.	125.	154.	235.	388.	436.	550.	600.
90	77.5	81.4	99.9	121.	167.	254.	309.	352.	450.
95	58.4	71.3	87.7	103.	141.	208.	256.	291.	388.
98	49.0	62.2	71.0	85.4	122.	176.	204.	253.	327.
99	38.3	55.4	65.9	77.7	116.	164.	188.	241.	277.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	3970.	4590.	4950.	7000.	10200.	14600.	16100.	19000.	22600.
2	2900.	3430.	4290.	6210.	8980.	11800.	14300.	17200.	18500.
5	1520.	2370.	3240.	5070.	6530.	8760.	9650.	11500.	12900.
10	1000.	1550.	1950.	2670.	4570.	5650.	7080.	7720.	8620.
20	512.	662.	1200.	1460.	2540.	3600.	4590.	5020.	5340.
25	420.	476.	888.	1100.	2100.	2950.	3810.	4110.	4390.
30	335.	403.	701.	946.	1590.	2530.	3060.	3370.	3720.
40	223.	265.	320.	557.	960.	1640.	2070.	2570.	2800.
50	181.	188.	229.	359.	647.	1090.	1490.	1730.	2030.
60	157.	164.	171.	250.	432.	798.	1060.	1200.	1490.
70	123.	138.	151.	198.	320.	574.	764.	857.	1050.
75	111.	123.	142.	179.	279.	472.	652.	744.	914.
80	106.	110.	131.	159.	242.	406.	508.	645.	664.
90	81.8	88.8	104.	124.	184.	291.	338.	406.	471.
95	68.9	73.4	94.2	110.	158.	229.	284.	317.	419.
98	59.5	64.2	76.8	95.7	143.	199.	257.	283.	350.
99	48.4	61.3	73.1	88.1	134.	181.	235.	274.	315.

04185000 Tiffin River at Stryker, Ohio

Years analyzed = 74
Climatic year range = 1922–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	770.	1510.	1630.	1890.	2590.	3700.	4230.	4530.	5780.
2	651.	989.	1320.	1520.	2090.	2980.	3220.	3750.	4130.
5	335.	534.	714.	967.	1430.	1960.	2130.	2280.	2420.
10	220.	337.	414.	629.	983.	1340.	1490.	1560.	1680.
20	93.5	177.	209.	279.	481.	744.	900.	950.	1000.
25	62.5	137.	169.	210.	369.	536.	668.	738.	789.
30	50.0	106.	124.	155.	293.	413.	478.	546.	612.
40	29.5	45.0	67.6	102.	207.	279.	336.	354.	392.
50	24.0	29.8	46.0	64.0	138.	187.	248.	270.	298.
60	18.5	23.5	35.7	46.0	92.9	140.	185.	203.	230.
70	14.5	20.1	28.5	36.0	58.9	104.	131.	141.	164.
75	12.8	18.5	24.9	28.0	49.5	77.0	111.	116.	142.
80	11.5	18.3	20.5	26.4	41.0	63.4	87.6	100.	131.
90	8.70	9.78	14.0	18.0	24.8	42.6	52.3	74.9	99.0
95	6.39	6.91	9.88	15.0	20.0	36.0	41.0	52.2	73.4
98	4.30	5.76	8.14	12.0	17.7	31.6	37.2	43.8	59.7
99	3.62	5.12	7.26	11.0	16.5	31.0	34.8	40.2	57.0

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	684.	1170.	1260.	1580.	2260.	2890.	3490.	3730.	4900.
2	400.	931.	1090.	1270.	1830.	2510.	2670.	3070.	3710.
5	276.	459.	756.	923.	1360.	1800.	1960.	2150.	2320.
10	185.	305.	405.	620.	910.	1270.	1430.	1510.	1570.
20	92.5	185.	224.	312.	508.	726.	909.	937.	1030.
25	61.7	143.	171.	219.	405.	613.	727.	783.	823.
30	50.9	102.	127.	168.	321.	485.	590.	654.	699.
40	29.9	46.1	71.6	102.	227.	316.	409.	455.	490.
50	24.5	29.5	46.8	68.6	142.	206.	277.	312.	345.
60	19.4	24.0	36.1	48.6	99.5	153.	207.	233.	263.
70	15.1	20.0	29.8	38.3	66.9	112.	149.	156.	191.
75	13.4	18.8	24.9	29.3	53.3	82.6	122.	128.	154.
80	11.7	18.0	21.1	28.0	43.1	67.5	99.6	107.	142.
90	8.85	11.1	14.5	18.3	27.0	46.3	56.5	78.9	110.
95	6.62	7.41	10.8	15.3	20.4	37.4	44.7	56.3	81.2
98	4.66	6.03	8.90	13.1	18.5	33.0	39.6	50.0	65.6
99	4.14	5.77	8.48	12.1	18.0	32.7	37.2	46.9	61.9

04187500 Ottawa River at Allentown, Ohio

Years analyzed = 48
Climatic year range = 1924–80

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	432.	637.	1030.	1120.	1430.	2010.	2210.	2320.	2480.
2	291.	427.	668.	802.	1090.	1370.	1470.	1730.	1820.
5	121.	209.	296.	385.	547.	782.	828.	909.	1040.
10	63.8	77.2	143.	183.	244.	378.	459.	556.	618.
20	35.7	37.9	63.2	80.0	104.	158.	190.	297.	316.
25	26.0	30.0	44.2	63.9	78.5	111.	139.	202.	236.
30	21.1	27.8	35.6	49.0	62.5	83.4	107.	149.	195.
40	17.4	22.9	27.8	36.1	45.6	54.5	72.0	103.	118.
50	15.6	20.0	22.8	27.0	35.0	42.3	47.6	68.2	75.8
60	13.8	18.0	20.8	22.7	28.0	34.0	36.8	47.5	52.9
70	11.4	14.0	18.0	19.7	24.0	28.3	31.0	37.3	41.1
75	11.0	13.8	16.0	18.9	22.0	26.3	29.1	35.0	38.0
80	9.47	12.8	15.8	18.7	20.5	24.0	28.1	32.3	35.1
90	7.47	9.98	13.6	16.0	18.0	21.2	24.8	28.1	31.5
95	6.48	9.26	11.8	15.0	17.0	19.3	23.1	26.2	29.1
98	5.92	8.81	11.0	12.7	16.0	18.0	21.2	25.1	27.0
99	5.64	8.61	9.75	11.7	15.0	17.8	20.0	24.0	25.0

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	293.	376.	657.	794.	1010.	1210.	1440.	1740.	1770.
2	236.	306.	487.	622.	747.	927.	1030.	1270.	1310.
5	119.	221.	357.	430.	541.	673.	723.	851.	978.
10	66.0	86.7	181.	230.	313.	444.	501.	551.	593.
20	33.5	39.1	67.9	98.2	128.	208.	283.	352.	397.
25	29.5	33.9	55.8	71.3	98.9	158.	201.	273.	324.
30	26.9	28.9	40.9	60.1	77.5	118.	144.	218.	261.
40	19.9	23.9	29.7	40.0	53.0	64.4	89.6	136.	173.
50	16.4	21.0	24.7	30.3	40.0	48.2	54.2	86.7	117.
60	14.9	18.9	22.1	24.2	30.6	37.3	42.1	61.3	67.4
70	12.5	15.3	18.5	20.9	24.9	31.1	34.5	43.6	50.0
75	11.7	14.3	17.7	20.1	23.6	29.0	32.6	37.2	42.5
80	11.0	13.5	16.8	19.5	22.5	27.5	30.1	34.9	39.1
90	8.95	11.2	13.9	16.7	19.6	23.0	26.2	29.6	33.7
95	6.95	10.5	12.2	15.6	18.1	20.9	24.8	28.3	30.5
98	6.18	9.18	11.3	13.9	17.5	20.3	23.0	27.4	27.9
99	5.87	8.93	11.0	13.1	17.0	19.4	22.1	26.8	27.6

04191500 Auglaize River near Defiance, Ohio

Years analyzed = 92
Climatic year range = 1917–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	4370.	8250.	9420.	13000.	18800.	25200.	29500.	32600.	36600.
2	3390.	6430.	7650.	9750.	14500.	18700.	22800.	26200.	30500.
5	2270.	3330.	4190.	5850.	8940.	11700.	14400.	15700.	18400.
10	836.	1590.	2330.	2810.	5020.	7150.	8670.	10400.	12000.
20	365.	619.	896.	1180.	2160.	3410.	4410.	4960.	5760.
25	283.	448.	646.	836.	1550.	2680.	3290.	3540.	4560.
30	218.	301.	490.	611.	1190.	2020.	2570.	2690.	3480.
40	113.	137.	280.	352.	702.	1140.	1520.	1720.	2010.
50	42.9	73.6	129.	217.	477.	779.	982.	1180.	1380.
60	34.9	39.0	65.7	135.	292.	511.	662.	829.	1010.
70	30.0	33.8	50.0	75.9	185.	325.	448.	589.	717.
75	26.9	31.3	40.6	53.8	138.	231.	339.	512.	652.
80	24.9	30.0	32.8	40.6	93.1	191.	255.	460.	561.
90	8.30	20.0	25.0	31.6	49.0	99.6	163.	267.	387.
95	4.72	13.6	20.0	25.6	36.6	79.2	94.4	168.	292.
98	3.75	9.51	17.0	20.4	31.5	52.8	73.9	123.	167.
99	3.42	7.62	12.4	19.0	29.8	46.5	62.2	77.2	139.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	4160.	6210.	6940.	8430.	14300.	19300.	23300.	25500.	29500.
2	2990.	5510.	6250.	7300.	11300.	15500.	18400.	21300.	24100.
5	1760.	3430.	4300.	5360.	8320.	10900.	12400.	14200.	17000.
10	704.	1540.	2210.	3140.	5120.	7250.	8340.	9500.	10900.
20	318.	610.	960.	1400.	2580.	3950.	5030.	5830.	7090.
25	263.	474.	726.	976.	1840.	3050.	3860.	4860.	5320.
30	219.	315.	548.	718.	1420.	2370.	3200.	3810.	4280.
40	145.	156.	305.	387.	812.	1420.	2070.	2500.	3060.
50	90.4	100.	138.	237.	572.	935.	1300.	1570.	1960.
60	56.8	71.0	87.1	165.	334.	595.	820.	1080.	1300.
70	43.2	51.8	61.5	112.	209.	392.	538.	736.	917.
75	38.1	41.3	56.7	91.5	169.	285.	463.	613.	797.
80	35.4	37.0	52.8	76.3	133.	220.	340.	567.	684.
90	11.3	26.0	33.3	46.7	80.8	132.	194.	324.	492.
95	5.31	19.4	27.5	34.8	65.0	99.0	152.	220.	392.
98	4.61	13.4	21.9	27.9	47.1	79.9	106.	191.	298.
99	3.62	11.7	19.7	24.4	42.4	70.2	92.4	166.	270.

04192500 Maumee River near Defiance, Ohio

Years analyzed = 75
Climatic year range = 1925–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	12700.	15800.	20900.	25800.	35900.	47700.	57300.	61100.	69800.
2	9730.	12900.	16800.	19500.	29600.	37500.	41200.	47400.	59700.
5	4880.	8060.	10300.	13000.	20100.	25800.	29600.	33300.	37500.
10	2680.	3880.	5680.	7550.	12200.	17800.	21000.	22300.	24800.
20	1040.	1800.	2670.	3420.	6440.	9580.	11700.	13200.	13500.
25	779.	1250.	2090.	2530.	5040.	7580.	9160.	10400.	11200.
30	588.	813.	1550.	1920.	3660.	6070.	7340.	8200.	9080.
40	449.	485.	814.	1260.	2360.	3680.	4680.	5180.	6310.
50	269.	312.	457.	746.	1560.	2490.	3190.	3620.	4150.
60	191.	238.	297.	514.	1070.	1650.	2250.	2570.	2890.
70	142.	192.	240.	347.	700.	1180.	1590.	2060.	2080.
75	126.	175.	220.	305.	600.	911.	1400.	1720.	1880.
80	114.	135.	190.	251.	474.	716.	1230.	1380.	1540.
90	68.9	94.4	128.	172.	302.	467.	781.	931.	1070.
95	54.4	68.0	97.1	135.	255.	367.	529.	709.	764.
98	30.1	56.4	76.6	103.	208.	313.	426.	558.	652.
99	16.7	49.8	71.1	90.4	180.	290.	376.	505.	560.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	10400.	13700.	16100.	19300.	26800.	38800.	49200.	52300.	61100.
2	8340.	9970.	14800.	16800.	23900.	30900.	36200.	39900.	49900.
5	4370.	7970.	10200.	12100.	18000.	23400.	25900.	29200.	35500.
10	2400.	3370.	5530.	7390.	11900.	16700.	19800.	20600.	23600.
20	979.	1870.	3070.	3840.	7110.	10700.	12400.	13600.	15000.
25	733.	1280.	2260.	2850.	5620.	8820.	10100.	11200.	12700.
30	563.	831.	1660.	2080.	4320.	6700.	8210.	9530.	10700.
40	442.	477.	889.	1300.	2760.	4360.	5580.	6440.	7030.
50	280.	324.	473.	804.	1810.	2880.	3810.	4580.	5260.
60	193.	246.	303.	544.	1210.	1940.	2720.	3160.	3600.
70	155.	204.	250.	380.	757.	1290.	1870.	2270.	2510.
75	138.	190.	222.	317.	647.	1040.	1630.	2050.	2190.
80	119.	170.	204.	280.	508.	802.	1420.	1630.	1860.
90	77.1	103.	139.	193.	316.	511.	878.	1070.	1300.
95	66.2	71.2	98.8	150.	268.	418.	628.	837.	981.
98	49.6	62.9	83.8	119.	232.	360.	492.	696.	773.
99	37.9	59.5	75.2	110.	216.	319.	433.	614.	706.

04193500 Maumee River at Waterville, Ohio

Years analyzed = 85
Climatic year range = 1899–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	16900.	19100.	23000.	29100.	40800.	54600.	64900.	67500.	77400.
2	12400.	15900.	18300.	22000.	32900.	44000.	47400.	54500.	67300.
5	6420.	9380.	11800.	15000.	22400.	29400.	32800.	36200.	44500.
10	3030.	5380.	6880.	9030.	14000.	19700.	22400.	24100.	28100.
20	1340.	2400.	3130.	4390.	7280.	10900.	13300.	15000.	15600.
25	986.	1610.	2430.	2980.	5560.	8090.	10800.	11700.	12800.
30	722.	1060.	1790.	2300.	4210.	6280.	8270.	9410.	10300.
40	475.	573.	922.	1410.	2600.	3870.	5420.	5830.	6480.
50	322.	363.	505.	850.	1780.	2690.	3680.	4000.	4630.
60	256.	268.	322.	490.	1170.	1900.	2560.	2920.	3460.
70	108.	170.	225.	308.	780.	1280.	1850.	2150.	2460.
75	86.4	106.	196.	264.	616.	990.	1530.	1850.	2110.
80	74.3	78.0	142.	229.	469.	779.	1250.	1660.	1870.
90	25.8	62.0	91.4	159.	310.	507.	807.	1050.	1320.
95	15.8	57.5	70.0	121.	238.	408.	587.	787.	982.
98	8.60	50.6	62.5	91.2	186.	346.	461.	639.	743.
99	5.00	36.9	50.0	78.2	163.	321.	417.	573.	641.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	13300.	15300.	18700.	22400.	32300.	44800.	54600.	59000.	70600.
2	11000.	12400.	16200.	19100.	26700.	35200.	39800.	47100.	57500.
5	5950.	9980.	11200.	14400.	20000.	26400.	29000.	33000.	40000.
10	2830.	5000.	6840.	8730.	13800.	18200.	22000.	22800.	25500.
20	1290.	2400.	3470.	4750.	8080.	11200.	13700.	15300.	17300.
25	925.	1690.	2590.	3530.	6200.	9480.	11300.	12500.	14600.
30	661.	1040.	1990.	2450.	4690.	7390.	9580.	10300.	12100.
40	466.	571.	961.	1530.	2980.	4600.	6520.	7300.	7690.
50	338.	381.	519.	862.	2040.	3190.	4410.	4950.	5380.
60	266.	291.	333.	511.	1230.	2300.	2970.	3360.	3970.
70	134.	190.	239.	373.	855.	1430.	2160.	2570.	2770.
75	92.2	130.	202.	280.	688.	1140.	1860.	2040.	2500.
80	78.3	92.5	172.	242.	526.	867.	1560.	1770.	2230.
90	36.9	67.3	103.	183.	338.	534.	890.	1300.	1540.
95	25.9	58.7	85.1	138.	264.	454.	722.	898.	1220.
98	17.9	57.3	70.6	112.	225.	389.	499.	718.	1020.
99	15.8	55.3	66.7	108.	199.	359.	477.	661.	892.

04195500 Portage River at Woodville, Ohio

Years analyzed = 57
Climatic year range = 1952–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1500.	1570.	2120.	2650.	4200.	5450.	6910.	7830.	8210.
2	817.	1190.	1380.	1930.	3190.	3980.	4700.	5420.	6380.
5	437.	673.	918.	1020.	1740.	2410.	2950.	3300.	4340.
10	148.	277.	400.	489.	879.	1300.	1600.	2040.	2200.
20	57.1	125.	156.	221.	372.	586.	730.	926.	1050.
25	39.3	91.9	110.	158.	270.	430.	539.	685.	725.
30	32.8	62.7	79.8	118.	203.	318.	403.	537.	612.
40	21.2	31.5	44.7	72.6	122.	202.	251.	335.	382.
50	12.3	14.9	20.4	44.4	83.0	128.	176.	234.	265.
60	8.24	10.0	13.1	27.8	51.8	86.6	118.	162.	170.
70	6.28	7.68	10.8	19.2	34.0	54.5	79.0	118.	123.
75	5.56	6.99	9.74	15.0	24.0	44.2	67.2	100.	105.
80	4.79	6.30	9.42	12.6	20.0	36.4	58.7	87.5	91.7
90	3.32	4.68	7.03	9.00	12.0	23.6	38.1	51.5	62.1
95	2.96	3.66	4.90	6.98	9.77	17.4	22.8	35.5	42.7
98	2.39	2.68	4.31	5.80	8.00	12.1	18.0	24.4	30.3
99	2.13	2.48	4.00	5.32	7.37	11.0	15.1	20.4	26.8

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	871.	952.	1240.	1780.	2660.	4020.	4960.	5610.	6000.
2	635.	786.	1050.	1340.	2160.	3080.	3450.	3730.	4790.
5	430.	626.	693.	1000.	1530.	2120.	2450.	2690.	3190.
10	160.	293.	423.	602.	999.	1360.	1790.	1930.	2470.
20	53.4	137.	158.	295.	499.	771.	1050.	1250.	1330.
25	38.2	105.	128.	183.	366.	598.	785.	982.	1060.
30	34.5	81.7	90.1	132.	267.	451.	617.	752.	821.
40	23.1	32.4	49.5	76.6	153.	295.	346.	487.	580.
50	14.2	17.1	20.7	47.0	102.	178.	238.	335.	369.
60	8.47	10.3	14.5	30.1	61.4	107.	164.	232.	248.
70	6.56	8.04	11.0	20.7	38.4	64.1	106.	167.	173.
75	6.01	7.22	10.4	16.9	28.7	50.2	81.1	140.	144.
80	5.03	6.47	9.78	14.3	20.9	38.7	69.6	106.	115.
90	3.55	5.03	7.72	9.55	13.2	26.6	48.9	83.3	84.4
95	3.02	3.84	5.52	7.84	11.0	20.3	28.3	54.3	66.2
98	2.64	2.95	4.75	6.65	9.13	13.6	21.4	28.9	45.6
99	2.39	2.62	4.46	6.15	8.19	12.5	17.3	25.8	38.2

04196000 Sandusky River near Bucyrus, Ohio

Years analyzed = 51
Climatic year range = 1926–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	252.	466.	677.	796.	1240.	1530.	1750.	1920.	2460.
2	148.	307.	405.	493.	850.	1130.	1290.	1480.	1730.
5	77.6	131.	203.	243.	406.	583.	697.	843.	935.
10	46.3	70.2	92.8	130.	200.	292.	348.	383.	459.
20	15.4	31.2	43.9	56.8	90.0	143.	163.	168.	195.
25	8.78	21.8	30.8	44.0	69.0	111.	119.	126.	134.
30	4.63	15.7	24.2	33.4	55.0	85.6	98.8	106.	117.
40	2.35	8.80	12.4	20.2	35.0	55.4	69.4	73.4	81.9
50	1.62	4.52	7.89	14.0	24.0	38.8	47.8	52.2	53.0
60	1.27	2.94	4.61	9.32	16.4	25.6	33.2	38.8	41.9
70	1.13	2.14	3.64	5.57	10.0	16.5	20.6	27.4	33.8
75	1.12	1.88	3.16	4.68	8.65	13.8	17.6	24.0	28.8
80	1.12	1.74	2.80	3.84	7.40	11.0	13.0	17.9	25.7
90	1.02	1.46	2.02	2.70	4.50	7.27	8.96	10.7	14.9
95	0.90	1.12	1.53	2.12	3.47	5.47	6.83	8.76	11.0
98	0.80	0.98	1.20	1.68	2.80	4.56	5.13	7.05	8.19
99	0.67	0.79	0.94	1.43	2.60	4.12	4.59	5.65	6.86

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	128.	296.	398.	461.	642.	841.	943.	1200.	1980.
2	98.6	222.	324.	377.	562.	704.	893.	1010.	1100.
5	81.2	141.	222.	280.	398.	512.	595.	749.	941.
10	57.6	89.0	125.	161.	254.	336.	397.	433.	592.
20	19.5	31.6	59.3	83.4	120.	188.	246.	269.	311.
25	7.96	23.8	39.3	62.1	90.6	162.	195.	221.	228.
30	4.14	18.7	28.4	43.4	73.1	131.	155.	173.	190.
40	2.72	9.42	14.8	22.1	45.7	79.5	99.0	114.	137.
50	1.99	5.09	9.33	15.5	30.4	53.5	62.7	71.3	80.0
60	1.62	3.36	5.41	9.48	20.1	33.5	42.0	47.5	57.1
70	1.37	2.67	3.71	6.47	12.5	20.7	27.2	34.7	40.7
75	1.24	2.26	3.44	5.65	9.79	16.6	20.2	30.9	37.0
80	1.19	1.97	3.06	4.84	8.39	13.7	15.7	26.8	32.6
90	1.09	1.67	2.22	3.35	5.26	9.18	10.5	14.4	20.5
95	1.03	1.26	1.71	2.55	4.42	7.20	7.80	10.3	12.8
98	0.95	1.17	1.41	2.06	4.01	5.83	6.59	8.65	11.0
99	0.93	1.13	1.26	1.82	3.39	5.08	5.92	7.69	9.88

04196800 Tymochtee Creek at Crawford, Ohio

Years analyzed = 36
Climatic year range = 1973–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	688.	833.	1390.	1860.	2120.	2600.	3140.	3870.	4330.
2	435.	641.	1060.	1380.	1660.	1950.	2220.	2930.	3520.
5	236.	361.	652.	811.	1010.	1310.	1450.	1790.	2350.
10	114.	164.	308.	373.	521.	773.	953.	1110.	1140.
20	44.6	59.8	102.	154.	199.	318.	424.	468.	494.
25	30.3	41.8	70.1	112.	148.	206.	302.	329.	345.
30	21.9	28.1	53.6	80.2	111.	156.	216.	244.	264.
40	9.10	14.4	31.5	40.8	64.0	90.0	136.	152.	161.
50	4.46	9.16	19.4	25.1	40.3	57.3	81.6	100.	109.
60	2.75	5.02	9.20	13.1	22.5	36.8	50.2	68.0	76.2
70	1.29	2.20	4.09	5.40	13.8	20.9	31.6	47.9	53.9
75	0.84	1.91	2.68	3.56	9.90	17.9	25.9	39.8	44.6
80	0.56	1.38	1.70	2.44	6.70	16.7	20.1	32.3	34.5
90	0.21	0.41	0.73	1.33	3.09	8.04	10.6	19.5	20.9
95	0.08	0.13	0.42	0.51	1.70	5.77	7.35	10.1	15.4
98	0.02	0.08	0.19	0.35	1.10	3.73	5.25	6.74	11.3
99	0.02	0.04	0.14	0.26	0.82	3.18	4.25	5.88	9.61

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	433.	630.	901.	1220.	1530.	1850.	2100.	2630.	3070.
2	332.	566.	781.	953.	1200.	1510.	1800.	2220.	2380.
5	224.	364.	602.	772.	901.	1090.	1320.	1620.	1890.
10	138.	170.	345.	459.	560.	723.	855.	1020.	1350.
20	53.7	76.4	134.	199.	292.	419.	546.	577.	731.
25	33.0	49.2	86.3	152.	199.	296.	408.	466.	563.
30	24.5	31.8	63.0	109.	154.	216.	313.	376.	461.
40	12.0	17.3	36.3	52.7	91.4	127.	177.	218.	243.
50	4.89	9.54	20.8	27.9	51.6	77.0	112.	142.	161.
60	2.97	5.41	9.46	14.8	27.9	50.5	64.0	95.8	103.
70	1.66	2.41	3.93	5.55	15.3	29.5	43.4	66.4	75.0
75	0.92	1.79	2.92	3.67	11.9	21.4	37.5	54.5	61.5
80	0.62	1.45	1.79	2.72	7.34	19.3	27.0	42.8	47.8
90	0.31	0.50	0.80	1.48	3.02	9.38	12.5	25.0	25.9
95	0.11	0.16	0.47	0.58	2.02	6.45	8.80	16.1	16.9
98	0.05	0.10	0.25	0.44	1.28	4.74	6.65	10.3	11.6
99	0.04	0.08	0.20	0.35	1.08	4.23	5.01	8.23	10.4

04200500 Black River at Elyria, Ohio

Years analyzed = 64
Climatic year range = 1945–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1410.	1760.	2340.	3240.	4450.	5550.	6810.	7590.	8770.
2	994.	1240.	1640.	2200.	2920.	4030.	4510.	5570.	6940.
5	421.	681.	839.	1020.	1480.	2260.	2570.	3160.	3630.
10	223.	283.	399.	512.	767.	1290.	1490.	1590.	1930.
20	69.3	138.	164.	214.	359.	594.	687.	762.	841.
25	48.5	97.1	118.	149.	271.	419.	536.	592.	648.
30	36.6	71.2	87.8	109.	212.	317.	415.	493.	510.
40	24.9	38.6	46.5	64.2	134.	208.	259.	319.	347.
50	18.3	19.5	30.0	40.0	87.0	130.	172.	226.	254.
60	11.9	14.1	20.0	27.4	56.5	93.0	121.	162.	170.
70	8.69	11.0	13.9	19.0	33.5	58.0	76.4	101.	124.
75	7.46	9.08	11.5	16.0	25.3	46.0	62.3	77.0	93.3
80	6.04	7.57	10.2	13.0	20.1	36.2	46.2	63.8	69.4
90	3.83	5.62	7.10	8.46	13.0	22.0	25.9	32.2	42.4
95	2.57	4.43	5.45	6.50	9.68	17.0	20.0	23.7	29.2
98	1.94	3.48	4.25	5.10	7.87	12.3	16.2	17.2	21.4
99	1.65	3.05	3.83	4.70	6.85	12.0	14.2	14.7	18.5

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	906.	1110.	1560.	1740.	2710.	3580.	4040.	4510.	5540.
2	834.	891.	1190.	1490.	2070.	2860.	3300.	3920.	4330.
5	431.	587.	801.	1080.	1440.	1880.	2430.	2780.	3390.
10	268.	350.	427.	614.	906.	1370.	1510.	1840.	2150.
20	70.2	158.	215.	284.	472.	810.	966.	1060.	1180.
25	54.3	110.	135.	208.	366.	641.	761.	847.	928.
30	38.0	88.0	101.	146.	280.	493.	591.	654.	771.
40	26.0	41.5	51.1	73.0	173.	312.	353.	452.	517.
50	18.2	21.0	30.7	46.0	109.	194.	249.	328.	377.
60	12.1	15.1	21.8	32.0	63.9	115.	167.	215.	253.
70	9.00	12.0	15.3	21.7	40.9	68.0	109.	151.	160.
75	6.90	9.89	11.9	17.6	31.2	53.0	86.6	104.	135.
80	6.22	8.44	10.7	14.6	24.0	41.4	62.9	82.3	99.3
90	3.78	6.19	7.78	9.44	13.7	26.6	31.4	45.7	51.3
95	3.00	4.82	6.12	7.43	10.5	19.4	25.0	30.3	37.7
98	2.58	4.33	4.99	6.20	9.35	16.4	19.7	23.2	30.3
99	2.47	4.13	4.66	5.80	8.79	14.1	17.3	20.4	23.2

04201500 Rocky River near Berea, Ohio

Years analyzed = 76
Climatic year range = 1924–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1050.	1730.	1960.	2390.	3390.	4670.	5180.	5630.	6620.
2	811.	1070.	1350.	1690.	2400.	3200.	3610.	4100.	4350.
5	339.	452.	783.	908.	1220.	1790.	2000.	2190.	2540.
10	205.	258.	354.	456.	668.	945.	1190.	1230.	1460.
20	71.5	101.	155.	213.	315.	462.	580.	619.	719.
25	48.4	74.0	121.	152.	253.	377.	443.	473.	555.
30	34.6	56.4	88.4	124.	208.	308.	362.	392.	453.
40	20.2	29.1	49.1	81.7	136.	208.	244.	278.	315.
50	14.4	19.4	25.0	52.0	92.8	151.	186.	218.	239.
60	8.97	11.7	17.0	33.4	60.5	109.	147.	163.	176.
70	5.28	7.90	11.9	19.4	43.9	75.6	102.	118.	130.
75	3.84	6.36	9.15	14.7	37.0	65.7	82.8	104.	108.
80	2.85	4.93	6.42	12.4	32.0	54.4	67.8	77.9	93.6
90	1.09	2.36	3.98	7.34	20.3	36.2	42.0	54.3	59.3
95	0.55	1.91	3.22	5.70	15.3	29.0	35.0	40.7	46.7
98	0.41	1.32	2.45	4.06	10.7	23.7	29.5	32.7	35.5
99	0.39	0.80	2.34	3.69	9.20	22.6	27.1	28.7	30.3

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	616.	933.	1160.	1290.	1920.	2490.	2800.	2990.	3330.
2	537.	720.	914.	1110.	1530.	2180.	2410.	2610.	3090.
5	371.	561.	737.	817.	1080.	1440.	1630.	1980.	2290.
10	224.	305.	432.	543.	766.	1050.	1200.	1310.	1530.
20	77.1	141.	201.	279.	429.	694.	771.	879.	938.
25	51.0	88.8	156.	196.	334.	538.	651.	706.	805.
30	35.0	65.0	109.	151.	258.	445.	545.	597.	683.
40	21.7	29.8	54.4	97.5	164.	291.	361.	431.	491.
50	14.7	19.8	30.5	57.8	119.	192.	259.	309.	366.
60	9.12	11.8	18.8	36.4	76.1	133.	180.	237.	278.
70	4.96	8.11	12.1	20.9	53.3	97.8	140.	153.	179.
75	4.09	7.01	9.57	16.8	47.1	83.0	109.	132.	159.
80	3.16	5.40	6.97	13.6	39.4	69.7	84.0	104.	133.
90	1.52	3.64	4.54	8.71	25.5	44.7	55.9	76.1	88.3
95	0.74	2.49	3.59	7.00	17.9	33.5	42.1	50.8	58.1
98	0.49	1.95	2.85	4.99	13.9	28.5	34.6	39.3	44.5
99	0.40	1.55	2.50	4.05	11.4	26.4	31.6	36.1	39.7

04208000 Cuyahoga River at Independence, Ohio

Years analyzed = 77
Climatic year range = 1922–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	2270.	3090.	3400.	3860.	5340.	6490.	7210.	8010.	9520.
2	1830.	2250.	2830.	3060.	4200.	5180.	5790.	6150.	7150.
5	1250.	1550.	1870.	2180.	2770.	3550.	3970.	4180.	4690.
10	881.	1090.	1180.	1500.	1960.	2710.	2960.	3150.	3280.
20	487.	576.	728.	891.	1250.	1690.	1950.	2110.	2210.
25	356.	429.	579.	730.	1040.	1420.	1640.	1780.	1860.
30	282.	328.	481.	591.	898.	1230.	1380.	1600.	1610.
40	193.	225.	297.	392.	647.	930.	1090.	1230.	1300.
50	146.	158.	230.	256.	486.	719.	880.	1030.	1070.
60	108.	113.	167.	212.	381.	552.	729.	850.	882.
70	86.4	95.6	129.	174.	301.	444.	554.	635.	715.
75	79.4	91.0	118.	155.	257.	406.	484.	564.	637.
80	69.9	83.0	111.	141.	232.	367.	424.	474.	569.
90	55.0	65.8	84.2	114.	188.	277.	328.	362.	409.
95	45.9	52.1	73.6	101.	157.	238.	281.	308.	344.
98	36.6	45.3	68.3	93.6	141.	218.	241.	281.	303.
99	30.7	39.0	64.8	87.1	135.	205.	233.	264.	292.

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1680.	2210.	2410.	2780.	3960.	4800.	5370.	5800.	6900.
2	1490.	1970.	2000.	2510.	3430.	4100.	4510.	4750.	6290.
5	1190.	1510.	1660.	1970.	2480.	3280.	3600.	3840.	4840.
10	842.	1060.	1150.	1530.	1920.	2550.	2750.	2840.	3030.
20	449.	533.	773.	885.	1300.	1830.	2030.	2180.	2330.
25	334.	435.	586.	760.	1110.	1530.	1750.	1970.	2060.
30	266.	306.	483.	636.	956.	1320.	1560.	1780.	1860.
40	197.	221.	332.	419.	696.	994.	1230.	1410.	1470.
50	157.	162.	230.	274.	521.	783.	972.	1180.	1220.
60	107.	115.	185.	221.	411.	621.	818.	972.	1030.
70	83.1	99.9	141.	182.	325.	518.	618.	713.	829.
75	78.1	92.7	127.	157.	292.	449.	530.	626.	755.
80	73.4	88.2	119.	149.	270.	410.	498.	554.	672.
90	62.9	76.0	99.0	125.	208.	321.	379.	422.	503.
95	55.9	62.9	89.6	111.	180.	269.	325.	371.	388.
98	48.9	59.5	86.4	99.6	149.	241.	288.	324.	347.
99	44.8	57.6	82.3	97.8	148.	231.	275.	298.	327.

04209000 Chagrin River at Willoughby, Ohio

Years analyzed = 69
Climatic year range = 1926–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	1520.	2010.	2100.	2430.	3380.	4120.	4610.	5220.	7020.
2	1070.	1380.	1530.	1760.	2270.	2870.	3340.	4280.	5100.
5	564.	671.	893.	1000.	1340.	1690.	1940.	2040.	2910.
10	367.	394.	484.	594.	795.	1020.	1080.	1450.	2130.
20	194.	213.	284.	323.	438.	580.	638.	747.	1010.
25	155.	172.	218.	253.	339.	470.	520.	578.	748.
30	124.	147.	162.	207.	286.	396.	432.	463.	584.
40	79.4	103.	110.	143.	214.	284.	319.	347.	389.
50	55.0	66.0	80.0	99.0	160.	220.	241.	265.	279.
60	40.6	51.0	56.0	71.0	118.	162.	188.	202.	221.
70	30.3	36.0	39.0	52.2	80.8	124.	147.	155.	171.
75	26.6	29.5	35.0	44.0	70.0	109.	126.	135.	144.
80	22.8	26.0	31.0	37.0	58.0	97.0	108.	115.	120.
90	14.6	19.0	22.0	27.0	44.0	72.6	83.0	89.0	98.0
95	10.2	14.7	18.3	25.0	35.0	59.0	68.0	75.2	84.4
98	7.24	12.2	16.0	20.3	28.0	52.3	61.0	66.8	73.6
99	5.85	8.32	14.0	18.7	27.0	47.0	58.0	64.8	70.4

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	865.	1050.	1240.	1510.	1890.	2550.	2990.	3180.	3700.
2	698.	876.	998.	1210.	1610.	1930.	2140.	2390.	3340.
5	567.	687.	799.	924.	1200.	1480.	1540.	1670.	2680.
10	394.	451.	496.	636.	842.	1080.	1230.	1370.	1960.
20	213.	245.	314.	390.	534.	733.	792.	893.	1110.
25	173.	198.	274.	314.	440.	624.	677.	767.	964.
30	141.	155.	193.	251.	362.	498.	568.	664.	830.
40	85.1	112.	129.	161.	266.	350.	425.	481.	587.
50	60.3	75.4	83.6	113.	185.	261.	308.	360.	440.
60	39.3	51.1	57.3	78.6	131.	204.	238.	278.	339.
70	31.1	36.0	41.0	54.1	94.6	146.	182.	200.	239.
75	27.9	31.6	39.3	47.1	81.6	130.	155.	172.	207.
80	25.2	27.7	31.3	39.1	68.1	119.	135.	154.	164.
90	17.8	21.3	24.2	29.7	51.4	84.1	94.1	106.	113.
95	12.2	16.0	21.0	26.4	37.0	64.4	78.9	88.6	100.
98	9.30	12.8	17.4	23.4	32.7	56.0	69.6	80.7	90.0
99	7.65	11.8	15.9	21.4	29.6	53.9	65.3	77.2	83.3

04211500 Mill Creek near Jefferson, Ohio

Years analyzed = 32
Climatic year range = 1942–73

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second]

	Daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	760.	885.	1040.	1140.	1290.	1430.	1700.	2050.	2380.
2	539.	622.	736.	877.	959.	1090.	1130.	1270.	1350.
5	245.	295.	401.	472.	558.	633.	661.	747.	769.
10	133.	156.	199.	224.	291.	339.	365.	393.	428.
20	62.9	71.4	85.2	93.0	127.	156.	183.	202.	206.
25	38.3	50.0	62.7	71.0	86.8	107.	130.	152.	158.
30	25.6	35.6	44.5	51.5	62.6	80.5	93.5	115.	123.
40	12.5	17.4	22.0	26.0	33.8	46.5	55.5	72.8	78.1
50	3.45	5.45	7.08	9.14	16.8	26.6	35.4	46.8	49.0
60	0.10	0.26	1.14	2.59	6.24	13.1	21.4	28.6	31.1
70	0.00	0.02	0.10	0.10	1.93	5.32	8.02	16.0	18.4
75	0.00	0.00	0.00	0.10	1.09	2.68	4.14	9.89	12.0
80	0.00	0.00	0.00	0.10	0.40	1.34	2.48	4.58	6.96
90	0.00	0.00	0.00	0.00	0.10	0.21	0.42	0.87	2.33
95	0.00	0.00	0.00	0.00	0.05	0.10	0.10	0.27	1.11
98	0.00	0.00	0.00	0.00	0.03	0.10	0.10	0.10	0.50
99	0.00	0.00	0.00	0.00	0.03	0.10	0.10	0.10	0.38

	7-day mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	358.	518.	607.	683.	795.	982.	1010.	1110.	1170.
2	306.	441.	498.	528.	614.	726.	785.	872.	973.
5	218.	274.	356.	427.	455.	525.	553.	607.	652.
10	141.	162.	250.	281.	339.	356.	386.	436.	456.
20	72.6	84.0	134.	163.	186.	210.	233.	268.	306.
25	56.7	65.4	95.0	112.	149.	170.	196.	221.	242.
30	34.0	47.7	67.8	78.7	108.	136.	157.	177.	194.
40	13.4	25.1	31.4	38.9	53.4	76.3	89.1	115.	132.
50	4.31	5.92	9.72	13.1	23.5	34.3	50.8	84.2	85.3
60	0.09	0.32	1.59	2.78	10.7	19.2	30.9	45.1	47.9
70	0.00	0.07	0.13	0.23	2.71	8.64	14.4	22.1	26.8
75	0.00	0.00	0.05	0.10	1.20	3.82	8.04	15.8	19.4
80	0.00	0.00	0.00	0.10	0.70	2.20	3.11	8.69	13.2
90	0.00	0.00	0.00	0.00	0.11	0.36	0.69	1.67	3.84
95	0.00	0.00	0.00	0.00	0.10	0.10	0.23	0.35	1.22
98	0.00	0.00	0.00	0.00	0.05	0.10	0.10	0.23	0.80
99	0.00	0.00	0.00	0.00	0.05	0.10	0.10	0.14	0.65

Appendix 6. Annual Seasonal-Period Flow-Duration Results for Sites with Streamflows that are Subject to Regulation

03086500 Mahoning River at Alliance, Ohio

Years analyzed = 38
Climatic year range = 1955–92

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	10.0	26.7	64.8	86.5	223.	373.	508.	711.	799.
2	9.82	24.3	55.9	70.8	174.	329.	423.	580.	719.
5	9.01	23.0	40.1	48.7	107.	188.	303.	423.	530.
10	8.34	19.2	29.4	38.8	57.2	123.	183.	312.	328.
20	6.95	16.0	20.6	25.8	35.7	76.0	121.	141.	184.
25	6.93	11.9	16.8	23.4	31.3	61.9	98.6	117.	126.
30	6.92	9.96	16.0	21.0	29.1	47.0	77.1	97.9	109.
40	6.87	8.85	14.2	17.7	24.8	38.0	60.6	72.1	81.7
50	5.32	7.22	9.16	14.7	20.5	30.5	41.9	52.8	57.6
60	4.18	5.51	8.30	10.7	17.0	25.4	29.8	41.0	54.4
70	3.52	4.73	7.24	9.14	13.3	21.6	26.0	32.7	49.2
75	3.52	4.10	6.36	7.93	11.5	18.9	24.0	30.3	46.3
80	2.76	3.63	5.36	7.14	9.81	15.9	21.2	28.5	46.1
90	0.00	1.95	3.63	4.99	6.96	12.7	15.2	20.1	34.7
95	0.00	1.26	3.22	4.37	6.01	11.0	12.6	16.2	25.7
98	0.00	0.90	2.86	3.59	5.50	8.78	12.2	13.2	25.6
99	0.00	0.90	2.70	3.47	4.90	8.78	12.0	13.0	25.5

03093000 Eagle Creek at Phalanx Station, Ohio

Years analyzed = 80
Climatic year range = 1926–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	98	95	90	80	50	20	10	5	2
1	20.6	30.1	42.0	89.6	331.	893.	1470.	2240.	3540.
2	20.6	30.0	38.0	72.3	268.	616.	1080.	1470.	2500.
5	18.0	21.9	30.2	46.1	122.	369.	546.	729.	1140.
10	14.9	20.1	23.1	34.7	78.0	222.	336.	496.	689.
20	12.6	18.0	19.1	26.4	46.5	113.	163.	219.	262.
25	12.6	15.1	18.0	24.0	40.0	93.6	128.	162.	227.
30	11.2	13.5	17.0	22.0	35.5	76.3	114.	147.	189.
40	9.76	12.1	15.0	18.0	29.3	53.4	83.9	104.	132.
50	8.81	9.34	13.0	16.0	23.0	43.2	59.7	87.6	112.
60	8.06	8.76	12.0	14.2	20.0	31.8	46.7	74.2	90.4
70	7.28	8.04	10.1	13.0	16.1	27.6	38.3	51.5	74.6
75	6.80	7.73	9.63	12.0	15.5	26.8	35.7	49.0	70.3
80	6.38	7.59	9.00	11.0	14.4	24.0	33.9	46.4	65.9
90	5.08	6.22	7.16	8.90	12.0	20.8	24.9	38.0	42.2
95	4.17	5.03	6.04	7.96	11.0	18.0	21.6	28.9	35.6
98	2.99	4.06	5.21	6.62	10.4	17.0	19.8	26.0	30.1
99	2.17	3.81	4.55	6.02	9.90	17.0	19.0	24.9	30.1

03097500 Meander Creek at Mineral Ridge, Ohio

Years analyzed = 22
Climatic year range = 1929–50

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	1.42	1.53	1.76	2.07	2.60	6.67	66.2	162.	412.
2	1.34	1.43	1.68	1.95	2.47	5.99	55.0	137.	370.
5	0.90	1.09	1.34	1.54	1.85	4.92	37.4	105.	261.
10	0.82	0.90	1.05	1.24	1.65	2.22	5.28	59.0	147.
20	0.70	0.73	0.80	0.98	1.43	1.88	2.54	19.8	28.1
25	0.70	0.70	0.80	0.89	1.40	1.82	2.48	10.6	15.4
30	0.61	0.70	0.80	0.80	1.20	1.81	2.44	8.55	11.6
40	0.60	0.60	0.70	0.70	1.06	1.62	2.28	5.47	8.28
50	0.50	0.53	0.66	0.70	0.95	1.60	1.82	4.76	6.41
60	0.48	0.49	0.56	0.69	0.84	1.39	1.64	3.79	5.08
70	0.40	0.43	0.56	0.60	0.70	1.32	1.54	2.75	4.66
75	0.40	0.40	0.50	0.60	0.70	1.21	1.54	2.44	4.33
80	0.32	0.40	0.46	0.50	0.65	1.20	1.48	2.37	3.96
90	0.22	0.31	0.37	0.40	0.65	1.10	1.26	1.99	2.98
95	0.12	0.27	0.30	0.40	0.50	0.96	1.26	1.92	2.60
98	0.10	0.16	0.30	0.38	0.50	0.78	1.13	1.81	2.49
99	0.10	0.13	0.30	0.30	0.50	0.70	1.04	1.81	2.49

03097550 Mahoning River at Ohio Edison P Plt at Niles, Ohio

Years analyzed = 22
Climatic year range = 1987–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	546.	701.	896.	987.	1320.	3370.	4230.	5330.	7350.
2	448.	568.	732.	817.	1190.	2850.	3980.	4540.	6460.
5	387.	455.	513.	589.	1020.	1990.	3240.	3920.	4310.
10	374.	403.	432.	504.	847.	1390.	2440.	2670.	3180.
20	338.	363.	380.	401.	665.	966.	1920.	2240.	2310.
25	329.	341.	363.	374.	583.	913.	1770.	2160.	2260.
30	321.	326.	346.	363.	497.	880.	1630.	1950.	2060.
40	292.	310.	328.	337.	444.	770.	1190.	1610.	1730.
50	247.	298.	306.	313.	407.	648.	970.	1300.	1350.
60	234.	264.	285.	292.	376.	565.	773.	1110.	1180.
70	222.	247.	262.	273.	330.	456.	628.	902.	1020.
75	216.	233.	250.	268.	320.	433.	573.	813.	941.
80	211.	228.	242.	258.	310.	390.	529.	722.	858.
90	201.	207.	224.	234.	284.	380.	438.	594.	658.
95	196.	201.	213.	227.	271.	344.	399.	454.	560.
98	189.	189.	205.	224.	254.	330.	378.	440.	551.
99	185.	187.	202.	219.	249.	329.	374.	433.	545.

03116000 Tuscarawas River at Clinton, Ohio

Years analyzed = 39
Climatic year range = 1939–77

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	61.0	73.0	134.	152.	200.	388.	600.	782.	1000.
2	59.3	66.5	115.	132.	187.	324.	491.	694.	899.
5	51.0	59.4	84.0	91.8	135.	209.	274.	409.	577.
10	49.0	56.0	71.6	75.0	102.	138.	175.	236.	316.
20	46.0	54.0	62.4	66.6	81.6	95.2	125.	163.	178.
25	44.0	53.0	57.0	65.0	75.0	86.0	117.	141.	159.
30	43.4	49.8	53.0	61.8	70.4	82.4	109.	130.	155.
40	43.0	46.0	52.4	58.0	66.0	77.0	90.2	118.	142.
50	42.0	44.0	49.0	55.0	63.0	75.0	80.0	100.	130.
60	41.0	42.0	47.8	52.0	59.0	70.8	74.0	85.0	118.
70	37.6	40.0	44.0	48.0	57.0	66.0	70.0	79.0	111.
75	37.0	40.0	43.0	47.0	57.0	64.0	69.0	77.0	85.0
80	35.8	39.0	42.0	47.0	56.0	64.0	67.0	76.0	82.4
90	33.0	38.0	39.4	41.2	52.0	61.2	66.0	71.2	73.2
95	31.6	34.0	37.0	40.0	50.6	59.6	63.0	70.0	73.0
98	28.7	34.0	36.0	37.0	47.5	56.8	60.0	69.5	72.0
99	27.0	32.0	35.0	37.0	46.0	56.0	60.0	67.0	72.0

03116200 Chippewa Creek at Easton, Ohio

Years analyzed = 21
Climatic year range = 1960–80

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	24.4	38.2	78.8	115.	210.	535.	591.	1280.	3720.
2	21.7	33.8	62.8	102.	144.	356.	498.	1260.	2450.
5	14.4	18.0	40.6	53.5	82.8	211.	266.	883.	1000.
10	11.4	15.4	23.5	34.0	46.8	100.	180.	322.	854.
20	10.2	14.2	17.6	23.8	32.2	53.7	104.	132.	443.
25	9.76	13.2	16.2	21.2	30.0	44.4	81.4	110.	408.
30	9.76	13.2	15.0	19.4	26.0	41.4	69.2	103.	302.
40	9.30	12.0	13.0	14.6	22.2	31.3	54.1	82.8	214.
50	8.84	11.0	12.0	13.2	20.0	27.6	40.2	71.0	167.
60	8.32	9.52	10.8	12.6	17.8	25.6	33.5	56.6	116.
70	7.92	9.02	10.3	11.0	15.0	22.2	28.9	48.1	92.2
75	7.87	8.52	9.76	11.0	15.0	20.8	24.2	44.6	84.8
80	7.19	7.62	9.13	9.92	14.0	20.0	21.4	40.0	72.1
90	6.22	6.56	8.06	9.06	13.0	16.9	20.6	28.2	35.4
95	5.09	5.98	7.13	8.72	12.0	16.0	18.6	25.8	33.8
98	4.47	5.22	6.68	8.28	10.8	14.4	17.1	25.5	32.2
99	4.22	4.64	6.58	7.94	10.0	14.4	16.6	24.0	31.3

03117000 Tuscarawas River at Massillon, Ohio

Years analyzed = 71
Climatic year range = 1938–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	124.	214.	300.	449.	958.	2290.	2880.	3540.	6600.
2	118.	159.	257.	354.	728.	1980.	2440.	3300.	6010.
5	103.	119.	198.	254.	453.	1180.	2010.	2660.	3970.
10	89.9	107.	149.	200.	317.	671.	1130.	1800.	2260.
20	86.0	99.6	134.	150.	215.	421.	572.	987.	1160.
25	83.9	98.4	127.	142.	190.	359.	484.	704.	991.
30	82.5	96.2	113.	132.	176.	323.	432.	589.	854.
40	78.8	93.4	105.	123.	153.	257.	355.	456.	608.
50	75.6	88.2	96.2	115.	137.	211.	315.	390.	505.
60	73.6	84.0	92.0	107.	125.	186.	267.	334.	399.
70	71.5	75.4	87.2	98.8	115.	172.	233.	269.	342.
75	70.8	74.6	85.2	94.4	112.	166.	210.	247.	319.
80	67.7	71.2	78.8	89.2	109.	160.	198.	237.	302.
90	60.3	67.1	70.4	81.2	101.	141.	167.	202.	268.
95	57.4	61.4	68.0	76.0	96.2	133.	151.	183.	217.
98	53.4	58.1	63.9	71.7	93.0	127.	147.	176.	196.
99	52.3	57.0	62.0	70.4	90.0	125.	145.	171.	191.

03118000 Middle Branch Nimishillen Creek at Canton, Ohio

Years analyzed = 68
Climatic year range = 1941–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	2.74	5.32	20.8	35.4	82.0	234.	322.	418.	785.
2	2.64	4.91	16.1	25.2	62.0	176.	259.	353.	534.
5	2.28	3.93	7.01	16.8	40.9	112.	183.	193.	216.
10	2.17	3.45	5.66	11.7	24.3	67.7	119.	144.	180.
20	1.78	2.92	4.93	7.52	16.3	38.4	60.1	72.3	85.5
25	1.72	2.67	4.64	6.08	14.0	33.4	48.6	60.6	70.1
30	1.64	2.64	4.03	5.39	13.0	26.8	41.2	51.1	65.2
40	1.44	2.38	3.18	4.55	10.0	20.4	34.4	41.7	56.8
50	1.14	1.99	2.78	3.88	9.05	17.2	27.4	35.2	48.3
60	1.06	1.80	2.29	3.69	7.88	15.2	24.2	31.1	42.4
70	0.95	1.60	2.09	2.92	6.85	14.0	22.1	25.5	37.9
75	0.93	1.55	1.99	2.88	6.75	13.2	21.1	23.5	35.3
80	0.92	1.47	1.79	2.72	6.33	12.2	20.0	21.5	34.1
90	0.82	1.30	1.42	2.31	5.65	11.0	17.3	19.0	30.0
95	0.56	1.04	1.35	1.88	4.94	10.2	14.3	17.8	21.2
98	0.43	0.88	1.15	1.58	4.54	10.0	12.2	16.6	19.1
99	0.36	0.69	0.90	1.58	4.40	9.60	12.2	16.1	18.6

03118500 Nimishillen Creek at North Industry, Ohio

Years analyzed = 88
Climatic year range = 1921–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	92.3	105.	147.	262.	504.	1070.	1450.	2220.	3530.
2	86.0	93.0	119.	195.	400.	909.	1120.	1700.	2070.
5	61.3	67.3	86.9	128.	258.	511.	751.	896.	1180.
10	49.3	60.0	67.8	96.8	167.	322.	492.	575.	707.
20	38.1	49.5	61.8	73.8	118.	218.	266.	363.	399.
25	36.7	47.9	57.9	70.0	107.	201.	240.	303.	351.
30	35.5	44.5	56.0	65.6	102.	170.	221.	270.	295.
40	33.5	40.3	54.7	61.0	90.7	133.	197.	219.	247.
50	29.3	36.4	48.7	56.8	80.5	122.	172.	188.	217.
60	27.6	34.0	45.8	54.8	74.7	117.	158.	170.	194.
70	25.8	31.9	44.3	52.0	71.3	110.	139.	152.	174.
75	25.6	31.3	43.7	50.0	69.0	106.	131.	143.	166.
80	24.6	30.1	42.5	48.8	67.5	103.	126.	138.	162.
90	23.3	26.5	35.7	44.0	64.7	96.0	114.	131.	147.
95	21.7	24.7	33.1	41.8	62.0	89.3	105.	124.	133.
98	18.3	23.4	29.2	40.0	59.3	86.9	99.9	118.	128.
99	16.8	21.4	29.0	39.8	57.5	85.0	97.2	114.	126.

03145000 South Fork Licking River near Hebron, Ohio

Years analyzed = 50
Climatic year range = 1939–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	35.4	85.8	139.	296.	603.	1210.	1540.	2160.	4460.
2	23.0	85.4	134.	211.	477.	931.	1330.	2070.	2840.
5	15.7	64.2	98.9	178.	299.	512.	814.	1360.	1950.
10	10.8	11.4	51.3	110.	212.	391.	474.	746.	1510.
20	7.87	9.02	21.3	32.8	103.	255.	338.	436.	445.
25	7.20	7.59	9.86	22.6	74.0	171.	274.	323.	405.
30	6.31	7.07	9.26	18.5	47.4	134.	238.	273.	363.
40	5.31	5.96	7.16	12.0	30.8	60.2	122.	188.	324.
50	3.72	5.07	5.73	9.14	20.5	39.8	73.1	134.	242.
60	3.52	4.46	4.92	7.14	15.0	31.2	44.8	84.5	153.
70	3.20	3.73	4.43	6.23	12.3	21.0	34.4	57.8	81.7
75	3.10	3.37	3.93	5.30	10.5	19.0	27.8	49.1	66.9
80	3.00	3.06	3.45	4.93	9.66	17.7	24.3	39.1	51.8
90	2.00	2.18	2.73	3.99	7.76	15.2	19.9	26.3	41.0
95	0.97	1.84	2.43	3.62	6.71	14.5	17.9	22.8	30.7
98	0.78	1.34	2.09	3.57	6.14	13.8	14.9	20.6	24.8
99	0.70	1.30	2.01	3.42	5.95	13.8	14.9	19.8	24.0

03156000 Hunters Run at Lancaster, Ohio

Years analyzed = 23
Climatic year range = 1956–78

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	1.56	1.96	5.28	8.00	27.0	37.4	61.4	113.	120.
2	1.46	1.76	4.05	7.33	15.1	33.9	55.1	83.7	92.5
5	1.30	1.43	2.65	4.36	7.00	18.5	27.0	41.1	53.2
10	1.10	1.26	2.19	3.13	5.34	9.16	14.0	21.6	25.1
20	1.00	1.12	1.66	2.24	3.40	6.18	7.38	12.6	14.3
25	1.00	1.12	1.58	2.22	2.90	4.94	6.32	9.26	12.3
30	0.95	1.12	1.48	2.02	2.64	4.50	5.96	8.02	10.4
40	0.82	1.02	1.37	1.92	2.24	3.74	4.86	6.05	6.40
50	0.80	0.96	1.28	1.72	2.00	3.12	3.66	5.10	6.22
60	0.78	0.94	1.20	1.52	1.80	2.68	3.18	4.73	5.46
70	0.70	0.86	1.20	1.27	1.60	2.29	2.51	4.42	5.20
75	0.62	0.82	1.10	1.20	1.40	2.04	2.42	4.30	4.86
80	0.54	0.82	1.10	1.12	1.40	1.97	2.22	4.00	4.40
90	0.51	0.58	0.96	1.00	1.22	1.68	1.92	3.05	3.76
95	0.31	0.51	0.78	0.91	1.00	1.38	1.74	2.75	3.46
98	0.22	0.46	0.68	0.89	1.00	1.25	1.57	2.56	3.26
99	0.22	0.46	0.68	0.80	0.95	1.20	1.50	2.48	3.24

03159500 Hocking River at Athens, Ohio

Years analyzed = 47
Climatic year range = 1962–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	123.	199.	398.	817.	1700.	3800.	5670.	7680.	11200.
2	118.	178.	321.	670.	1440.	2730.	5070.	6860.	9490.
5	112.	156.	282.	377.	885.	1750.	3410.	4710.	6670.
10	105.	134.	214.	256.	511.	1100.	1910.	2990.	3340.
20	82.1	112.	151.	185.	325.	685.	897.	1620.	1850.
25	76.4	104.	142.	167.	287.	512.	710.	1280.	1630.
30	72.1	98.1	132.	159.	244.	442.	627.	1120.	1510.
40	65.8	87.8	116.	136.	187.	303.	503.	855.	1070.
50	62.8	75.0	103.	113.	151.	246.	394.	611.	825.
60	56.0	68.5	94.0	95.6	126.	203.	309.	503.	684.
70	51.5	64.9	83.4	89.6	108.	180.	253.	444.	584.
75	49.4	60.0	78.8	87.0	102.	168.	232.	404.	542.
80	47.7	59.8	72.8	85.1	98.0	151.	221.	371.	481.
90	45.0	57.8	65.8	76.2	92.0	135.	211.	307.	341.
95	43.4	55.6	61.6	73.2	87.0	121.	158.	238.	302.
98	40.7	53.5	60.6	72.3	83.5	111.	146.	217.	268.
99	40.2	52.0	60.6	71.4	83.0	111.	136.	211.	250.

03261500 Great Miami River at Sidney, Ohio

Years analyzed = 83
Climatic year range = 1926–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	61.1	98.2	117.	181.	576.	2750.	4220.	6060.	6710.
2	56.1	92.0	106.	180.	563.	2190.	3930.	5440.	6410.
5	51.7	73.2	87.8	120.	324.	1360.	2330.	3790.	4430.
10	45.2	51.0	68.5	91.6	256.	779.	1510.	2110.	2970.
20	36.3	45.2	53.6	68.9	152.	372.	706.	1180.	1540.
25	35.1	43.6	49.0	64.0	124.	309.	536.	783.	1260.
30	33.4	42.4	47.4	58.8	97.0	273.	392.	640.	1030.
40	30.0	40.0	42.4	50.8	81.0	181.	275.	430.	763.
50	27.8	37.0	39.0	46.0	68.0	138.	223.	362.	523.
60	24.7	34.0	35.7	41.8	61.6	118.	191.	268.	330.
70	23.6	31.2	33.0	36.8	54.8	110.	165.	197.	301.
75	22.7	29.0	32.0	35.0	52.0	102.	151.	174.	283.
80	21.6	26.8	30.0	33.0	50.8	96.5	132.	149.	256.
90	18.9	21.6	26.5	29.2	45.0	76.2	101.	117.	224.
95	16.2	18.6	23.4	28.8	42.0	69.2	92.8	109.	214.
98	11.7	14.8	22.1	26.7	40.8	65.2	86.8	109.	198.
99	10.0	14.4	21.8	26.0	40.0	64.2	85.6	109.	190.

03261950 Loramie Creek near Newport, Ohio

Years analyzed = 45
Climatic year range = 1964–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	9.12	13.8	30.2	66.8	259.	1050.	1620.	2240.	2870.
2	8.57	11.5	22.7	52.6	248.	792.	1430.	1880.	2470.
5	6.06	7.19	12.6	20.6	127.	420.	846.	1290.	1440.
10	4.80	5.48	7.14	11.9	47.0	224.	366.	502.	729.
20	3.13	3.64	4.42	6.33	17.2	84.6	154.	222.	256.
25	2.83	3.36	3.82	4.98	13.0	49.0	97.6	169.	187.
30	2.56	2.80	3.42	4.47	11.0	26.7	85.0	124.	136.
40	1.54	1.96	2.56	3.24	7.80	15.8	44.8	74.0	84.3
50	1.16	1.36	1.80	2.70	5.50	10.6	34.2	46.4	59.1
60	0.93	1.10	1.44	2.30	3.46	7.60	23.8	34.0	41.9
70	0.61	0.94	1.26	1.87	3.02	5.31	15.5	26.8	33.7
75	0.52	0.83	1.04	1.70	2.50	5.06	11.6	21.0	30.8
80	0.39	0.74	1.02	1.55	2.34	4.27	9.12	15.8	26.9
90	0.25	0.45	0.84	1.08	1.80	2.65	3.80	8.50	10.3
95	0.23	0.35	0.69	0.84	1.26	2.43	2.94	5.76	7.56
98	0.21	0.31	0.57	0.69	1.10	1.99	2.73	4.29	6.03
99	0.20	0.28	0.50	0.64	1.00	1.92	2.58	3.90	5.85

03262000 Loramie Creek at Lockington, Ohio

Years analyzed = 94
Climatic year range = 1915–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	6.46	11.8	20.0	37.0	341.	1750.	2910.	3670.	4340.
2	6.46	11.1	17.9	34.4	226.	1540.	2420.	3050.	3640.
5	6.10	9.38	13.7	20.0	97.6	820.	1310.	1900.	2460.
10	5.72	8.75	10.9	14.8	48.4	346.	651.	818.	1280.
20	4.50	7.48	8.08	10.0	23.0	155.	248.	312.	785.
25	4.38	6.85	7.70	10.0	19.5	109.	200.	245.	641.
30	4.17	6.58	7.19	9.00	17.4	75.0	136.	180.	494.
40	3.70	5.89	6.60	7.74	13.5	53.2	94.0	126.	353.
50	3.37	5.18	5.95	6.90	12.0	39.0	68.5	91.5	230.
60	3.35	4.80	5.39	6.06	10.0	27.0	53.4	68.1	105.
70	3.10	4.09	4.65	5.20	9.00	22.0	43.5	56.2	74.1
75	2.67	3.85	4.35	5.00	8.60	18.0	40.0	49.5	66.1
80	2.53	3.59	4.15	4.74	8.14	17.0	31.0	44.6	59.2
90	1.83	2.65	3.63	4.20	7.06	14.0	21.6	37.7	44.2
95	1.15	2.20	3.11	3.96	6.65	12.6	19.5	33.6	42.8
98	0.68	2.17	2.70	3.80	6.00	10.8	17.7	28.4	36.0
99	0.50	1.63	2.65	3.70	5.80	10.0	14.0	24.3	33.0

03262700 Great Miami River at Troy, Ohio

Years analyzed = 47
Climatic year range = 1962–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	141.	184.	259.	394.	1080.	3800.	6270.	10000.	12000.
2	137.	178.	242.	373.	1000.	3270.	5600.	9370.	11100.
5	117.	151.	207.	281.	589.	2080.	3720.	5480.	7370.
10	78.5	115.	145.	226.	399.	837.	1930.	2850.	3560.
20	63.9	91.4	106.	143.	245.	485.	842.	1410.	1740.
25	57.4	83.0	102.	122.	190.	324.	609.	980.	1310.
30	56.0	80.6	94.2	110.	177.	266.	511.	804.	1040.
40	52.8	71.8	79.3	90.5	113.	229.	327.	614.	747.
50	50.2	64.0	72.6	84.8	105.	177.	250.	511.	566.
60	47.3	60.2	67.5	76.4	95.8	155.	219.	389.	441.
70	44.1	48.9	61.0	70.8	86.2	143.	193.	296.	347.
75	40.4	44.6	59.6	67.4	83.0	136.	182.	268.	328.
80	38.0	40.9	57.0	64.3	78.8	131.	173.	232.	266.
90	34.0	38.6	52.0	56.9	72.2	112.	141.	183.	225.
95	31.6	37.5	46.5	50.5	68.6	105.	129.	155.	211.
98	28.4	34.0	40.0	48.0	64.7	100.	114.	146.	195.
99	26.4	32.8	38.8	46.6	64.0	95.8	111.	144.	186.

03263000 Great Miami River at Taylorsville, Ohio

Years analyzed = 88
Climatic year range = 1921–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	108.	192.	232.	299.	1240.	4840.	10300.	12400.	14900.
2	92.6	181.	219.	293.	952.	3980.	8890.	10700.	13100.
5	87.9	145.	179.	238.	664.	2510.	5280.	8080.	10300.
10	82.8	99.8	148.	181.	408.	1480.	2720.	3980.	5200.
20	72.6	85.2	118.	138.	284.	823.	1530.	2000.	3180.
25	69.2	83.5	109.	126.	246.	616.	1070.	1600.	2690.
30	66.9	80.1	104.	116.	215.	519.	952.	1370.	2410.
40	63.2	75.0	90.4	102.	169.	396.	670.	1030.	1830.
50	62.5	70.3	82.7	95.6	148.	285.	507.	748.	1290.
60	59.5	66.9	75.6	88.8	130.	256.	405.	631.	781.
70	54.9	64.9	68.0	82.8	118.	240.	350.	516.	663.
75	53.4	60.9	64.9	79.8	116.	221.	332.	496.	615.
80	53.0	57.4	62.0	74.6	108.	209.	259.	396.	575.
90	45.5	53.5	57.8	66.6	96.2	170.	203.	321.	497.
95	39.9	51.0	54.5	62.8	91.7	157.	194.	255.	463.
98	37.6	47.2	52.6	56.0	84.1	140.	184.	206.	432.
99	35.6	45.9	51.9	55.8	82.5	135.	179.	197.	384.

03266000 Stillwater River at Englewood, Ohio

Years analyzed = 84
Climatic year range = 1925–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	42.9	57.5	88.5	149.	837.	3920.	6050.	6520.	7490.
2	42.1	55.3	83.4	131.	545.	3260.	5850.	6400.	7380.
5	40.7	48.8	76.6	95.4	258.	1490.	4260.	5230.	6340.
10	38.2	43.8	62.2	79.8	193.	961.	1700.	3150.	3570.
20	30.7	37.1	50.7	65.0	126.	411.	664.	1200.	1890.
25	29.7	34.3	47.0	61.0	115.	320.	479.	987.	1450.
30	29.1	33.4	42.9	58.4	100.	250.	427.	736.	1180.
40	26.5	31.2	38.0	52.4	87.0	190.	324.	541.	830.
50	22.8	26.0	33.5	46.0	72.5	150.	274.	412.	547.
60	19.8	23.0	30.0	40.0	65.9	122.	208.	301.	477.
70	14.9	20.1	22.6	36.6	56.9	106.	166.	266.	451.
75	13.4	19.3	21.0	35.0	53.0	95.0	155.	253.	429.
80	12.8	18.0	19.5	32.0	51.4	88.8	139.	244.	404.
90	11.0	15.4	17.0	25.0	43.6	76.4	118.	230.	284.
95	8.66	12.2	15.0	23.0	40.1	66.6	109.	185.	261.
98	5.53	9.92	13.8	19.8	36.2	63.5	100.	166.	247.
99	5.22	8.65	12.0	19.0	36.0	61.0	99.5	159.	239.

03267900 Mad River at St Paris Pike at Eagle City, Ohio

Years analyzed = 38
Climatic year range = 1965–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	141.	152.	212.	286.	548.	968.	1500.	2110.	2790.
2	139.	145.	206.	238.	442.	716.	1370.	1810.	2370.
5	129.	136.	170.	201.	274.	418.	807.	965.	1540.
10	121.	130.	153.	177.	217.	306.	444.	614.	887.
20	119.	123.	135.	145.	186.	237.	301.	400.	498.
25	118.	122.	131.	137.	179.	219.	269.	372.	436.
30	115.	118.	127.	132.	171.	210.	250.	355.	416.
40	105.	115.	118.	127.	160.	199.	236.	290.	374.
50	100.	112.	116.	125.	156.	182.	222.	272.	350.
60	99.0	109.	113.	118.	149.	172.	209.	240.	336.
70	97.1	105.	110.	113.	143.	167.	201.	232.	314.
75	97.1	99.8	107.	113.	141.	161.	188.	230.	280.
80	95.5	97.9	105.	112.	137.	156.	174.	207.	238.
90	85.7	96.4	102.	110.	132.	148.	158.	198.	226.
95	83.6	94.4	99.3	109.	129.	143.	157.	196.	222.
98	81.7	93.3	96.8	106.	126.	140.	155.	195.	218.
99	81.7	92.5	95.6	105.	126.	139.	155.	193.	218.

03269000 Buck Creek at Springfield, Ohio

Years analyzed = 33
Climatic year range = 1914–73

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	51.0	67.0	86.0	148.	225.	486.	743.	880.	915.
2	49.0	62.2	72.4	108.	163.	385.	446.	700.	767.
5	35.1	47.3	57.6	79.2	106.	218.	296.	464.	507.
10	29.2	38.1	47.2	63.4	87.0	114.	197.	234.	316.
20	25.6	32.6	40.0	50.2	65.0	88.8	126.	161.	191.
25	24.6	31.6	39.4	44.0	64.0	80.0	103.	136.	180.
30	24.6	30.2	36.0	40.2	60.8	78.4	101.	125.	159.
40	21.1	27.0	34.4	37.6	53.0	68.9	84.8	99.0	127.
50	18.7	25.8	29.8	36.0	51.0	67.0	76.8	93.6	117.
60	15.3	23.8	28.0	32.4	46.0	60.0	75.4	87.5	105.
70	13.8	23.8	26.0	30.2	46.0	58.1	68.6	80.8	99.5
75	13.2	21.8	25.8	28.6	45.0	56.8	62.4	77.0	97.5
80	11.9	20.4	24.8	28.6	43.0	55.4	61.4	76.4	94.8
90	11.0	17.8	21.0	27.7	36.0	51.4	59.2	74.1	86.4
95	10.8	16.4	19.8	26.7	35.0	49.3	53.2	68.2	82.7
98	9.33	16.0	18.4	24.9	34.0	47.4	52.0	66.4	78.1
99	7.14	16.0	18.4	23.6	34.0	46.0	52.0	58.0	74.2

03269500 Mad River near Springfield, Ohio

Years analyzed = 97
Climatic year range = 1904–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	172.	223.	271.	346.	754.	2130.	3300.	4130.	5690.
2	170.	200.	244.	310.	628.	1660.	2430.	3010.	3640.
5	158.	175.	224.	261.	438.	950.	1420.	1590.	2420.
10	148.	163.	193.	241.	352.	619.	901.	1150.	1430.
20	144.	156.	171.	212.	284.	452.	618.	846.	1250.
25	142.	152.	168.	206.	269.	416.	540.	719.	958.
30	134.	152.	166.	201.	261.	388.	481.	641.	886.
40	132.	147.	161.	190.	245.	350.	410.	572.	760.
50	128.	145.	157.	183.	237.	320.	373.	516.	621.
60	128.	140.	152.	179.	227.	301.	352.	462.	591.
70	115.	135.	148.	173.	212.	290.	343.	408.	560.
75	115.	131.	144.	169.	209.	283.	332.	386.	542.
80	110.	123.	144.	165.	204.	277.	323.	368.	526.
90	102.	123.	137.	155.	194.	260.	306.	336.	479.
95	99.8	118.	132.	146.	189.	250.	296.	318.	445.
98	89.3	115.	125.	141.	184.	245.	280.	306.	382.
99	85.7	113.	123.	140.	183.	242.	270.	297.	380.

03270000 Mad River near Dayton, Ohio

Years analyzed = 91
Climatic year range = 1915–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	205.	250.	351.	404.	992.	2690.	3820.	4570.	5630.
2	190.	239.	299.	367.	824.	2050.	3180.	3880.	4760.
5	175.	203.	240.	302.	602.	1310.	1940.	2370.	2970.
10	160.	187.	213.	274.	460.	858.	1120.	1600.	1900.
20	157.	173.	203.	252.	359.	628.	722.	1040.	1390.
25	154.	169.	198.	237.	346.	541.	656.	896.	1230.
30	154.	167.	195.	235.	331.	503.	590.	833.	1020.
40	150.	162.	190.	223.	297.	448.	537.	708.	833.
50	147.	158.	182.	216.	283.	402.	488.	675.	770.
60	139.	155.	180.	206.	275.	382.	457.	623.	711.
70	128.	145.	177.	198.	265.	360.	432.	556.	666.
75	127.	141.	163.	193.	257.	347.	412.	484.	638.
80	122.	131.	159.	190.	242.	334.	400.	473.	606.
90	109.	129.	147.	176.	229.	317.	379.	426.	563.
95	106.	125.	144.	170.	219.	310.	352.	412.	508.
98	103.	124.	138.	166.	214.	293.	333.	385.	491.
99	103.	123.	137.	162.	209.	291.	327.	368.	484.

03270500 Great Miami River at Dayton, Ohio

Years analyzed = 96
Climatic year range = 1913–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	270.	486.	631.	853.	2470.	10800.	19800.	21200.	27500.
2	269.	467.	597.	776.	2310.	9220.	16400.	18500.	22200.
5	260.	336.	512.	630.	1520.	6410.	10100.	14300.	19300.
10	247.	296.	435.	537.	1170.	3240.	5860.	8310.	10300.
20	210.	250.	382.	452.	795.	1910.	2930.	3310.	5370.
25	207.	239.	367.	436.	705.	1440.	2200.	2810.	4860.
30	204.	232.	350.	405.	652.	1240.	2010.	2420.	4240.
40	196.	223.	321.	371.	550.	964.	1640.	2010.	3280.
50	190.	219.	294.	344.	501.	830.	1280.	1740.	2210.
60	184.	212.	278.	320.	449.	743.	1140.	1370.	1980.
70	173.	189.	215.	295.	410.	689.	860.	1180.	1770.
75	158.	184.	205.	286.	395.	641.	814.	1100.	1700.
80	153.	167.	199.	268.	381.	611.	789.	969.	1640.
90	140.	146.	182.	248.	347.	536.	663.	797.	1450.
95	131.	138.	176.	232.	331.	498.	625.	700.	1380.
98	124.	135.	160.	220.	313.	469.	568.	671.	1300.
99	119.	130.	155.	216.	311.	463.	561.	631.	1100.

03271500 Great Miami River at Miamisburg, Ohio

Years analyzed = 54
Climatic year range = 1924–94

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	344.	521.	643.	935.	2590.	10700.	21500.	23500.	27000.
2	344.	494.	598.	844.	2440.	8470.	18300.	21200.	23700.
5	333.	368.	553.	692.	1830.	6450.	13000.	16400.	18900.
10	300.	342.	519.	590.	1420.	3770.	6730.	9670.	12700.
20	284.	328.	463.	517.	1020.	2210.	3060.	4390.	8450.
25	277.	320.	451.	497.	907.	1610.	2610.	3740.	7760.
30	273.	318.	423.	480.	787.	1410.	2390.	3220.	6730.
40	261.	307.	396.	459.	658.	1060.	2090.	2590.	5400.
50	249.	300.	355.	440.	597.	979.	1770.	2160.	3830.
60	245.	286.	328.	431.	547.	900.	1380.	1830.	3090.
70	240.	265.	294.	418.	513.	828.	1060.	1650.	2670.
75	236.	256.	289.	411.	504.	780.	1010.	1500.	2530.
80	231.	249.	282.	396.	465.	757.	950.	1320.	2350.
90	221.	227.	262.	377.	436.	662.	829.	1110.	2130.
95	201.	220.	249.	338.	423.	650.	798.	1020.	1880.
98	167.	195.	224.	291.	405.	638.	768.	958.	1760.
99	149.	164.	210.	278.	394.	623.	758.	920.	1760.

03272000 Twin Creek near Germantown, Ohio

Years analyzed = 86
Climatic year range = 1920–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	9.27	11.4	26.8	48.6	442.	2090.	4100.	5150.	5970.
2	8.78	11.4	22.2	42.1	307.	1420.	3020.	4240.	4850.
5	7.44	11.2	18.7	29.9	141.	671.	1380.	2030.	2540.
10	7.05	10.1	16.0	23.3	85.1	351.	709.	1020.	1250.
20	6.59	8.94	12.9	18.4	48.0	138.	322.	415.	523.
25	6.39	8.28	12.7	17.4	39.5	96.8	220.	339.	422.
30	6.24	7.69	11.7	16.6	32.0	81.4	192.	274.	381.
40	5.63	6.94	10.0	14.4	27.0	53.7	107.	188.	220.
50	4.87	6.39	9.05	11.4	23.5	41.6	87.6	149.	177.
60	4.27	5.49	7.04	9.54	19.5	35.0	76.2	124.	146.
70	4.07	4.81	5.94	8.54	17.5	30.2	49.4	98.2	125.
75	3.97	4.54	5.89	8.14	15.0	28.0	38.9	86.6	113.
80	3.78	4.15	5.29	7.79	14.0	23.0	33.1	78.6	96.6
90	3.30	3.55	4.55	6.80	12.0	20.6	29.2	56.9	85.5
95	2.89	3.33	3.97	6.28	11.0	18.6	28.7	46.2	67.4
98	2.54	2.84	3.67	5.78	10.0	17.4	26.2	35.2	59.9
99	2.37	2.84	3.54	5.44	10.0	16.6	25.3	35.2	57.3

03274000 Great Miami River at Hamilton, Ohio

Years analyzed = 79
Climatic year range = 1930–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	469.	676.	908.	1210.	4330.	14100.	26700.	29900.	31700.
2	459.	608.	806.	1130.	3530.	12000.	22400.	25600.	26400.
5	422.	515.	679.	896.	2590.	8950.	14600.	18400.	22100.
10	393.	472.	583.	747.	1800.	4530.	8930.	10600.	12000.
20	356.	399.	532.	647.	1310.	2520.	3610.	5080.	6450.
25	346.	380.	499.	626.	1160.	1910.	3130.	4030.	5680.
30	344.	372.	491.	613.	1030.	1700.	2920.	3410.	4680.
40	324.	363.	469.	574.	841.	1310.	2210.	2890.	3730.
50	312.	355.	445.	531.	748.	1180.	1980.	2480.	2950.
60	297.	340.	399.	509.	675.	1120.	1380.	1950.	2630.
70	281.	330.	366.	466.	652.	958.	1220.	1700.	2320.
75	277.	325.	352.	462.	620.	945.	1190.	1550.	2160.
80	268.	310.	337.	438.	593.	859.	1140.	1490.	2090.
90	250.	288.	308.	414.	508.	765.	947.	1290.	1880.
95	217.	269.	294.	392.	487.	713.	897.	1170.	1680.
98	191.	258.	289.	378.	463.	696.	851.	1060.	1560.
99	177.	246.	267.	357.	458.	683.	846.	974.	1470.

04183500 Maumee River at Antwerp, Ohio

Years analyzed = 57
Climatic year range = 1921–81

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	231.	277.	376.	530.	2260.	5950.	9500.	11500.	13100.
2	199.	218.	334.	451.	2140.	5400.	8670.	11200.	12900.
5	164.	170.	261.	390.	1310.	3830.	6000.	9580.	10600.
10	143.	160.	218.	307.	823.	2520.	4150.	5930.	7730.
20	120.	126.	178.	225.	513.	1360.	2430.	2850.	5740.
25	112.	119.	165.	206.	410.	1070.	1670.	2440.	4560.
30	107.	113.	156.	190.	375.	870.	1310.	2100.	4050.
40	96.1	103.	140.	163.	306.	550.	854.	1590.	2810.
50	91.6	95.9	122.	143.	275.	426.	585.	1160.	2320.
60	85.1	88.9	110.	130.	212.	353.	456.	870.	1650.
70	75.2	84.3	103.	121.	189.	303.	377.	666.	1300.
75	75.0	82.7	94.4	116.	175.	282.	352.	594.	1110.
80	68.4	76.0	90.0	112.	164.	241.	325.	507.	911.
90	53.9	63.2	74.1	98.2	140.	204.	265.	430.	701.
95	48.1	59.7	68.1	85.7	121.	196.	240.	415.	657.
98	32.4	51.0	64.1	75.6	110.	174.	221.	372.	443.
99	30.8	50.8	61.6	72.8	110.	163.	208.	335.	429.

04185000 Tiffin River at Stryker, Ohio

Years analyzed = 76
Climatic year range = 1921–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	23.2	36.7	53.0	137.	735.	1240.	1570.	2090.	3100.
2	22.8	35.2	50.4	123.	673.	1200.	1530.	1960.	3040.
5	21.2	32.9	42.9	77.2	366.	938.	1190.	1720.	2290.
10	19.2	29.1	35.3	63.0	221.	648.	989.	1190.	1670.
20	17.2	26.6	30.7	48.2	122.	332.	560.	664.	962.
25	15.2	24.9	29.7	40.4	103.	258.	339.	450.	820.
30	15.2	24.9	28.4	38.8	95.4	202.	317.	376.	657.
40	11.1	22.1	26.0	32.6	70.0	148.	226.	270.	382.
50	10.0	19.5	22.7	27.4	52.5	113.	169.	204.	266.
60	9.62	16.7	20.0	23.4	43.2	85.5	134.	158.	204.
70	8.50	12.1	15.9	19.0	35.1	64.6	98.9	141.	168.
75	7.86	10.7	13.7	17.0	29.5	57.2	86.0	110.	154.
80	7.19	8.82	11.7	16.2	27.2	46.8	68.0	96.1	141.
90	5.82	6.92	10.0	14.0	20.1	37.6	54.2	66.3	116.
95	5.50	5.87	9.37	12.6	19.0	35.1	45.6	56.9	105.
98	4.49	5.14	7.95	11.8	17.9	33.2	41.5	54.5	99.3
99	3.81	5.13	7.88	11.0	17.5	33.2	38.6	53.7	96.9

04187500 Ottawa River at Allentown, Ohio

Years analyzed = 52
Climatic year range = 1923–81

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	23.5	34.6	42.1	63.8	150.	953.	1570.	2230.	2320.
2	21.8	31.4	35.2	42.8	102.	646.	1310.	1960.	2040.
5	15.4	19.9	24.0	29.4	65.3	300.	576.	1080.	1510.
10	13.9	15.0	18.6	24.0	47.1	119.	208.	501.	856.
20	10.1	12.5	16.2	20.6	34.8	55.0	104.	250.	457.
25	9.78	11.7	16.0	19.0	31.0	46.6	82.5	172.	345.
30	9.53	11.3	14.6	18.6	28.5	38.3	67.1	146.	289.
40	9.06	10.7	14.6	18.0	24.0	34.1	49.0	90.6	153.
50	8.68	10.0	12.3	16.6	21.0	30.4	39.0	62.6	101.
60	8.28	9.73	11.3	15.0	20.0	28.9	35.6	47.5	74.0
70	7.96	9.17	11.0	13.6	18.8	27.4	32.5	40.7	59.1
75	7.85	8.86	10.6	13.6	18.5	26.8	31.5	37.7	55.0
80	7.66	8.73	10.3	12.6	18.5	25.4	30.8	34.7	50.4
90	7.06	8.23	9.55	12.0	16.6	23.8	28.1	32.3	41.6
95	6.83	7.76	9.34	11.0	16.0	22.2	25.0	30.7	34.4
98	6.04	6.98	8.86	9.87	14.4	20.7	23.6	28.2	30.7
99	5.60	6.64	8.56	9.66	14.0	20.4	23.0	27.7	29.9

04191500 Auglaize River near Defiance, Ohio

Years analyzed = 94
Climatic year range = 1915–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	135.	259.	514.	879.	3260.	11600.	14000.	17700.	22300.
2	132.	239.	386.	674.	3020.	10100.	12600.	15000.	22100.
5	97.1	163.	239.	341.	1480.	6860.	9860.	11000.	16000.
10	59.6	102.	138.	238.	933.	2910.	6150.	7600.	12700.
20	43.8	60.3	84.1	118.	401.	1260.	2550.	4320.	8920.
25	38.3	44.8	59.0	102.	288.	833.	1780.	2620.	6680.
30	34.5	39.4	50.9	79.2	229.	681.	1220.	1870.	5720.
40	29.6	33.6	37.2	56.8	153.	473.	848.	1200.	2990.
50	22.7	30.0	35.0	48.0	117.	322.	634.	912.	2110.
60	21.4	30.0	31.3	39.6	82.4	224.	416.	816.	1240.
70	18.5	21.8	29.3	34.0	56.9	175.	283.	536.	869.
75	14.0	19.8	27.0	30.0	48.5	165.	257.	452.	696.
80	13.4	19.3	24.0	29.0	44.5	113.	215.	428.	629.
90	7.28	14.8	20.0	25.2	37.3	71.0	147.	243.	385.
95	5.06	10.2	15.5	21.6	33.0	57.8	104.	180.	245.
98	1.87	6.67	9.66	20.0	30.0	47.8	62.4	102.	140.
99	1.49	5.65	9.20	19.0	29.0	46.0	58.5	88.5	119.

04192500 Maumee River near Defiance, Ohio

Years analyzed = 77
Climatic year range = 1924–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	248.	370.	750.	1100.	9120.	22000.	27900.	31700.	42900.
2	244.	358.	627.	866.	7970.	20800.	26400.	30700.	39500.
5	196.	256.	492.	640.	4650.	15300.	20100.	24500.	28600.
10	165.	241.	386.	520.	2700.	8170.	12900.	18900.	24500.
20	131.	188.	299.	404.	1390.	4080.	7280.	9840.	17100.
25	123.	178.	244.	342.	1130.	2790.	5040.	7390.	14400.
30	114.	165.	227.	314.	943.	2410.	4200.	5830.	11800.
40	99.7	154.	189.	284.	675.	1340.	2520.	3810.	8510.
50	78.2	138.	165.	232.	506.	959.	1740.	2880.	5630.
60	69.3	123.	157.	207.	398.	744.	1380.	2020.	3870.
70	62.1	93.5	117.	182.	339.	574.	1050.	1640.	2550.
75	57.0	81.6	114.	170.	303.	526.	906.	1570.	2140.
80	55.2	75.3	105.	160.	273.	455.	831.	1440.	1770.
90	48.6	62.4	75.6	128.	234.	376.	643.	927.	1230.
95	21.3	61.2	69.6	111.	215.	338.	557.	830.	994.
98	11.6	47.9	58.0	84.6	198.	294.	467.	640.	811.
99	4.68	41.8	53.4	84.6	170.	280.	393.	609.	745.

04193500 Maumee River at Waterville, Ohio

Years analyzed = 87
Climatic year range = 1899–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	423.	629.	865.	1250.	9090.	24900.	30700.	36300.	47000.
2	361.	526.	813.	1150.	8550.	22900.	28200.	35500.	43200.
5	299.	416.	570.	781.	5530.	16700.	21500.	29400.	34100.
10	246.	291.	442.	601.	3150.	8770.	13800.	20900.	28300.
20	158.	202.	253.	399.	1540.	4900.	7480.	9950.	20300.
25	102.	113.	199.	353.	1180.	3000.	4740.	7570.	16500.
30	77.6	96.0	182.	320.	1000.	2280.	4090.	5720.	12600.
40	70.4	89.4	159.	275.	737.	1480.	2680.	3830.	8780.
50	64.1	80.0	126.	202.	574.	1080.	1960.	2960.	6280.
60	35.2	70.0	89.2	169.	425.	870.	1690.	2070.	3640.
70	32.8	53.1	70.0	150.	348.	618.	1320.	1640.	2760.
75	16.4	47.2	70.0	145.	295.	544.	1060.	1510.	2310.
80	16.4	44.9	67.5	128.	263.	494.	923.	1340.	1990.
90	8.80	35.4	63.2	100.	213.	410.	662.	1020.	1300.
95	8.80	30.2	52.4	88.9	180.	356.	584.	860.	999.
98	5.00	26.8	38.6	68.8	154.	303.	492.	601.	933.
99	5.00	24.4	33.0	64.2	146.	281.	458.	548.	914.

04195500 Portage River at Woodville, Ohio

Years analyzed = 58
Climatic year range = 1951–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	98	95	90	80	50	20	10	5	2
1	13.4	16.9	47.8	82.8	1090.	2720.	3790.	5250.	5950.
2	12.3	14.9	43.3	66.6	841.	2450.	3330.	4720.	5090.
5	11.1	13.9	34.3	43.6	363.	1330.	1770.	3440.	4320.
10	9.19	10.9	25.1	32.0	157.	612.	1010.	1820.	2310.
20	7.92	9.90	15.6	22.3	53.9	242.	416.	998.	1180.
25	6.95	9.67	14.0	19.6	44.5	153.	318.	658.	963.
30	6.10	9.50	12.0	17.6	35.6	114.	286.	442.	720.
40	5.23	8.58	10.9	14.2	27.5	76.4	158.	337.	541.
50	4.42	7.61	9.24	12.0	22.0	56.8	96.0	235.	336.
60	4.02	6.03	7.16	10.0	18.0	42.8	73.1	173.	213.
70	3.37	4.92	6.21	9.10	14.9	30.8	59.6	106.	151.
75	3.23	4.28	5.60	8.70	13.5	28.0	50.7	88.5	124.
80	2.97	3.87	5.37	8.13	12.0	21.8	43.2	80.7	105.
90	2.65	3.56	4.59	6.72	10.0	18.0	27.5	49.1	78.9
95	2.23	3.17	4.33	6.04	8.88	15.7	22.0	39.6	71.4
98	2.07	2.29	3.46	5.18	8.04	14.2	18.6	32.4	63.1
99	1.82	2.09	3.46	5.04	7.75	14.0	16.3	32.4	63.1

04196000 Sandusky River near Bucyrus, Ohio

Years analyzed = 56
Climatic year range = 1925–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	98	95	90	80	50	20	10	5	2
1	12.7	19.5	26.2	48.0	277.	855.	1270.	1420.	1420.
2	6.72	12.7	23.1	38.4	210.	646.	875.	1120.	1350.
5	3.05	8.37	11.8	18.4	112.	275.	568.	732.	750.
10	2.16	5.30	8.20	11.7	53.1	132.	237.	258.	397.
20	1.61	3.50	5.29	7.50	25.7	65.5	108.	154.	176.
25	1.55	3.18	4.27	6.28	17.0	48.6	68.2	108.	138.
30	1.47	3.15	3.78	5.94	14.2	39.8	58.7	88.6	118.
40	1.31	2.61	3.28	5.00	10.0	26.3	44.7	59.9	85.8
50	1.20	2.06	2.87	4.24	8.20	19.0	31.8	46.0	64.0
60	1.17	1.77	2.54	3.04	6.66	14.0	24.2	38.4	48.6
70	1.06	1.49	1.95	2.64	5.38	11.4	17.0	28.2	38.8
75	1.04	1.38	1.64	2.54	4.75	10.0	14.3	25.6	36.7
80	1.00	1.26	1.50	2.32	4.20	9.78	12.0	24.4	33.5
90	0.90	1.16	1.30	1.95	3.33	6.50	8.72	14.6	23.9
95	0.81	0.90	1.17	1.54	3.01	5.50	7.92	12.1	19.6
98	0.60	0.70	0.95	1.33	2.68	4.69	5.95	8.27	14.3
99	0.60	0.69	0.87	1.20	2.40	4.20	5.33	6.95	14.2

04196800 Tymochtee Creek at Crawford, Ohio

Years analyzed = 37
Climatic year range = 1972–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	95	90	80	70	50	30	20	10	5
1	6.78	8.48	27.0	57.2	516.	1070.	1880.	2570.	2710.
2	5.08	6.64	25.3	52.2	424.	978.	1570.	2330.	2530.
5	4.23	5.43	15.6	34.9	202.	648.	978.	1360.	1620.
10	2.91	4.16	13.8	25.2	63.6	291.	564.	981.	1260.
20	1.84	3.31	6.07	17.2	24.6	103.	208.	403.	629.
25	1.50	3.06	4.76	13.0	20.0	63.6	162.	268.	467.
30	1.26	2.49	4.09	8.22	17.0	47.4	116.	198.	291.
40	1.05	1.80	2.73	4.25	11.2	32.2	76.0	102.	180.
50	0.77	0.88	1.84	3.20	6.60	26.4	47.0	81.2	101.
60	0.56	0.61	1.09	2.07	5.30	15.9	36.5	50.0	70.3
70	0.20	0.40	0.85	1.29	4.06	12.4	25.8	32.8	59.3
75	0.15	0.32	0.62	0.98	2.40	11.6	19.6	26.4	52.4
80	0.11	0.25	0.48	0.83	1.90	10.1	13.4	22.0	48.2
90	0.08	0.10	0.30	0.50	1.30	5.42	8.70	15.4	28.7
95	0.06	0.07	0.18	0.39	0.94	3.90	5.80	12.9	25.2
98	0.01	0.02	0.14	0.34	0.81	2.52	4.74	11.6	22.0
99	0.01	0.02	0.09	0.30	0.68	2.02	4.34	11.4	22.0

04200500 Black River at Elyria, Ohio

Years analyzed = 65
Climatic year range = 1944–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	98	95	90	80	50	20	10	5	2
1	11.6	30.3	56.2	82.0	1050.	2420.	3570.	4560.	6390.
2	11.1	26.0	47.0	65.4	840.	2030.	3040.	3660.	5320.
5	10.4	19.3	33.2	45.8	378.	1170.	1860.	2330.	3340.
10	9.51	17.9	24.5	36.2	179.	535.	843.	1440.	2270.
20	7.64	12.5	17.0	28.6	74.0	207.	345.	710.	1040.
25	6.78	11.9	15.0	23.2	58.0	158.	263.	533.	800.
30	5.44	11.3	13.6	18.6	47.8	122.	222.	409.	621.
40	4.23	9.67	11.6	15.2	31.2	72.2	138.	232.	406.
50	3.98	6.77	9.36	14.0	23.0	50.4	101.	155.	296.
60	3.04	6.20	8.47	10.8	18.0	35.8	72.9	107.	204.
70	2.47	4.82	7.28	8.52	15.0	27.8	57.8	88.8	151.
75	2.26	3.96	6.68	7.56	13.0	25.0	52.4	80.0	128.
80	2.07	3.59	5.90	7.40	11.0	22.3	46.4	66.3	106.
90	1.52	2.72	4.87	5.76	9.22	18.0	26.6	34.3	46.8
95	1.20	2.47	4.11	5.04	7.60	13.9	18.6	22.8	28.7
98	0.91	1.98	3.60	4.58	6.20	12.0	14.7	18.5	24.4
99	0.82	1.58	2.94	3.82	5.70	11.8	14.4	17.4	22.4

04201500 Rocky River near Berea, Ohio

Years analyzed = 78
Climatic year range = 1923–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	19.6	29.9	60.5	250.	1350.	3380.	4190.	4810.	8610.
2	19.2	25.6	51.1	163.	988.	2300.	3210.	3890.	4670.
5	16.6	17.4	36.8	103.	454.	1070.	1860.	2420.	2910.
10	11.7	14.8	19.9	70.3	236.	579.	824.	1360.	1730.
20	8.88	11.9	16.3	37.9	115.	267.	395.	589.	1010.
25	7.43	9.92	15.5	28.6	92.5	187.	278.	456.	815.
30	5.87	8.93	14.5	25.6	75.3	160.	226.	349.	614.
40	4.28	6.98	11.2	19.0	56.5	111.	146.	238.	445.
50	3.40	5.90	6.91	15.8	45.0	81.2	117.	187.	317.
60	2.32	4.09	5.48	12.6	36.4	63.4	90.8	152.	216.
70	1.51	3.37	4.75	8.60	27.5	51.2	70.2	130.	164.
75	1.43	3.00	4.19	7.98	24.6	47.4	62.3	108.	147.
80	1.14	2.59	4.05	7.06	22.6	43.7	54.8	85.7	121.
90	0.81	1.87	3.35	5.80	18.1	34.7	40.3	53.3	91.6
95	0.63	1.85	2.65	4.77	13.6	28.6	34.7	41.2	58.0
98	0.44	1.17	2.46	3.71	12.4	24.7	28.5	36.0	39.9
99	0.26	1.17	2.38	3.56	11.0	24.0	28.5	36.0	38.0

04208000 Cuyahoga River at Independence, Ohio

Years analyzed = 80
Climatic year range = 1921–2008

[APEE, annual percentage equaled or exceeded; ft^3/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft^3/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	158.	285.	381.	708.	2430.	4450.	5620.	7430.	12800.
2	149.	250.	333.	622.	1840.	3460.	4390.	5900.	9140.
5	124.	184.	246.	477.	1150.	2340.	3270.	3750.	4330.
10	108.	142.	199.	357.	858.	1660.	2030.	2540.	3040.
20	94.1	130.	160.	273.	519.	1010.	1270.	1730.	2140.
25	88.5	122.	147.	247.	432.	874.	1190.	1600.	1840.
30	83.2	116.	138.	211.	368.	751.	1000.	1240.	1510.
40	75.0	112.	128.	161.	325.	590.	848.	1070.	1220.
50	69.5	104.	118.	139.	280.	509.	705.	855.	1040.
60	62.0	97.8	107.	129.	232.	437.	539.	725.	876.
70	57.1	82.5	99.1	115.	208.	388.	442.	524.	726.
75	53.5	80.3	90.5	109.	197.	354.	414.	490.	644.
80	50.0	76.1	84.5	106.	178.	315.	390.	440.	610.
90	43.1	69.2	74.8	97.6	149.	249.	327.	382.	509.
95	34.1	60.7	69.7	85.0	138.	228.	279.	312.	332.
98	30.3	52.8	62.4	74.3	127.	216.	271.	293.	326.
99	24.9	45.0	58.1	72.2	124.	208.	267.	289.	323.

04209000 Chagrin River at Willoughby, Ohio

Years analyzed = 73
Climatic year range = 1925–2008

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**98**	**95**	**90**	**80**	**50**	**20**	**10**	**5**	**2**
1	98.4	124.	248.	344.	1660.	3260.	4250.	5420.	8660.
2	86.1	118.	215.	290.	1180.	2540.	2960.	3840.	6300.
5	70.0	96.2	141.	176.	746.	1350.	1500.	2080.	2950.
10	54.8	74.9	93.5	145.	386.	775.	1010.	1250.	1580.
20	41.9	53.0	59.6	98.4	217.	446.	531.	652.	880.
25	39.4	46.4	53.0	86.0	186.	356.	421.	528.	738.
30	35.4	42.7	49.3	67.4	138.	288.	370.	469.	647.
40	30.9	35.2	41.8	55.4	110.	206.	273.	327.	481.
50	25.0	28.7	36.2	46.8	98.0	155.	212.	244.	388.
60	23.0	27.0	31.9	39.3	78.0	127.	165.	195.	276.
70	20.3	24.1	27.2	33.0	61.6	106.	136.	145.	229.
75	20.0	22.4	26.0	30.0	53.0	102.	129.	135.	183.
80	18.4	20.7	23.4	27.8	47.4	97.5	116.	123.	164.
90	14.7	16.8	19.1	25.8	39.0	68.6	87.2	102.	115.
95	10.8	13.8	16.6	20.6	32.6	58.0	73.0	92.2	99.9
98	6.91	12.7	15.3	19.8	30.8	53.7	66.9	77.5	94.5
99	6.82	12.1	14.4	18.8	30.0	52.0	61.8	76.2	93.8

04211500 Mill Creek near Jefferson, Ohio

Years analyzed = 33
Climatic year range = 1942–74

[APEE, annual percentage equaled or exceeded; ft³/s, cubic foot per second; Sep, September; Nov, November]

	Sep–Nov daily mean streamflow (ft³/s) that was equaled or exceeded the indicated percentage of time at APEE level								
APEE	**95**	**90**	**80**	**70**	**50**	**30**	**20**	**10**	**5**
1	6.04	15.0	97.2	256.	728.	1100.	1220.	1950.	2470.
2	4.16	8.19	48.6	172.	549.	951.	1010.	1100.	1380.
5	0.27	2.52	18.7	47.6	183.	397.	570.	667.	877.
10	0.24	0.61	1.88	10.6	74.4	206.	276.	408.	507.
20	0.00	0.00	0.10	2.32	41.0	70.0	140.	261.	282.
25	0.00	0.00	0.10	1.26	17.0	50.6	99.2	216.	224.
30	0.00	0.00	0.00	0.16	8.74	36.3	81.8	152.	171.
40	0.00	0.00	0.00	0.14	2.40	13.7	58.9	67.5	114.
50	0.00	0.00	0.00	0.10	0.75	6.34	29.0	36.8	52.6
60	0.00	0.00	0.00	0.01	0.10	1.74	9.78	20.7	35.0
70	0.00	0.00	0.00	0.01	0.10	0.40	3.29	13.4	25.9
75	0.00	0.00	0.00	0.00	0.10	0.34	2.34	8.64	22.1
80	0.00	0.00	0.00	0.00	0.10	0.10	1.29	5.98	16.3
90	0.00	0.00	0.00	0.00	0.05	0.10	0.12	1.68	5.25
95	0.00	0.00	0.00	0.00	0.05	0.10	0.10	1.14	3.38
98	0.00	0.00	0.00	0.00	0.05	0.10	0.10	0.50	2.64
99	0.00	0.00	0.00	0.00	0.05	0.10	0.10	0.50	2.32