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DETERMINATION OF STREAM WIDTH AND ELEVATION AT SELECTED GAGING STATIONS IN ILLINOIS FOR SOIL CONSERVATION SERVICE WETLAND MAPPING

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and Krishan P. Singh*

Prepared for the Soil Conservation Service,
U.S. Department of Agriculture

Champaign, Illinois

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Introduction

The Soil Conservation Service of the U.S. Department of Agriculture is conducting an evaluation and mapping of wetland areas in Illinois as provided by the Food Security Act of 1985. The purpose of their evaluation is to identify wetland areas under cultivation so that the participation of such areas in government programs may be prevented. According to a provision of the act (sometimes referred to as the swampbuster provision), any land that is covered with water for a continuous period of 15 days at least once every two years would be classified as a wetland and not allowed to participate in any governmental assistance program. The Illinois State Water Survey was asked to assist in the determination of these water-coverage events and to provide the necessary floodplain maps to determine the coverage.

Analyses of Data

Fifty-five gaging stations with drainage areas greater than 1000 square miles were selected for this study. The U.S. Geological Survey gaging station numbers (USGS no.), drainage areas in square miles, periods of daily-flow record, names of the streams, and locations of the gaging stations at the selected sites are given in Table 1. These locations are also shown in Figure 1. The selected stations include one station on the Ohio River, seven stations on the Illinois River, and six stations on the Mississippi River. The primary objective of the analysis was to determine the minimum daily flow during a 15-day high-flow period with a recurrence interval of 2 years (or 50 percent probability of exceedance) at the 55 selected locations. The average width of the channel and the elevation corresponding to the computed flow were also to be determined.

Daily-flow data at the 55 selected locations were obtained from the U.S. Geological Survey offices in Illinois, Iowa, and Missouri in magnetic media. A computer program was developed to read the daily-flow data and perform the following computations:

1. Determine the start and end of a 15-day high-flow period during the months March through September for each year for the period of record.
2. Compute the average daily flow, Q_{avg} , and minimum daily flow, Q_{min} , during the 15-day high-flow period for each year for the period of record.
3. Sort the minimum flow series, Q_{min} , and determine the flow corresponding to a 2-year recurrence interval or 50 percent exceedance probability.

Table 1. Gaging Stations Selected for the Study

<i>No.</i>	<i>USGS no.</i>	<i>Drainage area (sq mi)</i>	<i>Years of record</i>	<i>Stream and gaging station</i>
1	03339000	1290.00	59(1929-87)	Vermilion River near Danville
2	03344000	919.00	12(1971-82)	Embarras River near Diona
3	03345000	1392.00	6(1940-45)	Embarras River at Newton
4	03345500	1516.00	73(1915-87)	Embarras River at St. Marie
5	03346500	2333.00	3(1931-33)	Embarras River at Lawrenceville
6	03379500	1131.00	73(1915-87)	Little Wabash River below Clay City
7	03381500	3102.00	48(1940-87)	Little Wabash River at Carmi
8	03382500	1051.00	32(1940-71)	Saline River near Junction
9	05435500	1326.00	73(1915-87)	Pecatonica River at Freeport
10	05437000	2550.00	19(1940-58)	Pecatonica River at Shirland
11	05437500	6363.00	48(1940-87)	Rock River at Rockton
12	05440000	1099.00	48(1940-87)	Kishwaukee River near Perryville
13	05441500	8205.00	10(1940-49)	Rock River at Oregon
14	05443500	8755.00	57(1915-71)	Rock River at Como
15	05446500	9549.00	48(1940-87)	Rock River near Joslin
16	05447500	1003.00	49(1937-87)	Green River near Geneseo
17	05520500	2294.00	72(1916-87)	Kankakee River at Momence
18	05525000	686.00	43(1945-87)	Iroquois River at Iroquois
19	05526000	2091.00	64(1924-87)	Iroquois River near Chebanse
20	05527000	4810.00	18(1916-33)	Kankakee River at Custer Park
21	05527500	5150.00	72(1916-87)	Kankakee River near Wilmington
22	05538000	1503.00	16(1916-31)	Des Plaines River at Joliet
23	05543500	8259.00	68(1920-87)	Illinois River at Marseilles
24	05550000	1403.00	72(1916-87)	Fox River at Algonquin
25	05552500	2642.00	63(1925-87)	Fox River at Dayton
26	05555000	1084.00	9(1922-30)	Vermilion River at Streator
27	05555300	1251.00	16(1972-87)	Vermilion River near Leonore
28	05555500	1278.00	40(1932-71)	Vermilion River at Lowell
29	05558300	13543.00	6(1982-87)	Illinois River at Henry
30	05560000	14165.00	28(1911-38)	Illinois River at Peoria
31	05568000	1089.00	35(1922-56)	Mackinaw River near Green Valley
32	05568500	15818.00	48(1940-87)	Illinois River at Kingston Mines
33	05569500	1072.00	45(1943-87)	Spoon River at London Mills
34	05570000	1636.00	73(1915-87)	Spoon River at Seville
35	05570500	18299.00	6(1922-27)	Illinois River at Havana
36	05576500	2618.00	41(1915-55)	Sangamon River at Riverton
37	05582000	1804.00	46(1942-87)	Salt Creek near Greenview
38	05583000	5093.00	48(1940-87)	Sangamon River near Oakford
39	05584000	24227.00	18(1921-38)	Illinois River at Beardstown
40	05585000	1293.00	66(1922-87)	La Moine River at Ripley

Table 1. Concluded

<i>No.</i>	<i>USGS no.</i>	<i>Drainage area (sq mi)</i>	<i>Years of record</i>	<i>Stream and gaging station</i>
41	05585500	26028.00	49(1939-87)	Illinois River at Meredosia
42	05592000	1054.00	47(1941-87)	Kaskaskia River at Shelbyville
43	05592100	1330.00	17(1971-87)	Kaskaskia River near Cowden
44	05592500	1940.00	73(1915-87)	Kaskaskia River at Vandalia
45	05593000	2719.00	48(1940-87)	Kaskaskia River at Carlyle
46	05594100	4393.00	18(1970-87)	Kaskaskia River near Venedy Station
47	05595000	5181.00	37(1935-71)	Kaskaskia River at New Athens
48	05599500	2169.00	57(1931-87)	Big Muddy River at Murphysboro
49	03611500	203000.00	53(1935-87)	Ohio River at Metropolis
50	05420500	86500.00	87(1901-87)	Mississippi River at Clinton, IA
51	05474500	119000.00	87(1901-87)	Mississippi River at Keokuk, IA
52	05587500	171500.00	59(1929-87)	Mississippi River at Alton
53	07010000	697000.00	54(1934-87)	Mississippi River at St Louis, MO
54	07020500	708600.00	47(1941-87)	Mississippi River at Chester
55	07022000	713200.00	46(1940-87)	Mississippi River at Thebes

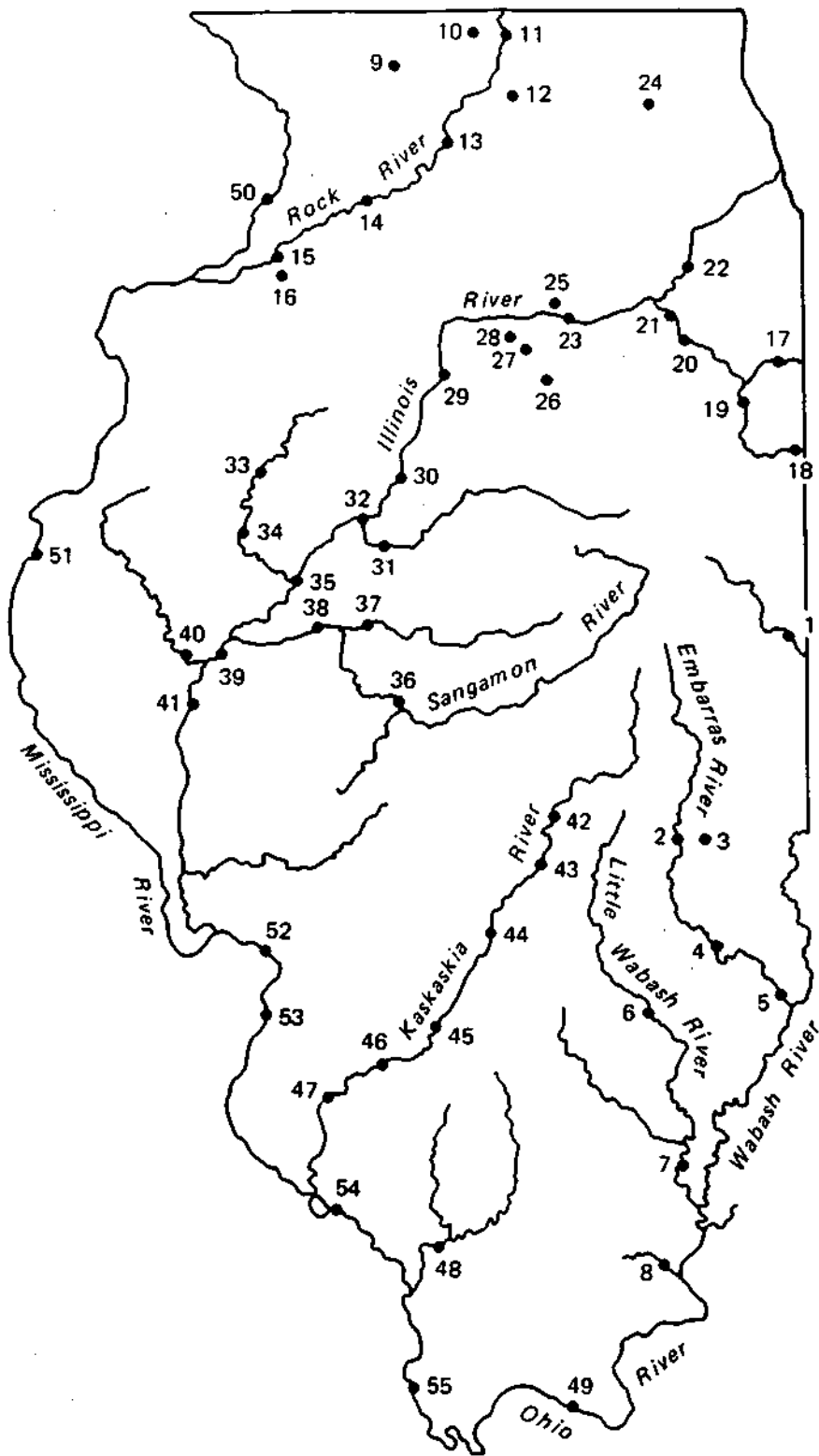


Figure 1. Locations of Selected Streamgaging Stations in Illinois

Four stations had less than 6 years of daily-flow data, and one station had negative flow values due to backwater effects. The Q_{min} values were not determined at these locations. The Q_{min} values for the remaining 50 locations were determined by using the computer program, and a detailed output for each station is given in the appendix. The Q_{min} values for the 50 gaging stations are given in Table 2.

Several large lakes were constructed from 1965 to 1970, most notably Lake Shelbyville and Lake Carlyle on the Kaskaskia River and Rend Lake on the Big Muddy River. The high-flow regime at the Murphysboro gaging site on the Big Muddy River has not changed significantly since construction of Rend Lake. However, the specification of minimum flow releases from the impounding structures on the Kaskaskia River has significantly altered the flow regime downstream along this river. The daily-flow data prior to and after construction of these lakes were analyzed separately, and the Q_{min} values for the two flow regimes are given in Table 2 for the Kaskaskia River gaging stations.

One method for calculating the width of the channel corresponding to some target flow involves the use of the streamflow measurements made at the gaging site. To determine the rating curve at a gaging station, measurements on stream-channel width, depth across a cross section, velocity of flow, and flow elevation are made at frequent intervals. Data on flow values and corresponding stream channel width can be used to fit a regression model relating channel width to flow. This equation can then be used to determine the width corresponding to a given flow level. However, most of the measurements at sites with large drainage areas are made from a bridge for economic considerations. The data obtained from such measurements do not reflect natural conditions, and therefore they are not useful in determining stream parameters such as channel width. A more reliable estimate of channel width for a given flow level can be obtained by using the hydraulic-geometry equations developed for Illinois streams by Stall and Fok (1968). A set of 18 equations relating channel width to flow, covering the entire state, was used to estimate the channel width corresponding to Q_{min} . The estimates of the channel widths in feet for the selected gaging stations are given in Table 2. Hydraulic geometry equations are not available for the major rivers (the Illinois, Mississippi, and Ohio Rivers). The channel widths at gaging stations on these rivers were not estimated.

The rating tables for the selected gaging stations obtained from the U.S. Geological Survey were used to compute the gage height corresponding to Q_{min} . These gage heights were then converted to elevation in feet above mean sea level. These elevations are given in Table 2.

The flood profile maps and/or flood insurance rate maps covering the selected gaging sites were obtained from the Federal Emergency Management Agency (FEMA). These maps in conjunction with the information available in Table 2 can be used to delineate the areas that would meet the established criterion for classification as a wetland.

Conclusion

Gaging stations with a drainage area of greater than 1000 square miles were selected for this study. Daily-flow data were analyzed to determine the minimum daily-flow value during a continuous 15-day high-

Table 2. Flow, Elevation, and Stream Width at Selected Gaging Stations*

<i>No.</i>	<i>USGS no.</i>	<i>Record analyzed</i>	<i>Stream and gaging station</i>	<i>Flow (cfs)</i>	<i>Width (feet)</i>	<i>Elev (ft, msl)</i>
1	03339000	1929-1987	Vermilion River near Danville	1420	150	508.5
2	03344000	1971-1982	Embarras River near Diona	1560	120	540.7
3	03345000	1940-1945	Embarras River at Newtonl			
4	03345500	1915-1987	Embarras River at St. Marie	1800	143	452.6
5	03346500	1931-1933	Embarras River at Lawrenceville ¹			
6	03379500	1915-1987	Little Wabash River below Clay City	560	88.2	401.3
7	03381500	1940-1987	Little Wabash River at Carmi	8430	224	361.9
8	03382500	1940-1971	Saline River near Junction2			
9	05435500	1915-1987	Pecatonica River at Freeport	1170	169	748.7
10	05437000	1940-1958	Pecatonica River at Shirland	2090	251	718.2
11	05437500	1940-1987	Rock River at Rockton	7740	490	714.4
12	05440000	1940-1987	Kishwaukee River near Perryville	1110	155	699.1
13	05441500	1940-1949	Rock River at Oregon	9665	572	664.4
14	05443500	1915-1971	Rock River at Como	10,500	598	612.3
15	05446500	1940-1987	Rock River near Joslin	11,600	634	573.3
16	05447500	1937-1987	Green River near Geneseo	925	143	584.2
17	05520500	1916-1987	Kankakee River at Momence	4120	229	612.6
18	05525000	1945-1987	Iroquois River at Iroquois	1050	124	624.9
19	05526000	1924-1987	Iroquois River near Chebanse	2805	199	602.6
20	05527000	1916-1933	Kankakee River at Custer Park	6630	296	549.2
21	05527500	1916-1987	Kankakee River near Wilmington	7845	315	513.6
22	05538000	1916-1931	Des Plaines River at Joliet	9475	496	530.0
23	05543500	1920-1987	Illinois River at Marseilles	15,900		467.1
24	05550000	1916-1987	Fox River at Algonquin	2200	176	731.9
25	05552500	1925-1987	Fox River at Dayton	3615	257	470.9
26	05555000	1922-1930	Vermilion River at Streator	880	170	560.7
27	05555300	1972-1987	Vermilion River near Leonore	1580	202	527.2
28	05555500	1932-1971	Vermilion River at Lowell	1215	192	505.3
29	05558300	1982-1987	Illinois River at Henry ¹			
30	05560000	1911-1938	Illinois River at Peoria ³	28,400		
31	05568000	1922-1956	Mackinaw River near Green Valley	1100	160	492.2
32	05568500	1940-1987	Illinois River at Kingston Mines	31,600		443.2
33	05569500	1943-1987	Spoon River at London Mills	1120	95.1	515.5
34	05570000	1915-1987	Spoon River at Seville	1350	109	475.4
35	05570500	1922-1927	Illinois River at Havana ¹			
36	05576500	1915-1956	Sangamon River at Riverton	2400	200	518.2
37	05582000	1942-1987	Salt Creek near Greenview	2200	183	483.8
38	05583000	1940-1987	Sangamon River near Oakford	7660	331	463.2
39	05584000	1921-1938	Illinois River at Beardstown	40,600		435.9
40	05585000	1922-1987	La Moine River at Ripley	894	96.4	441.0

Table 2. Concluded

<i>No.</i>	<i>USGS no.</i>	<i>Record analyzed</i>	<i>Stream and gaging station</i>	<i>Flow (cfs)</i>	<i>Width (feet)</i>	<i>Elev (ft, msl)</i>
41	05585500	1939-1987	Illinois River at Meredosia	46,700		432.7
42	05592000	1941-1987	Kaskaskia River at Shelbyville	1360	116	540.9
43	05592100	1971-1987	Kaskaskia River near Cowden	2130	137	509.3
44	05592500	1915-1987	Kaskaskia River at Vandalia	2420	156	463.4
45	05593000	1940-1987	Kaskaskia River at Carlyle	4745	199	422.5
46	05594100	1970-1987	Kaskaskia River near Venedy Station	5900	237	395.5
47	05595000	1935-1971	Kaskaskia River at New Athens	8690	271	379.4
48	05599500	1931-1987	Big Muddy River at Murphysboro	5130	256	354.1
49	03611500	1935-1987	Ohio River at Metropolis	621,000		317.2
50	05420500	1901-1987	Mississippi River at Clinton, IA	100,700		576.1
51	05474500	1901-1987	Mississippi River at Keokuk, IA ³	135,000		
52	05587500	1929-1987	Mississippi River at Alton ⁴	226,500		418.6
53	07010000	1934-1987	Mississippi River at St. Louis, MO	328,500		401.0
54	07020500	1941-1987	Mississippi River at Chester	360,000		364.5
55	07022000	1940-1987	Mississippi River at Thebes	382,500		328.8
42a	05592000	1941-1970	Kaskaskia River at Shelbyville	1290	114	540.8
42b	05592000	1971-1987	Kaskaskia River at Shelbyville	2090	128	542.6
44a	05592500	1915-1970	Kaskaskia River at Vandalia	2405	155	463.3
44b	05592500	1971-1987	Kaskaskia River at Vandalia	2670	159	463.9
45a	05593000	1940-1966	Kaskaskia River at Carlyle	4750	199	422.5
45b	05593000	1968-1987	Kaskaskia River at Carlyle	4900	201	422.8
47a	05595000	1935-1966	Kaskaskia River at New Athens	9155	275	379.9

* *Flow* is the flow in cfs corresponding to the minimum daily flow in a 15-day high-flow period during the months March to September, that can be expected to occur once every two years (50% probability)

Width is the average width of the channel in feet corresponding to *Flow*

Elev is the elevation of water level in feet above mean sea level corresponding to *Flow*

1 Period of record insufficient for analysis

2 Backwater effects; negative flow values

3 Rating curve not available

4 Elevation based on rating curve for St Louis gaging station

flow period that could be expected to occur once every two years at each of the selected gaging stations. The results indicate that at most of the selected sites the target flow is within the stream banks.

Further investigation is needed on the correlation between areas inundated by the target flow and areas identified by the National Wetland Inventory (NWI). The NWI is based primarily on biological indicators. An extension of this study can provide the interaction between hydrologic and biologic characteristics in the delineation of wetlands.

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References

Stall, J.B. and Y. Fok. 1968. *Hydraulic Geometry of Illinois Streams*. University of Illinois Water Resources Center, Research Report No. 15, 47p.

APPENDIX

Station No. 03339000 Years of Record Analyzed = 59(1929-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Historical		Qavg	Date	Qmin	Prob	Ranked	
	Start	End					T-Yr	Qmin
1929	Apr 1	Apr 15	4487.	Apr 7	1750.	1.67	60.00	313.
1930	Apr 16	Apr 30	3315.	Apr 30	1450.	3.33	30.00	344.
1931	Sep 16	Sep 30	1332.	Sep 30	313.	5.00	20.00	356.
1932	Mar 21	Apr 4	765.	Mar 21	495.	6.67	15.00	412.
1933	May 11	May 25	7319.	May 25	2820.	8.33	12.00	454.
1934	Mar 27	Apr 10	932.	Apr 10	356.	10.00	10.00	495.
1935	May 3	May 17	4736.	May 17	2570.	11.67	8.57	542.
1936	Apr 28	May 12	2729.	Apr 28	946.	13.33	7.50	603.
1937	Apr 22	May 6	3256.	Apr 30	1860.	15.00	6.67	734.
1938	Mar 30	Apr 13	7091.	Apr 5	2240.	16.67	6.00	762.
1939	Mar 3	Mar 17	8769.	Mar 11	1800.	18.33	5.45	785.
1940	Jun 8	Jun 22	2633.	Jun 22	542.	20.00	5.00	790.
1941	Jun 10	Jun 24	1866.	Jun 24	412.	21.67	4.62	812.
1942	Mar 8	Mar 22	3923.	Mar 16	1830.	23.33	4.29	834.
1943	May 11	May 25	12748.	May 15	3400.	25.00	4.00	884.
1944	Apr 11	Apr 25	8118.	Apr 21	1950.	26.67	3.75	946.
1945	Mar 26	Apr 9	3890.	Mar 29	1010.	28.33	3.53	1000.
1946	Jun 13	Jun 27	5477.	Jun 18	1650.	30.00	3.33	1010.
1947	Apr 21	May 5	4350.	Apr 24	2130.	31.67	3.16	1030.
1948	Mar 20	Apr 3	4667.	Apr 3	2410.	33.33	3.00	1040.
1949	May 20	Jun 3	2420.	Jun 3	790.	35.00	2.86	1080.
1950	Mar 28	Apr 11	4305.	Apr 2	1590.	36.67	2.73	1100.
1951	Jul 9	Jul 23	5353.	Jul 23	785.	38.33	2.61	1150.
1952	Jun 14	Jun 28	4256.	Jun 28	1220.	40.00	2.50	1220.
1953	Mar 31	Apr 14	2817.	Apr 14	1030.	41.67	2.40	1280.
1954	Apr 8	Apr 22	1259.	Apr 10	344.	43.33	2.31	1310.
1955	Jun 6	Jun 20	1506.	Jun 8	603.	45.00	2.22	1320.
1956	May 27	Jun 10	3855.	Jun 10	454.	46.67	2.14	1340.
1957	Apr 20	May 4	3941.	May 4	1850.	48.33	2.07	1390.
1958	Jun 10	Jun 24	5566.	Jun 24	1100.	50.00	2.00	1420.
1959	Mar 6	Mar 20	3007.	Mar 20	1920.	51.67	1.94	1450.
1960	Jun 18	Jul 2	4210.	Jun 20	734.	53.33	1.88	1570.
1961	Apr 18	May 2	5046.	Apr 21	1390.	55.00	1.82	1590.
1962	Jul 14	Jul 28	5241.	Jul 28	1080.	56.67	1.76	1630.
1963	Mar 4	Mar 18	4898.	Mar 15	1280.	58.33	1.71	1650.
1964	Apr 19	May 3	8020.	May 3	1340.	60.00	1.67	1690.
1965	Apr 5	Apr 19	3639.	Apr 5	1570.	61.67	1.62	1710.
1966	Apr 21	May 5	3003.	May 5	1420.	63.33	1.58	1750.
1967	May 7	May 21	2556.	May 21	762.	65.00	1.54	1770.
1968	May 16	May 30	6817.	May 22	2190.	66.67	1.50	1800.
1969	Apr 6	Apr 20	3710.	Apr 13	1770.	68.33	1.46	1830.
1970	Apr 19	May 3	6687.	May 3	2120.	70.00	1.43	1850.
1971	Mar 12	Mar 26	1959.	Mar 12	834.	71.67	1.40	1860.
1972	Apr 12	Apr 26	4053.	Apr 15	1630.	73.33	1.36	1920.
1973	Apr 19	May 3	5614.	Apr 19	1690.	75.00	1.33	1950.
1974	Jun 21	Jul 5	5734.	Jul 5	884.	76.67	1.30	2040.
1975	Mar 28	Apr 11	1647.	Apr 11	812.	78.33	1.28	2120.
1976	Mar 3	Mar 17	2596.	Mar 17	1320.	80.00	1.25	2130.

Station No. 03339000 Years of Record Analyzed = 59(1929-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1977	Aug 7	Aug 21	3826.	Aug 21	1150.	81.67	1.22	2190.
1978	Mar 15	Mar 29	5697.	Mar 26	3040.	83.33	1.20	2240.
1979	Mar 1	Mar 15	7746.	Mar 13	2390.	85.00	1.18	2390.
1980	Jun 2	Jun 16	4923.	Jun 15	1000.	86.67	1.15	2410.
1981	May 10	May 24	5937.	May 24	2040.	88.33	1.13	2570.
1982	Mar 11	Mar 25	6473.	Mar 25	3000.	90.00	1.11	2820.
1983	May 1	May 15	7071.	May 13	1710.	91.67	1.09	3000.
1984	Mar 16	Mar 30	7751.	Mar 30	3920.	93.33	1.07	3040.
1985	Mar 1	Mar 15	5327.	Mar 10	3250.	95.00	1.05	3250.
1986	May 29	Jun 12	5409.	Jun 4	1310.	96.67	1.03	3400.
1987	Apr 13	Apr 27	1895.	Apr 27	1040.	98.33	1.02	3920.
Avg			4545.		1530.			
SD			2262.		822.			

Qmin (2-Yr) = 1420. cfs

Exceedance Probability = 18.92 percent

Station No. 03344000 Years of Record Analyzed = 12(1971-1982)
 Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
 Based on Analysis of 15-Day High Flows During March-September

Year	Historical		Qavg	Date	Qmin	Prob	Ranked	
							T-Yr	Qmin
1971	May 24	Jun 7	1304.	Jun 1	435.	7.69	13.00	435.
1972	Apr 14	Apr 28	3068.	Apr 15	1620.	15.38	6.50	435.
1973	Jul 21	Aug 4	5985.	Aug 4	1160.	23.08	4.33	744.
1974	May 19	Jun 2	5601.	May 29	1650.	30.77	3.25	899.
1975	Apr 24	May 8	2061.	May 6	744.	38.46	2.60	1160.
1976	Mar 4	Mar 18	1592.	Mar 18	899.	46.15	2.17	1500.
1977	May 6	May 20	2569.	May 20	435.	53.85	1.86	1620.
1978	Mar 15	Mar 29	6410.	Mar 29	3850.	61.54	1.63	1650.
1979	Mar 1	Mar 15	5573.	Mar 15	2000.	69.23	1.44	2000.
1980	Mar 29	Apr 12	2660.	Apr 7	1500.	76.92	1.30	2440.
1981	May 11	May 25	4082.	May 25	2610.	84.62	1.18	2610.
1982	Mar 11	Mar 25	3825.	Mar 25	2440.	92.31	1.08	3850.
Avg			3727.		1612.			
SD			1796.		1004.			

Qmin(2-Yr) = 1560. cfs Exceedance Probability = 15.99 percent

Station No. 03345500 Years of Record Analyzed = 73(1915-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1915	Aug 15	Aug 29	6015.	Aug 19	2080.	1.35	74.00	95.
1916	Jun 16	Jun 30	1342.	Jun 30	530.	2.70	37.00	249.
1917	May 29	Jun 12	6986.	May 31	3950.	4.05	24.67	366.
1918	Apr 21	May 5	5349.	May 5	2960.	5.41	18.50	390.
1919	Jun 23	Jul 7	4477.	Jul 7	930.	6.76	14.80	458.
1920	May 13	May 27	4301.	May 27	1670.	8.11	12.33	530.
1921	Mar 24	Apr 7	4255.	Apr 7	1400.	9.46	10.57	534.
1922	Apr 9	Apr 23	10009.	Apr 23	7000.	10.81	9.25	555.
1923	Mar 12	Mar 26	6739.	Mar 26	2200.	12.16	8.22	730.
1924	Mar 23	Apr 6	3963.	Mar 28	1800.	13.51	7.40	767.
1925	Mar 14	Mar 28	5687.	Mar 28	1800.	14.86	6.73	828.
1926	Sep 9	Sep 23	5862.	Sep 23	1960.	16.22	6.17	850.
1927	May 25	Jun 8	12952.	Jun 8	3850.	17.57	5.69	890.
1928	Jun 9	Jun 23	2747.	Jun 19	850.	18.92	5.29	910.
1929	May 13	May 27	9548.	May 27	2030.	20.27	4.93	922.
1930	Mar 1	Mar 15	1958.	Mar 15	730.	21.62	4.63	930.
1931	Sep 16	Sep 30	1614.	Sep 16	249.	22.97	4.35	968.
1932	Jun 28	Jul 12	707.	Jul 6	366.	24.32	4.11	985.
1933	May 14	May 28	9531.	May 22	5900.	25.68	3.89	1060.
1934	Mar 27	Apr 10	1346.	Apr 10	534.	27.03	3.70	1080.
1935	May 3	May 17	7722.	May 14	3690.	28.38	3.52	1140.
1936	Mar 20	Apr 3	2268.	Mar 20	968.	29.73	3.36	1170.
1937	Apr 25	May 9	4778.	May 1	1920.	31.08	3.22	1290.
1938	Apr 1	Apr 15	11793.	Apr 8	4960.	32.43	3.08	1310.
1939	Mar 6	Mar 20	8016.	Mar 10	2230.	33.78	2.96	1310.
1940	Apr 20	May 4	3367.	Apr 29	910.	35.14	2.85	1350.
1941	Jun 4	Jun 18	1899.	Jun 9	828.	36.49	2.74	1400.
1942	Jun 16	Jun 30	4504.	Jun 25	1310.	37.84	2.64	1420.
1943	May 11	May 25	17176.	May 15	7960.	39.19	2.55	1450.
1944	Apr 12	Apr 26	6783.	Apr 22	1830.	40.54	2.47	1470.
1945	Mar 31	Apr 14	9117.	Apr 12	2030.	41.89	2.39	1510.
1946	May 2	May 16	4720.	May 10	2910.	43.24	2.31	1560.
1947	Apr 24	May 8	3852.	May 8	1510.	44.59	2.24	1590.
1948	Mar 22	Apr 5	9425.	Apr 5	3070.	45.95	2.18	1670.
1949	Mar 26	Apr 9	2226.	Apr 9	890.	47.30	2.11	1670.
1950	Mar 27	Apr 10	4858.	Apr 2	1870.	48.65	2.06	1700.
1951	Apr 8	Apr 22	3674.	Apr 22	1700.	50.00	2.00	1800.
1952	Mar 11	Mar 25	5051.	Mar 17	2150.	51.35	1.95	1800.
1953	Mar 31	Apr 14	2875.	Apr 14	1450.	52.70	1.90	1830.
1954	Apr 16	Apr 30	217.	Apr 30	95.	54.05	1.85	1840.
1955	May 29	Jun 12	1754.	Jun 6	458.	55.41	1.80	1840.
1956	May 28	Jun 11	1976.	Jun 11	555.	56.76	1.76	1870.
1957	Jun 17	Jul 1	10030.	Jun 27	1170.	58.11	1.72	1920.
1958	Jul 11	Jul 25	6613.	Jul 11	2140.	59.46	1.68	1930.
1959	Mar 7	Mar 21	3062.	Mar 8	1840.	60.81	1.64	1960.
1960	Jun 23	Jul 7	4751.	Jul 7	985.	62.16	1.61	2030.
1961	May 6	May 20	10631.	May 20	1840.	63.51	1.57	2030.
1962	Mar 14	Mar 28	6086.	Mar 19	1560.	64.86	1.54	2080.

Station No. 03345500 Years of Record Analyzed = 73(1915-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1963	Mar 5	Mar 19	3894.	Mar 15	1060.	66.22	1.51	2140.
1964	Apr 21	May 5	4269.	May 5	1350.	67.57	1.48	2150.
1965	Apr 17	May 1	2469.	Apr 25	1080.	68.92	1.45	2200.
1966	Apr 21	May 5	3697.	Apr 21	1670.	70.27	1.42	2230.
1967	May 7	May 21	4062.	May 21	1420.	71.62	1.40	2300.
1968	May 24	Jun 7	7813.	Jun 7	1930.	72.97	1.37	2310.
1969	Apr 10	Apr 24	4735.	Apr 13	1590.	74.32	1.35	2370.
1970	Apr 20	May 4	9263.	May 4	2630.	75.68	1.32	2380.
1971	Jul 10	Jul 24	1752.	Jul 23	767.	77.03	1.30	2630.
1972	Apr 14	Apr 28	5173.	Apr 15	2310.	78.38	1.28	2760.
1973	Mar 11	Mar 25	7094.	Mar 24	3560.	79.73	1.25	2910.
1974	May 20	Jun 3	8257.	May 29	2370.	81.08	1.23	2960.
1975	Mar 1	Mar 15	3214.	Mar 10	1140.	82.43	1.21	3070.
1976	Mar 4	Mar 18	3870.	Mar 18	1310.	83.78	1.19	3200.
1977	Mar 26	Apr 9	2919.	Mar 26	922.	85.14	1.17	3560.
1978	Mar 15	Mar 29	10853.	Mar 29	6750.	86.49	1.16	3670.
1979	Mar 1	Mar 15	10771.	Mar 15	2760.	87.84	1.14	3690.
1980	Mar 30	Apr 13	4016.	Apr 7	2300.	89.19	1.12	3850.
1981	May 14	May 28	5000.	May 14	3200.	90.54	1.10	3950.
1982	Mar 12	Mar 26	5219.	Mar 25	3670.	91.89	1.09	4140.
1983	May 1	May 15	4535.	May 13	1470.	93.24	1.07	4960.
1984	Apr 21	May 5	7962.	May 3	2380.	94.59	1.06	5900.
1985	Mar 1	Mar 15	5892.	Mar 10	4140.	95.95	1.04	6750.
1986	Mar 9	Mar 23	2515.	Mar 11	1290.	97.30	1.03	7000.
1987	Jul 1	Jul 15	1733.	Jul 5	390.	98.65	1.01	7960.
Avg			5419.		2070.			
SD			3247.		1551.			

Qmin(2-Yr) = **1800.** cfs Exceedance Probability = 18.01 percent

Station No. 03379500 Years of Record Analyzed = 73(1915-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start End		Historical		Ranked			
			Qavg	Date	Qmin	Prob	T-Yr	Qmin
1915	Aug 16	Aug 30	10798.	Aug 30	1640.	1.35	74.00	0.
1916	Jun 16	Jun 30	1028.	Jun 30	208.	2.70	37.00	66.
1917	May 31	Jun 14	6155.	May 31	2900.	4.05	24.67	104.
1918	Apr 19	May 3	10432.	May 3	3640.	5.41	18.50	131.
1919	Jun 22	Jul 6	4358.	Jul 6	208.	6.76	14.80	143.
1920	Mar 14	Mar 28	3871.	Mar 23	562.	8.11	12.33	145.
1921	Mar 22	Apr 5	3696.	Apr 5	429.	9.46	10.57	169.
1922	Apr 9	Apr 23	8695.	Apr 9	2900.	10.81	9.25	178.
1923	Mar 8	Mar 22	5596.	Mar 11	829.	12.16	8.22	202.
1924	May 25	Jun 8	2932.	Jun 5	738.	13.51	7.40	208.
1925	Mar 15	Mar 29	1893.	Mar 29	433.	14.86	6.73	208.
1926	Apr 1	Apr 15	4931.	Apr 1	1180.	16.22	6.17	214.
1927	Mar 13	Mar 27	6165.	Mar 17	1220.	17.57	5.69	243.
1928	Jun 20	Jul 4	2458.	Jul 4	379.	18.92	5.29	255.
1929	May 6	May 20	8789.	May 12	1940.	20.27	4.93	277.
1930	Mar 1	Mar 15	1191.	Mar 15	202.	21.62	4.63	290.
1931	Aug 28	Sep 11	1791.	Sep 11	104.	22.97	4.35	316.
1932	Jun 3	Jun 17	521.	Jun 14	66.	24.32	4.11	318.
1933	May 6	May 20	6681.	May 6	4160.	25.68	3.89	336.
1934	Mar 27	Apr 10	972.	Apr 5	145.	27.03	3.70	336.
1935	May 3	May 17	6252.	May 13	1600.	28.38	3.52	338.
1936	Mar 17	Mar 31	1951.	Mar 19	353.	29.73	3.36	353.
1937	Apr 25	May 9	3591.	Apr 28	540.	31.08	3.22	363.
1938	Mar 30	Apr 13	7187.	Apr 7	1770.	32.43	3.08	379.
1939	Apr 16	Apr 30	4463.	Apr 30	336.	33.78	2.96	400.
1940	Apr 19	May 3	2961.	Apr 30	243.	35.14	2.85	429.
1941	Jun 3	Jun 17	1328.	Jun 9	169.	36.49	2.74	433.
1942	Jun 19	Jul 3	3693.	Jun 19	2440.	37.84	2.64	434.
1943	May 10	May 24	17639.	May 24	6610.	39.19	2.55	435.
1944	Apr 12	Apr 26	5601.	Apr 21	440.	40.54	2.47	440.
1945	Jun 9	Jun 23	7736.	Jun 9	4680.	41.89	2.39	508.
1946	May 2	May 16	7109.	May 10	2130.	43.24	2.31	530.
1947	Apr 22	May 6	3495.	Apr 24	530.	44.59	2.24	534.
1948	Mar 21	Apr 4	6354.	Apr 4	2300.	45.95	2.18	540.
1949	Mar 21	Apr 4	3127.	Mar 22	610.	47.30	2.11	545.
1950	Mar 27	Apr 10	4021.	Mar 27	1960.	48.65	2.06	550.
1951	Mar 11	Mar 25	3148.	Mar 25	545.	50.00	2.00	562.
1952	Mar 12	Mar 26	5259.	Mar 18	2470.	51.35	1.95	564.
1953	Mar 5	Mar 19	2252.	Mar 12	316.	52.70	1.90	610.
1954	Sep 16	Sep 30	213.	Sep 16	0.	54.05	1.85	738.
1955	Apr 14	Apr 28	1920.	Apr 22	178.	55.41	1.80	800.
1956	Apr 27	May 11	1325.	May 6	338.	56.76	1.76	803.
1957	Apr 1	Apr 15	7813.	Apr 1	803.	58.11	1.72	829.
1958	Jul 12	Jul 26	4517.	Jul 26	1340.	59.46	1.68	836.
1959	Mar 1	Mar 15	1878.	Mar 5	564.	60.81	1.64	1010.
1960	Mar 23	Apr 6	4237.	Apr 6	1200.	62.16	1.61	1180.
1961	May 6	May 20	12523.	May 20	434.	63.51	1.57	1200.
1962	Mar 13	Mar 27	4513.	Mar 19	435.	64.86	1.54	1200.

Station No. 03379500 Years of Record Analyzed = 73(1915-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start End		Historical			Ranked		
			Qavg	Date	Qmin	Prob	T-Yr	Qmin
1963	Mar 6	Mar 20	3999.	Mar 15	336.	66.22	1.51	1220.
1964	Mar 5	Mar 19	2785.	Mar 19	318.	67.57	1.48	1230.
1965	Jun 30	Jul 14	913.	Jul 6	143.	68.92	1.45	1340.
1966	Apr 22	May 6	3523.	May 6	836.	70.27	1.42	1600.
1967	May 7	May 21	2896.	May 21	1010.	71.62	1.40	1640.
1968	May 23	Jun 6	3029.	Jun 6	290.	72.97	1.37	1770.
1969	Apr 10	Apr 24	5429.	Apr 13	2060.	74.32	1.35	1790.
1970	Apr 20	May 4	9297.	May 4	2580.	75.68	1.32	1940.
1971	Jun 12	Jun 26	1415.	Jun 26	131.	77.03	1.30	1960.
1972	Apr 13	Apr 27	4653.	Apr 27	1790.	78.38	1.28	2060.
1973	Mar 8	Mar 22	7763.	Mar 22	3780.	79.73	1.25	2130.
1974	May 23	Jun 6	3889.	May 29	277.	81.08	1.23	2300.
1975	Apr 20	May 4	2796.	Apr 22	550.	82.43	1.21	2440.
1976	Mar 5	Mar 19	2454.	Mar 17	363.	83.78	1.19	2470.
1977	Mar 27	Apr 10	3315.	Apr 10	255.	85.14	1.17	2540.
1978	Mar 14	Mar 28	9486.	Mar 14	7430.	86.49	1.16	2580.
1979	Mar 1	Mar 15	7458.	Mar 15	534.	87.84	1.14	2900.
1980	Mar 24	Apr 7	3635.	Apr 7	1230.	89.19	1.12	2900.
1981	Aug 27	Sep 10	2549.	Sep 10	214.	90.54	1.10	2930.
1982	Mar 14	Mar 28	5069.	Mar 14	2930.	91.89	1.09	3640.
1983	May 1	May 15	4253.	May 13	800.	93.24	1.07	3780.
1984	Apr 21	May 5	8349.	May 4	2540.	94.59	1.06	4160.
1985	Mar 30	Apr 13	7063.	Apr 13	1200.	95.95	1.04	4680.
1986	Mar 12	Mar 26	2093.	Mar 17	400.	97.30	1.03	6610.
1987	Jul 2	Jul 16	2588.	Jul 9	508.	98.65	1.01	7430.
Avg			4654.		1256.			
SD			3098.		1457.			

Qmin(2-Yr) = 562. cfs Exceedance Probability = 26.65 percent

Station No. 03381500 Years of Record Analyzed = 48(1940-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1940	Apr 22	May 6	10833.	May 6	10100.	2.04	49.00	61.
1941	Apr 9	Apr 23	2070.	Apr 18	439.	4.08	24.50	439.
1942	Mar 10	Mar 24	7707.	Mar 24	6120.	6.12	16.33	562.
1943	May 18	Jun 1	25327.	Jun 1	17500.	8.16	12.25	1010.
1944	Apr 24	May 8	12040.	Apr 24	10400.	10.20	9.80	1110.
1945	Mar 8	Mar 22	18127.	Mar 22	15500.	12.24	8.17	1490.
1946	May 12	May 26	14487.	May 15	14200.	14.29	7.00	2230.
1947	Apr 26	May 10	10104.	Apr 26	8160.	16.33	6.13	2640.
1948	Apr 3	Apr 17	10102.	Apr 12	8640.	18.37	5.44	2710.
1949	Mar 27	Apr 10	9836.	Mar 27	7260.	20.41	4.90	4590.
1950	Apr 3	Apr 17	11739.	Apr 17	9380.	22.45	4.45	5000.
1951	Mar 1	Mar 15	11438.	Mar 14	8580.	24.49	4.08	5110.
1952	Mar 18	Apr 1	13493.	Mar 18	11900.	26.53	3.77	5620.
1953	Mar 6	Mar 20	6558.	Mar 17	4590.	28.57	3.50	5820.
1954	May 2	May 16	1100.	May 16	61.	30.61	3.27	5880.
1955	Apr 19	May 3	7145.	Apr 22	2230.	32.65	3.06	6120.
1956	Mar 1	Mar 15	6778.	Mar 15	2710.	34.69	2.88	6780.
1957	Apr 7	Apr 21	15567.	Apr 7	12800.	36.73	2.72	7260.
1958	Jul 22	Aug 5	10937.	Aug 5	9430.	38.78	2.58	7520.
1959	May 18	Jun 1	6075.	May 18	2640.	40.82	2.45	7600.
1960	Mar 27	Apr 10	9035.	Mar 27	7520.	42.86	2.33	7680.
1961	May 9	May 23	30727.	May 23	16700.	44.90	2.23	8110.
1962	Mar 1	Mar 15	9947.	Mar 15	8110.	46.94	2.13	8160.
1963	Mar 16	Mar 30	9927.	Mar 30	8270.	48.98	2.04	8270.
1964	Mar 10	Mar 24	13193.	Mar 24	10600.	51.02	1.96	8580.
1965	Mar 1	Mar 15	4095.	Mar 15	1110.	53.06	1.88	8640.
1966	Apr 26	May 10	8817.	Apr 26	5820.	55.10	1.81	9160.
1967	Mar 9	Mar 23	6991.	Mar 11	5880.	57.14	1.75	9380.
1968	Mar 21	Apr 4	8543.	Mar 31	5620.	59.18	1.69	9430.
1969	Apr 17	May 1	11923.	Apr 17	9870.	61.22	1.63	9870.
1970	Apr 27	May 11	15040.	Apr 27	11200.	63.27	1.58	10100.
1971	Mar 1	Mar 15	5927.	Mar 15	1490.	65.31	1.53	10400.
1972	Apr 18	May 2	14993.	Apr 18	12700.	67.35	1.48	10600.
1973	Mar 15	Mar 29	14487.	Mar 29	12800.	69.39	1.44	11100.
1974	Jun 1	Jun 15	7905.	Jun 5	6780.	71.43	1.40	11200.
1975	Apr 25	May 9	13367.	May 9	11100.	73.47	1.36	11900.
1976	Mar 6	Mar 20	3346.	Mar 20	1010.	75.51	1.32	12700.
1977	Mar 29	Apr 12	12151.	Apr 12	9160.	77.55	1.29	12700.
1978	Mar 18	Apr 1	17427.	Apr 1	15800.	79.59	1.26	12800.
1979	Mar 1	Mar 15	23947.	Mar 1	15800.	81.63	1.23	12800.
1980	Mar 27	Apr 10	9211.	Mar 29	7600.	83.67	1.20	14200.
1981	May 19	Jun 2	8957.	Jun 2	7680.	85.71	1.17	14400.
1982	Mar 1	Mar 15	10966.	Mar 14	5000.	87.76	1.14	15500.
1983	May 2	May 16	18020.	May 2	15700.	89.80	1.11	15700.
1984	Apr 25	May 9	15627.	May 9	12700.	91.84	1.09	15800.
1985	Apr 1	Apr 15	18487.	Apr 15	14400.	93.88	1.07	15800.
1986	Mar 13	Mar 27	7022.	Mar 18	5110.	95.92	1.04	16700.
1987	Apr 13	Apr 27	4145.	Apr 13	562.	97.96	1.02	17500.
Avg			11368.		8515.			
SD			5808.		4785.			

Qmin (2-Yr) = 8425. cfs Exceedance Probability = 9.91 percent

Station No. 05435500 Years of Record Analyzed = 73(1915-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1915	Sep 16	Sep 30	4221.	Sep 25	1140.	1.35	74.00	220.
1916	Mar 24	Apr 7	5944.	Apr 7	1040.	2.70	37.00	299.
1917	Mar 11	Mar 25	4243.	Mar 25	2340.	4.05	24.67	416.
1918	Mar 1	Mar 15	4731.	Mar 12	2520.	5.41	18.50	426.
1919	Mar 11	Mar 25	4493.	Mar 25	935.	6.76	14.80	446.
1920	Mar 15	Mar 29	3698.	Mar 24	1890.	8.11	12.33	484.
1921	Sep 16	Sep 30	1687.	Sep 19	1310.	9.46	10.57	490.
1922	Mar 1	Mar 15	2468.	Mar 15	1080.	10.81	9.25	490.
1923	Mar 30	Apr 13	5329.	Mar 31	1430.	12.16	8.22	490.
1924	Aug 14	Aug 28	2657.	Aug 17	1130.	13.51	7.40	544.
1925	Mar 10	Mar 24	1334.	Mar 16	490.	14.86	6.73	641.
1926	Jun 11	Jun 25	2169.	Jun 25	683.	16.22	6.17	660.
1927	May 23	Jun 6	3065.	Jun 6	1960.	17.57	5.69	683.
1928	Mar 11	Mar 25	3289.	Mar 23	915.	18.92	5.29	690.
1929	Mar 9	Mar 23	7873.	Mar 23	3440.	20.27	4.93	751.
1930	Apr 20	May 4	1159.	Apr 30	690.	21.62	4.63	798.
1931	Sep 16	Sep 30	1234.	Sep 16	220.	22.97	4.35	801.
1932	Mar 18	Apr 1	2577.	Mar 22	484.	24.32	4.11	830.
1933	Mar 28	Apr 11	3640.	Apr 10	842.	25.68	3.89	842.
1934	Jul 6	Jul 20	800.	Jul 17	299.	27.03	3.70	850.
1935	Mar 3	Mar 17	3251.	Mar 3	2080.	28.38	3.52	900.
1936	Mar 4	Mar 18	2665.	Mar 4	1800.	29.73	3.36	915.
1937	Mar 1	Mar 15	6269.	Mar 15	1780.	31.08	3.22	922.
1938	Sep 11	Sep 25	4659.	Sep 11	3170.	32.43	3.08	935.
1939	Mar 5	Mar 19	2209.	Mar 9	1190.	33.78	2.96	1000.
1940	Aug 26	Sep 9	1322.	Sep 9	426.	35.14	2.85	1010.
1941	Mar 21	Apr 4	2617.	Apr 2	1010.	36.49	2.74	1040.
1942	Jul 30	Aug 13	3355.	Aug 1	900.	37.84	2.64	1040.
1943	Mar 14	Mar 28	4454.	Mar 14	1720.	39.19	2.55	1080.
1944	Mar 12	Mar 26	3208.	Mar 26	1170.	40.54	2.47	1080.
1945	Jun 22	Jul 6	2271.	Jun 24	1120.	41.89	2.39	1090.
1946	Mar 6	Mar 20	3837.	Mar 6	2320.	43.24	2.31	1120.
1947	Jun 8	Jun 22	2567.	Jun 12	1510.	44.59	2.24	1130.
1948	Mar 15	Mar 29	4228.	Mar 26	1290.	45.95	2.18	1130.
1949	Mar 1	Mar 15	4095.	Mar 15	1230.	47.30	2.11	1140.
1950	Jul 17	Jul 31	3685.	Jul 30	1090.	48.65	2.06	1140.
1951	Jul 8	Jul 22	4070.	Jul 21	1240.	50.00	2.00	1170.
1952	Mar 11	Mar 25	5226.	Mar 18	3500.	51.35	1.95	1190.
1953	Mar 11	Mar 25	1748.	Mar 22	1130.	52.70	1.90	1230.
1954	Jun 23	Jul 7	1457.	Jul 3	801.	54.05	1.85	1240.
1955	Mar 1	Mar 15	1679.	Mar 15	850.	55.41	1.80	1280.
1956	Mar 1	Mar 15	1289.	Mar 15	446.	56.76	1.76	1290.
1957	Jun 11	Jun 25	1564.	Jun 25	660.	58.11	1.72	1310.
1958	Mar 1	Mar 15	992.	Mar 15	490.	59.46	1.68	1430.
1959	Mar 24	Apr 7	9333.	Mar 24	6520.	60.81	1.64	1510.
1960	Mar 29	Apr 12	5346.	Apr 12	1960.	62.16	1.61	1600.
1961	Mar 17	Mar 31	2841.	Mar 22	1280.	63.51	1.57	1720.
1962	Mar 21	Apr 4	4791.	Apr 4	3700.	64.86	1.54	1780.

Station No. 05435500 Years of Record Analyzed = 73(1915-1987)
 Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
 Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1963	Mar 14	Mar 28	4299.	Mar 28	1870.	66.22	1.51	1800.
1964	Apr 3	Apr 17	995.	Apr 17	490.	67.57	1.48	1810.
1965	Mar 1	Mar 15	3557.	Mar 15	830.	68.92	1.45	1840.
1966	Mar 21	Apr 4	1130.	Mar 21	798.	70.27	1.42	1870.
1967	Mar 23	Apr 6	2614.	Apr 6	922.	71.62	1.40	1890.
1968	Sep 16	Sep 30	1202.	Sep 17	544.	72.97	1.37	1960.
1969	Jun 28	Jul 12	5757.	Jul 12	2650.	74.32	1.35	1960.
1970	Mar 3	Mar 17	1191.	Mar 17	641.	75.68	1.32	2000.
1971	Mar 1	Mar 15	2323.	Mar 12	1140.	77.03	1.30	2080.
1972	Mar 12	Mar 26	2654.	Mar 12	1000.	78.38	1.28	2110.
1973	May 2	May 16	4829.	May 16	3680.	79.73	1.25	2320.
1974	Mar 1	Mar 15	3513.	Mar 1	1840.	81.08	1.23	2340.
1975	Mar 20	Apr 3	6750.	Apr 3	2670.	82.43	1.21	2490.
1976	Mar 2	Mar 16	2781.	Mar 4	2000.	83.78	1.19	2520.
1977	Jul 18	Aug 1	1305.	Aug 1	416.	85.14	1.17	2650.
1978	Jun 21	Jul 5	2451.	Jun 30	1040.	86.49	1.16	2670.
1979	Mar 21	Apr 4	4629.	Apr 4	3570.	87.84	1.14	2920.
1980	Mar 16	Mar 30	1695.	Mar 28	751.	89.19	1.12	3170.
1981	Aug 29	Sep 12	3036.	Sep 12	1810.	90.54	1.10	3380.
1982	Mar 13	Mar 27	4885.	Mar 27	2920.	91.89	1.09	3440.
1983	Apr 2	Apr 16	2550.	Apr 2	2110.	93.24	1.07	3500.
1984	Jun 11	Jun 25	2135.	Jun 17	1600.	94.59	1.06	3570.
1985	Mar 1	Mar 15	3447.	Mar 15	2490.	95.95	1.04	3680.
1986	Mar 14	Mar 28	3717.	Mar 17	3380.	97.30	1.03	3700.
1987	May 21	Jun 4	1289.	May 26	1080.	98.65	1.01	6520.
Avg			3238.		1554.			
SD			1714.		1082.			

QminC2-Yr) = 1170. cfs

Exceedance Probability = 19.47 percent

Station No. 05437000 Years of Record Analyzed = 19(1940-1958)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1940	Aug 26	Sep 9	3595.	Aug 26	1000.	5.00	20.00	930.
1941	Mar 21	Apr 4	5019.	Apr 3	2090.	10.00	10.00	1000.
1942	Aug 1	Aug 15	4866.	Aug 15	1800.	15.00	6.67	1100.
1943	Mar 15	Mar 29	8659.	Mar 15	3800.	20.00	5.00	1150.
1944	Mar 12	Mar 26	6627.	Mar 26	2680.	25.00	4.00	1360.
1945	Jun 27	Jul 11	3685.	Jul 10	1830.	30.00	3.33	1800.
1946	Mar 8	Mar 22	7439.	Mar 12	5320.	35.00	2.86	1830.
1947	Mar 12	Mar 26	4039.	Mar 26	2490.	40.00	2.50	1830.
1948	Mar 15	Mar 29	8694.	Mar 29	3160.	45.00	2.22	1950.
1949	Mar 1	Mar 15	8003.	Mar 15	5960.	50.00	2.00	2090.
1950	Jul 18	Aug 1	5573.	Aug 1	2470.	55.00	1.82	2470.
1951	Jul 8	Jul 22	6219.	Jul 8	1950.	60.00	1.67	2470.
1952	Mar 13	Mar 27	9822.	Mar 27	7100.	65.00	1.54	2490.
1953	Mar 12	Mar 26	3467.	Mar 26	2470.	70.00	1.43	2680.
1954	Jun 1	Jun 15	2719.	Jun 15	1360.	75.00	1.33	3160.
1955	Mar 1	Mar 15	3871.	Mar 15	1830.	80.00	1.25	3800.
1956	Mar 1	Mar 15	2241.	Mar 15	930.	85.00	1.18	5320.
1957	Jun 12	Jun 26	2227.	Jun 26	1100.	90.00	1.11	5960.
1958	Mar 1	Mar 15	2255.	Mar 15	1150.	95.00	1.05	7100.
Avg			5212.			2657.		
SD			2417.			1739.		

Qmin(2-Yr) = 2090. cfs

Exceedance Probability = 16.44 percent

Station No. 05437500 Years of Record Analyzed = 48(1940-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1940	Aug 26	Sep 9	6916.	Sep 8	2900.	2.04	49.00	2160.
1941	Mar 22	Apr 5	9513.	Apr 2	7390.	4.08	24.50	2860.
1942	Aug 2	Aug 16	6151.	Aug 16	2860.	6.12	16.33	2870.
1943	Mar 16	Mar 30	16680.	Mar 30	12800.	8.16	12.25	2900.
1944	Mar 13	Mar 27	12009.	Mar 27	7450.	10.20	9.80	3470.
1945	May 28	Jun 11	5706.	Jun 11	4450.	12.24	8.17	3830.
1946	Mar 13	Mar 27	15987.	Mar 27	11900.	14.29	7.00	4160.
1947	Apr 7	Apr 21	7631.	Apr 18	6520.	16.33	6.13	4450.
1948	Mar 16	Mar 30	18080.	Mar 30	11500.	18.37	5.44	5080.
1949	Mar 1	Mar 15	11749.	Mar 2	8020.	20.41	4.90	5080.
1950	Jul 20	Aug 3	11304.	Aug 3	7640.	22.45	4.45	5440.
1951	Mar 1	Mar 15	11087.	Mar 15	8400.	24.49	4.08	5610.
1952	Mar 14	Mar 28	17647.	Mar 14	15800.	26.53	3.77	5660.
1953	Mar 13	Mar 27	8299.	Mar 13	7450.	28.57	3.50	5770.
1954	Jul 7	Jul 21	6223.	Jul 20	5080.	30.61	3.27	6520.
1955	Mar 1	Mar 15	7135.	Mar 10	5440.	32.65	3.06	6580.
1956	May 1	May 15	5572.	May 4	5080.	34.69	2.88	6870.
1957	Jun 8	Jun 22	5232.	Jun 9	3830.	36.73	2.72	7350.
1958	Mar 1	Mar 15	4491.	Mar 15	2870.	38.78	2.58	7390.
1959	Mar 29	Apr 12	22633.	Apr 12	19800.	40.82	2.45	7450.
1960	Mar 30	Apr 13	19100.	Apr 13	13300.	42.86	2.33	7450.
1961	Mar 22	Apr 5	10880.	Mar 22	9270.	44.90	2.23	7450.
1962	Mar 25	Apr 8	17267.	Apr 8	15600.	46.94	2.13	7620.
1963	Mar 17	Mar 31	10370.	Mar 31	7450.	48.98	2.04	7640.
1964	Apr 3	Apr 17	4065.	Apr 15	2160.	51.02	1.96	7840.
1965	Apr 1	Apr 15	11987.	Apr 1	9610.	53.06	1.88	8020.
1966	Mar 22	Apr 5	7819.	Apr 5	6580.	55.10	1.81	8400.
1967	Mar 24	Apr 7	8187.	Apr 7	5660.	57.14	1.75	8830.
1968	Jun 27	Jul 11	6878.	Jul 11	5610.	59.18	1.69	8910.
1969	Jul 1	Jul 15	10351.	Jul 1	7620.	61.22	1.63	9270.
1970	May 14	May 28	5260.	May 28	4160.	63.27	1.58	9370.
1971	Mar 19	Apr 2	10300.	Mar 27	9370.	65.31	1.53	9610.
1972	Sep 16	Sep 30	10160.	Sep 16	8830.	67.35	1.48	10600.
1973	May 1	May 15	21407.	May 1	18700.	69.39	1.44	11500.
1974	Mar 4	Mar 18	17453.	Mar 18	14100.	71.43	1.40	11900.
1975	Mar 22	Apr 5	23213.	Apr 5	16500.	73.47	1.36	12500.
1976	Mar 5	Mar 19	12600.	Mar 19	10600.	75.51	1.32	12800.
1977	Mar 30	Apr 13	4159.	Apr 12	3470.	77.55	1.29	13200.
1978	Jun 26	Jul 10	13761.	Jun 30	8910.	79.59	1.26	13300.
1979	Mar 25	Apr 8	21073.	Apr 8	19200.	81.63	1.23	13700.
1980	Sep 13	Sep 27	8345.	Sep 23	7840.	83.67	1.20	14100.
1981	Aug 31	Sep 14	7519.	Aug 31	5770.	85.71	1.17	15100.
1982	Mar 14	Mar 28	15593.	Mar 28	13700.	87.76	1.14	15600.
1983	Apr 3	Apr 17	13460.	Apr 16	12500.	89.80	1.11	15800.
1984	Jun 15	Jun 29	8579.	Jun 29	7350.	91.84	1.09	16500.
1985	Mar 1	Mar 15	15873.	Mar 15	13200.	93.88	1.07	18700.
1986	Mar 19	Apr 2	16093.	Apr 2	15100.	95.92	1.04	19200.
1987	Apr 23	May 7	7324.	May 7	6870.	97.96	1.02	19800.
Avg			11440.		9088.			
SD			5275.		4611.			

Qmin (2-Yr) = 7740. cfs Exceedance Probability = 11.17 percent

Station No. 05440000 Years of Record Analyzed = 48(1940-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Historical		Qavg	Date	Qmin	Prob	Ranked	
	Start	End					T-Yr	Qmin
1940	Mar 5	Mar 19	969.	Mar 14	219.	2.04	49.00	219.
1941	Mar 20	Apr 3	1745.	Mar 30	932.	4.08	24.50	329.
1942	Mar 17	Mar 31	1750.	Mar 26	995.	6.12	16.33	434.
1943	Mar 14	Mar 28	2837.	Mar 14	1100.	8.16	12.25	475.
1944	Mar 12	Mar 26	4069.	Mar 26	1160.	10.20	9.80	485.
1945	May 15	May 29	2264.	May 27	942.	12.24	8.17	500.
1946	Mar 5	Mar 19	3306.	Mar 11	2020.	14.29	7.00	505.
1947	Apr 20	May 4	1951.	May 4	1120.	16.33	6.13	601.
1948	Mar 15	Mar 29	4673.	Mar 26	1760.	18.37	5.44	617.
1949	Mar 1	Mar 15	1599.	Mar 15	500.	20.41	4.90	677.
1950	Apr 24	May 8	2827.	May 8	840.	22.45	4.45	726.
1951	Jul 8	Jul 22	2202.	Jul 22	601.	24.49	4.08	772.
1952	Mar 11	Mar 25	4147.	Mar 17	2060.	26.53	3.77	840.
1953	Mar 11	Mar 25	1246.	Mar 11	677.	28.57	3.50	860.
1954	Jun 2	Jun 16	1615.	Jun 16	485.	30.61	3.27	860.
1955	Mar 1	Mar 15	1495.	Mar 14	860.	32.65	3.06	920.
1956	Apr 29	May 13	1456.	May 4	860.	34.69	2.88	932.
1957	May 19	Jun 2	1096.	May 30	726.	36.73	2.72	942.
1958	Jul 2	Jul 16	1630.	Jul 16	505.	38.78	2.58	944.
1959	Mar 2	Mar 16	3214.	Mar 14	1430.	40.82	2.45	947.
1960	Mar 28	Apr 11	4517.	Apr 11	1370.	42.86	2.33	965.
1961	Mar 13	Mar 27	1353.	Mar 26	920.	44.90	2.23	995.
1962	Mar 17	Mar 31	5764.	Mar 17	2760.	46.94	2.13	1030.
1963	Mar 8	Mar 22	1075.	Mar 22	617.	48.98	2.04	1100.
1964	Apr 3	Apr 17	1092.	Apr 17	475.	51.02	1.96	1120.
1965	Mar 31	Apr 14	3206.	Apr 14	1650.	53.06	1.88	1160.
1966	May 12	May 26	1899.	May 26	965.	55.10	1.81	1180.
1967	Mar 23	Apr 6	2415.	Mar 31	1380.	57.14	1.75	1310.
1968	Aug 16	Aug 30	1818.	Aug 30	434.	59.18	1.69	1340.
1969	Jun 8	Jun 22	2663.	Jun 21	1030.	61.22	1.63	1370.
1970	Sep 16	Sep 30	3032.	Sep 16	1520.	63.27	1.58	1380.
1971	Mar 15	Mar 29	2088.	Mar 26	1310.	65.31	1.53	1430.
1972	Sep 13	Sep 27	5421.	Sep 27	2650.	67.35	1.48	1460.
1973	Apr 21	May 5	5683.	Apr 29	2250.	69.39	1.44	1520.
1974	May 15	May 29	5130.	May 29	1960.	71.43	1.40	1530.
1975	Mar 17	Mar 31	3311.	Mar 31	1460.	73.47	1.36	1650.
1976	Mar 3	Mar 17	3614.	Mar 17	1530.	75.51	1.32	1760.
1977	Mar 28	Apr 11	559.	Mar 28	329.	77.55	1.29	1760.
1978	Jun 27	Jul 11	4060.	Jun 30	944.	79.59	1.26	1960.
1979	Mar 19	Apr 2	9056.	Mar 28	4450.	81.63	1.23	2020.
1980	Sep 9	Sep 23	3166.	Sep 22	2320.	83.67	1.20	2060.
1981	Jun 13	Jun 27	1831.	Jun 27	772.	85.71	1.17	2250.
1982	Mar 12	Mar 26	3840.	Mar 12	1760.	87.76	1.14	2320.
1983	Apr 2	Apr 16	4614.	Apr 16	2640.	89.80	1.11	2400.
1984	May 25	Jun 8	1686.	Jun 6	947.	91.84	1.09	2640.
1985	Mar 1	Mar 15	4271.	Mar 15	2400.	93.88	1.07	2650.
1986	Mar 5	Mar 19	3247.	Mar 8	1180.	95.92	1.04	2760.
1987	Aug 15	Aug 29	4558.	Aug 25	1340.	97.96	1.02	4450.
Avg			2939.		1316.			
SD			1652.		801.			

Qmin(2-Yr) = 1110. cfs Exceedance Probability = 16.98 percent

Station No. 05441500 Years of Record Analyzed = 10(1940-1949)
 Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
 Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qtnin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1940	Aug 27	Sep 10	7635.	Sep 7	3450.	9.09	11.00	3450.
1941	Mar 21	Apr 4	12672.	Apr 1	9620.	18.18	5.50	4070.
1942	Aug 2	Aug 16	7927.	Aug 16	4070.	27.27	3.67	5260.
1943	Mar 16	Mar 30	20113.	Mar 30	15600.	36.36	2.75	8080.
1944	Mar 13	Mar 27	18454.	Mar 27	9530.	45.45	2.20	9530.
1945	May 16	May 30	8529.	May 27	5260.	54.55	1.83	9600.
1946	Mar 13	Mar 27	19033.	Mar 27	14200.	63.64	1.57	9620.
1947	Apr 7	Apr 21	9926.	Apr 19	8080.	72.73	1.38	14200.
1948	Mar 15	Mar 29	24393.	Mar 15	15400.	81.82	1.22	15400.
1949	Mar 1	Mar 15	13693.	Mar 2	9600.	90.91	1.10	15600.
Avg			14238.		9481.			
SD			5923.		4475.			

Qmin (2-Yr) = 9565. cfs Exceedance Probability = 7.17 percent

Station No. 05443500 Years of Record Analyzed = 57(1915-1971)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Historical		Qavg	Date	Qmin	Prob	Ranked	
	Start	End					T-Yr	Qmin
1915	Sep 16	Sep 30	16487.	Sep 26	13800.	1.72	58.00	2760.
1916	Mar 26	Apr 9	28267.	Apr 9	13600.	3.45	29.00	2950.
1917	Mar 11	Mar 25	17173.	Mar 25	15000.	5.17	19.33	3200.
1918	Mar 6	Mar 20	22540.	Mar 12	18800.	6.90	14.50	3360.
1919	Mar 14	Mar 28	24833.	Mar 15	10500.	8.62	11.60	4000.
1920	Mar 21	Apr 4	27420.	Mar 24	20500.	10.34	9.67	4230.
1921	Apr 24	May 8	15347.	May 8	10500.	12.07	8.29	4380.
1922	Apr 10	Apr 24	20707.	Apr 24	13600.	13.79	7.25	4380.
1923	Apr 2	Apr 16	21520.	Apr 4	15600.	15.52	6.44	4480.
1924	Aug 14	Aug 28	17553.	Aug 17	9500.	17.24	5.80	5760.
1925	Mar 1	Mar 15	11540.	Mar 8	4000.	18.97	5.27	6200.
1926	Apr 8	Apr 22	13799.	Apr 22	7700.	20.69	4.83	6230.
1927	May 24	Jun 7	21820.	Jun 1	16600.	22.41	4.46	6290.
1928	Apr 6	Apr 20	14140.	Apr 20	10800.	24.14	4.14	6300.
1929	Mar 14	Mar 28	32680.	Mar 28	25000.	25.86	3.87	6980.
1930	Mar 1	Mar 15	8797.	Mar 5	6230.	27.59	3.63	7190.
1931	Mar 29	Apr 12	3301.	Mar 29	2760.	29.31	3.41	7700.
1932	Mar 27	Apr 10	12221.	Apr 9	6980.	31.03	3.22	8120.
1933	May 18	Jun 1	19060.	May 19	13000.	32.76	3.05	8180.
1934	Apr 5	Apr 19	4045.	Apr 19	2950.	34.48	2.90	8350.
1935	Mar 6	Mar 20	14933.	Mar 19	11500.	36.21	2.76	8440.
1936	Mar 5	Mar 19	12827.	Mar 19	11000.	37.93	2.64	8860.
1937	Mar 1	Mar 15	21120.	Mar 3	15300.	39.66	2.52	9200.
1938	Sep 11	Sep 25	21333.	Sep 17	18100.	41.38	2.42	9400.
1939	Mar 7	Mar 21	11809.	Mar 8	8440.	43.10	2.32	9500.
1940	Aug 27	Sep 10	7869.	Sep 10	3360.	44.83	2.23	10000.
1941	Mar 21	Apr 4	12400.	Apr 2	9400.	46.55	2.15	10200.
1942	Aug 2	Aug 16	7919.	Aug 2	4480.	48.28	2.07	10300.
1943	Mar 16	Mar 30	23480.	Mar 30	16300.	50.00	2.00	10500.
1944	Mar 13	Mar 27	19367.	Mar 27	10200.	51.72	1.93	10500.
1945	May 16	May 30	9012.	May 28	5760.	53.45	1.87	10500.
1946	Mar 13	Mar 27	19267.	Mar 27	14600.	55.17	1.81	10500.
1947	Apr 7	Apr 21	10704.	Apr 18	8860.	56.90	1.76	10800.
1948	Mar 16	Mar 30	26800.	Mar 30	16400.	58.62	1.71	11000.
1949	Mar 2	Mar 16	14407.	Mar 2	10500.	60.34	1.66	11200.
1950	Mar 25	Apr 8	13760.	Mar 25	10500.	62.07	1.61	11500.
1951	Mar 1	Mar 15	14367.	Mar 15	10000.	63.79	1.57	12000.
1952	Mar 12	Mar 26	23813.	Mar 18	20200.	65.52	1.53	13000.
1953	Mar 14	Mar 28	10833.	Mar 26	9200.	67.24	1.49	13600.
1954	Jun 2	Jun 16	7545.	Jun 2	4380.	68.97	1.45	13600.
1955	Mar 1	Mar 15	10727.	Mar 12	7190.	70.69	1.41	13800.
1956	May 1	May 15	7760.	May 5	6300.	72.41	1.38	14500.
1957	Jun 8	Jun 22	5686.	Jun 10	4380.	74.14	1.35	14600.
1958	Mar 1	Mar 15	6761.	Mar 13	4230.	75.86	1.32	15000.
1959	Mar 30	Apr 13	23513.	Apr 13	20400.	77.59	1.29	15300.
1960	Mar 30	Apr 13	25833.	Apr 13	16600.	79.31	1.26	15600.
1961	Mar 21	Apr 4	12253.	Mar 22	11200.	81.03	1.23	16300.
1962	Mar 20	Apr 3	24567.	Apr 3	21400.	82.76	1.21	16400.

Station No. 05443500 Years of Record Analyzed = 57(1915-1971)
 Average (Qavg) and Minimum (Qmin) Daily Flows in c:fs
 Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1963	Mar 18	Apr 1	11140.	Apr 1	8120.	84.48	1.18	16600.
1964	Apr 4	Apr 18	5759.	Apr 17	3200.	86.21	1.16	16600.
1965	Apr 1	Apr 15	17293.	Apr 15	14500.	87.93	1.14	18100.
1966	Mar 22	Apr 5	9553.	Apr 5	8180.	89.66	1.12	18800.
1967	Mar 24	Apr 7	11234.	Mar 24	8350.	91.38	1.09	20200.
1968	Jun 27	Jul 11	7827.	Jun 27	6290.	93.10	1.07	20400.
1969	Jul 1	Jul 15	13547.	Jul 1	10300.	94.83	1.05	20500.
1970	Jun 2	Jun 16	9534.	Jun 12	6200.	96.55	1.04	21400.
1971	Mar 15	Mar 29	13433.	Mar 27	12000.	98.28	1.02	25000.
Avg			15320.		10960.			
SD			6898.		5325.			

Qmin (2-Yr) = 10500. cfs Exceedance Probability = 9.65 percent

Station No. 05446500 Years of Record Analyzed = 48(1940-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1940	Aug 28	Sep 11	8504.	Sep 11	3730.	2.04	49.00	3730.
1941	Mar 21	Apr 4	14327.	Apr 2	10500.	4.08	24.50	3830.
1942	Aug 3	Aug 17	8545.	Aug 17	5250.	6.12	16.33	4700.
1943	Mar 17	Mar 31	24387.	Mar 31	17700.	8.16	12.25	4900.
1944	Mar 14	Mar 28	21340.	Mar 28	11500.	10.20	9.80	4910.
1945	May 16	May 30	10253.	May 28	7000.	12.24	8.17	4980.
1946	Mar 14	Mar 28	21233.	Mar 28	17400.	14.29	7.00	5250.
1947	Apr 11	Apr 25	12128.	Apr 19	9820.	16.33	6.13	7000.
1948	Mar 17	Mar 31	29487.	Mar 31	20100.	18.37	5.44	7000.
1949	Mar 1	Mar 15	17867.	Mar 4	12000.	20.41	4.90	7120.
1950	Mar 6	Mar 20	14687.	Mar 20	9610.	22.45	4.45	7740.
1951	Mar 1	Mar 15	17660.	Mar 15	12100.	24.49	4.08	8100.
1952	Mar 13	Mar 27	24560.	Mar 19	21500.	26.53	3.77	8260.
1953	Mar 14	Mar 28	11557.	Mar 27	9830.	28.57	3.50	8900.
1954	Jun 2	Jun 16	8261.	Jun 16	4900.	30.61	3.27	9150.
1955	Mar 1	Mar 15	12268.	Mar 13	8100.	32.65	3.06	9160.
1956	May 2	May 16	8151.	May 6	7120.	34.69	2.88	9400.
1957	Jun 9	Jun 23	6075.	Jun 10	4910.	36.73	2.72	9610.
1958	Mar 1	Mar 15	8133.	Mar 14	4980.	38.78	2.58	9820.
1959	Mar 31	Apr 14	23527.	Mar 31	20600.	40.82	2.45	9830.
1960	Mar 31	Apr 14	28160.	Apr 14	18400.	42.86	2.33	10400.
1961	Mar 22	Apr 5	13493.	Mar 24	12400.	44.90	2.23	10500.
1962	Mar 20	Apr 3	26520.	Apr 3	23200.	46.94	2.13	11100.
1963	Mar 18	Apr 1	12027.	Mar 18	9400.	48.98	2.04	11500.
1964	Apr 5	Apr 19	6531.	Apr 17	3830.	51.02	1.96	11700.
1965	Apr 2	Apr 16	18673.	Apr 16	15900.	53.06	1.88	12000.
1966	Mar 23	Apr 6	10675.	Apr 6	9160.	55.10	1.81	12100.
1967	Mar 24	Apr 7	12880.	Mar 24	11100.	57.14	1.75	12100.
1968	Jun 28	Jul 12	8718.	Jul 12	7000.	59.18	1.69	12400.
1969	Jul 2	Jul 16	15473.	Jul 2	12100.	61.22	1.63	13500.
1970	May 26	Jun 9	12054.	May 29	8260.	63.27	1.58	15000.
1971	Mar 1	Mar 15	14973.	Mar 13	10400.	65.31	1.53	15100.
1972	Sep 15	Sep 29	17887.	Sep 28	15100.	67.35	1.48	15900.
1973	Apr 22	May 6	33133.	May 1	25400.	69.39	1.44	17400.
1974	May 17	May 31	29467.	May 17	21100.	71.43	1.40	17700.
1975	Mar 20	Apr 3	30380.	Mar 23	26400.	73.47	1.36	18200.
1976	Mar 5	Mar 19	19973.	Mar 19	15000.	75.51	1.32	18200.
1977	Mar 30	Apr 13	5590.	Apr 13	4700.	77.55	1.29	18300.
1978	Jun 27	Jul 11	21733.	Jul 1	13500.	79.59	1.26	18400.
1979	Mar 21	Apr 4	36573.	Mar 29	31200.	81.63	1.23	19200.
1980	Sep 11	Sep 25	13073.	Sep 25	11700.	83.67	1.20	20100.
1981	Aug 31	Sep 14	10746.	Sep 14	9150.	85.71	1.17	20600.
1982	Mar 14	Mar 28	23427.	Mar 28	18200.	87.76	1.14	21100.
1983	Apr 3	Apr 17	23473.	Apr 17	18300.	89.80	1.11	21500.
1984	May 26	Jun 9	10964.	Jun 7	8900.	91.84	1.09	23200.
1985	Mar 1	Mar 15	28127.	Mar 15	19200.	93.88	1.07	25400.
1986	Mar 12	Mar 26	19540.	Mar 18	18200.	95.92	1.04	26400.
1987	Aug 17	Aug 31	14586.	Aug 25	7740.	97.96	1.02	31200.
Avg			17121.		12991.			
SD			7921.		6544.			

Qmin(2-Yr) = 11600. cfs Exceedance Probability = 11.78 percent

Station No. 05447500 Years of Record Analyzed = 51(1937-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start End		Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1937	Apr 21	May 5	2141.	Apr 29	1470.	1.92	52.00	263.
1938	May 17	May 31	1688.	May 26	865.	3.85	26.00	319.
1939	Mar 5	Mar 19	1517.	Mar 9	463.	5.77	17.33	346.
1940	Mar 2	Mar 16	1213.	Mar 14	263.	7.69	13.00	398.
1941	Jun 3	Jun 17	1377.	Jun 17	605.	9.62	10.40	421.
1942	Mar 14	Mar 28	1418.	Mar 14	890.	11.54	8.67	463.
1943	May 17	May 31	2545.	May 30	1330.	13.46	7.43	479.
1944	Mar 14	Mar 28	2369.	Mar 28	925.	15.38	6.50	495.
1945	May 8	May 22	2287.	May 13	925.	17.31	5.78	500.
1946	Mar 6	Mar 20	2105.	Mar 14	1610.	19.23	5.20	518.
1947	Apr 20	May 4	2540.	May 4	1390.	21.15	4.73	605.
1948	Mar 14	Mar 28	2738.	Mar 28	925.	23.08	4.33	645.
1949	Mar 24	Apr 7	973.	Mar 25	645.	25.00	4.00	656.
1950	Apr 23	May 7	2520.	Apr 23	1030.	26.92	3.71	675.
1951	May 10	May 24	3220.	May 24	1070.	28.85	3.47	714.
1952	Mar 11	Mar 25	3050.	Mar 17	1830.	30.77	3.25	720.
1953	Mar 12	Mar 26	626.	Mar 26	398.	32.69	3.06	748.
1954	Jun 1	Jun 15	1277.	Jun 15	421.	34.62	2.89	800.
1955	Apr 19	May 3	1757.	May 3	868.	36.54	2.74	816.
1956	Apr 28	May 12	481.	May 5	319.	38.46	2.60	821.
1957	Apr 4	Apr 18	789.	Apr 16	518.	40.38	2.48	865.
1958	Jun 9	Jun 23	1147.	Jun 23	500.	42.31	2.36	868.
1959	Apr 28	May 12	1687.	May 10	675.	44.23	2.26	890.
1960	Mar 28	Apr 11	4231.	Apr 11	1580.	46.15	2.17	895.
1961	Sep 14	Sep 28	1422.	Sep 22	495.	48.08	2.08	925.
1962	Mar 12	Mar 26	3873.	Mar 16	2280.	50.00	2.00	925.
1963	Mar 4	Mar 18	1409.	Mar 18	720.	51.92	1.93	925.
1964	Apr 20	May 4	1113.	May 4	656.	53.85	1.86	954.
1965	Sep 15	Sep 29	2554.	Sep 17	1270.	55.77	1.79	955.
1966	May 12	May 26	2965.	May 23	1600.	57.69	1.73	963.
1967	Apr 1	Apr 15	1392.	Apr 12	748.	59.62	1.68	1030.
1968	Apr 15	Apr 29	440.	Apr 16	346.	61.54	1.63	1060.
1969	Jul 8	Jul 22	2494.	Jul 16	816.	63.46	1.58	1070.
1970	May 13	May 27	3203.	May 23	1400.	65.38	1.53	1120.
1971	Mar 15	Mar 29	1143.	Mar 29	800.	67.31	1.49	1230.
1972	Jun 10	Jun 24	2490.	Jun 13	895.	69.23	1.44	1270.
1973	Apr 21	May 5	5171.	Apr 30	2830.	71.15	1.41	1300.
1974	May 17	May 31	5963.	May 17	2890.	73.08	1.37	1330.
1975	Mar 17	Mar 31	2618.	Mar 27	1300.	75.00	1.33	1390.
1976	Apr 24	May 8	2644.	May 5	1120.	76.92	1.30	1400.
1977	Sep 16	Sep 30	851.	Sep 30	479.	78.85	1.27	1470.
1978	May 8	May 22	2495.	May 11	963.	80.77	1.24	1580.
1979	Mar 19	Apr 2	5801.	Mar 28	3170.	82.69	1.21	1600.
1980	Apr 9	Apr 23	1475.	Apr 23	955.	84.62	1.18	1610.
1981	Aug 15	Aug 29	2118.	Aug 24	714.	86.54	1.16	1830.
1982	Mar 9	Mar 23	2366.	Mar 13	1230.	88.46	1.13	2090.
1983	Apr 2	Apr 16	4063.	Apr 16	2130.	90.38	1.11	2130.
1984	May 25	Jun 8	2133.	Jun 6	1060.	92.31	1.08	2280.

Station No. 05447500 Years of Record Analyzed = 51(1937-1987)
 Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
 Based on Analysis of 15-Day High Flows During Mar ch-September

Year	Start	End	Historical		Ranked			
			Qavg	Date	Qmin	Prob	T-Yr	Qmin
1985	Mar 1	Mar 15	3341.	Mar 15	2090.	94.23	1.06	2830.
1986	Jul 7	Jul 21	2918.	Jul 21	821.	96.15	1.04	2890.
1987	Aug 21	Sep 4	3727.	Aug 24	954.	98.08	1.02	3170.
Avg			2311.		1103.			
SD			1254.		666.			

Qmin (2-Yr) = 925. cfs Exceedance Probability = 18.23 percent

Station No. 05520500 Years of Record Analyzed = 72(1916-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1916	Mar 28	Apr 11	4197.	Apr 11	3850.	1.37	73.00	1510.
1917	Apr 6	Apr 20	3855.	Apr 19	3350.	2.74	36.50	1730.
1918	Mar 1	Mar 15	5003.	Mar 10	4640.	4.11	24.33	1860.
1919	Mar 16	Mar 30	5897.	Mar 30	4650.	5.48	18.25	1930.
1920	Apr 20	May 4	5433.	Apr 26	4930.	6.85	14.60	2100.
1921	Mar 21	Apr 4	2585.	Apr 4	2120.	8.22	12.17	2120.
1922	Apr 11	Apr 25	7913.	Apr 23	6550.	9.59	10.43	2430.
1923	Mar 14	Mar 28	3967.	Mar 15	3340.	10.96	9.13	2480.
1924	Mar 29	Apr 12	5565.	Apr 12	4720.	12.33	8.11	2660.
1925	Mar 15	Mar 29	3485.	Mar 15	2740.	13.70	7.30	2720.
1926	Apr 5	Apr 19	6024.	Apr 19	4170.	15.07	6.64	2740.
1927	Apr 18	May 2	5985.	Apr 28	4720.	16.44	6.08	2800.
1928	Apr 2	Apr 16	3271.	Apr 13	2720.	17.81	5.62	2900.
1929	Apr 26	May 10	5873.	Apr 30	5020.	19.18	5.21	3050.
1930	Apr 16	Apr 30	4121.	Apr 30	3400.	20.55	4.87	3160.
1931	May 9	May 23	2103.	May 9	1860.	21.92	4.56	3180.
1932	Mar 26	Apr 9	3519.	Apr 9	2480.	23.29	4.29	3340.
1933	May 9	May 23	5671.	May 22	4890.	24.66	4.06	3340.
1934	Apr 2	Apr 16	2261.	Apr 16	1730.	26.03	3.84	3350.
1935	Mar 8	Mar 22	3925.	Mar 20	3160.	27.40	3.65	3400.
1936	Mar 1	Mar 15	2944.	Mar 14	1930.	28.77	3.48	3400.
1937	Apr 22	May 6	3927.	Apr 23	3400.	30.14	3.32	3470.
1938	Apr 7	Apr 21	4591.	Apr 21	3850.	31.51	3.17	3560.
1939	Mar 7	Mar 21	5279.	Mar 7	4900.	32.88	3.04	3560.
1940	May 2	May 16	4187.	May 2	3560.	34.25	2.92	3580.
1941	Apr 18	May 2	2189.	Apr 18	1510.	35.62	2.81	3660.
1942	Mar 17	Mar 31	5064.	Mar 26	4740.	36.99	2.70	3660.
1943	May 17	May 31	7372.	May 30	6730.	38.36	2.61	3670.
1944	Apr 12	Apr 26	6045.	Apr 21	5260.	39.73	2.52	3760.
1945	May 14	May 28	4073.	May 15	3340.	41.10	2.43	3770.
1946	Mar 14	Mar 28	4127.	Mar 14	3760.	42.47	2.35	3830.
1947	May 29	Jun 12	5000.	May 31	4360.	43.84	2.28	3850.
1948	May 11	May 25	5340.	May 25	4360.	45.21	2.21	3850.
1949	Mar 1	Mar 15	3694.	Mar 15	2900.	46.58	2.15	3880.
1950	Apr 13	Apr 27	7677.	Apr 21	6740.	47.95	2.09	3940.
1951	Apr 11	Apr 25	4473.	Apr 25	3560.	49.32	2.03	4110.
1952	Jun 13	Jun 27	4759.	Jun 27	2800.	50.68	1.97	4130.
1953	Mar 13	Mar 27	3490.	Mar 27	2660.	52.05	1.92	4130.
1954	Apr 22	May 6	4040.	Apr 24	3660.	53.42	1.87	4130.
1955	Mar 1	Mar 15	3683.	Mar 15	3180.	54.79	1.83	4170.
1956	May 9	May 23	4740.	May 9	4460.	56.16	1.78	4200.
1957	Apr 25	May 9	5144.	May 9	3660.	57.53	1.74	4300.
1958	Jun 9	Jun 23	4083.	Jun 9	3050.	58.90	1.70	4360.
1959	Mar 1	Mar 15	5055.	Mar 14	4300.	60.27	1.66	4360.
1960	Mar 29	Apr 12	4799.	Apr 12	4200.	61.64	1.62	4410.
1961	Apr 23	May 7	5285.	May 7	4410.	63.01	1.59	4460.
1962	Mar 13	Mar 27	5941.	Mar 17	5060.	64.38	1.55	4640.
1963	Mar 5	Mar 19	4709.	Mar 19	3880.	65.75	1.52	4650.

Station No. 05520500 Years of Record Analyzed = 72(1916-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1964	Apr 22	May 6	2248.	May 6	2100.	67.12	1.49	4720.
1965	Apr 24	May 8	4372.	Apr 24	3670.	68.49	1.46	4720.
1966	May 12	May 26	6051.	May 26	5330.	69.86	1.43	4740.
1967	Apr 17	May 1	6029.	Apr 28	5310.	71.23	1.40	4840.
1968	Jun 26	Jul 10	4963.	Jul 10	4130.	72.60	1.38	4890.
1969	Apr 10	Apr 24	4318.	Apr 14	4130.	73.97	1.35	4900.
1970	May 13	May 27	5912.	May 27	3770.	75.34	1.33	4930.
1971	Mar 15	Mar 29	4211.	Mar 29	3580.	76.71	1.30	5020.
1972	May 8	May 22	4813.	May 22	4110.	78.08	1.28	5060.
1973	Apr 19	May 3	5443.	Apr 19	4130.	79.45	1.26	5130.
1974	May 17	May 31	7239.	May 31	5130.	80.82	1.24	5200.
1975	Apr 19	May 3	6580.	Apr 23	5650.	82.19	1.22	5260.
1976	Mar 1	Mar 15	7659.	Mar 15	6310.	83.56	1.20	5310.
1977	Mar 29	Apr 12	4484.	Apr 12	3940.	84.93	1.18	5330.
1978	Apr 2	Apr 16	6355.	Apr 2	5590.	86.30	1.16	5590.
1979	Mar 5	Mar 19	8796.	Mar 16	6610.	87.67	1.14	5650.
1980	Apr 8	Apr 22	4277.	Apr 8	3830.	89.04	1.12	6090.
1981	Jun 14	Jun 28	7539.	Jun 28	6090.	90.41	1.11	6310.
1982	Mar 13	Mar 27	9559.	Mar 27	8180.	91.78	1.09	6550.
1983	Apr 8	Apr 22	6883.	Apr 12	5200.	93.15	1.07	6610.
1984	Mar 20	Apr 3	6027.	Apr 3	4840.	94.52	1.06	6730.
1985	Mar 1	Mar 15	7339.	Mar 3	6850.	95.89	1.04	6740.
1986	Mar 10	Mar 24	3647.	Mar 24	3470.	97.26	1.03	6850.
1987	May 20	Jun 3	3779.	Jun 1	2430.	98.63	1.01	8180.
Avg			5012.		4162.			
SD			1550.		1347.			

Qmin (2-Yr) = 4120. cfs Exceedance Probability = 10.33 percent

Station No. 05525000 Years of Record Analyzed = 43(1945-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start End		Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1945	May 15	May 29	2317.	May 29	640.	2.27	44.00	413.
1946	Mar 15	Mar 29	1664.	Mar 29	1220.	4.55	22.00	425.
1947	May 31	Jun 14	1783.	May 31	1030.	6.82	14.67	500.
1948	May 7	May 21	1856.	May 21	1320.	9.09	11.00	500.
1949	Mar 1	Mar 15	933.	Mar 15	506.	11.36	8.80	504.
1950	Apr 4	Apr 18	3941.	Apr 18	2450.	13.64	7.33	506.
1951	Jul 9	Jul 23	3659.	Jul 23	500.	15.91	6.29	529.
1952	Jun 13	Jun 27	1652.	Jun 27	500.	18.18	5.50	579.
1953	Mar 13	Mar 27	1911.	Mar 13	1210.	20.45	4.89	582.
1954	May 28	Jun 11	878.	Jun 11	425.	22.73	4.40	639.
1955	Jun 8	Jun 22	1544.	Jun 8	529.	25.00	4.00	640.
1956	Apr 29	May 13	2499.	May 11	972.	27.27	3.67	680.
1957	Apr 21	May 5	3262.	Apr 24	2340.	29.55	3.38	700.
1958	Jun 10	Jun 24	5955.	Jun 24	2580.	31.82	3.14	710.
1959	Apr 23	May 7	2599.	Apr 26	680.	34.09	2.93	787.
1960	Mar 28	Apr 11	2277.	Apr 11	700.	36.36	2.75	812.
1961	Apr 19	May 3	2042.	Apr 19	1230.	38.64	2.59	846.
1962	Mar 13	Mar 27	2652.	Mar 19	1380.	40.91	2.44	972.
1963	Mar 5	Mar 19	2691.	Mar 19	710.	43.18	2.32	1030.
1964	Apr 21	May 5	911.	May 5	413.	45.45	2.20	1030.
1965	Apr 6	Apr 20	1485.	Apr 20	1040.	47.73	2.10	1040.
1966	Apr 23	May 7	1594.	May 7	846.	50.00	2.00	1050.
1967	Mar 21	Apr 4	1873.	Apr 1	1130.	52.27	1.91	1060.
1968	Apr 4	Apr 18	2294.	Apr 18	639.	54.55	1.83	1130.
1969	Apr 11	Apr 25	2218.	Apr 17	1610.	56.82	1.76	1140.
1970	May 13	May 27	3145.	May 27	787.	59.09	1.69	1210.
1971	Mar 13	Mar 27	1209.	Mar 27	582.	61.36	1.63	1220.
1972	Apr 11	Apr 25	1669.	Apr 18	1050.	63.64	1.57	1230.
1973	Apr 18	May 2	2207.	Apr 18	1060.	65.91	1.52	1320.
1974	May 18	Jun 1	2513.	Jun 1	1500.	68.18	1.47	1380.
1975	Jun 15	Jun 29	2808.	Jun 25	1880.	70.45	1.42	1400.
1976	Mar 1	Mar 15	1919.	Mar 15	1140.	72.73	1.38	1500.
1977	Sep 14	Sep 28	1453.	Sep 28	504.	75.00	1.33	1610.
1978	Mar 18	Apr 1	3145.	Apr 1	2150.	77.27	1.29	1880.
1979	Mar 3	Mar 17	3859.	Mar 17	1400.	79.55	1.26	1890.
1980	Jun 2	Jun 16	2705.	Jun 16	579.	81.82	1.22	2030.
1981	May 13	May 27	3127.	May 27	1030.	84.09	1.19	2150.
1982	Mar 12	Mar 26	4672.	Mar 26	2970.	86.36	1.16	2270.
1983	Apr 3	Apr 17	2729.	Apr 13	2030.	88.64	1.13	2340.
1984	Mar 17	Mar 31	3455.	Mar 17	2270.	90.91	1.10	2450.
1985	Mar 28	Apr 11	3615.	Apr 11	2520.	93.18	1.07	2520.
1986	Jun 6	Jun 20	2903.	Jun 14	1890.	95.45	1.05	2580.
1987	May 20	Jun 3	1990.	May 31	812.	97.73	1.02	2970.
Avg			2456.		1227.			
SD			1026.		691.			

Qmin(2-Yr) = 1050. cfs

Exceedance Probability = 17.01 percent

Station No. 05526000 Years of Record Analyzed = 64(1924-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1924	Jun 22	Jul 6	6088.	Jul 6	2330.	1.54	65.00	635.
1925	Mar 14	Mar 28	5190.	Mar 28	2000.	3.08	32.50	685.
1926	Apr 3	Apr 17	7303.	Apr 17	4130.	4.62	21.67	735.
1927	May 19	Jun 2	11360.	Jun 2	5010.	6.15	16.25	910.
1928	Jul 1	Jul 15	5599.	Jul 15	1380.	7.69	13.00	960.
1929	Apr 2	Apr 16	5828.	Apr 7	2800.	9.23	10.83	1170.
1930	Apr 16	Apr 30	6944.	Apr 30	2900.	10.77	9.29	1320.
1931	May 9	May 23	1927.	May 19	910.	12.31	8.13	1380.
1932	Mar 24	Apr 7	2759.	Apr 7	1170.	13.85	7.22	1480.
1933	May 8	May 22	12481.	May 9	6100.	15.38	6.50	1670.
1934	Mar 30	Apr 13	2130.	Apr 13	960.	16.92	5.91	1690.
1935	May 3	May 17	6448.	May 17	2950.	18.46	5.42	1740.
1936	Apr 29	May 13	5944.	Apr 29	1800.	20.00	5.00	1800.
1937	Apr 23	May 7	6585.	May 7	5020.	21.54	4.64	1850.
1938	Mar 31	Apr 14	7836.	Apr 5	4100.	23.08	4.33	1850.
1939	Apr 15	Apr 29	8758.	Apr 29	3170.	24.62	4.06	1940.
1940	May 1	May 15	2724.	May 15	735.	26.15	3.82	2000.
1941	Apr 18	May 2	1973.	May 2	635.	27.69	3.61	2040.
1942	Mar 10	Mar 24	8566.	Mar 15	4780.	29.23	3.42	2080.
1943	May 11	May 25	16887.	May 25	11600.	30.77	3.25	2140.
1944	Apr 12	Apr 26	11324.	Apr 21	5400.	32.31	3.10	2140.
1945	May 14	May 28	6758.	May 14	2040.	33.85	2.95	2170.
1946	Jun 13	Jun 27	5549.	Jun 27	1940.	35.38	2.83	2240.
1947	Apr 22	May 6	5704.	Apr 29	2540.	36.92	2.71	2270.
1948	Mar 19	Apr 2	6428.	Mar 31	3940.	38.46	2.60	2270.
1949	Jul 21	Aug 4	2762.	Aug 4	685.	40.00	2.50	2330.
1950	Apr 4	Apr 18	9559.	Apr 18	4750.	41.54	2.41	2510.
1951	Jul 9	Jul 23	10722.	Jul 23	1670.	43.08	2.32	2540.
1952	Apr 14	Apr 28	5502.	Apr 22	2240.	44.62	2.24	2640.
1953	Mar 13	Mar 27	5571.	Mar 27	2740.	46.15	2.17	2740.
1954	Apr 11	Apr 25	3293.	Apr 25	1740.	47.69	2.10	2760.
1955	Apr 18	May 2	4029.	Apr 19	1480.	49.23	2.03	2800.
1956	Apr 29	May 13	5781.	May 11	2140.	50.77	1.97	2810.
1957	Apr 20	May 4	11374.	Apr 24	7070.	52.31	1.91	2900.
1958	Jun 10	Jun 24	13387.	Jun 24	5400.	53.85	1.86	2950.
1959	Apr 23	May 7	7077.	Apr 26	1850.	55.38	1.81	3010.
1960	Mar 28	Apr 11	6107.	Apr 11	1850.	56.92	1.76	3170.
1961	Apr 19	May 3	5097.	Apr 19	2640.	58.46	1.71	3340.
1962	Mar 12	Mar 26	8998.	Mar 18	4360.	60.00	1.67	3430.
1963	Mar 4	Mar 18	7461.	Mar 18	2270.	61.54	1.63	3510.
1964	Apr 21	May 5	3627.	May 5	1320.	63.08	1.59	3940.
1965	Apr 6	Apr 20	5206.	Apr 20	3010.	64.62	1.55	3940.
1966	Apr 23	May 7	5479.	May 7	2810.	66.15	1.51	4000.
1967	Mar 21	Apr 4	5477.	Mar 31	3430.	67.69	1.48	4100.
1968	Apr 4	Apr 18	6085.	Apr 17	2140.	69.23	1.44	4130.
1969	Apr 10	Apr 24	6043.	Apr 14	4310.	70.77	1.41	4170.
1970	May 13	May 27	11209.	May 27	3340.	72.31	1.38	4310.
1971	Mar 14	Mar 28	4056.	Mar 28	1690.	73.85	1.35	4360.

Station No. 05526000 Years of Record Analyzed = 64(1924--1987)
 Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
 Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1972	Apr 11	Apr 25	4940.	Apr 18	2510.	75.38	1.33	4500.
1973	Apr 20	May 4	7622.	Apr 20	2760.	76.92	1.30	4630.
1974	May 18	Jun 1	7587.	Jun 1	4170.	78.46	1.27	4750.
1975	Jun 15	Jun 29	7439.	Jun 29	4630.	80.00	1.25	4780.
1976	Mar 1	Mar 15	7090.	Mar 15	3510.	81.54	1.23	5010.
1977	Sep 14	Sep 28	6543.	Sep 28	2270.	83.08	1.20	5020.
1978	Mar 17	Mar 31	9857.	Mar 27	6290.	84.62	1.18	5400.
1979	Mar 3	Mar 17	13664.	Mar 3	4500.	86.15	1.16	5400.
1980	Jun 2	Jun 16	10031.	Jun 16	2170.	87.69	1.14	5850.
1981	May 11	May 25	10284.	May 25	3940.	89.23	1.12	6100.
1982	Mar 12	Mar 26	14580.	Mar 26	9500.	90.77	1.10	6290.
1983	Apr 3	Apr 17	8355.	Apr 13	5850.	92.31	1.08	6550.
1984	Mar 17	Mar 31	11037.	Mar 31	7970.	93.85	1.07	7070.
1985	Mar 1	Mar 15	8877.	Mar 11	6550.	95.38	1.05	7970.
1986	Jun 6	Jun 20	6443.	Jun 14	4000.	96.92	1.03	9500.
1987	May 20	Jun 3	4900.	May 31	2080.	98.46	1.02	11600.
Avg			7223.		3406.			
SD			3180.		2121.			

Qmin (2-Yr) = 2805. cfs Exceedance Probability = 18.21 percent

Station No. 05527000 Years of Record Analyzed == 18(1916-1933)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1916	May 15	May 29	8121.	May 26	4630.	5.26	19.00	2980.
1917	Jun 3	Jun 17	9097.	Jun 5	3470.	10.53	9.50	2980.
1918	Mar 1	Mar 15	6859.	Mar 13	5130.	15.79	6.33	3470.
1919	Mar 15	Mar 29	14751.	Mar 29	7880.	21.05	4.75	4200.
1920	Apr 18	May 2	16013.	Apr 29	10000.	26.32	3.80	4630.
1921	Apr 18	May 2	5374.	Apr 22	4670.	31.58	3.17	4670.
1922	Apr 1	Apr 15	21293.	Apr 10	14000.	36.84	2.71	5130.
1923	Mar 13	Mar 27	10389.	Mar 27	6440.	42.11	2.38	5980.
1924	Mar 25	Apr 8	12853.	Mar 25	8480.	47.37	2.11	6440.
1925	Mar 14	Mar 28	9835.	Mar 14	5980.	52.63	1.90	6820.
1926	Apr 3	Apr 17	14273.	Apr 17	8030.	57.89	1.73	7880.
1927	May 19	Jun 2	17367.	Jun 2	10000.	63.16	1.58	8030.
1928	Jul 1	Jul 15	8909.	Jul 1	2980.	68.42	1.46	8480.
1929	Apr 3	Apr 17	12857.	Apr 6	8590.	73.68	1.36	8590.
1930	Apr 16	Apr 30	12501.	Apr 30	6820.	78.95	1.27	10000.
1931	May 9	May 23	4499.	May 19	2980.	84.21	1.19	10000.
1932	Mar 25	Apr 8	7016.	Apr 8	4200.	89.47	1.12	12400.
1933	May 8	May 22	19760.	May 8	12400.	94.74	1.06	14000.
Avg			11765.			7038.		
SD			4831.			3174.		

Qmin(2-Yr) = 6630. cfs

Exceedance Probability = 15.04 percent

Station No. 05527500 Years of Record Analyzed = 72(1916-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1916	May 15	May 29	8121.	May 26	4630.	1.37	73.00	2450.
1917	Jun 3	Jun 17	9097.	Jun 5	3470.	2.74	36.50	2980.
1918	Mar 1	Mar 15	6859.	Mar 13	5130.	4.11	24.33	2980.
1919	Mar 15	Mar 29	14751.	Mar 29	7880.	5.48	18.25	3400.
1920	Apr 18	May 2	16013.	Apr 29	10000.	6.85	14.60	3470.
1921	Apr 18	May 2	5374.	Apr 22	4670.	8.22	12.17	3820.
1922	Apr 1	Apr 15	21293.	Apr 10	14000.	9.59	10.43	4030.
1923	Mar 13	Mar 27	10389.	Mar 27	6440.	10.96	9.13	4180.
1924	Mar 25	Apr 8	12853.	Mar 25	8480.	12.33	8.11	4200.
1925	Mar 14	Mar 28	9835.	Mar 14	5980.	13.70	7.30	4630.
1926	Apr 3	Apr 17	14273.	Apr 17	8030.	15.07	6.64	4670.
1927	May 19	Jun 2	17367.	Jun 2	10000.	16.44	6.08	4850.
1928	Jul 1	Jul 15	8909.	Jul 1	2980.	17.81	5.62	4880.
1929	Apr 3	Apr 17	12857.	Apr 6	8590.	19.18	5.21	5130.
1930	Apr 16	Apr 30	12501.	Apr 30	6820.	20.55	4.87	5230.
1931	May 9	May 23	4499.	May 19	2980.	21.92	4.56	5260.
1932	Mar 25	Apr 8	7016.	Apr 8	4200.	23.29	4.29	5540.
1933	May 8	May 22	19760.	May 8	12400.	24.66	4.06	5840.
1934	Apr 16	Apr 30	3400.	Apr 16	3400.	26.03	3.84	5920.
1935	May 4	May 18	11841.	May 18	6940.	27.40	3.65	5980.
1936	Apr 30	May 14	8733.	May 14	3820.	28.77	3.48	6050.
1937	Apr 22	May 6	12353.	Apr 23	10900.	30.14	3.32	6100.
1938	Apr 1	Apr 15	13739.	Apr 5	8080.	31.51	3.17	6240.
1939	Apr 15	Apr 29	14427.	Apr 29	7840.	32.88	3.04	6440.
1940	May 1	May 15	6991.	May 1	4180.	34.25	2.92	6490.
1941	Apr 18	May 2	4589.	May 2	2450.	35.62	2.81	6500.
1942	Mar 11	Mar 25	15220.	Mar 25	10400.	36.99	2.70	6700.
1943	May 11	May 25	31167.	May 15	24300.	38.36	2.61	6720.
1944	Apr 12	Apr 26	21827.	Apr 21	12100.	39.73	2.52	6820.
1945	May 8	May 22	13649.	May 14	6990.	41.10	2.43	6920.
1946	Mar 15	Mar 29	10831.	Mar 29	7850.	42.47	2.35	6940.
1947	May 29	Jun 12	12771.	May 31	8520.	43.84	2.28	6990.
1948	Mar 19	Apr 2	12939.	Mar 31	9200.	45.21	2.21	7150.
1949	Mar 1	Mar 15	6870.	Mar 15	4850.	46.58	2.15	7600.
1950	Apr 4	Apr 18	20307.	Apr 18	12700.	47.95	2.09	7680.
1951	Jul 9	Jul 23	15453.	Jul 23	5230.	49.32	2.03	7840.
1952	Jun 13	Jun 27	12610.	Jun 13	5540.	50.68	1.97	7850.
1953	Mar 13	Mar 27	10770.	Mar 27	5920.	52.05	1.92	7880.
1954	Apr 12	Apr 26	9079.	Apr 19	7680.	53.42	1.87	8030.
1955	Apr 17	May 1	8323.	Apr 19	4880.	54.79	1.83	8080.
1956	Apr 30	May 14	11658.	May 10	8580.	56.16	1.78	8210.
1957	Jul 13	Jul 27	18803.	Jul 27	6100.	57.53	1.74	8400.
1958	Jun 9	Jun 23	19727.	Jun 23	11000.	58.90	1.70	8430.
1959	Apr 27	May 11	13737.	May 11	6050.	60.27	1.66	8480.
1960	Mar 28	Apr 11	12560.	Apr 11	6700.	61.64	1.62	8520.
1961	Apr 22	May 6	10787.	May 6	7150.	63.01	1.59	8580.
1962	Mar 12	Mar 26	18680.	Mar 17	12400.	64.38	1.55	8590.
1963	Mar 4	Mar 18	12488.	Mar 18	6720.	65.75	1.52	9120.

Station No. 05527500 Years of Record Analyzed = 72(1916-1987)
 Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
 Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1964	Apr 21	May 5	6489.	May 5	4030.	67.12	1.49	9200.
1965	Apr 25	May 9	10643.	May 4	6920.	68.49	1.46	9730.
1966	May 12	May 26	12393.	May 23	9730.	69.86	1.43	10000.
1967	Mar 22	Apr 5	12954.	Mar 31	9120.	71.23	1.40	10000.
1968	Jun 25	Jul 9	11971.	Jul 9	6490.	72.60	1.38	10000.
1969	Apr 11	Apr 25	12300.	Apr 14	10000.	73.97	1.35	10400.
1970	May 13	May 27	20897.	May 27	7600.	75.34	1.33	10900.
1971	Mar 15	Mar 29	9234.	Mar 29	5260.	76.71	1.30	11000.
1972	Apr 11	Apr 25	11390.	Apr 19	8400.	78.08	1.28	11100.
1973	Apr 20	May 4	14927.	Apr 20	8430.	79.45	1.26	11300.
1974	May 17	May 31	20287.	May 31	11700.	80.82	1.24	11300.
1975	Jun 15	Jun 29	15300.	Jun 24	11400.	82.19	1.22	11400.
1976	Mar 1	Mar 15	17260.	Mar 15	11300.	83.56	1.20	11700.
1977	Sep 15	Sep 29	10291.	Sep 29	5840.	84.93	1.18	12100.
1978	Mar 28	Apr 11	15313.	Apr 2	13000.	86.30	1.16	12400.
1979	Mar 5	Mar 19	27247.	Mar 17	14500.	87.67	1.14	12400.
1980	Jun 1	Jun 15	16402.	Jun 15	6500.	89.04	1.12	12700.
1981	May 11	May 25	22273.	May 25	11300.	90.41	1.11	13000.
1982	Mar 11	Mar 25	32273.	Mar 25	20000.	91.78	1.09	14000.
1983	Apr 29	May 13	19693.	May 13	11100.	93.15	1.07	14500.
1984	Mar 17	Mar 31	22227.	Mar 17	15600.	94.52	1.06	15600.
1985	Mar 1	Mar 15	22673.	Mar 15	17800.	95.89	1.04	17800.
1986	Jun 7	Jun 21	11436.	Jun 14	8210.	97.26	1.03	20000.
1987	May 20	Jun 3	12771.	May 31	6240.	98.63	1.01	24300.
Avg			13844.		8411.			
SD			5803.		3985.			

Qmin (2-Yr) = 7845. cfs Exceedance Probability = 15.00 percent

Station No. 05538000 Years of Record Analyzed = 16(1916-1931)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1916	Jun 8	Jun 22	10751.	Jun 16	9000.	5.88	17.00	8150.
1917	Jul 15	Jul 29	9842.	Jul 16	9360.	11.76	8.50	8300.
1918	Mar 3	Mar 17	10449.	Mar 12	9180.	17.65	5.67	8400.
1919	May 2	May 16	12798.	May 2	9590.	23.53	4.25	8760.
1920	Mar 18	Apr 1	11607.	Mar 21	8400.	29.41	3.40	8980.
1921	Apr 22	May 6	10003.	May 6	8980.	35.29	2.83	9000.
1922	Mar 30	Apr 13	12473.	Apr 9	10300.	41.18	2.43	9180.
1923	Mar 13	Mar 27	9264.	Mar 21	8150.	47.06	2.13	9360.
1924	Aug 6	Aug 20	12893.	Aug 16	10800.	52.94	1.89	9590.
1925	Mar 13	Mar 27	9097.	Mar 16	8300.	58.82	1.70	9950.
1926	Apr 5	Apr 19	12031.	Apr 5	9960.	64.71	1.55	9960.
1927	Mar 12	Mar 26	10710.	Mar 26	9950.	70.59	1.42	10300.
1928	Apr 2	Apr 16	12780.	Apr 3	11600.	76.47	1.31	10800.
1929	Mar 1	Mar 15	13767.	Mar 12	12500.	82.35	1.21	11600.
1930	Aug 16	Aug 30	13140.	Aug 24	12900.	88.24	1.13	12500.
1931	Jun 21	Jul 5	9421.	Jun 30	8760.	94.12	1.06	12900.
Avg			11314.		9858.			
SD			1553.		1445.			

Qmin (2-Yr) = 9475. cfs

Exceedance Probability = 27.81 percent

Station No. 05543500 Years of Record Analyzed = 68(1920-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start End		Historical		Ranked			
			Qavg	Date	Qmin	Prob	T-Yr	Qmin
1920	Apr 18	May 2	30833.	Apr 30	21400.	1.45	69.00	5820.
1921	Apr 20	May 4	17633.	Apr 22	15400.	2.90	34.50	7410.
1922	Apr 1	Apr 15	46600.	Apr 10	27200.	4.35	23.00	7530.
1923	Mar 13	Mar 27	21813.	Mar 26	18200.	5.80	17.25	8910.
1924	Mar 25	Apr 8	28333.	Mar 25	21700.	7.25	13.80	9030.
1925	Mar 15	Mar 29	19453.	Mar 29	15400.	8.70	11.50	9300.
1926	Apr 5	Apr 19	28533.	Apr 19	19000.	10.14	9.86	9670.
1927	Apr 17	May 1	33007.	Apr 28	20400.	11.59	8.63	9730.
1928	Jul 1	Jul 15	21407.	Jul 1	14400.	13.04	7.67	10500.
1929	Mar 14	Mar 28	27333.	Mar 28	17400.	14.49	6.90	11000.
1930	Apr 17	May 1	26333.	May 1	18000.	15.94	6.27	11100.
1931	May 10	May 24	14820.	May 18	11900.	17.39	5.75	11300.
1932	Mar 26	Apr 9	17920.	Apr 9	13600.	18.84	5.31	11500.
1933	May 6	May 20	37347.	May 20	25800.	20.29	4.93	11500.
1934	Mar 31	Apr 14	13700.	Mar 31	12100.	21.74	4.60	11600.
1935	May 4	May 18	26333.	May 18	17800.	23.19	4.31	11700.
1936	Apr 30	May 14	17573.	Apr 30	11500.	24.64	4.06	11900.
1937	Apr 22	May 6	23120.	May 6	20700.	26.09	3.83	12000.
1938	Apr 1	Apr 15	24927.	Apr 5	16600.	27.54	3.63	12100.
1939	Mar 5	Mar 19	21887.	Mar 11	12000.	28.99	3.45	13100.
1940	May 1	May 15	12074.	May 15	8910.	30.43	3.29	13100.
1941	Jun 4	Jun 18	10287.	Jun 10	7410.	31.88	3.14	13400.
1942	Mar 11	Mar 25	24813.	Mar 11	15800.	33.33	3.00	13600.
1943	May 12	May 26	49987.	May 16	37200.	34.78	2.88	13600.
1944	Apr 12	Apr 26	35313.	Apr 21	20400.	36.23	2.76	13600.
1945	May 8	May 22	27973.	May 12	16400.	37.68	2.65	13700.
1946	Mar 7	Mar 21	20940.	Mar 14	14600.	39.13	2.56	14400.
1947	Apr 2	Apr 16	25527.	Apr 4	13100.	40.58	2.46	14600.
1948	Mar 16	Mar 30	29753.	Mar 30	16800.	42.03	2.38	15000.
1949	Mar 25	Apr 8	13497.	Apr 8	9030.	43.48	2.30	15000.
1950	Apr 18	May 2	33067.	Apr 22	15100.	44.93	2.23	15100.
1951	Jul 9	Jul 23	23780.	Jul 23	11500.	46.38	2.16	15400.
1952	Mar 11	Mar 25	21953.	Mar 17	15000.	47.83	2.09	15400.
1953	Mar 12	Mar 26	19320.	Mar 26	11600.	49.28	2.03	15800.
1954	Apr 14	Apr 28	18227.	Apr 19	13100.	50.72	1.97	16000.
1955	Apr 19	May 3	15369.	Apr 19	9730.	52.17	1.92	16100.
1956	Apr 29	May 13	20620.	May 9	15000.	53.62	1.86	16300.
1957	Jul 13	Jul 27	31487.	Jul 27	11700.	55.07	1.82	16400.
1958	Jun 9	Jun 23	30780.	Jun 23	17200.	56.52	1.77	16400.
1959	Apr 27	May 11	23187.	May 11	11300.	57.97	1.73	16600.
1960	Mar 28	Apr 11	26833.	Apr 11	13700.	59.42	1.68	16800.
1961	Sep 14	Sep 28	20337.	Sep 22	5820.	60.87	1.64	17200.
1962	Mar 12	Mar 26	35300.	Mar 17	22500.	62.32	1.60	17300.
1963	Mar 5	Mar 19	18047.	Mar 18	11000.	63.77	1.57	17400.
1964	Apr 20	May 4	12758.	Apr 20	9670.	65.22	1.53	17800.
1965	Apr 25	May 9	22540.	May 4	13600.	66.67	1.50	17900.
1966	May 11	May 25	29820.	May 22	16100.	68.12	1.47	18000.
1967	Mar 22	Apr 5	26253.	Mar 31	17300.	69.57	1.44	18200.

Station No. 05543500 Years of Record Analyzed = 68(1920-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1968	Jun 25	Jul 9	21927.	Jul 9	10500.	71.01	1.41	18300.
1969	Apr 9	Apr 23	20760.	Apr 14	16300.	72.46	1.38	19000.
1970	May 12	May 26	39927.	May 26	16000.	73.91	1.35	19200.
1971	Mar 14	Mar 28	18253.	Mar 14	11100.	75.36	1.33	20100.
1972	Apr 12	Apr 26	21893.	Apr 15	16400.	76.81	1.30	20400.
1973	Apr 20	May 4	31713.	Apr 20	17900.	78.26	1.28	20400.
1974	May 15	May 29	37300.	May 15	20100.	79.71	1.25	20400.
1975	Apr 19	May 3	28640.	Apr 23	19200.	81.16	1.23	20700.
1976	Mar 1	Mar 15	34840.	Mar 15	20400.	82.61	1.21	21400.
1977	Sep 15	Sep 29	19173.	Sep 29	9300.	84.06	1.19	21600.
1978	Mar 29	Apr 12	27313.	Apr 3	21600.	85.51	1.17	21700.
1979	Mar 6	Mar 20	49227.	Mar 17	30600.	86.96	1.15	22500.
1980	May 29	Jun 12	28060.	May 31	13600.	88.41	1.13	25800.
1981	Jun 13	Jun 27	31713.	Jun 22	18300.	89.86	1.11	25800.
1982	Mar 12	Mar 26	48400.	Mar 26	28700.	91.30	1.10	25900.
1983	Apr 2	Apr 16	40087.	Apr 13	29300.	92.75	1.08	27200.
1984	Mar 16	Mar 30	33700.	Mar 19	25800.	94.20	1.06	28700.
1985	Mar 1	Mar 15	36967.	Mar 15	25900.	95.65	1.05	29300.
1986	Jun 7	Jun 21	16653.	Jun 21	13400.	97.10	1.03	30600.
1987	Aug 15	Aug 29	16437.	Aug 24	7530.	98.55	1.01	37200.
Avg			26114.		16515.			
SD			8919.		6024.			

Qmin(2-Yr) = 15900. cfs

Exceedance Probability = 15.70 percent

Station No. 05550000 Years of Record Analyzed = 72(1916-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start		End		Historical		Prob	Ranked		
					Qavg	Date		Qmin	T-Yr	Qmin
1916	Mar	27	Apr	10	4602.	Mar 27	3120.	1.37	73.00	255.
1917	Mar	22	Apr	5	2089.	Apr 5	1920.	2.74	36.50	530.
1918	Mar	6	Mar	20	4894.	Mar 13	4010.	4.11	24.33	602.
1919	Mar	17	Mar	31	3752.	Mar 31	2560.	5.48	18.25	820.
1920	Mar	28	Apr	11	4797.	Apr 7	4650.	6.85	14.60	852.
1921	Apr	26	May	10	3677.	May 10	2420.	8.22	12.17	962.
1922	Apr	4	Apr	18	2648.	Apr 5	2580.	9.59	10.43	994.
1923	Apr	6	Apr	20	2785.	Apr 20	2100.	10.96	9.13	1010.
1924	Aug	11	Aug	25	3559.	Aug 11	3470.	12.33	8.11	1140.
1925	Mar	1	Mar	15	1509.	Mar 15	1220.	13.70	7.30	1140.
1926	Apr	16	Apr	30	1900.	Apr 16	1900.	15.07	6.64	1220.
1927	Apr	19	May	3	2145.	Apr 19	2060.	16.44	6.08	1220.
1928	Apr	6	Apr	20	2774.	Apr 20	2220.	17.81	5.62	1280.
1929	Mar	14	Mar	28	4979.	Mar 28	3830.	19.18	5.21	1280.
1930	Apr	22	May	6	1800.	May 1	1350.	20.55	4.87	1330.
1931	Mar	26	Apr	9	667.	Mar 26	530.	21.92	4.56	1330.
1932	Mar	27	Apr	10	1626.	Mar 27	1280.	23.29	4.29	1350.
1933	May	10	May	24	3163.	May 10	2920.	24.66	4.06	1350.
1934	Mar	22	Apr	5	346.	Apr 1	255.	26.03	3.84	1360.
1935	Mar	10	Mar	24	2589.	Mar 24	2180.	27.40	3.65	1460.
1936	Mar	12	Mar	26	2392.	Mar 26	2070.	28.77	3.48	1590.
1937	Mar	1	Mar	15	2920.	Mar 15	2320.	30.14	3.32	1600.
1938	Jul	2	Jul	16	4175.	Jul 16	2320.	31.51	3.17	1660.
1939	Mar	11	Mar	25	1471.	Mar 17	1140.	32.88	3.04	1670.
1940	Aug	27	Sep	10	1966.	Sep 10	994.	34.25	2.92	1790.
1941	Mar	23	Apr	6	2525.	Mar 23	2360.	35.62	2.81	1890.
1942	Mar	17	Mar	31	1971.	Mar 30	1360.	36.99	2.70	1890.
1943	Mar	18	Apr	1	3927.	Mar 31	3240.	38.36	2.61	1900.
1944	Mar	14	Mar	28	3211.	Mar 14	2390.	39.73	2.52	1900.
1945	May	15	May	29	1700.	May 27	1330.	41.10	2.43	1910.
1946	Mar	13	Mar	27	3331.	Mar 13	2850.	42.47	2.35	1920.
1947	Jun	2	Jun	16	2167.	Jun 16	1890.	43.84	2.28	2030.
1948	Mar	20	Apr	3	3969.	Apr 3	3120.	45.21	2.21	2060.
1949	Mar	1	Mar	15	2267.	Mar 15	2030.	46.58	2.15	2070.
1950	Apr	24	May	8	2730.	May 8	1890.	47.95	2.09	2100.
1951	Mar	1	Mar	15	3637.	Mar 1	3310.	49.32	2.03	2180.
1952	Mar	19	Apr	2	4050.	Apr 2	3420.	50.68	1.97	2220.
1953	Mar	16	Mar	30	1247.	Mar 23	1140.	52.05	1.92	2320.
1954	Apr	26	May	10	1859.	May 10	1330.	53.42	1.87	2320.
1955	Jun	10	Jun	24	2006.	Jun 10	1280.	54.79	1.83	2350.
1956	May	4	May	18	1512.	May 9	1350.	56.16	1.78	2360.
1957	May	14	May	28	1421.	May 18	1010.	57.53	1.74	2390.
1958	Mar	1	Mar	15	1148.	Mar 15	962.	58.90	1.70	2420.
1959	Mar	26	Apr	9	3095.	Apr 9	2900.	60.27	1.66	2460.
1960	Apr	2	Apr	16	5442.	Apr 16	4220.	61.64	1.62	2540.
1961	Mar	18	Apr	1	2632.	Mar 27	2460.	63.01	1.59	2560.
1962	Mar	26	Apr	9	4411.	Apr 9	3830.	64.38	1.55	2580.
1963	Mar	19	Apr	2	1134.	Mar 26	820.	65.75	1.52	2720.

Station No. 05550000 Years of Record Analyzed = 72(1916-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1964	Apr 6	Apr 20	1171.	Apr 6	852.	67.12	1.49	2850.
1965	Apr 6	Apr 20	3611.	Apr 6	3060.	68.49	1.46	2870.
1966	Mar 24	Apr 7	1925.	Mar 24	1590.	69.86	1.43	2900.
1967	Jun 12	Jun 26	2997.	Jun 12	1670.	71.23	1.40	2920.
1968	Jun 27	Jul 11	1822.	Jun 27	1220.	72.60	1.38	3060.
1969	Jul 1	Jul 15	2143.	Jul 15	1600.	73.97	1.35	3060.
1970	Jun 2	Jun 16	2339.	Jun 2	1910.	75.34	1.33	3120.
1971	Mar 1	Mar 15	3172.	Mar 15	2540.	76.71	1.30	3120.
1972	Sep 16	Sep 30	4191.	Sep 16	2870.	78.08	1.28	3130.
1973	Apr 24	May 8	5469.	Apr 24	5070.	79.45	1.26	3240.
1974	Mar 6	Mar 20	4703.	Mar 6	3840.	80.82	1.24	3310.
1975	Mar 24	Apr 7	3122.	Mar 24	2720.	82.19	1.22	3420.
1976	Mar 6	Mar 20	3899.	Mar 20	3130.	83.56	1.20	3470.
1977	Apr 4	Apr 18	952.	Apr 17	602.	84.93	1.18	3610.
1978	Jun 30	Jul 14	2421.	Jun 30	1460.	86.30	1.16	3650.
1979	Mar 24	Apr 7	6138.	Apr 7	5680.	87.67	1.14	3830.
1980	Sep 13	Sep 27	2213.	Sep 13	1790.	89.04	1.12	3830.
1981	Apr 13	Apr 27	2185.	Apr 27	1660.	90.41	1.11	3840.
1982	Apr 4	Apr 18	3823.	Apr 15	3650.	91.78	1.09	4010.
1983	Apr 5	Apr 19	4778.	Apr 5	4180.	93.15	1.07	4180.
1984	Apr 23	May 7	2186.	May 7	1900.	94.52	1.06	4220.
1985	Mar 3	Mar 17	4018.	Mar 4	3610.	95.89	1.04	4650.
1986	Mar 14	Mar 28	3448.	Mar 28	3060.	97.26	1.03	5070.
1987	Apr 16	Apr 30	2604.	Apr 20	2350.	98.63	1.01	5680.
Avg			2860.		2332.			
SD			1260.		1126.			

Qmin(2-Yr) = 2200. cfs Exceedance Probability = 7.98 percent

Station No. 05552500 Years of Record Analyzed = 72(1916-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1916	Mar 25	Apr 8	8533.	Mar 26	5080.	1.37	73.00	376.
1917	Mar 12	Mar 26	4145.	Mar 19	2720.	2.74	36.50	484.
1918	Mar 4	Mar 18	6417.	Mar 11	4660.	4.11	24.33	906.
1919	Mar 14	Mar 28	8682.	Mar 14	5590.	5.48	18.25	973.
1920	Mar 20	Apr 3	8499.	Mar 23	5590.	6.85	14.60	1260.
1921	Apr 24	May 8	5468.	Apr 25	3560.	8.22	12.17	1300.
1922	Mar 31	Apr 14	5561.	Apr 8	4140.	9.59	10.43	1460.
1923	Mar 12	Mar 26	3885.	Mar 20	1460.	10.96	9.13	1690.
1924	Aug 9	Aug 23	6177.	Aug 18	4540.	12.33	8.11	1700.
1925	Mar 1	Mar 15	2027.	Mar 15	1700.	13.70	7.30	2080.
1926	Apr 7	Apr 21	4287.	Apr 11	2520.	15.07	6.64	2110.
1927	May 24	Jun 7	4813.	Jun 1	2540.	16.44	6.08	2160.
1928	Apr 6	Apr 20	5144.	Apr 20	3460.	17.81	5.62	2250.
1929	Mar 13	Mar 27	7690.	Mar 13	5490.	19.18	5.21	2360.
1930	Apr 17	May 1	4091.	May 1	2970.	20.55	4.87	2380.
1931	Mar 28	Apr 11	1423.	Apr 11	973.	21.92	4.56	2520.
1932	Mar 26	Apr 9	5187.	Apr 9	3470.	23.29	4.29	2540.
1933	May 8	May 22	6715.	May 19	5100.	24.66	4.06	2540.
1934	Mar 25	Apr 8	536.	Mar 26	376.	26.03	3.84	2580.
1935	Mar 7	Mar 21	5202.	Mar 8	4090.	27.40	3.65	2590.
1936	Mar 4	Mar 18	4866.	Mar 13	3990.	28.77	3.48	2650.
1937	Apr 22	May 6	5792.	Apr 30	5090.	30.14	3.32	2720.
1938	Jul 1	Jul 15	5399.	Jul 1	3690.	31.51	3.17	2830.
1939	Mar 12	Mar 26	3938.	Mar 17	2250.	32.88	3.04	2860.
1940	Mar 1	Mar 15	2770.	Mar 14	484.	34.25	2.92	2970.
1941	Mar 27	Apr 10	3180.	Mar 28	2650.	35.62	2.81	3180.
1942	Mar 16	Mar 30	4288.	Mar 26	3220.	36.99	2.70	3220.
1943	Mar 15	Mar 29	5753.	Mar 29	4700.	38.36	2.61	3240.
1944	Mar 13	Mar 27	6393.	Mar 13	3610.	39.73	2.52	3240.
1945	May 8	May 22	4618.	May 13	2160.	41.10	2.43	3460.
1946	Mar 8	Mar 22	5271.	Mar 13	4550.	42.47	2.35	3470.
1947	Apr 5	Apr 19	5476.	Apr 18	3240.	43.84	2.28	3500.
1948	Mar 15	Mar 29	9867.	Mar 18	5490.	45.21	2.21	3560.
1949	Mar 1	Mar 15	3269.	Mar 14	2830.	46.58	2.15	3560.
1950	Apr 24	May 8	6950.	May 8	3240.	47.95	2.09	3560.
1951	Mar 1	Mar 15	5164.	Mar 12	4550.	49.32	2.03	3610.
1952	Mar 11	Mar 25	7108.	Mar 17	5170.	50.68	1.97	3620.
1953	Mar 12	Mar 26	2839.	Mar 25	2110.	52.05	1.92	3690.
1954	Jun 1	Jun 15	4764.	Jun 15	2580.	53.42	1.87	3750.
1955	Mar 1	Mar 15	3709.	Mar 14	2860.	54.79	1.83	3870.
1956	Apr 30	May 14	3554.	May 4	2540.	56.16	1.78	3960.
1957	May 14	May 28	3189.	May 18	2360.	57.53	1.74	3990.
1958	Jun 9	Jun 23	3162.	Jun 23	1260.	58.90	1.70	4010.
1959	Mar 27	Apr 10	4815.	Apr 10	3870.	60.27	1.66	4090.
1960	Mar 29	Apr 12	8960.	Apr 12	6710.	61.64	1.62	4130.
1961	Mar 14	Mar 28	3409.	Mar 17	3180.	63.01	1.59	4140.
1962	Mar 19	Apr 2	9404.	Apr 2	7240.	64.38	1.55	4270.
1963	Mar 4	Mar 18	2793.	Mar 12	1300.	65.75	1.52	4540.

Station No. 05552500 Years of Record Analyzed = 72(1916-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1964	Apr 20	May 4	2402.	Apr 27	1690.	67.12	1.49	4550.
1965	Apr 6	Apr 20	6082.	Apr 20	4810.	68.49	1.46	4550.
1966	May 11	May 25	7449.	May 22	4270.	69.86	1.43	4620.
1967	Mar 28	Apr 11	6071.	Mar 30	3560.	71.23	1.40	4660.
1968	Jun 25	Jul 9	2969.	Jun 25	2380.	72.60	1.38	4700.
1969	Apr 5	Apr 19	4729.	Apr 14	3500.	73.97	1.35	4810.
1970	Jun 2	Jun 16	6999.	Jun 12	3560.	75.34	1.33	4950.
1971	Mar 14	Mar 28	4863.	Mar 28	4130.	76.71	1.30	5080.
1972	Sep 16	Sep 30	7140.	Sep 17	4620.	78.08	1.28	5090.
1973	Apr 22	May 6	10545.	Apr 30	8340.	79.45	1.26	5100.
1974	May 16	May 30	10813.	May 16	6050.	80.82	1.24	5170.
1975	Apr 19	May 3	7000.	Apr 26	4010.	82.19	1.22	5420.
1976	Mar 3	Mar 17	7953.	Mar 17	5420.	83.56	1.20	5490.
1977	Mar 29	Apr 12	1542.	Apr 4	906.	84.93	1.18	5490.
1978	Jun 26	Jul 10	6618.	Jun 30	3620.	86.30	1.16	5590.
1979	Mar 19	Apr 2	18000.	Mar 27	11100.	87.67	1.14	5590.
1980	Sep 8	Sep 22	5620.	Sep 16	3960.	89.04	1.12	5810.
1981	Jun 13	Jun 27	4919.	Jun 27	2080.	90.41	1.11	6050.
1982	Mar 12	Mar 26	7959.	Mar 26	5810.	91.78	1.09	6530.
1983	Apr 2	Apr 16	11473.	Apr 8	8550.	93.15	1.07	6710.
1984	Apr 22	May 6	4598.	Apr 29	3750.	94.52	1.06	7240.
1985	Mar 1	Mar 15	10038.	Mar 15	6530.	95.89	1.04	8340.
1986	Mar 11	Mar 25	5455.	Mar 25	4950.	97.26	1.03	8550.
1987	Aug 15	Aug 29	5983.	Aug 25	2590.	98.63	1.01	11100.
Avg			5728.		3849.			
SD			2737.		1904.			

Qmin(2-Yr) = 3615. cfs

Exceedance Probability = 12.07 percent

Station No. 05555000 Years of Record Analyzed = 15(1915-1929)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1915	Jul 30	Aug 13	2619.	Aug 13	557.	6.25	16.00	310.
1916	May 14	May 28	1694.	May 26	652.	12.50	8.00	377.
1917	Jun 6	Jun 20	3547.	Jun 20	783.	18.75	5.33	454.
1918	Apr 21	May 5	1145.	May 5	620.	25.00	4.00	557.
1919	Mar 13	Mar 27	3349.	Mar 27	1400.	31.25	3.20	620.
1920	Apr 18	May 2	4644.	Apr 30	1700.	37.50	2.67	652.
1921	Apr 1	Apr 15	5816.	Apr 9	3340.	43.75	2.29	783.
1922	Mar 11	Mar 25	1497.	Mar 25	454.	50.00	2.00	880.
1923	Jun 25	Jul 9	2144.	Jul 6	377.	56.25	1.78	1010.
1924	Mar 14	Mar 28	1871.	Mar 28	1170.	62.50	1.60	1170.
1925	Sep 3	Sep 17	4926.	Sep 17	3680.	68.75	1.45	1400.
1926	May 18	Jun 1	6777.	Jun 1	1970.	75.00	1.33	1700.
1927	Jun 29	Jul 13	989.	Jul 3	310.	81.25	1.23	1970.
1928	Mar 14	Mar 28	3583.	Mar 28	880.	87.50	1.14	3340.
1929	Apr 15	Apr 29	2907.	Apr 29	1010.	93.75	1.07	3680.
Avg			3167.		1260.			
SD			1743.		1033.			

Qmin(2-Yr) = 880. cfs Exceedance Probability = 20.13 percent

Station No. 05555300 Years of Record Analyzed = 16(1972-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1972	Jun 9	Jun 23	2659.	Jun 23	1100.	5.88	17.00	545.
1973	Jun 17	Jul 1	5734.	Jul 1	1230.	11.76	8.50	547.
1974	Jun 15	Jun 29	5227.	Jun 18	1420.	17.65	5.67	1100.
1975	Apr 18	May 2	2800.	Apr 26	1650.	23.53	4.25	1220.
1976	Mar 1	Mar 15	4773.	Mar 15	1670.	29.41	3.40	1230.
1977	Sep 15	Sep 29	2293.	Sep 29	1220.	35.29	2.83	1400.
1978	Mar 29	Apr 12	3603.	Apr 2	1970.	41.18	2.43	1420.
1979	Mar 5	Mar 19	9804.	Mar 13	4020.	47.06	2.13	1510.
1980	Jun 1	Jun 15	7980.	Jun 15	1400.	52.94	1.89	1650.
1981	May 10	May 24	5406.	May 10	1510.	58.82	1.70	1670.
1982	Mar 13	Mar 27	7913.	Mar 27	2800.	64.71	1.55	1700.
1983	Apr 2	Apr 16	7022.	Apr 12	3500.	70.59	1.42	1970.
1984	Mar 17	Mar 31	5367.	Mar 31	2600.	76.47	1.31	2600.
1985	Mar 1	Mar 15	3881.	Mar 11	1700.	82.35	1.21	2800.
1986	Jul 1	Jul 15	2829.	Jul 8	547.	88.24	1.13	3500.
1987	Apr 16	Apr 30	886.	Apr 22	545.	94.12	1.06	4020.
Avg			4886.		1805.			
SD			2419.		974.			

Qmin(2-Yr) = 1580. cfs

Exceedance Probability = 19.42 percent

Station No. 0555500 Years of Record Analyzed = 40(1932-1971)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start End		Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1932	May 1	May 15	1356.	May 2	612.	2.44	41.00	166.
1933	May 6	May 20	7132.	May 7	2310.	4.88	20.50	208.
1934	Mar 31	Apr 14	757.	Apr 14	375.	7.32	13.67	209.
1935	May 3	May 17	5694.	May 17	1950.	9.76	10.25	302.
1936	Mar 1	Mar 15	1191.	Mar 15	498.	12.20	8.20	318.
1937	Apr 22	May 6	3004.	Apr 30	1830.	14.63	6.83	375.
1938	Apr 2	Apr 16	3411.	Apr 5	990.	17.07	5.86	440.
1939	Apr 13	Apr 27	3661.	Apr 14	1430.	19.51	5.13	498.
1940	Apr 30	May 14	508.	May 14	166.	21.95	4.56	612.
1941	Jun 12	Jun 26	1021.	Jun 26	208.	24.39	4.10	702.
1942	Mar 9	Mar 23	3191.	Mar 9	1730.	26.83	3.73	704.
1943	May 11	May 25	10491.	May 25	5470.	29.27	3.42	790.
1944	Apr 12	Apr 26	8863.	Apr 21	2850.	31.71	3.15	818.
1945	May 8	May 22	4834.	May 14	2140.	34.15	2.93	910.
1946	Jun 13	Jun 27	4689.	Jun 27	1660.	36.59	2.73	930.
1947	May 29	Jun 12	3877.	Jun 5	2010.	39.02	2.56	990.
1948	Mar 15	Mar 29	3880.	Mar 15	2010.	41.46	2.41	1010.
1949	Jul 22	Aug 5	1568.	Jul 28	318.	43.90	2.28	1040.
1950	Apr 23	May 7	5245.	May 7	1350.	46.34	2.16	1050.
1951	Jul 9	Jul 23	7699.	Jul 23	1400.	48.78	2.05	1080.
1952	Apr 13	Apr 27	4251.	Apr 22	1660.	51.22	1.95	1350.
1953	Mar 13	Mar 27	2316.	Mar 27	930.	53.66	1.86	1370.
1954	May 29	Jun 12	2525.	Jun 12	790.	56.10	1.78	1400.
1955	Apr 20	May 4	2303.	May 4	704.	58.54	1.71	1400.
1956	Jun 17	Jul 1	988.	Jul 1	209.	60.98	1.64	1430.
1957	Apr 19	May 3	6864.	Apr 22	3320.	63.41	1.58	1450.
1958	Jul 14	Jul 28	6564.	Jul 26	1080.	65.85	1.52	1590.
1959	Apr 27	May 11	3183.	May 10	702.	68.29	1.46	1660.
1960	Mar 28	Apr 11	5083.	Apr 11	1040.	70.73	1.41	1660.
1961	Sep 14	Sep 28	3840.	Sep 22	302.	73.17	1.37	1730.
1962	Mar 11	Mar 25	6727.	Mar 17	2170.	75.61	1.32	1830.
1963	Mar 5	Mar 19	1803.	Mar 16	818.	78.05	1.28	1950.
1964	Apr 21	May 5	1410.	May 5	440.	80.49	1.24	2010.
1965	Apr 25	May 9	6619.	May 4	1450.	82.93	1.21	2010.
1966	May 12	May 26	2914.	May 23	1400.	85.37	1.17	2140.
1967	Mar 22	Apr 5	3511.	Mar 31	1370.	87.80	1.14	2170.
1968	Jun 22	Jul 6	5113.	Jul 6	1050.	90.24	1.11	2310.
1969	Apr 9	Apr 23	1583.	Apr 15	1010.	92.68	1.08	2850.
1970	May 13	May 27	7653.	May 27	1590.	95.12	1.05	3320.
1971	Mar 15	Mar 29	2545.	Mar 29	910.	97.56	1.02	5470.
Avg			3997.			1356.		
SD			2443.			997.		

Qmin(2-Yr) = 1215. cfs Exceedance Probability = 16.30 percent

Station No. 05560000 Years of Record Analyzed = 28C1911-1938)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start		End		Historical		Ranked			
					Qavg	Date	Qmin	Prob	T-Yr	Qmin
1911	Mar	1	Mar	15	15713.	Mar 14	14200.	3.45	29.00	12800.
1912	Mar	28	Apr	11	40900.	Mar 28	37800.	6.90	14.50	14200.
1913	Mar	29	Apr	12	52093.	Apr 11	48800.	10.34	9.67	14200.
1914	Apr	4	Apr	18	21487.	Apr 4	19900.	13.79	7.25	19900.
1915	Aug	4	Aug	18	29967.	Aug 18	24100.	17.24	5.80	20800.
1916	Mar	30	Apr	13	32107.	Mar 30	27700.	20.69	4.83	21100.
1917	Jun	11	Jun	25	30480.	Jun 11	24500.	24.14	4.14	21300.
1918	Mar	1	Mar	15	33213.	Mar 15	29400.	27.59	3.63	21800.
1919	Mar	19	Apr	2	46920.	Apr 2	37400.	31.03	3.22	24100.
1920	Apr	21	May	5	46853.	Apr 21	41000.	34.48	2.90	24500.
1921	Apr	28	May	12	23547.	May 12	21300.	37.93	2.64	24600.
1922	Apr	7	Apr	21	52040.	Apr 9	46800.	41.38	2.42	27700.
1923	Mar	19	Apr	2	24733.	Apr 2	21800.	44.83	2.23	27800.
1924	Aug	17	Aug	31	34727.	Aug 19	28800.	48.28	2.07	28000.
1925	Mar	21	Apr	4	22453.	Apr 4	20800.	51.72	1.93	28800.
1926	Sep	16	Sep	30	33640.	Sep 23	29400.	55.17	1.81	29400.
1927	Apr	21	May	5	49647.	May 5	43300.	58.62	1.71	29400.
1928	Apr	10	Apr	24	26680.	Apr 24	24600.	62.07	1.61	30100.
1929	Mar	18	Apr	1	42560.	Mar 31	36600.	65.52	1.53	30500.
1930	Apr	21	May	5	36007.	May 5	30500.	68.97	1.45	32100.
1931	Jun	10	Jun	24	16827.	Jun 23	14200.	72.41	1.38	36600.
1932	Mar	29	Apr	12	24493.	Mar 29	21100.	75.86	1.32	37000.
1933	May	11	May	25	44333.	May 11	37000.	79.31	1.26	37400.
1934	Apr	6	Apr	20	13673.	Apr 17	12800.	82.76	1.21	37800.
1935	May	10	May	24	34113.	May 24	27800.	86.21	1.16	41000.
1936	Mar	1	Mar	15	32980.	Mar 15	28000.	89.66	1.12	43300.
1937	Apr	27	May	11	33920.	May 11	32100.	93.10	1.07	46800.
1938	Apr	9	Apr	23	34460.	Apr 9	30100.	96.55	1.04	48800.
Avg					33235.	28993.				
SD					10804.	9492.				

Qmin(2-Yr) = 28400. cfs Exceedance Probability = 9.19 percent

Station No. 05568000 Years of Record Analyzed = 35(1922-1956)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1922	Apr 1	Apr 15	5068.	Apr 10	2710.	2.78	36.00	188.
1923	May 12	May 26	2055.	May 25	690.	5.56	18.00	213.
1924	Aug 20	Sep 3	4754.	Sep 1	1100.	8.33	12.00	228.
1925	Mar 14	Mar 28	2052.	Mar 28	1060.	11.11	9.00	265.
1926	Sep 2	Sep 16	5505.	Sep 14	2700.	13.89	7.20	280.
1927	May 19	Jun 2	6301.	Jun 1	2040.	16.67	6.00	328.
1928	Jun 29	Jul 13	841.	Jul 12	265.	19.44	5.14	380.
1929	Jul 2	Jul 16	3881.	Jul 5	1360.	22.22	4.50	410.
1930	Apr 16	Apr 30	1713.	Apr 30	870.	25.00	4.00	459.
1931	May 19	Jun 2	587.	May 29	280.	27.78	3.60	600.
1932	Mar 25	Apr 8	802.	Apr 6	459.	30.56	3.27	690.
1933	May 9	May 23	5767.	May 10	2280.	33.33	3.00	713.
1934	Mar 31	Apr 14	341.	Apr 14	213.	36.11	2.77	830.
1935	May 3	May 17	5035.	May 17	2000.	38.89	2.57	870.
1936	May 2	May 16	1080.	May 16	380.	41.67	2.40	890.
1937	Jun 15	Jun 29	1707.	Jun 25	410.	44.44	2.25	930.
1938	Mar 31	Apr 14	2099.	Apr 5	890.	47.22	2.12	1060.
1939	Apr 15	Apr 29	2961.	Apr 29	1120.	50.00	2.00	1100.
1940	Mar 1	Mar 15	628.	Mar 14	188.	52.78	1.89	1120.
1941	Jun 10	Jun 24	1426.	Jun 24	328.	55.56	1.80	1160.
1942	Apr 3	Apr 17	3265.	Apr 6	1350.	58.33	1.71	1210.
1943	May 9	May 23	9527.	May 10	4250.	61.11	1.64	1240.
1944	Apr 12	Apr 26	8221.	Apr 21	1980.	63.89	1.57	1260.
1945	May 8	May 22	3007.	May 14	1160.	66.67	1.50	1350.
1946	Jun 12	Jun 26	4394.	Jun 17	1560.	69.44	1.44	1360.
1947	Apr 21	May 5	3975.	Apr 28	1260.	72.22	1.38	1560.
1948	Mar 16	Mar 30	2583.	Mar 30	1600.	75.00	1.33	1600.
1949	Mar 27	Apr 10	973.	Apr 10	600.	77.78	1.29	1780.
1950	Apr 24	May 8	4267.	May 8	1210.	80.56	1.24	1980.
1951	Jun 29	Jul 13	5673.	Jul 8	713.	83.33	1.20	2000.
1952	Apr 13	Apr 27	3574.	Apr 22	1780.	86.11	1.16	2040.
1953	Mar 31	Apr 14	2029.	Apr 14	930.	88.89	1.13	2280.
1954	Apr 11	Apr 25	2649.	Apr 20	1240.	91.67	1.09	2700.
1955	Apr 20	May 4	1931.	May 4	830.	94.44	1.06	2710.
1956	May 27	Jun 10	1333.	Jun 10	228.	97.22	1.03	4250.
Avg			3200.		1201.			
SD			2216.		878.			

Qmin(2-Yr) = 1100. cfs

Exceedance Probability = 17.71 percent

Station No. 05568500 Years of Record Analyzed = 48(1940-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1940	May 3	May 17	14207.	May 14	10300.	2.04	49.00	9720.
1941	Apr 20	May 4	16240.	May 2	11300.	4.08	24.50	10300.
1942	Mar 18	Apr 1	38293.	Mar 18	31900.	6.12	16.33	11300.
1943	May 17	May 31	69193.	May 31	57200.	8.16	12.25	16200.
1944	Apr 17	May 1	48887.	Apr 21	39600.	10.20	9.80	17200.
1945	May 16	May 30	38587.	May 16	31600.	12.24	8.17	20100.
1946	Mar 17	Mar 31	31027.	Mar 17	25800.	14.29	7.00	21400.
1947	Apr 7	Apr 21	40160.	Apr 19	34000.	16.33	6.13	21500.
1948	Mar 20	Apr 3	50433.	Apr 3	40500.	18.37	5.44	21600.
1949	Mar 1	Mar 15	26040.	Mar 15	22200.	20.41	4.90	21800.
1950	Apr 25	May 9	54933.	May 9	39400.	22.45	4.45	22200.
1951	Jul 10	Jul 24	39833.	Jul 24	29900.	24.49	4.08	22400.
1952	Apr 15	Apr 29	35473.	Apr 27	31500.	26.53	3.77	23000.
1953	Mar 15	Mar 29	24573.	Mar 15	21600.	28.57	3.50	23500.
1954	Mar 26	Apr 9	24813.	Apr 9	21500.	30.61	3.27	23800.
1955	Mar 1	Mar 15	24593.	Mar 14	21400.	32.65	3.06	24200.
1956	May 2	May 16	23133.	May 2	22400.	34.69	2.88	25800.
1957	Apr 27	May 11	35267.	May 11	27400.	36.73	2.72	27400.
1958	Jun 13	Jun 27	36767.	Jun 27	29500.	38.78	2.58	27600.
1959	Mar 1	Mar 15	33733.	Mar 6	31300.	40.82	2.45	29500.
1960	Mar 31	Apr 14	43520.	Apr 14	36000.	42.86	2.33	29900.
1961	Sep 16	Sep 30	24575.	Sep 22	9720.	44.90	2.23	31300.
1962	Mar 20	Apr 3	53253.	Mar 20	43200.	46.94	2.13	31500.
1963	Mar 7	Mar 21	25687.	Mar 21	23000.	48.98	2.04	31600.
1964	Apr 21	May 5	19987.	May 5	17200.	51.02	1.96	31600.
1965	Apr 26	May 10	37160.	May 6	31600.	53.06	1.88	31900.
1966	May 13	May 27	44073.	May 25	37100.	55.10	1.81	31900.
1967	Apr 3	Apr 17	38100.	Apr 17	31900.	57.14	1.75	32700.
1968	Jun 27	Jul 11	31607.	Jul 11	24200.	59.18	1.69	33100.
1969	Apr 16	Apr 30	26693.	Apr 16	23800.	61.22	1.63	34000.
1970	May 15	May 29	60273.	May 29	44000.	63.27	1.58	34500.
1971	Mar 17	Mar 31	26893.	Mar 31	21800.	65.31	1.53	36000.
1972	Apr 20	May 4	31507.	May 4	27600.	67.35	1.48	37100.
1973	Apr 22	May 6	51020.	Apr 22	45200.	69.39	1.44	37200.
1974	May 19	Jun 2	60947.	Jun 2	45900.	71.43	1.40	39400.
1975	Apr 25	May 9	42220.	Apr 27	37200.	73.47	1.36	39600.
1976	Mar 5	Mar 19	54433.	Mar 19	41300.	75.51	1.32	40500.
1977	Sep 16	Sep 30	26880.	Sep 16	16200.	77.55	1.29	41300.
1978	Apr 7	Apr 21	39760.	Apr 21	34500.	79.59	1.26	43200.
1979	Mar 20	Apr 3	68720.	Mar 20	65100.	81.63	1.23	44000.
1980	Jun 3	Jun 17	44160.	Jun 3	32700.	83.67	1.20	45200.
1981	May 13	May 27	41847.	May 27	33100.	85.71	1.17	45900.
1982	Mar 14	Mar 28	68253.	Mar 14	57200.	87.76	1.14	46700.
1983	Apr 5	Apr 19	64720.	Apr 13	59200.	89.80	1.11	52000.
1984	Mar 21	Apr 4	53580.	Mar 21	46700.	91.84	1.09	57200.
1985	Mar 1	Mar 15	65027.	Mar 15	52000.	93.88	1.07	57200.
1986	Mar 15	Mar 29	26973.	Mar 29	23500.	95.92	1.04	59200.
1987	May 21	Jun 4	23827.	May 21	20100.	97.96	1.02	65100.
Avg			39623.		32528.			
SD			14771.		12798.			

Qmin(2-Yr) = 31600. cfs Exceedance Probability = 9.51 percent

Station No. 05569500 Years of Record Analyzed = 45(1943-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1943	May 11	May 25	4071.	May 15	1860.	2.17	46.00	290.
1944	Apr 22	May 6	4113.	May 2	1790.	4.35	23.00	313.
1945	May 8	May 22	5083.	May 14	1490.	6.52	15.33	326.
1946	Jun 12	Jun 26	2781.	Jun 26	830.	8.70	11.50	332.
1947	Apr 5	Apr 19	3082.	Apr 19	1060.	10.87	9.20	384.
1948	Mar 14	Mar 28	5817.	Mar 28	1200.	13.04	7.67	398.
1949	Mar 26	Apr 9	891.	Apr 9	437.	15.22	6.57	437.
1950	Apr 24	May 8	4692.	May 8	920.	17.39	5.75	458.
1951	Jul 11	Jul 25	6579.	Jul 21	580.	19.57	5.11	475.
1952	Mar 11	Mar 25	2757.	Mar 17	1590.	21.74	4.60	481.
1953	May 17	May 31	1196.	May 31	610.	23.91	4.18	572.
1954	May 28	Jun 11	3302.	May 31	903.	26.09	3.83	580.
1955	Apr 19	May 3	2470.	May 3	1180.	28.26	3.54	610.
1956	Jul 4	Jul 18	1941.	Jul 17	313.	30.43	3.29	613.
1957	Apr 17	May 1	1440.	Apr 21	866.	32.61	3.07	830.
1958	Jun 9	Jun 23	3904.	Jun 9	852.	34.78	2.88	852.
1959	Apr 21	May 5	1092.	Apr 25	384.	36.96	2.71	866.
1960	Mar 28	Apr 11	7132.	Apr 11	1200.	39.13	2.56	903.
1961	Sep 14	Sep 28	3316.	Sep 21	326.	41.30	2.42	920.
1962	Mar 11	Mar 25	5401.	Mar 17	2100.	43.48	2.30	954.
1963	Mar 4	Mar 18	1565.	Mar 11	475.	45.65	2.19	971.
1964	Jun 20	Jul 4	2407.	Jul 4	290.	47.83	2.09	1060.
1965	Sep 15	Sep 29	3109.	Sep 29	1240.	50.00	2.00	1120.
1966	May 12	May 26	3123.	May 22	1540.	52.17	1.92	1170.
1967	Apr 29	May 13	2169.	May 13	1170.	54.35	1.84	1180.
1968	Jun 25	Jul 9	1235.	Jul 7	398.	56.52	1.77	1200.
1969	Jun 30	Jul 14	1940.	Jul 3	971.	58.70	1.70	1200.
1970	Sep 14	Sep 28	6381.	Sep 21	1460.	60.87	1.64	1200.
1971	Mar 14	Mar 28	1063.	Mar 28	613.	63.04	1.59	1220.
1972	Jun 14	Jun 28	1526.	Jun 27	458.	65.22	1.53	1240.
1973	Apr 21	May 5	4669.	Apr 30	2000.	67.39	1.48	1320.
1974	Jun 15	Jun 29	9310.	Jun 18	1440.	69.57	1.44	1440.
1975	Apr 18	May 2	2335.	May 2	1200.	71.74	1.39	1460.
1976	Apr 24	May 8	4455.	May 5	1490.	73.91	1.35	1490.
1977	Sep 16	Sep 30	2283.	Sep 30	1120.	76.09	1.31	1490.
1978	May 7	May 21	4676.	May 21	2070.	78.26	1.28	1540.
1979	Mar 19	Apr 2	5722.	Mar 28	1990.	80.43	1.24	1590.
1980	Jun 2	Jun 16	3389.	Jun 13	332.	82.61	1.21	1670.
1981	Jun 13	Jun 27	2869.	Jun 21	1220.	84.78	1.18	1790.
1982	Jul 7	Jul 21	4896.	Jul 17	954.	86.96	1.15	1860.
1983	Apr 2	Apr 16	6404.	Apr 16	2250.	89.13	1.12	1990.
1984	May 20	Jun 3	3833.	Jun 3	1320.	91.30	1.10	2000.
1985	Mar 1	Mar 15	6917.	Mar 15	1670.	93.48	1.07	2070.
1986	Jul 1	Jul 15	1601.	Jul 7	481.	95.65	1.05	2100.
1987	Mar 29	Apr 12	826.	Apr 11	572.	97.83	1.02	2250.
Avg			3550.		1094.			
SD			1992.		559.			

Qmin(2-Yr) = 1120. cfs Exceedance Probability = 15.83 percent

Station No. 05570000 Years of Record Analyzed = 73(1915-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Historical		Qavg	Date	Qmin	Prob	Ranked	
							T-Yr	Qmin
1915	Sep 11	Sep 25	4701.	Sep 25	900.	1.35	74.00	75.
1916	Mar 27	Apr 10	2713.	Apr 10	1120.	2.70	37.00	245.
1917	Jun 5	Jun 19	6361.	Jun 12	2560.	4.05	24.67	333.
1918	Jun 27	Jul 11	3196.	Jul 6	350.	5.41	18.50	350.
1919	Mar 16	Mar 30	3737.	Mar 30	1500.	6.76	14.80	423.
1920	Apr 17	May 1	4635.	Apr 26	2600.	8.11	12.33	444.
1921	Apr 16	Apr 30	1892.	Apr 25	830.	9.46	10.57	481.
1922	Mar 31	Apr 14	3543.	Apr 3	2580.	10.81	9.25	531.
1923	Mar 12	Mar 26	2947.	Mar 26	1150.	12.16	8.22	568.
1924	Aug 20	Sep 3	8463.	Sep 1	1050.	13.51	7.40	598.
1925	Jun 15	Jun 29	1058.	Jun 28	245.	14.86	6.73	660.
1926	Sep 3	Sep 17	12075.	Sep 14	3170.	16.22	6.17	697.
1927	May 18	Jun 1	9751.	Jun 1	2450.	17.57	5.69	765.
1928	Jun 29	Jul 13	4189.	Jul 13	910.	18.92	5.29	795.
1929	Jul 6	Jul 20	7685.	Jul 14	2190.	20.27	4.93	800.
1930	Mar 1	Mar 15	1596.	Mar 15	915.	21.62	4.63	810.
1931	Jun 5	Jun 19	1315.	Jun 19	481.	22.97	4.35	830.
1932	Mar 25	Apr 8	1560.	Apr 7	810.	24.32	4.11	858.
1933	May 9	May 23	7711.	May 10	2850.	25.68	3.89	900.
1934	Jul 12	Jul 26	1145.	Jul 12	75.	27.03	3.70	910.
1935	May 3	May 17	6323.	May 16	2600.	28.38	3.52	915.
1936	Mar 1	Mar 15	3047.	Mar 15	1140.	29.73	3.36	920.
1937	Apr 22	May 6	2110.	Apr 30	1260.	31.08	3.22	940.
1938	Apr 6	Apr 20	4051.	Apr 20	1370.	32.43	3.08	1000.
1939	Apr 15	Apr 29	3329.	Apr 29	1110.	33.78	2.96	1050.
1940	Mar 2	Mar 16	2418.	Mar 15	333.	35.14	2.85	1110.
1941	Jun 1	Jun 15	2453.	Jun 8	531.	36.49	2.74	1120.
1942	Mar 14	Mar 28	3658.	Mar 28	1580.	37.84	2.64	1140.
1943	May 11	May 25	6275.	May 15	3280.	39.19	2.55	1140.
1944	Apr 22	May 6	7348.	Apr 30	2890.	40.54	2.47	1150.
1945	May 8	May 22	7492.	May 13	2540.	41.89	2.39	1150.
1946	Jun 12	Jun 26	5989.	Jun 26	1360.	43.24	2.31	1190.
1947	Jun 6	Jun 20	4696.	Jun 17	1720.	44.59	2.24	1220.
1948	Mar 15	Mar 29	8390.	Mar 29	1480.	45.95	2.18	1240.
1949	Mar 27	Apr 10	1471.	Apr 10	697.	47.30	2.11	1260.
1950	Apr 24	May 8	6686.	May 8	1500.	48.65	2.06	1340.
1951	Jul 13	Jul 27	6253.	Jul 21	795.	50.00	2.00	1350.
1952	Jun 14	Jun 28	4070.	Jun 19	1220.	51.35	1.95	1360.
1953	Mar 30	Apr 13	1768.	Apr 13	940.	52.70	1.90	1370.
1954	May 28	Jun 11	4808.	May 31	1150.	54.05	1.85	1460.
1955	Apr 20	May 4	3264.	May 4	1460.	55.41	1.80	1460.
1956	Jul 5	Jul 19	2182.	Jul 18	423.	56.76	1.76	1480.
1957	Apr 18	May 2	2028.	Apr 21	1340.	58.11	1.72	1500.
1958	Jun 10	Jun 24	5590.	Jun 24	1140.	59.46	1.68	1500.
1959	Apr 21	May 5	1339.	Apr 26	568.	60.81	1.64	1550.
1960	Mar 28	Apr 11	8325.	Apr 11	1900.	62.16	1.61	1580.
1961	Sep 14	Sep 28	6813.	Sep 22	660.	63.51	1.57	1680.
1962	Mar 12	Mar 26	7158.	Mar 17	3180.	64.86	1.54	1720.

Station No. 05570000 Years of Record Analyzed = 73(1915-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1963	Mar 4	Mar 18	2949.	Mar 13	765.	66.22	1.51	1720.
1964	Jun 20	Jul 4	3621.	Jul 4	444.	67.57	1.48	1880.
1965	Sep 15	Sep 29	4797.	Sep 29	1460.	68.92	1.45	1900.
1966	May 12	May 26	4588.	May 22	2370.	70.27	1.42	2040.
1967	Jul 20	Aug 3	4023.	Jul 21	1190.	71.62	1.40	2190.
1968	Jun 25	Jul 9	2355.	Jul 7	598.	72.97	1.37	2210.
1969	Jun 30	Jul 14	3181.	Jul 4	1350.	74.32	1.35	2240.
1970	Sep 15	Sep 29	9633.	Sep 21	2550.	75.68	1.32	2370.
1971	Mar 13	Mar 27	1603.	Mar 14	858.	77.03	1.30	2450.
1972	Apr 19	May 3	1939.	Apr 19	1240.	78.38	1.28	2540.
1973	Apr 21	May 5	7952.	Apr 30	2930.	79.73	1.25	2550.
1974	Jun 15	Jun 29	11521.	Jun 18	2240.	81.08	1.23	2560.
1975	Apr 19	May 3	3185.	May 3	1680.	82.43	1.21	2580.
1976	Apr 24	May 8	7331.	May 5	2210.	83.78	1.19	2600.
1977	Sep 16	Sep 30	3581.	Sep 29	2040.	85.14	1.17	2600.
1978	May 7	May 21	6985.	May 21	3100.	86.49	1.16	2660.
1979	Mar 19	Apr 2	7789.	Mar 28	2660.	87.84	1.14	2850.
1980	Jun 2	Jun 16	6253.	Jun 14	1000.	89.19	1.12	2890.
1981	Jun 22	Jul 6	4911.	Jul 2	1550.	90.54	1.10	2930.
1982	Jul 8	Jul 22	8479.	Jul 16	1720.	91.89	1.09	3100.
1983	Apr 2	Apr 16	11041.	Apr 16	3900.	93.24	1.07	3100.
1984	May 20	Jun 3	4695.	Jun 3	1880.	94.59	1.06	3170.
1985	Mar 1	Mar 15	11335.	Mar 15	3100.	95.95	1.04	3180.
1986	Jul 2	Jul 16	2148.	Jul 8	800.	97.30	1.03	3280.
1987	Mar 29	Apr 12	1367.	Apr 12	920.	98.65	1.01	3900.
Avg			4889.		1554.			
SD			2836.		891.			

Qmin(2-Yr) = 1350. cfs

Exceedance Probability = 20.42 percent

Station No. 05576500 Years of Record Analyzed = 42(1915-1956)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Date	Qmin	Prob	Ranked	
			Qavg					T-Yr	Qmin
1915	Aug 21	Sep 4	10237.		Sep 4	1660.	2.33	43.00	276.
1916	Mar 1	Mar 15	2670.		Mar 6	1920.	4.65	21.50	371.
1917	Jun 5	Jun 19	11536.		Jun 19	5610.	6.98	14.33	464.
1918	May 9	May 23	6390.		May 23	1980.	9.30	10.75	715.
1919	Jun 24	Jul 8	5865.		Jul 8	1870.	11.63	8.60	780.
1920	May 12	May 26	9572.		May 26	7060.	13.95	7.17	793.
1921	Mar 25	Apr 8	5663.		Apr 8	2220.	16.28	6.14	902.
1922	Apr 8	Apr 22	17840.		Apr 8	12600.	18.60	5.38	1130.
1923	Mar 13	Mar 27	7165.		Mar 13	3380.	20.93	4.78	1390.
1924	Jun 24	Jul 8	6215.		Jul 8	3180.	23.26	4.30	1440.
1925	Mar 15	Mar 29	7212.		Mar 15	3540.	25.58	3.91	1510.
1926	Sep 6	Sep 20	18125.		Sep 20	9480.	27.91	3.58	1660.
1927	Apr 9	Apr 23	11079.		Apr 12	7780.	30.23	3.31	1850.
1928	Apr 6	Apr 20	4886.		Apr 20	2020.	32.56	3.07	1870.
1929	May 10	May 24	10498.		May 12	6090.	34.88	2.87	1920.
1930	Mar 1	Mar 15	4105.		Mar 15	1390.	37.21	2.69	1930.
1931	May 16	May 30	543.		May 17	371.	39.53	2.53	1980.
1932	Jun 27	Jul 11	917.		Jul 4	464.	41.86	2.39	2010.
1933	May 14	May 28	13457.		May 28	9760.	44.19	2.26	2020.
1934	Mar 28	Apr 11	1544.		Apr 11	793.	46.51	2.15	2090.
1935	May 11	May 25	9538.		May 12	7950.	48.84	2.05	2220.
1936	Mar 1	Mar 15	4697.		Mar 15	1130.	51.16	1.95	2580.
1937	Jun 10	Jun 24	5552.		Jun 24	1930.	53.49	1.87	3150.
1938	Mar 31	Apr 14	13980.		Apr 6	10100.	55.81	1.79	3180.
1939	Mar 8	Mar 22	13086.		Mar 10	3150.	58.14	1.72	3380.
1940	May 1	May 15	1774.		May 14	780.	60.47	1.65	3540.
1941	Jun 5	Jun 19	3237.		Jun 9	1850.	62.79	1.59	4280.
1942	Jul 8	Jul 22	7060.		Jul 22	2010.	65.12	1.54	4390.
1943	May 12	May 26	29493.		May 14	11500.	67.44	1.48	4540.
1944	Apr 13	Apr 27	17913.		Apr 21	7100.	69.77	1.43	5360.
1945	Jun 11	Jun 25	9193.		Jun 25	6070.	72.09	1.39	5610.
1946	May 6	May 20	5693.		May 15	4280.	74.42	1.34	6070.
1947	Apr 25	May 9	9369.		May 9	4390.	76.74	1.30	6090.
1948	Mar 22	Apr 5	9666.		Apr 5	5360.	79.07	1.26	7060.
1949	Mar 1	Mar 15	3459.		Mar 15	1440.	81.40	1.23	7100.
1950	Jun 15	Jun 29	7119.		Jun 29	2580.	83.72	1.19	7780.
1951	Jun 27	Jul 11	11894.		Jul 10	2090.	86.05	1.16	7950.
1952	Apr 14	Apr 28	7323.		Apr 22	4540.	88.37	1.13	9480.
1953	Mar 14	Mar 28	3676.		Mar 28	1510.	90.70	1.10	9760.
1954	Jun 3	Jun 17	713.		Jun 8	276.	93.02	1.08	10100.
1955	Jun 9	Jun 23	2285.		Jun 9	902.	95.35	1.05	11500.
1956	May 29	Jun 12	3373.		Jun 12	715.	97.67	1.02	12600.
Avg			7991.			3924.			
SD			5760.			3303.			

Qmin(2-Yr) = 2400. cfs

Exceedance Probability = 19.83 percent

Station No. 05582000 Years of Record Analyzed = 46(1942-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1942	Jul 7	Jul 21	4627.	Jul 21	1690.	2.13	47.00	800.
1943	May 11	May 25	16541.	May 25	7240.	4.26	23.50	815.
1944	Apr 13	Apr 27	10249.	Apr 21	3910.	6.38	15.67	900.
1945	Jun 10	Jun 24	3143.	Jun 12	1490.	8.51	11.75	1050.
1946	Jun 13	Jun 27	5153.	Jun 27	2810.	10.64	9.40	1060.
1947	Apr 22	May 6	4944.	Apr 23	3400.	12.77	7.83	1220.
1948	Mar 21	Apr 4	4166.	Apr 4	2810.	14.89	6.71	1240.
1949	Mar 1	Mar 15	1713.	Mar 15	1050.	17.02	5.88	1490.
1950	Apr 25	May 9	4620.	May 9	2050.	19.15	5.22	1500.
1951	Jun 28	Jul 12	6481.	Jul 8	1640.	21.28	4.70	1550.
1952	Apr 13	Apr 27	4415.	Apr 22	2570.	23.40	4.27	1580.
1953	Mar 31	Apr 14	3232.	Apr 14	1640.	25.53	3.92	1640.
1954	Apr 11	Apr 25	1815.	Apr 25	1220.	27.66	3.62	1640.
1955	Jun 11	Jun 25	1762.	Jun 25	800.	29.79	3.36	1690.
1956	May 27	Jun 10	3325.	Jun 10	900.	31.91	3.13	1690.
1957	Apr 22	May 6	8376.	Apr 22	2770.	34.04	2.94	2000.
1958	Jul 11	Jul 25	5716.	Jul 25	2770.	36.17	2.76	2050.
1959	Mar 6	Mar 20	2757.	Mar 9	2000.	38.30	2.61	2070.
1960	Jun 21	Jul 5	5871.	Jul 5	2070.	40.43	2.47	2080.
1961	May 7	May 21	9451.	May 21	2160.	42.55	2.35	2100.
1962	Mar 12	Mar 26	7121.	Mar 19	2460.	44.68	2.24	2140.
1963	Mar 4	Mar 18	4165.	Mar 17	815.	46.81	2.14	2160.
1964	Apr 20	May 4	7295.	May 4	2140.	48.94	2.04	2160.
1965	Apr 6	Apr 20	4857.	Apr 20	2810.	51.06	1.96	2240.
1966	Apr 21	May 5	3629.	May 5	2160.	53.19	1.88	2380.
1967	May 6	May 20	2977.	May 6	1580.	55.32	1.81	2450.
1968	May 17	May 31	8251.	May 22	3800.	57.45	1.74	2460.
1969	Jun 30	Jul 14	5266.	Jul 5	2080.	59.57	1.68	2540.
1970	Apr 20	May 4	8311.	Apr 29	3170.	61.70	1.62	2570.
1971	Mar 15	Mar 29	2279.	Mar 29	1240.	63.83	1.57	2770.
1972	Apr 19	May 3	2985.	Apr 19	1690.	65.96	1.52	2770.
1973	Apr 21	May 5	9166.	May 5	3100.	68.09	1.47	2810.
1974	Jun 20	Jul 4	10985.	Jul 4	2540.	70.21	1.42	2810.
1975	Mar 1	Mar 15	2501.	Mar 15	1550.	72.34	1.38	2810.
1976	Mar 3	Mar 17	5153.	Mar 3	2380.	74.47	1.34	2880.
1977	May 5	May 19	5754.	May 19	1500.	76.60	1.31	3100.
1978	May 8	May 22	4203.	May 22	2450.	78.72	1.27	3170.
1979	Mar 3	Mar 17	10743.	Mar 17	4140.	80.85	1.24	3400.
1980	Jun 3	Jun 17	4139.	Jun 14	2100.	82.98	1.21	3580.
1981	Aug 4	Aug 18	12204.	Aug 14	3580.	85.11	1.17	3800.
1982	Mar 11	Mar 25	9033.	Mar 25	5750.	87.23	1.15	3910.
1983	May 2	May 16	7567.	May 12	2880.	89.36	1.12	4140.
1984	Mar 17	Mar 31	7336.	Mar 19	4830.	91.49	1.09	4830.
1985	Mar 1	Mar 15	7500.	Mar 10	5400.	93.62	1.07	5400.
1986	Mar 5	Mar 19	3201.	Mar 18	2240.	95.74	1.04	5750.
1987	Apr 15	Apr 29	1235.	Apr 22	1060.	97.87	1.02	7240.
Avg			5787.		2531.			
SD			3204.		1335.			

Qmin(2-Yr) = 2200. cfs Exceedance Probability = 15.96 percent

Station No. 05583000 Years of Record Analyzed = 48(1940-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start End		Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1940	Mar 3	Mar 17	3602.	Mar 15	1550.	2.04	49.00	1420.
1941	Jun 6	Jun 20	4001.	Jun 9	2480.	4.08	24.50	1550.
1942	Jul 8	Jul 22	14416.	Jul 22	5110.	6.12	16.33	1560.
1943	May 13	May 27	51933.	May 13	23700.	8.16	12.25	2480.
1944	Apr 15	Apr 29	28713.	Apr 22	16600.	10.20	9.80	2570.
1945	Jun 13	Jun 27	13909.	Jun 13	9200.	12.24	8.17	2620.
1946	May 7	May 21	9351.	May 16	7780.	14.29	7.00	3060.
1947	Jun 6	Jun 20	16459.	Jun 18	8900.	16.33	6.13	3120.
1948	Mar 22	Apr 5	14853.	Mar 22	10400.	18.37	5.44	3220.
1949	Mar 1	Mar 15	6853.	Mar 15	3220.	20.41	4.90	3230.
1950	Jun 16	Jun 30	11884.	Jun 30	5080.	22.45	4.45	3370.
1951	Jun 28	Jul 12	18877.	Jul 12	7650.	24.49	4.08	3500.
1952	Apr 14	Apr 28	12780.	Apr 22	10200.	26.53	3.77	3600.
1953	Apr 1	Apr 15	7285.	Apr 15	3600.	28.57	3.50	4540.
1954	Apr 12	Apr 26	2326.	Apr 26	1560.	30.61	3.27	4590.
1955	Jun 11	Jun 25	3619.	Jun 25	1420.	32.65	3.06	4730.
1956	May 28	Jun 11	6740.	Jun 11	2620.	34.69	2.88	5080.
1957	Apr 24	May 8	22339.	Apr 24	9990.	36.73	2.72	5110.
1958	Jul 29	Aug 12	17047.	Aug 12	11100.	38.78	2.58	5300.
1959	Mar 7	Mar 21	7052.	Mar 8	5960.	40.82	2.45	5960.
1960	Jun 22	Jul 6	16433.	Jun 22	9050.	42.86	2.33	6600.
1961	May 7	May 21	21232.	May 7	7230.	44.90	2.23	7230.
1962	Mar 17	Mar 31	16748.	Mar 20	9680.	46.94	2.13	7260.
1963	Mar 4	Mar 18	9801.	Mar 18	3120.	48.98	2.04	7650.
1964	Apr 20	May 4	18394.	May 4	8580.	51.02	1.96	7670.
1965	Jun 2	Jun 16	8981.	Jun 16	3500.	53.06	1.88	7780.
1966	Apr 22	May 6	11987.	May 6	7260.	55.10	1.81	8520.
1967	May 8	May 22	7870.	May 22	4540.	57.14	1.75	8580.
1968	May 23	Jun 6	19593.	Jun 6	10500.	59.18	1.69	8900.
1969	Apr 14	Apr 28	12403.	Apr 15	7670.	61.22	1.63	9050.
1970	Apr 22	May 6	23520.	Apr 30	17200.	63.27	1.58	9200.
1971	Jul 10	Jul 24	5716.	Jul 23	3230.	65.31	1.53	9680.
1972	Apr 20	May 4	10866.	May 4	5300.	67.35	1.48	9990.
1973	Apr 20	May 4	25042.	Apr 20	8520.	69.39	1.44	10200.
1974	Jun 19	Jul 3	23753.	Jun 20	10200.	71.43	1.40	10200.
1975	Mar 1	Mar 15	10112.	Mar 15	4730.	73.47	1.36	10400.
1976	Mar 4	Mar 18	12022.	Mar 4	6600.	75.51	1.32	10400.
1977	May 5	May 19	16371.	May 19	4590.	77.55	1.29	10500.
1978	Mar 20	Apr 3	19133.	Mar 20	12700.	79.59	1.26	10800.
1979	Apr 12	Apr 26	29247.	Apr 25	11100.	81.63	1.23	11100.
1980	Jun 2	Jun 16	8653.	Jun 15	3370.	83.67	1.20	11100.
1981	Jul 27	Aug 10	21333.	Aug 2	10800.	85.71	1.17	12700.
1982	Mar 12	Mar 26	17887.	Mar 26	14100.	87.76	1.14	13400.
1983	May 2	May 16	17593.	May 13	10400.	89.80	1.11	14100.
1984	Mar 19	Apr 2	19907.	Apr 2	13400.	91.84	1.09	14200.
1985	Mar 1	Mar 15	20047.	Mar 15	14200.	93.88	1.07	16600.
1986	Jun 5	Jun 19,	7458.	Jun 5	3060.	95.92	1.04	17200.
1987	Apr 15	Apr 29	4254.	Apr 28	2570.	97.96	1.02	23700.
Avg			14800.		7819.			
SD			8756.		4685.			

Qmin(2-Yr) = 7660. cfs Exceedance Probability = 12.39 percent

Station No. 05584000 Years of Record Analyzed = 18(1921-1938)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1921	Apr 29	May 13	33167.	May 13	30800.	5.26	19.00	14700.
1922	Apr 14	Apr 28	83000.	Apr 28	76200.	10.53	9.50	20400.
1923	Mar 21	Apr 4	35807.	Apr 4	32500.	15.79	6.33	25600.
1924	Jun 30	Jul 14	49733.	Jul 14	43300.	21.05	4.75	30800.
1925	Mar 21	Apr 4	36260.	Mar 21	32900.	26.32	3.80	32500.
1926	Sep 13	Sep 27	66120.	Sep 26	60400.	31.58	3.17	32900.
1927	May 28	Jun 11	85020.	Jun 11	81200.	36.84	2.71	35400.
1928	Apr 12	Apr 26	38633.	Apr 12	35400.	42.11	2.38	36700.
1929	Apr 5	Apr 19	61527.	Apr 11	59500.	47.37	2.11	39100.
1930	Mar 1	Mar 15	44873.	Mar 15	39100.	52.63	1.90	42100.
1931	Jun 8	Jun 22	21767.	Jun 20	20400.	57.89	1.73	43300.
1932	Apr 3	Apr 17	26940.	Apr 16	25600.	63.16	1.58	51600.
1933	May 18	Jun 1	85967.	May 18	78700.	68.42	1.46	57100.
1934	Apr 6	Apr 20	15553.	Apr 20	14700.	73.68	1.36	59500.
1935	May 14	May 28	65020.	May 28	57100.	78.95	1.27	60400.
1936	Mar 2	Mar 16	51313.	Mar 16	42100.	84.21	1.19	76200.
1937	May 5	May 19	42700.	May 19	36700.	89.47	1.12	78700.
1938	Apr 11	Apr 25	60993.	Apr 25	51600.	94.74	1.06	81200.
Avg			50244.		45456.			
SD			21347.		19799.			

Qmin(2-Yr) = 40600. cfs

Exceedance Probability = 11.59 percent

Station No. 05585000 Years of Record Analyzed = 66(1922-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1922	Mar 30	Apr 13	4993.	Apr 4	1330.	1.49	67.00	28.
1923	Mar 12	Mar 26	2501.	Mar 26	600.	2.99	33.50	118.
1924	Jul 22	Aug 5	4761.	Aug 5	610.	4.48	22.33	184.
1925	Aug 7	Aug 21	1463.	Aug 9	240.	5.97	16.75	190.
1926	Sep 4	Sep 18	4729.	Sep 18	2280.	7.46	13.40	220.
1927	Apr 16	Apr 30	2400.	Apr 16	2400.	8.96	11.17	239.
1928	Apr 6	Apr 20	1474.	Apr 13	690.	10.45	9.57	240.
1929	Mar 11	Mar 25	5167.	Mar 25	880.	11.94	8.38	244.
1930	Apr 12	Apr 26	1060.	Apr 14	244.	13.43	7.44	315.
1931	Jun 5	Jun 19	2396.	Jun 19	560.	14.93	6.70	375.
1932	Aug 2	Aug 16	2582.	Aug 10	220.	16.42	6.09	392.
1933	May 12	May 26	5248.	May 25	1620.	17.91	5.58	408.
1934	Sep 2	Sep 16	368.	Sep 14	28.	19.40	5.15	438.
1935	May 3	May 17	7112.	May 17	4460.	20.90	4.79	440.
1936	Mar 1	Mar 15	2446.	Mar 15	617.	22.39	4.47	486.
1937	Apr 23	May 7	1373.	Apr 27	440.	23.88	4.19	504.
1938	Mar 31	Apr 14	5777.	Apr 5	1030.	25.37	3.94	510.
1939	Apr 15	Apr 29	4408.	Apr 29	970.	26.87	3.72	512.
1940	Mar 2	Mar 16	1205.	Mar 16	239.	28.36	3.53	530.
1941	Apr 17	May 1	1169.	May 1	190.	29.85	3.35	536.
1942	Apr 5	Apr 19	2750.	Apr 19	685.	31.34	3.19	543.
1943	May 11	May 25	8311.	May 14	2970.	32.84	3.05	560.
1944	Apr 12	Apr 26	8198.	Apr 21	1370.	34.33	2.91	600.
1945	Mar 20	Apr 3	6657.	Apr 1	2140.	35.82	2.79	600.
1946	Jun 14	Jun 28	3169.	Jun 28	536.	37.31	2.68	610.
1947	Jun 7	Jun 21	7080.	Jun 15	2970.	38.81	2.58	617.
1948	Mar 16	Mar 30	5817.	Mar 30	1110.	40.30	2.48	685.
1949	Mar 23	Apr 6	1742.	Mar 25	737.	41.79	2.39	690.
1950	Jun 14	Jun 28	2778.	Jun 28	530.	43.28	2.31	714.
1951	Mar 23	Apr 6	3486.	Mar 27	1310.	44.78	2.23	724.
1952	Mar 10	Mar 24	3080.	Mar 17	935.	46.27	2.16	737.
1953	Mar 31	Apr 14	1558.	Apr 14	504.	47.76	2.09	788.
1954	Apr 11	Apr 25	1686.	Apr 14	408.	49.25	2.03	880.
1955	Apr 20	May 4	3109.	Apr 22	510.	50.75	1.97	908.
1956	Aug 2	Aug 16	874.	Aug 8	118.	52.24	1.91	915.
1957	Jun 8	Jun 22	2050.	Jun 9	315.	53.73	1.86	923.
1958	Jul 28	Aug 11	2186.	Aug 7	543.	55.22	1.81	935.
1959	Aug 5	Aug 19	2119.	Aug 15	392.	56.72	1.76	970.
1960	Jun 21	Jul 5	7339.	Jun 21	2380.	58.21	1.72	981.
1961	Sep 14	Sep 28	9699.	Sep 22	981.	59.70	1.68	1030.
1962	Mar 12	Mar 26	4835.	Mar 19	1090.	61.19	1.63	1090.
1963	Mar 4	Mar 18	2311.	Mar 15	375.	62.69	1.60	1100.
1964	Apr 19	May 3	4717.	May 3	714.	64.18	1.56	1110.
1965	Apr 5	Apr 19	5081.	Apr 19	1780.	65.67	1.52	1190.
1966	Apr 20	May 4	2538.	May 4	724.	67.16	1.49	1290.
1967	Apr 30	May 14	2745.	May 5	788.	68.66	1.46	1310.
1968	Jun 16	Jun 30	1392.	Jun 24	184.	70.15	1.43	1310.
1969	Jun 29	Jul 13	6249.	Jul 3	1290.	71.64	1.40	1330.

Station No. 05585000 Years of Record Analyzed = 66(1922-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1970	Sep 16	Sep 30	9899.	Sep 21	3420.	73.13	1.37	1370.
1971	Mar 13	Mar 27	1192.	Mar 27	512.	74.63	1.34	1600.
1972	Apr 19	May 3	2965.	Apr 28	1100.	76.12	1.31	1620.
1973	Mar 6	Mar 20	6014.	Mar 20	1600.	77.61	1.29	1780.
1974	May 30	Jun 13	6087.	Jun 13	2000.	79.10	1.26	2000.
1975	Mar 27	Apr 10	3451.	Apr 10	1310.	80.60	1.24	2140.
1976	Apr 24	May 8	4692.	May 5	923.	82.09	1.22	2280.
1977	Sep 13	Sep 27	1586.	Sep 27	600.	83.58	1.20	2380.
1978	Apr 1	Apr 15	5553.	Apr 4	1190.	85.07	1.18	2400.
1979	Mar 12	Mar 26	4713.	Mar 12	2520.	86.57	1.16	2520.
1980	Jun 1	Jun 15	5101.	Jun 15	438.	88.06	1.14	2710.
1981	Jun 27	Jul 11	6732.	Jul 3	915.	89.55	1.12	2830.
1982	Mar 11	Mar 25	6735.	Mar 25	3210.	91.04	1.10	2970.
1983	Apr 2	Apr 16	9065.	Apr 16	2710.	92.54	1.08	2970.
1984	Mar 16	Mar 30	4681.	Mar 30	3110.	94.03	1.06	3110.
1985	Mar 2	Mar 16	10333.	Mar 3	2830.	95.52	1.05	3210.
1986	Jun 5	Jun 19	3721.	Jun 19	908.	97.01	1.03	3420.
1987	Mar 19	Apr 2	1594.	Mar 23	486.	98.51	1.02	4460.
Avg			4095.		1179.			
SD			2479.		974.			

Qmin(2-Yr) = 894. cfs Exceedance Probability = 21.31 percent

Station No. 05585500 Years of Record Analyzed = 49(1939-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1939	Mar 16	Mar 30	60640.	Mar 30	47200.	2.00	50.00	14300.
1940	Mar 3	Mar 17	21400.	Mar 3	14300.	4.00	25.00	16300.
1941	Jun 9	Jun 23	23173.	Jun 9	16300.	6.00	16.67	23000.
1942	Apr 8	Apr 22	50827.	Apr 8	46700.	8.00	12.50	23500.
1943	May 21	Jun 4	114467.	Jun 4	100000.	10.00	10.00	25000.
1944	Apr 25	May 9	93100.	Apr 25	81300.	12.00	8.33	30000.
1945	May 19	Jun 2	56860.	Jun 2	49000.	14.00	7.14	30400.
1946	Jun 21	Jul 5	43507.	Jul 5	36200.	16.00	6.25	30600.
1947	Jun 8	Jun 22	65087.	Jun 22	60800.	18.00	5.56	32200.
1948	Mar 25	Apr 8	69433.	Apr 6	65000.	20.00	5.00	33400.
1949	Mar 1	Mar 15	46493.	Mar 15	36400.	22.00	4.55	34100.
1950	Apr 28	May 12	70680.	May 12	61400.	24.00	4.17	34600.
1951	Mar 1	Mar 15	60607.	Mar 15	44800.	26.00	3.85	34800.
1952	Apr 18	May 2	52213.	Apr 18	48400.	28.00	3.57	36200.
1953	Mar 28	Apr 11	33413.	Mar 31	30600.	30.00	3.33	36300.
1954	Apr 22	May 6	31880.	May 6	30000.	32.00	3.13	36400.
1955	Mar 1	Mar 15	35200.	Mar 15	32200.	34.00	2.94	36700.
1956	May 5	May 19	26073.	May 19	25000.	36.00	2.78	39700.
1957	May 1	May 15	58360.	May 15	50000.	38.00	2.63	40900.
1958	Jun 16	Jun 30	54147.	Jun 16	45100.	40.00	2.50	42300.
1959	Mar 1	Mar 15	47827.	Mar 15	44700.	42.00	2.38	44700.
1960	Apr 4	Apr 18	66487.	Apr 16	59800.	44.00	2.27	44800.
1961	May 9	May 23	44073.	May 9	34800.	46.00	2.17	45100.
1962	Mar 24	Apr 7	80880.	Apr 7	71000.	48.00	2.08	46600.
1963	Mar 7	Mar 21	37513.	Mar 20	34100.	50.00	2.00	46700.
1964	Apr 23	May 7	44200.	May 7	36300.	52.00	1.92	47200.
1965	Apr 12	Apr 26	51347.	Apr 26	46600.	54.00	1.85	48400.
1966	May 19	Jun 2	58907.	Jun 2	50300.	56.00	1.79	49000.
1967	Apr 3	Apr 17	45120.	Apr 3	40900.	58.00	1.72	49800.
1968	Jun 29	Jul 13	37613.	Jun 29	34600.	60.00	1.67	50000.
1969	Apr 17	May 1	44860.	Apr 17	36700.	62.00	1.61	50300.
1970	May 16	May 30	83913.	May 16	74600.	64.00	1.56	54800.
1971	Mar 1	Mar 15	35133.	Mar 14	30400.	66.00	1.52	59800.
1972	Apr 23	May 7	45653.	May 7	39700.	68.00	1.47	60800.
1973	Apr 26	May 10	95200.	May 9	83600.	70.00	1.43	61400.
1974	Jun 23	Jul 7	95033.	Jul 7	77800.	72.00	1.39	61700.
1975	Mar 1	Mar 15	50227.	Mar 15	42300.	74.00	1.35	63000.
1976	Mar 7	Mar 21	75500.	Mar 21	66800.	76.00	1.32	65000.
1977	May 6	May 20	34107.	May 20	23000.	78.00	1.28	66800.
1978	Apr 6	Apr 20	66293.	Apr 20	61700.	80.00	1.25	71000.
1979	Mar 23	Apr 6	99327.	Mar 23	96500.	82.00	1.22	74600.
1980	Jun 4	Jun 18	59447.	Jun 4	49800.	84.00	1.19	77800.
1981	May 18	Jun 1	66347.	May 18	54800.	86.00	1.16	81300.
1982	Mar 18	Apr 1	95840.	Apr 1	86200.	88.00	1.14	83600.
1983	Apr 10	Apr 24	90907.	Apr 10	85500.	90.00	1.11	85500.
1984	Mar 24	Apr 7	69767.	Mar 24	63000.	92.00	1.09	86200.
1985	Mar 5	Mar 19	111533.	Mar 6	100000.	94.00	1.06	96500.
1986	Mar 7	Mar 21	34447.	Mar 11	33400.	96.00	1.04	100000.
1987	May 26	Jun 9	24780.	Jun 9	23500.	98.00	1.02	100000.
Avg			58364.		51084.			
SD			23699.		21806.			

Qmin (2-Yr) = 46700. cfs Exceedance Probability = 9.55 percent

Station No. 05592000 Years of Record Analyzed = 47(1941-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1941	Jun 6	Jun 20	861.	Jun 9	349.	2.08	48.00	79.
1942	Jul 8	Jul 22	5191.	Jul 22	1360.	4.17	24.00	323.
1943	May 11	May 25	11207.	May 15	4520.	6.25	16.00	349.
1944	Apr 12	Apr 26	7348.	Apr 21	2070.	8.33	12.00	538.
1945	Mar 29	Apr 12	5780.	Apr 12	1860.	10.42	9.60	676.
1946	May 4	May 18	3895.	May 15	2650.	12.50	8.00	692.
1947	Jun 2	Jun 16	4577.	Jun 5	1860.	14.58	6.86	753.
1948	Mar 22	Apr 5	5574.	Apr 5	2210.	16.67	6.00	831.
1949	Mar 26	Apr 9	1550.	Mar 26	753.	18.75	5.33	868.
1950	Jun 25	Jul 9	2901.	Jun 27	676.	20.83	4.80	876.
1951	Jun 28	Jul 12	3840.	Jul 11	1220.	22.92	4.36	932.
1952	Mar 11	Mar 25	2705.	Mar 17	2070.	25.00	4.00	936.
1953	Mar 31	Apr 14	2267.	Apr 14	936.	27.08	3.69	952.
1954	Jun 3	Jun 17	253.	Jun 10	79.	29.17	3.43	1000.
1955	Jun 9	Jun 23	1194.	Jun 23	538.	31.25	3.20	1000.
1956	May 28	Jun 11	981.	Jun 11	323.	33.33	3.00	1080.
1957	Jun 18	Jul 2	7494.	Jun 26	1000.	35.42	2.82	1160.
1958	Jul 21	Aug 4	4558.	Jul 27	1180.	37.50	2.67	1180.
1959	Mar 8	Mar 22	2172.	Mar 8	1480.	39.58	2.53	1200.
1960	Jun 21	Jul 5	4597.	Jul 5	1160.	41.67	2.40	1200.
1961	May 8	May 22	4912.	May 22	1360.	43.75	2.29	1220.
1962	Mar 14	Mar 28	4437.	Mar 19	1360.	45.83	2.18	1360.
1963	Mar 5	Mar 19	1787.	Mar 16	1080.	47.92	2.09	1360.
1964	Apr 20	May 4	5058.	May 4	1200.	50.00	2.00	1360.
1965	Jun 2	Jun 16	2256.	Jun 16	692.	52.08	1.92	1400.
1966.	Apr 21	May 5	2816.	May 5	1400.	54.17	1.85	1480.
1967	May 7	May 21	2129.	May 21	831.	56.25	1.78	1770.
1968	May 24	Jun 7	6351.	Jun 7	2170.	58.33	1.71	1790.
1969	Apr 10	Apr 24	3277.	Apr 13	1850.	60.42	1.66	1850.
1970	Apr 23	May 7	3973.	Apr 23	3620.	62.50	1.60	1860.
1971	Jul 20	Aug 3	1804.	Jul 30	1770.	64.58	1.55	1860.
1972	May 11	May 25	1068.	May 11	932.	66.67	1.50	2070.
1973	Aug 1	Aug 15	2100.	Aug 12	2090.	68.75	1.45	2070.
1974	Mar 1	Mar 15	4460.	Mar 15	3650.	70.83	1.41	2090.
1975	Mar 1	Mar 15	3217.	Mar 15	1200.	72.92	1.37	2170.
1976	Mar 1	Mar 15	1947.	Mar 3	1000.	75.00	1.33	2170.
1977	Mar 23	Apr 6	1673.	Mar 27	868.	77.08	1.30	2210.
1978	Mar 28	Apr 11	3721.	Apr 11	3400.	79.17	1.26	2370.
1979	Mar 4	Mar 18	4766.	Mar 15	4730.	81.25	1.23	2380.
1980	Apr 2	Apr 16	2499.	Apr 14	2170.	83.33	1.20	2650.
1981	Jun 17	Jul 1	1815.	Jun 29	1790.	85.42	1.17	3400.
1982	Mar 10	Mar 24	4833.	Mar 15	4730.	87.50	1.14	3620.
1983	Jun 13	Jun 27	2403.	Jun 13	2380.	89.58	1.12	3650.
1984	Mar 17	Mar 31	3215.	Mar 17	2370.	91.67	1.09	3740.
1985	Mar 4	Mar 18	3772.	Mar 18	3740.	93.75	1.07	4520.
1986	Mar 6	Mar 20	1301.	Mar 6	876.	95.83	1.04	4730.
1987	Jul 10	Jul 24	1133.	Jul 24	952.	97.92	1.02	4730.
Avg			3440.		1755.			
SD			2087.		1155.			

Qmin(2-Yr) = 1360. cfs Exceedance Probability = 20.03 percent

Station No. 05592100 Years of Record Analyzed = 17(1971-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1971	Jul 10	Jul 24	2329.	Jul' 22	1840.	5.56	18.00	940.
1972	May 12	May 26	1108.	May 26	940.	11.11	9.00	1110.
1973	Apr 16	Apr 30	3097.	Apr 30	2130.	16.67	6.00	1120.
1974	Mar 1	Mar 15	5151.	Mar 15	4340.	22.22	4.50	1250.
1975	Mar 1	Mar 15	3707.	Mar 15	1800.	27.78	3.60	1470.
1976	Mar 1	Mar 15	2537.	Mar 3	1480.	33.33	3.00	1480.
1977	Mar 23	Apr 6	2014.	Mar 27	1250.	38.89	2.57	1800.
1978	Mar 19	Apr 2	4913.	Mar 28	4340.	44.44	2.25	1840.
1979	Mar 31	Apr 14	6481.	Apr 10	4790.	50.00	2.00	2130.
1980	Mar 30	Apr 13	2826.	Apr 7	2290.	55.56	1.80	2290.
1981	May 27	Jun 10	1965.	Jun 3	1470.	61.11	1.64	2400.
1982	Mar 12	Mar 26	5692.	Mar 24	5450.	66.67	1.50	3640.
1983	Jun 16	Jun 30	2567.	Jun 27	2400.	72.22	1.38	4220.
1984	Mar 16	Mar 30	4365.	Mar 18	3640.	77.78	1.29	4340.
1985	Mar 3	Mar 17	4839.	Mar 3	4220.	83.33	1.20	4340.
1986	Mar 7	Mar 21	1528.	Mar 20	1110.	88.89	1.13	4790.
1987	Jul 9	Jul 23	1231.	Jul 9	1120.	94.44	1.06	5450.
Avg			3315.		2624.			
SD			1649.		1495.			

Qmin(2-Yr) = 2130. cfs Exceedance Probability = 16.30 percent

Station No. 05592500 Years of Record Analyzed = 73(1915-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1915	Aug 18	Sep 1	6843.	Sep 1	3440.	1.35	74.00	103.
1916	Jun 17	Jul 1	2440.	Jul 1	520.	2.70	37.00	210.
1917	May 31	Jun 14	7534.	Jun 14	5280.	4.05	24.67	305.
1918	Apr 21	May 5	4935.	May 5	2920.	5.41	18.50	440.
1919	Jun 23	Jul 7	5902.	Jul 7	2150.	6.76	14.80	452.
1920	May 13	May 27	6827.	May 13	4090.	8.11	12.33	520.
1921	Mar 24	Apr 7	3660.	Apr 7	1200.	9.46	10.57	541.
1922	Apr 9	Apr 23	15700.	Apr 23	12600.	10.81	9.25	830.
1923	Mar 12	Mar 26	7418.	Mar 26	4140.	12.16	8.22	870.
1924	Mar 25	Apr 8	3927.	Mar 26	1750.	13.51	7.40	890.
1925	Mar 14	Mar 28	6249.	Mar 28	2720.	14.86	6.73	938.
1926	Sep 10	Sep 24	5938.	Sep 24	3390.	16.22	6.17	1050.
1927	Apr 2	Apr 16	11679.	Apr 12	9150.	17.57	5.69	1200.
1928	Apr 6	Apr 20	3691.	Apr 19	1540.	18.92	5.29	1240.
1929	May 5	May 19	7489.	May 11	2720.	20.27	4.93	1290.
1930	Mar 1	Mar 15	1960.	Mar 15	870.	21.62	4.63	1450.
1931	Sep 16	Sep 30	459.	Sep 16	210.	22.97	4.35	1530.
1932	Jun 3	Jun 17	1387.	Jun 14	452.	24.32	4.11	1540.
1933	May 15	May 29	13053.	May 29	10500.	25.68	3.89	1540.
1934	Aug 13	Aug 27	2004.	Aug 15	440.	27.03	3.70	1540.
1935	May 8	May 22	7735.	May 12	5580.	28.38	3.52	1610.
1936	Mar 20	Apr 3	3528.	Apr 3	1240.	29.73	3.36	1660.
1937	Apr 26	May 10	5287.	Apr 28	2650.	31.08	3.22	1700.
1938	Mar 30	Apr 13	12194.	Apr 7	6240.	32.43	3.08	1710.
1939	Mar 10	Mar 24	8485.	Mar 11	1860.	33.78	2.96	1750.
1940	Apr 21	May 5	2870.	Apr 29	1050.	35.14	2.85	1760.
1941	Jun 10	Jun 24	1807.	Jun 22	830.	36.49	2.74	1780.
1942	Jul 8	Jul 22	6927.	Jul 22	2090.	37.84	2.64	1800.
1943	May 11	May 25	20553.	May 15	9200.	39.19	2.55	1800.
1944	Apr 13	Apr 27	11952.	Apr 21	5050.	40.54	2.47	1810.
1945	Jun 9	Jun 23	10436.	Jun 9	4940.	41.89	2.39	1810.
1946	May 4	May 18	7181.	May 16	4770.	43.24	2.31	1860.
1947	Jun 2	Jun 16	6201.	Jun 6	2810.	44.59	2.24	2090.
1948	Mar 22	Apr 5	10511.	Apr 5	5270.	45.95	2.18	2150.
1949	Mar 26	Apr 9	3019.	Apr 9	1450.	47.30	2.11	2280.
1950	Apr 3	Apr 17	4862.	Apr 17	1660.	48.65	2.06	2390.
1951	Jun 28	Jul 12	7695.	Jul 11	1780.	50.00	2.00	2420.
1952	Mar 11	Mar 25	5785.	Mar 17	2730.	51.35	1.95	2470.
1953	Mar 31	Apr 14	3161.	Mar 31	1760.	52.70	1.90	2550.
1954	Apr 16	Apr 30	277.	Apr 30	103.	54.05	1.85	2590.
1955	Apr 14	Apr 28	1775.	Apr 18	890.	55.41	1.80	2650.
1956	Jun 19	Jul 3	1603.	Jul 2	305.	56.76	1.76	2670.
1957	Jun 17	Jul 1	14640.	Jun 27	1800.	58.11	1.72	2710.
1958	Jul 29	Aug 12	6650.	Jul 30	2470.	59.46	1.68	2720.
1959	Mar 7	Mar 21	4385.	Mar 8	2550.	60.81	1.64	2720.
1960	Jun 21	Jul 5	7422.	Jun 21	2390.	62.16	1.61	2730.
1961	May 7	May 21	10036.	May 21	2590.	63.51	1.57	2780.
1962	Mar 17	Mar 31	7925.	Mar 19	2280.	64.86	1.54	2810.

Station No. 05592500 Years of Record Analyzed = 73(1915-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1963	Mar 5	Mar 19	4678.	Mar 15	1540.	66.22	1.51	2920.
1964	Apr 21	May 5	5226.	May 5	1810.	67.57	1.48	3290.
1965	Apr 18	May 2	4234.	Apr 24	1700.	68.92	1.45	3390.
1966	Apr 21	May 5	5889.	May 5	2420.	70.27	1.42	3440.
1967	May 7	May 21	4425.	May 21	1710.	71.62	1.40	3720.
1968	May 24	Jun 7	9799.	Jun 7	3290.	72.97	1.37	4090.
1969	Apr 11	Apr 25	7008.	Apr 13	2780.	74.32	1.35	4140.
1970	Apr 20	May 4	11276.	May 4	6020.	75.68	1.32	4380.
1971	Jul 11	Jul 25	2182.	Jul 17	1610.	77.03	1.30	4770.
1972	Apr 12	Apr 26	3032.	Apr 26	938.	78.78	1.28	4820.
1973	Apr 16	Apr 30	5677.	Apr 30	2670.	79.73	1.25	4940.
1974	Mar 1	Mar 15	6931.	Mar 9	5640.	81.08	1.23	5050.
1975	Mar 1	Mar 15	4895.	Mar 15	3720.	82.43	1.21	5270.
1976	Mar 1	Mar 15	3791.	Mar 3	1800.	83.78	1.19	5280.
1977	Mar 25	Apr 8	3570.	Apr 8	1540.	85.14	1.17	5460.
1978	Mar 15	Mar 29	11465.	Mar 29	6760.	86.49	1.16	5580.
1979	Mar 1	Mar 15	8381.	Mar 15	5460.	87.84	1.14	5640.
1980	Mar 31	Apr 14	4221.	Apr 7	2710.	89.19	1.12	6000.
1981	May 18	Jun 1	2878.	May 23	1810.	90.54	1.10	6020.
1982	Mar 13	Mar 27	6667.	Mar 27	6000.	91.89	1.09	6240.
1983	May 1	May 15	4861.	May 12	1530.	93.24	1.07	6760.
1984	Mar 16	Mar 30	6993.	Mar 30	4820.	94.59	1.06	9150.
1985	Mar 28	Apr 11	7547.	Mar 28	4380.	95.95	1.04	9200.
1986	Mar 8	Mar 22	1910.	Mar 22	1290.	97.30	1.03	10500.
1987	Apr 14	Apr 28	1480.	Apr 28	541.	98.65	1.01	12600.
Avg			6206.		3054.			
SD			3790.		2445.			

Qmin(2-Yr) = 2420. cfs

Exceedance Probability = 17.00 percent

Station No. 05593000 Years of Record Analyzed = 48(1940-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1940	Apr 30	May 14	3953.	Apr 30	1320.	2.04	49.00	46.
1941	Apr 8	Apr 22	2474.	Apr 15	807.	4.08	24.50	121.
1942	Jul 10	Jul 24	8509.	Jul 10	5050.	6.12	16.33	807.
1943	May 12	May 26	27720.	May 17	16200.	8.16	12.25	1010.
1944	Apr 16	Apr 30	15053.	Apr 22	7750.	10.20	9.80	1100.
1945	Apr 1	Apr 15	14597.	Apr 12	7750.	12.24	8.17	1320.
1946	May 8	May 22	10835.	May 17	8650.	14.29	7.00	1530.
1947	Apr 27	May 11	8508.	May 11	5480.	16.33	6.13	1910.
1948	Mar 25	Apr 8	15529.	Apr 8	7440.	18.37	5.44	1920.
1949	Mar 24	Apr 7	4673.	Mar 26	2540.	20.41	4.90	2040.
1950	Apr 4	Apr 18	6109.	Apr 18	3420.	22.45	4.45	2410.
1951	Jun 30	Jul 14	10612.	Jul 14	4960.	24.49	4.08	2540.
1952	Mar 13	Mar 27	8433.	Mar 20	7070.	26.53	3.77	2790.
1953	Apr 2	Apr 16	3399.	Apr 16	1910.	28.57	3.50	2870.
1954	Apr 17	May 1	295.	May 1	121.	30.61	3.27	3050.
1955	Apr 16	Apr 30	2456.	Apr 22	1010.	32.65	3.06	3260.
1956	Mar 1	Mar 15	3858.	Mar 15	1100.	34.69	2.88	3400.
1957	Jun 22	Jul 6	15899.	Jun 29	6030.	36.73	2.72	3420.
1958	Aug 1	Aug 15	7881.	Aug 1	4740.	38.78	2.58	3520.
1959	Mar 11	Mar 25	4293.	Mar 11	3400.	40.82	2.45	3730.
1960	Jun 27	Jul 11	9449.	Jun 27	3770.	42.86	2.33	3770.
1961	May 8	May 22	17206.	May 8	7840.	44.90	2.23	4010.
1962	Mar 21	Apr 4	9527.	Mar 21	4920.	46.94	2.13	4690.
1963	Mar 10	Mar 24	5798.	Mar 17	4750.	48.98	2.04	4740.
1964	Apr 24	May 8	5460.	Apr 24	3520.	51.02	1.96	4750.
1965	Apr 25	May 9	3850.	Apr 25	2040.	53.06	1.88	4920.
1966	Apr 24	May 8	7260.	May 8	5120.	55.10	1.81	4960.
1967	May 8	May 22	5951.	May 8	1530.	57.14	1.75	5050.
1968	Jun 13	Jun 27	4117.	Jun 27	4010.	59.18	1.69	5110.
1969	Mar 1	Mar 15	6228.	Mar 15	3730.	61.22	1.63	5120.
1970	May 6	May 20	9669.	May 20	9030.	63.27	1.58	5400.
1971	Jul 15	Jul 29	3023.	Jul 29	2410.	65.31	1.53	5480.
1972	May 14	May 28	3175.	May 17	2870.	67.35	1.48	6030.
1973	May 6	May 20	6309.	May 6	6200.	69.39	1.44	6200.
1974	Mar 2	Mar 16	10017.	Mar 2	9980.	71.43	1.40	7070.
1975	Mar 1	Mar 15	9193.	Mar 1	8890.	73.47	1.36	7440.
1976	Mar 5	Mar 19	4947.	Mar 19	3260.	75.51	1.32	7750.
1977	Mar 28	Apr 11	5857.	Apr 11	2790.	77.55	1.29	7750.
1978	Mar 20	Apr 3	9433.	Apr 2	9330.	79.59	1.26	7840.
1979	Apr 5	Apr 19	10269.	Apr 9	9970.	81.63	1.23	8650.
1980	Apr 3	Apr 17	5579.	Apr 15	4690.	83.67	1.20	8820.
1981	May 30	Jun 13	3343.	Jun 9	3050.	85.71	1.17	8890.
1982	Mar 2	Mar 16	9647.	Mar 7	9590.	87.76	1.14	9030.
1983	Apr 7	Apr 21	5263.	Apr 12	5110.	89.80	1.11	9330.
1984	Mar 15	Mar 29	6809.	Mar 15	5400.	91.84	1.09	9590.
1985	Mar 25	Apr 8	8975.	Mar 25	8820.	93.88	1.07	9970.
1986	Mar 12	Mar 26	3036.	Mar 26	1920.	95.92	1.04	9980.
1987	Apr 16	Apr 30	1737.	Apr 29	46.	97.96	1.02	16200.
Avg			7630.		5028.			
SD			4923.		3266.			

Qmin(2-Yr) = 4745. cfs Exceedance Probability = 12.74 percent

Station No. 05594100 Years of Record Analyzed = 18(1970-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1970	Apr 24	May 8	9365.	May 8	8940.	5.26	19.00	917.
1971	Mar 7	Mar 21	4064.	Mar 7	3320.	10.53	9.50	2470.
1972	Apr 13	Apr 27	9774.	Apr 13	3720.	15.79	6.33	3320.
1973	Mar 5	Mar 19	12757.	Mar 6	5500.	21.05	4.75	3660.
1974	Mar 31	Apr 14	15240.	Mar 31	13600.	26.32	3.80	3720.
1975	Mar 1	Mar 15	13233.	Mar 6	10200.	31.58	3.17	3930.
1976	Mar 5	Mar 19	5691.	Mar 5	3930.	36.84	2.71	4190.
1977	Mar 28	Apr 11	12264.	Apr 11	3660.	42.11	2.38	5500.
1978	Mar 16	Mar 30	23173.	Mar 19	17800.	47.37	2.11	5850.
1979	Apr 5	Apr 19	20687.	Apr 9	11600.	52.63	1.90	5950.
1980	Mar 31	Apr 14	8136.	Apr 11	5950.	57.89	1.73	8940.
1981	May 24	Jun 7	4858.	May 30	4190.	63.16	1.58	10200.
1982	Mar 15	Mar 29	13647.	Mar 29	12100.	68.42	1.46	11200.
1983	May 1	May 15	12504.	May 13	5850.	73.68	1.36	11600.
1984	Mar 19	Apr 2	16573.	Apr 2	11200.	78.95	1.27	12100.
1985	Mar 30	Apr 13	17793.	Apr 13	12600.	84.21	1.19	12600.
1986	Mar 13	Mar 27	5021.	Mar 27	2470.	89.47	1.12	13600.
1987	Apr 14	Apr 28	3502.	Apr 28	917.	94.74	1.06	17800.
Avg			11571.		7642.			
SD			5784.		4715.			

Qmin(2-Yr) = 5900. cfs

Exceedance Probability = 20.54 percent

Station No. 05595000 Years of Record Analyzed = 37(1935-1971)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1935	May 17	May 31	19733.	May 18	15000.	2.63	38.00	42.
1936	Mar 1	Mar 15	7005.	Mar 15	1930.	5.26	19.00	1380.
1937	Apr 30	May 14	11061.	May 14	9590.	7.89	12.67	1420.
1938	Apr 1	Apr 15	30000.	Apr 15	17200.	10.53	9.50	1520.
1939	Mar 12	Mar 26	14713.	Mar 12	11800.	13.16	7.60	1930.
1940	May 1	May 15	5398.	May 15	2150.	15.79	6.33	2150.
1941	Apr 16	Apr 30	5497.	Apr 16	1420.	18.42	5.43	2300.
1942	Jul 4	Jul 18	17847.	Jul 8	13700.	21.05	4.75	2310.
1943	May 17	May 31	55167.	May 31	32000.	23.68	4.22	3800.
1944	Apr 23	May 7	25267.	Apr 23	10600.	26.32	3.80	3820.
1945	Apr 1	Apr 15	29387.	Apr 14	19200.	28.95	3.45	4100.
1946	Aug 15	Aug 29	35059.	Aug 29	2310.	31.58	3.17	5250.
1947	Apr 26	May 10	15933.	Apr 26	12200.	34.21	2.92	5790.
1948	Mar 28	Apr 11	22820.	Apr 11	13200.	36.84	2.71	6130.
1949	Mar 26	Apr 9	8896.	Mar 26	6260.	39.47	2.53	6260.
1950	Apr 4	Apr 18	12338.	Apr 18	8690.	42.11	2.38	7410.
1951	Mar 1	Mar 15	12975.	Mar 11	9740.	44.74	2.24	7970.
1952	Mar 15	Mar 29	15733.	Mar 29	12800.	47.37	2.11	8440.
1953	Mar 6	Mar 20	5555.	Mar 14	2300.	50.00	2.00	8690.
1954	Sep 16	Sep 30	1325.	Sep 19	42.	52.63	1.90	8720.
1955	Apr 18	May 2	3623.	Apr 22	1380.	55.26	1.81	9590.
1956	Mar 1	Mar 15	4348.	Mar 15	1520.	57.89	1.73	9740.
1957	Jun 16	Jun 30	34107.	Jun 30	14800.	60.53	1.65	10500.
1958	Aug 4	Aug 18	15180.	Aug 7	10500.	63.16	1.58	10600.
1959	Mar 1	Mar 15	7221.	Mar 7	4100.	65.79	1.52	10900.
1960	Jul 2	Jul 16	13095.	Jul 16	7970.	68.42	1.46	11200.
1961	May 8	May 22	43673.	May 8	15100.	71.05	1.41	11800.
1962	Mar 22	Apr 5	15060.	Apr 5	10900.	73.68	1.36	12200.
1963	Mar 11	Mar 25	8518.	Mar 15	7410.	76.32	1.31	12800.
1964	Apr 6	Apr 20	7645.	Apr 20	6130.	78.95	1.27	13200.
1965	Apr 26	May 10	5701.	Apr 26	3820.	81.58	1.23	13700.
1966	Apr 25	May 9	9673.	May 9	8720.	84.21	1.19	14800.
1967	Mar 22	Apr 5	8177.	Apr 5	5250.	86.84	1.15	15000.
1968	May 26	Jun 9	10209.	Jun 9	5790.	89.47	1.12	15100.
1969	Jul 5	Jul 19	14379.	Jul 6	8440.	92.11	1.09	17200.
1970	Apr 24	May 8	14760.	Apr 24	11200.	94.74	1.06	19200.
1971	Mar 8	Mar 22	4376.	Mar 8	3800.	97.37	1.03	32000.
Avg			15445.		8891.			
SD			11918.		6354.			

Qmin(2-Yr) = 8690. cfs Exceedance Probability = 11.76 percent

Station No. 05599500 Years of Record Analyzed = 57(1931-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1931	Sep 1	Sep 15	3790.	Sep 15	192.	1.72	58.00	40.
1932	Aug 10	Aug 24	3043.	Aug 24	412.	3.45	29.00	147.
1933	May 11	May 25	16627.	May 11	11000.	5.17	19.33	192.
1934	Mar 28	Apr 11	1394.	Apr 5	316.	6.90	14.50	316.
1935	Mar 11	Mar 25	16071.	Mar 25	7600.	8.62	11.60	412.
1936	Apr 6	Apr 20	3937.	Apr 20	722.	10.34	9.67	514.
1937	Apr 30	May 14	9958.	Apr 30	7030.	12.07	8.29	572.
1938	Mar 30	Apr 13	7445.	Mar 30	4320.	13.79	7.25	722.
1939	Apr 17	May 1	11783.	Apr 17	6360.	15.52	6.44	1160.
1940	Apr 21	May 5	7716.	May 1	5530.	17.24	5.80	1470.
1941	Apr 4	Apr 18	682.	Apr 17	147.	18.97	5.27	1710.
1942	Mar 9	Mar 23	5830.	Mar 23	3260.	20.69	4.83	2000.
1943	May 12	May 26	12167.	May 26	8900.	22.41	4.46	2040.
1944	Apr 14	Apr 28	7927.	Apr 23	5050.	24.14	4.14	2410.
1945	Apr 3	Apr 17	17427.	Apr 13	11800.	25.86	3.87	2530.
1946	Aug 19	Sep 2	15193.	Sep 2	10300.	27.59	3.63	2700.
1947	Apr 24	May 8	10405.	Apr 24	5640.	29.31	3.41	2780.
1948	Apr 5	Apr 19	5859.	Apr 12	2410.	31.03	3.22	3260.
1949	Mar 19	Apr 2	11432.	Mar 27	9080.	32.76	3.05	3270.
1950	Mar 30	Apr 13	12589.	Mar 30	9140.	34.48	2.90	3440.
1951	Mar 15	Mar 29	6935.	Mar 16	3690.	36.21	2.76	3690.
1952	Mar 14	Mar 28	11707.	Mar 19	11000.	37.93	2.64	3750.
1953	Mar 4	Mar 18	4509.	Mar 17	2780.	39.66	2.52	4320.
1954	May 2	May 16	1552.	May 16	40.	41.38	2.42	4480.
1955	Mar 20	Apr 3	7269.	Apr 3	2700.	43.10	2.32	4670.
1956	Mar 1	Mar 15	2984.	Mar 6	2040.	44.83	2.23	4840.
1957	Apr 5	Apr 19	16840.	Apr 19	11600.	46.55	2.15	4920.
1958	Jul 18	Aug 1	11561.	Aug 1	7480.	48.28	2.07	5050.
1959	Aug 17	Aug 31	6282.	Aug 31	1160.	50.00	2.00	5130.
1960	Mar 23	Apr 6	5628.	Mar 30	4670.	51.72	1.93	5230.
1961	May 9	May 23	22973.	May 23	14200.	53.45	1.87	5490.
1962	Mar 1	Mar 15	8084.	Mar 15	3750.	55.17	1.81	5530.
1963	Mar 17	Mar 31	7637.	Mar 31	4920.	56.90	1.76	5640.
1964	Mar 10	Mar 24	13869.	Mar 24	8860.	58.62	1.71	6040.
1965	Apr 5	Apr 19	2380.	Apr 17	1470.	60.34	1.66	6230.
1966	Apr 25	May 9	7777.	May 9	4840.	62.07	1.61	6310.
1967	May 5	May 19	3319.	May 12	2000.	63.79	1.57	6360.
1968	Apr 1	Apr 15	8519.	Apr 15	5490.	65.52	1.53	6900.
1969	Jul 6	Jul 20	8795.	Jul 13	7680.	67.24	1.49	7030.
1970	Apr 22	May 6	7049.	Apr 30	6230.	68.97	1.45	7210.
1971	Mar 1	Mar 15	3761.	Mar 14	1710.	70.69	1.41	7400.
1972	Apr 17	May 1	8065.	May 1	5130.	72.41	1.38	7480.
1973	Apr 23	May 7	10778.	May 7	7210.	74.14	1.35	7600.
1974	Mar 13	Mar 27	7093.	Mar 27	6310.	75.86	1.32	7680.
1975	Apr 26	May 10	8587.	May 8	5230.	77.59	1.29	7980.
1976	Jun 25	Jul 9	2015.	Jul 2	514.	79.31	1.26	8860.
1977	Mar 29	Apr 12	11025.	Apr 12	4480.	81.03	1.23	8900.
1978	Mar 12	Mar 26	11688.	Mar 25	7980.	82.76	1.21	9080.

Station No. 05599500 Years of Record Analyzed = 57(1931-1987)
 Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
 Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1979	Mar 1	Mar 15	16860.	Mar 15	10100.	84.48	1.18	9140.
1980	Mar 21	Apr 4	4579.	Mar 24	3440.	86.21	1.16	10100.
1981	May 28	Jun 11	9470.	May 30	6900.	87.93	1.14	10300.
1982	Mar 14	Mar 28	4156.	Mar 28	2530.	89.66	1.12	11000.
1983	May 2	May 16	22433.	May 13	15300.	91.38	1.09	11000.
1984	Mar 23	Apr 6	9753.	Mar 28	7400.	93.10	1.07	11600.
1985	Mar 31	Apr 14	13057.	Apr 14	6040.	94.83	1.05	11800.
1986	Mar 13	Mar 27	4426.	Mar 27	3270.	96.55	1.04	14200.
1987	Mar 1	Mar 15	3026.	Mar 15	572.	98.28	1.02	15300.
Avg			8732.			5437.		
SD			5114.			3727.		

Qmin(2-Yr) = 5130. cfs Exceedance Probability = 11.22 percent

Station No. 03611500 Years of Record Analyzed = 58(1929-1986)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start		End		Historical		Ranked			
					Qavg	Date	Qmin	Prob	T-Yr	Qmin
1929	Mar	6	Mar	20	901933	Mar 20	778000	1.69	59.00	172000
1930	Mar	7	Mar	21	533800	Mar 21	471000	3.39	29.50	249000
1931	Apr	3	Apr	17	489000	Apr 17	396000	5.08	19.67	327000
1932	Mar	31	Apr	14	602733	Mar 31	470000	6.78	14.75	329000
1933	Mar	24	Apr	7	962666	Mar 24	845000	8.47	11.80	396000
1934	Mar	5	Mar	19	641333	Mar 5	423000	10.17	9.83	404000
1935	Mar	15	Mar	29	831800	Mar 29	707000	11.86	8.43	414000
1936	Apr	5	Apr	19	1064666	Apr 19	1010000	13.56	7.38	416000
1937	May	2	May	16	696866	May 2	531000	15.25	6.56	423000
1938	Mar	18	Apr	1	620333	Mar 29	604000	16.95	5.90	426000
1939	Mar	4	Mar	18	926533	Mar 4	861000	18.64	5.36	430000
1940	Apr	22	May	6	772533	Apr 22	652000	20.34	4.92	452000
1941	Apr	6	Apr	20	261600	Apr 6	172000	22.03	4.54	454000
1942	Mar	16	Mar	30	638800	Mar 16	514000	23.73	4.21	470000
1943	Mar	21	Apr	4	876800	Mar 21	739000	25.42	3.93	471000
1944	Mar	25	Apr	8	706800	Mar 26	599000	27.12	3.69	476000
1945	Mar	7	Mar	21	1078000	Mar 7	1020000	28.81	3.47	506000
1946	Mar	18	Apr	1	481733	Mar 18	454000	30.51	3.28	509000
1947	Apr	11	Apr	25	475466	Apr 25	414000	32.20	3.11	514000
1948	Apr	15	Apr	29	828533	Apr 15	740000	33.90	2.95	531000
1949	Mar	25	Apr	8	592066	Mar 25	476000	35.59	2.81	535000
1950	Apr	2	Apr	16	617600	Apr 2	535000	37.29	2.68	540000
1951	Mar	1	Mar	15	693533	Mar 15	613000	38.98	2.57	559000
1952	Mar	22	Apr	5	776333	Mar 22	662000	40.68	2.46	567000
1953	Mar	3	Mar	17	525333	Mar 17	416000	42.37	2.36	578000
1954	Apr	19	May	3	308800	May 3	249000	44.07	2.27	599000
1955	Mar	20	Apr	3	962000	Mar 20	830000	45.76	2.19	604000
1956	Mar	14	Mar	28	724733	Mar 14	644000	47.46	2.11	613000
1957	Apr	9	Apr	23	706400	Apr 9	624000	49.15	2.03	618000
1958	May	8	May	22	735066	May 8	677000	50.85	1.97	624000
1959	Mar	1	Mar	15	369333	Mar 13	327000	52.54	1.90	642000
1960	Apr	3	Apr	17	493733	Apr 3	430000	54.24	1.84	644000
1961	Mar	9	Mar	23	893199	Mar 23	825999	55.93	1.79	652000
1962	Mar	2	Mar	16	1037665	Mar 16	976999	57.63	1.74	654000
1963	Mar	16	Mar	30	1087999	Mar 30	1019999	59.32	1.69	662000
1964	Mar	15	Mar	29	1047999	Mar 15	943999	61.02	1.64	677000
1965	Mar	29	Apr	12	762332	Apr 12	618000	62.71	1.59	707000
1966	May	1	May	15	592266	May 1	404000	64.41	1.55	707000
1967	Mar	12	Mar	26	760665	Mar 26	719999	66.10	1.51	719999
1968	May	29	Jun	12	660932	May 29	567000	67.80	1.47	739000
1969	Apr	14	Apr	28	489200	Apr 16	452000	69.49	1.44	740000
1970	Apr	28	May	12	681666	May 12	540000	71.19	1.40	765000
1971	Mar	1	Mar	15	715933	Mar 15	578000	72.88	1.37	778000
1972	Apr	20	May	4	774466	Apr 20	707000	74.58	1.34	817000
1973	Mar	20	Apr	3	920866	Apr 3	840000	76.27	1.31	825999
1974	Apr	5	Apr	19	635266	Apr 19	506000	77.97	1.28	830000
1975	Mar	26	Apr	9	1137333	Mar 26	1050000	79.66	1.26	840000
1976	Mar	25	Apr	8	476733	Apr 8	426000	81.36	1.23	845000

Station No. 03611500 Years of Record Analyzed = 58(1929-1986)
 Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
 Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Ranked			
			Qavg	Date	Qmin	Prob	T-Yr	Qmin
1977	Mar 5	Mar 19	691933	Mar 5	642000	83.05	1.20	849000
1978	Mar 17	Mar 31	824866	Mar 31	765000	84.75	1.18	861000
1979	Mar 4	Mar 18	1075333	Mar 18	1010000	86.44	1.16	900000
1980	Mar 23	Apr 6	936800	Apr 6	817000	88.14	1.13	943999
1981	Jun 4	Jun 18	612533	Jun 4	509000	89.83	1.11	976999
1982	Mar 17	Mar 31	740533	Mar 17	654000	91.53	1.09	1010000
1983	May 18	Jun 1	985866	May 19	900000	93.22	1.07	1010000
1984	May 8	May 22	1001533	May 22	849000	94.92	1.05	1019999
1985	Mar 1	Mar 15	641000	Mar 12	559000	96.61	1.04	1020000
1986	Mar 14	Mar 28	486066	Mar 14	329000	98.31	1.02	1050000
Avg			733928			639517		
SD			208942			210735		

Qmin(2-Yr) = 621000 cfs

Exceedance Probability = 10.66 percent

Station No. 05420500 Years of Record Analyzed = 87(1901-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked		Qmin
			Qavg	Date			T-Yr		
1901	Apr 18	May 2	102480	May 2	96800	1.14	88.00	34500	
1902	May 21	Jun 4	110626	Jun 3	98400	2.27	44.00	35300	
1903	May 30	Jun 13	158133	Jun 13	142000	3.41	29.33	44100	
1904	Apr 22	May 6	102733	May 3	95200	4.55	22.00	47100	
1905	Jun 18	Jul 2	152400	Jun 30	134000	5.68	17.60	51100	
1906	Apr 17	May 1	161933	Apr 17	151000	6.82	14.67	52000	
1907	Apr 8	Apr 22	153200	Apr 22	134000	7.95	12.57	52100	
1908	Jul 8	Jul 22	126266	Jul 8	121000	9.09	11.00	55800	
1909	Apr 20	May 4	115800	Apr 28	107000	10.23	9.78	58700	
1910	Mar 24	Apr 7	70800	Mar 30	68600	11.36	8.80	62400	
1911	Jun 3	Jun 17	49373	Jun 10	44100	12.50	8.00	62600	
1912	May 22	Jun 5	90933	Jun 4	87200	13.64	7.33	66600	
1913	Mar 21	Apr 4	95740	Apr 4	76100	14.77	6.77	68600	
1914	Jul 8	Jul 22	101040	Jul 22	87200	15.91	6.29	70000	
1915	Apr 17	May 1	84133	May 1	73100	17.05	5.87	70000	
1916	Apr 27	May 11	176533	Apr 27	160000	18.18	5.50	72500	
1917	Apr 17	May 1	133666	Apr 30	123000	19.32	5.18	72900	
1918	Jun 7	Jun 21	112733	Jun 7	97500	20.45	4.89	73100	
1919	Apr 18	May 2	150533	Apr 18	133000	21.59	4.63	74200	
1920	Apr 4	Apr 18	189200	Apr 18	148000	22.73	4.40	76100	
1921	May 3	May 17	71693	May 7	55800	23.86	4.19	77100	
1922	Apr 17	May 1	186533	May 1	150000	25.00	4.00	78800	
1923	Apr 28	May 12	86900	Apr 28	72500	26.14	3.83	78800	
1924	Apr 29	May 13	86000	Apr 29	82000	27.27	3.67	79000	
1925	Jun 17	Jul 1	85600	Jul 1	66600	28.41	3.52	81200	
1926	Sep 16	Sep 30	69526	Sep 16	52100	29.55	3.38	81600	
1927	Mar 26	Apr 9	119600	Apr 9	103000	30.68	3.26	82000	
1928	Apr 7	Apr 21	110066	Apr 21	105000	31.82	3.14	85400	
1929	Apr 9	Apr 23	141600	Apr 23	136000	32.95	3.03	85800	
1930	Jun 17	Jul 1	73260	Jun 20	62400	34.09	2.93	87000	
1931	Jun 30	Jul 14	39166	Jun 30	35300	35.23	2.84	87200	
1932	Apr 15	Apr 29	88813	Apr 29	78800	36.36	2.75	87200	
1933	Apr 4	Apr 18	90173	Apr 4	87000	37.50	2.67	88000	
1934	Apr 12	Apr 26	68946	Apr 12	51100	38.64	2.59	90800	
1935	Apr 1	Apr 15	107040	Apr 1	88000	39.77	2.51	91800	
1936	Apr 2	Apr 16	117813	Apr 16	97200	40.91	2.44	95200	
1937	May 2	May 16	78880	May 2	72900	42.05	2.38	95200	
1938	Sep 16	Sep 30	134700	Sep 16	85400	43.18	2.32	96100	
1939	Apr 3	Apr 17	124580	Apr 3	100700	44.32	2.26	96800	
1940	Apr 10	Apr 24	65600	Apr 10	62600	45.45	2.20	97200	
1941	Apr 16	Apr 30	120313	Apr 16	105900	46.59	2.15	97500	
1942	Jun 8	Jun 22	145660	Jun 22	111800	47.73	2.10	98000	
1943	Jun 27	Jul 11	151380	Jul 5	141100	48.86	2.05	98400	
1944	Jun 19	Jul 3	146700	Jul 3	134000	50.00	2.00	100700	
1945	Mar 25	Apr 8	151760	Mar 25	132900	51.14	1.96	103000	
1946	Mar 22	Apr 5	130220	Apr 5	112300	52.27	1.91	103000	
1947	Apr 20	May 4	209846	May 4	183300	53.41	1.87	104300	
1948	Mar 28	Apr 11	100426	Apr 10	96100	54.55	1.83	105000	

Station No. 05420500 Years of Record Analyzed = 87(1901-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1949	Apr 3	Apr 17	83500	Apr 3	81600	55.68	1.80	105900
1950	May 14	May 28	120386	May 14	104300	56.82	1.76	107000
1951	Apr 20	May 4	209560	May 4	186600	57.95	1.73	108000
1952	Apr 20	May 4	209846	May 4	183300	59.09	1.69	109000
1953	Mar 30	Apr 13	97733	Mar 30	90800	60.23	1.66	110100
1954	May 7	May 21	147513	May 7	110100	61.36	1.63	111000
1955	Apr 13	Apr 27	92613	Apr 13	85800	62.50	1.60	111800
1956	Apr 11	Apr 25	115733	Apr 11	103000	63.64	1.57	112300
1957	Jul 6	Jul 20	90120	Jul 20	78800	64.77	1.54	114000
1958	Apr 7	Apr 21	56880	Apr 8	47100	65.91	1.52	115000
1959	Mar 26	Apr 9	92886	Mar 26	77100	67.05	1.49	121000
1960	May 8	May 22	137266	May 12	123000	68.18	1.47	123000
1961	Mar 27	Apr 10	117560	Apr 10	81200	69.32	1.44	123000
1962	Apr 12	Apr 26	126466	Apr 12	111000	70.45	1.42	124000
1963	Mar 26	Apr 9	87540	Apr 9	79000	71.59	1.40	124000
1964	May 14	May 28	78966	May 14	70000	72.73	1.38	125000
1965	Apr 22	May 6	270866	Apr 22	226000	73.86	1.35	126000
1966	Mar 26	Apr 9	127666	Apr 9	114000	75.00	1.33	132900
1967	Apr 9	Apr 23	176266	Apr 23	141000	76.14	1.31	133000
1968	Jun 28	Jul 12	114533	Jun 28	98000	77.27	1.29	134000
1969	Apr 19	May 3	211066	Apr 19	181000	78.41	1.28	134000
1970	May 31	Jun 14	83186	May 31	70000	79.55	1.26	134000
1971	Apr 16	Apr 30	148933	Apr 16	125000	80.68	1.24	136000
1972	Apr 26	May 10	138933	May 10	124000	81.82	1.22	141000
1973	Mar 18	Apr 1	181666	Apr 1	148000	82.95	1.21	141100
1974	Jun 16	Jun 30	122633	Jun 17	91800	84.09	1.19	142000
1975	May 2	May 16	194466	May 2	164000	85.23	1.17	142000
1976	Apr 5	Apr 19	133866	Apr 5	108000	86.36	1.16	148000
1977	Mar 29	Apr 12	41520	Apr 12	34500	87.50	1.14	148000
1978	Apr 13	Apr 27	109866	Apr 13	95200	88.64	1.13	150000
1979	Apr 28	May 12	148200	Apr 28	142000	89.77	1.11	150000
1980	Apr 10	Apr 24	87513	Apr 10	74200	90.91	1.10	151000
1981	Apr 6	Apr 20	77953	Apr 20	58700	92.05	1.09	160000
1982	Apr 21	May 5	144200	Apr 22	126000	93.18	1.07	164000
1983	Mar 13	Mar 27	153466	Mar 27	124000	94.32	1.06	181000
1984	Jun 22	Jul 6	123600	Jun 22	109000	95.45	1.05	183300
1985	Apr 1	Apr 15	127066	Apr 15	115000	96.59	1.04	183300
1986	Apr 8	Apr 22	176066	Apr 22	150000	97.73	1.02	186600
1987	Mar 29	Apr 12	59666	Apr 12	52000	98.86	1.01	226000
Avg			121365	104863				
SD			43409	37364				

Qmin(2-Yr) = 100700 cfs Exceedance Probability = 6.80 percent

Station No. 05474500 Years of Record Analyzed = 87(1901-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1901	Mar 23	Apr 6	140800	Mar 31	129000	1.14	88.00	35500
1902	Jun 2	Jun 16	224600	Jun 16	176000	2.27	44.00	41900
1903	Jun 2	Jun 16	224600	Jun 16	176000	3.41	29.33	47500
1904	Mar 24	Apr 7	145866	Mar 24	116000	4.55	22.00	55000
1905	Jun 22	Jul 6	174533	Jul 6	161000	5.68	17.60	56500
1906	Apr 19	May 3	185466	Apr 19	174000	6.82	14.67	72400
1907	Apr 11	Apr 25	164933	Apr 25	149000	7.95	12.57	72500
1908	Jun 4	Jun 18	164933	Jun 5	158000	9.09	11.00	73500
1909	Apr 25	May 9	171533	May 1	161000	10.23	9.78	79600
1910	Mar 17	Mar 31	114866	Mar 29	103000	11.36	8.80	83500
1911	Jun 4	Jun 18	60420	Jun 12	55000	12.50	8.00	83500
1912	Mar 30	Apr 13	186866	Mar 30	153000	13.64	7.33	84000
1913	Mar 22	Apr 5	140133	Mar 22	118000	14.77	6.77	84500
1914	Jul 9	Jul 23	105600	Jul 9	92000	15.91	6.29	85500
1915	May 31	Jun 14	123866	Jun 14	103000	17.05	5.87	87900
1916	May 2	May 16	201400	May 16	187000	18.18	5.50	89500
1917	Apr 22	May 6	151833	Apr 29	144000	19.32	5.18	90000
1918	Jun 7	Jun 21	152266	Jun 21	112000	20.45	4.89	92000
1919	Apr 26	May 10	188533	May 3	163000	21.59	4.63	94000
1920	Apr 7	Apr 21	216066	Apr 19	199000	22.73	4.40	97500
1921	May 1	May 15	97166	May 7	89500	23.86	4.19	102100
1922	Apr 18	May 2	216333	May 2	185000	25.00	4.00	103000
1923	Apr 4	Apr 18	117000	Apr 18	83500	26.14	3.83	103000
1924	Aug 21	Sep 4	124366	Sep 4	84500	27.27	3.67	105000
1925	Jun 18	Jul 2	92000	Jul 2	73500	28.41	3.52	107800
1926	Sep 16	Sep 30	119566	Sep 21	94000	29.55	3.38	108000
1927	Mar 29	Apr 12	153600	Apr 11	136000	30.68	3.26	109700
1928	Apr 8	Apr 22	139333	Apr 22	132000	31.82	3.14	111000
1929	Mar 19	Apr 2	221933	Mar 30	202000	32.95	3.03	112000
1930	Jun 15	Jun 29	108066	Jun 24	83500	34.09	2.93	113000
1931	Jul 2	Jul 16	40400	Jul 16	35500	35.23	2.84	114100
1932	Apr 14	Apr 28	97200	Apr 18	90000	36.36	2.75	115100
1933	Apr 5	Apr 19	135533	Apr 19	113000	37.50	2.67	116000
1934	Apr 14	Apr 28	71533	Apr 28	56500	38.64	2.59	116400
1935	Apr 3	Apr 17	126066	Apr 3	108000	39.77	2.51	118000
1936	Apr 2	Apr 16	136600	Apr 2	120000	40.91	2.44	120000
1937	Mar 5	Mar 19	147766	Mar 19	97500	42.05	2.38	121800
1938	Sep 16	Sep 30	160680	Sep 16	114100	43.18	2.32	127500
1939	Apr 7	Apr 21	145726	Apr 7	129300	44.32	2.26	129000
1940	Apr 11	Apr 25	75860	Apr 13	72500	45.45	2.20	129300
1941	Apr 18	May 2	145253	Apr 18	130400	46.59	2.15	130400
1942	Jun 10	Jun 24	177993	Jun 10	140900	47.73	2.10	131500
1943	Apr 13	Apr 27	163786	Apr 26	149000	48.86	2.05	132000
1944	May 22	Jun 5	205553	Jun 5	153300	50.00	2.00	135000
1945	Mar 25	Apr 8	195180	Apr 8	182700	51.14	1.96	136000
1946	Mar 20	Apr 3	190486	Apr 3	178400	52.27	1.91	138200
1947	Jun 9	Jun 23	203160	Jun 15	160600	53.41	1.87	140400
1948	Mar 19	Apr 2	189966	Apr 2	148400	54.55	1.83	140900

Station No. 05474500 Years of Record Analyzed = 87(1901-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1949	Mar 2	Mar 16	121200	Mar 4	85500	55.68	1.80	141000
1950	Apr 25	May 9	162560	May 8	148200	56.82	1.76	144000
1951	Apr 24	May 8	253826	Apr 24	239700	57.95	1.73	144000
1952	Apr 22	May 6	242546	May 6	215400	59.09	1.69	148000
1953	Mar 30	Apr 13	128240	Mar 30	116400	60.23	1.66	148200
1954	May 9	May 23	159073	May 9	127500	61.36	1.63	148400
1955	Apr 16	Apr 30	128460	Apr 18	109700	62.50	1.60	149000
1956	Apr 12	Apr 26	121393	Apr 12	111000	63.64	1.57	149000
1957	Jul 6	Jul 20	96813	Jul 6	87900	64.77	1.54	153000
1958	Jun 7	Jun 21	66926	Jun 21	41900	65.91	1.52	153300
1959	Mar 28	Apr 11	160226	Apr 11	138200	67.05	1.49	158000
1960	Mar 30	Apr 13	208053	Mar 30	131500	68.18	1.47	160600
1961	Mar 28	Apr 11	162980	Mar 28	121800	69.32	1.44	161000
1962	Mar 31	Apr 14	202246	Apr 14	178300	70.45	1.42	161000
1963	Mar 21	Apr 4	117426	Mar 25	107800	71.59	1.40	161000
1964	May 15	May 29	90680	May 29	84000	72.73	1.38	163000
1965	Apr 25	May 9	292466	May 9	253000	73.86	1.35	165100
1966	Mar 28	Apr 11	154173	Apr 11	140400	75.00	1.33	168000
1967	Apr 11	Apr 25	198566	Apr 11	165100	76.14	1.31	174000
1968	Jun 30	Jul 14	130800	Jun 30	115100	77.27	1.29	176000
1969	Apr 21	May 5	237266	May 5	214000	78.41	1.28	176000
1970	Jun 1	Jun 15	121186	Jun 14	102100	79.55	1.26	177000
1971	Apr 18	May 2	168946	Apr 18	148000	80.68	1.24	178300
1972	Apr 30	May 14	182133	May 14	168000	81.82	1.22	178400
1973	Apr 21	May 5	287266	Apr 21	244000	82.95	1.21	181000
1974	May 19	Jun 2	217400	Jun 2	177000	84.09	1.19	182700
1975	May 4	May 18	232000	May 4	202000	85.23	1.17	184000
1976	Apr 22	May 6	177533	Apr 22	135000	86.36	1.16	185000
1977	Sep 16	Sep 30	58960	Sep 24	47500	87.50	1.14	187000
1978	Apr 12	Apr 26	161400	Apr 17	141000	88.64	1.13	191000
1979	Mar 30	Apr 13	243200	Mar 31	229000	89.77	1.11	199000
1980	Apr 11	Apr 25	119866	Apr 11	105000	90.91	1.10	202000
1981	Apr 9	Apr 23	117033	Apr 23	79600	92.05	1.09	202000
1982	Apr 16	Apr 30	197066	Apr 24	181000	93.18	1.07	214000
1983	Mar 15	Mar 29	203600	Mar 15	184000	94.32	1.06	215400
1984	May 3	May 17	181200	May 17	161000	95.45	1.05	229000
1985	Mar 1	Mar 15	174466	Mar 15	144000	96.59	1.04	239700
1986	Apr 9	Apr 23	213400	Apr 9	191000	97.73	1.02	244000
1987	Mar 28	Apr 11	85766	Apr 11	72400	98.86	1.01	253000
Avg			158799			135822		
SD			51677			47304		

Qmin(2-Yr) = 135000 cfs Exceedance Probability = 8.53 percent

Station No. 05587500 Years of Record Analyzed = 48(1940-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Historical		Qavg	Date	Qmin	Prob	Ranked	
							Start	End
1940	Apr 13	Apr 27	96680	Apr 16	86000	2.04	49.00	86000
1941	Apr 19	May 3	193933	May 3	166000	4.08	24.50	92100
1942	Jun 14	Jun 28	230200	Jun 14	207000	6.12	16.33	95100
1943	May 18	Jun 1	336400	Jun 1	248000	8.16	12.25	114000
1944	Apr 24	May 8	342600	May 8	283000	10.20	9.80	120000
1945	Mar 28	Apr 11	283533	Apr 11	259000	12.24	8.17	124000
1946	Mar 21	Apr 4	265800	Apr 4	251000	14.29	7.00	130000
1947	Jun 22	Jul 6	359800	Jun 29	332000	16.33	6.13	139000
1948	Mar 22	Apr 5	316400	Apr 5	253000	18.37	5.44	150000
1949	Mar 2	Mar 16	192866	Mar 5	163000	20.41	4.90	159000
1950	Apr 28	May 12	241533	May 12	228000	22.45	4.45	159000
1951	May 3	May 17	319000	May 4	310000	24.49	4.08	161000
1952	Apr 26	May 10	320800	May 10	284000	26.53	3.77	163000
1953	Mar 31	Apr 14	194466	Apr 14	159000	28.57	3.50	166000
1954	May 11	May 25	182666	May 25	159000	30.61	3.27	167000
1955	Apr 20	May 4	176333	Apr 20	139000	32.65	3.06	178000
1956	Apr 18	May 2	135666	Apr 19	120000	34.69	2.88	184000
1957	Jun 4	Jun 18	137066	Jun 11	114000	36.73	2.72	186000
1958	Jul 11	Jul 25	156206	Jul 13	95100	38.78	2.58	186000
1959	Mar 29	Apr 12	206600	Mar 29	191000	40.82	2.45	191000
1960	Apr 2	Apr 16	338266	Apr 2	285000	42.86	2.33	207000
1961	Mar 30	Apr 13	211133	Mar 30	184000	44.90	2.23	208000
1962	Apr 1	Apr 15	315600	Apr 1	296000	46.94	2.13	212000
1963	Mar 21	Apr 4	161466	Mar 26	150000	48.98	2.04	225000
1964	Apr 21	May 5	149866	Apr 26	130000	51.02	1.96	228000
1965	Apr 28	May 12	364866	Apr 28	339000	53.06	1.88	234000
1966	May 16	May 30	210933	May 30	186000	55.10	1.81	242000
1967	Apr 15	Apr 29	244333	Apr 15	212000	57.14	1.75	248000
1968	Jul 1	Jul 15	176000	Jul 1	161000	59.18	1.69	249000
1969	Apr 22	May 6	318133	Apr 30	300000	61.22	1.63	251000
1970	May 16	May 30	264533	May 30	225000	63.27	1.58	253000
1971	Mar 18	Apr 1	201133	Apr 1	186000	65.31	1.53	259000
1972	May 3	May 17	248333	May 17	234000	67.35	1.48	266000
1973	Apr 26	May 10	474200	May 10	420000	69.39	1.44	268000
1974	May 24	Jun 7	334533	May 30	288000	71.43	1.40	283000
1975	May 8	May 22	306066	May 22	266000	73.47	1.36	284000
1976	Apr 26	May 10	262000	May 10	208000	75.51	1.32	285000
1977	Sep 14	Sep 28	111986	Sep 26	92100	77.55	1.29	288000
1978	Apr 12	Apr 26	262866	Apr 19	249000	79.59	1.26	296000
1979	Apr 7	Apr 21	402933	Apr 11	348000	81.63	1.23	298000
1980	Jun 5	Jun 19	193400	Jun 13	167000	83.67	1.20	300000
1981	Jun 26	Jul 10	227800	Jul 4	178000	85.71	1.17	310000
1982	Mar 18	Apr 1	336000	Apr 1	298000	87.76	1.14	327000
1983	Apr 5	Apr 19	382666	Apr 19	337000	89.80	1.11	332000
1984	Apr 24	May 8	268466	May 2	242000	91.84	1.09	337000
1985	Mar 1	Mar 15	360133	Mar 15	327000	93.88	1.07	339000
1986	May 21	Jun 4	283866	May 30	268000	95.92	1.04	348000
1987	Apr 14	Apr 28	150266	Apr 28	124000	97.96	1.02	420000
Avg			255215		223900			
SD			84649		78220			

Qmin(2-Yr) = 226500 cfs Exceedance Probability = 9.17 percent

Station No. 07010000 Years of Record Analyzed = 54(1934-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1934	Apr 15	Apr 29	123666	Apr 15	114000	1.82	55.00	114000
1935	Jun 1	Jun 15	560400	Jun 1	455000	3.64	27.50	133000
1936	Mar 9	Mar 23	272666	Mar 9	247000	5.45	18.33	158000
1937	Mar 8	Mar 22	298533	Mar 22	260000	7.27	13.75	178000
1938	May 24	Jun 7	357133	Jun 4	302000	9.09	11.00	181000
1939	Apr 11	Apr 25	396266	Apr 11	310000	10.91	9.17	183000
1940	Apr 13	Apr 27	145400	Apr 13	133000	12.73	7.86	197000
1941	Apr 18	May 2	344133	May 2	239000	14.55	6.88	199000
1942	Jun 22	Jul 6	538666	Jul 6	446000	16.36	6.11	206000
1943	May 17	May 31	669733	May 17	459000	18.18	5.50	224000
1944	Apr 25	May 9	710933	May 9	583000	20.00	5.00	225000
1945	Jun 11	Jun 25	547066	Jun 18	484000	21.82	4.58	230000
1946	Mar 21	Apr 4	367800	Apr 4	344000	23.64	4.23	239000
1947	Jun 24	Jul 8	736200	Jul 8	681000	25.45	3.93	243000
1948	Mar 21	Apr 4	528666	Mar 21	392000	27.27	3.67	247000
1949	Mar 27	Apr 10	363400	Apr 10	327000	29.09	3.44	253000
1950	May 1	May 15	395933	May 9	328000	30.91	3.24	260000
1951	Jul 12	Jul 26	719400	Jul 12	659000	32.73	3.06	261000
1952	Apr 22	May 6	611666	Apr 22	525000	34.55	2.89	263000
1953	Mar 30	Apr 13	295800	Mar 30	243000	36.36	2.75	302000
1954	Jun 24	Jul 8	234266	Jun 24	183000	38.18	2.62	310000
1955	Apr 19	May 3	230533	Apr 21	197000	40.00	2.50	316000
1956	Apr 20	May 4	173733	Apr 20	158000	41.82	2.39	317000
1957	May 19	Jun 2	298533	Jun 2	224000	43.64	2.29	321000
1958	Jul 21	Aug 4	430866	Jul 30	316000	45.45	2.20	322000
1959	Mar 30	Apr 13	289666	Apr 13	263000	47.27	2.12	327000
1960	Apr 1	Apr 15	608800	Apr 1	532000	49.09	2.04	328000
1961	May 7	May 21	448866	May 21	321000	50.91	1.96	329000
1962	Mar 23	Apr 6	534800	Apr 6	481000	52.73	1.90	335000
1963	Mar 7	Mar 21	240400	Mar 14	199000	54.55	1.83	344000
1964	Jun 16	Jun 30	251600	Jun 30	181000	56.36	1.77	361000
1965	Apr 7	Apr 21	497866	Apr 7	444000	58.18	1.72	368000
1966	Apr 21	May 5	296600	May 4	230000	60.00	1.67	392000
1967	Jun 20	Jul 4	503333	Jun 20	474000	61.82	1.62	397000
1968	May 25	Jun 8	272666	Jun 8	206000	63.64	1.57	430000
1969	Jul 4	Jul 18	558000	Jul 4	495000	65.45	1.53	444000
1970	Apr 21	May 5	406466	Apr 29	317000	67.27	1.49	446000
1971	Mar 1	Mar 15	301466	Mar 13	225000	69.09	1.45	452000
1972	May 3	May 17	384466	May 17	361000	70.91	1.41	455000
1973	Apr 23	May 7	752000	May 5	662000	72.73	1.38	459000
1974	May 21	Jun 4	514533	May 30	430000	74.55	1.34	466000
1975	Apr 26	May 10	400200	May 6	335000	76.36	1.31	474000
1976	Apr 24	May 8	389533	May 8	329000	78.18	1.28	481000
1977	Sep 7	Sep 21	252266	Sep 12	178000	80.00	1.25	484000
1978	Mar 21	Apr 4	483933	Apr 4	368000	81.82	1.22	490000
1979	Apr 5	Apr 19	583133	Apr 10	511000	83.64	1.20	495000
1980	Apr 2	Apr 16	294400	Apr 6	253000	85.45	1.17	511000
1981	Jul 21	Aug 4	410400	Jul 23	322000	87.27	1.15	525000

Station No. 07010000 Years of Record Analyzed = 54(1934-1987)
 Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
 Based on Analysis of 15-Day High Flows During March-September

Year	Start		End		Historical		Ranked			
					Qavg	Date	Qmin	Prob	T-Yr	Qmin
1982	Jun	1	Jun	15	492133	Jun 8	466000	89.09	1.12	532000
1983	Apr	4	Apr	18	658666	Apr 18	573000	90.91	1.10	573000
1984	Apr	13	Apr	27	508333	Apr 20	452000	92.73	1.08	583000
1985	Mar	1	Mar	15	587266	Mar 15	490000	94.55	1.06	659000
1986	May	19	Jun	2	455200	Jun 2	397000	96.36	1.04	662000
1987	Apr	14	Apr	28	339666	Apr 28	261000	98.18	1.02	681000
Avg					427186			358611		
SD					157975			142366		

Qmin(2-Yr) = 328500 cfs Exceedance Probability = 12.38 percent

Station No. 07020500 Years of Record Analyzed = 45(1943-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1943	May 18	Jun 1	688866	May 18	502000	2.17	46.00	163000
1944	Apr 26	May 10	753800	May 10	626000	4.35	23.00	170000
1945	Mar 26	Apr 9	622400	Apr 9	492000	6.52	15.33	190000
1946	Mar 22	Apr 5	377800	Apr 5	345000	8.70	11.50	190000
1947	Jun 25	Jul 9	792333	Jun 25	706000	10.87	9.20	208000
1948	Mar 22	Apr 5	570466	Mar 22	441000	13.04	7.67	214000
1949	Mar 27	Apr 10	380600	Mar 27	336000	15.22	6.57	215000
1950	May 2	May 16	416800	May 9	347000	17.39	5.75	238000
1951	Jul 13	Jul 27	752933	Jul 13	690000	19.57	5.11	243000
1952	Apr 23	May 7	615600	Apr 23	531000	21.74	4.60	248000
1953	Mar 31	Apr 14	305733	Mar 31	248000	23.91	4.18	265000
1954	Jun 24	Jul 8	235200	Jun 25	190000	26.09	3.83	269000
1955	Apr 19	May 3	236800	Apr 22	208000	28.26	3.54	279000
1956	Apr 24	May 8	177200	May 6	163000	30.43	3.29	287000
1957	May 19	Jun 2	364333	May 19	265000	32.61	3.07	316000
1958	Jul 23	Aug 6	444533	Jul 31	321000	34.78	2.88	321000
1959	Mar 30	Apr 13	296733	Mar 30	269000	36.96	2.71	334000
1960	Apr 2	Apr 16	619733	Apr 2	522000	39.13	2.56	336000
1961	May 7	May 21	522200	May 7	353000	41.30	2.42	343000
1962	Mar 23	Apr 6	557866	Apr 6	498000	43.48	2.30	345000
1963	Mar 7	Mar 21	253800	Mar 14	214000	45.65	2.19	347000
1964	Jun 17	Jul 1	255133	Jul 1	190000	47.83	2.09	353000
1965	Apr 8	Apr 22	487933	Apr 8	444000	50.00	2.00	360000
1966	Apr 21	May 5	327200	May 4	243000	52.17	1.92	384000
1967	Jun 21	Jul 5	500600	Jun 21	466000	54.35	1.84	407000
1968	May 25	Jun 8	293800	May 25	215000	56.52	1.77	429000
1969	Jul 5	Jul 19	583666	Jul 5	509000	58.70	1.70	441000
1970	Apr 22	May 6	433066	Apr 30	316000	60.87	1.64	444000
1971	Mar 1	Mar 15	320800	Mar 14	238000	63.04	1.59	466000
1972	May 3	May 17	384266	May 17	360000	65.22	1.53	480000
1973	Apr 25	May 9	778933	May 6	683000	67.39	1.48	488000
1974	Jun 2	Jun 16	509400	Jun 8	480000	69.57	1.44	492000
1975	Apr 26	May 10	453266	May 6	384000	71.74	1.39	498000
1976	Apr 24	May 8	392266	Apr 24	334000	73.91	1.35	502000
1977	Sep 7	Sep 21	249866	Sep 13	170000	76.09	1.31	509000
1978	Mar 21	Apr 4	539733	Mar 21	429000	78.26	1.28	512000
1979	Apr 7	Apr 21	636800	Apr 10	541000	80.43	1.24	522000
1980	Apr 8	Apr 22	313866	Apr 8	287000	82.61	1.21	531000
1981	Jul 21	Aug 4	421133	Jul 21	343000	84.78	1.18	536000
1982	Jun 2	Jun 16	517000	Jun 2	488000	86.96	1.15	541000
1983	Apr 5	Apr 19	676600	Apr 19	588000	89.13	1.12	588000
1984	Apr 23	May 7	553600	May 3	512000	91.30	1.10	626000
1985	Mar 1	Mar 15	604266	Mar 15	536000	93.48	1.07	683000
1986	May 20	Jun 3	463466	Jun 3	407000	95.65	1.05	690000
1987	Apr 14	Apr 28	355866	Apr 14	279000	97.83	1.02	706000
Avg			467517		393533			
SD			162829		147965			

Qmin(2-Yr) = 360000 cfs Exceedance Probability = 12.23 percent

Station No. 07022000 Years of Record Analyzed = 48(1940-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1940	Apr 15	Apr 29	167800	Apr 15	148000	2.04	49.00	148000
1941	Apr 19	May 3	354400	Apr 19	239000	4.08	24.50	167000
1942	Jun 24	Jul 8	557200	Jun 24	480000	6.12	16.33	174000
1943	May 20	Jun 3	731000	Jun 3	560000	8.16	12.25	205000
1944	Apr 27	May 11	741600	Apr 27	663000	10.20	9.80	214000
1945	Mar 27	Apr 10	617600	Apr 10	526000	12.24	8.17	220000
1946	Mar 22	Apr 5	382533	Apr 5	348000	14.29	7.00	225000
1947	Jun 27	Jul 11	766800	Jul 11	696000	16.33	6.13	233000
1948	Mar 23	Apr 6	578533	Mar 23	462000	18.37	5.44	236000
1949	Mar 27	Apr 10	399333	Mar 27	346000	20.41	4.90	239000
1950	May 2	May 16	438000	May 9	379000	22.45	4.45	256000
1951	Jul 14	Jul 28	752066	Jul 14	695000	24.49	4.08	262000
1952	Apr 24	May 8	622133	Apr 24	552000	26.53	3.77	276000
1953	Apr 1	Apr 15	313800	Apr 1	256000	28.57	3.50	278000
1954	May 7	May 21	235666	May 13	225000	30.61	3.27	289000
1955	Apr 20	May 4	244600	May 4	220000	32.65	3.06	303000
1956	Apr 26	May 10	180466	Apr 29	167000	34.69	2.88	344000
1957	May 20	Jun 3	399600	Jun 3	289000	36.73	2.72	346000
1958	Jul 22	Aug 5	465533	Jul 31	365000	38.78	2.58	348000
1959	Mar 31	Apr 14	300866	Apr 14	276000	40.82	2.45	353000
1960	Apr 4	Apr 18	619000	Apr 18	519000	42.86	2.33	362000
1961	May 8	May 22	562666	May 22	386000	44.90	2.23	365000
1962	Mar 24	Apr 7	566200	Apr 7	513000	46.94	2.13	373000
1963	Mar 8	Mar 22	264333	Mar 15	214000	48.98	2.04	379000
1964	Apr 23	May 7	263266	May 7	205000	51.02	1.96	386000
1965	Apr 10	Apr 24	494200	Apr 24	451000	53.06	1.88	407000
1966	Apr 22	May 6	349400	May 5	262000	55.10	1.81	407000
1967	Jun 22	Jul 6	501800	Jun 22	468000	57.14	1.75	451000
1968	May 26	Jun 9	307133	Jun 9	233000	59.18	1.69	452000
1969	Jul 6	Jul 20	599466	Jul 6	524000	61.22	1.63	462000
1970	Apr 23	May 7	463666	Apr 30	373000	63.27	1.58	468000
1971	Mar 1	Mar 15	335200	Mar 14	236000	65.31	1.53	480000
1972	May 4	May 18	390000	May 18	362000	67.35	1.48	483000
1973	Apr 25	May 9	793133	May 7	708000	69.39	1.44	489000
1974	May 24	Jun 7	531733	Jun 1	483000	71.43	1.40	504000
1975	Apr 27	May 11	468533	May 6	407000	73.47	1.36	513000
1976	Apr 25	May 9	401466	May 9	344000	75.51	1.32	519000
1977	Sep 8	Sep 22	251466	Sep 14	174000	77.55	1.29	524000
1978	Mar 21	Apr 4	554733	Mar 21	452000	79.59	1.26	526000
1979	Apr 8	Apr 22	673000	Apr 10	586000	81.63	1.23	552000
1980	Apr 9	Apr 23	323466	Apr 14	303000	83.67	1.20	556000
1981	Jul 22	Aug 5	425066	Jul 22	353000	85.71	1.17	560000
1982	Jun 3	Jun 17	524866	Jun 10	504000	87.76	1.14	586000
1983	Apr 6	Apr 20	697066	Apr 6	612000	89.80	1.11	612000
1984	Apr 25	May 9	528866	May 5	489000	91.84	1.09	663000
1985	Mar 1	Mar 15	638600	Mar 15	556000	93.88	1.07	695000
1986	May 21	Jun 4	467400	Jun 4	407000	95.92	1.04	696000
1987	Apr 14	Apr 28	365133	Apr 14	278000	97.96	1.02	708000
Avg			471049		401958			
SD			164951		152087			

Qmin(2-Yr) = 382500 cfs Exceedance Probability = 11.08 percent

Station No. 05592000 Years of Record Analyzed = 30(1941-1970)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1941	Jun 6	Jun 20	861.	Jun 9	349.	3.23	31.00	79.
1942	Jul 8	Jul 22	5191.	Jul 22	1360.	6.45	15.50	323.
1943	May 11	May 25	11207.	May 15	4520.	9.68	10.33	349.
1944	Apr 12	Apr 26	7348.	Apr 21	2070.	12.90	7.75	538.
1945	Mar 29	Apr 12	5780.	Apr 12	1860.	16.13	6.20	676.
1946	May 4	May 18	3895.	May 15	2650.	19.35	5.17	692.
1947	Jun 2	Jun 16	4577.	Jun 5	1860.	22.58	4.43	753.
1948	Mar 22	Apr 5	5574.	Apr 5	2210.	25.81	3.88	831.
1949	Mar 26	Apr 9	1550.	Mar 26	753.	29.03	3.44	936.
1950	Jun 25	Jul 9	2901.	Jun 27	676.	32.26	3.10	1000.
1951	Jun 28	Jul 12	3840.	Jul 11	1220.	35.48	2.82	1080.
1952	Mar 11	Mar 25	2705.	Mar 17	2070.	38.71	2.58	1160.
1953	Mar 31	Apr 14	2267.	Apr 14	936.	41.94	2.38	1180.
1954	Jun 3	Jun 17	253.	Jun 10	79.	45.16	2.21	1200.
1955	Jun 9	Jun 23	1194.	Jun 23	538.	48.39	2.07	1220.
1956	May 28	Jun 11	981.	Jun 11	323.	51.61	1.94	1360.
1957	Jun 18	Jul 2	7494.	Jun 26	1000.	54.84	1.82	1360.
1958	Jul 21	Aug 4	4558.	Jul 27	1180.	58.06	1.72	1360.
1959	Mar 8	Mar 22	2172.	Mar 8	1480.	61.29	1.63	1400.
1960	Jun 21	Jul 5	4597.	Jul 5	1160.	64.52	1.55	1480.
1961	May 8	May 22	4912.	May 22	1360.	67.74	1.48	1850.
1962	Mar 14	Mar 28	4437.	Mar 19	1360.	70.97	1.41	1860.
1963	Mar 5	Mar 19	1787.	Mar 16	1080.	74.19	1.35	1860.
1964	Apr 20	May 4	5058.	May 4	1200.	77.42	1.29	2070.
1965	Jun 2	Jun 16	2256.	Jun 16	692.	80.65	1.24	2070.
1966	Apr 21	May 5	2816.	May 5	1400.	83.87	1.19	2170.
1967	May 7	May 21	2129.	May 21	831.	87.10	1.15	2210.
1968	May 24	Jun 7	6351.	Jun 7	2170.	90.32	1.11	2650.
1969	Apr 10	Apr 24	3277.	Apr 13	1850.	93.55	1.07	3620.
1970	Apr 23	May 7	3973.	Apr 23	3620.	96.77	1.03	4520.
Avg			3865.		1462.			
SD			2349.		948.			

Qmin(2-Yr) = 1290. cfs

Exceedance Probability = 16.09 percent

Station No. 05592000 Years of Record Analyzed = 17(1971-1987)
Average CQavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start		End		Historical		Ranked			
					Qavg	Date	Qmin	Prob	T-Yr	Qmin
1971	Jul	20	Aug	3	1804.	Jul 30	1770.	5.56	18.00	868.
1972	May	11	May	25	1068.	May 11	932.	11.11	9.00	876.
1973	Aug	1	Aug	15	2100.	Aug 12	2090.	16.67	6.00	932.
1974	Mar	1	Mar	15	4460.	Mar 15	3650.	22.22	4.50	952.
1975	Mar	1	Mar	15	3217.	Mar 15	1200.	27.78	3.60	1000.
1976	Mar	1	Mar	15	1947.	Mar 3	1000.	33.33	3.00	1200.
1977	Mar	23	Apr	6	1673.	Mar 27	868.	38.89	2.57	1770.
1978	Mar	28	Apr	11	3721.	Apr 11	3400.	44.44	2.25	1790.
1979	Mar	4	Mar	18	4766.	Mar 15	4730.	50.00	2.00	2090.
1980	Apr	2	Apr	16	2499.	Apr 14	2170.	55.56	1.80	2170.
1981	Jun	17	Jul	1	1815.	Jun 29	1790.	61.11	1.64	2370.
1982	Mar	10	Mar	24	4833.	Mar 15	4730.	66.67	1.50	2380.
1983	Jun	13	Jun	27	2403.	Jun 13	2380.	72.22	1.38	3400.
1984	Mar	17	Mar	31	3215.	Mar 17	2370.	77.78	1.29	3650.
1985	Mar	4	Mar	18	3772.	Mar 18	3740.	83.33	1.20	3740.
1986	Mar	6	Mar	20	1301.	Mar 6	876.	88.89	1.13	4730.
1987	Jul	10	Jul	24	1133.	Jul 24	952.	94.44	1.06	4730.
Avg					2690.		2273.			
SD					1260.		1327.			

Qmin(2-Yr) = 2090. cfs Exceedance Probability = 11.60 percent

Station No. 05592500 Years of Record Analyzed = 56(1915-1970)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1915	Aug 18	Sep 1	6843.	Sep 1	3440.	1.75	57.00	103.
1916	Jun 17	Jul 1	2440.	Jul 1	520.	3.51	28.50	210.
1917	May 31	Jun 14	7534.	Jun 14	5280.	5.26	19.00	305.
1918	Apr 21	May 5	4935.	May 5	2920.	7.02	14.25	440.
1919	Jun 23	Jul 7	5902.	Jul 7	2150.	8.77	11.40	452.
1920	May 13	May 27	6827.	May 13	4090.	10.53	9.50	520.
1921	Mar 24	Apr 7	3660.	Apr 7	1200.	12.28	8.14	830.
1922	Apr 9	Apr 23	15700.	Apr 23	12600.	14.04	7.13	870.
1923	Mar 12	Mar 26	7418.	Mar 26	4140.	15.79	6.33	890.
1924	Mar 25	Apr 8	3927.	Mar 26	1750.	17.54	5.70	1050.
1925	Mar 14	Mar 28	6249.	Mar 28	2720.	19.30	5.18	1200.
1926	Sep 10	Sep 24	5938.	Sep 24	3390.	21.05	4.75	1240.
1927	Apr 2	Apr 16	11679.	Apr 12	9150.	22.81	4.38	1450.
1928	Apr 6	Apr 20	3691.	Apr 19	1540.	24.56	4.07	1540.
1929	May 5	May 19	7489.	May 11	2720.	26.32	3.80	1540.
1930	Mar 1	Mar 15	1960.	Mar 15	870.	28.07	3.56	1660.
1931	Sep 16	Sep 30	459.	Sep 16	210.	29.82	3.35	1700.
1932	Jun 3	Jun 17	1387.	Jun 14	452.	31.58	3.17	1710.
1933	May 15	May 29	13053.	May 29	10500.	33.33	3.00	1750.
1934	Aug 13	Aug 27	2004.	Aug 15	440.	35.09	2.85	1760.
1935	May 8	May 22	7735.	May 12	5580.	36.84	2.71	1780.
1936	Mar 20	Apr 3	3528.	Apr 3	1240.	38.60	2.59	1800.
1937	Apr 26	May 10	5287.	Apr 28	2650.	40.35	2.48	1810.
1938	Mar 30	Apr 13	12194.	Apr 7	6240.	42.11	2.38	1860.
1939	Mar 10	Mar 24	8485.	Mar 11	1860.	43.86	2.28	2090.
1940	Apr 21	May 5	2870.	Apr 29	1050.	45.61	2.19	2150.
1941	Jun 10	Jun 24	1807.	Jun 22	830.	47.37	2.11	2280.
1942	Jul 8	Jul 22	6927.	Jul 22	2090.	49.12	2.04	2390.
1943	May 11	May 25	20553.	May 15	9200.	50.88	1.97	2420.
1944	Apr 13	Apr 27	11952.	Apr 21	5050.	52.63	1.90	2470.
1945	Jun 9	Jun 23	10436.	Jun 9	4940.	54.39	1.84	2550.
1946	May 4	May 18	7181.	May 16	4770.	56.14	1.78	2590.
1947	Jun 2	Jun 16	6201.	Jun 6	2810.	57.89	1.73	2650.
1948	Mar 22	Apr 5	10511.	Apr 5	5270.	59.65	1.68	2720.
1949	Mar 26	Apr 9	3019.	Apr 9	1450.	61.40	1.63	2720.
1950	Apr 3	Apr 17	4862.	Apr 17	1660.	63.16	1.58	2730.
1951	Jun 28	Jul 12	7695.	Jul 11	1780.	64.91	1.54	2780.
1952	Mar 11	Mar 25	5785.	Mar 17	2730.	66.67	1.50	2810.
1953	Mar 31	Apr 14	3161.	Mar 31	1760.	68.42	1.46	2920.
1954	Apr 16	Apr 30	277.	Apr 30	103.	70.18	1.42	3290.
1955	Apr 14	Apr 28	1775.	Apr 18	890.	71.93	1.39	3390.
1956	Jun 19	Jul 3	1603.	Jul 2	305.	73.68	1.36	3440.
1957	Jun 17	Jul 1	14640.	Jun 27	1800.	75.44	1.33	4090.
1958	Jul 29	Aug 12	6650.	Jul 30	2470.	77.19	1.30	4140.
1959	Mar 7	Mar 21	4385.	Mar 8	2550.	78.95	1.27	4770.
1960	Jun 21	Jul 5	7422.	Jun 21	2390.	80.70	1.24	4940.
1961	May 7	May 21	10036.	May 21	2590.	82.46	1.21	5050.
1962	Mar 17	Mar 31	7925.	Mar 19	2280.	84.21	1.19	5270.

Station No. 05592500 Years of Record Analyzed = 56(1915-1970)
 Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
 Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked		Qmin
			Qavg	Date			T-Yr		
1963	Mar 5	Mar 19	4678.	Mar 15	1540.	85.96	1.16	5280.	
1964	Apr 21	May 5	5226.	May 5	1810.	87.72	1.14	5580.	
1965	Apr 18	May 2	4234.	Apr 24	1700.	89.47	1.12	6020.	
1966	Apr 21	May 5	5889.	May 5	2420.	91.23	1.10	6240.	
1967	May 7	May 21	4425.	May 21	1710.	92.98	1.08	9150.	
1968	May 24	Jun 7	9799.	Jun 7	3290.	94.74	1.06	9200.	
1969	Apr 11	Apr 25	7008.	Apr 13	2780.	96.49	1.04	10500.	
1970	Apr 20	May 4	11276.	May 4	6020.	98.25	1.02	12600.	
Avg			6545.		3030.				
SD			4031.		2580.				

Qmin(2-Yr) = 2405. cfs Exceedance Probability = 16.04 percent

Station No. 05592500 Years of Record Analyzed = 17(1971-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1971	Jul 11	Jul 25	2182.	Jul 17	1610.	5.56	18.00	541.
1972	Apr 12	Apr 26	3032.	Apr 26	938.	11.11	9.00	938.
1973	Apr 16	Apr 30	5677.	Apr 30	2670.	16.67	6.00	1290.
1974	Mar 1	Mar 15	6931.	Mar 9	5640.	22.22	4.50	1530.
1975	Mar 1	Mar 15	4895.	Mar 15	3720.	27.78	3.60	1540.
1976	Mar 1	Mar 15	3791.	Mar 3	1800.	33.33	3.00	1610.
1977	Mar 25	Apr 8	3570.	Apr 8	1540.	38.89	2.57	1800.
1978	Mar 15	Mar 29	11465.	Mar 29	6760.	44.44	2.25	1810.
1979	Mar 1	Mar 15	8381.	Mar 15	5460.	50.00	2.00	2670.
1980	Mar 31	Apr 14	4221.	Apr 7	7710.	55.56	1.80	2710.
1981	May 18	Jun 1	2878.	May 23	1810.	61.11	1.64	3720.
1982	Mar 13	Mar 27	6667.	Mar 27	6000.	66.67	1.50	4380.
1983	May 1	May 15	4861.	May 12	1530.	72.22	1.38	4820.
1984	Mar 16	Mar 30	6993.	Mar 30	4820.	77.78	1.29	5460.
1985	Mar 28	Apr 11	7547.	Mar 28	4380.	83.33	1.20	5640.
1986	Mar 8	Mar 22	1910.	Mar 22	1290.	88.89	1.13	6000.
1987	Apr 14	Apr 28	1480.	Apr 28	541.	94.44	1.06	6760.
Avg			5087.		3131.			
SD			2657.		2002.			

Qmin(2-Yr) = 2670. cfs

Exceedance Probability = 18.05 percent

Station No. 05593000 Years of Record Analyzed = 27(1940-1966)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1940	Apr 30	May 14	3953.	Apr 30	1320.	3.57	28.00	121.
1941	Apr 8	Apr 22	2474.	Apr 15	807.	7.14	14.00	807.
1942	Jul 10	Jul 24	8509.	Jul 10	5050.	10.71	9.33	1010.
1943	May 12	May 26	27720.	May 17	16200.	14.29	7.00	1100.
1944	Apr 16	Apr 30	15053.	Apr 22	7750.	17.86	5.60	1320.
1945	Apr 1	Apr 15	14597.	Apr 12	7750.	21.43	4.67	1910.
1946	May 8	May 22	10835.	May 17	8650.	25.00	4.00	2040.
1947	Apr 27	May 11	8508.	May 11	5480.	28.57	3.50	2540.
1948	Mar 25	Apr 8	15529.	Apr 8	7440.	32.14	3.11	3400.
1949	Mar 24	Apr 7	4673.	Mar 26	2540.	35.71	2.80	3420.
1950	Apr 4	Apr 18	6109.	Apr 18	3420.	39.29	2.55	3520.
1951	Jun 30	Jul 14	10612.	Jul 14	4960.	42.86	2.33	3770.
1952	Mar 13	Mar 27	8433.	Mar 20	7070.	46.43	2.15	4740.
1953	Apr 2	Apr 16	3399.	Apr 16	1910.	50.00	2.00	4750.
1954	Apr 17	May 1	295.	May 1	121.	53.57	1.87	4920.
1955	Apr 16	Apr 30	2456.	Apr 22	1010.	57.14	1.75	4960.
1956	Mar 1	Mar 15	3858.	Mar 15	1100.	60.71	1.65	5050.
1957	Jun 22	Jul 6	15899.	Jun 29	6030.	64.29	1.56	5120.
1958	Aug 1	Aug 15	7881.	Aug 1	4740.	67.86	1.47	5480.
1959	Mar 11	Mar 25	4293.	Mar 11	3400.	71.43	1.40	6030.
1960	Jun 27	Jul 11	9449.	Jun 27	3770.	75.00	1.33	7070.
1961	May 8	May 22	17206.	May 8	7840.	78.57	1.27	7440.
1962	Mar 21	Apr 4	9527.	Mar 21	4920.	82.14	1.22	7750.
1963	Mar 10	Mar 24	5798.	Mar 17	4750.	85.71	1.17	7750.
1964	Apr 24	May 8	5460.	Apr 24	3520.	89.29	1.12	7840.
1965	Apr 25	May 9	3850.	Apr 25	2040.	92.86	1.08	8650.
1966	Apr 24	May 8	7260.	May 8	5120.	96.43	1.04	16200.
Avg			8653.		4767.			
SD			5972.		3348.			

Qmin(2-Yr) = 4750. cfs

Exceedance Probability = 11.44 percent

Station No. 05593000 Years of Record Analyzed = 20(1968-1987)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1968	Jun 13	Jun 27	4117.	Jun 27	4010.	4.76	21.00	46.
1969	Mar 1	Mar 15	6228.	Mar 15	3730.	9.52	10.50	1920.
1970	May 6	May 20	9669.	May 20	9030.	14.29	7.00	2410.
1971	Jul 15	Jul 29	3023.	Jul 29	2410.	19.05	5.25	2790.
1972	May 14	May 28	3175.	May 17	2870.	23.81	4.20	2870.
1973	May 6	May 20	6309.	May 6	6200.	28.57	3.50	3050.
1974	Mar 2	Mar 16	10017.	Mar 2	9980.	33.33	3.00	3260.
1975	Mar 1	Mar 15	9193.	Mar 1	8890.	38.10	2.63	3730.
1976	Mar 5	Mar 19	4947.	Mar 19	3260.	42.86	2.33	4010.
1977	Mar 28	Apr 11	5857.	Apr 11	2790.	47.62	2.10	4690.
1978	Mar 20	Apr 3	9433.	Apr 2	9330.	52.38	1.91	5110.
1979	Apr 5	Apr 19	10269.	Apr 9	9970.	57.14	1.75	5400.
1980	Apr 3	Apr 17	5579.	Apr 15	4690.	61.90	1.62	6200.
1981	May 30	Jun 13	3343.	Jun 9	3050.	66.67	1.50	8820.
1982	Mar 2	Mar 16	9647.	Mar 7	9590.	71.43	1.40	8890.
1983	Apr 7	Apr 21	5263.	Apr 12	5110.	76.19	1.31	9030.
1984	Mar 15	Mar 29	6809.	Mar 15	5400.	80.95	1.24	9330.
1985	Mar 25	Apr 8	8975.	Mar 25	8820.	85.71	1.17	9590.
1986	Mar 12	Mar 26	3036.	Mar 26	1920.	90.48	1.11	9970.
1987	Apr 16	Apr 30	1737.	Apr 29	46.	95.24	1.05	9980.
Avg			6331.		5555.			
SD			2780.		3166.			

Qmin(2-Yr) = 4900. cfs Exceedance Probability = 13.91 percent

Station No. 05595000 Years of Record Analyzed = 32(1935-1966)
Average (Qavg) and Minimum (Qmin) Daily Flows in cfs
Based on Analysis of 15-Day High Flows During March-September

Year	Start	End	Historical		Qmin	Prob	Ranked	
			Qavg	Date			T-Yr	Qmin
1935	May 17	May 31	19733.	May 18	15000.	3.03	33.00	42.
1936	Mar 1	Mar 15	7005.	Mar 15	1930.	6.06	16.50	1380.
1937	Apr 30	May 14	11061.	May 14	9590.	9.09	11.00	1420.
1938	Apr 1	Apr 15	30000.	Apr 15	17200.	12.12	8.25	1520.
1939	Mar 12	Mar 26	14713.	Mar 12	11800.	15.15	6.60	1930.
1940	May 1	May 15	5398.	May 15	2150.	18.18	5.50	2150.
1941	Apr 16	Apr 30	5497.	Apr 16	1420.	21.21	4.71	2300.
1942	Jul 4	Jul 18	17847.	Jul 8	13700.	24.24	4.13	2310.
1943	May 17	May 31	55167.	May 31	32000.	27.27	3.67	3820.
1944	Apr 23	May 7	25267.	Apr 23	10600.	30.30	3.30	4100.
1945	Apr 1	Apr 15	29387.	Apr 14	19200.	33.33	3.00	6130.
1946	Aug 15	Aug 29	35059.	Aug 29	2310.	36.36	2.75	6260.
1947	Apr 26	May 10	15933.	Apr 26	12200.	39.39	2.54	7410.
1948	Mar 28	Apr 11	22820.	Apr 11	13200.	42.42	2.36	7970.
1949	Mar 26	Apr 9	8896.	Mar 26	6260.	45.45	2.20	8690.
1950	Apr 4	Apr 18	12338.	Apr 18	8690.	48.48	2.06	8720.
1951	Mar 1	Mar 15	12975.	Mar 11	9740.	51.52	1.94	9590.
1952	Mar 15	Mar 29	15733.	Mar 29	12800.	54.55	1.83	9740.
1953	Mar 6	Mar 20	5555.	Mar 14	2300.	57.58	1.74	10500.
1954	Sep 16	Sep 30	1325.	Sep 19	42.	60.61	1.65	10600.
1955	Apr 18	May 2	3623.	Apr 22	1380.	63.64	1.57	10900.
1956	Mar 1	Mar 15	4348.	Mar 15	1520.	66.67	1.50	11800.
1957	Jun 16	Jun 30	34107.	Jun 30	14800.	69.70	1.43	12200.
1958	Aug 4	Aug 18	15180.	Aug 7	10500.	72.73	1.38	12800.
1959	Mar 1	Mar 15	7221.	Mar 7	4100.	75.76	1.32	13200.
1960	Jul 2	Jul 16	13095.	Jul 16	7970.	78.79	1.27	13700.
1961	May 8	May 22	43673.	May 8	15100.	81.82	1.22	14800.
1962	Mar 22	Apr 5	15060.	Apr 5	10900.	84.85	1.18	15000.
1963	Mar 11	Mar 25	8518.	Mar 15	7410.	87.88	1.14	15100.
1964	Apr 6	Apr 20	7645.	Apr 20	6130.	90.91	1.10	17200.
1965	Apr 26	May 10	5701.	Apr 26	3820.	93.94	1.06	19200.
1966	Apr 25	May 9	9673.	May 9	8720.	96.97	1.03	32000.
Avg			16236.		9203.			
SD			12559.		6711.			

Qmin(2-Yr) = 9155. cfs

Exceedance Probability = 10.51 percent