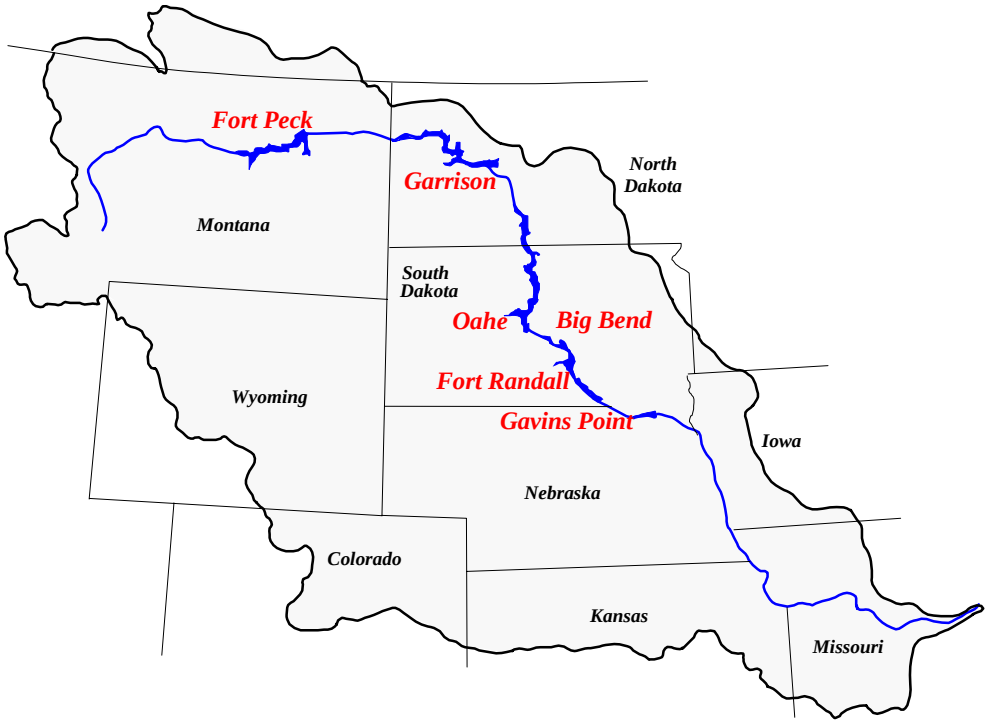
US Army Corps of Engineers

Northwestern Division

Missouri River Mainstem Reservoir System

Missouri River Incremental Flows Below Gavins Point Dam

RCC Technical Report JY-05



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July 2005

Missouri River Incremental
Flows Below Gavins Point Dam

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I. Introduction

A. Purpose and Scope

The purpose of this report is to determine the incremental flows at key locations for the Missouri River below Gavins Point Dam. Results of this analysis include the development of statistical data for daily and monthly reach inflows for five conditions of statistical significance. In addition, the average monthly flow data for each reach, as well as the summation of reaches at key locations, was sorted and ranked by month and year.

The Missouri River Water Management Division (MRWMD) Reservoir Control Center (RCC) makes numerous studies. Some of the studies include long-term Missouri River Mainstem Reservoir System (System) regulation studies in which flows are presented as average monthly values. Other regulation studies require daily values for each of the months of record.

The report titled "Monthly Maximum and Minimum Mean Daily Flow Estimates, Missouri River Below Gavins Point Dam, MRD-RCC Technical Study N-72" was published in November 1972. This study defined the relationship between mean monthly values and corresponding maximum and minimum mean daily flows for each month of the period of record. At that time data available from long-term studies consisted only of the mean monthly Gavins Point releases and the mean monthly incremental inflows between Gavins Point and the downstream location. Since that time, daily flow records have been accumulated so that an analysis could be done with a more detailed data set.

The Missouri River Master Water Control Manual Review and Update Study (Master Manual Study), for which a Final Environmental Impact Statement (FEIS) was completed in March 2004, provided the need to produce a daily data set for use in long-term regulation studies. As part of the Master Manual Study the Daily Routing Model (DRM) was developed to simulate and evaluate alternative System regulation for all authorized purposes under a widely varying long-term hydrologic record. The DRM uses daily input data that provides a greater level of precision that is necessary to evaluate the effects of different proposed System regulation alternatives with regard to flood control, interior drainage, groundwater, riverine fish requirements (spawning cue and shallow water habitat) on the Missouri River downstream from the System, and power (capacity and energy generation) at risk in the basin. The same daily data used in the DRM was used to produce the basic incremental flow data used in this report's analysis and is discussed in more detail in the Data Source and Preparation section.

This study was completed by the Missouri River Water Management Office, Northwestern Division, U.S. Army Corps of Engineers and is published as NWD-MRR-RCC Technical Report Number JY-05.

B. Data Source and Preparation

Computer model simulation studies have been used by the RCC since the 1960's to simulate the regulation of the System using a long-term hydrologic record. Prior to 1997 the RCC had used the Long Range Study (LRS) model to simulate System regulation. The LRS model was developed to evaluate regulation criteria for regulation of the System for all authorized purposes under widely varying hydrologic conditions. Although the LRS model simulates the regulating criteria for each of the System projects, it utilizes only historical average monthly data and is not used for real-time, day-to-day regulation. As previously mentioned, the DRM was developed during the Master Manual Study to simulate and evaluate alternative System regulation for all of the authorized purposes under a widely varying long-term hydrologic record. The DRM uses daily input data and was used for this analysis.

The DRM is a water accounting model that consists of 20 nodes, including the six System dams and 14 gaging stations. In the DRM, each of the six System reservoirs was modeled. The DRM provides output at four locations (nodes) along river reaches between System projects: Wolf Point and Culbertson, Montana, and Williston and Bismarck, North Dakota; and ten locations along river reaches below the System: Sioux City, Iowa; Omaha, Nebraska City and Rulo, Nebraska; St. Joseph, Kansas City, Waverly, Boonville, and Hermann, Missouri on the Missouri River and St. Louis, Missouri on the Mississippi River.

The historic data set used for the DRM was developed from the Corps' Missouri River Water Management database, U.S. Geological Survey (USGS) gaging records, and the Corps' LRS model database for reservoir evaporations prior to 1967. Daily records are available for the six System dams since their respective dates of closure, and daily flow data is available for the majority of gaging stations since 1930. Prior to 1930, there is general lack of daily records in the basin. Representative daily data were constructed to cover the period from 1898 to 1929 for the Corps' Master Manual Study because of the significance and statistical importance of the drought of the 1930's in System regulation. As a result, a 100-year record of daily data, extending from 1898 through 1997, was used in evaluating alternatives for the Corps' Final Environmental Impact Statement (FEIS). The data set has since been extended through 2002. The data are organized in yearly files that contain daily data for each of the dams and gaging locations. The input data set consists of historic reach inflows; streamflow depletions; evaporation; downstream flow targets; reservoir characteristics, including operational levels; routing factors; operational guide curves; power generation criteria; navigation guide criteria; and endangered species flow criteria.

Daily flow values for the necessary nodes were obtained from the USGS to develop historic reach inflows for use in the DRM. Multiple correlations were performed on the flows from the upstream station to the downstream station for the period from 1967 to1994 (the period of System regulation available at that time). The appropriate routing coefficients were selected for each of the reaches. These routing coefficients were then used when building the DRM annual input files, which includes the incremental flows. More information on this process can be found in the DRM Programmer's and Technical Manual.

The routing coefficients are also used by the DRM to route flows for the different regulation alternatives. For this study, the DRM was used to produce the 1898 to 2002 incremental flows (QL in the DRM) for each of the reaches below Gavins Point listed in **Table 1**.

As previously noted, daily USGS records are not available for the entire period of record. Daily flow record availability dates at each gage are presented in **Table 1**. A representative set of daily data was constructed for the period prior to 1930. More information on this process can be found in the DRM Programmer's and Technical Manual.

Table 1
Daily Flow Record Availability

Gaging Station	Date Daily Records Available
Gavins Point Dam	Aug. 1955-
Missouri River at Sioux City, Iowa	Oct. 1928-Sep. 1931, and Oct. 1938-
Missouri River at Omaha, Nebraska	Sept. 1928-
Missouri River at Nebraska City, Nebraska	Sept. 1928-
Missouri River at Rulo, Nebraska	Oct. 1949-
Missouri River at St. Joseph, Missouri	Oct. 1928-
Missouri River at Kansas City, Missouri	Oct. 1928-
Missouri River at Waverly, Missouri	Oct. 1928-
Missouri River at Boonville, Missouri	Oct. 1925-
Missouri River at Hermann, Missouri	Oct. 1928-
Mississippi River at St. Louis, Missouri	Apr. 1933-

Availability is for USGS data except for Gavins Point Dam, which is from the Corps' Missouri River Water Management database.

Due to the differences in the data sets, analysis was done on both the period of record, 1898 to 2002, and the period for which actual daily data was available. The data set produced by the DRM was imported into the Microsoft Excel software package where sorting and calculations were performed with a combination of Excel built-in functions and Visual Basic macros.

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II. Incremental Flows by Reach

A. General

The incremental flow data set produced by the DRM was used to develop statistical data for reach incremental flows for five conditions of statistical significance implied by their titles: upper decile (UD), upper quartile (UQ), median, lower quartile (LQ) and lower decile (LD). For each reach the data were sorted and ranked on the basis of a single day and for all days in each month. **Tables 2 through 11** indicate the incremental flow value for the five conditions using all the days in each month. The data for the 1898 to 2002 period for each reach are shown on **Plates 3, 5, 7, 9, 11, 13, 15, 17, 19, and 21**. The single-day values are also shown on each plate for comparison and to show the day-to-day fluctuations. Each plate contains two plots: the top plot shows the full range of values and the lower one shows values in the lower flow range.

As an example, in the reach from Gavins Point to Sioux City, all of the days in January were ranked for the period 1898 to 2002. The January median value was 0.4 thousand cubic feet per second (kcfs), as shown in **Table 2**. All of the days in January were also ranked for the period 1956 to 2002, and the median value was 0.8 kcfs, as shown in **Table 2** and as a step (flat) line on **Plate 3**. This process was repeated for each month and these values are labeled on the plate legend as Median, LQ, UQ, LD, UD. Next, all of the January 1's were ranked and the median value computed was 0.5 kcfs. The process of ranking was repeated for each day of the year, and the values are shown by the varying line on **Plate 3**. These daily values are labeled on the plate legend as Median Daily, LQ Daily, UQ Daily, LD Daily, and UD Daily.

Note that a few of the incremental flows are shown as being negative values. In some cases, the negative flow values are a result of the average monthly depletion values being applied to daily incremental flows. In other cases, as in the winter periods, short-term changes in flows due to ice formation and temporary ice blockages cause negative incremental flow values for various days.

The System, intervening river reaches and lower river reaches extend from Fort Peck in eastern Montana downstream to the confluence with the Mississippi River at St. Louis, as shown on **Plate 1**. **Plate 2** presents the usual time of travel of within-bank, open-water flows for the Missouri River and its major tributaries. It should be noted that these are general approximations that may be affected by many factors. For purposes of scheduling System releases, approximate open water travel times from Gavins Point Dam are 1.5 days to Sioux City, 3 days to Omaha, 3.5 days to Nebraska City, 5.5 days to Kansas City, and 10 days to the mouth of the Missouri River.

B. Missouri River Reach – Gavins Point to Sioux City

Construction of Gavins Point Dam began in 1952. Dam closure was made in July 1955. Daily flow records from Gavins Point are available beginning in August 1955 and are stored in the RCC database. Missouri River flow data at Sioux City, Iowa from October 1938 to the

present are available from the USGS. Analysis of the incremental flow data was done on the 47-year period from 1956 to 2002 and the 105-year period from 1898 to 2002 (see **Table 2**).

The main tributaries in this reach are the James, Vermillion, and Big Sioux Rivers, all left bank tributaries. The James River enters the Missouri River downstream of Yankton, South Dakota and has a drainage area of approximately 20,942 square miles and includes portions of North and South Dakota. The Vermillion River enters the Missouri River near Vermillion, South Dakota and has a drainage area of approximately 2,302 square miles within east central South Dakota. The Big Sioux River enters the Missouri River near Sioux City and has a drainage area of approximately 8,424 square miles including portions of South Dakota, Minnesota, and Iowa.

Downstream from Gavins Point, the Missouri River remains in a semi-natural state for a distance of about 59 miles downstream to Ponca, Nebraska. This portion of the river is a meandering channel with many chutes, backwater marshes, sandbars, islands, and variable current velocities. From Ponca to above Sioux City the river is confined by revetment and dike structures into a single channel developed for bank stabilization purposes under the Kensler's Bend Project. The reach from the downstream end of the Kensler's Bend Project to Sioux City is part of the Missouri River Navigation and Bank Stabilization Project. The channelized reach extends to the mouth of the Missouri River near St. Louis, Missouri.

Table 2
Daily Incremental Flows by Month
Gavins Point to Sioux City in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002
January	1.9	2.6	1.0	1.7	0.4	0.8	0.0	0.0	-0.6*	-1.0
February	3.7	3.6	2.0	2.2	1.0	1.2	0.3	0.4	-0.2	-0.2
March	11.2	12.7	6.8	5.4	3.4	2.5	1.3	1.1	0.2	0.4
April	13.9	24.0	6.7	10.4	3.2	3.7	1.1	1.4	0.2	0.5
May	10.2	12.6	6.2	6.8	2.9	3.1	1.2	1.5	0.2	0.5
June	10.5	11.6	6.3	6.9	3.0	3.2	1.0	1.6	0.0	0.4
July	6.6	8.5	4.2	4.7	2.1	2.4	0.7	1.0	0.0	0.1
August	4.4	5.3	3.0	3.2	1.6	1.9	0.6	0.8	0.0	0.1
September	3.6	4.1	2.5	2.8	1.3	1.6	0.5	0.6	0.0	0.0
October	3.2	4.7	1.9	2.7	1.1	1.6	0.3	0.7	0.0	0.0
November	3.4	4.6	1.9	3.1	1.1	1.7	0.4	0.9	0.0	0.3
December	2.6	3.7	1.4	2.4	0.7	1.4	0.2	0.6	-0.6	-0.6

* Negative values are discussed in Section II-A, page 5.

C. Missouri River Reach – Sioux City to Omaha

As shown in Table 1, Missouri River flow data at Sioux City, Iowa are available from the USGS for October 1928 to September 1931 and from October 1938 to the present. Missouri River flow data at Omaha, Nebraska are available since September 1929. The 1931-1938 gap in the Sioux City data set was synthetically derived using the same methods that were used in the construction of the data set used in the DRM for the period prior to 1929. Analysis of the incremental flow data was done on the 74-year period from 1929 to 2002 and the 105-year period from 1898-2002 (see **Table 3**).

The main tributaries in this reach are the Little Sioux, Soldier, and Boyer Rivers, all left bank tributaries. The Little Sioux River drains approximately 3,526 square miles within northwest Iowa. The Soldier and Boyer Rivers are small tributaries that drain approximately 407 and 871 square miles of western Iowa, respectively. The Missouri River reach between Sioux City and Omaha is part of the channelized reach that extends to the mouth of the Missouri River near St. Louis.

Table 3
Daily Incremental Flows by Month
Sioux City to Omaha in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002
January	3.8	4.2	1.8	2.2	1.0	0.9	0.2	0.0	-0.7*	-1.0
February	4.6	5.4	2.6	3.1	1.3	1.3	0.5	0.4	-0.2	-0.5
March	7.9	9.5	4.3	5.4	2.2	2.5	0.9	0.7	0.0	0.0
April	9.8	11.6	5.0	5.5	2.4	2.1	0.7	0.5	0.0	0.0
May	8.8	10.4	4.9	5.5	2.1	1.8	0.5	0.2	0.0	0.0
June	11.7	12.6	6.4	6.5	3.0	2.6	0.9	0.5	0.0	0.0
July	9.1	9.0	5.4	4.8	2.4	1.8	0.5	0.3	0.0	0.0
August	5.2	5.5	3.1	3.2	1.6	1.2	0.4	0.1	0.0	0.0
September	4.6	5.0	2.6	2.6	1.3	0.9	0.4	0.2	0.0	0.0
October	4.2	4.9	2.2	2.3	1.2	0.8	0.3	0.1	0.0	0.0
November	4.3	5.4	2.3	2.9	1.2	1.0	0.4	0.1	0.0	0.0
December	3.8	4.5	1.9	2.5	1.0	0.9	0.3	0.1	-0.6	-1.0

* Negative values are discussed in Section II-A, page 5.

D. Missouri River Reach – Omaha to Nebraska City

As shown in Table 1, Missouri River flow data at Omaha from October 1928 to the present are available from the USGS. Daily flow data at Nebraska City, Nebraska are available since September 1928. Analysis of the incremental flow data was done on the 74-year period from 1929 to 2002 and the 105-year period from 1898 to 2002 (see **Table 4**).

The main tributaries in this reach are the Platte River and Weeping Water Creek. The

Platte River is a major right bank tributary to the Missouri River draining an area of approximately 85,370 square miles of northeast Colorado, southeast Wyoming, and most of central Nebraska. In eastern Nebraska, major tributaries to the Platte River are Salt Creek and the Elkhorn and Loup Rivers. Weeping Water Creek is a right bank tributary located in southeast Nebraska and has a drainage area of approximately 241 square miles. This Missouri River reach is also part of the channelized reach.

Table 4
Daily Incremental Flows by Month
Omaha to Nebraska City in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002
January	6.7	7.0	5.0	5.0	3.6	3.4	2.0	2.0	0.8	0.7
February	11.4	12.1	7.6	8.1	5.1	5.5	3.3	3.5	1.5	1.8
March	18.1	19.0	11.2	11.7	7.5	7.9	4.9	5.5	2.9	3.8
April	18.5	16.7	11.5	10.1	7.0	6.5	4.6	4.3	2.8	2.7
May	18.7	18.6	12.3	11.2	7.2	6.7	4.1	4.1	2.2	2.4
June	28.4	24.5	16.4	14.1	8.2	7.0	4.2	3.8	2.1	1.9
July	21.1	13.1	11.2	7.5	5.1	3.9	2.1	1.7	0.8	0.7
August	11.1	7.7	6.6	4.6	3.4	2.6	1.8	1.5	0.8	0.7
September	9.5	7.1	5.9	4.5	3.5	2.7	1.9	1.6	1.0	0.8
October	8.4	7.6	5.8	4.9	3.8	3.3	2.4	2.2	1.5	1.4
November	7.9	7.5	6.0	5.6	4.3	4.1	3.1	3.1	2.2	2.3
December	7.3	7.5	5.5	5.6	3.9	3.9	2.4	2.4	0.9	0.9

E. Missouri River Reach – Nebraska City to Rulo

As shown in Table 1, Missouri River flow data at Nebraska City are available from September 1928 to the present from the USGS. However, data at Rulo, Nebraska are only available since October 1949. Analysis of the incremental flow data was done on the 53-year period from 1950 to 2002 and the 105-year period from 1898 to 2002 (see **Table 5**).

The main tributaries in this reach are the Nishnabotna and Little Nemaha Rivers. The Nishnabotna River is a left bank tributary located approximately 20 miles downstream of Nebraska City and has a total drainage area of 2,806 square miles. The Little Nemaha, located in southeast Nebraska, is a right bank tributary that has a drainage area of approximately 793 square miles. This Missouri River reach is part of the channelized reach.

Table 5
Daily Incremental Flows by Month
Nebraska City to Rulo in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1950-2002	1898-2002	1950-2002	1898-2002	1950-2002	1898-2002	1950-2002	1898-2002	1950-2002
January	2.8	3.4	1.7	2.0	0.8	0.9	0.2	0.2	-0.2*	-0.4
February	3.9	5.4	2.1	2.8	1.2	1.3	0.3	0.4	-0.2	-0.2
March	6.4	7.8	3.5	4.5	1.8	2.2	0.5	0.7	0.0	0.0
April	6.2	8.5	3.5	4.7	1.9	2.0	0.6	0.7	0.0	0.0
May	7.6	10.6	4.2	5.7	2.1	2.4	0.6	0.9	0.0	0.0
June	9.8	12.3	5.3	6.4	2.6	2.5	0.9	0.9	0.0	0.0
July	7.9	9.9	3.9	4.3	1.9	1.9	0.6	0.7	0.0	0.0
August	4.9	5.7	2.7	2.9	1.3	1.2	0.4	0.5	0.0	0.0
September	4.7	5.9	2.5	3.0	1.3	1.3	0.4	0.6	0.0	0.0
October	3.4	5.0	1.9	2.3	1.0	1.2	0.4	0.5	0.0	0.0
November	3.3	4.5	1.8	2.5	1.1	1.3	0.5	0.6	0.0	0.1
December	3.1	4.2	1.6	2.3	0.9	1.1	0.3	0.4	-0.2	-0.3

* Negative values are discussed in Section II-A, page 5.

F. Missouri River Reach – Rulo to St. Joseph

As shown in Table 1, Missouri River flow data at Rulo are available from October 1949 to the present from the USGS. Flow data at St. Joseph, Missouri is available since October 1929. Analysis of the incremental flow data was done on the 53-year period from 1950 to 2002 and the 105-year period from 1898 to 2002 (see **Table 6**).

The main tributaries in this reach are the Big Nemaha and Nodaway Rivers. The Big Nemaha is a right bank tributary that drains 1,926 square miles in southeastern Nebraska and northeastern Kansas. The Nodaway River is a left bank tributary that flows from southwest Iowa through the northwest corner of Missouri and has a drainage area of 1,935 square miles. This Missouri River reach is part of the channelized reach.

Table 6
Daily Incremental Flows by Month
Rulo to St. Joseph in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1950-2002	1898-2002	1950-2002	1898-2002	1950-2002	1898-2002	1950-2002	1898-2002	1950-2002
January	4.0	4.4	2.4	2.4	1.2	1.1	0.3	0.1	-0.7*	-0.8
February	5.1	6.0	3.0	3.4	1.4	1.5	0.3	0.3	-0.4	-0.4
March	6.4	7.3	3.9	4.1	1.9	1.6	0.4	0.4	0.0	0.0
April	6.9	8.6	4.0	4.2	2.0	1.5	0.4	0.1	0.0	0.0
May	8.6	11.8	4.9	5.7	2.3	2.2	0.5	0.6	0.0	0.0
June	10.9	10.5	5.6	5.3	2.7	2.4	0.7	0.6	0.0	0.0
July	10.0	9.0	5.9	5.0	2.4	2.0	0.7	0.5	0.0	0.0
August	5.1	5.8	3.0	3.2	1.6	1.3	0.6	0.3	0.0	0.0
September	4.9	6.3	2.8	3.0	1.5	1.1	0.4	0.0	0.0	0.0
October	4.0	4.6	2.2	2.5	1.3	1.2	0.4	0.2	0.0	0.0
November	4.0	4.9	2.5	2.8	1.4	1.1	0.4	0.2	0.0	0.0
December	4.1	5.2	2.3	2.9	1.2	1.3	0.4	0.3	-0.5	-0.5

* Negative values are discussed in Section II-A, page 5.

G. Missouri River Reach – St. Joseph to Kansas City

As shown in Table 1, Missouri River flow data at St. Joseph are available from October 1928 to the present from the USGS. Flow data for Kansas City, Missouri are also available since October 1928. Analysis of the incremental flow data was done on the 74-year period from 1929 to 2002 and the 105-year period from 1898 to 2002 (see **Table 7**).

The main tributaries in this reach are the Platte and Kansas Rivers. The Kansas River is a major right bank tributary to the Missouri River draining an area of approximately 60,580 square miles of the northern half of Kansas, much of southern Nebraska, and a part of northeastern Colorado. The Kansas River basin contains numerous major impoundments including seven Corps reservoirs and eleven Bureau of Reclamation reservoirs. The Platte River is a left bank tributary that flows through southwest Iowa into Missouri and has a drainage area of 2,503 square miles. This Missouri River reach is part of the channelized reach that extends from near Sioux City to the mouth of the Missouri River near St. Louis.

Table 7
Daily Incremental Flows by Month
St. Joseph to Kansas City in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002
January	7.7	7.8	5.1	4.8	2.9	2.4	1.4	1.1	0.3	0.0
February	12.4	13.4	7.5	7.4	4.2	3.4	1.8	1.4	0.6	0.4
March	20.8	24.6	11.4	11.3	6.1	5.2	2.6	2.0	1.1	0.7
April	30.4	31.7	16.5	13.6	7.5	5.4	3.2	2.6	1.0	0.8
May	29.9	32.7	17.4	16.6	9.2	8.6	3.7	3.8	1.2	1.5
June	45.4	42.2	25.1	22.9	12.4	11.1	5.2	4.6	1.6	1.7
July	35.0	31.7	19.3	15.6	8.9	6.8	3.0	2.7	0.9	0.9
August	18.1	16.4	10.7	8.8	5.6	4.1	2.1	1.6	0.6	0.4
September	19.9	20.3	10.0	8.7	5.0	3.6	1.9	1.5	0.4	0.1
October	15.8	17.3	8.1	6.7	4.0	2.7	1.6	1.2	0.6	0.3
November	13.1	13.7	7.5	6.0	3.8	3.1	1.6	1.3	0.7	0.5
December	9.9	10.4	5.9	5.6	3.4	3.0	1.6	1.3	0.6	0.5

As previously noted, this reach contains numerous major impoundments. During the periods shown in Table 7, these projects were constructed and filled, which impacted the incremental flow. For comparison, the data was also analyzed for the 23-year period from 1980 to 2002 (see **Table 7b**), following construction and fill of these projects.

Table 7b
Daily Incremental Flows by Month
St. Joseph to Kansas City in kcfs
1980-2002

Month	Upper Decile	Upper Quartile	Median	Lower Quartile	Lower Decile
	1980-2002	1980-2002	1980-2002	1980-2002	1980-2002
January	7.7	5.3	3.1	1.5	0.7
February	13.8	8.6	4.3	1.6	0.5
March	22.9	11.9	5.7	2.2	1.0
April	39.8	21.2	6.8	2.7	0.7
May	39.2	23.9	10.6	3.7	1.3
June	43.1	22.1	10.7	5.0	1.0
July	36.9	18.6	8.4	2.7	0.7
August	23.3	11.3	4.1	1.3	0.3
September	21.9	7.1	2.6	1.1	0.0
October	22.4	6.0	2.2	0.8	0.2
November	16.1	6.5	2.4	1.0	0.1
December	13.5	9.6	4.1	1.5	0.6

H. Missouri River Reach – Kansas City to Waverly

As shown in Table 1, Missouri River flow data at Kansas City are available from October 1928 to the present from the USGS. Flow data are also available at Waverly, Missouri since October 1928. Analysis of the incremental flow data was done on the 74-year period from 1929 to 2002 and the 105-year period from 1898 to 2002 (see **Table 8**).

There are no major tributaries in this reach. This Missouri River reach is part of the channelized reach that extends from near Sioux City to the mouth of the Missouri River.

Table 8
Daily Incremental Flows by Month
Kansas City to Waverly in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002
January	2.4	2.9	1.1	1.4	0.4	0.4	-0.1	-0.4	-1.0*	-1.3
February	3.1	3.8	1.4	1.9	0.5	0.5	-0.2	-0.5	-1.4	-1.8
March	2.8	3.8	1.0	1.4	0.3	0.1	0.0	0.0	-0.2	-0.4
April	4.1	5.4	1.6	1.9	0.4	0.2	0.0	0.0	-0.2	-0.4
May	4.5	6.6	1.5	1.9	0.3	0.2	0.0	0.0	-0.2	-0.4
June	4.9	6.5	1.8	2.3	0.3	0.2	0.0	0.0	-0.2	-0.4
July	3.3	4.4	1.1	1.4	0.3	0.2	0.0	0.0	-0.2	-0.4
August	1.8	2.3	0.6	0.8	0.1	0.1	0.0	0.0	-0.2	-0.4
September	2.8	3.2	0.9	0.8	0.2	0.0	0.0	0.0	-0.2	-0.4
October	1.9	2.5	0.6	0.6	0.1	0.0	0.0	0.0	-0.2	-0.4
November	2.3	3.0	0.6	0.9	0.2	0.1	0.0	0.0	-0.2	-0.4
December	2.6	3.1	1.2	1.6	0.5	0.5	0.0	-0.2	-0.8	-1.2

* Negative values are discussed in Section II-A, page 5.

I. Missouri River Reach – Waverly to Boonville

As shown in Table 1, Missouri River data at Waverly from October 1928 to the present are available from the USGS. Flow data are also available at Boonville, Missouri since October 1925. Analysis of the incremental flow data was done on the 74-year period from 1929 to 2002 and the 105-year period from 1898 to 2002 (see **Table 9**).

The main tributaries in this reach are the Grand, Chariton and Blackwater Rivers. The Grand River is a left bank tributary that flows from south-central Iowa into Missouri and has a drainage area of 7,883 square miles. The Chariton River is a left bank tributary that flows from south-central Iowa into Missouri, draining an area of 2,566 square miles. The Lamine River, with its major tributary the Blackwater River, is a right bank tributary that drains an area of 2,783 square miles in west-central Missouri. This Missouri River reach is part of the

channelized reach that extends from near Sioux City to the mouth.

Table 9
Daily Incremental Flows by Month
Waverly to Boonville in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002
January	10.8	11.3	5.3	5.4	2.7	2.4	1.1	0.8	0.0	-0.3*
February	18.8	22.8	9.1	9.8	4.0	3.7	1.7	1.4	0.2	0.0
March	30.6	36.0	14.3	15.8	7.4	6.3	2.8	2.4	0.6	0.5
April	37.1	41.2	17.3	17.1	7.1	6.0	2.4	1.9	0.5	0.3
May	33.7	41.8	17.2	19.2	7.5	7.4	2.6	2.7	0.4	0.6
June	32.5	39.0	17.0	17.2	6.2	6.2	1.7	2.0	0.0	0.0
July	19.6	25.0	8.5	8.8	3.1	3.0	1.0	1.1	0.0	0.0
August	10.3	10.8	5.5	5.7	2.8	2.5	1.1	1.0	0.0	0.0
September	15.7	12.9	6.0	4.7	2.7	2.0	1.0	0.7	0.0	0.0
October	15.6	14.3	6.4	4.4	2.4	1.6	0.8	0.5	0.0	0.0
November	12.0	13.1	5.6	4.8	2.8	2.2	1.1	0.8	0.2	0.1
December	11.7	12.7	6.0	5.4	3.1	2.4	1.5	1.1	0.3	0.2

* Negative values are discussed in Section II-A, page 5.

J. Missouri River Reach – Boonville to Hermann

As shown in Table 1, Missouri River flow data at Boonville from October 1925 to the present are available from the USGS. Flow data are available at Hermann, Missouri since October 1928. Analysis of the incremental flow data was done on the 74-year period from 1929 to 2002 and the 105-year period from 1898 to 2002 (see **Table 10**).

The main tributaries in this reach are the Osage and Gasconade Rivers. The Osage River is right bank tributary that flows through Kansas and west-central Missouri to join the Missouri River near Jefferson City, Missouri. It has a drainage area of 15,088 square miles. The upper Osage River is called the Marais des Cygnes River. There are seven major impoundments in the basin. The Lake of the Ozarks is a hydroelectric power project of AmerenUE, a private energy services company. There are six Corps' reservoirs in the basin, including the largest flood control project in the Corps' Kansas City District, the Harry S. Truman reservoir. The Gasconade River is a right bank tributary that drains an area of 3,582 square miles in south-central Missouri. This Missouri River reach is part of the channelized reach that extends from near Sioux City to the mouth of the Missouri River near St. Louis.

Table 10
Daily Incremental Flows by Month
Boonville to Hermann in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002	1898-2002	1929-2002
January	33.9	36.5	16.4	18.9	8.3	9.0	4.2	3.8	2.1	1.7
February	37.8	42.1	21.9	25.0	11.3	12.1	5.7	5.9	2.3	2.1
March	50.9	54.6	31.1	32.4	18.0	17.5	9.0	7.9	3.4	3.3
April	60.6	63.2	39.2	40.9	20.6	20.3	8.7	8.6	3.0	3.3
May	63.0	73.4	36.5	39.6	16.6	17.2	6.8	7.2	2.5	3.5
June	62.8	67.3	38.7	39.3	14.4	14.9	4.8	5.7	1.5	2.3
July	39.5	43.7	18.8	18.4	8.3	8.2	3.4	4.0	1.3	2.1
August	21.7	18.9	11.0	9.5	5.7	5.2	2.8	2.7	0.7	0.8
September	28.1	22.7	12.9	10.0	6.3	5.1	3.1	2.6	1.2	0.8
October	32.8	30.3	14.8	11.4	6.6	4.8	2.8	2.5	1.4	1.3
November	35.5	41.9	16.0	16.5	7.8	6.2	3.4	3.0	1.7	1.5
December	30.9	37.5	17.3	17.3	8.8	7.9	4.4	3.8	2.3	2.0

As previously noted, this reach contains numerous major impoundments. During the periods shown in Table 11, these projects were constructed and filled, which impacted the incremental flow. For comparison, the data was also analyzed for the 23-year period from 1980 to 2002 (see **Table 10b**), following construction and fill of these projects.

Table 10b
Daily Incremental Flows by Month
Boonville to Hermann in kcfs
1980-2002

Month	Upper Decile	Upper Quartile	Median	Lower Quartile	Lower Decile
	1980-2002	1980-2002	1980-2002	1980-2002	1980-2002
January	43.0	23.6	11.9	5.7	1.6
February	43.9	29.7	17.5	9.7	4.1
March	59.4	40.6	20.6	10.3	5.2
April	62.4	46.4	28.7	9.9	3.8
May	80.0	50.5	25.0	7.0	2.7
June	73.4	48.5	29.2	11.3	4.4
July	47.2	26.0	12.1	6.2	3.0
August	32.5	14.5	6.8	3.6	1.7
September	20.2	9.7	5.2	2.8	0.9
October	48.4	11.9	4.7	2.5	1.4
November	54.7	33.9	9.1	3.1	1.3
December	55.3	32.2	15.4	4.7	2.2

K. Missouri River Reach – Hermann to St. Louis

As shown in Table 1, Missouri River flow data at Hermann from October 1928 to the present are available from the USGS. Flow data are available at St. Louis since April 1933. Analysis of the incremental flow data was done on the 69-year period from 1934 to 2002 and the 105-year period from 1898 to 2002 (see **Table 11**).

There are no major tributaries in this reach, however, the Mississippi River is a major inflow in the reach from Hermann to St. Louis. This Missouri River reach is the lowest portion of the channelized reach that extends from near Sioux City to the mouth of the Missouri River near St. Louis.

Table 11
Daily Incremental Flows by Month
Hermann to St. Louis in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1934-2002	1898-2002	1934-2002	1898-2002	1934-2002	1898-2002	1934-2002	1898-2002	1934-2002
January	117.9	118.5	82.6	84.0	55.7	58.1	38.7	42.0	30.2	33.1
February	141.2	150.4	103.4	111.8	71.0	77.5	45.2	46.8	33.6	34.8
March	218.0	233.7	167.3	184.4	116.6	131.9	84.7	88.5	57.0	57.3
April	300.6	300.6	234.9	237.1	166.4	177.4	120.3	128.2	86.4	91.6
May	289.4	301.1	228.2	237.2	149.6	168.6	104.5	111.1	71.3	74.8
June	255.6	255.6	191.6	201.0	131.1	133.6	88.4	91.4	57.8	57.0
July	200.8	206.4	151.5	153.2	102.1	108.1	63.3	66.4	43.2	43.0
August	123.8	122.1	90.6	93.6	64.1	69.5	45.9	46.4	34.9	33.0
September	115.7	118.2	78.7	81.0	54.0	57.8	39.7	41.0	30.4	30.8
October	131.0	133.6	88.9	91.6	53.0	54.0	34.7	36.8	27.1	28.9
November	132.2	141.2	88.7	98.0	59.8	65.9	40.6	43.6	31.3	33.5
December	114.3	122.4	83.5	89.5	53.6	58.9	36.0	41.8	28.8	32.7

L. Ranking of Average Monthly Incremental Flows by Reach

For this section, the average monthly flows were output from the DRM. For each reach, monthly average incremental flows were ranked from lowest to highest for each month and listed on **Plates 4, 6, 8, 10, 12, 14, 16, 18, 20, and 22**.

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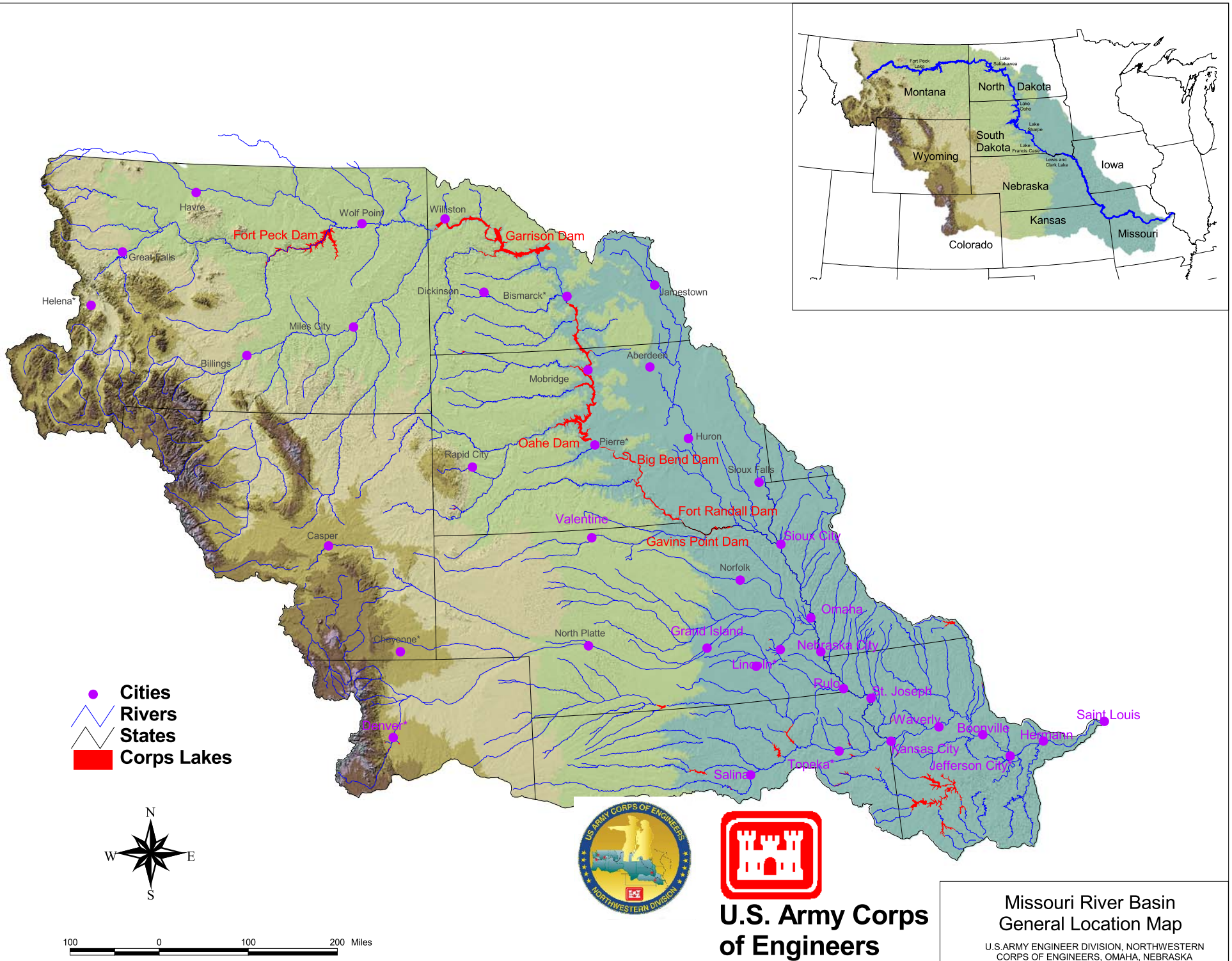
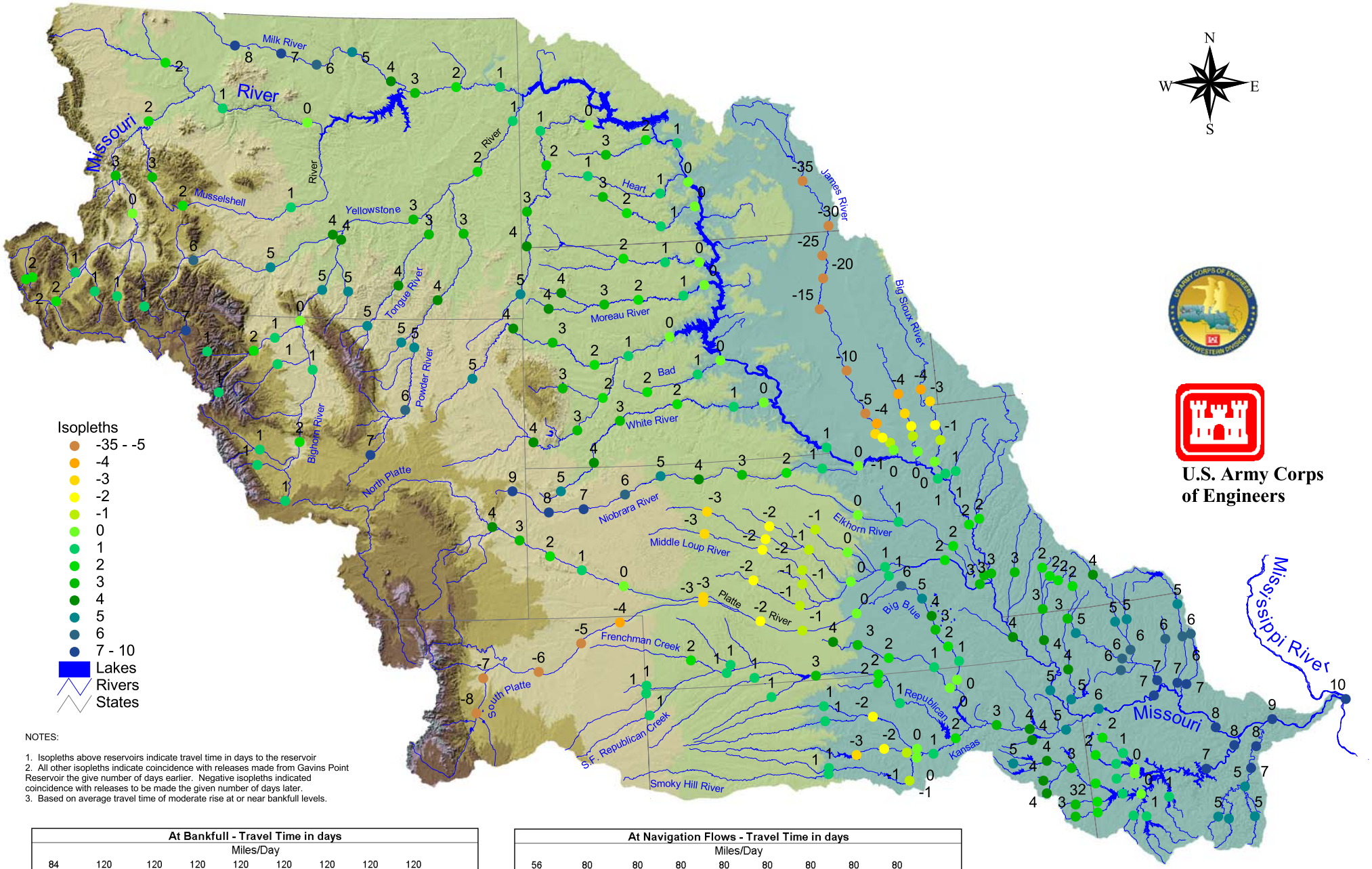


Missouri River Basin
General Location Map

U.S.ARMY ENGINEER DIVISION, NORTHWESTERN
CORPS OF ENGINEERS, OMAHA, NEBRASKA
July 2005

Plate 1



U.S. Army Corps of Engineers

NOTES:

1. Isopleths above reservoirs indicate travel time in days to the reservoir
2. All other isopleths indicate coincidence with releases made from Gavins Point Reservoir the give number of days earlier. Negative isopleths indicated coincidence with releases to be made the given number of days later.
3. Based on average travel time of moderate rise at or near bankfull levels.

At Bankfull - Travel Time in days

Miles/Day									
84	120	120	120	120	120	120	120	120	
GAPT									
1	SUX								
2	1	OMA							
2	1	0	NCNE						
3	2	1	1	STJ					
4	3	2	2	1	MKC				
5	4	3	2	1	1	WVMO			
5	4	3	3	2	1	1	BNMO		
6	5	4	4	3	2	2	1	HEMO	
7	6	5	5	4	3	2	2	1	STL

At Navigation Flows - Travel Time in days

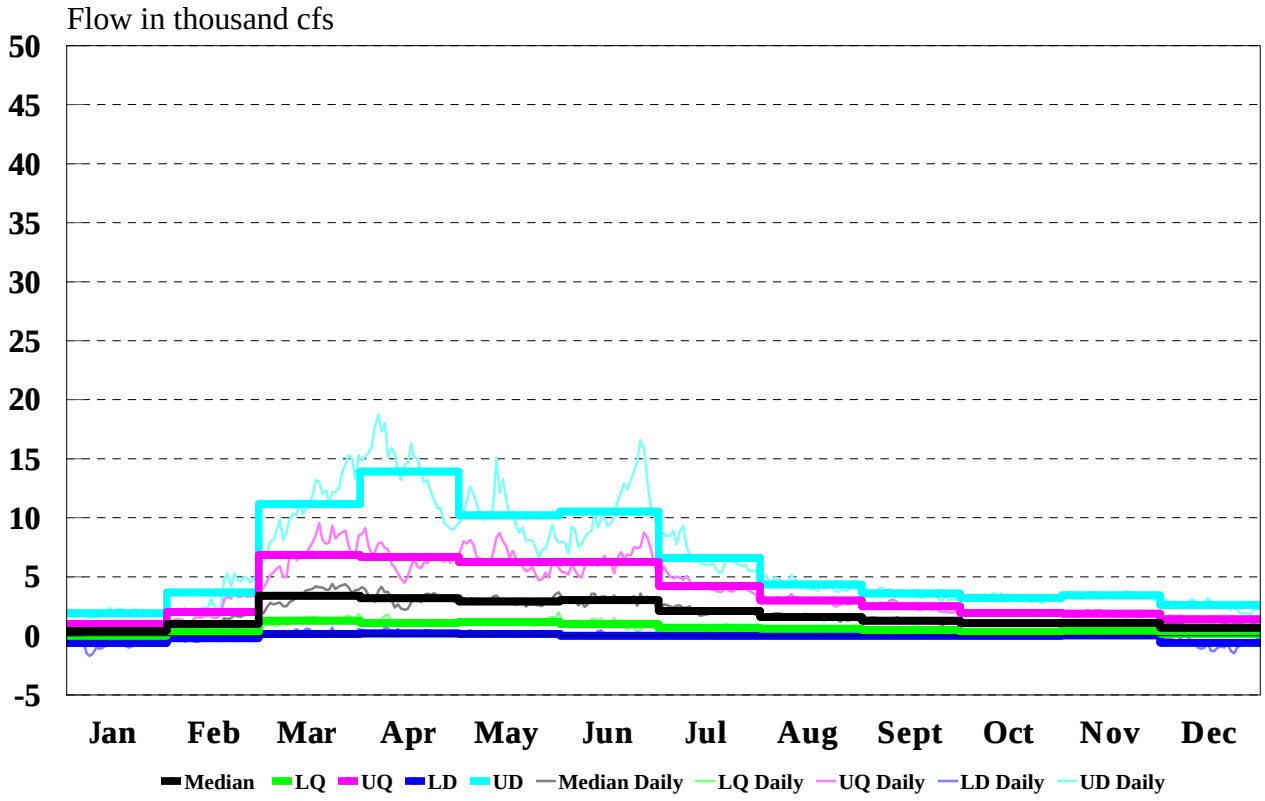
Miles/Day									
56	80	80	80	80	80	80	80	80	
GAPT									
1	SUX								
3	1	OMA							
4	2	1	NCNE						
5	4	2	1	STJ					
6	5	3	2	1	MKC				
7	5	4	3	2	1	WVMO			
8	7	5	5	3	2	1	BNMO		
9	8	6	6	4	3	2	1	HEMO	
11	9	8	7	6	5	4	2	1	STL

Plate 2

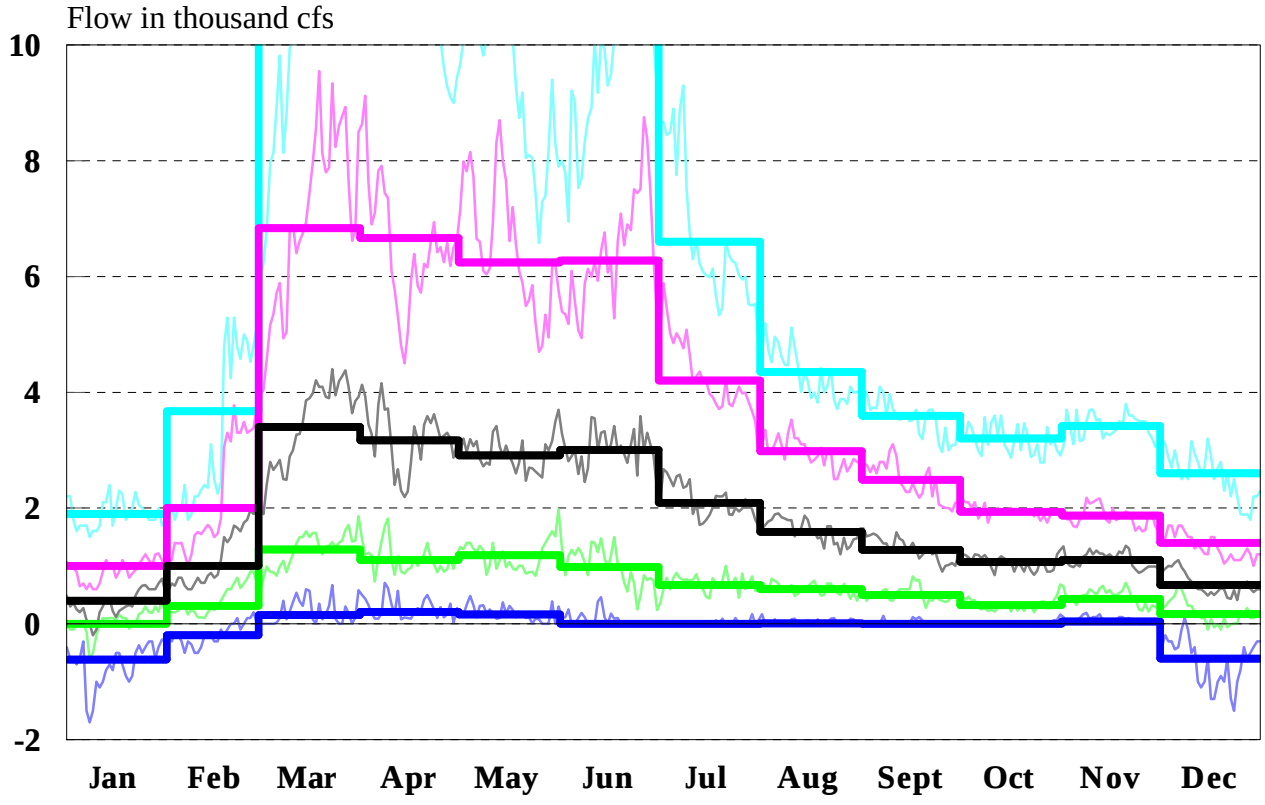
Missouri River Basin Water Travel Time

U.S. ARMY ENGINEER DIVISION, NORTHWESTERN
CORPS OF ENGINEERS, OMAHA, NEBRASKA
March 2004

Gavins Point to Sioux City Incremental Flows



Gavins Point to Sioux City Incremental Flows (Lower Values Expanded)

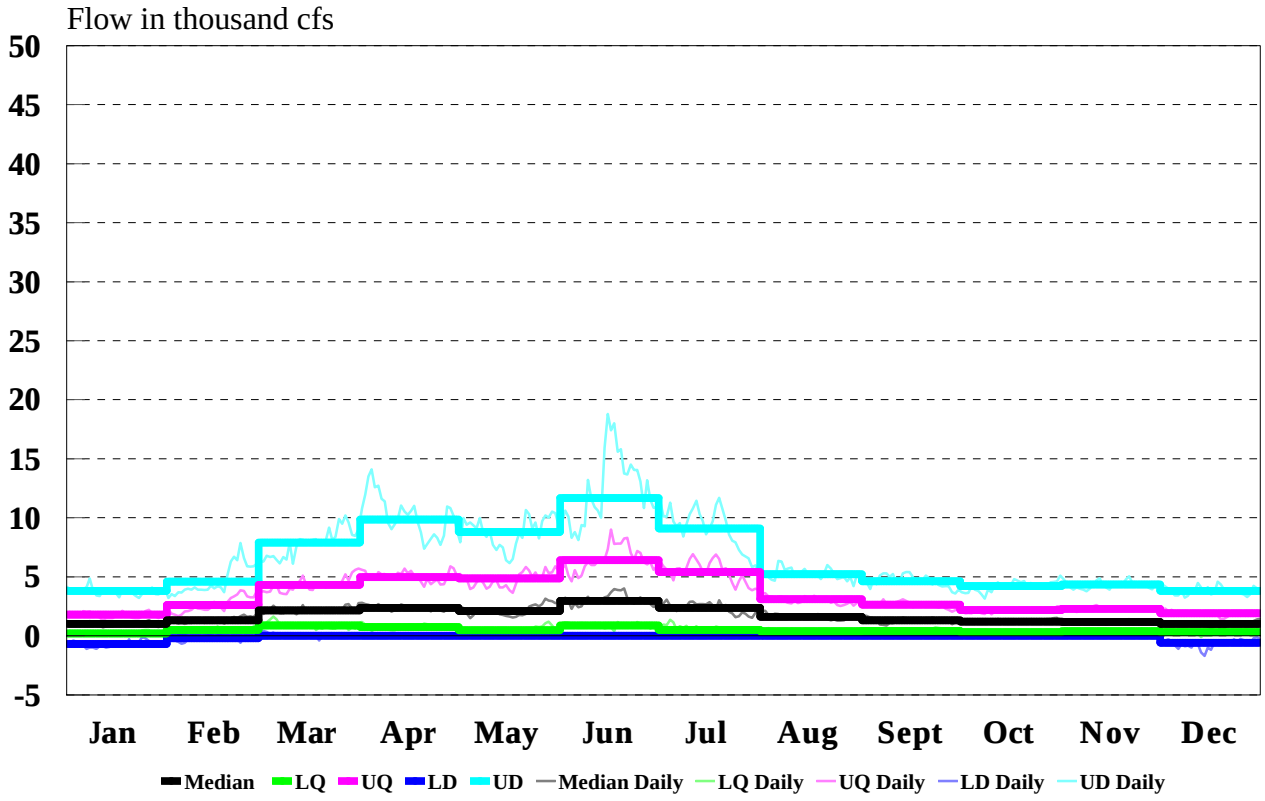


1898-2002 Data

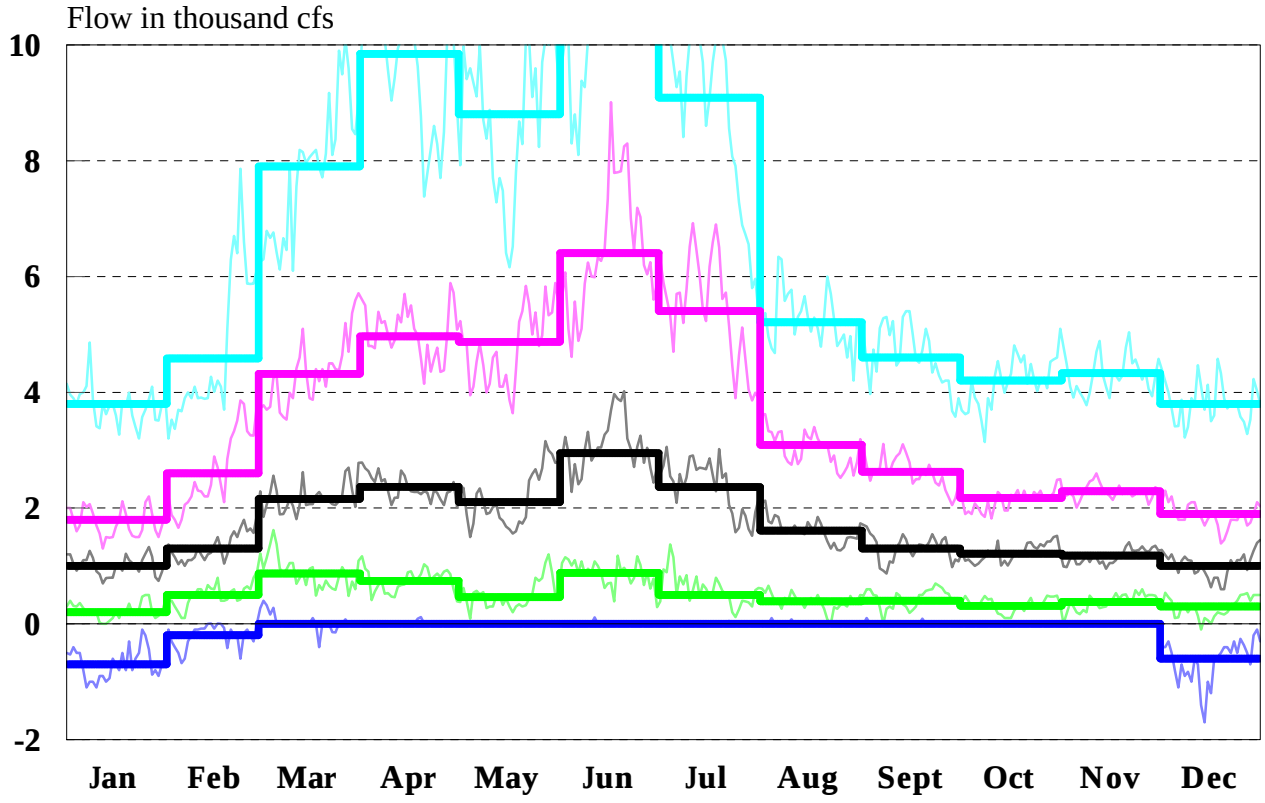
Gavins Point to Sioux City
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-1.2	1952	-0.3	1956	0.0	1955	-0.2	1955	-0.2	1955	-0.2	1955	-0.2	1955	-0.2	1955	-0.2	1955	-0.2	1955	-0.2	1955	-1.3	1950
2	-0.6	1970	-0.1	1942	0.3	1931	0.0	1990	0.1	1931	0.1	1989	0.0	1988	0.1	1989	0.0	1931	0.0	1988	-0.1	1930	-1.1	1968
3	-0.6	1971	-0.1	1930	0.4	1933	0.2	1934	0.1	1934	0.1	1956	0.1	1989	0.1	1991	0.0	1943	0.0	1935	0.1	1939	-1.1	1929
4	-0.4	1977	-0.1	1939	0.5	1925	0.3	1935	0.2	1981	0.2	1941	0.1	1943	0.2	1931	0.1	1990	0.1	1931	0.1	1924	-0.6	1989
5	-0.4	1988	0.0	1955	0.5	1934	0.3	1931	0.2	1956	0.3	1912	0.2	1931	0.2	1925	0.1	1925	0.1	1934	0.1	1934	-0.5	1990
6	-0.4	1951	0.0	1937	0.5	1991	0.3	1991	0.3	1940	0.4	1933	0.2	1933	0.2	1936	0.1	1935	0.1	1936	0.1	1936	-0.5	1943
7	-0.2	1982	0.0	1936	0.5	1990	0.3	1925	0.3	1935	0.4	1910	0.2	1936	0.2	1934	0.1	1989	0.1	1924	0.1	1931	-0.5	1940
8	-0.2	1955	0.0	1932	0.6	1935	0.4	1981	0.4	1968	0.4	1911	0.2	1956	0.2	1990	0.1	1981	0.1	1990	0.1	1969	-0.3	1944
9	-0.1	1934	0.1	1940	0.7	1943	0.5	1968	0.5	1925	0.5	1988	0.3	1925	0.2	1988	0.2	1937	0.1	1932	0.2	1925	-0.2	1949
10	-0.1	1968	0.1	1933	0.8	1964	0.6	1933	0.6	1989	0.6	1931	0.3	1947	0.3	1933	0.2	1934	0.1	1937	0.2	1933	-0.2	1953
11	-0.1	1950	0.1	1925	0.8	1940	0.7	1926	0.6	1933	0.6	1935	0.3	1981	0.3	1954	0.2	1991	0.1	1943	0.2	1935	-0.2	1983
12	-0.1	1957	0.1	1961	0.8	1981	0.8	1943	0.7	1939	0.6	1936	0.3	1968	0.3	1981	0.2	1940	0.1	1989	0.2	1921	-0.1	1938
13	-0.1	1969	0.2	1990	0.9	1968	0.9	1963	0.7	1943	0.7	1921	0.4	1934	0.3	1935	0.2	1954	0.1	1939	0.2	1932	-0.1	1941
14	-0.1	1933	0.2	1935	1.1	1975	0.9	1938	0.8	1936	0.7	1922	0.4	1932	0.3	1968	0.3	1998	0.2	1933	0.3	1943	-0.1	1947
15	-0.1	1972	0.3	1938	1.1	1926	1.0	1974	0.9	1911	0.7	1977	0.4	1940	0.4	1946	0.3	1968	0.2	1925	0.3	1910	0.0	1961
16	0.0	1930	0.3	1960	1.1	1998	1.1	1936	1.0	1932	0.8	1968	0.5	1959	0.4	1938	0.3	1926	0.2	1945	0.3	1989	0.0	1935
17	0.0	1940	0.3	1998	1.2	1959	1.1	1939	1.0	1941	0.9	1934	0.5	1977	0.4	1926	0.4	1956	0.2	1991	0.3	1937	0.0	1937
18	0.0	1962	0.3	1934	1.2	1963	1.2	1922	1.0	1938	0.9	1943	0.5	1935	0.4	1941	0.4	1922	0.3	1921	0.4	1917	0.0	1960
19	0.0	1935	0.3	1926	1.3	1958	1.2	1911	1.1	1946	1.0	1981	0.6	1970	0.5	1932	0.4	1974	0.3	1953	0.4	1990	0.0	1924
20	0.0	1936	0.4	1950	1.3	1937	1.3	1956	1.1	1974	1.0	1938	0.7	1926	0.5	1937	0.5	1939	0.4	1910	0.4	1898	0.1	1964
21	0.0	1937	0.4	1922	1.5	1922	1.4	1988	1.1	1910	1.2	1927	0.7	1942	0.5	1940	0.5	1988	0.4	1959	0.5	1927	0.1	1930
22	0.0	1925	0.4	1959	1.6	1965	1.4	1989	1.1	1988	1.2	1932	0.7	1946	0.6	1922	0.6	1932	0.4	1987	0.5	1987	0.1	1958
23	0.0	1960	0.5	1989	1.7	1957	1.5	1932	1.1	1990	1.2	1992	0.7	1990	0.6	1945	0.6	1953	0.4	1917	0.5	1918	0.1	1925
24	0.0	1961	0.6	1962	1.8	1956	1.5	1959	1.1	1991	1.2	1926	0.8	1937	0.8	1973	0.7	1945	0.5	1898	0.5	1940	0.1	1939
25	0.1	1922	0.6	1911	1.8	1969	1.5	1992	1.2	1900	1.2	1939	0.8	1939	0.8	1987	0.7	1987	0.5	1942	0.5	1954	0.1	1932
26	0.1	1926	0.6	1965	1.8	1974	1.6	1961	1.3	1977	1.3	1902	0.9	1922	0.9	1911	0.7	1947	0.5	1998	0.6	1953	0.1	1921
27	0.1	1997	0.6	1972	1.8	1911	1.6	1977	1.4	1992	1.3	1946	0.9	2002	1.0	1899	0.7	1911	0.5	1940	0.6	1901	0.2	1931
28	0.1	1942	0.7	1931	1.9	1942	1.6	1954	1.5	1924	1.4	1937	0.9	1941	1.0	1939	0.8	1977	0.5	1927	0.6	1913	0.2	1945
29	0.1	1911	0.7	1964	1.9	1989	1.7	1957	1.5	1958	1.5	1940	0.9	1930	1.0	1942	0.8	1899	0.6	1929	0.6	1929	0.2	1910
30	0.1	1932	0.7	1963	2.2	2002	1.8	1967	1.5	1928	1.6	2002	0.9	1953	1.0	1982	0.8	1929	0.6	1954	0.6	1956	0.2	1946
31	0.1	1938	0.7	1975	2.2	1967	1.8	1928	1.5	1926	1.6	1987	1.1	1911	1.0	1956	0.8	1970	0.6	1949	0.6	1904	0.3	1898
32	0.2	1899	0.8	1899	2.3	1947	1.8	1975	1.5	1963	1.7	1900	1.2	1963	1.1	1958	0.8	1959	0.6	1901	0.6	1916	0.3	1917
33	0.2	1918	0.8	1918	2.5	1988	1.9	1958	1.5	1919	1.7	1958	1.3	1985	1.1	1959	0.9	1963	0.6	1918	0.7	1903	0.3	1934
34	0.2	1919	0.8	1953	2.8	1977	2.0	1942	1.6	1937	1.7	1990	1.4	1991	1.1	1997	0.9	1918	0.6	1969	0.7	1926	0.3	1927
35	0.2	1928	0.8	1941	2.8	1960	2.1	1937	1.6	1967	1.8	1963	1.4	1974	1.2	1928	0.9	1936	0.7	1913	0.7	1974	0.3	1996
36	0.2	1902	0.9	1928	2.8	1928	2.1	1941	1.6	1922	1.9	1959	1.5	1899	1.2	1929	1.0	1919	0.7	1958	0.7	1991	0.3	1942
37	0.2	1944	0.9	1978	2.8	1941	2.2	1940	1.7	1975	2.1	1964	1.5	1918	1.2	1918	1.0	1902	0.7	1974	0.8	1938	0.3	1952
38	0.2	1914	0.9	1949	3.1	1999	2.2	1919	1.7	1954	2.2	1925	1.6	1964	1.2	1902	1.0	1928	0.7	1956	0.8	1945	0.3	1901
39	0.2	1931	0.9	1969	3.1	2000	2.3	1905	1.9	1971	2.3	1903	1.6	1966	1.2	1919	1.0	1905	0.8	1916	0.9	1968	0.3	1918
40	0.2	1905	0.9	1979	3.1	1939	2.4	1964	2.1	1917	2.4	1973	1.7	1975	1.3	1970	1.1	1973	0.8	1904	0.9	1988	0.4	1936
41	0.2	1917	1.0	1943	3.2	1899	2.4	1918	2.3	1964	2.4	1974	1.8	1950	1.3	1943	1.1	1997	0.8	1926	0.9	1959	0.4	1913
42	0.2	1927	1.0	1968	3.2	1932	2.5	1898	2.4	1957	2.5	1930	1.8	1954	1.3	1947	1.1	1914	0.8	1981	0.9	1923	0.4	1962
43	0.2	1946	1.0	1902	3.3	1918	2.6	1899	2.5	1959	2.6	1960	1.8	1919	1.4	1977	1.1	1941	0.8	1960	1.0	1961	0.4	1963
44	0.3	1904	1.0	1919	3.4	1980	2.6	1914	2.5	1904	2.7	1975	1.9	1960	1.4	1985	1.1	1958	0.9	1903	1.0	1907	0.4	1988
45	0.3	1953	1.0	1951	3.4	1919	2.7	1930	2.5	1980	2.8	1970	1.9	1902	1.4	1914	1.2	1917	1.0	1952	1.0	1994	0.4	1916
46	0.3	1967	1.0	1958	3.6	1898	2.9	1946	2.7	1973	2.8	1980	1.9	1987	1.4	2002	1.2	1982	1.0	1930	1.0	1912	0.4	1933
47	0.3	1924	1.0	1929	3.6	1992	2.9	1982	2.8	2002	2.9	1982	2.0	1928	1.5	1974	1.2	1898	1.1	1907	1.0	1963	0.4	1967
48	0.3	1941	1.1	1997	3.6	1914	2.9	1971	2.9	1961	3.0	1961	2.1	1914	1.5	1950	1.3	1933	1.1	1963	1.0	1958	0.4	1904
49	0.3	1945	1.1	1914	3.7	1982	3.0	1950	3.1	1912	3.0	1976	2.1	1938	1.5	1969	1.3	1927	1.1	1997	1.1	1920	0.4	1957
50	0.3	1898	1.1	1991	3.8	1976	3.0	1904	3.1	1930	3.0	1917	2.1	1980	1.5	1917	1.4	1904	1.1	1947	1.1	1951	0.4	1948
51	0.3	1908	1.2	1957	3.8	1944	3.1	1945	3.2	1966	3.1	1966	2.1	1898	1.5	1998	1.4	1946	1.2	1996	1.2	1915	0.5	1903
52	0.3	1958	1.2	1985	4.0	1954	3.2	1953	3.2	1982	3.1	1949	2.2	1917	1.6	1948	1.4	1948	1.2	1977	1.2	1911	0.5	1926
53	0.4	1959	1.2	1917	4.0	1905	3.3	1972	3.2	1970	3.3	1919	2.2	1961	1.6	1965	1.5	1969	1.2	1912	1.2	1960	0.6	1954
54	0.4	1913	1.2	1995	4.0	1938	3.3	1927	3.2	1948	3.5	1913	2.2	1958	1.6	1949	1.5	1952	1.2	1920	1.2	1944	0.6	1923
55	0.4	1921	1.2	1905	4.1	1917	3.5	1902	3.4	1976	3.6	1953	2.3	1949	1.6	1898	1.5	1950	1.2	1923	1.2	1947	0.6	1976
56	0.4	1954	1.3	1904	4.3	1936	3.5	1980	3.4	1987	3.8	1985	2.4	1976	1.6	1952	1.5	1961	1.2	1970	1.2	1941	0.6	1907
57	0.4	1996	1.3	1981	4.3	1996	3.6	1966	3.4	1903	3.9	1928	2.5	1982	1.7	1966	1.5	1962	1.3	1922	1.2	1950	0.6	1991
58	0.4	1910	1.4	1927	4.3	1904	3.7	1917	3.6	1945	3.9	1918	2.5	1973	1.7	1927	1.6	1966	1.3	1962	1.3	1952	0.6	1956
59	0.4	1912	1.4	1987	4.4	1953	3.8	2002	3.8	1902	4.1	1991	2.6	1927	1.8	1963	1.6	2002	1.3	1941	1.3	1909	0.7	1912
60	0.4	1916	1.4	1970	4.6	1966	3.9	1970	3.8	1949	4.2	1898	2.6	1905	1.8	1904	1.7	1967	1.3	1911	1.3	1962	0.7	1920
61	0.4	1943	1.4	1988	4.7	1962	4.1	1976	3.9	1914	4.4	1942	2.6	1965	1.8	1905	1.7	1924	1.3	1950	1.3	1906	0.7	1951
62	0.4	1901	1.5	1974	4.8	1970	4.1	1921	4.0	1923	4.4	1969	2.7	1904	2.2	1967	1.9	1908	1.4	1909	1.3	1900	0.7	1955
63	0.4	1920	1.6	1967	4.9	1951	4.2	1908	4.1	1921	4.6	1978	2.8	1948	2.2	1924	1.9	1957	1.4	1915	1.3	1928	0.8	1911
64	0.4	1923	1.6	1977	5.0	1995	4.3	1944	4.2	1942	4.9	1952	3.0	1967	2.2	1976	1.9	1994	1.4	1994	1.4	1919	0.8	1915
65	0.4	1993	1.6	1986	5.0	1927	4.5	1913	4.2	1950	5.0	1948	3.1	1929	2.4	1957	2.0	1949	1.4	1919	1.4	1914	0.8	1909
66	0.4	1949	1.6	1924	5.1	1902	4.7	1924	4.3	1947	5.0	1899	3.2	1945	2.4	1930	2.0	1971	1.4	1900	1.4	1973	0.8	1919
67	0.4	1991	1.7	1947	5.2	1961	4.9	1920	4.4	1901	5.2	1905	3.3	1924	2.4	1961	2.0	1965	1.4	1976	1.5	1985	0.8	1922
68	0.5	1907	1.7	1993	5.7	2001	4.9	1973	4.5	1998	5.4	1965	3.4	1998	2.4	1908	2.0	1938	1.5	1938	1.5	1957	0.8	1900
69	0.5	1900	1.7	1946	5.7	1924	5.1	1910	4.6	1965	5.5	1944	3.5	1908	2.5	1980	2.0	1964	1.5	1967	1.5	1942	0.8	1906
70	0.5	1903	1.8	2001	5.8	1950	5.2	1916	4.9	1905	5.5	1904	3.7	1971	2.5	1964	2.0	1930	1.6	1961	1.5	1899	0.9	1899
71	0.5	1915	1.8	1908	5.8	1952	5.3	1912	5.1	1953	5.7	1947	3.7	1913	2.6	1994	2.1	1921	1.6	1968	1.5	1902	0.9	1914
72	0.6	1906	1.8	1948	5.9	1971	5.3	1923	5.2	1985	5.8	1916	3.9	1921	2.7	1971	2.1	1980	1.6	1906	1.6	1976	1.0	1969
73	0.6	1978	1.9	1945	6.2	1908	5.7	1949	5.4	1960	5.8	1957	4.1	1986	2.7	1913	2.1	1942	1.6	1928	1.6	1997	1.0	1902
74	0.6	1990	2.0	1999	6.3	1921	5.7	1947	5.5	1962	5.8	1998	4.1	1997	2.7	1921	2.2	1920	1.6	1914	1.6	2002	1.0	1959
75	0.6	1992	2.0	2000	6.5	1987	5.8	1901	5.6	1978	5.9	1950	4.2	1920	2.9	1996	2.2	1916	1.7	1966	1.6	1966	1.0	1928
76	0.6	1939	2.0	1913	6.5	1972	6.2	1996	5.7	1918	6.1	1967	4.2	1912	2.9	1920	2.2	1996	1.7	1902	1.7	1905	1.1	1905
77	0.6	1948	2.1	1921	6.8	1913	6.4	1900	6.2	1899	6.4	1979	4.2	1916	2.9	1986	2.2	1913	1.7	1899	1.7	1922	1.1	2002
78	0.6	1909	2.1	1954	6.9	1984	6.6	1907	6.2	1996	6.4	1997	4.4	1910	2.9	1910	2.3	1910	1.8	2001	1.7	1996	1.1	1908
79	0.6	1965	2.1	1992	7.0	1912	7.1	1909	6.7	1951	6.5	1920	4.5	1972	3.0	1975	2.3	1912	1.8	1973	1.7	1967	1.2	1966
80	0.7	1964	2.1	2002	7.0	1946	7.3	1906	7.1	1994	6.6	1929	4.5	1923	3.0	1953	2.4	1960	1.9	2002	1.7	1999	1.2	1997
81	0.7	1975	2.1	1944	7.1	1923	7.4	1915	7.3	1983	7.0	1923	4.6	1907	3.0	1916	2.4	1907	2.0	1964	1.7	2000	1.2	1972
82	0.7	1976	2.2	1898	7.7	1916	7.4	1903	7.7	1916	7.5	1971	4.7	1901	3.1	1960	2.5	1901	2.0	1905	1.8	1908	1.2	1994
83	0.8	1966	2.2	1912	7.8	1907	7.6	1998	7.7	1908	7.8	1915	4.9	1994	3.1	1901	2.5	1976	2.0	1908	1.8	1981	1.5	1981
84	0.8	1979	2.2	1916	8.0	1945	8.2	1965	7.8	1898	7.8	1914	4.9	1969	3.3	1912	2.6	2001	2.2	1948	1.9	1965	1.5	1973
85	0.8	1999	2.2	1920	8.3	1948	8.9	1994	7.8	1915	7.9	1954	5.1	1957	3.4	1923	2.6	1983	2.2	1957	1.9	1970	1.5	1992
86	0.8	2000	2.3	1996	8.4	1949	9.2	1948	7.9	1929	7.9	1972	5.3	1900	3.5	2001	2.6	1923	2.3	1975	2.0	1975	1.7	1965
87	0.8	1963	2.3	1910	8.5	1920	9.4	1999	7.9	1969	8.2	1906	5.4	1979	3.5	1972	2.8	1975	2.3	1972	2.1	1949	1.7	1974
88	0.8	1989	2.4	1923	8.5	1901	9.4	2000	7.9	1913	8.3	1994	5.5	1903	3.6	1962	2.9	1915	2.4	1971	2.1	1948	1.9	1987
89	0.9	1974	2.5	1901	8.7	1993	9.9	1987	7.9	1927	8.5	1901	5.6	1915	3.7	1900	3.0	1900	2.5	1951	2.2	1977	1.9	1977
90	0.9	1929	2.5	1907	8.8	1910	10.2	1985	8.1	1999	9.1	1999	5.7	1992	3.9	1915	3.0	1972	2.5	1980	2.4	1964	2.0	1970
91	1.0	1985	2.6	1982	9.2	1979	10.4	1929	8.1	2000	9.1	2000	5.9	1952	3.9	1903	3.0	1903	2.6	1944	2.8	1983	2.0	1985
92	1.0	1956	2.8	1980	9.2	1978	11.3	1979	8.3	1944	9.4	1945	5.9	1906	4.0	1999	3.3	1944	2.6	1985	2.8	1946	2.0	1995
93	1.0	1995	2.9	1915	9.3	1915	11.7	1978	8.5	1979	9.4	1986	6.1	1978	4.0	2000	3.3	1906	2.7	1965	3.1	2001	2.1	1984
94	1.3	2001	2.9	1900	9.4	1900	13.4	1951	8.6	1972	9.6	1951	6.3	1996	4.0	1907	3.3	1985	2.7	1983	3.4	1972	2.3	1980
95	1.4	1947	3.0	1903	9.9	1985	15.0	1983	8.6	1906	10.3	2001	6.3	2001	4.1	1983	3.5	1909	2.7	1999	3.4	1980	2.3	1999
96	1.7	1987	3.0	1973	10.3	1903	17.2	1952	9.6	1909	10.5	1983	6.8	1909	4.2	1951	3.6	1995	2.7	2000	3.5	1992	2.3	2000
97	1.7	1998	3.1	1984	10.5	1906	17.9	1993	10.4	1952	10.6	1908	8.2	1995	4.3	1992	3.6	1984	3.9	1979	3.6	1971	2.4	1971
98	1.7	1981	3.3	1906	11.1	1986	19.3	1995	10.7	1907	11.3	1924	8.7	1999	4.6	1909	4.1	1999	4.0	1946	4.0	1984	2.7	1975
99	1.8	1986	3.5	1909	11.5	1909	21.0	1986	11.5	1920	11.4	1996	8.7	2000	4.8	1906	4.1	2000	4.3	1992	4.2	1993	2.7	1998
100	1.9	1994	4.1	1976	11.6	1930	27.9	1969	15.1	1993	11.7	1907	9.5	1962	5.2	1944	4.2	1992	4.3	1978	4.4	1978	3.0	2001
101	2.0	2002	4.1	1952	11.7	1997	28.2	1962	15.2	1984	12.4	1909	9.8	1983	5.3	1978	4.3	1978	4.4	1982	4.5	1986	3.1	1993
102	2.1	1980	4.6	1966	12.4	1973	28.6	1960	17.8	1986	13.8	1962	10.0	1951	5.4	1984	4.7	1979	4.9	1993	4.6	1995	3.2	1986
103	2.2	1984	4.7	1983	14.0	1994	28.6	1984	19.1	2001	18.6	1993	13.3	1944	6.1	1979	5.4	1951	6.0	1984	5.2	1998	3.3	1978
104	2.8	1973	4.7	1994	15.4	1983	30.9	2001	19.2	1997	18.7	1995	13.3	1984	6.4	1995	7.6	1993	6.2	1995	5.7	1979	4.1	1979
105	3.0	1983	6.4	1971	19.9	1929	38.3	1997	27.5	1995	33.3	1984	40.5	1993	13.8	1993	9.8	1986	7.9	1986	6.3	1982	6.2	1982

Sioux City to Omaha Incremental Flows



Sioux City to Omaha Incremental Flows (Lower Values Expanded)

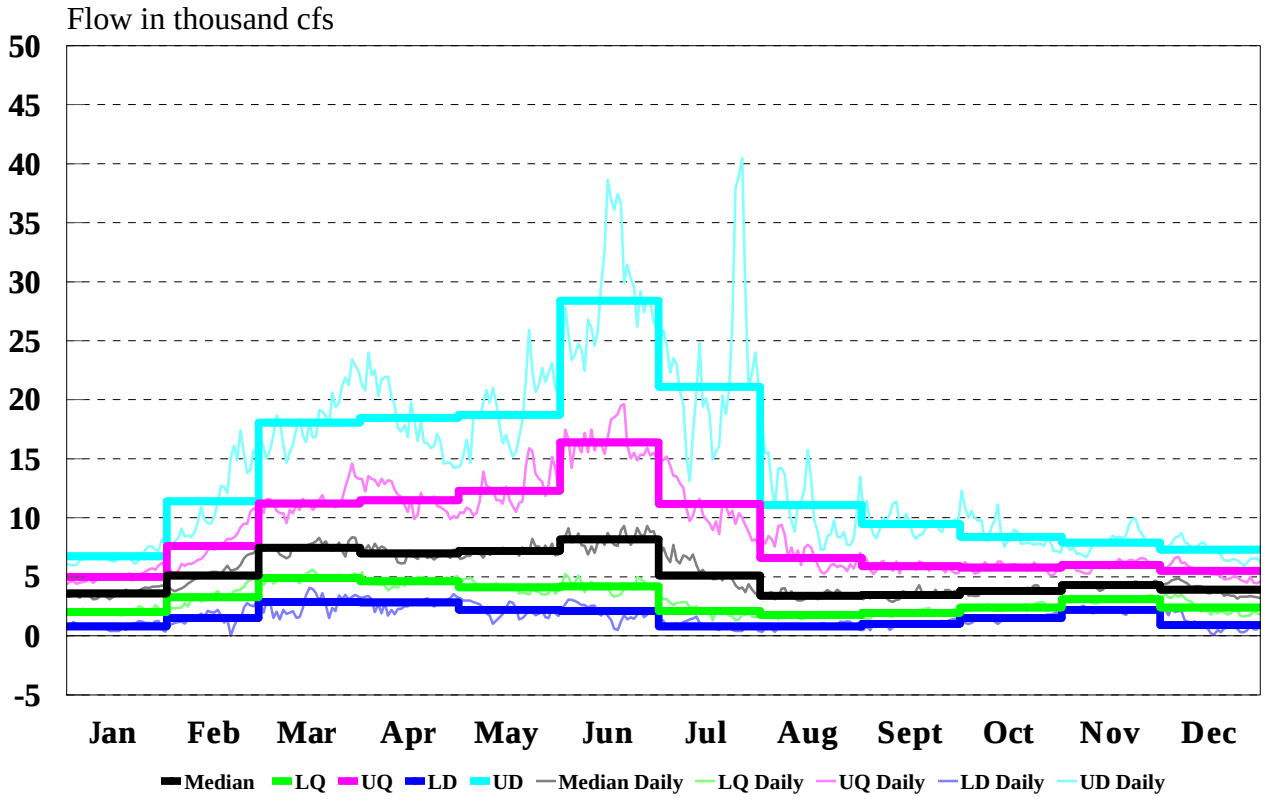


1898-2002 Data

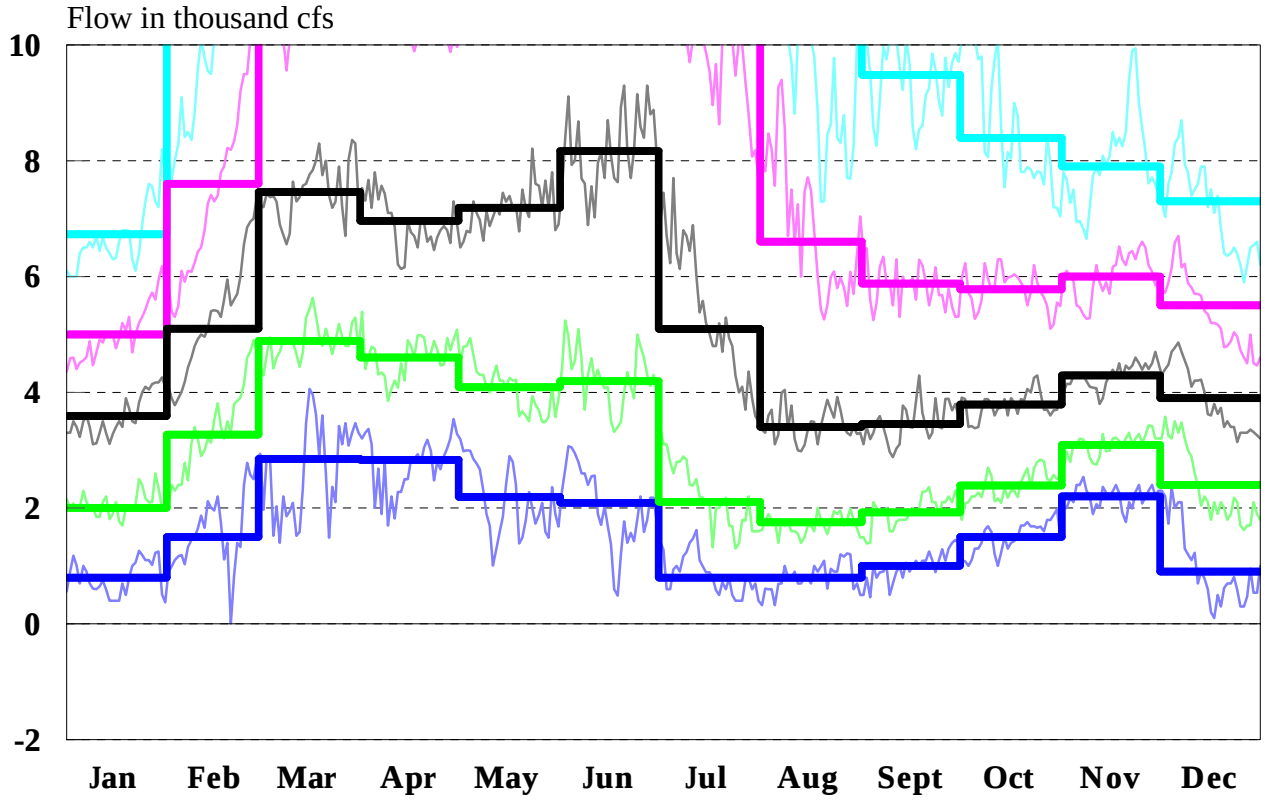
Sioux City to Omaha
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-1.4	1954	-0.9	1952	-0.9	1952	-0.8	1933	-1.0	1952	-1.2	1933	-1.0	1933	-0.7	1933	-0.8	1933	-0.4	1946	-0.7	1933	-1.3	1933
2	-1.1	1971	-0.6	1933	-0.3	1946	-0.7	1952	-0.7	1933	-1.0	1952	-0.4	1946	-0.3	1946	-0.4	1946	-0.2	1933	-0.3	1946	-0.9	1943
3	-1.0	1972	-0.2	1936	-0.2	1933	-0.3	1946	-0.3	1946	-0.4	1946	0.0	1952	-0.2	1932	0.1	1934	0.0	1940	0.0	1949	-0.7	1932
4	-0.9	1929	-0.2	1959	0.3	1934	0.1	1948	0.0	1929	0.1	1936	0.1	1936	0.0	1970	0.1	1958	0.0	1934	0.0	1934	-0.7	1989
5	-0.9	1952	-0.2	1968	0.3	1943	0.1	1934	0.0	1934	0.2	1926	0.2	1901	0.1	1934	0.2	1967	0.0	1936	0.1	1942	-0.7	1944
6	-0.8	1969	0.0	1957	0.3	1968	0.1	1959	0.1	1948	0.3	1948	0.2	1911	0.2	1911	0.3	1947	0.1	1947	0.1	1936	-0.5	1947
7	-0.5	1937	0.1	1939	0.4	1931	0.3	1968	0.1	1958	0.3	1901	0.2	1926	0.2	1958	0.3	1948	0.1	1935	0.1	1945	-0.4	1955
8	-0.4	1960	0.1	1969	0.4	1928	0.4	1931	0.2	1926	0.3	1911	0.3	1968	0.2	1936	0.3	1953	0.1	1958	0.1	1947	-0.4	1956
9	-0.4	1959	0.1	1937	0.6	1935	0.4	1935	0.2	1940	0.3	1956	0.3	1931	0.2	1957	0.3	1956	0.1	1953	0.1	1938	-0.3	1934
10	-0.4	1936	0.2	1914	0.7	1940	0.4	1957	0.2	1931	0.3	1934	0.3	1934	0.2	1971	0.3	1935	0.1	1932	0.1	1939	-0.3	1929
11	-0.4	1967	0.2	1940	0.7	1966	0.5	1898	0.3	1968	0.5	1931	0.4	1958	0.3	1956	0.3	1952	0.2	1948	0.2	1914	-0.2	1948
12	-0.3	1938	0.2	1931	0.7	1899	0.5	1956	0.3	1939	0.5	1958	0.4	1970	0.3	1931	0.4	1959	0.2	1929	0.2	1967	-0.2	1977
13	-0.2	1948	0.2	1935	0.7	1918	0.5	1943	0.3	1914	0.6	1964	0.4	1966	0.4	1967	0.4	1930	0.2	1963	0.2	1968	-0.2	1958
14	-0.2	1957	0.3	1929	0.7	1925	0.5	1958	0.4	1941	0.7	1970	0.4	1961	0.4	1976	0.4	1976	0.2	1930	0.3	1937	-0.2	1935
15	-0.2	1978	0.4	1967	0.7	1964	0.8	1908	0.4	1967	0.8	1930	0.5	1956	0.4	1941	0.4	1971	0.2	1939	0.3	1935	-0.1	1931
16	-0.1	1977	0.4	1975	0.9	1957	0.8	1925	0.4	1935	0.8	1939	0.6	1912	0.4	1901	0.5	1901	0.2	1931	0.3	1964	-0.1	1938
17	-0.1	1944	0.5	1928	1.0	1917	0.8	1938	0.4	1901	0.8	1976	0.6	1974	0.4	1913	0.5	1911	0.3	1944	0.3	1966	-0.1	1949
18	-0.1	1953	0.5	1909	1.0	1926	0.8	1940	0.4	1911	0.9	1935	0.7	1930	0.5	1968	0.5	1966	0.3	1967	0.3	1948	0.0	1928
19	0.0	1940	0.5	1910	1.2	1956	0.8	1964	0.5	1943	0.9	1955	0.7	1935	0.5	1964	0.5	1940	0.3	1937	0.3	1980	0.0	1961
20	0.2	1912	0.5	1913	1.3	1959	0.8	1930	0.5	1956	0.9	1938	0.7	1939	0.5	1952	0.5	2002	0.3	1945	0.4	1944	0.1	1937
21	0.2	1925	0.5	1917	1.3	1958	0.9	1967	0.5	1961	0.9	1968	0.7	1963	0.5	1965	0.6	1970	0.3	1956	0.4	1929	0.1	1967
22	0.2	1955	0.5	1956	1.3	1898	0.9	1963	0.6	1977	0.9	1966	0.7	1980	0.6	1930	0.6	1939	0.3	1964	0.5	1923	0.2	1912
23	0.2	1956	0.6	1977	1.3	1911	1.0	1977	0.6	1907	1.0	1941	0.7	1949	0.6	1939	0.6	1949	0.4	1955	0.5	1924	0.2	1924
24	0.2	1966	0.6	1912	1.3	1923	1.0	1939	0.6	1925	1.0	1977	0.7	1964	0.6	1948	0.6	1942	0.4	1942	0.5	1958	0.2	1927
25	0.2	1968	0.7	1900	1.3	1927	1.1	1970	0.7	1936	1.2	1912	0.9	1910	0.6	1926	0.6	1912	0.4	1966	0.5	1930	0.2	1970
26	0.3	1939	0.7	1923	1.5	1913	1.2	1936	0.7	1947	1.2	1922	0.9	1965	0.7	1938	0.6	1960	0.4	1924	0.5	1940	0.2	1964
27	0.3	1935	0.8	1950	1.5	1920	1.2	1899	0.8	1930	1.4	1910	0.9	1948	0.7	1912	0.6	1931	0.5	1949	0.5	1969	0.2	1978
28	0.3	1975	0.8	1976	1.5	2002	1.3	1932	0.8	1957	1.4	1913	0.9	1941	0.8	1935	0.7	1937	0.5	1950	0.5	1931	0.2	1966
29	0.3	1913	0.8	1924	1.5	1981	1.3	1941	0.8	1955	1.5	1949	1.0	1932	0.8	1959	0.7	1968	0.5	1970	0.6	1965	0.2	1976
30	0.3	1924	0.8	2001	1.6	1906	1.4	1911	0.9	1950	1.7	1906	1.0	1976	0.9	1955	0.7	1936	0.6	1959	0.6	1943	0.3	1939
31	0.3	1962	0.8	1932	1.6	1921	1.4	1921	0.9	1928	1.7	1932	1.1	1967	0.9	1914	0.7	1974	0.6	1943	0.6	1932	0.3	1953
32	0.3	1945	0.8	1989	1.6	1947	1.4	1942	0.9	1971	1.7	1950	1.1	1960	0.9	1974	0.8	1913	0.6	1922	0.6	1907	0.3	1969
33	0.4	1949	0.8	1958	1.7	1976	1.4	1954	1.0	1923	1.8	1972	1.2	1898	0.9	1980	0.8	1957	0.6	1960	0.7	1956	0.3	1942
34	0.4	1958	0.9	1942	1.8	1970	1.5	1926	1.0	1966	1.9	1978	1.2	1957	1.0	1972	0.8	1944	0.7	1957	0.7	1978	0.3	1930
35	0.4	1941	0.9	1960	1.8	1900	1.6	1966	1.2	1924	2.1	1989	1.2	1940	1.0	1960	0.8	1929	0.7	1969	0.7	1976	0.3	1914
36	0.4	1905	0.9	1947	1.8	1904	1.7	1914	1.2	1970	2.1	1900	1.3	1977	1.0	1966	0.9	1963	0.7	1952	0.8	1910	0.4	1936
37	0.4	1915	1.0	1899	1.8	1914	1.8	1976	1.2	1963	2.2	1940	1.3	1959	1.0	1961	0.9	1961	0.8	1976	0.8	1917	0.5	1940
38	0.5	1931	1.0	1901	1.8	1924	1.8	1900	1.4	1954	2.3	1909	1.3	1913	1.1	1944	1.0	1932	0.9	1971	0.8	1926	0.5	1945
39	0.5	1932	1.0	1905	1.9	1907	1.8	1924	1.5	1937	2.3	1937	1.4	2002	1.1	1973	1.0	1943	0.9	1974	0.8	1941	0.6	1908
40	0.5	1947	1.1	1954	1.9	1941	1.8	1990	1.5	1949	2.4	1961	1.5	1938	1.1	1949	1.0	1954	0.9	1899	0.8	1950	0.6	1910
41	0.6	1930	1.1	1902	2.0	1960	1.9	1972	1.5	1944	2.4	1921	1.6	1971	1.1	1947	1.0	1991	0.9	1907	0.8	1970	0.6	1922
42	0.6	1909	1.1	1934	2.1	1939	1.9	1981	1.5	1976	2.5	1965	1.7	1979	1.1	1963	1.0	1945	0.9	1917	0.8	1951	0.6	1925
43	0.6	1943	1.1	1944	2.2	1974	2.0	2002	1.6	1953	2.5	1988	1.8	1918	1.3	1969	1.1	1955	0.9	1941	0.9	1963	0.6	1965
44	0.6	1976	1.2	1979	2.2	1908	2.0	1907	1.7	1978	2.6	1973	1.9	1950	1.3	1909	1.1	1917	1.0	1910	0.9	1974	0.6	1968
45	0.6	1970	1.2	1964	2.3	1954	2.0	1909	1.8	1938	2.7	1927	2.0	1929	1.3	1910	1.1	1922	1.0	1916	0.9	1899	0.7	1923
46	0.7	1979	1.3	1904	2.3	1910	2.0	1910	1.9	1910	2.9	1914	2.1	1973	1.5	1898	1.1	1950	1.2	1972	0.9	1911	0.7	1926
47	0.7	1950	1.3	1978	2.3	1977	2.1	1971	2.0	1932	3.0	1929	2.2	1906	1.5	1929	1.1	1941	1.2	1913	1.0	1962	0.8	1946
48	0.7	1961	1.3	1955	2.5	1990	2.1	1937	2.2	1900	3.4	1943	2.4	1972	1.5	1954	1.2	2000	1.2	1925	1.0	1971	0.8	1971
49	0.7	1981	1.3	1918	2.5	1902	2.1	1903	2.2	1906	3.4	1974	2.4	1955	1.5	1977	1.2	1980	1.2	1975	1.1	1898	0.8	1963
50	0.7	1982	1.3	1922	2.5	1950	2.3	1989	2.2	1908	3.5	1898	2.4	1989	1.5	2001	1.2	2001	1.2	1978	1.1	1913	0.8	1951
51	0.7	1934	1.3	2002	2.6	1929	2.4	1923	2.2	1989	3.5	1905	2.5	1975	1.6	1919	1.2	1977	1.2	1965	1.1	1927	0.8	1974
52	0.7	1908	1.4	1898	2.6	1955	2.4	1928	2.3	1980	3.5	1918	2.5	1900	1.6	1922	1.2	1923	1.2	1938	1.2	1916	0.9	1906
53	0.7	1914	1.4	1938	2.6	1901	2.5	1961	2.3	1909	3.5	1920	2.5	1953	1.6	1978	1.2	1924	1.3	2000	1.2	1953	0.9	1916
54	0.7	1963	1.5	1903	2.8	1922	2.6	1944	2.3	1912	3.6	1981	2.6	1954	1.7	1953	1.2	1927	1.3	1962	1.3	1952	0.9	1957
55	0.8	1942	1.5	1941	2.8	1944	2.6	1974	2.3	1922	3.8	1957	2.6	1914	1.7	1950	1.2	1973	1.3	1898	1.3	1961	0.9	1959
56	0.9	1911	1.5	1951	2.8	1967	2.7	1950	2.3	1927	3.9	1979	2.6	1925	1.8	1940	1.3	1964	1.3	1909	1.4	1912	1.0	1980
57	0.9	1917	1.5	1953	2.9	1937	2.8	1980	2.5	1898	4.0	2002	2.9	1937	1.8	1975	1.3	1972	1.4	1951	1.4	1925	1.0	1952
58	0.9	1974	1.6	1921	3.1	1942	2.9	1902	2.5	1921	4.1	1969	3.0	1988	1.9	1906	1.4	1899	1.5	1901	1.4	1955	1.0	1954
59	1.0	1933	1.6	1925	3.1	1912	2.9	1905	2.6	1902	4.2	1959	3.1	1928	1.9	1924	1.4	1925	1.5	1906	1.4	2001	1.0	1911
60	1.0	1918	1.6	1927	3.1	1915	2.9	1978	2.8	1918	4.2	1916	3.2	1903	2.1	1918	1.5	1898	1.5	1914	1.5	1957	1.0	1917
61	1.0	1919	1.6	1973	3.2	1980	2.9	2000	2.8	1964	4.2	1928	3.2	1919	2.1	1925	1.5	1906	1.5	1920	1.5	1901	1.0	1919
62	1.0	1927	1.6	1949	3.2	1953	3.0	1955	2.8	1981	4.3	1960	3.2	2001	2.1	1943	1.5	1909	1.5	1977	1.5	1904	1.1	1960
63	1.0	1926	1.6	1981	3.2	1930	3.1	1953	3.0	1959	4.5	2000	3.3	1981	2.2	1988	1.5	1969	1.5	1980	1.5	1908	1.1	1981
64	1.1	1965	1.7	1972	3.2	2000	3.3	1945	3.1	1917	4.7	1980	3.7	1978	2.3	1989	1.7	1904	1.5	1968	1.5	1922	1.1	1950
65	1.1	1898	1.7	1908	3.3	1972	3.3	1973	3.1	2000	4.8	1925	3.9	1991	2.3	1942	1.7	1975	1.6	1981	1.5	1928	1.1	1962
66	1.1	1964	1.7	1920	3.3	1989	3.5	1917	3.1	1965	4.9	1947	4.0	1942	2.3	1900	1.8	1908	1.6	1904	1.5	1960	1.2	1901
67	1.2	1922	1.8	1963	3.4	1936	3.8	1947	3.4	1969	4.9	1942	4.1	1945	2.3	1920	1.8	1910	1.6	1912	1.6	2000	1.2	1904
68	1.2	1923	1.9	1990	3.4	1996	3.9	1904	3.6	2002	5.0	1971	4.1	1985	2.3	1923	1.8	1919	1.7	2002	1.6	2002	1.2	1907
69	1.3	1946	1.9	1906	3.6	1948	3.9	1906	3.6	1972	5.0	1985	4.2	2000	2.4	1991	2.0	1907	1.8	1908	1.7	1973	1.3	1900
70	1.3	1900	1.9	1926	3.6	1932	3.9	1918	3.7	1973	5.1	1907	4.2	1921	2.4	2002	2.0	1990	1.8	1911	1.8	1959	1.3	1902
71	1.3	1901	2.1	1911	3.6	1998	4.0	1988	3.8	1988	5.2	1963	4.5	1916	2.4	1928	2.1	1988	1.8	1927	1.8	1906	1.3	1903
72	1.3	1907	2.1	1930	3.7	1963	4.1	1913	4.4	1913	5.2	1944	4.5	1924	2.5	1985	2.1	1965	1.8	1928	1.8	1920	1.4	1941
73	1.3	1921	2.1	1962	3.8	1916	4.1	1915	4.5	1916	5.8	1902	4.8	1943	2.5	1904	2.3	1900	1.8	1961	1.8	1921	1.5	1898
74	1.3	1928	2.3	1970	3.9	1975	4.3	1982	4.6	1974	5.9	1992	5.1	1922	2.5	1917	2.3	1916	1.8	2001	1.9	1954	1.5	1899
75	1.4	2002	2.4	1974	4.1	1999	4.5	1901	4.7	1905	6.1	1924	5.4	1917	2.6	1962	2.3	1920	1.9	1900	2.0	1902	1.5	1920
76	1.5	1902	2.5	1965	4.1	1919	4.5	1916	4.7	1962	6.5	1982	5.6	1927	2.6	1921	2.4	1981	1.9	1921	2.1	1915	1.5	1921
77	1.5	1916	2.6	1919	4.2	1905	4.5	1922	4.9	1942	6.5	1987	5.6	1990	2.8	1981	2.6	1914	2.0	1991	2.1	1919	1.6	1905
78	1.5	1991	2.7	1945	4.3	1988	4.9	1994	4.9	1990	6.5	1919	5.9	1905	2.9	1908	2.7	1998	2.1	1919	2.2	1981	1.6	1913
79	1.6	2001	2.7	1998	4.4	1991	5.2	1996	5.1	1919	6.6	1962	6.0	1899	3.1	1902	2.7	1921	2.1	1988	2.2	1977	1.6	1983
80	1.6	1899	3.1	1961	4.5	1938	5.9	1920	5.3	1994	6.7	1899	6.0	1951	3.2	1916	3.0	1999	2.2	1918	2.3	1900	1.8	1915
81	1.6	1904	3.1	1915	4.5	1909	6.4	1997	5.4	1899	6.8	1975	6.1	1997	3.2	1927	3.0	1918	2.3	1954	2.3	1903	1.8	1975
82	1.6	1906	3.2	1986	4.7	2001	6.7	1919	5.4	1915	7.0	1923	6.1	1947	3.3	2000	3.1	1995	2.3	1989	2.4	1905	1.9	2002
83	1.8	1951	3.2	1907	5.0	1903	6.8	1992	5.5	1960	7.3	1951	6.2	1920	3.3	1990	3.4	1928	2.3	1905	2.6	1972	2.1	1973
84	1.8	1998	3.3	1946	5.3	1949	6.9	1991	5.9	1904	7.4	2001	6.4	1962	3.4	1905	3.5	1997	2.3	1923	2.7	1989	2.2	1990
85	1.9	1903	3.3	1980	5.4	1992	7.1	1927	5.9	1998	7.5	1945	6.5	1969	3.6	1997	3.5	1902	2.5	1979	2.7	1988	2.2	1972
86	1.9	1920	3.3	1988	5.5	1982	7.4	1949	6.2	1903	7.8	1953	6.7	1944	3.8	1899	3.5	1915	2.5	1903	2.7	1990	2.3	2001
87	2.0	1989	3.6	1993	5.9	1985	7.6	2001	6.3	1979	7.9	1904	6.7	1908	3.9	1982	3.6	1989	2.6	1926	3.1	1985	2.4	1987
88	2.5	1990	3.6	1916	6.2	1969	7.7	1912	6.4	1945	9.5	1954	6.9	1923	3.9	1979	3.9	1979	2.7	1999	3.1	1975	2.5	1909
89	2.7	1986	3.7	2000	6.5	1987	7.8	1962	6.6	1920	9.5	1997	7.1	1995	4.2	1983	3.9	1978	2.7	1990	3.2	1991	2.5	2000
90	2.8	1988	3.8	1999	6.6	1995	8.0	1995	6.7	1975	9.5	1986	7.5	1909	4.3	1937	4.0	1983	2.8	1973	3.2	1918	2.6	1918
91	3.0	1995	3.9	1987	7.6	1951	8.3	1975	6.9	1996	10.5	1994	8.2	1998	4.4	1945	4.3	1996	3.4	1987	3.5	1997	2.7	1988
92	3.4	1973	4.1	1991	7.6	1994	8.4	1979	7.0	1982	10.6	1990	8.3	1907	4.5	1995	4.5	1962	3.7	1915	3.8	1909	3.1	1997
93	3.5	1993	4.1	1966	7.8	1965	9.1	1929	7.1	1987	11.2	1917	8.4	1986	4.6	1986	4.5	1951	4.2	1983	3.9	1999	3.5	1985
94	3.5	1980	4.1	1995	7.9	1945	9.2	1998	7.2	1992	11.2	1995	8.4	1999	5.3	1907	4.6	1985	4.2	1998	4.1	1996	3.5	1979
95	3.7	1994	4.5	1971	8.2	1978	9.3	1985	8.5	1997	12.0	1998	8.4	1987	5.6	1903	4.8	1984	4.2	1902	4.1	1995	3.6	1999
96	4.0	2000	4.5	1992	8.4	1961	10.3	1999	8.6	1951	12.4	1967	8.6	1992	5.6	1994	4.8	1994	4.4	1995	4.3	1987	3.8	1991
97	4.1	1984	4.5	1943	8.5	1997	10.6	1987	9.2	1985	12.6	1999	8.8	1904	5.8	1998	4.8	1926	4.7	1994	4.5	1994	3.8	1994
98	4.2	1992	4.6	1994	8.6	1971	10.8	1960	9.3	1999	13.2	1991	8.8	1982	5.9	1984	5.0	1982	4.8	1997	5.1	1993	4.7	1992
99	4.2	1999	4.7	1948	8.7	1984	12.0	1986	9.4	1991	13.2	1996	9.8	1994	6.0	1992	5.0	1905	4.8	1984	5.7	1983	4.8	1982
100	4.2	1996	4.7	1982	10.3	1973	12.7	1951	10.5	2001	13.3	1908	10.2	1984	6.3	1999	5.2	1986	4.8	1985	6.5	1998	4.9	1998
101	4.8	1985	5.6	1996	11.4	1986	15.5	1969	12.1	1995	13.5	1915	10.7	1902	6.4	1987	5.4	1987	4.9	1996	6.9	1992	5.1	1995
102	5.0	1910	5.8	1985	12.5	1962	16.1	1965	13.1	1993	13.9	1903	11.6	1996	9.2	1951	5.5	1903	6.3	1982	7.0	1979	5.3	1993
103	5.3	1987	8.7	1984	12.9	1993	16.8	1984	14.3	1986	19.6	1983	12.7	1983	10.0	1915	6.1	1992	6.4	1993	7.5	1986	5.5	1986
104	5.5	1997	9.3	1983	17.6	1983	17.7	1993	14.3	1983	20.4	1993	16.4	1915	11.4	1993	7.7	1938	8.2	1986	7.6	1984	5.6	1996
105	5.6	1983	9.6	1997	17.9	1979	21.6	1983	14.5	1984	26.4	1984	29.3	1993	12.4	1996	9.5	1993	9.5	1992	7.8	1982	7.2	1984

Omaha to Nebraska City Incremental Flows



Omaha to Nebraska City Incremental Flows (Lower Values Expanded)

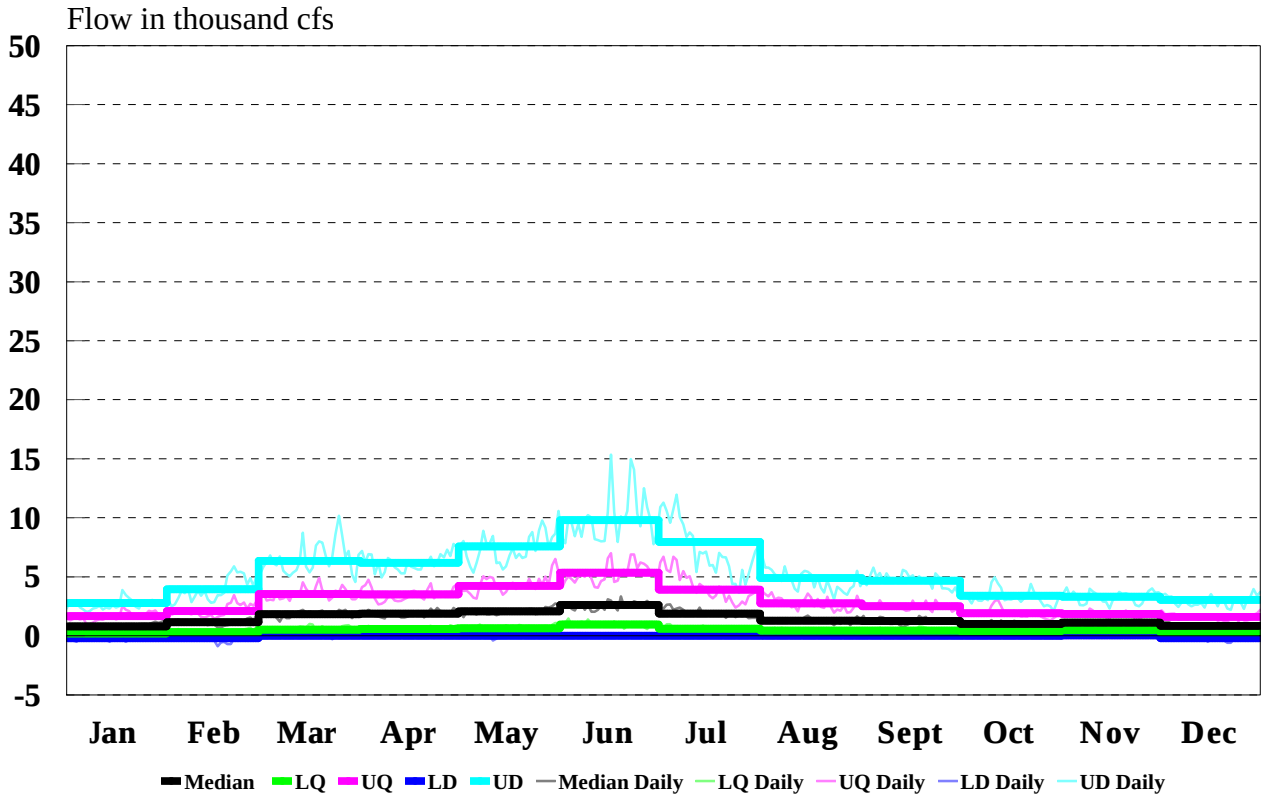


1898-2002 Data

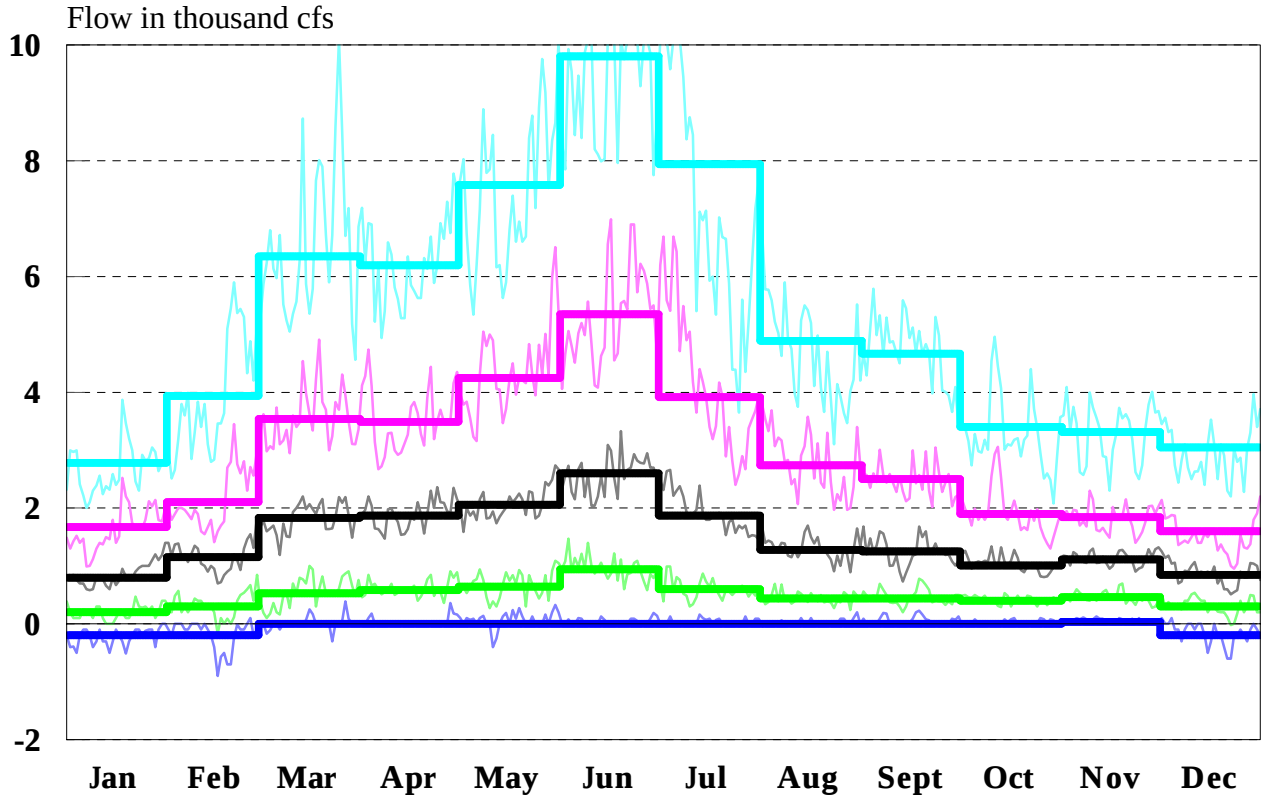
Omaha to Nebraska City
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	0.1	1937	0.6	1914	1.5	1928	1.6	1898	0.5	1926	0.5	1926	0.5	1976	0.4	1991	0.6	1976	0.9	1991	0.5	1914	0.5	1912
2	0.4	1968	1.6	1936	2.5	1899	2.3	1990	1.0	1914	1.0	1901	0.5	1901	0.4	1976	0.7	1990	1.1	1990	1.6	1923	0.5	1924
3	0.5	1912	1.6	1928	2.5	1918	2.5	1989	1.5	1901	1.0	1911	0.5	1911	0.5	1911	0.7	1991	1.3	1940	1.6	1924	0.5	1927
4	0.5	1925	1.7	1909	2.5	1925	2.6	1908	1.5	1911	2.1	1989	0.5	1926	0.7	1989	0.9	1971	1.5	1924	2.0	1939	0.5	1990
5	0.8	1936	1.7	1910	3.5	1917	2.6	1925	1.7	1989	2.2	1981	0.5	1974	0.9	1941	1.1	1940	1.7	1939	2.1	1907	1.0	1914
6	1.0	1913	1.7	1913	3.5	1926	2.9	1981	2.0	1907	2.4	1988	0.9	1981	0.9	1988	1.1	1939	1.7	1989	2.4	1975	1.3	1943
7	1.0	1924	1.7	1917	3.7	1991	3.3	1942	2.0	1925	2.9	1948	1.0	2002	0.9	1975	1.1	1980	1.7	1936	2.4	1941	1.4	1945
8	1.2	1940	1.7	1978	3.9	1981	3.3	1955	2.3	1934	3.0	1976	1.0	1936	1.3	1971	1.1	1953	1.7	1974	2.6	1937	1.6	1955
9	1.5	1991	2.2	1912	4.0	1996	3.5	1982	2.4	1955	3.1	1936	1.4	1934	1.3	1936	1.3	1974	1.7	1975	2.6	1936	1.6	1989
10	1.5	1905	2.2	1940	4.5	1898	3.8	1940	2.6	1997	3.2	1956	1.5	1940	1.3	1974	1.3	1956	1.9	1980	2.6	1988	1.7	1963
11	1.5	1915	2.2	1900	4.5	1911	3.8	1956	3.0	1981	3.4	1934	1.5	1988	1.4	1955	1.4	1988	2.0	1922	2.6	1910	1.7	1940
12	1.6	1957	2.2	1923	4.5	1923	3.9	1991	3.0	1928	3.5	1992	1.7	1975	1.4	1934	1.4	1955	2.2	1937	2.6	1917	1.8	1956
13	1.6	1979	2.7	1924	4.5	1927	4.0	1967	3.1	1967	3.6	2000	1.7	1954	1.5	1970	1.4	2000	2.2	1956	2.6	1926	1.9	1932
14	1.8	1977	2.8	1979	4.7	1990	4.0	1948	3.1	1941	4.0	2002	1.8	1980	1.5	1901	1.5	1975	2.2	1978	2.6	1950	1.9	1944
15	1.9	1935	2.8	1939	4.7	1943	4.1	1992	3.3	1990	4.1	1972	2.0	1941	1.5	1913	1.5	1947	2.2	1943	2.7	1956	2.0	1934
16	2.0	1909	3.4	1899	4.8	1956	4.2	1899	3.5	1923	4.2	1912	2.0	1912	1.6	2000	1.6	1901	2.3	1994	2.7	1978	2.0	1939
17	2.2	1941	3.4	1901	4.8	1967	4.2	1996	3.6	2000	4.2	1922	2.1	1955	1.7	1943	1.6	1911	2.3	1976	2.7	1940	2.0	1908
18	2.4	1948	3.4	1905	5.0	1977	4.3	1946	3.6	1994	4.2	1939	2.4	1939	1.8	1980	1.7	2002	2.5	1988	2.7	1976	2.0	1910
19	2.4	1951	3.5	1981	5.0	1913	4.5	1943	3.6	1940	4.3	1931	2.4	1991	1.8	1946	1.9	1969	2.5	1953	2.9	1980	2.0	1922
20	2.4	1970	3.5	1990	5.0	1920	4.5	2000	3.8	1946	4.4	1933	2.5	1956	1.9	1947	2.0	1994	2.5	1942	3.0	1955	2.0	1925
21	2.4	1971	3.6	1938	5.2	1957	4.5	1941	3.8	1956	4.5	1968	2.5	1970	1.9	1969	2.0	1954	2.5	1944	3.0	1943	2.2	1936
22	2.5	1908	3.8	1957	5.2	1941	4.6	1937	3.9	1939	4.7	1974	2.6	1987	1.9	1931	2.0	1979	2.6	1947	3.0	1944	2.3	1985
23	2.5	1914	3.8	1975	5.6	1906	4.7	1936	3.9	1943	4.7	1979	2.6	1963	1.9	2002	2.1	1945	2.6	1938	3.0	1948	2.3	1929
24	2.5	1969	3.8	1989	5.6	1921	4.7	1911	3.9	1948	4.7	1910	2.6	1968	2.0	1939	2.1	1912	2.6	1935	3.1	1938	2.5	1923
25	2.6	1982	3.9	1902	5.6	1968	4.7	1921	4.0	1992	4.7	1913	2.6	1931	2.0	1926	2.2	1967	2.7	1948	3.1	1899	2.5	1926
26	2.6	1967	4.0	1992	5.7	1992	4.8	1935	4.0	1924	4.8	1970	2.7	1946	2.0	1995	2.3	1981	2.7	1995	3.1	1911	2.7	1950
27	2.6	1975	4.2	1937	5.8	1935	4.9	1938	4.1	1968	5.0	1994	2.7	1997	2.1	1956	2.3	1978	2.7	1997	3.2	1989	2.8	1937
28	2.7	1963	4.3	1904	5.9	2000	4.9	1934	4.3	1975	5.0	1938	2.8	1966	2.1	1990	2.4	1950	2.7	1996	3.2	1991	2.8	1958
29	2.7	1978	4.4	1956	6.0	1934	4.9	2002	4.4	1937	5.1	1941	2.8	1977	2.2	1953	2.4	1936	2.8	1934	3.2	1945	2.9	2000
30	2.8	1942	4.4	1955	6.0	1976	5.2	1968	4.7	1991	5.2	1977	3.0	1910	2.2	1984	2.4	1937	2.8	1992	3.3	1952	2.9	1980
31	2.9	1950	4.5	1918	6.1	1900	5.2	1976	4.9	1966	5.4	1958	3.3	1989	2.2	1997	2.5	1943	2.8	1941	3.4	1966	3.0	1906
32	2.9	1956	4.5	1922	6.1	1904	5.2	1926	5.0	1963	5.5	1997	3.4	1985	2.5	1963	2.5	1970	2.9	1958	3.4	1990	3.0	1916
33	2.9	1960	4.5	1933	6.1	1914	5.3	1988	5.1	1988	5.6	1955	3.5	2000	2.5	1968	2.5	1968	2.9	1979	3.4	1934	3.1	1935
34	2.9	1992	4.6	1942	6.1	1924	5.4	1972	5.3	1947	5.7	1906	3.6	1961	2.5	1912	2.6	1913	2.9	1971	3.5	1999	3.1	1976
35	3.0	1954	4.7	1898	6.1	2002	5.4	1997	5.4	1936	5.7	1937	3.6	1992	2.5	1979	2.7	1995	3.0	1899	3.6	1995	3.1	1942
36	3.0	1911	4.8	1941	6.3	1970	5.6	1957	5.5	1932	6.0	1966	4.0	1953	2.6	1978	2.8	1934	3.0	1907	3.6	1964	3.2	1991
37	3.0	1917	4.8	1951	6.4	1964	5.7	1914	5.6	1970	6.1	1978	4.0	1898	2.7	1940	2.8	1999	3.0	1931	3.7	1898	3.2	1974
38	3.1	1955	5.0	1903	6.6	1907	5.7	1994	5.9	1976	6.7	1975	4.1	1972	2.7	1942	2.9	1959	3.0	1917	3.7	1913	3.4	1949
39	3.1	1958	5.0	1944	6.6	1946	6.3	1900	6.2	2002	6.9	1985	4.3	1990	2.7	1965	3.0	1931	3.1	2002	3.7	1927	3.5	1966
40	3.1	1988	5.1	1967	6.9	1942	6.3	1924	6.5	1958	6.9	1950	4.4	1932	2.8	1994	3.0	1941	3.1	1999	3.7	1974	3.5	1911
41	3.2	1990	5.1	1965	7.0	1999	6.3	1939	6.6	1910	7.2	1969	4.4	1996	3.0	1914	3.0	1944	3.1	1966	3.7	1994	3.5	1917
42	3.2	1972	5.1	1977	7.0	1954	6.5	1977	6.7	1969	7.3	1900	4.5	1937	3.0	1973	3.2	1946	3.2	1955	3.7	1987	3.5	1919
43	3.2	1980	5.3	1969	7.1	1940	6.6	1975	6.9	1931	7.5	1986	4.5	1913	3.1	1967	3.2	1998	3.3	1945	3.8	2002	3.6	1996
44	3.2	1997	5.3	1991	7.4	1930	6.6	1954	7.4	1957	7.6	1959	4.9	1959	3.1	1937	3.2	1961	3.4	1964	3.9	1931	3.6	1988
45	3.3	1930	5.4	1964	7.4	1995	6.7	1963	7.5	1961	7.8	1963	4.9	1948	3.2	1938	3.3	1966	3.4	1933	4.0	1953	3.6	1975
46	3.4	1943	5.6	1921	7.6	1908	6.8	1907	7.6	1938	7.8	1909	5.1	1978	3.2	1949	3.4	1935	3.5	1981	4.0	1942	3.6	1938
47	3.4	1947	5.6	1925	7.6	1989	6.8	1909	7.6	1900	8.0	1946	5.2	2001	3.2	1961	3.6	1952	3.5	1963	4.2	1916	3.7	1954
48	3.4	1944	5.6	1927	7.7	1975	6.8	1910	7.6	1906	8.2	1940	5.2	1933	3.3	1964	3.6	1932	3.5	1910	4.2	1954	3.7	1960
49	3.4	1993	5.6	1985	7.8	1931	7.1	1966	7.6	1908	8.3	1921	5.3	1964	3.3	1935	3.7	1917	3.5	1916	4.3	1983	3.7	1962
50	3.4	1961	5.6	1980	7.9	1997	7.2	1961	7.6	1977	8.4	2001	5.6	1935	3.4	1933	3.7	1922	3.6	1987	4.3	1967	3.8	1978
51	3.5	1996	5.7	1958	7.9	1988	7.2	1932	7.6	1954	9.0	1961	5.7	1979	3.5	1957	3.7	1997	3.6	2000	4.3	1963	3.8	1941
52	3.5	1959	5.7	1961	8.1	1910	7.2	1947	8.1	1909	9.4	1927	5.7	1938	3.5	1954	3.7	1963	3.7	1954	4.4	1957	3.9	1967
53	3.5	1994	5.8	1993	8.2	1947	7.3	1903	8.1	1912	9.4	1993	6.1	1918	3.7	2001	3.9	1957	3.7	1967	4.4	1935	3.9	1992
54	3.5	1939	5.9	1963	8.5	1972	7.3	1964	8.1	1922	9.6	1953	6.3	1971	3.7	1945	4.0	1992	4.0	1972	4.4	1933	3.9	1995
55	3.5	1918	5.9	1934	8.6	1902	7.4	1971	8.1	1927	9.9	1987	6.4	1930	3.7	1972	4.0	1984	4.0	1952	4.4	1997	3.9	2002
56	3.5	1919	5.9	1908	8.6	1961	7.5	1953	8.1	1979	9.9	1914	6.5	1942	3.9	1985	4.2	1923	4.0	1913	4.5	1981	4.0	1968
57	3.5	1926	5.9	1920	8.7	1955	7.8	1933	8.4	1964	9.9	1990	6.6	1952	4.5	1909	4.2	1924	4.0	1925	4.5	1949	4.0	1901
58	3.5	1927	6.0	1947	8.7	1944	8.0	1979	8.4	1986	10.6	1954	6.6	1995	4.5	1910	4.2	1927	4.1	1949	4.6	1992	4.0	1904
59	3.6	1981	6.0	1972	8.9	1939	8.2	1970	8.6	1898	11.0	1991	6.8	1957	4.7	1992	4.2	2001	4.2	1928	4.7	1985	4.0	1907
60	3.7	1929	6.0	1949	8.9	1938	8.2	1931	8.6	1921	12.0	1898	6.8	1982	4.7	1996	4.3	1996	4.2	2001	4.7	1912	4.1	1964
61	3.7	1932	6.0	2001	9.1	1901	8.2	1950	9.0	1978	12.0	1905	6.9	1960	4.8	1987	4.3	1958	4.3	1950	4.7	1925	4.1	1961
62	3.7	1964	6.2	2002	9.3	1982	8.3	1923	9.1	1902	12.0	1918	7.0	1944	4.9	1977	4.3	1985	4.4	1957	4.8	1947	4.2	1982
63	3.7	1949	6.2	1945	9.4	1933	8.3	1928	9.3	1962	12.0	1920	7.0	1973	5.0	1898	4.3	1948	4.5	1898	4.8	1932	4.2	1970
64	3.8	1965	6.2	1929	9.4	1998	8.6	1959	9.4	1942	12.2	1930	7.4	1994	5.1	1944	4.4	1949	4.5	1909	4.8	1971	4.2	1994
65	3.9	1962	6.2	1996	9.5	1966	8.6	1985	9.4	1993	12.8	1980	7.5	1943	5.4	1930	4.4	1964	4.6	1932	4.9	1982	4.3	1948
66	4.0	1938	6.3	1935	9.6	1922	8.8	1930	9.6	1918	13.1	1952	7.6	1906	5.6	1919	4.5	1929	4.6	1959	4.9	1958	4.5	1959
67	4.0	1966	6.3	1960	9.6	1980	9.6	1993	9.7	1974	13.5	1965	7.7	1969	5.6	1922	4.6	1962	4.7	1977	4.9	1969	4.5	1900
68	4.0	1946	6.4	1995	10.2	1958	9.6	1951	9.9	1945	13.7	1942	8.5	1962	5.6	1981	4.6	1982	4.7	1960	5.0	2001	4.5	1902
69	4.0	1898	6.6	1994	10.4	1959	9.7	1945	10.0	1998	14.0	1932	8.5	1967	5.7	1952	4.6	1960	5.0	1901	5.1	1959	4.5	1903
70	4.0	1922	6.6	1946	10.5	1945	9.9	1995	10.0	1980	14.2	1957	8.6	1900	6.0	1966	4.7	1899	5.0	1906	5.2	1901	4.7	1971
71	4.0	1923	6.6	1950	10.5	1953	9.9	1902	10.5	1933	14.5	1996	8.8	1949	6.2	1960	4.7	1925	5.0	1914	5.2	1904	4.8	1953
72	4.1	1985	6.7	2000	10.6	1912	9.9	1905	10.6	1949	14.5	1943	9.1	1914	6.2	1998	4.9	1987	5.0	1920	5.2	1908	4.9	1957
73	4.1	1945	6.7	1959	10.6	1915	10.2	1980	10.6	1917	14.6	1916	9.1	1925	6.5	1986	5.0	1972	5.1	1998	5.2	1922	4.9	1999
74	4.2	2000	6.7	1906	10.6	1985	10.7	1958	11.3	1996	14.6	1928	9.1	1999	6.6	1906	5.1	1933	5.2	1961	5.2	1996	5.0	1898
75	4.2	1989	6.7	1926	10.8	1974	11.0	1974	11.4	1953	15.1	1949	10.1	1945	6.6	1924	5.2	1898	5.2	1970	5.3	1960	5.0	1899
76	4.2	1995	6.7	1962	11.2	1994	11.1	1986	11.8	1935	15.1	1999	10.2	1965	6.7	1962	5.2	1906	5.3	1962	5.3	1979	5.0	1920
77	4.5	1934	7.1	1948	11.2	1986	11.3	1949	11.9	1985	15.3	1971	10.3	1984	6.8	1929	5.2	1909	5.4	1969	5.3	1962	5.0	1921
78	4.5	1976	7.2	1976	11.3	1937	11.7	1969	12.3	1950	15.4	1960	10.6	1986	6.9	1982	5.7	1904	5.5	1985	5.4	1970	5.0	1952
79	4.5	1900	7.3	1911	11.6	1960	11.9	1965	12.5	1952	16.3	1964	10.6	1928	7.0	1959	6.0	1938	5.6	1904	5.5	2000	5.1	1947
80	4.5	1901	7.4	1986	12.7	1983	12.0	1917	12.6	1972	16.7	1998	11.1	1903	7.1	1918	6.3	1908	5.6	1912	6.0	1968	5.1	1981
81	4.5	1907	7.5	1968	12.8	1963	12.1	1962	13.6	1965	16.7	1925	11.1	1919	7.1	1925	6.3	1910	5.7	1968	6.0	1961	5.2	1979
82	4.5	1921	7.5	1988	13.1	1916	12.9	2001	13.7	1999	16.8	1982	11.1	1998	7.1	1983	6.3	1919	6.1	1908	6.3	1906	5.3	1969
83	4.5	1928	7.7	1997	13.3	1952	13.0	1952	14.1	1987	16.8	1962	12.0	1950	7.3	1950	6.4	1989	6.1	1911	6.3	1920	5.3	1933
84	5.0	1998	7.7	1953	13.4	1950	13.3	1999	14.6	1951	17.1	1973	12.2	1951	7.4	1999	6.8	1907	6.1	1927	6.3	1921	5.3	1951
85	5.0	1902	7.9	1954	13.5	1965	13.5	1906	14.7	2001	17.7	1907	12.6	1947	8.1	1900	6.9	1928	6.6	1900	6.3	1993	5.6	1905
86	5.0	1916	8.4	1970	14.1	2001	13.6	1904	14.9	1982	18.9	1995	13.8	1958	8.1	1920	6.9	1942	6.6	1921	6.8	1902	5.6	1913
87	5.1	2001	8.4	1987	14.1	1919	13.6	1918	15.1	1913	19.7	1945	14.6	1921	8.1	1923	7.1	1973	7.0	1983	6.9	1977	5.7	2001
88	5.6	1899	8.5	1982	14.6	1905	14.1	1913	15.2	1971	19.8	1902	15.6	1916	8.3	1928	7.2	1930	7.0	1984	6.9	1946	5.8	1946
89	5.6	1904	8.6	1966	15.0	1971	14.1	1915	15.5	1959	20.8	1924	15.6	1924	8.4	1932	7.4	1977	7.1	1919	6.9	1984	5.8	1972
90	5.6	1906	8.9	1919	15.1	1932	14.1	1944	15.6	1916	22.4	1919	17.6	1922	8.4	1948	7.8	1900	7.1	1993	7.3	1915	5.8	1931
91	5.6	2002	9.0	1931	15.6	1909	14.6	1973	16.1	1905	22.8	1951	18.7	1917	8.6	1904	7.8	1920	7.2	1982	7.3	1919	6.0	1977
92	5.6	1986	9.0	1932	16.0	1951	14.9	1998	16.2	1995	22.9	1899	19.2	1927	8.6	1917	7.8	1983	7.6	1918	7.3	1998	6.0	1997
93	5.8	1931	9.2	1999	16.8	1936	15.6	1901	16.4	1973	23.0	1935	19.4	1983	9.1	1921	7.8	1916	7.6	1929	7.4	1951	6.1	1915
94	5.9	1999	9.2	1943	17.1	1903	15.6	1916	16.8	1960	24.0	1923	20.2	1905	9.3	1951	8.8	1986	8.1	1905	7.5	1965	6.1	1998
95	6.0	1933	9.4	1998	17.2	1984	15.6	1922	17.4	1944	24.1	1944	20.7	1899	10.1	1908	8.9	1951	8.1	1923	7.7	1972	6.3	1987
96	6.2	1953	10.6	1915	17.4	1962	16.1	1978	17.7	1919	26.7	1983	21.2	1920	10.6	1902	8.9	1914	8.2	1951	7.8	1900	6.4	1973
97	6.5	1983	11.2	1907	17.4	1948	17.9	1983	17.7	1983	27.1	1904	23.1	1929	10.8	1958	9.4	1921	8.5	1930	7.8	1903	6.8	1965
98	6.6	1903	12.2	1973	17.8	1973	20.3	1920	18.7	1899	32.9	1947	23.2	1908	11.1	1916	9.7	1993	8.6	1903	8.3	1905	6.9	1993
99	6.6	1920	12.4	1983	17.8	1969	21.1	1987	18.7	1915	37.3	1929	23.7	1923	11.1	1927	10.4	1918	9.1	1926	8.4	1986	7.0	1930
100	6.6	1987	12.4	1916	21.0	1979	22.9	1919	20.2	1904	38.6	1917	25.7	1909	11.6	1905	12.0	1902	9.7	1946	8.6	1929	7.2	1928
101	6.8	1984	12.7	1930	21.5	1978	24.5	1927	21.2	1903	38.9	1967	28.7	1907	13.1	1899	12.0	1915	11.8	1965	9.4	1930	7.3	1983
102	6.8	1952	12.9	1952	21.6	1987	25.7	1929	21.8	1930	42.4	1984	30.3	1904	13.2	1993	13.3	1965	12.6	1915	9.5	1973	8.6	1909
103	7.6	1974	13.5	1974	22.0	1993	26.1	1960	22.0	1929	45.8	1908	36.8	1902	18.2	1907	16.7	1926	13.9	1986	10.9	1918	9.1	1918
104	9.7	1973	14.3	1971	22.1	1929	26.6	1912	22.7	1920	46.4	1915	37.9	1993	19.2	1903	17.2	1905	14.6	1902	12.7	1928	9.4	1986
105	17.1	1910	16.5	1984	29.9	1949	35.0	1984	35.3	1984	47.9	1903	56.5	1915	34.3	1915	18.8	1903	15.6	1973	13.0	1909	10.3	1984

Nebraska City to Rulo Incremental Flows



Nebraska City to Rulo Incremental Flows (Lower Values Expanded)

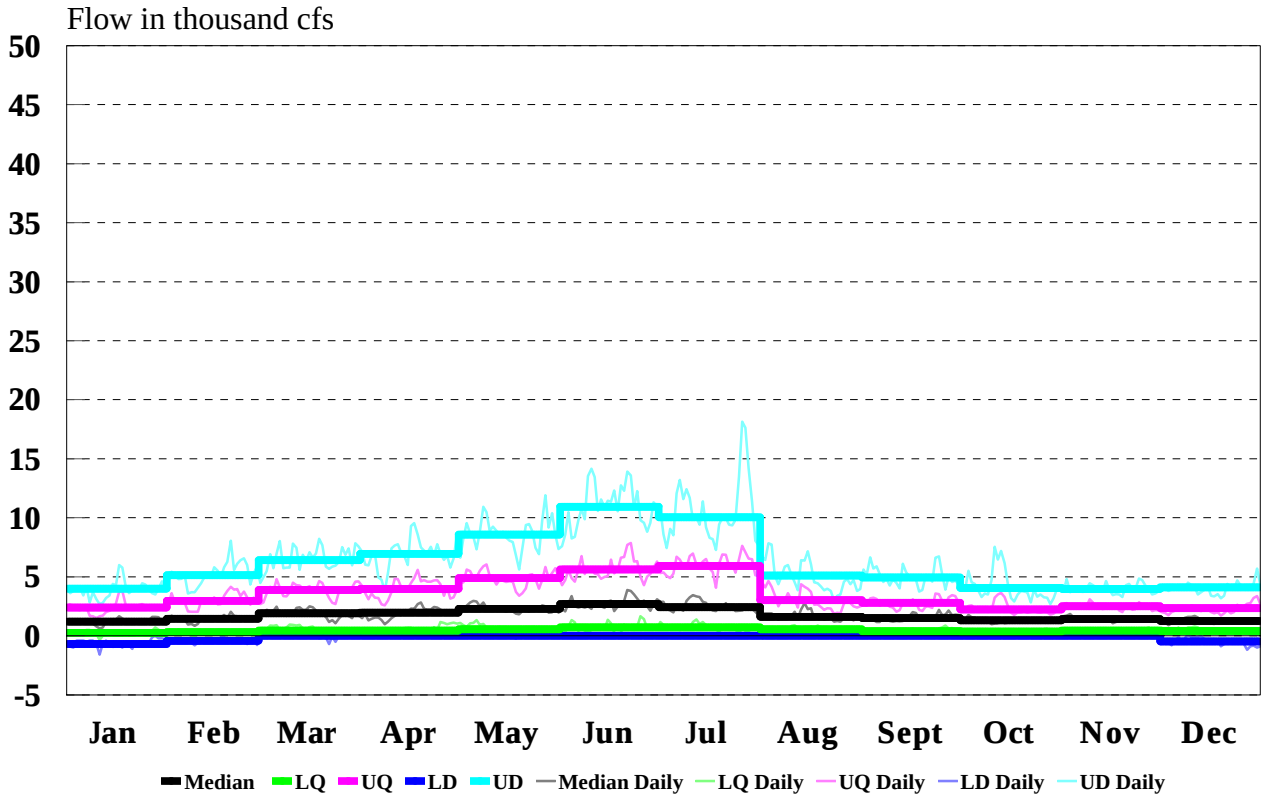


1898-2002 Data

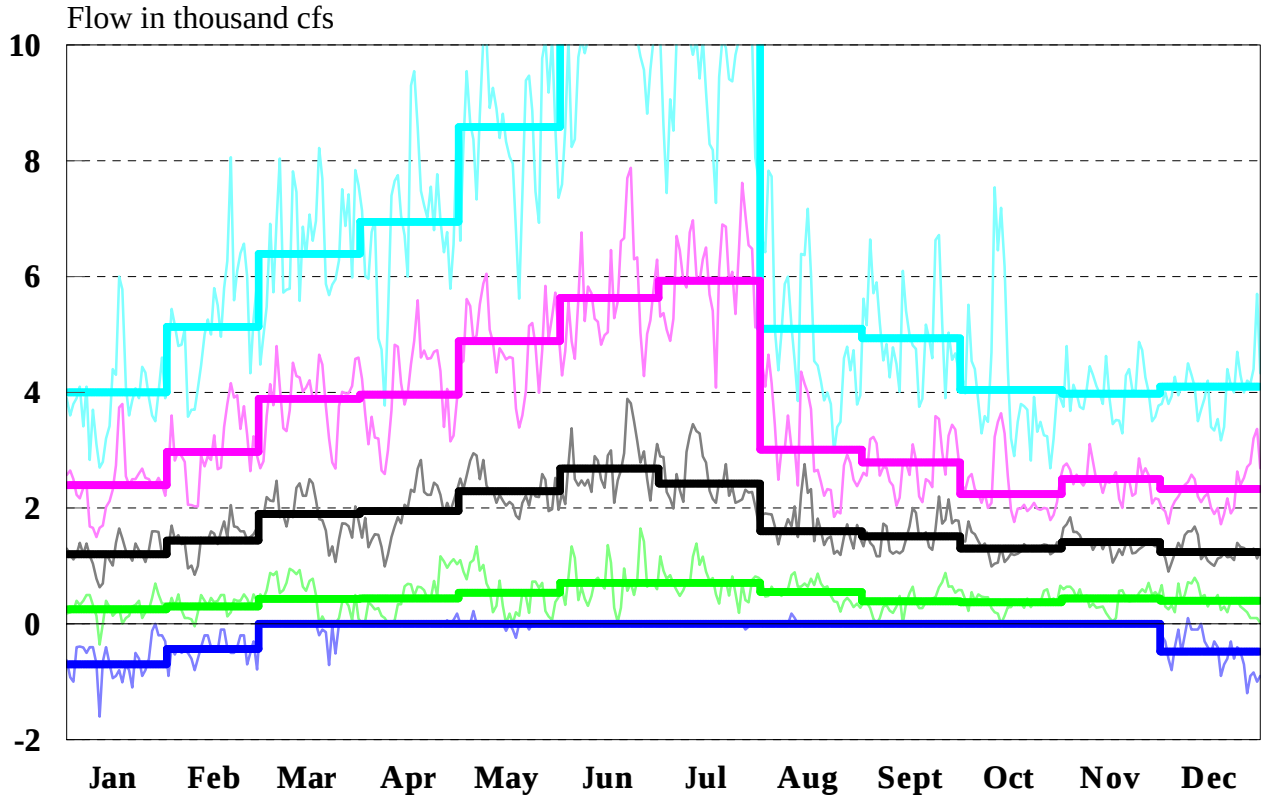
Nebraska City to Rulo
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-0.7	1959	-0.1	1940	-0.7	1927	-0.4	1953	-0.5	1953	-0.4	1953	-0.5	1953	-0.5	1953	-0.4	1953	-0.4	1953	-0.4	1953	-0.9	1951
2	-0.3	1953	-0.1	1931	-0.5	1953	0.1	1954	0.1	1934	0.2	1956	0.1	1933	0.1	1934	-0.1	1934	0.0	1934	0.0	1939	-0.5	1955
3	-0.2	1931	0.0	1938	-0.4	1918	0.1	1938	0.2	1940	0.2	1977	0.1	1930	0.1	1930	0.0	1930	0.1	1939	0.1	1930	-0.2	1978
4	-0.1	1939	0.0	1949	-0.2	1934	0.2	1934	0.2	1956	0.3	1934	0.1	1936	0.1	1936	0.1	1939	0.1	1930	0.1	1934	-0.1	1930
5	-0.1	1944	0.0	1944	-0.2	1928	0.2	1935	0.2	1954	0.3	1926	0.2	1977	0.2	1911	0.1	1955	0.1	1937	0.1	1943	0.0	1937
6	0.0	1912	0.0	1935	0.1	1920	0.2	1949	0.3	1931	0.4	1933	0.3	1934	0.2	1941	0.2	1937	0.1	1955	0.1	1933	0.0	1934
7	0.0	1925	0.1	1956	0.1	1954	0.3	1940	0.3	1939	0.4	1940	0.4	1970	0.3	1933	0.2	1911	0.1	1943	0.1	1936	0.0	1940
8	0.0	1936	0.1	1936	0.2	1981	0.3	1956	0.3	1935	0.4	1968	0.5	1954	0.3	1931	0.2	1935	0.1	1940	0.2	1938	0.0	1984
9	0.0	1940	0.1	1964	0.2	1957	0.4	1930	0.3	1941	0.5	1930	0.5	1946	0.3	1935	0.3	1940	0.1	1938	0.2	1937	0.1	1936
10	0.1	1947	0.2	1972	0.3	1931	0.4	1931	0.4	1938	0.5	1901	0.5	1980	0.4	1926	0.3	1933	0.1	1933	0.2	1980	0.1	1943
11	0.1	1935	0.3	1941	0.4	1941	0.4	1936	0.4	1930	0.5	1911	0.5	1935	0.4	1949	0.3	1901	0.2	1948	0.3	1944	0.2	1924
12	0.1	1938	0.3	1934	0.4	1956	0.4	1937	0.4	1926	0.6	1938	0.5	1931	0.4	1955	0.4	1949	0.2	1935	0.3	1942	0.2	1912
13	0.1	1945	0.3	1947	0.4	1917	0.4	1941	0.5	1936	0.6	1936	0.5	1940	0.4	1901	0.4	1980	0.3	1956	0.3	1948	0.2	1938
14	0.1	1969	0.3	1979	0.4	1964	0.4	1981	0.5	1980	0.7	1954	0.6	1937	0.4	1971	0.4	1943	0.3	1942	0.3	1954	0.2	1944
15	0.2	1934	0.3	1939	0.4	1967	0.5	1933	0.5	1981	0.9	1937	0.6	1938	0.5	1937	0.4	1947	0.3	1947	0.3	1940	0.2	1939
16	0.2	1924	0.4	1933	0.5	1933	0.7	1957	0.5	1914	0.9	1948	0.6	1941	0.5	1938	0.5	1912	0.3	1980	0.3	1914	0.2	1980
17	0.2	1979	0.4	1945	0.5	1935	0.7	1967	0.6	1948	1.0	1970	0.6	1943	0.5	1981	0.5	1948	0.4	1936	0.4	1976	0.2	1935
18	0.2	1937	0.4	1914	0.6	1938	0.8	1946	0.6	1933	1.0	1939	0.6	1963	0.5	2001	0.5	1945	0.5	1932	0.4	1935	0.3	1963
19	0.2	1915	0.4	1978	0.6	1940	0.8	2002	0.6	1937	1.0	2002	0.6	1981	0.5	1942	0.5	1956	0.5	1945	0.4	1945	0.3	1942
20	0.2	1955	0.5	1959	0.6	1944	0.8	1942	0.7	1943	1.1	1981	0.7	1911	0.6	1913	0.6	1970	0.5	2000	0.5	1947	0.3	1945
21	0.3	1954	0.5	1981	0.7	1966	0.8	1955	0.7	1911	1.3	1955	0.8	2002	0.6	1970	0.6	1971	0.5	1971	0.5	2001	0.3	1947
22	0.3	1913	0.5	1954	0.8	1899	0.8	1943	0.7	1925	1.3	1958	0.8	1955	0.6	1967	0.6	2002	0.5	1978	0.5	1932	0.3	1914
23	0.3	1971	0.5	1909	0.8	1930	0.8	1968	0.8	1949	1.3	1971	0.9	1949	0.6	1948	0.6	1954	0.6	1944	0.6	1923	0.3	1954
24	0.3	1941	0.5	1957	0.8	1925	0.9	1925	0.8	1907	1.3	1985	0.9	1948	0.6	1962	0.6	1968	0.6	1924	0.6	1924	0.3	1964
25	0.3	1905	0.6	1989	0.9	1955	0.9	1958	0.8	1989	1.5	1988	0.9	1971	0.6	1979	0.6	1966	0.6	1963	0.6	1978	0.4	1933
26	0.3	1964	0.6	1948	0.9	1960	0.9	1971	0.9	1967	1.6	1979	1.0	1966	0.7	1978	0.6	1944	0.7	1966	0.7	1964	0.4	1976
27	0.3	1930	0.6	1977	0.9	1943	0.9	1898	0.9	1968	1.7	1978	1.0	1939	0.7	1912	0.6	1976	0.7	1976	0.7	1926	0.4	1948
28	0.3	1943	0.7	1913	0.9	2002	0.9	1939	1.0	1946	1.7	1910	1.0	1901	0.7	1972	0.7	1913	0.7	1929	0.7	1985	0.4	1927
29	0.3	1948	0.7	1950	0.9	1968	1.0	1944	1.1	1901	1.7	1912	1.0	1968	0.7	1976	0.7	1929	0.8	1964	0.7	1927	0.4	1932
30	0.4	1961	0.7	1967	1.0	1913	1.0	1972	1.1	1958	1.8	1931	1.1	1932	0.8	1957	0.8	1931	0.8	1975	0.8	1955	0.4	1950
31	0.4	1970	0.7	1917	1.0	1972	1.0	1977	1.2	1928	1.9	1949	1.1	1944	0.9	2002	0.8	1974	0.8	1917	0.8	1956	0.5	1967
32	0.4	1958	0.8	1975	1.0	1926	1.1	1966	1.2	1977	2.0	1935	1.2	1956	0.9	1939	0.8	1967	0.8	2002	0.8	1968	0.5	1953
33	0.4	1967	0.8	1912	1.1	1906	1.1	1963	1.2	1966	2.0	1946	1.2	1926	0.9	1947	0.9	1942	0.8	1954	0.8	1963	0.5	1908
34	0.4	1976	0.8	1928	1.2	1942	1.1	1948	1.2	1955	2.1	1906	1.2	1913	0.9	1968	0.9	1981	0.9	1983	0.8	1966	0.6	1923
35	0.4	1963	0.8	1910	1.3	1947	1.2	1899	1.3	1923	2.1	1966	1.2	1976	1.0	1964	0.9	1938	0.9	2001	0.8	1981	0.6	1960
36	0.4	1968	0.8	1951	1.3	1976	1.3	1908	1.3	1924	2.1	1914	1.3	1985	1.0	1943	0.9	1991	0.9	1899	0.9	1910	0.6	1989
37	0.5	1981	0.8	1900	1.3	1985	1.4	1911	1.3	2000	2.1	1922	1.3	1912	1.0	1956	0.9	1950	0.9	1922	0.9	1912	0.6	1910
38	0.5	1989	0.9	1923	1.3	1923	1.4	1926	1.4	1957	2.4	1900	1.3	1957	1.0	1963	1.0	1984	0.9	1960	0.9	1965	0.7	1925
39	0.6	1957	0.9	1963	1.4	1904	1.5	1932	1.4	2002	2.4	1980	1.4	1929	1.0	1980	1.0	1932	0.9	1970	0.9	1970	0.7	1983
40	0.6	1984	0.9	1980	1.5	1977	1.5	1989	1.5	1970	2.5	1963	1.5	1974	1.0	1914	1.0	2000	0.9	1913	0.9	1967	0.7	1922
41	0.6	1977	0.9	1955	1.5	1986	1.5	1921	1.6	1965	2.6	1941	1.5	1942	1.1	1929	1.1	1941	1.0	1907	0.9	2002	0.7	1958
42	0.6	1909	1.0	1905	1.6	1911	1.7	2001	1.7	1963	2.6	1942	1.8	1898	1.1	1946	1.1	1963	1.0	1982	1.0	1911	0.7	2002
43	0.6	1962	1.0	1924	1.6	1946	1.7	1970	1.9	1992	2.6	1961	1.9	1961	1.1	1966	1.2	1983	1.0	1991	1.0	1907	0.8	1911
44	0.6	1956	1.0	1942	1.8	1958	1.8	1914	1.9	1932	2.6	1913	1.9	1914	1.2	1965	1.2	1923	1.0	1969	1.1	1917	0.8	1990
45	0.7	1908	1.1	1901	1.9	1929	1.8	2000	1.9	1947	2.8	1921	2.0	1988	1.2	1910	1.3	1922	1.0	1910	1.1	1941	0.8	1968
46	0.7	1986	1.1	1960	1.9	1980	1.9	1924	2.0	1908	2.8	1976	2.0	1960	1.2	1961	1.3	1990	1.1	1911	1.1	1960	0.8	1926
47	0.7	1965	1.1	1968	2.0	2000	1.9	1928	2.1	1910	2.8	1992	2.0	1910	1.2	1988	1.3	1985	1.1	1979	1.1	1950	0.8	1977
48	0.7	1949	1.2	1899	2.0	1898	1.9	1900	2.1	1961	2.9	1969	2.1	1947	1.2	1983	1.3	1957	1.1	1931	1.1	1946	0.8	1941
49	0.7	1951	1.2	2002	2.0	1937	1.9	1988	2.1	1971	2.9	1909	2.1	1972	1.3	1984	1.3	1964	1.1	1981	1.2	1925	0.8	1946
50	0.7	1966	1.2	1987	2.0	1950	2.0	1907	2.3	1942	3.0	1943	2.1	1919	1.4	1974	1.4	1917	1.1	1901	1.2	1908	0.8	1965
51	0.8	1914	1.2	1902	2.1	1921	2.0	1945	2.3	1900	3.0	1957	2.2	1945	1.4	2000	1.4	1936	1.2	1984	1.2	1929	0.8	1966
52	0.8	1982	1.3	1965	2.2	1907	2.1	1985	2.4	1898	3.0	1986	2.2	1979	1.4	1898	1.4	1982	1.2	1898	1.2	1975	0.8	1916
53	0.8	2001	1.3	1970	2.2	1932	2.1	1923	2.5	1909	3.0	1927	2.2	1989	1.5	1989	1.4	1969	1.2	1925	1.2	1916	0.8	1974
54	0.8	1942	1.3	1922	2.3	1989	2.1	1959	2.5	1964	3.1	1932	2.2	1991	1.5	1944	1.5	2001	1.2	1912	1.2	2000	0.9	1962
55	0.9	1919	1.3	1976	2.3	1924	2.1	1910	2.5	1929	3.1	1898	2.3	1975	1.6	1991	1.5	1924	1.2	1985	1.2	1991	0.9	2001
56	0.9	1911	1.4	1903	2.3	1912	2.2	1950	2.5	1921	3.1	2000	2.5	1967	1.7	1985	1.5	1927	1.2	1914	1.3	1979	0.9	1904
57	0.9	1978	1.4	1904	2.4	1900	2.3	1976	2.5	1979	3.1	1928	2.7	1918	1.7	1919	1.5	1979	1.3	1916	1.3	1958	0.9	1906
58	1.0	1933	1.4	1918	2.4	1951	2.3	1964	2.6	1906	3.1	1950	2.7	2000	1.8	1977	1.5	1988	1.3	1927	1.3	1971	1.0	1956
59	1.0	1946	1.4	1898	2.4	1959	2.4	1980	2.7	1976	3.1	1989	2.7	1925	1.9	1986	1.5	1909	1.3	1923	1.3	1962	1.0	1917
60	1.0	1950	1.5	1943	2.5	1975	2.4	1982	2.8	1922	3.3	1918	2.8	1982	1.9	1906	1.5	1925	1.4	1990	1.3	1899	1.0	1907
61	1.0	1917	1.6	1990	2.5	1914	2.4	1929	2.8	1902	3.3	1925	2.9	1917	1.9	1945	1.6	1898	1.4	1965	1.3	1922	1.0	1949
62	1.0	1929	1.6	1999	2.5	1970	2.5	1986	2.9	1990	3.4	1960	3.1	1924	1.9	1918	1.6	1906	1.4	1949	1.3	1898	1.0	1969
63	1.1	1991	1.7	1921	2.5	1990	2.7	1979	2.9	1988	3.4	1972	3.1	1906	2.0	1954	1.8	1919	1.4	1962	1.4	1984	1.1	1979
64	1.1	1926	1.7	1925	2.7	1939	2.7	1990	2.9	1985	3.4	1929	3.1	2001	2.0	1922	1.8	1904	1.4	1967	1.4	1990	1.1	1985
65	1.1	1918	1.7	1927	2.8	1901	2.8	1917	3.0	1944	3.8	1975	3.3	1983	2.0	1909	1.9	1899	1.4	1974	1.4	1902	1.1	1957
66	1.1	1927	1.8	1908	2.8	1988	2.8	1902	3.0	1994	4.0	1907	3.4	1908	2.1	1925	1.9	1910	1.4	1989	1.4	1988	1.1	1975
67	1.1	1972	1.8	1929	2.8	1945	2.8	1909	3.1	1918	4.1	1965	3.5	1928	2.1	1959	1.9	1946	1.4	1904	1.4	1913	1.1	1988
68	1.2	1985	1.8	1920	3.0	1922	2.8	1947	3.1	1927	4.3	1959	3.6	1964	2.2	1924	2.0	1995	1.4	1906	1.4	1904	1.1	1961
69	1.2	1990	1.8	1985	3.0	1991	3.0	1918	3.2	1912	4.3	1905	3.6	1950	2.3	1900	2.0	1908	1.5	1941	1.5	1901	1.2	1919
70	1.3	1980	1.9	1930	3.1	1902	3.1	1903	3.2	1975	4.4	1924	3.6	1900	2.3	1960	2.1	1960	1.5	1957	1.5	1974	1.2	1901
71	1.3	1922	1.9	1966	3.2	1995	3.2	1906	3.2	1917	4.6	1916	3.6	1959	2.3	1975	2.2	1959	1.5	1908	1.5	1959	1.2	1900
72	1.3	1898	1.9	1986	3.3	1910	3.3	1913	3.4	1972	4.8	1945	3.8	1962	2.4	1940	2.2	1994	1.6	1946	1.5	1906	1.3	2000
73	1.4	1907	1.9	1932	3.4	1908	3.3	1904	4.2	1960	5.0	1974	4.3	1922	2.4	1928	2.2	1928	1.6	1920	1.5	1949	1.3	1903
74	1.4	1923	1.9	1937	3.4	1952	3.3	1965	4.6	1913	5.0	1920	4.3	1978	2.6	1969	2.3	1962	1.7	1988	1.5	1957	1.3	1921
75	1.4	2002	1.9	2000	3.4	1915	3.3	1905	4.7	1905	5.0	1923	4.4	1951	2.6	1958	2.4	1900	1.8	1972	1.6	1919	1.3	1913
76	1.4	1952	1.9	1906	3.6	1936	3.4	1961	4.7	1916	5.2	1997	4.4	1923	2.7	1920	2.4	1920	1.8	1919	1.7	1921	1.3	1920
77	1.4	1983	1.9	1926	3.8	1997	3.4	1994	4.8	2001	5.3	1902	4.5	1997	2.7	1921	2.5	1914	1.9	1921	1.7	1989	1.3	1971
78	1.4	1975	2.1	1911	3.9	1984	3.6	1992	5.1	1899	5.6	1982	4.5	1903	2.8	1917	2.7	1916	1.9	1968	1.7	1969	1.4	1899
79	1.4	1916	2.1	1953	4.1	1961	3.7	1951	5.3	1945	5.8	1962	4.7	1921	2.8	1923	2.7	1907	1.9	1958	1.7	1915	1.4	1929
80	1.4	1921	2.2	1946	4.2	1982	3.8	1915	5.4	1915	5.9	1944	4.7	1909	2.9	1932	2.9	1921	1.9	1900	1.7	1920	1.4	1902
81	1.5	1901	2.3	1919	4.2	1983	3.8	1962	5.5	1919	5.9	1919	4.9	1920	2.9	1994	3.0	1918	2.0	1909	1.8	1903	1.4	1959
82	1.5	1900	2.4	1991	4.2	1996	3.9	1901	5.6	1978	6.1	1952	5.0	1916	3.0	1992	3.1	1997	2.0	1928	1.9	1900	1.4	1931
83	1.5	1987	2.4	1961	4.3	1919	3.9	1922	5.6	1962	6.4	1899	5.2	1904	3.2	1904	3.2	1975	2.1	1952	2.0	1905	1.4	1898
84	1.7	1928	2.6	1958	4.3	1992	4.0	1991	5.8	1903	6.4	1994	5.2	1969	3.3	1916	3.3	1902	2.3	1977	2.1	1931	1.5	1905
85	1.7	1902	2.7	1992	4.3	1999	4.3	1916	5.8	1904	6.6	1991	5.3	1990	3.3	1908	3.6	1999	2.3	1926	2.1	1994	1.5	1970
86	1.8	1906	2.7	1915	4.4	1948	4.5	1920	6.0	1991	6.6	1983	5.5	1995	3.3	1997	3.7	1998	2.3	1987	2.1	1983	1.6	1915
87	1.9	1904	2.9	1984	4.4	1916	4.6	1987	6.2	1952	7.1	1990	5.6	1952	3.4	1927	3.7	1986	2.4	1918	2.2	1982	1.6	1928
88	1.9	1899	2.9	1988	4.6	1971	4.8	1974	6.3	1969	7.3	1964	5.7	1899	3.5	1905	3.9	1978	2.5	1959	2.4	1986	1.6	1995
89	1.9	1992	3.0	1907	4.9	1994	4.9	1996	6.3	1983	7.4	1904	5.8	1927	3.8	1995	3.9	1961	2.7	1994	2.6	1961	1.7	1952
90	2.0	1932	3.0	1969	5.1	1987	5.2	1927	6.4	1959	7.7	1987	5.9	1994	3.8	1902	4.0	1952	2.7	1905	2.9	1918	1.8	1981
91	2.0	1993	3.0	1971	5.3	1963	5.4	1975	6.4	1986	7.9	1973	5.9	1905	3.9	1950	4.1	1965	2.8	1998	2.9	1995	1.9	1991
92	2.1	1999	3.1	1995	5.6	1974	5.7	1919	6.8	1920	7.9	1995	6.0	1965	4.0	1899	4.5	1926	2.8	1915	3.1	1928	2.0	1918
93	2.2	1995	3.1	2001	5.8	1949	6.1	1995	6.9	1997	8.0	1917	7.2	1902	4.4	1973	4.6	1915	2.8	1903	3.2	1977	2.6	1972
94	2.3	1903	3.2	1952	5.9	1965	6.1	1912	7.1	1987	8.4	1967	7.3	1984	4.5	1982	4.6	1992	2.9	1961	3.3	1909	2.6	1994
95	2.3	1920	3.3	1916	6.1	1962	6.4	1978	7.6	1974	9.0	1908	7.4	1987	4.9	1998	5.2	1905	3.0	1902	3.4	1987	2.6	1986
96	2.5	2000	3.9	1974	6.2	1905	6.8	1969	8.1	1998	9.2	2001	7.7	1992	5.0	1990	5.5	1958	3.1	1995	3.6	1998	2.9	1909
97	2.7	1996	4.0	1962	6.9	2001	6.9	1983	8.6	1982	10.3	1996	7.7	1986	5.0	1903	5.5	1996	3.1	1950	3.7	1972	3.0	1998
98	2.8	1994	4.1	1996	7.2	1969	7.4	1997	8.9	1984	10.4	1951	7.9	1996	5.4	1999	5.6	1972	3.3	1992	3.8	1952	3.4	1982
99	2.8	1960	4.3	1983	7.2	1909	7.6	1984	9.2	1950	10.4	1903	8.2	1958	5.5	1907	5.9	1973	3.3	1997	4.0	1951	3.6	1999
100	3.1	1988	5.2	1993	7.2	1998	8.0	1952	9.7	1951	10.9	1993	8.7	1907	6.4	1951	5.9	1977	4.2	1999	4.0	1992	3.7	1987
101	3.7	1998	5.5	1994	7.5	1978	8.5	1960	9.9	1973	11.1	1915	8.9	1973	6.7	1952	6.0	1903	5.6	1951	4.4	1999	4.1	1992
102	4.6	1997	5.5	1997	7.7	1903	8.8	1993	11.8	1996	13.9	1984	11.1	1998	6.9	1987	6.1	1987	6.2	1996	4.5	1997	4.9	1993
103	5.8	1974	5.6	1973	9.7	1993	9.6	1998	14.3	1999	13.9	1999	11.7	1999	7.2	1996	8.0	1989	7.3	1993	4.7	1973	5.6	1973
104	6.1	1973	5.9	1998	14.1	1973	11.1	1999	14.7	1995	17.6	1947	15.3	1915	10.5	1915	8.6	1951	8.0	1986	5.6	1993	5.9	1997
105	6.4	1910	6.1	1982	17.9	1979	14.2	1973	15.2	1993	19.8	1998	48.3	1993	16.3	1993	12.3	1993	10.1	1973	8.8	1996	6.0	1996

Rulo to St. Joseph Incremental Flows



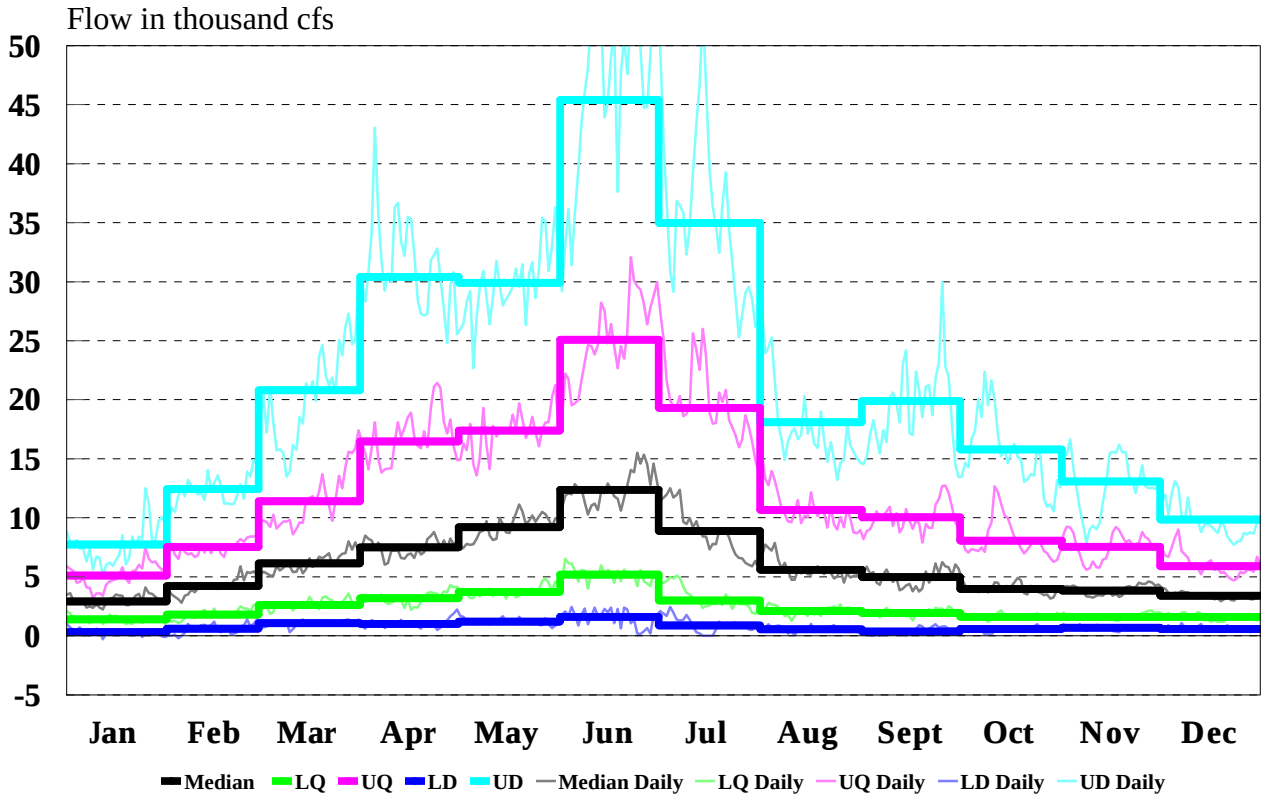
Rulo to St. Joseph Incremental Flows (Lower Values Expanded)



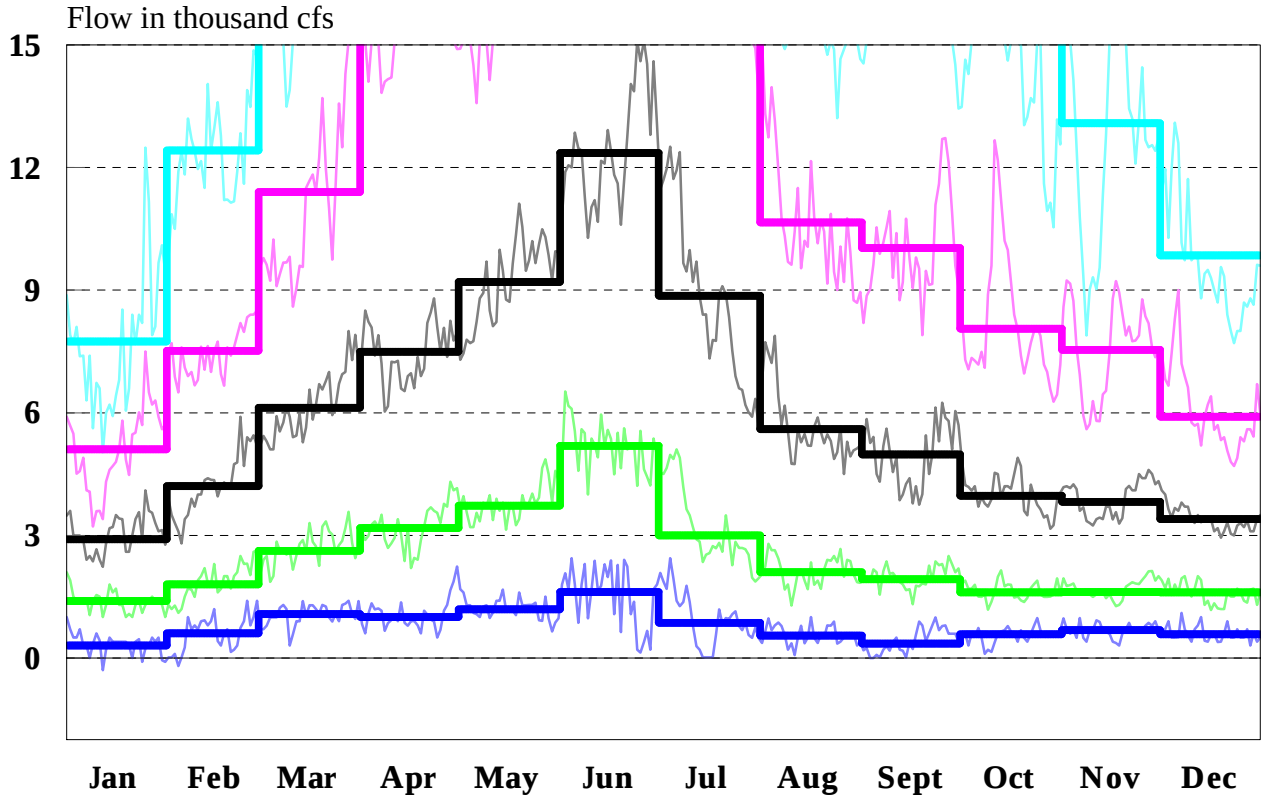
Rulo to St. Joseph
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-0.7	1955	-2.3	1966	-0.7	1950	-2.0	1950	-1.3	1950	-1.5	1950	-1.4	1950	-0.1	1953	-0.2	1953	-0.9	1999	-2.2	1999	-1.3	1945
2	-0.6	1963	-1.2	1910	-0.3	2002	-0.5	2002	-0.2	1953	-0.1	1953	-0.7	1911	-0.1	1957	-0.1	1957	-0.9	2000	-2.2	2000	-0.6	1954
3	-0.4	1954	-1.1	1947	-0.2	1953	-0.2	1953	-0.1	1957	0.0	1957	-0.1	1901	0.1	1995	0.0	1954	-0.2	1953	-0.1	1953	-0.5	1953
4	-0.4	1959	-0.5	1972	0.0	1957	-0.1	2001	0.1	1939	0.2	1926	-0.1	1953	0.2	1934	0.0	1955	-0.1	1957	0.0	1957	-0.3	1936
5	-0.3	1988	-0.2	1958	0.0	1995	0.0	1957	0.1	1954	0.3	1934	-0.1	1957	0.2	1955	0.1	1988	0.0	1954	0.0	1954	-0.3	1943
6	-0.3	1937	-0.1	1956	0.0	1954	0.1	1954	0.2	1934	0.4	1901	0.0	1954	0.3	1941	0.4	1991	0.2	1955	0.1	1939	-0.2	1937
7	-0.2	1956	-0.1	1914	0.3	1934	0.1	1934	0.3	1989	0.4	1911	0.2	1989	0.4	1975	0.4	1976	0.2	1963	0.1	1942	-0.1	1989
8	-0.2	2002	0.0	1944	0.3	1956	0.2	1956	0.3	1956	0.5	1954	0.2	1926	0.4	1988	0.5	1963	0.2	1971	0.2	1956	-0.1	1955
9	-0.2	1939	0.0	1934	0.4	1931	0.3	1989	0.4	1925	0.6	1933	0.3	1930	0.4	1971	0.5	1971	0.2	1956	0.2	1993	0.0	1938
10	-0.1	1950	0.1	1979	0.4	1968	0.3	1962	0.5	1931	0.7	1956	0.4	1966	0.4	1954	0.5	1999	0.2	1939	0.2	1936	0.1	1935
11	0.0	1940	0.1	1994	0.5	1943	0.3	1996	0.5	1914	0.8	1963	0.5	1934	0.5	1936	0.5	2000	0.2	1991	0.2	1963	0.2	1956
12	0.0	1925	0.1	1952	0.5	1947	0.6	1968	0.5	1926	0.9	1948	0.6	1963	0.5	1933	0.5	1943	0.3	1952	0.3	1937	0.2	1939
13	0.0	1938	0.2	1954	0.5	1933	0.6	1940	0.6	1940	0.9	1938	0.6	1912	0.5	1963	0.5	1956	0.3	1937	0.3	1955	0.2	1963
14	0.0	1948	0.3	1957	0.5	1964	0.7	1935	0.6	1933	1.0	1958	0.6	1933	0.5	1956	0.5	2002	0.3	1940	0.4	1933	0.3	1957
15	0.1	1982	0.3	1977	0.5	1967	0.8	1955	0.7	1955	1.0	1937	0.7	1913	0.5	1967	0.6	1952	0.3	1933	0.4	1967	0.3	1924
16	0.2	1957	0.3	1928	0.7	1925	0.8	1966	0.7	1967	1.0	1972	0.8	1941	0.6	1994	0.6	1990	0.3	1964	0.4	1962	0.3	1934
17	0.2	1915	0.3	1935	0.9	1988	0.8	1930	0.8	1907	1.1	1922	0.9	1991	0.6	1935	0.6	1995	0.4	1943	0.4	1914	0.3	1940
18	0.2	1946	0.3	1938	1.0	1938	0.8	1933	0.8	1911	1.1	1981	1.0	1936	0.7	1962	0.7	1933	0.4	1966	0.5	1971	0.4	1944
19	0.2	1977	0.3	1931	1.0	1991	0.9	1938	0.8	1968	1.2	1968	1.0	1959	0.7	1991	0.7	1940	0.4	1951	0.5	1938	0.4	2001
20	0.2	1935	0.3	1933	1.0	1989	0.9	1970	0.9	1937	1.2	1962	1.1	1975	0.7	1976	0.8	1948	0.5	1948	0.5	1952	0.5	1933
21	0.3	1971	0.4	2002	1.1	1930	1.0	1948	1.1	1948	1.4	1966	1.2	1971	0.8	1931	0.8	1962	0.5	1924	0.5	2001	0.5	1912
22	0.3	1941	0.4	1917	1.1	1899	1.0	1937	1.2	1941	1.4	1930	1.2	1994	0.8	1930	0.8	1967	0.6	1935	0.6	1964	0.5	1914
23	0.3	1944	0.5	1989	1.1	1928	1.0	1990	1.2	1923	1.4	1988	1.2	1988	0.9	1980	0.8	1966	0.6	1932	0.7	1930	0.5	1993
24	0.3	1984	0.5	1940	1.1	1941	1.0	1972	1.3	1924	1.4	1940	1.2	1955	1.0	1911	0.8	1935	0.6	1958	0.7	1960	0.5	2002
25	0.4	1912	0.5	1967	1.1	1940	1.0	1925	1.3	1928	1.5	1989	1.2	1956	1.0	1947	0.9	1975	0.7	1936	0.7	1923	0.5	1930
26	0.4	1979	0.6	1900	1.1	1926	1.1	1964	1.3	1960	1.6	1931	1.3	1940	1.0	1964	0.9	1968	0.7	1990	0.7	1990	0.5	1999
27	0.4	1930	0.6	1909	1.2	1996	1.1	1898	1.4	1938	1.7	1971	1.3	1972	1.0	1961	0.9	1945	0.7	1942	0.7	1951	0.5	2000
28	0.4	1953	0.6	1995	1.3	1958	1.2	1931	1.5	1962	1.7	1912	1.4	1962	1.1	1966	1.0	1930	0.8	1960	0.8	1944	0.6	1959
29	0.4	1961	0.6	1923	1.3	1977	1.2	1958	1.5	1908	1.8	1910	1.5	1974	1.1	1989	1.0	1939	0.8	1907	0.8	1989	0.6	1950
30	0.5	1972	0.7	1968	1.3	1951	1.3	1971	1.5	1930	1.9	1909	1.6	1929	1.2	1913	1.0	1974	0.8	1988	0.8	2002	0.6	1971
31	0.5	1913	0.7	1913	1.4	1918	1.3	1942	1.6	1988	1.9	1959	1.6	1943	1.2	1937	1.0	1934	0.8	1949	0.8	1945	0.7	1948
32	0.5	1989	0.7	1988	1.4	1911	1.4	1908	1.7	1932	2.0	1906	1.8	1964	1.2	1901	1.0	1960	0.9	1938	0.8	1949	0.7	1969
33	0.5	1931	0.8	1941	1.4	1976	1.5	1977	1.7	1949	2.0	1952	1.8	1946	1.3	1990	1.1	1947	0.9	1947	0.8	1995	0.7	1946
34	0.5	1936	0.8	1930	1.5	1972	1.5	1911	1.8	1901	2.3	1913	1.8	2002	1.3	1972	1.1	1899	1.0	1914	0.9	1940	0.7	1962
35	0.5	1924	0.8	1961	1.6	1898	1.6	1926	1.8	1975	2.3	1961	1.8	1999	1.3	2002	1.2	1929	1.0	1934	0.9	1943	0.8	1927
36	0.6	1952	1.0	1939	1.6	1935	1.6	1975	1.8	1943	2.3	1985	1.8	2000	1.4	1965	1.2	1937	1.0	1962	0.9	1924	0.8	1990
37	0.6	1991	1.1	1899	1.6	1970	1.6	1985	1.8	1966	2.3	2002	1.9	1910	1.4	1943	1.2	1917	1.0	1989	0.9	1958	0.8	1970
38	0.6	1934	1.1	1936	1.7	1971	1.7	1951	1.9	1971	2.4	1900	2.0	1898	1.4	1912	1.2	1994	1.1	1910	1.0	1966	0.9	1923
39	0.7	1951	1.1	1912	1.8	1944	1.7	1967	1.9	1970	2.4	1939	2.1	1960	1.4	1909	1.3	1907	1.1	1975	1.0	1968	0.9	1966
40	0.7	1949	1.2	1901	1.9	1907	1.7	1914	1.9	1964	2.4	1955	2.1	1939	1.5	1929	1.3	1983	1.1	1899	1.0	1926	0.9	1932
41	0.7	1969	1.2	1998	1.9	1952	1.8	1941	1.9	1977	2.5	1960	2.1	1976	1.8	1946	1.4	1950	1.1	1916	1.0	1932	0.9	1981
42	0.8	2001	1.3	1964	1.9	1955	1.9	1921	2.0	2002	2.5	1921	2.2	1968	1.8	1999	1.4	1901	1.1	1995	1.0	1934	1.0	1958
43	0.8	1905	1.3	1991	2.0	1999	2.0	1924	2.2	1961	2.6	1927	2.2	1970	1.8	2000	1.4	1927	1.2	1917	1.0	1994	1.0	1910
44	0.9	1947	1.3	1924	2.0	2000	2.0	1907	2.2	1991	2.7	1977	2.2	1937	1.8	1959	1.4	1938	1.2	2001	1.2	1907	1.0	1908
45	0.9	1968	1.3	1996	2.0	1921	2.0	1936	2.2	1994	2.7	1914	2.3	1948	1.8	1914	1.4	1922	1.2	1922	1.2	1959	1.1	1974
46	1.0	1970	1.4	1902	2.0	1917	2.1	1963	2.3	1946	2.7	1992	2.3	1942	1.8	1922	1.4	1924	1.2	1929	1.2	1991	1.2	1925
47	1.1	1909	1.4	1942	2.1	1932	2.2	1900	2.3	1958	3.1	1936	2.3	1914	1.8	1939	1.5	1964	1.2	1930	1.2	1910	1.2	1949
48	1.1	1908	1.4	1992	2.2	1981	2.2	1959	2.4	1935	3.2	1944	2.4	1938	1.9	1940	1.5	1998	1.2	1996	1.2	1976	1.2	1947
49	1.2	1958	1.5	1990	2.2	1923	2.2	1994	2.4	1936	3.3	1993	2.4	1931	1.9	1949	1.5	1912	1.3	1945	1.2	1997	1.2	1964
50	1.2	1911	1.6	1905	2.2	1937	2.2	1899	2.5	1910	3.5	1970	2.4	1980	1.9	1938	1.5	1942	1.3	2002	1.3	1917	1.2	1988
51	1.2	1943	1.6	1978	2.2	1966	2.2	1960	2.5	1947	3.7	1974	2.5	1977	2.0	1970	1.6	1911	1.3	1978	1.3	1911	1.2	1911
52	1.3	1964	1.6	1943	2.3	1969	2.3	1910	2.5	1898	3.8	1976	2.8	1944	2.1	1968	1.6	1913	1.4	1968	1.4	1935	1.2	1926
53	1.3	1996	1.6	1904	2.3	1906	2.4	1928	2.6	1952	3.9	1905	2.8	1961	2.1	2001	1.7	1925	1.4	1972	1.4	1950	1.2	1952
54	1.3	1967	1.7	1976	2.3	1962	2.4	1909	2.7	1981	3.9	1932	2.9	1967	2.1	1924	1.7	1959	1.5	1980	1.4	1927	1.2	1960
55	1.3	1995	1.7	1975	2.3	1929	2.4	1923	2.7	1900	4.0	1978	3.0	1935	2.1	1910	1.8	1923	1.5	1931	1.4	1970	1.2	1922
56	1.4	1933	1.8	1922	2.4	1963	2.5	1932	2.8	1976	4.0	1918	3.1	1952	2.1	1919	1.9	1980	1.6	1976	1.5	1965	1.2	1967
57	1.4	1965	1.9	1903	2.5	1990	2.5	1988	2.8	1921	4.1	1898	3.4	1945	2.2	1898	1.9	1996	1.6	1967	1.5	1899	1.2	1991
58	1.4	1992	1.9	1950	2.5	1920	2.7	1949	2.9	1909	4.1	1999	3.4	1919	2.2	1923	2.0	1906	1.6	1898	1.6	1974	1.2	1985
59	1.4	1998	1.9	1918	2.6	1924	2.7	1981	2.9	1929	4.1	2000	3.6	1918	2.3	1978	2.0	1904	1.7	1925	1.6	1898	1.3	1929
60	1.5	1966	1.9	1898	2.6	1927	2.7	1946	3.0	1980	4.2	1973	3.6	2001	2.3	1904	2.1	1908	1.7	1913	1.7	1913	1.4	1916
61	1.5	1926	1.9	1946	2.6	1908	2.9	1929	3.1	1998	4.2	1928	3.6	1996	2.3	1926	2.1	1898	1.8	1983	1.7	1975	1.4	1995
62	1.6	1927	2.0	1948	2.6	1900	2.9	1939	3.2	1902	4.2	1964	3.7	1990	2.4	1998	2.1	1915	1.8	1926	1.8	1912	1.5	1917
63	1.6	1914	2.1	1965	2.7	1992	3.1	1902	3.4	1906	4.2	1994	3.8	1998	2.4	1942	2.1	1909	1.9	1920	1.8	1929	1.5	1907
64	1.6	1917	2.1	1953	2.7	1913	3.2	1965	3.5	1917	4.3	1920	3.8	1932	2.4	1906	2.2	1916	1.9	1946	1.8	1978	1.5	1968
65	1.7	1990	2.2	1959	2.8	1904	3.2	1903	3.5	1969	4.3	1907	4.1	1925	2.4	1925	2.3	1928	2.1	1904	1.8	1916	1.5	1904
66	1.7	1994	2.2	1955	2.8	1997	3.4	1991	3.6	1965	4.5	1929	4.1	1906	2.5	1917	2.3	1931	2.1	1997	1.9	1946	1.6	1961
67	1.7	1918	2.3	1971	2.8	1914	3.5	1905	3.7	1963	4.8	1916	4.4	1997	2.5	1960	2.3	2001	2.2	1906	1.9	1925	1.6	1906
68	1.7	1907	2.4	1921	3.0	1939	3.6	1917	3.8	1922	4.8	1925	4.4	1981	2.6	1920	2.4	1910	2.2	1994	2.0	1908	1.7	1951
69	1.8	1919	2.4	1949	3.4	1948	3.7	1982	3.9	1918	4.9	1991	4.6	1985	2.6	1945	2.4	1936	2.2	1903	2.0	1988	1.8	1942
70	1.8	1997	2.4	1920	3.5	1910	3.8	1943	4.0	1990	5.0	1941	5.1	1900	2.6	1969	2.5	1919	2.2	1927	2.0	1980	1.8	1994
71	1.9	1929	2.5	1927	3.5	1942	3.8	1906	4.2	1992	5.1	1946	5.2	1924	2.7	1952	2.6	1932	2.2	1981	2.1	1904	1.8	1978
72	1.9	1975	2.5	1937	3.5	1949	3.9	1918	4.4	1927	5.1	1902	5.3	1928	2.8	1928	2.6	1920	2.2	1944	2.1	1901	1.9	1941
73	1.9	1898	2.5	1951	3.6	1902	3.9	1961	4.6	1985	5.1	1969	5.4	1949	2.9	1908	2.6	1969	2.2	1908	2.1	1922	1.9	1901
74	2.0	1923	2.5	1993	3.7	1998	4.0	1901	4.7	1972	5.4	1979	6.0	1917	2.9	1900	2.7	1900	2.2	1921	2.2	1902	2.0	1997
75	2.0	1922	2.8	1960	3.8	1915	4.2	1952	4.7	1912	5.5	1997	6.2	1987	2.9	1918	2.7	1970	2.2	1905	2.2	1947	2.0	1913
76	2.1	1916	2.8	1970	3.9	1959	4.3	1995	4.8	1942	5.5	1975	6.2	1922	3.0	1958	2.8	1997	2.3	1970	2.4	1969	2.0	1919
77	2.2	1981	2.8	2001	4.0	1961	4.3	1913	4.9	1944	5.7	1943	6.5	1969	3.0	1902	2.9	1981	2.4	1965	2.4	1906	2.0	1983
78	2.2	1928	2.8	1981	4.0	1975	4.4	1969	5.6	1905	5.9	1986	6.6	1995	3.0	1950	3.0	1979	2.4	1901	2.4	1921	2.0	1899
79	2.2	1921	2.8	1929	4.1	1936	4.4	1922	5.7	1899	5.9	1965	6.7	1982	3.0	1974	3.1	1921	2.4	1911	2.5	1948	2.1	1900
80	2.3	1901	2.9	1925	4.1	1901	4.5	1904	5.8	1951	6.0	1924	6.8	1947	3.1	1921	3.1	1951	2.4	1912	2.5	1920	2.1	1921
81	2.4	1900	2.9	1906	4.2	1993	4.6	1915	5.8	1913	6.0	1935	6.9	1973	3.1	1927	3.3	1944	2.5	1923	2.5	1915	2.1	1976
82	2.5	1942	2.9	1908	4.2	1922	4.7	1979	5.9	1916	6.1	2001	7.1	1921	3.1	1948	3.3	1914	2.6	1974	2.6	1919	2.1	1898
83	2.5	1902	3.0	1963	4.3	1974	4.8	1916	6.1	1915	6.5	1923	7.1	1983	3.4	1984	3.4	1984	2.6	1900	2.8	1903	2.2	1920
84	2.7	1906	3.0	1980	4.3	1984	4.9	1944	6.2	1999	6.7	1990	7.5	1978	3.4	1916	3.5	1949	2.7	1984	2.9	1900	2.2	1903
85	2.7	1976	3.0	1945	4.5	1946	5.0	1997	6.2	2000	6.8	1942	7.5	1908	3.4	1997	3.6	1918	2.7	1928	3.0	1905	2.2	1902
86	2.7	1945	3.1	1926	4.6	1916	5.1	1980	6.2	1903	7.0	1945	7.5	1909	3.4	1983	3.7	1978	2.8	1919	3.5	1979	2.5	1905
87	2.7	1978	3.4	1987	4.6	1985	5.1	1974	6.2	2001	7.3	1980	7.9	1923	3.5	1899	4.3	1941	2.8	1959	3.7	1987	2.5	1915
88	2.8	1904	3.5	1911	4.7	1980	5.2	1947	6.9	1904	7.4	1899	8.0	1920	3.9	1932	4.3	1902	2.8	1979	4.0	1983	2.8	1965
89	2.9	1899	3.6	1974	5.1	1982	5.2	1976	7.0	1919	7.5	1919	8.0	1916	4.0	1905	4.4	1989	2.8	1998	4.0	1984	2.8	1998
90	3.0	1999	3.9	1999	5.4	1945	6.2	1920	7.5	1959	7.9	1987	9.1	1951	4.3	1951	4.4	1961	3.0	1909	4.0	1918	2.8	1980
91	3.0	2000	3.9	2000	5.4	1912	6.4	1927	8.3	1974	8.0	1995	9.1	1903	4.3	1996	4.5	1972	3.0	1969	4.0	1985	2.9	1975
92	3.1	1920	4.0	1985	5.7	1994	6.4	1992	8.3	1979	8.3	1904	9.1	1979	4.3	1977	5.0	1903	3.1	1918	4.1	1998	3.0	1928
93	3.2	1993	4.2	1986	5.8	2001	6.6	1919	8.6	1920	9.0	1996	9.3	1927	4.6	1907	5.2	1905	3.1	1950	4.1	1982	3.4	1918
94	3.2	1903	4.2	1932	5.8	1919	6.6	1999	8.6	1993	9.6	1998	9.5	1958	4.7	1992	5.3	1958	3.3	1987	4.3	1981	3.5	1987
95	3.2	1973	4.3	1997	6.0	1905	6.6	2000	9.0	1978	10.0	1983	9.6	1905	4.9	1944	5.6	1946	3.4	1982	4.5	1972	4.2	1972
96	3.3	1962	4.3	1919	6.2	1986	6.9	1912	9.2	1997	10.6	1967	9.7	1904	5.2	1979	5.9	1992	3.4	1977	4.5	1931	4.2	1977
97	3.4	1987	4.8	1969	6.4	1909	7.1	1987	9.3	1973	11.6	1917	9.9	1899	5.7	1985	5.9	1986	3.6	1992	4.7	1928	4.3	1931
98	3.6	1980	5.4	1907	6.6	1903	8.0	1986	9.9	1984	12.7	1947	10.7	1986	6.0	1981	5.9	1985	4.0	1915	4.8	1941	4.7	1909
99	4.0	1960	5.5	1915	7.5	1978	8.0	1998	10.0	1996	13.0	1915	10.8	1965	6.1	1903	6.0	1926	4.3	1993	4.8	1996	5.1	1996
100	4.5	1985	6.2	1916	7.7	1960	8.3	1993	10.7	1982	13.1	1951	11.1	1992	6.6	1986	7.2	1987	4.4	1961	4.8	1909	5.1	1979
101	4.5	1974	7.8	1984	7.8	1965	8.5	1945	11.9	1945	13.4	1908	11.4	1984	7.1	1982	7.3	1965	4.6	1902	5.1	1973	5.5	1984
102	5.4	1983	8.2	1983	8.2	1987	10.0	1973	13.1	1986	14.1	1982	12.9	1902	7.5	1993	7.9	1982	7.2	1941	5.2	1986	5.7	1992
103	6.7	1932	9.3	1962	8.4	1973	10.1	1978	14.6	1995	15.1	1984	15.0	1907	7.6	1973	9.2	1973	8.7	1985	5.3	1961	6.1	1982
104	7.0	1986	11.1	1973	15.1	1983	11.0	1984	14.8	1987	15.5	1903	28.9	1915	7.9	1915	9.5	1993	9.9	1986	5.4	1992	6.5	1986
105	8.8	1910	12.3	1982	17.6	1979	11.6	1983	15.9	1983	17.5	1949	30.9	1993	10.0	1987	13.2	1977	17.9	1973	9.3	1977	6.8	1973

St. Joseph to Kansas City Incremental Flows



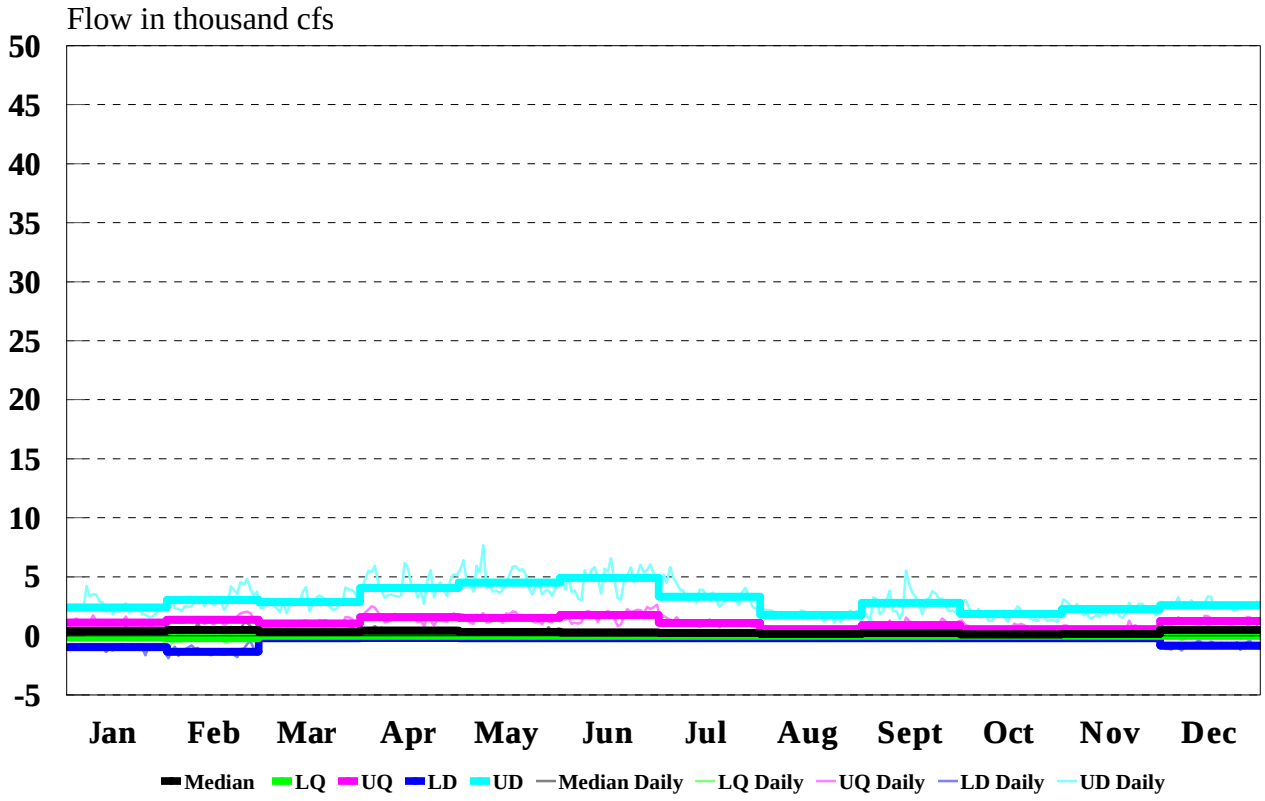
St. Joseph to Kansas City Incremental Flows (Lower Values Expanded)



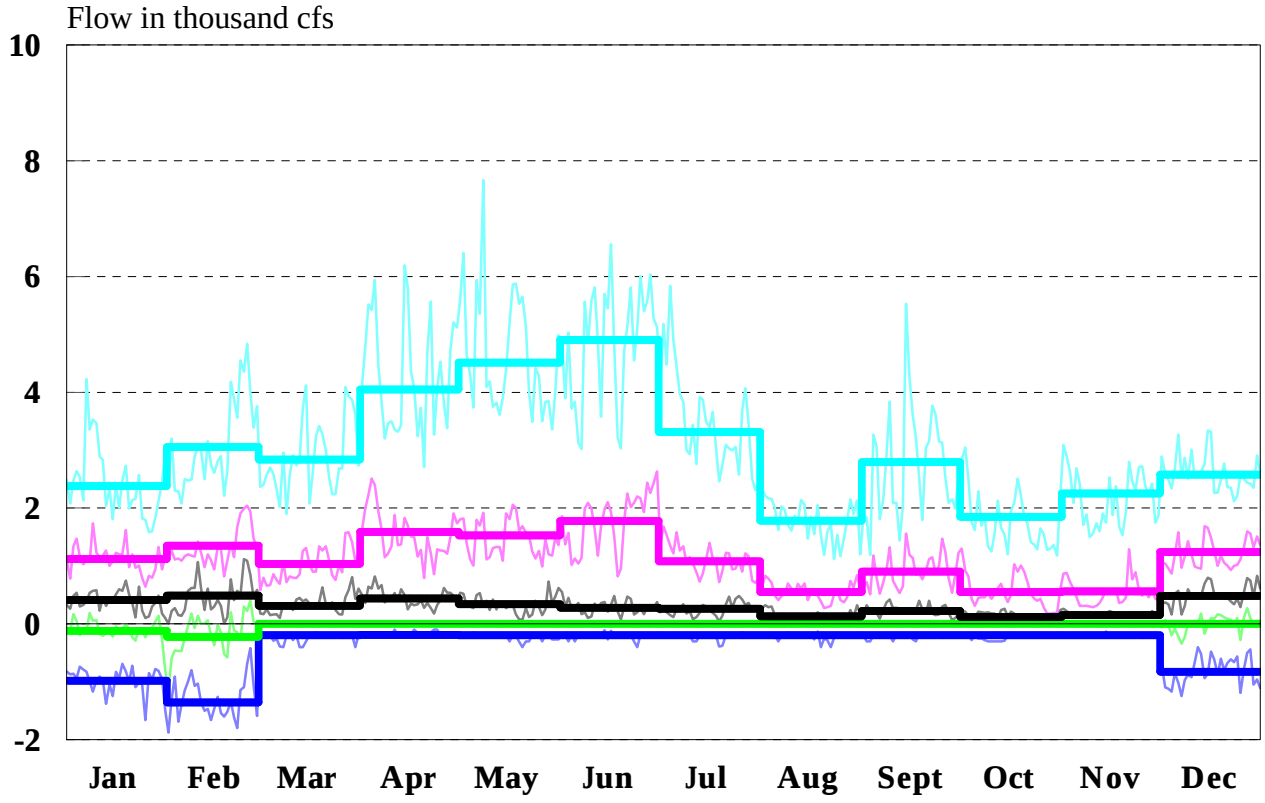
St. Joseph to Kansas City
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-1.5	1977	0.0	1970	0.6	1989	0.8	1989	0.2	1926	0.5	1926	0.6	1926	0.1	1911	-0.3	1997	0.5	1956	0.1	1980	-0.1	1927
2	-0.1	1979	0.2	1989	0.6	1957	0.8	1996	0.4	1989	0.7	1989	0.7	1901	0.2	2002	0.1	1947	0.5	1980	0.2	1914	0.0	1976
3	-0.1	1940	0.7	1957	0.7	1967	1.0	1981	0.7	1901	0.8	1901	0.9	1980	0.4	1991	0.2	1976	0.5	1997	0.3	1976	0.3	1912
4	0.0	1957	0.8	1914	0.9	1981	1.1	1898	0.9	1914	0.9	1911	1.0	1911	0.6	1955	0.2	1971	0.6	1939	0.5	2001	0.3	1988
5	0.2	1970	0.8	1964	1.2	1964	1.3	1956	1.2	2000	1.2	1988	1.4	1934	0.6	1988	0.4	1991	0.6	1999	0.6	1939	0.4	1937
6	0.5	1967	0.9	1981	1.3	1938	1.3	1935	1.5	1911	2.1	1933	1.7	1988	0.7	1970	0.6	1956	0.6	1994	0.7	1936	0.5	1924
7	0.7	1937	1.0	1940	1.5	1977	1.4	1934	1.6	1956	2.4	1956	1.7	1936	0.7	1934	0.9	2002	0.7	2000	0.8	1988	0.6	1990
8	0.7	1912	1.2	1967	1.7	2002	1.4	1940	2.0	1934	2.9	1934	1.8	1933	0.8	1936	1.0	1901	0.7	1976	0.9	1956	0.6	1956
9	0.7	1938	1.3	1990	1.7	1956	1.5	1977	2.0	1955	3.1	1972	2.0	1910	0.8	1901	1.0	1994	0.8	1952	1.0	1948	0.7	2000
10	0.9	1939	1.3	2002	1.9	1954	1.9	2000	2.0	1992	3.3	1953	2.0	1970	1.0	1975	1.1	1939	0.8	1979	1.1	1947	0.8	1966
11	1.0	2001	1.3	1939	1.9	1935	2.0	1950	2.2	1939	3.6	1963	2.0	1912	1.0	1926	1.1	1911	0.8	1947	1.2	1940	0.8	1936
12	1.0	1935	1.3	1938	2.0	1996	2.4	1908	2.3	1907	3.8	1992	2.1	1989	1.1	1974	1.3	1988	0.9	1937	1.2	1991	0.9	1939
13	1.0	1989	1.4	1934	2.1	1991	2.6	1937	2.5	1988	4.1	1940	2.2	1953	1.2	1913	1.4	1955	0.9	1971	1.2	1937	1.0	1938
14	1.1	1925	1.5	1956	2.1	1928	2.7	1954	2.8	1925	4.2	1968	2.2	2002	1.2	1964	1.6	1990	0.9	1988	1.3	1999	1.1	1955
15	1.1	1934	1.6	1933	2.1	1934	2.8	1972	2.9	1965	4.2	1937	2.4	1940	1.5	2000	1.7	1953	1.0	1948	1.4	2002	1.2	1914
16	1.2	1956	1.7	1947	2.1	1970	2.9	1938	2.9	1967	4.4	2000	2.5	1966	1.6	1997	1.7	1975	1.0	1981	1.4	1933	1.2	1940
17	1.2	1955	1.7	1935	2.3	1972	3.2	1925	3.0	1966	4.5	1913	2.6	1978	1.7	1983	1.8	2000	1.0	1975	1.4	2000	1.2	1963
18	1.2	1936	1.8	2000	2.4	1968	3.4	1966	3.2	1937	4.5	1912	2.7	1991	1.7	1953	1.9	1983	1.3	2002	1.4	1938	1.4	2002
19	1.3	1913	1.9	1913	2.6	1940	3.5	1963	3.4	1928	4.7	1931	2.9	1954	1.7	1989	1.9	1999	1.4	1972	1.5	1994	1.5	1964
20	1.3	1961	1.9	1992	2.8	1941	3.6	1990	3.6	1980	4.7	1946	3.3	1974	1.8	1984	2.0	1980	1.4	1995	1.5	1955	1.5	1991
21	1.3	1924	2.0	1978	2.8	1988	3.6	1985	3.7	1968	4.7	1936	3.3	1985	1.8	1976	2.1	1912	1.5	1938	1.5	1924	1.7	1999
22	1.3	1991	2.1	1965	2.8	1931	3.8	1936	4.3	1941	4.9	1922	3.5	2000	2.1	1980	2.1	1934	1.6	1974	1.5	1954	1.8	1954
23	1.4	1963	2.1	1917	2.9	1933	3.9	1957	4.3	1923	5.1	1976	3.6	1972	2.1	1956	2.1	1954	1.6	1940	1.6	1949	1.9	1929
24	1.5	1992	2.1	1928	3.1	1899	3.9	1971	4.6	1964	5.4	1997	3.7	1976	2.2	1947	2.2	1929	1.8	1922	1.7	1990	1.9	1934
25	1.5	2002	2.2	1909	3.3	1925	4.0	1995	4.7	1940	5.4	1952	4.0	1898	2.4	1952	2.2	1937	1.9	1924	1.7	1932	2.0	1932
26	1.5	1981	2.3	1976	3.3	1950	4.2	1967	4.8	1977	5.6	1910	4.0	1955	2.5	1966	2.3	1984	1.9	1934	1.8	1923	2.0	1933
27	1.6	1954	2.4	1912	3.3	2000	4.3	1955	5.2	1975	6.0	1979	4.1	1931	2.6	1971	2.3	1981	1.9	1990	1.9	1907	2.0	1953
28	1.7	1996	2.4	1954	3.5	1930	4.3	1964	5.2	1924	6.1	1955	4.2	1930	2.7	1912	2.4	1943	2.0	1966	1.9	1943	2.0	1922
29	1.7	1964	2.4	1944	3.6	1953	4.3	1953	5.3	1946	6.4	1991	4.4	1997	2.9	1963	2.4	1936	2.1	1932	2.0	1953	2.1	1943
30	1.7	1930	2.4	1931	3.6	1966	4.3	1930	5.6	1932	6.4	2002	5.3	1956	3.1	1914	2.5	1979	2.1	1953	2.1	1975	2.1	1925
31	1.7	1944	2.4	1995	4.0	1918	4.3	1933	6.2	1931	7.1	1906	5.4	1963	3.4	1935	2.7	1974	2.1	1929	2.2	1966	2.3	1952
32	1.8	1905	2.7	1991	4.1	1943	4.4	2002	6.2	1981	7.4	1973	5.5	1918	3.5	1978	2.7	1966	2.3	1964	2.4	1945	2.3	1908
33	1.9	1976	2.8	1923	4.1	1976	4.5	1931	6.3	1954	8.6	1980	5.6	1952	3.6	1946	2.8	1913	2.4	1984	2.5	1995	2.3	1910
34	2.0	1948	2.9	1900	4.5	1917	4.6	1946	7.0	1972	8.9	1998	5.8	1977	3.7	1933	3.3	1948	2.5	1943	2.5	1952	2.4	1945
35	2.0	1953	2.9	1963	4.5	1994	4.8	1941	7.0	1948	9.0	1994	6.1	1964	3.7	1929	3.3	1963	2.6	1936	2.5	1989	2.4	1948
36	2.1	1933	2.9	1946	4.7	1926	4.8	1899	7.3	1953	9.1	1966	6.2	1938	4.1	1994	3.3	1995	2.6	1991	2.7	1917	2.6	1979
37	2.2	1958	3.0	1924	4.7	1995	5.1	1982	7.6	1912	9.1	1981	6.3	1939	4.3	1969	3.5	1996	2.8	1933	2.8	1971	2.6	1957
38	2.2	1980	3.1	1977	5.2	1898	5.5	1991	7.9	1997	9.4	1900	6.3	1913	4.4	1937	3.5	1945	2.8	1978	2.9	1934	2.6	2001
39	2.2	1909	3.2	1968	5.2	1955	5.6	1988	8.0	1979	9.5	1978	7.0	1937	4.4	1940	3.5	1938	3.0	1955	3.0	1910	2.7	1980
40	2.3	1995	3.3	1953	5.3	1923	5.7	1921	8.1	1927	10.4	1909	7.1	1968	4.7	2001	3.6	1940	3.0	1989	3.0	1997	2.8	1989
41	2.3	1966	3.4	1972	5.8	1911	5.9	1943	8.2	1910	10.9	1921	7.2	1994	4.8	1959	3.9	1952	3.3	1963	3.0	1963	2.8	1935
42	2.3	1982	3.4	1910	6.2	1939	6.1	1911	8.3	1963	11.2	1958	7.5	1906	4.9	1930	4.3	1922	3.6	1928	3.1	1960	2.8	1994
43	2.3	1990	3.4	1996	6.2	1913	6.2	1926	8.3	1933	11.3	1959	7.6	1946	5.0	1949	4.4	1917	3.7	1960	3.1	1984	2.9	1958
44	2.4	1951	3.6	1948	6.5	1914	6.3	1939	8.4	1998	12.1	1983	7.8	1903	5.2	1909	4.7	1968	3.8	1899	3.2	1899	3.0	1926
45	2.5	1950	3.8	1950	6.6	1992	6.5	1965	8.5	1962	12.6	1927	7.9	1941	5.4	1943	5.1	1923	3.8	1983	3.3	1926	3.0	1950
46	2.5	1914	4.0	1941	6.6	1921	6.5	1970	8.7	1906	12.8	1986	8.0	1932	5.4	1910	5.1	1924	3.9	1917	3.5	1950	3.3	1949
47	2.5	1947	4.0	1980	6.7	1937	6.9	1949	8.8	1991	12.9	1948	8.0	1900	5.4	1965	5.1	1969	3.9	1945	3.7	1911	3.4	1923
48	2.6	1915	4.1	1905	6.7	1946	7.5	1948	9.1	1922	13.2	1985	8.4	1990	5.5	1932	5.2	1927	3.9	2001	3.9	1964	3.4	1960
49	2.9	1975	4.2	1958	6.8	1900	7.6	1914	9.5	2001	13.3	1971	8.7	1975	5.8	1999	5.2	1932	3.9	1909	4.0	1987	3.4	1906
50	3.0	1971	4.2	1899	6.8	1924	7.9	1909	9.7	1900	13.7	1920	8.9	1971	5.9	1931	5.8	1925	4.1	1907	4.0	1913	3.4	1974
51	3.1	1931	4.3	1901	7.0	1975	7.9	1903	9.8	1952	14.1	1950	9.7	1943	6.0	1957	5.9	1957	4.3	1992	4.1	1898	3.5	1962
52	3.1	1908	4.4	1961	7.1	1932	8.0	1951	10.0	1929	14.1	1939	9.9	1929	6.1	1961	5.9	1899	4.4	1916	4.2	1957	3.6	1930
53	3.2	1965	4.9	1902	7.1	1927	8.0	1974	10.2	1943	14.5	1914	9.9	1973	6.1	1939	6.1	1964	4.6	1935	4.2	1969	3.6	1977
54	3.2	1978	5.1	1930	7.1	1997	8.1	1900	10.3	1909	14.5	1990	10.0	1983	6.2	1898	6.3	1978	4.6	1982	4.3	1982	3.7	1916
55	3.2	1917	5.2	1982	7.2	1999	8.3	1924	10.7	1957	14.9	1905	10.4	1996	6.3	1938	6.4	1909	4.7	1910	4.3	1981	3.7	1946
56	3.4	2000	5.3	1904	7.4	1920	8.4	1958	11.0	2002	15.9	1918	10.7	1925	6.3	1967	6.4	1898	4.8	1930	4.4	1983	3.7	1951
57	3.8	1911	5.3	1975	7.5	1906	8.4	1932	11.1	1908	16.0	1898	11.8	1928	6.4	1972	6.5	1906	4.8	1969	4.5	1978	3.8	1947
58	3.8	1959	5.4	1918	7.6	1929	8.5	1968	11.3	1936	16.1	1930	12.2	1961	6.6	1996	6.5	1992	4.9	1931	4.6	1930	3.8	1967
59	4.0	1918	5.5	1922	7.6	1951	8.7	1910	11.3	1921	16.3	1960	12.7	1960	6.7	1941	6.6	1960	5.0	1925	4.6	1959	3.8	1995
60	4.0	1941	5.6	1951	7.7	1904	8.8	1994	11.4	1970	16.5	1954	13.2	1914	6.8	1922	6.9	1930	5.1	1913	4.8	1929	3.8	1919
61	4.0	1972	5.6	1936	7.8	1986	8.9	1992	11.5	1985	16.6	1932	13.2	1942	6.9	1919	6.9	1998	5.2	1954	4.9	1927	4.0	1959
62	4.1	1927	5.7	1898	8.3	1936	9.1	1907	11.6	1902	16.9	1938	13.3	1967	7.0	1979	7.2	1904	5.4	1987	4.9	1942	4.1	1971
63	4.3	1926	5.8	1988	8.5	1963	10.0	1975	11.6	1918	17.4	1964	13.4	1998	7.8	1960	7.2	1933	5.7	1970	5.1	1916	4.1	1975
64	4.3	1929	6.1	1952	8.6	1959	10.1	1986	11.8	1898	18.3	1974	13.4	1959	8.3	1906	7.8	1910	5.9	1957	5.1	1962	4.3	1970
65	4.3	1919	6.3	1966	8.6	1908	10.2	1942	11.8	1947	18.8	1916	13.6	1981	8.4	1924	7.9	1919	6.0	1898	5.4	1970	4.4	1917
66	4.3	1923	6.3	1932	8.6	1907	11.4	1962	12.4	1996	19.0	1929	14.1	2001	8.7	1954	8.0	1908	6.2	1906	5.6	1935	4.8	1911
67	4.4	1997	6.3	1955	8.7	1990	11.6	1923	12.5	1958	19.3	1962	14.3	1979	8.8	1918	8.1	1931	6.3	1901	6.0	1944	4.8	1965
68	4.4	1999	6.4	1925	8.8	1983	11.6	1959	13.5	1950	20.4	1944	14.4	1962	8.8	1977	8.3	1982	6.3	1920	6.0	1967	4.8	1901
69	4.5	1922	6.5	1903	8.9	1910	11.9	1928	13.7	1994	20.8	1957	14.5	1935	9.1	1925	8.4	1967	6.4	1996	6.0	1925	5.3	1904
70	4.5	1898	6.6	1997	8.9	1947	12.3	2001	13.8	1917	21.1	1928	14.6	1999	9.2	1962	8.5	1959	6.7	1944	6.2	1974	5.3	1907
71	4.6	1968	6.7	2001	9.5	1971	12.4	1905	14.0	1983	21.6	1977	15.0	1944	9.2	1945	8.9	1928	6.8	1949	6.4	1912	5.4	1902
72	4.6	1983	6.7	1927	9.9	1902	12.4	1929	14.4	1976	22.1	1987	15.8	1919	9.7	1942	8.9	1907	7.1	1912	6.6	1901	5.4	1903
73	4.7	1945	6.7	1945	10.2	1942	13.3	1902	14.7	1990	22.4	1993	16.5	1957	9.9	1995	9.4	1935	7.2	1904	6.6	1904	5.5	1900
74	4.7	1900	6.8	1921	10.3	1980	13.4	1976	15.3	1971	22.6	1969	16.7	1921	10.1	1973	9.5	1970	7.6	1914	6.6	1922	5.9	1969
75	4.8	1928	6.9	1908	10.3	1974	13.6	1952	16.2	1978	23.2	1975	17.3	1947	10.1	1948	10.0	1962	7.7	1962	6.7	1965	5.9	1983
76	4.9	1901	7.1	1942	10.6	1985	13.7	1961	16.3	1949	24.0	1961	17.4	1916	10.2	1987	10.0	1900	7.9	1908	6.9	1946	6.1	1978
77	5.0	1952	7.2	1920	10.8	1901	15.4	1997	16.5	1938	24.3	1925	17.6	1995	10.2	1920	10.0	1920	8.1	1958	7.0	1908	6.3	1981
78	5.0	1985	7.4	1979	11.5	1922	16.9	1917	17.1	1960	24.4	1965	18.2	1969	10.3	1900	10.1	1916	8.1	1942	7.2	1968	6.3	1968
79	5.1	1921	7.5	1929	11.5	1944	18.5	1904	18.9	1913	26.0	1996	18.4	1987	10.4	1923	10.7	1987	8.2	1900	7.3	1958	6.3	1920
80	5.3	1988	7.5	1983	13.0	1965	18.9	1915	19.6	1916	26.2	1999	20.5	1949	10.7	1928	10.8	1946	8.2	1927	7.9	1920	6.3	1898
81	5.5	1902	8.0	1926	13.1	1912	19.1	1906	20.7	1974	26.3	1907	21.8	1924	11.0	1904	11.2	1972	8.2	1911	8.0	1921	6.4	1921
82	5.6	1943	8.1	1994	13.1	1982	19.3	1918	21.0	1905	27.1	1970	22.2	1927	11.4	1917	11.3	1914	8.6	1921	8.2	1906	6.4	1984
83	5.7	1907	8.1	1959	13.3	1915	19.6	1913	21.3	1959	28.2	1902	23.7	1905	11.6	1990	11.4	2001	9.0	1919	8.5	1979	6.5	1899
84	5.8	1986	8.2	1906	14.5	1958	21.1	1916	21.3	1942	29.9	1919	23.8	1922	11.6	1921	12.2	1921	9.1	1918	9.5	1902	6.8	1905
85	5.9	1899	8.3	1987	15.4	1998	21.9	1922	21.6	1919	30.2	1924	24.6	1899	11.7	1981	12.6	1949	9.2	1946	9.7	1972	7.2	1942
86	6.0	1984	8.4	1999	16.2	1905	22.0	1978	21.8	1982	30.6	1899	24.6	1992	12.0	1986	13.6	1918	9.9	1968	9.8	1919	7.2	1982
87	6.0	1904	8.5	1986	16.4	1916	22.2	1901	23.4	1930	30.7	1984	25.0	1948	13.1	1982	13.6	1941	10.7	1905	9.9	1915	7.4	1913
88	6.2	1906	8.6	1911	16.5	1952	22.8	1998	24.3	1935	33.2	1941	26.9	1917	13.4	1902	14.7	1950	11.6	1903	10.4	1900	7.4	1961
89	6.3	1916	8.8	1943	16.6	1961	23.2	1969	24.6	1969	35.1	1942	28.1	1920	13.4	1908	14.8	1944	11.7	1923	10.5	1903	7.5	1931
90	6.3	1946	9.5	1960	16.7	1909	28.7	1920	24.8	1915	35.1	1923	29.1	1984	14.6	1916	15.7	1902	12.1	1965	10.5	1951	7.5	1972
91	6.5	1969	9.7	1971	17.5	1919	29.4	1999	25.5	1899	36.0	1949	29.7	1986	14.7	1927	16.1	1985	12.7	1951	11.1	1905	7.7	1915
92	6.7	1987	9.8	1937	18.0	2001	30.4	1947	26.4	1904	36.7	1904	31.6	1945	14.7	1905	16.3	1915	12.9	1967	11.1	1996	8.1	1987
93	6.9	1993	10.4	1969	18.9	1903	30.6	1983	27.7	1986	36.9	1945	32.3	1907	15.0	1998	17.7	1958	13.4	1926	12.1	1992	8.7	1985
94	7.0	1998	10.7	1919	20.1	1960	30.6	1980	28.6	1920	39.2	2001	33.3	1982	17.7	1899	17.8	1989	16.1	1950	12.9	1985	8.9	1941
95	7.1	1903	11.3	1998	20.9	1969	32.0	1919	28.7	1973	45.9	1982	33.4	1923	18.8	1958	21.4	1986	16.7	1959	13.8	1993	9.1	1928
96	7.1	1962	11.8	1984	21.1	1945	35.4	1979	29.1	1903	50.9	1935	33.6	1908	19.7	1985	21.8	1942	17.4	1915	14.3	1918	9.5	1909
97	7.2	1920	12.5	1915	21.3	1987	35.7	1927	29.2	1961	52.2	1995	37.5	1909	20.4	1968	21.9	1926	18.3	1977	15.5	1986	9.7	1996
98	7.4	1960	13.3	1907	21.6	1962	36.3	1960	31.5	1951	53.1	1967	37.6	1958	23.2	1944	22.9	1905	20.2	1993	16.6	1941	10.0	1997
99	7.9	1994	14.6	1916	22.3	1984	36.8	1984	32.4	1984	55.2	1917	37.7	1965	23.9	1992	23.3	1965	20.6	1902	17.0	1928	11.5	1998
100	7.9	1942	14.9	1985	23.6	1949	38.3	1912	35.4	1999	57.0	1947	40.3	1950	24.5	1950	23.5	1973	21.8	1961	17.2	1909	12.0	1918
101	9.1	1949	17.5	1974	24.2	1948	39.3	1945	35.5	1944	59.0	1943	43.6	1904	24.6	1907	24.6	1961	22.9	1998	17.3	1977	12.3	1993
102	9.2	1932	20.3	1993	24.2	1978	40.3	1987	41.4	1987	66.1	1915	51.2	1902	25.6	1951	25.2	1903	40.9	1986	25.0	1931	13.2	1986
103	14.4	1973	23.4	1949	28.2	1993	44.2	1993	44.9	1995	66.6	1908	65.6	1915	25.9	1903	38.9	1977	42.8	1941	29.0	1961	17.8	1944
104	17.4	1910	24.5	1973	38.0	1979	47.4	1944	48.5	1993	66.9	1903	94.7	1993	47.3	1915	45.4	1951	43.1	1985	37.8	1998	23.0	1992
105	17.6	1974	29.4	1962	44.7	1973	50.9	1973	48.7	1945	76.4	1951	137.1	1951	68.9	1993	46.9	1993	59.5	1973	42.4	1973	25.3	1973

Kansas City to Waverly Incremental Flows



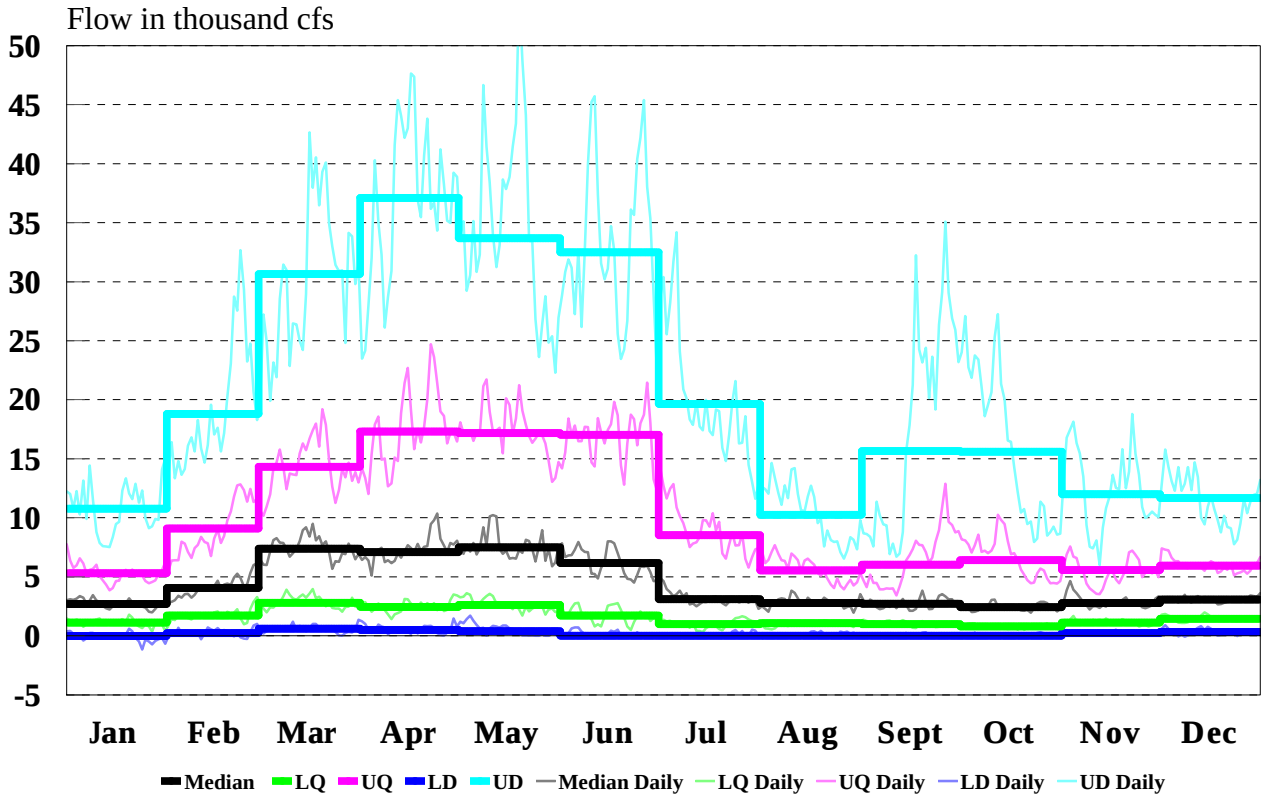
Kansas City to Waverly Incremental Flows (Lower Values Expanded)



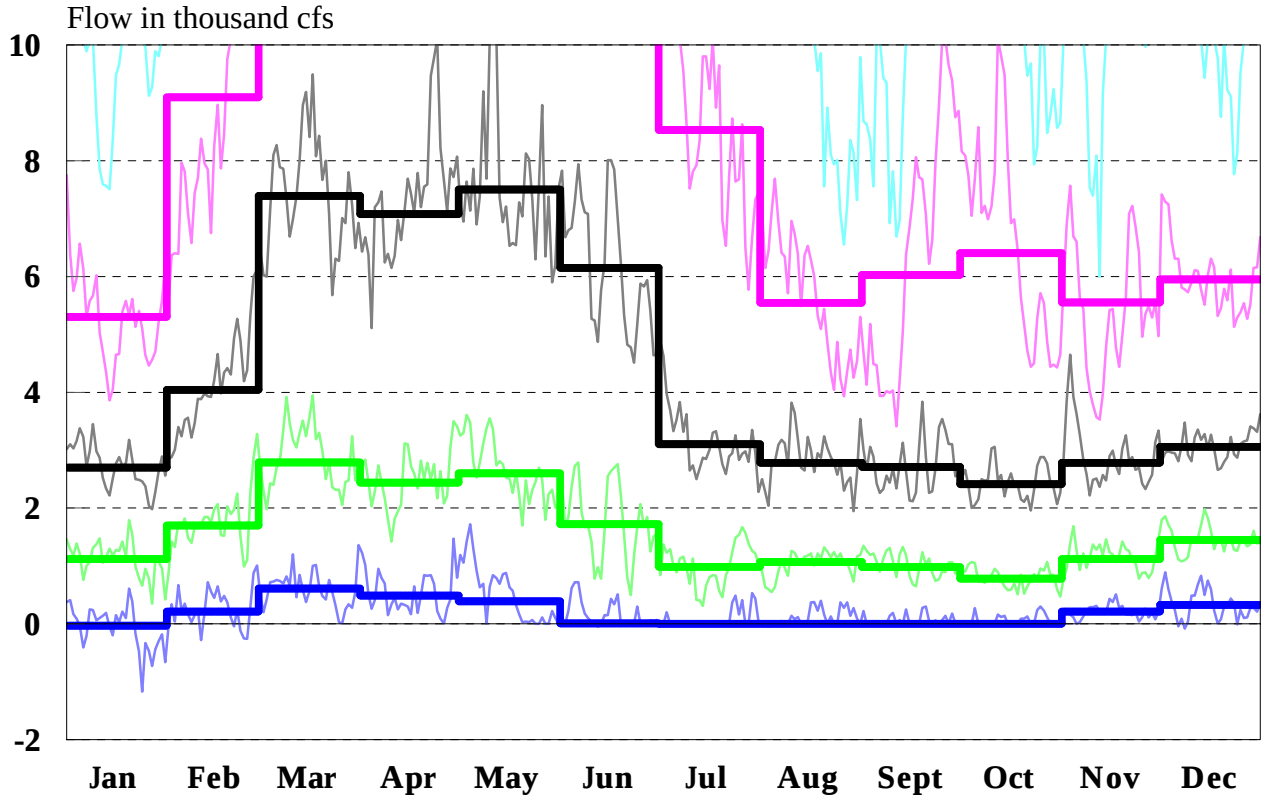
Kansas City to Waverly
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-1.2	1986	-2.0	1983	-3.0	1986	-2.9	1986	-3.0	1986	-3.0	1986	-3.0	1986	-3.0	1986	-2.9	1986	-2.9	1986	-3.0	1986	-1.5	1985
2	-1.1	1978	-1.8	1984	-1.0	1984	-1.0	1984	-1.0	1984	-0.9	1984	-1.0	1984	-1.0	1984	-1.0	1984	-1.0	1984	-1.0	1984	-1.2	1986
3	-1.1	1972	-1.7	1987	-0.9	1981	-0.9	1981	-0.9	1981	-0.9	1981	-0.9	1981	-0.9	1981	-0.9	1981	-0.9	1981	-0.8	1981	-1.0	1984
4	-1.0	1980	-1.2	1978	-0.8	1956	-0.8	1956	-0.8	1956	-0.8	1956	-0.8	1949	-0.8	1956	-0.7	1949	-0.7	1949	-0.7	1956	-0.7	1969
5	-0.9	1953	-1.0	1970	-0.8	1949	-0.8	1949	-0.7	1949	-0.8	1949	-0.7	1956	-0.7	1949	-0.7	1956	-0.7	1956	-0.7	1949	-0.7	1976
6	-0.9	1987	-0.8	1981	-0.5	1959	-0.5	1959	-0.5	1954	-0.5	1954	-0.5	1954	-0.5	1959	-0.5	1954	-0.5	1954	-0.4	1959	-0.6	1952
7	-0.7	1947	-0.7	1944	-0.4	1954	-0.4	1954	-0.5	1959	-0.4	1959	-0.4	1959	-0.5	1954	-0.5	1959	-0.5	1959	-0.4	1954	-0.5	1968
8	-0.6	1945	-0.7	1985	-0.4	1985	-0.4	1985	-0.4	1985	-0.4	1985	-0.4	1985	-0.4	1985	-0.4	1985	-0.4	1985	-0.4	1985	-0.5	1987
9	-0.4	1981	-0.6	1972	-0.3	1946	-0.3	1946	-0.3	1946	-0.3	1946	-0.3	1946	-0.3	1946	-0.3	1946	-0.3	1946	-0.3	1946	-0.4	1975
10	-0.3	1958	-0.6	1971	-0.2	1944	-0.2	1958	-0.2	1958	-0.2	1944	-0.2	1944	-0.2	1958	-0.2	1944	-0.2	1958	-0.2	1958	-0.2	1977
11	-0.2	1983	-0.5	1953	-0.2	1958	-0.2	1966	-0.2	1944	-0.2	1958	-0.2	1958	-0.1	1944	-0.2	1958	-0.2	1944	-0.2	1944	-0.2	1963
12	-0.2	1992	-0.4	1959	-0.2	1966	0.0	1944	-0.1	1966	-0.2	1966	-0.1	1966	-0.1	1966	-0.2	1966	-0.2	1966	-0.2	1966	-0.1	1949
13	-0.2	1938	-0.3	1956	0.0	1957	0.0	1957	0.0	1957	0.0	1957	0.0	1957	-0.1	1957	-0.1	1957	-0.1	1957	-0.1	1957	-0.1	1954
14	-0.1	1934	-0.3	1977	0.0	1970	0.0	1902	0.0	1948	0.0	1906	0.0	1945	-0.1	1973	0.0	1976	0.0	2002	0.0	1952	-0.1	1991
15	-0.1	1956	-0.1	1943	0.0	1910	0.0	1976	0.0	1926	0.0	1911	0.0	1976	0.0	1948	0.0	1983	0.0	1940	0.0	1982	0.0	1958
16	-0.1	1931	0.0	1932	0.0	1976	0.0	1950	0.0	1971	0.0	1913	0.1	1901	0.0	1976	0.0	1945	0.0	1952	0.0	1948	0.0	1936
17	-0.1	1939	0.0	1940	0.1	1917	0.0	1963	0.1	1987	0.0	1914	0.1	1911	0.0	1983	0.0	1948	0.0	1953	0.0	1939	0.0	1959
18	-0.1	1969	0.0	1945	0.1	1918	0.0	1971	0.1	1939	0.0	1976	0.1	1913	0.0	1901	0.0	1955	0.0	1983	0.0	1945	0.0	1979
19	-0.1	1977	0.0	1954	0.1	1941	0.1	1917	0.1	1941	0.1	1945	0.1	1918	0.0	1903	0.0	1987	0.0	1948	0.0	1976	0.0	1983
20	0.0	1940	0.0	1934	0.1	1928	0.1	1955	0.1	1913	0.1	1971	0.1	1920	0.0	1911	0.1	1901	0.0	1964	0.0	1963	0.1	1937
21	0.1	1991	0.1	1931	0.1	1964	0.1	1948	0.1	1914	0.1	1901	0.1	1971	0.0	1912	0.1	1971	0.0	1945	0.0	1969	0.1	1940
22	0.1	1942	0.1	1946	0.1	1968	0.1	1930	0.1	1988	0.1	1918	0.1	1948	0.0	1913	0.1	1950	0.0	1976	0.1	1933	0.1	1945
23	0.1	1996	0.1	1950	0.1	1971	0.2	1907	0.1	1934	0.1	1900	0.1	1914	0.0	1918	0.1	1941	0.0	1912	0.1	1971	0.1	1930
24	0.1	1917	0.1	1947	0.1	1938	0.2	1915	0.1	1901	0.1	1920	0.1	1925	0.0	1945	0.1	1952	0.0	1918	0.1	1901	0.1	1912
25	0.1	1979	0.1	1902	0.2	1977	0.2	1934	0.1	1976	0.1	1925	0.1	1930	0.0	1971	0.1	1953	0.0	1982	0.1	1913	0.1	1939
26	0.1	1933	0.1	1922	0.2	1940	0.2	1941	0.2	1902	0.1	1988	0.1	1991	0.1	1941	0.1	1972	0.1	1939	0.1	1916	0.2	1901
27	0.1	1935	0.1	1900	0.2	1975	0.2	1968	0.2	1906	0.2	1902	0.1	1941	0.1	1962	0.1	1912	0.1	1901	0.1	1962	0.2	1916
28	0.2	1902	0.1	1905	0.2	1907	0.2	1940	0.2	1900	0.2	1905	0.1	1907	0.1	1970	0.1	1913	0.1	1913	0.1	1987	0.2	1953
29	0.2	1905	0.1	1913	0.2	1914	0.2	1988	0.2	1911	0.2	1922	0.1	1987	0.1	1987	0.1	1939	0.1	1963	0.1	1930	0.2	1920
30	0.2	1930	0.1	1939	0.2	1991	0.2	1900	0.3	1945	0.2	1948	0.2	1934	0.1	1900	0.1	1963	0.1	1916	0.1	1936	0.3	1899
31	0.2	1900	0.2	1933	0.2	1967	0.2	1919	0.3	1903	0.2	1937	0.2	1955	0.1	1914	0.1	1930	0.1	1971	0.1	1940	0.3	1938
32	0.2	1914	0.2	1938	0.2	1963	0.3	1899	0.3	1918	0.2	1934	0.2	1970	0.1	1916	0.2	1900	0.1	1991	0.1	1980	0.3	1966
33	0.2	1920	0.2	1991	0.2	1902	0.3	1918	0.3	1940	0.2	1972	0.2	1988	0.1	1923	0.2	1940	0.1	1938	0.1	1970	0.3	1904
34	0.2	1921	0.2	1899	0.2	1972	0.3	1923	0.3	1963	0.2	1987	0.2	1900	0.1	1934	0.2	1937	0.1	1941	0.1	1912	0.3	1910
35	0.2	1954	0.2	1917	0.2	1939	0.3	1977	0.4	1950	0.2	1955	0.2	1917	0.1	1930	0.2	1968	0.2	1932	0.1	1914	0.3	1914
36	0.2	1944	0.2	1919	0.3	1934	0.3	1972	0.4	1923	0.3	1950	0.2	1968	0.1	1899	0.2	1979	0.2	1947	0.1	1932	0.3	1918
37	0.3	1919	0.2	1960	0.3	1953	0.4	1905	0.4	1977	0.3	1930	0.2	1972	0.1	1947	0.2	1990	0.2	1955	0.1	1943	0.3	1921
38	0.3	1911	0.2	1961	0.3	1955	0.4	1974	0.4	1930	0.3	1960	0.2	1980	0.2	1927	0.2	1934	0.2	1933	0.1	1950	0.3	1960
39	0.3	1912	0.2	1964	0.3	1931	0.4	1910	0.4	1925	0.3	1921	0.2	1950	0.2	1936	0.2	1918	0.2	1930	0.1	1937	0.3	1929
40	0.3	1924	0.2	1920	0.3	1930	0.4	1929	0.5	1905	0.3	1940	0.2	1912	0.2	1967	0.2	1943	0.2	1917	0.2	1899	0.3	1919
41	0.3	1928	0.2	1976	0.4	1909	0.5	1937	0.5	1937	0.3	1941	0.2	1923	0.2	1907	0.2	1980	0.2	1943	0.2	1904	0.3	1988
42	0.3	1957	0.2	1901	0.4	1933	0.5	1931	0.5	1947	0.3	1963	0.3	1933	0.2	1933	0.2	2002	0.2	1960	0.2	1910	0.4	1957
43	0.3	1984	0.2	1918	0.4	1916	0.5	1911	0.5	1979	0.4	1933	0.3	1936	0.2	1939	0.3	1927	0.2	1980	0.2	1918	0.4	1903
44	0.3	1959	0.3	1914	0.4	1924	0.5	1938	0.5	1967	0.4	1938	0.3	1940	0.2	1963	0.3	1906	0.2	1934	0.2	1920	0.4	1917
45	0.3	1899	0.3	1921	0.4	1919	0.5	1933	0.5	1955	0.4	1968	0.3	1939	0.2	1920	0.3	1911	0.2	1899	0.2	1938	0.4	1933
46	0.3	1904	0.3	1904	0.4	1904	0.6	1898	0.6	1915	0.5	1899	0.3	1963	0.2	1972	0.3	1916	0.2	1909	0.2	1979	0.4	1970
47	0.3	1948	0.3	1951	0.5	1911	0.6	1906	0.6	1968	0.5	1907	0.3	1931	0.2	1980	0.3	1933	0.2	1923	0.2	1921	0.4	1900
48	0.4	1901	0.4	1907	0.5	1921	0.6	1924	0.6	1917	0.5	1898	0.3	1899	0.2	1910	0.3	1929	0.2	1937	0.2	1968	0.4	1913
49	0.4	1903	0.4	1929	0.5	1948	0.7	1982	0.6	1922	0.5	1939	0.3	1903	0.2	1926	0.3	1907	0.3	1950	0.2	1917	0.5	1950
50	0.4	1913	0.4	1912	0.5	1950	0.7	1939	0.7	1920	0.6	1978	0.3	1906	0.2	1940	0.3	1919	0.3	1987	0.2	1955	0.5	1898
51	0.4	1918	0.4	1923	0.5	1988	0.7	1925	0.7	1938	0.6	1909	0.4	1942	0.3	1906	0.4	1982	0.3	1990	0.3	1911	0.5	1915
52	0.4	1922	0.4	1898	0.5	1996	0.7	1962	0.7	1972	0.7	1923	0.4	1916	0.3	1909	0.4	1936	0.3	1907	0.3	1941	0.5	1924
53	0.4	1989	0.4	1996	0.5	1908	0.7	1970	0.7	1975	0.7	1942	0.4	1927	0.3	1919	0.4	1960	0.3	1908	0.3	1898	0.5	1955
54	0.4	1923	0.4	1911	0.5	1925	0.8	1935	0.7	1933	0.7	1936	0.4	1898	0.3	1925	0.4	1947	0.3	1920	0.3	1907	0.5	1990
55	0.4	1997	0.4	1910	0.6	1901	0.8	1991	0.7	1960	0.8	1912	0.5	1953	0.3	1953	0.4	1917	0.3	1979	0.3	1915	0.5	1907
56	0.5	1936	0.5	1967	0.6	1923	0.8	1901	0.7	1970	0.8	1975	0.6	1975	0.3	1935	0.5	1938	0.3	1968	0.3	1924	0.6	1965
57	0.5	1990	0.5	1963	0.6	1983	0.8	1909	0.8	1931	0.8	1931	0.6	1962	0.3	1898	0.5	1962	0.3	1972	0.3	1906	0.6	1956
58	0.5	1927	0.6	1908	0.6	1905	0.8	1936	0.8	1924	0.9	1917	0.6	1974	0.3	1917	0.5	1899	0.3	1921	0.3	1923	0.6	1905
59	0.5	1950	0.6	1979	0.6	1982	0.9	1903	0.8	1936	1.0	1926	0.6	1922	0.3	1922	0.5	1909	0.3	1936	0.3	1927	0.6	1922
60	0.5	1964	0.6	1927	0.6	1899	0.9	1942	0.8	1980	1.1	1952	0.6	1926	0.3	1929	0.5	1923	0.3	1975	0.3	1947	0.6	1943
61	0.5	1929	0.7	1903	0.7	1945	0.9	1914	0.9	1899	1.1	1979	0.6	1990	0.3	1988	0.5	1935	0.3	1929	0.3	1953	0.6	1974
62	0.5	1943	0.7	1925	0.7	1913	1.0	1913	1.0	1942	1.1	1973	0.6	1943	0.3	1960	0.5	1991	0.3	1906	0.3	1988	0.6	1911
63	0.5	1951	0.7	1957	0.7	1926	1.0	1945	1.0	1909	1.1	1908	0.6	1905	0.4	1991	0.6	1932	0.3	1915	0.3	1900	0.7	1964
64	0.5	1898	0.7	1988	0.7	1942	1.0	1932	1.2	1908	1.2	1977	0.6	1919	0.4	1979	0.6	1978	0.4	1900	0.3	1975	0.7	1962
65	0.5	1909	0.7	1924	0.7	1920	1.1	1989	1.2	1916	1.2	1983	0.8	1902	0.4	1955	0.6	1942	0.4	1922	0.4	1903	0.7	1906
66	0.5	1915	0.7	1966	0.7	1935	1.2	1964	1.2	1921	1.3	1919	0.8	1910	0.4	1968	0.6	1967	0.4	1924	0.4	1983	0.7	1927
67	0.5	1949	0.8	1942	0.8	1900	1.2	1908	1.2	1928	1.4	1974	0.8	1938	0.4	1908	0.6	1964	0.4	1898	0.4	1902	0.8	1948
68	0.6	1970	0.8	1992	0.8	1932	1.2	1916	1.2	1907	1.4	1910	0.9	1960	0.5	1931	0.7	1908	0.4	1911	0.4	1909	0.8	1999
69	0.6	1908	0.9	1958	0.8	1943	1.2	1921	1.3	1982	1.5	1970	0.9	1983	0.5	1942	0.7	1931	0.4	1931	0.4	1922	0.8	1973
70	0.6	1925	0.9	1906	0.8	1915	1.2	1979	1.4	1912	1.5	1962	0.9	1921	0.5	1902	0.7	1898	0.4	1978	0.4	1934	0.8	1967
71	0.7	1937	0.9	1909	0.9	1906	1.2	1943	1.4	1965	1.6	1932	1.0	1937	0.5	1921	0.7	1922	0.5	1928	0.4	1925	0.8	1934
72	0.7	1926	0.9	1935	0.9	1898	1.3	1960	1.4	1991	1.6	1980	1.0	2002	0.5	1924	0.7	1925	0.5	1988	0.4	1978	0.9	1932
73	0.7	1910	0.9	1989	0.9	1989	1.3	1987	1.5	1951	1.6	1924	1.0	1932	0.5	1938	0.8	1904	0.6	1903	0.4	1960	0.9	1935
74	0.8	1975	1.0	2000	1.0	1937	1.3	1996	1.5	1932	1.8	1927	1.1	1979	0.5	1904	0.8	1924	0.6	1919	0.4	1908	0.9	1909
75	0.8	1941	1.0	1969	1.1	1936	1.4	1920	1.5	1910	1.8	1961	1.2	1967	0.5	1950	0.8	2000	0.7	1935	0.5	1972	0.9	1989
76	0.9	1946	1.0	1980	1.1	1987	1.6	1980	1.5	1919	2.0	1903	1.3	1908	0.5	1964	0.8	1988	0.7	1925	0.5	1929	1.0	1926
77	0.9	2000	1.1	1915	1.1	1969	1.6	1904	1.7	1904	2.0	1928	1.3	1928	0.6	1928	0.9	1910	0.7	1914	0.5	1965	1.0	2000
78	0.9	1961	1.1	1930	1.1	1951	1.6	1965	1.7	1969	2.0	1989	1.3	1977	0.6	1978	1.0	1920	0.7	1910	0.5	1926	1.0	1908
79	0.9	1967	1.2	1936	1.2	1927	1.6	1926	1.8	1898	2.0	1992	1.4	1952	0.6	1937	1.0	1975	0.7	1995	0.6	1991	1.0	1923
80	0.9	1976	1.2	1948	1.2	1903	1.7	1912	1.9	1962	2.1	1904	1.4	1915	0.7	1943	1.1	1974	0.8	1962	0.7	2002	1.1	2002
81	1.0	1968	1.2	1986	1.2	1960	1.9	1969	1.9	1989	2.1	1991	1.4	1964	0.7	1932	1.3	1914	0.8	1951	0.7	1905	1.1	1942
82	1.0	1963	1.3	1928	1.2	1979	2.0	1975	1.9	1953	2.2	1929	1.4	1978	0.7	1952	1.3	1903	0.8	1902	0.8	1967	1.2	1941
83	1.0	1955	1.3	1926	1.4	1922	2.2	2000	2.0	1964	2.2	1916	1.5	1929	0.7	1974	1.6	1902	0.8	1942	0.8	1919	1.2	1902
84	1.1	1988	1.4	1941	1.5	1912	2.2	1928	2.1	1983	2.6	1994	1.7	1924	0.8	1975	1.6	1970	0.9	1974	0.9	1990	1.3	1946
85	1.4	1906	1.5	1955	1.5	1947	2.3	1990	2.1	1943	2.6	1965	1.8	1904	0.8	1969	1.7	1999	1.0	1905	1.0	1964	1.3	1925
86	1.4	1932	1.5	1916	1.7	1978	2.4	1978	2.2	1992	2.8	1964	2.0	1909	1.0	1905	2.0	1995	1.0	1994	1.0	1935	1.4	1947
87	1.4	1974	1.5	1968	1.9	1994	2.4	1967	2.3	1929	2.9	1953	2.1	1989	1.1	1977	2.1	1921	1.1	1904	1.1	1942	1.4	1928
88	1.4	1965	1.7	1965	2.1	1992	2.6	1947	2.3	2000	3.0	2002	2.1	1982	1.1	2002	2.1	1992	1.1	1977	1.3	1974	1.4	1980
89	1.5	2001	1.7	1990	2.2	1962	2.8	1953	2.4	1978	3.0	1982	2.2	2001	1.1	1965	2.1	1994	1.1	1999	1.4	1999	1.5	1961
90	1.5	1960	1.7	1975	2.2	1980	3.2	1951	2.6	1994	3.1	1915	2.4	1947	1.4	1961	2.2	1928	1.3	1965	1.4	1977	1.5	1997
91	1.5	1966	1.7	1949	2.3	2002	4.3	1995	3.1	1998	3.4	1947	2.4	1935	1.5	1915	2.2	1973	1.4	1970	1.5	1951	1.5	1978
92	1.6	1971	2.1	1998	2.4	1929	4.3	1922	3.5	1927	4.3	1943	2.7	1973	1.5	1990	2.2	1969	1.7	1967	1.6	1931	1.5	1981
93	1.9	1995	2.2	1973	2.7	2000	4.5	2002	3.6	1952	4.5	1998	2.9	1994	1.5	1994	2.7	1915	1.8	1926	1.7	1989	1.6	1931
94	2.0	1999	2.6	1995	2.8	1993	4.8	1961	3.7	1935	4.6	1969	3.4	1961	1.5	1992	2.7	1996	1.9	2000	2.2	1995	1.7	2001
95	2.1	2002	2.7	1952	2.9	1990	5.1	1992	4.0	1961	4.7	2000	3.6	1997	1.8	1997	3.1	1997	1.9	1989	2.4	1973	1.8	1971
96	2.2	1998	2.9	1994	3.0	1974	5.2	1983	4.2	2001	4.9	1967	4.0	2000	1.9	1951	3.3	1905	2.0	1927	2.8	1994	2.1	1944
97	2.2	1994	3.5	1999	3.3	1995	5.6	1927	4.4	1973	5.4	1935	4.4	1969	1.9	1989	3.8	2001	2.1	1961	2.9	1997	2.3	1982
98	2.4	1907	3.9	1993	3.6	1952	5.8	2001	7.6	1993	5.5	1951	5.1	1999	2.0	2001	3.9	1989	2.4	1992	3.0	2000	2.6	1951
99	2.4	1916	4.0	2002	3.7	1965	6.2	1973	9.3	1997	6.1	1997	5.6	1998	2.0	1999	3.9	1926	2.6	1969	3.4	2001	2.7	1972
100	2.8	1952	4.2	1962	4.2	1961	6.9	1952	9.4	1974	7.0	2001	6.7	1992	2.6	2000	4.4	1951	3.4	1997	3.8	1928	3.0	1994
101	3.0	1962	4.2	1974	4.2	1999	7.0	1994	10.4	1996	7.9	1990	7.8	1965	2.6	1982	5.2	1965	3.9	1996	4.3	1996	3.1	1995
102	3.6	1985	4.4	1937	4.3	1998	7.1	1998	11.1	1990	8.7	1993	7.8	1996	3.0	1996	5.8	1993	4.6	2001	5.0	1993	3.6	1993
103	4.0	1973	4.7	2001	4.3	2001	7.8	1997	11.7	2002	9.6	1999	8.2	1995	3.4	1998	6.5	1961	5.0	1973	6.5	1961	4.5	1996
104	4.5	1982	7.6	1997	5.8	1997	8.1	1993	15.5	1999	11.9	1996	18.8	1951	3.7	1995	7.3	1977	5.1	1993	6.8	1992	5.5	1998
105	5.5	1993	12.2	1982	6.4	1973	12.3	1999	23.9	1995	20.1	1995	21.7	1993	7.7	1993	7.7	1998	12.1	1998	13.4	1998	12.9	1992

Waverly to Boonville Incremental Flows



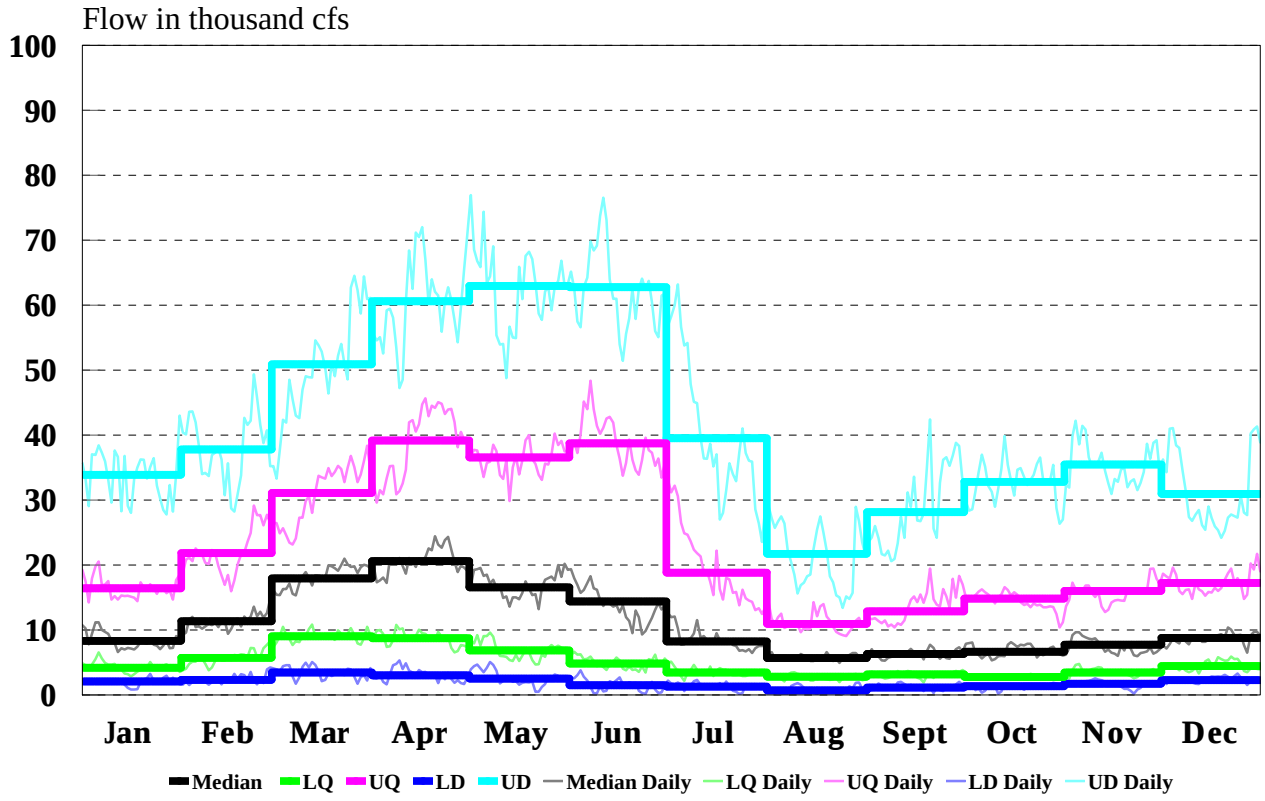
Waverly to Boonville Incremental Flows (Lower Values Expanded)



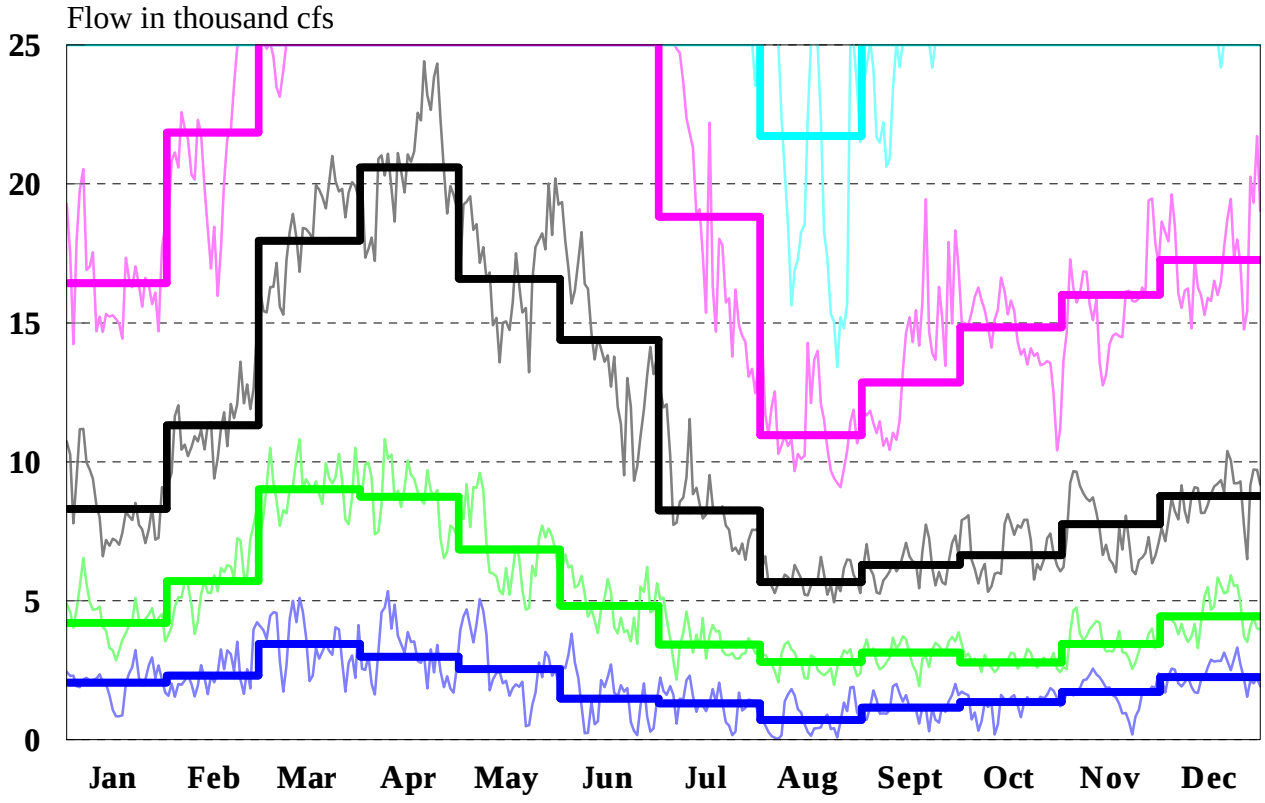
Waverly to Boonville
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-0.4	1976	-0.5	1954	0.2	1956	0.0	1902	0.3	1926	0.0	1906	0.5	1901	0.1	1964	0.1	1956	0.1	1989	0.1	1956	-0.9	1979
2	-0.1	1940	0.2	1934	0.2	1957	0.5	1956	0.4	1956	0.4	1988	0.5	1911	0.5	1912	0.1	1963	0.2	1956	0.3	1976	0.0	1955
3	0.0	1963	0.3	1956	0.5	1910	0.8	2000	0.8	1988	0.5	1911	0.5	1913	0.5	1901	0.5	1901	0.2	1948	0.4	1933	0.2	1937
4	0.1	1954	0.5	1957	0.9	1964	1.0	1917	0.9	1934	0.5	1913	0.5	1918	0.5	1903	0.6	1966	0.2	1987	0.4	1939	0.2	1948
5	0.2	1931	0.6	1940	0.9	2000	1.5	1989	1.0	1913	0.5	1914	0.5	1920	0.5	1911	0.6	1954	0.2	1963	0.4	1963	0.3	1956
6	0.3	1956	0.7	1938	1.0	1917	1.8	1977	1.0	1914	0.6	1956	0.8	1936	0.5	1913	0.8	1953	0.3	1937	0.5	1943	0.4	1954
7	0.3	1934	0.8	1964	1.0	1918	1.8	1996	1.4	1941	0.9	1934	0.9	1934	0.5	1918	0.8	1976	0.5	1964	0.6	1937	0.4	1939
8	0.4	1944	0.8	1931	1.4	1928	1.9	1936	1.4	1901	1.0	1918	0.9	1914	0.5	1936	0.8	1988	0.5	1912	0.7	1955	0.5	1963
9	0.4	1964	0.9	1939	1.5	1934	1.9	1954	1.5	1989	1.0	1901	0.9	1925	0.6	1948	1.0	1912	0.5	1918	0.7	1930	0.7	1960
10	0.5	1981	1.1	1922	1.9	1954	2.0	1915	1.8	1980	1.1	1977	1.0	1977	0.7	1963	1.0	1913	0.5	1939	0.8	1953	0.8	1933
11	0.6	2000	1.1	1902	2.0	2002	2.0	1907	1.9	1906	1.4	1963	1.0	1989	0.9	1930	1.0	1939	0.6	1976	1.0	1901	0.8	1950
12	0.6	1959	1.5	2000	2.0	1941	2.2	1963	1.9	1902	1.5	1933	1.1	1985	1.0	1976	1.0	1948	0.6	1953	1.0	1913	0.9	1953
13	0.6	1957	1.6	1900	2.0	1968	2.5	1971	2.0	1964	1.5	1920	1.1	1988	1.1	1975	1.0	1997	0.7	1978	1.0	1916	1.0	1912
14	0.7	1979	1.6	1905	2.3	1977	2.5	1934	2.4	1900	1.5	1925	1.3	1931	1.1	1953	1.2	1940	0.7	1988	1.0	2002	1.1	1943
15	0.7	1936	1.6	1913	2.4	1989	2.9	1955	2.5	1939	1.5	1900	1.4	1938	1.2	1941	1.2	2000	0.7	1979	1.1	1964	1.3	1936
16	0.7	1939	1.7	1947	2.7	1981	3.0	1930	2.8	2000	1.5	1936	1.4	1963	1.3	1988	1.2	1971	0.8	1975	1.1	1940	1.4	1929
17	0.8	1938	1.8	1976	2.9	1938	3.0	1943	2.9	1911	2.0	1905	1.4	1976	1.3	1947	1.2	1955	0.8	1947	1.1	1938	1.4	1938
18	0.9	1989	1.8	1989	3.0	1996	3.0	1900	3.1	1992	2.0	1902	1.4	1907	1.3	1934	1.3	1930	0.9	1994	1.1	1954	1.4	1901
19	0.9	1917	1.9	1967	3.0	1970	3.0	1919	3.3	1977	2.0	1922	1.4	1980	1.4	1945	1.4	1991	0.9	1995	1.3	1959	1.4	1916
20	1.0	1961	2.1	1933	3.2	1930	3.1	1962	3.4	1918	2.0	1971	1.6	1994	1.5	1900	1.4	1938	1.0	1940	1.3	1948	1.4	2002
21	1.0	1951	2.2	1899	3.3	1967	3.4	1940	3.4	1903	2.2	1987	1.8	1940	1.5	1914	1.4	1937	1.0	1901	1.3	1949	1.4	1995
22	1.0	1953	2.2	1917	3.4	1907	3.5	1899	3.4	1985	2.4	1992	1.8	1954	1.5	1916	1.4	2002	1.0	1913	1.3	1995	1.5	1940
23	1.1	1977	2.2	1919	3.4	1914	3.5	1923	3.6	1936	2.5	1989	1.8	1970	1.5	1923	1.5	1900	1.1	1930	1.3	1936	1.6	1962
24	1.2	1980	2.3	1980	3.6	1933	3.5	1918	3.9	1949	3.1	1961	1.9	1917	1.7	1971	1.5	1947	1.1	1932	1.3	1975	1.6	1930
25	1.3	1930	2.4	1981	3.6	1931	3.6	1948	4.0	1932	3.1	1940	1.9	1900	1.7	1942	1.6	1968	1.1	1952	1.5	1988	1.6	1958
26	1.4	1902	2.4	1977	3.7	1995	3.8	1958	4.3	1923	3.2	1953	2.0	1930	1.9	1938	1.8	1932	1.1	1950	1.6	2001	1.8	1945
27	1.4	1905	2.4	1963	3.9	1902	4.0	1935	4.5	1965	3.2	1972	2.0	1933	1.9	1949	1.8	1994	1.2	1991	1.6	1989	1.8	1988
28	1.5	1997	2.6	1920	4.1	1988	4.0	1941	4.6	1940	3.7	1957	2.1	1997	1.9	2002	1.9	1946	1.2	1974	1.6	1966	1.9	2001
29	1.6	1967	2.7	1901	4.1	1966	4.3	1957	4.7	1962	3.8	1968	2.1	1971	2.0	1899	1.9	1918	1.3	1972	1.6	1932	1.9	1920
30	1.6	2002	2.7	1918	4.2	1943	5.0	1933	4.8	1954	3.8	1983	2.3	1959	2.0	1935	1.9	1990	1.3	1960	1.6	1945	1.9	1976
31	1.7	1996	2.7	1978	4.4	1980	5.0	1974	5.3	1925	4.0	1921	2.3	1923	2.1	1931	2.1	1943	1.4	1935	1.8	2000	2.0	1935
32	1.7	1945	3.2	1953	4.7	1972	5.0	1905	5.3	1931	4.1	1937	2.4	1912	2.1	1994	2.2	1935	1.4	1943	1.9	1952	2.1	1978
33	1.8	1994	3.2	1921	5.2	1932	5.1	1937	5.3	1957	4.3	1980	2.4	1972	2.1	1927	2.3	1927	1.4	1980	2.0	1914	2.1	1966
34	1.8	1900	3.2	1914	5.5	1950	5.4	1950	5.8	1905	4.7	1955	2.4	1964	2.2	1954	2.3	1952	1.5	1916	2.0	1912	2.2	1952
35	1.8	1920	3.3	1966	5.7	1940	5.4	1972	5.9	1955	4.9	1986	2.6	1983	2.2	1991	2.3	1975	1.5	2000	2.1	1999	2.4	1899
36	1.8	1921	3.3	1944	5.9	1909	5.8	1988	6.0	1971	5.0	1930	2.6	1944	2.2	1997	2.4	1967	1.6	1971	2.1	1962	2.5	1969
37	1.9	1914	3.6	1987	6.4	1916	5.8	1966	6.3	1948	5.3	1994	2.6	2002	2.2	1974	2.4	1906	1.7	1938	2.1	1950	2.6	1999
38	2.3	1966	3.8	1970	6.4	1924	6.0	1949	6.3	1967	5.5	1899	2.9	1955	2.2	1972	2.4	1911	1.7	1966	2.2	1947	2.7	1964
39	2.3	1919	3.8	1972	6.9	1919	6.0	1929	6.5	1963	5.5	1907	2.9	1962	2.4	1989	2.4	1916	1.8	1990	2.3	1944	2.8	1904
40	2.3	1911	3.9	2002	7.1	1955	6.1	1910	6.5	1930	5.6	1976	3.1	1952	2.4	1907	2.4	1958	1.9	1968	2.5	1980	2.8	1910
41	2.3	1912	4.1	1996	7.4	1904	6.3	1981	6.8	1915	5.6	1946	3.1	1956	2.5	1937	2.5	1962	2.0	2002	2.5	1990	2.8	1918
42	2.3	1988	4.1	1904	7.7	1960	6.8	1985	6.9	1950	6.0	1898	3.2	1975	2.5	1957	2.5	1950	2.2	1992	2.5	1899	2.8	1921
43	2.4	1924	4.4	1907	7.9	1911	7.0	1911	7.1	1987	6.5	1944	3.2	1941	2.7	1983	2.7	1974	2.5	1933	2.5	1910	2.9	1914
44	2.4	1958	4.5	1929	7.9	1921	7.1	1932	7.3	1966	6.5	1991	3.2	1903	2.7	1956	2.7	1929	2.8	1999	2.5	1920	3.2	1981
45	2.6	1928	4.5	1946	8.1	1953	7.1	1980	7.6	1922	6.7	1938	3.3	1899	2.8	1969	2.7	1979	2.8	1996	2.5	1904	3.3	1919
46	2.6	1990	4.6	1912	8.5	1935	7.2	1987	7.7	1917	7.0	1909	3.3	1906	2.9	1966	2.9	1933	2.9	1942	2.5	1918	3.4	2000
47	2.6	1947	4.8	1923	8.8	1925	7.3	1990	8.0	1968	7.0	1997	3.6	1966	2.9	1920	2.9	1987	3.0	1917	2.6	1997	3.5	1996
48	2.8	1899	4.9	1932	8.9	1908	7.6	1938	8.2	1920	7.9	1952	3.6	1957	3.0	1977	2.9	1907	3.1	1944	2.8	1996	3.5	1990
49	2.8	1904	5.0	1898	9.1	1976	7.6	1946	8.6	1947	8.0	1923	3.7	1916	3.1	1967	2.9	1919	3.2	2001	3.0	1917	3.6	1989
50	2.8	1948	5.0	1968	9.2	1992	8.5	1906	9.2	1958	8.1	1954	3.9	1939	3.1	1955	2.9	1960	3.4	1946	3.0	1921	3.7	1972
51	3.2	1922	5.3	1911	9.3	1923	8.5	1924	9.6	1924	8.8	1932	4.0	1953	3.2	1933	2.9	1985	3.4	1899	3.0	1965	3.8	1903
52	3.2	1901	5.4	1910	9.4	1901	8.5	1898	10.4	1975	9.0	1941	4.1	1932	3.2	1943	3.2	1995	3.4	1909	3.3	1971	3.8	1917
53	3.2	1913	5.4	1995	9.9	1969	9.0	2002	10.6	1899	9.2	1931	4.1	2000	3.3	2000	3.2	1957	3.5	1923	3.5	1957	4.0	1946
54	3.2	1918	5.5	1961	10.0	1986	9.4	1952	11.3	1952	9.4	1959	4.1	1927	3.4	1926	3.3	1972	3.6	1934	3.6	1960	4.0	1959
55	3.3	1903	5.5	1990	10.0	1936	9.5	1925	11.5	1959	9.4	2000	4.2	1943	3.4	1910	3.3	1944	3.7	1981	3.6	1979	4.1	1968
56	3.7	1923	5.6	1941	10.3	1905	9.6	1986	11.7	1933	9.4	1965	4.3	1898	3.5	1960	3.3	1983	3.9	1983	3.6	1987	4.1	1965
57	4.0	1978	5.8	1952	10.4	1991	9.9	1931	12.4	1976	9.7	1962	4.8	1950	3.7	1962	3.4	1941	4.1	1997	4.1	1911	4.1	1994
58	4.1	1968	6.0	1958	10.4	1951	10.5	1901	12.4	1951	9.8	1978	4.8	1968	3.9	1909	3.6	2001	4.4	1908	4.1	1991	4.3	1900
59	4.2	1927	6.2	1960	10.8	1899	11.0	1995	12.5	1909	9.8	1985	5.5	1948	3.9	1906	3.7	1996	4.4	1920	4.4	1942	4.3	1913
60	4.3	1929	6.9	1984	11.2	1994	11.0	1909	12.5	1953	9.9	1912	5.7	1922	3.9	1919	3.9	1917	4.4	1907	4.5	1968	4.6	1949
61	4.4	1972	7.2	1908	11.8	1913	11.5	1903	12.6	1972	10.5	1917	5.7	1926	3.9	1925	4.4	1899	4.6	1945	4.6	1898	4.7	1898
62	4.5	1987	7.4	1948	11.8	1926	11.8	1942	12.6	1938	10.6	1975	5.7	1946	4.2	1946	4.4	1909	4.7	1965	4.6	1907	4.7	1924
63	4.5	1992	7.5	1927	12.3	1920	12.4	1982	12.8	1969	10.7	1958	5.8	1937	4.3	1952	4.4	1923	4.9	1921	4.6	1915	4.8	1915
64	4.7	1943	7.7	1992	12.3	1974	12.5	1914	13.0	1979	11.0	2002	5.9	1974	4.3	1965	4.4	1934	4.9	1955	4.6	1924	5.1	1974
65	4.7	1898	7.8	1991	12.6	1963	12.9	1964	13.1	1997	11.1	1960	6.1	1919	4.7	1961	4.4	1936	5.0	1951	4.9	1935	5.2	1975
66	4.7	1909	7.9	1935	12.6	1939	13.0	1913	13.7	1937	12.3	1979	6.2	1905	4.9	1898	4.6	1984	5.0	1958	5.1	1906	5.2	1907
67	4.7	1915	8.0	1903	12.7	1999	13.9	1959	13.9	1908	12.7	1926	6.8	1991	4.9	1917	4.7	1942	5.2	1929	5.1	1923	5.3	1951
68	4.8	1933	8.0	1925	12.8	1900	14.5	1968	13.9	1916	13.4	1908	7.0	1949	4.9	1922	4.9	1949	5.3	1915	5.1	1927	5.6	1947
69	4.9	1995	8.2	1945	12.8	1947	15.0	1939	14.3	1998	13.7	1966	7.5	1910	4.9	1929	5.4	1959	5.3	1957	5.1	1946	5.7	1922
70	5.1	1970	8.2	1924	13.1	1949	15.3	1953	14.4	1921	13.9	1973	7.5	1945	4.9	1985	5.6	1980	5.4	1949	5.5	1994	5.7	1991
71	5.1	1955	8.4	1943	13.3	1971	16.6	1908	14.6	1928	14.3	1964	7.6	1902	5.1	1996	5.8	1908	5.4	1954	5.6	1900	5.7	1905
72	5.2	1937	8.6	1936	13.8	1958	16.6	1921	14.6	1946	14.5	1948	7.9	1979	5.1	1980	5.9	1981	5.4	1906	5.8	1969	5.7	1993
73	5.3	2001	9.0	1965	14.2	1915	16.6	1916	14.9	1907	14.6	1939	8.5	1921	5.3	1939	5.9	1945	5.4	1984	6.1	1903	5.9	1967
74	5.6	1908	9.3	1988	14.4	1937	17.2	1979	15.6	1942	15.3	1970	10.7	1982	5.3	1978	6.3	1898	5.6	1962	6.5	1981	6.1	1911
75	5.6	1925	9.8	1994	14.7	1906	17.8	1976	16.8	1912	15.4	1999	10.9	1992	5.5	1979	6.3	1922	5.9	1924	6.6	1902	6.5	1944
76	5.7	1991	10.1	1986	14.8	1997	18.9	1951	18.6	1961	16.4	1919	10.9	1973	5.5	1944	6.3	1925	5.9	1922	6.6	1909	6.7	1980
77	5.9	1984	10.6	1955	14.9	1975	19.5	2001	18.7	1910	16.6	1950	11.1	1990	5.6	1984	6.7	1964	5.9	1900	6.6	1922	6.8	1961
78	6.1	1952	10.6	1909	15.0	1990	19.6	1920	18.8	1919	17.4	1910	11.1	1996	5.8	1908	6.8	1904	6.0	1936	6.7	1925	7.1	1927
79	6.2	1942	10.7	1906	15.3	1898	19.9	1992	20.5	1981	17.8	1995	12.4	1978	6.1	1973	7.2	1989	6.4	1898	7.1	1908	7.1	1906
80	6.3	1926	10.7	1979	16.0	1944	21.3	1970	20.7	1904	19.3	1949	12.7	1908	6.2	1968	7.3	1924	6.4	1911	7.5	1973	7.3	1977
81	6.4	1949	11.2	1950	16.3	1987	21.6	1904	20.7	1994	19.4	1924	12.9	1928	6.4	2001	7.4	1999	7.8	1928	7.9	1929	7.5	1957
82	6.5	1982	11.5	1951	16.3	1946	21.9	1991	22.1	1898	19.7	1951	12.9	1961	6.8	1986	7.6	1931	9.0	1982	7.9	1986	7.8	1970
83	6.5	1910	12.1	1993	17.0	1959	22.0	1961	22.8	2001	21.6	1981	13.1	1935	6.8	1902	7.7	1910	9.2	1967	8.1	1970	8.5	1909
84	6.7	1935	12.2	1959	17.2	1945	22.4	1926	25.0	1944	21.7	1927	13.6	1915	7.1	1970	8.2	1977	9.3	1931	8.4	1958	8.5	1932
85	6.8	1941	13.1	1998	17.6	1983	23.1	1975	25.6	1983	21.9	1969	13.6	1984	7.3	1921	8.6	1973	9.3	1903	8.6	1978	8.9	1941
86	6.9	1986	13.3	1930	18.8	1942	23.3	1969	26.1	1986	23.9	1903	13.7	1986	7.8	1904	8.7	1920	10.3	1919	8.8	1951	9.3	1926
87	7.1	1971	13.8	1915	19.5	1927	23.6	1912	26.5	1970	24.0	1928	14.1	2001	7.8	1924	9.4	1969	11.0	1925	8.9	1926	9.5	1984
88	7.3	1975	14.3	1983	20.2	1903	24.1	1967	26.8	1993	25.4	1904	14.4	1987	7.8	1990	9.5	1978	11.3	1914	8.9	1993	9.9	1923
89	7.7	1985	14.4	1975	20.6	1948	25.1	1965	27.0	1974	25.9	1984	14.4	1929	8.2	1940	11.1	1914	11.8	1910	9.2	1974	9.9	1908
90	8.0	1969	14.8	1969	21.6	1965	25.6	1994	27.2	1984	25.9	1998	14.6	1967	8.2	1959	11.6	1903	12.5	1959	9.5	1972	9.9	1983
91	8.5	1999	15.0	1974	23.1	1922	27.3	1945	27.5	1945	26.4	1929	16.6	1960	8.4	1928	13.7	1951	13.7	1902	9.5	1982	10.3	1997
92	8.6	1983	15.5	1928	24.3	1952	30.0	1928	27.5	1929	26.6	1974	16.8	1965	8.7	1981	14.0	1902	15.4	1961	10.2	1934	10.4	1985
93	9.2	1962	15.8	1971	25.1	1982	30.3	1984	29.0	1991	26.9	1916	16.9	1924	9.5	1950	14.3	1992	15.7	1905	10.7	1967	10.7	1934
94	9.5	1950	15.9	1926	25.1	1912	30.9	1997	29.2	1960	27.0	1942	17.3	1942	9.5	1987	15.2	1998	15.8	1970	11.1	1905	11.8	1902
95	12.1	1906	16.4	1999	25.8	1984	33.1	1993	30.2	1982	27.2	1993	17.4	1904	9.8	1992	18.4	1921	17.0	1977	13.2	1919	11.9	1998
96	12.3	1998	17.5	1949	26.7	1962	33.7	1999	30.5	1978	28.4	1990	18.0	1999	9.9	1998	18.9	1982	17.6	1904	15.5	1984	12.2	1971
97	13.4	1960	18.3	1942	27.8	1985	35.8	1998	37.5	1943	34.7	1996	19.2	1998	10.2	1999	19.2	1928	19.5	1969	16.3	1983	12.2	1942
98	14.8	1993	18.5	1916	29.1	1961	36.6	1978	37.9	1999	36.7	1943	19.8	1909	13.7	1982	20.0	1986	20.7	1941	17.0	1941	12.8	1925
99	15.8	1965	21.4	1973	30.1	1998	39.5	1947	38.1	1973	37.3	1945	22.4	1995	13.8	1995	24.2	1915	21.1	1993	21.0	1977	13.6	1928
100	20.9	1907	27.2	1997	30.2	1993	41.0	1960	39.5	1990	37.9	1915	23.4	1947	14.2	1932	29.0	1970	29.3	1926	23.4	1998	15.9	1987
101	21.5	1916	27.5	2001	30.6	2001	47.8	1983	42.0	1927	42.2	1967	39.4	1981	14.3	1951	29.5	1965	32.3	1927	27.7	1992	16.0	1931
102	22.8	1932	30.7	1962	33.6	1978	48.7	1944	43.0	1935	43.8	1982	39.9	1958	14.6	1905	29.5	1905	33.5	1985	31.2	1985	18.3	1973
103	23.2	1973	32.8	1937	40.0	1929	59.2	1922	45.5	1996	58.2	1935	52.2	1969	20.5	1958	34.8	1926	37.7	1998	36.7	1931	18.7	1986
104	25.2	1974	35.9	1985	41.1	1979	76.8	1927	49.1	2002	59.3	2001	52.3	1951	21.4	1915	37.7	1961	43.1	1973	48.9	1961	23.6	1992
105	26.2	1946	41.7	1982	54.8	1973	81.6	1973	68.7	1995	95.1	1947	74.9	1993	51.3	1993	44.5	1993	50.9	1986	62.4	1928	41.5	1982

Boonville to Hermann Incremental Flows



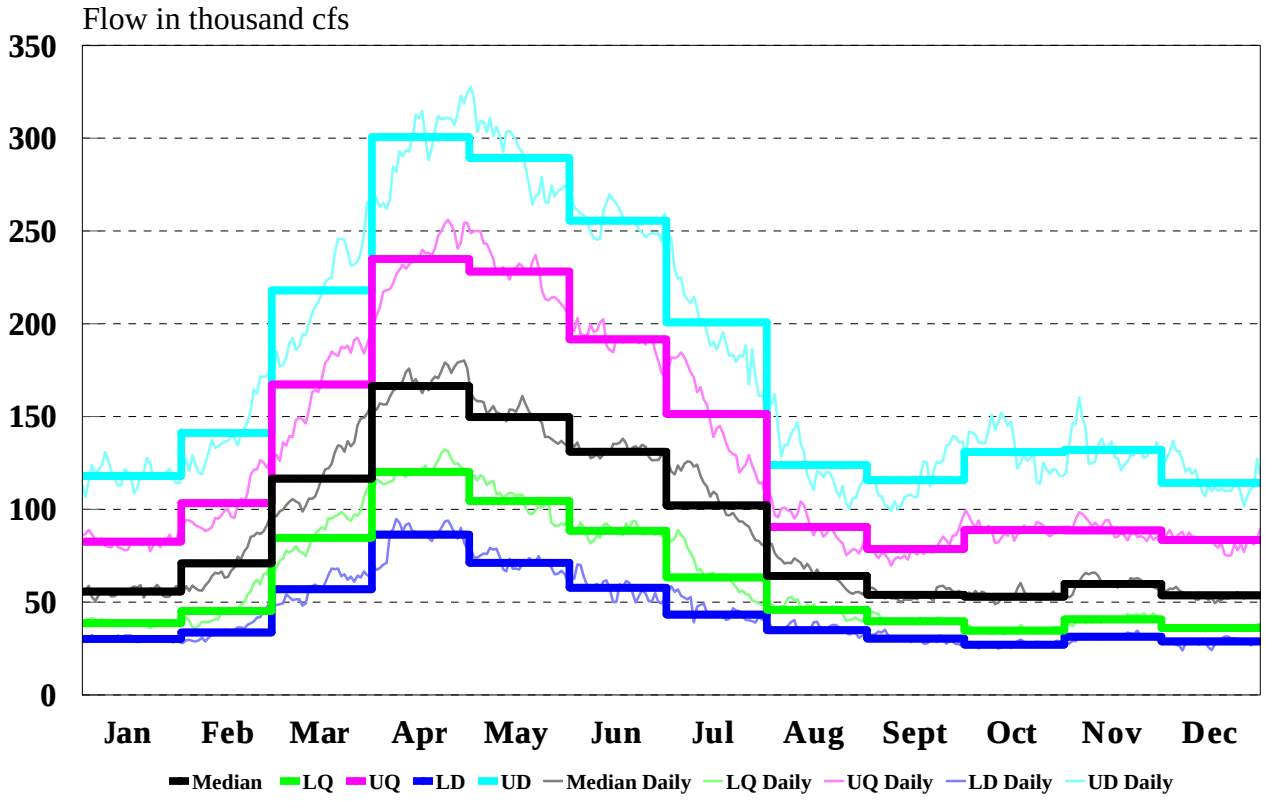
Boonville to Hermann Incremental Flows (Lower Values Expanded)



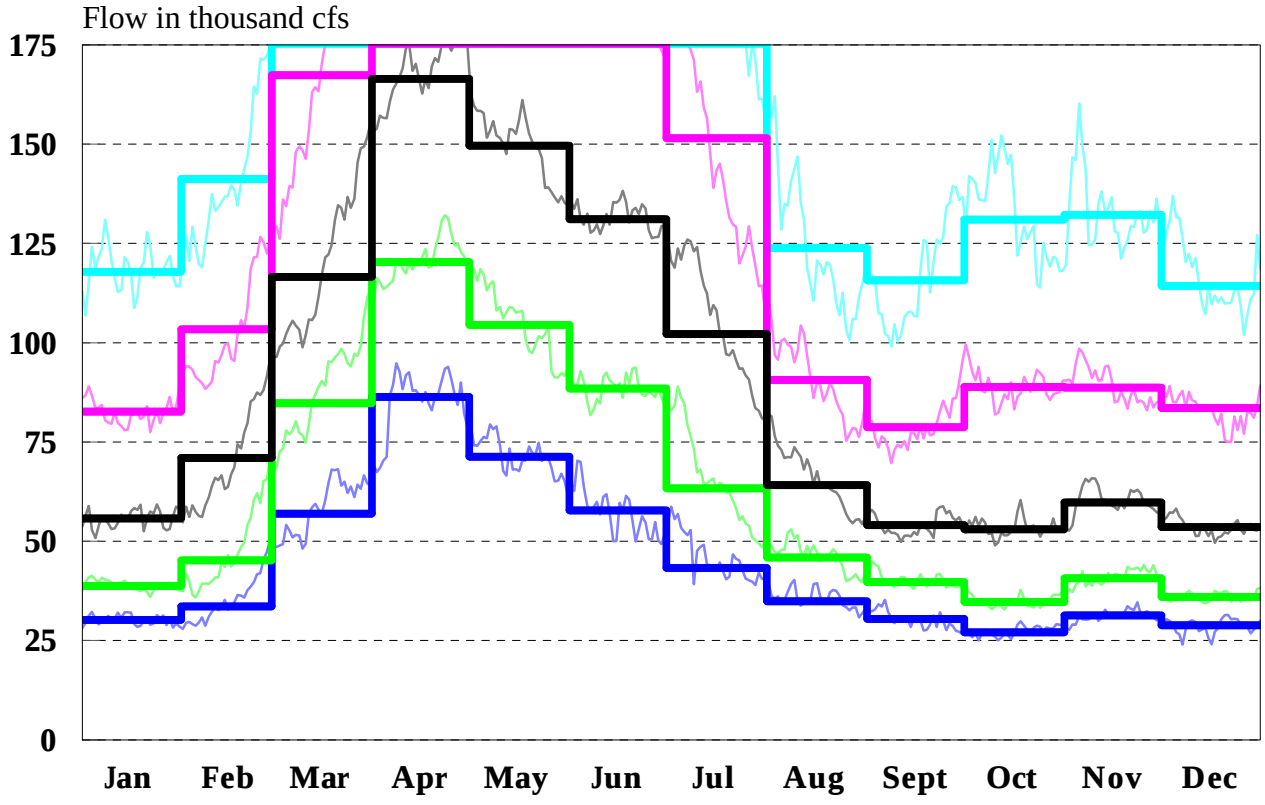
Boonville to Hermann
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	0.4	1977	1.6	1964	1.1	1910	19.4	1898	50.9	1898	0.0	1906	1.1	1901	1.0	1999	0.5	1963	0.3	1963	1.1	1980	0.1	1989
2	1.8	1940	1.6	1954	1.6	1954	0.0	1902	2.2	1913	1.1	1911	1.1	1911	1.1	1901	0.9	1999	0.8	1956	1.2	1956	1.3	2000
3	2.1	1964	1.8	1929	2.1	1956	2.3	1917	2.2	1914	1.1	1913	1.1	1913	1.1	1903	1.1	1901	0.8	1928	1.3	2000	1.7	1939
4	2.2	1931	2.5	1902	2.2	1917	2.3	1956	2.3	1932	1.1	1914	1.1	1918	1.1	1911	1.2	1957	1.0	1980	1.5	1966	2.2	1912
5	2.2	1981	2.5	1922	2.2	1918	2.9	1954	3.3	1901	2.3	1901	1.1	1920	1.1	1912	1.3	1956	1.1	1957	1.6	1952	2.3	1953
6	2.2	1917	2.5	1978	3.1	1967	3.5	1930	3.9	1936	2.3	1918	2.1	1954	1.1	1913	1.9	1959	1.1	1912	1.8	1963	2.4	1962
7	2.5	1963	2.6	1963	3.1	1941	4.6	1907	4.3	1977	2.7	1932	2.2	1914	1.1	1918	1.9	1983	1.1	1918	2.0	2001	2.8	1963
8	2.6	1951	2.6	1961	3.1	1981	4.6	1915	4.4	1902	3.2	1934	2.2	1925	1.6	1930	1.9	1976	1.5	2002	2.2	2002	2.8	1976
9	2.8	2001	2.8	1940	3.8	1964	4.9	1981	4.4	1906	3.4	1900	2.3	1936	1.7	1954	2.0	1964	1.6	1966	2.3	1901	2.8	2002
10	2.8	1954	3.7	1900	6.1	1931	4.9	1977	4.9	1934	3.4	1920	2.5	1934	1.9	1957	2.0	1954	1.8	1964	2.3	1913	3.0	1980
11	3.3	1902	3.7	1905	6.3	1936	5.1	2000	5.0	1980	3.4	1925	2.6	1963	2.0	1936	2.2	1929	1.9	1952	2.3	1916	3.1	1995
12	3.3	1905	3.7	1913	6.7	1996	5.1	1963	5.5	1900	3.6	1936	2.6	1988	2.1	1980	2.3	1913	2.0	1937	2.4	1939	3.3	1964
13	3.6	1967	3.8	1956	7.7	1930	5.4	1931	5.5	2001	3.9	1988	2.7	1930	2.3	1963	2.3	1912	2.1	1987	2.5	1937	3.3	1901
14	3.6	1978	4.1	1996	7.7	1907	6.2	1932	6.0	2000	4.4	1972	3.0	1972	2.4	1976	2.5	1980	2.1	1979	2.7	1940	3.3	1916
15	3.7	1957	4.2	1981	7.7	1914	6.9	1900	6.1	1954	4.6	1902	3.3	1940	2.4	1956	2.7	2001	2.2	1901	2.8	1953	3.4	1978
16	3.8	1961	4.9	1899	8.0	1991	6.9	1919	6.2	1926	4.6	1905	3.3	1907	2.4	1962	2.8	1960	2.2	1913	2.8	1955	3.7	1952
17	3.8	1939	4.9	1917	8.3	1977	7.2	1936	6.2	1965	4.6	1922	3.4	1931	2.6	1929	3.1	1987	2.3	1939	2.9	1997	3.9	1929
18	3.8	1934	4.9	1919	8.9	1902	7.4	1934	6.6	1911	4.7	1953	3.7	1960	2.6	1941	3.1	1955	2.3	1960	3.0	1930	3.9	1966
19	4.0	1956	5.1	1931	9.0	1983	7.8	1971	7.3	1956	4.8	1931	3.8	1962	2.6	1955	3.2	1952	2.3	1940	3.1	1976	3.9	1956
20	4.4	1990	5.7	1970	9.5	1932	8.0	1899	7.3	1989	5.0	1960	4.4	1900	2.6	1964	3.2	1967	2.6	1946	3.3	1957	4.0	1940
21	4.4	1900	5.8	1977	9.7	1940	8.0	1918	7.6	1955	5.0	1926	4.4	1917	2.9	1991	3.4	1900	2.6	2000	3.3	1962	4.1	1937
22	4.4	1914	5.9	1920	10.5	1972	8.0	1923	7.6	1962	6.0	1956	4.5	1953	3.1	1984	3.5	1953	2.7	1930	3.3	1964	4.4	1920
23	4.4	1920	6.1	1901	11.2	1934	9.2	1959	7.7	1903	6.0	1963	4.7	1952	3.2	1977	3.6	1988	2.7	1978	3.6	1965	4.4	1955
24	4.4	1921	6.1	1918	11.3	1970	11.2	1940	7.7	1918	6.3	1954	5.1	1970	3.3	1966	3.6	1966	3.0	1953	3.6	1932	4.7	1945
25	4.6	1953	6.1	1934	12.1	1957	11.4	1905	8.2	1971	6.4	1959	5.2	1978	3.3	1900	3.7	1943	3.1	1994	3.7	1978	5.1	1933
26	5.1	1980	6.5	1947	12.5	1992	11.6	1982	8.7	1930	7.4	1952	5.2	1980	3.3	1914	3.7	2000	3.3	1932	3.7	1999	5.4	1947
27	5.2	1936	6.6	1948	12.6	2002	13.4	1967	9.1	1941	7.8	1962	5.3	1956	3.3	1916	3.8	1946	3.3	1916	4.1	1954	5.5	1938
28	5.5	1911	6.8	1967	13.0	1943	13.5	1943	9.7	1992	8.0	1961	5.3	1933	3.3	1923	4.0	1991	3.4	1929	4.2	1933	5.5	1899
29	5.5	1912	6.8	1972	13.2	1928	13.7	1910	10.0	1923	8.1	1930	5.3	1971	3.6	1959	4.0	1937	3.7	1988	4.5	1990	5.5	1965
30	5.5	1919	7.1	1953	13.2	1963	14.7	1991	10.4	1982	8.1	1966	5.4	1989	3.7	1932	4.0	1932	3.9	1991	4.5	1979	5.6	1970
31	5.5	1924	7.1	1965	13.2	1995	14.9	1955	10.5	1940	8.4	1946	5.5	1959	3.9	1931	4.1	1984	4.1	1938	4.6	1912	5.7	1950
32	5.6	1958	7.2	1957	13.3	1909	14.9	1962	11.1	1987	8.9	1984	5.5	1912	4.0	1988	4.1	2002	4.4	1971	4.6	1914	5.8	1943
33	6.3	1944	7.4	1914	13.4	1953	15.4	2002	11.5	1948	9.0	1944	5.5	1923	4.2	1960	4.2	1938	4.5	1976	5.2	1944	6.4	1958
34	6.4	1938	7.4	1921	14.0	2000	15.5	1946	11.7	1959	9.1	1921	5.7	1946	4.2	1986	4.6	1918	4.6	1935	5.5	1989	6.6	1904
35	6.5	1979	8.1	1976	14.0	1933	16.0	1911	11.9	1931	9.3	1976	5.9	1944	4.3	1970	4.8	1939	4.8	1997	5.5	1960	6.6	1910
36	6.5	2002	9.0	1944	14.4	1916	16.5	1948	12.1	1964	9.3	1992	6.1	1938	4.3	1979	5.4	1930	4.9	1999	5.7	1904	6.6	1914
37	6.6	1899	9.2	1958	14.4	1924	18.0	1933	12.2	1925	9.4	2000	6.3	1991	4.3	1953	5.5	1940	5.0	1995	5.7	1910	6.6	1918
38	6.6	1904	9.5	1904	15.1	1926	18.2	1950	13.3	1905	9.5	1980	6.4	1939	4.3	1972	5.7	1962	5.1	1989	5.7	1918	6.6	1921
39	6.9	1970	9.7	1926	15.2	1966	18.6	1935	13.4	1952	9.8	1933	6.5	1974	4.4	1899	5.7	1933	5.1	1948	5.7	1920	7.0	1979
40	7.0	1945	9.8	1907	15.5	1919	18.7	1989	13.5	1928	10.0	1941	6.9	1937	4.6	1934	5.7	1906	5.1	1983	5.7	1899	7.4	1954
41	7.1	1996	10.2	1936	16.6	1904	19.2	1937	15.5	1915	10.1	1987	7.4	1964	4.8	1971	5.7	1916	5.2	1958	6.0	1943	7.6	1948
42	7.4	1976	10.6	1912	16.7	1986	19.4	1996	16.1	1958	10.2	1939	7.4	1941	4.8	1938	5.7	1911	5.4	1981	6.4	1971	7.7	1930
43	7.7	1901	11.0	1923	17.5	1959	19.4	1906	16.6	1988	10.7	1955	7.5	1968	5.1	1933	5.8	1935	5.7	1972	6.5	1958	7.7	1919
44	7.7	1903	11.4	1898	17.5	2001	19.4	1924	17.4	1997	10.8	1971	7.7	1966	5.1	1987	5.8	1971	6.4	1947	6.6	1929	7.9	1936
45	7.7	1913	11.4	2000	17.7	1921	19.7	1953	17.7	1917	11.7	1940	7.7	1899	5.3	1940	6.0	1981	6.5	1982	6.9	1917	8.4	1957
46	7.7	1918	11.6	1980	17.7	1911	20.3	1968	17.7	1922	12.2	1991	7.7	1903	5.4	1983	6.1	1947	6.5	1931	6.9	1921	8.5	1969
47	7.7	1922	12.2	1910	17.7	1946	20.8	2001	18.2	1986	12.3	1978	7.7	1906	5.4	1937	6.5	1936	6.6	1917	7.2	1938	8.5	1977
48	7.8	1965	12.2	1911	18.0	1965	21.0	1986	18.6	1963	12.6	1899	8.1	1975	5.5	1939	6.6	1931	6.7	1943	7.3	1945	8.6	1999
49	8.0	1984	12.2	1943	18.0	1968	21.3	1992	18.8	1920	12.6	1907	8.2	1955	5.5	1907	6.7	1968	6.9	1974	7.4	1947	8.7	1959
50	8.1	1959	13.0	1933	19.1	1950	21.4	1972	18.9	1949	12.9	1989	8.3	1926	5.8	1935	6.7	1928	7.3	1950	8.0	1959	8.8	1960
51	8.5	1968	13.2	1960	19.4	1942	21.6	1976	19.3	1953	13.5	1958	8.7	1976	6.3	1994	6.9	1978	7.5	1933	8.1	1949	8.9	1903
52	8.6	1947	13.6	1983	19.6	1947	21.7	1925	20.6	1967	13.7	1898	8.9	1916	6.6	1920	6.9	1907	7.6	1990	8.4	1995	8.9	1917
53	8.9	1923	13.9	1945	19.9	1908	22.1	1974	20.9	1966	14.3	1979	9.5	2000	6.6	1965	6.9	1919	7.7	1899	8.5	1991	9.6	2001
54	9.1	2000	14.1	1991	19.9	1925	23.2	1980	20.9	1951	14.8	1986	10.0	1898	6.8	1997	6.9	1948	7.7	1909	8.6	1950	10.0	1900
55	9.1	1992	14.2	1941	20.0	1939	23.3	1949	21.3	1975	16.0	1909	10.1	2002	6.8	2002	7.0	1990	7.7	1923	8.6	1975	10.0	1913
56	9.3	1926	14.3	1989	20.3	1980	23.4	1958	21.6	1969	16.4	1975	10.1	1927	6.9	1945	7.4	1986	8.1	1954	9.1	1911	10.5	1944
57	10.9	1948	14.8	1935	20.4	1937	24.0	1901	21.9	1976	18.3	1923	10.1	1983	7.1	1967	7.4	1979	8.3	1934	9.4	1982	10.6	1990
58	11.1	1909	15.0	1932	20.7	1971	25.1	1909	22.1	1924	20.5	1977	10.4	1987	7.1	1973	7.8	1972	8.5	2001	9.9	1948	11.1	1898
59	11.1	1915	15.0	1992	21.0	1901	26.3	1903	23.4	1939	20.6	1968	11.2	1997	7.3	1978	8.0	1973	9.0	1992	9.9	1928	11.1	1915
60	11.2	1960	16.6	1908	21.0	1923	26.4	1926	23.9	1979	22.9	1912	11.4	1973	7.3	1961	8.7	1997	9.0	1968	9.9	1987	11.1	1924
61	11.3	1942	17.4	1939	21.3	1938	26.6	1964	24.2	1998	22.9	1973	12.6	1994	7.5	1947	8.7	1995	9.6	1984	10.0	1934	11.4	1932
62	11.3	1982	18.4	1998	21.7	1979	26.7	1928	24.3	1899	24.0	1996	12.9	1986	7.6	1974	8.9	1985	9.8	1975	10.3	1907	12.2	1907
63	11.8	1898	18.4	1903	21.7	1989	26.7	1960	25.6	1972	24.0	1917	13.3	1922	7.7	1910	9.0	1994	9.8	1967	10.3	1915	13.0	1988
64	12.3	1966	18.4	1925	21.7	1961	28.1	1951	25.8	1974	27.0	1957	14.3	1961	7.9	1952	9.1	1917	10.0	1907	10.3	1924	13.3	1905
65	13.3	1908	18.4	1938	22.9	1929	28.6	1914	26.7	1991	28.2	1964	14.3	1943	8.3	1943	10.3	1909	10.0	1908	10.3	1898	13.3	1922
66	13.3	1925	18.9	1924	23.1	1960	28.7	1966	26.7	1968	29.1	1998	14.4	1905	8.9	1906	10.3	1899	10.0	1920	10.5	1988	13.3	1981
67	13.9	1955	19.3	1990	23.1	1976	29.0	1995	28.5	1981	29.7	1965	14.4	1919	8.9	1909	10.3	1923	10.0	1942	11.2	1931	13.5	1925
68	13.9	1962	19.6	1928	23.2	1905	29.1	1942	28.7	1946	30.3	1947	14.7	1932	8.9	1919	11.1	1992	10.2	1962	11.4	1906	13.6	1961
69	14.3	1989	20.2	1984	24.3	1899	29.7	1913	28.8	1909	30.9	1908	15.1	1993	8.9	1925	11.5	1934	10.4	1936	11.4	1923	13.6	1975
70	14.3	1930	20.6	2002	25.5	1982	30.4	1999	29.9	1947	31.5	1951	16.7	1965	9.4	1942	11.6	1977	11.1	1921	12.6	1900	14.4	1911
71	14.8	1927	20.7	1927	25.7	1969	31.3	1957	30.2	1985	34.1	1974	16.9	1979	9.4	1949	11.6	1989	12.2	1906	12.9	1981	14.9	1991
72	15.1	1972	20.9	1971	26.5	1913	32.9	1997	31.2	1935	34.1	1967	17.1	1957	9.6	1969	12.2	1996	12.2	1915	13.7	1903	15.6	1935
73	15.2	1987	21.4	1959	27.2	1993	34.3	1979	32.1	1908	37.7	1919	17.7	1902	9.6	2001	13.4	1926	12.6	1961	14.4	1942	16.3	1946
74	15.5	1910	22.0	1950	27.7	1920	34.5	1952	32.1	1916	38.1	1969	17.7	1910	9.7	2000	13.7	1908	12.9	1977	14.9	1902	16.6	1906
75	15.9	1997	22.9	2001	27.9	1994	35.6	1939	33.2	1921	39.0	1999	18.1	1996	10.6	1975	14.1	1958	13.3	1900	14.9	1909	17.6	1949
76	16.0	1986	22.9	1951	28.3	1948	35.8	1993	33.2	1937	39.2	1950	19.4	1985	11.1	1898	14.3	1927	13.3	1922	14.9	1922	17.8	1931
77	18.2	1929	23.4	1995	28.8	1900	36.0	1987	33.5	1993	39.9	2001	19.9	1921	11.1	1917	14.9	1898	13.3	1924	15.4	1970	18.0	1997
78	18.5	1941	23.5	1955	29.8	1955	36.1	1938	33.9	1942	40.0	1910	21.1	1999	11.1	1922	14.9	1922	14.0	1944	15.8	1969	18.0	1941
79	18.7	1952	24.0	1962	31.9	1999	37.7	1908	34.3	1907	41.4	2002	22.6	2001	12.1	1996	14.9	1925	14.3	1925	16.0	1908	18.1	1972
80	18.9	1983	24.3	1979	32.1	1915	37.7	1916	35.2	1978	42.1	1938	24.0	1984	12.2	1990	15.3	1944	14.4	1898	18.6	1936	19.9	1974
81	19.0	1928	24.3	1966	33.2	1906	37.7	1921	37.6	1950	42.5	1993	24.4	1990	13.3	1908	15.5	1942	14.4	1911	22.0	1935	19.9	1909
82	19.1	1994	24.5	1906	34.3	1898	38.3	1975	38.4	1960	43.3	1949	24.4	1935	15.2	1985	16.0	1904	14.5	1955	23.2	1925	20.0	1928
83	19.7	1932	24.5	1909	34.5	1935	39.0	1978	38.7	1912	43.3	1970	24.7	1949	15.2	1968	16.4	1975	15.0	1965	23.4	1973	20.7	1951
84	19.9	1933	24.9	1946	35.1	1952	39.6	1961	39.0	1927	43.7	1927	24.7	1928	15.5	1902	16.8	1998	15.1	1996	24.4	1968	20.7	1984
85	21.7	1935	25.5	1942	35.3	1988	42.8	1965	40.6	1984	43.9	1948	24.7	1998	15.9	1926	17.0	1941	21.0	1903	24.9	1927	21.7	1934
86	21.9	1971	25.7	1968	37.0	1949	43.0	1969	43.1	1910	44.2	1997	24.9	1950	16.2	1989	17.1	1924	22.3	1945	25.1	1905	22.0	1994
87	22.7	1991	27.5	1988	38.3	1951	44.6	1920	43.1	1919	44.6	1924	25.6	1992	16.4	1928	17.7	1969	23.2	1919	25.3	1984	22.3	1926
88	22.8	1999	28.2	1930	40.9	1962	45.3	1990	44.9	1933	44.8	1982	26.4	1945	16.6	1921	18.3	1910	24.0	1970	25.9	1967	23.2	1908
89	24.5	1975	28.3	1993	41.1	1987	45.7	1970	45.1	1957	47.1	1981	26.7	1977	17.1	1998	18.4	1982	24.5	1985	27.4	1977	23.2	1923
90	27.4	1946	28.3	1994	41.3	1944	47.9	1998	45.8	1999	48.5	1994	26.8	1942	17.4	1951	19.2	1949	25.1	1951	29.2	1926	24.1	1998
91	28.8	1906	28.3	1987	42.8	1927	48.7	1988	47.6	1904	48.7	1929	28.4	1982	17.7	1904	19.2	1974	25.4	1914	29.7	1919	27.1	1983
92	29.2	1998	30.0	1952	44.6	1958	49.0	1941	50.2	1996	49.6	1937	29.9	1908	17.7	1924	20.6	1920	25.8	1959	31.1	1983	27.6	1971
93	30.1	1995	30.2	1982	45.3	1903	49.1	1904	50.9	1938	50.6	1942	32.1	1915	17.7	1944	21.7	1970	26.5	1910	31.2	1994	27.7	1902
94	32.0	1988	31.5	1937	45.8	1990	51.2	1983	52.0	1945	50.9	1983	32.1	1947	19.8	1982	23.0	1950	30.8	1973	34.3	1961	28.0	1996
95	33.5	1937	31.8	1915	48.5	1997	52.1	1929	53.3	1944	51.4	1928	33.6	1967	19.8	1992	23.2	1945	31.0	1902	36.2	1998	29.6	1968
96	34.2	1943	33.6	1974	48.8	1978	52.2	1944	54.9	1973	54.9	1903	38.5	1929	22.9	1948	26.3	1914	32.4	1949	40.2	1996	29.6	1927
97	36.4	1974	34.1	1997	51.8	1975	53.7	1912	57.2	1970	58.3	1904	39.8	1924	23.1	1981	27.4	1903	35.4	1905	41.4	1992	30.7	1967
98	36.7	1969	34.2	1973	52.0	1922	61.9	1985	73.5	1983	60.4	1943	40.9	1904	27.2	1995	29.5	1961	39.8	1904	41.9	1951	32.4	1993
99	37.7	1949	38.9	1986	52.1	1998	73.3	1984	73.9	2002	61.7	1916	46.1	1948	29.9	1946	33.1	1902	47.0	1927	45.1	1972	35.3	1942
100	38.1	1973	41.9	1985	56.4	1912	82.3	1947	76.2	1990	62.5	1945	46.5	1909	30.2	1950	43.4	1921	52.2	1998	46.4	1974	38.2	1987
101	40.7	1985	42.2	1969	56.6	1974	88.1	1994	80.2	1994	70.8	1990	48.7	1969	33.2	1905	46.8	1965	56.7	1969	48.3	1946	39.2	1986
102	46.4	1950	42.6	1916	57.4	1945	98.6	1945	82.5	1995	78.3	1985	52.6	1958	37.4	1958	57.1	1915	64.6	1993	56.3	1986	41.6	1973
103	49.8	1907	47.4	1999	63.7	1984	117.2	1973	108.1	1961	86.9	1915	54.9	1995	48.7	1915	65.0	1951	71.4	1926	56.7	1993	53.7	1992
104	50.9	1916	52.1	1949	78.1	1985	127.7	1927	127.2	1929	89.8	1995	59.9	1981	54.6	1927	69.7	1905	80.8	1941	58.9	1985	66.9	1985
105	54.6	1993	57.2	1975	87.5	1973	134.9	1922	136.8	1943	120.3	1935	138.5	1951	78.4	1993	81.6	1993	103.7	1986	60.7	1941	73.7	1982

Hermann to St. Louis Incremental Flows



Hermann to St. Louis Incremental Flows (Lower Values Expanded)



Hermann to St. Louis
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	19.0	1914	20.1	1917	35.7	1931	51.2	1902	47.6	1934	30.7	1988	23.3	1988	25.1	1936	21.7	1976	7.0	1910	22.9	1910	11.2	1917
2	24.4	1940	29.2	1923	37.5	1934	52.1	1931	56.5	1931	31.8	1934	33.0	1936	26.0	1988	26.1	1901	16.9	1908	24.4	1976	15.0	1910
3	24.8	1911	30.0	1901	52.3	1964	63.2	1911	59.6	1958	37.0	1977	35.9	1923	28.5	1964	27.9	1988	17.3	1904	25.8	1917	23.0	1914
4	26.2	1909	31.2	1940	52.3	1902	70.2	1934	63.3	1911	46.7	1948	38.8	1911	30.3	1941	28.8	1913	22.1	1976	29.9	1908	23.9	1976
5	26.4	1915	33.5	1934	53.0	1954	72.7	2000	67.3	1940	47.4	1923	38.8	1934	30.8	1976	29.1	1916	22.1	1918	30.1	1901	24.8	1904
6	26.5	1977	33.6	1902	54.2	1914	73.5	1977	69.6	1988	50.2	1900	40.4	1989	31.7	1934	29.1	1917	23.7	1917	30.2	1950	25.3	1908
7	28.0	1964	33.9	1964	54.8	1956	76.9	1914	70.1	1925	50.6	1901	42.8	1977	32.2	1910	30.6	1948	25.5	1956	30.2	1930	25.5	1903
8	28.2	1917	34.0	1954	55.5	1940	78.7	1930	71.7	1977	56.8	1911	45.9	1964	32.4	1989	31.3	1933	26.7	1988	30.8	1963	26.2	1989
9	28.6	1931	35.0	1931	59.3	1968	85.0	1958	74.3	1980	66.1	1992	46.8	1900	32.4	1931	31.8	1939	27.0	1948	31.3	1939	29.8	1933
10	29.0	1923	37.3	1963	62.2	1957	87.0	1940	75.0	1918	67.1	1964	46.9	1976	37.8	1918	32.8	1937	28.9	1939	31.6	1918	30.0	1937
11	30.4	1908	38.5	1914	64.7	1921	87.8	1968	75.1	1989	69.4	1931	49.7	1910	37.9	1914	32.9	1908	28.9	1922	32.6	1933	30.2	1898
12	30.9	1934	39.9	1977	69.7	1917	88.3	1990	75.5	1915	69.6	1936	50.7	1940	39.9	1901	33.0	1949	29.1	1901	34.2	1953	30.3	1930
13	31.4	1959	41.9	1956	72.4	1911	90.5	1925	76.5	1902	70.3	1956	54.0	1921	40.3	1930	34.0	1955	29.2	1963	34.4	1948	30.4	1907
14	32.7	1902	42.6	1989	75.0	1989	93.2	1918	77.6	1949	71.2	1976	58.3	1987	40.7	1971	34.1	1963	29.7	1899	34.9	1937	30.8	1963
15	33.1	1900	43.2	1913	75.2	1941	100.5	1915	82.1	1914	72.2	1940	58.5	1913	41.9	1933	34.2	1971	31.1	1940	35.0	1949	30.8	1916
16	33.1	1956	43.2	1958	75.8	1977	103.1	1954	84.3	1987	74.1	1925	58.7	1963	43.9	1937	35.6	1930	31.3	1953	35.2	1914	31.5	1922
17	33.7	1901	46.6	1899	76.0	1960	107.3	1899	86.0	1930	75.0	1987	59.0	1980	44.3	1948	36.0	1922	31.5	1989	35.7	1922	32.8	1958
18	33.8	1918	46.6	2000	78.6	1923	109.9	1964	93.5	2000	75.5	1949	59.5	1901	44.6	1911	36.0	1934	32.1	1913	36.7	1989	33.6	1936
19	35.5	1913	47.4	1920	82.4	1933	110.9	1963	95.0	1901	76.3	1910	60.0	1931	44.8	1904	36.6	1996	32.2	1937	37.3	1956	33.8	1948
20	35.6	1963	47.4	1936	84.0	1924	113.4	1956	99.0	1900	78.2	1963	62.2	1941	46.9	1917	37.6	1931	32.7	1958	37.7	1932	34.0	1901
21	36.1	2000	47.7	1921	84.8	1981	114.9	1910	102.4	1956	78.2	1989	62.6	1918	47.1	1913	37.8	1899	33.5	1952	38.3	1913	34.1	1939
22	36.1	1899	48.0	1957	85.0	2000	117.7	1921	102.5	1955	85.4	1961	63.2	1970	47.2	1949	38.1	1956	34.1	1898	38.5	1907	34.2	1912
23	37.8	1961	49.1	1978	85.7	1958	118.7	1989	103.3	1910	87.1	1921	64.0	1912	48.0	1975	38.9	1966	34.9	1950	38.9	1964	34.6	1899
24	38.2	1945	49.2	1948	89.1	1918	120.7	1924	104.6	1946	87.5	1914	66.7	1956	48.0	1955	40.3	1918	35.5	1932	39.9	1955	35.9	1913
25	38.5	1954	49.3	1918	89.1	1947	120.8	1908	104.7	1923	88.0	1928	68.9	1961	49.0	1966	40.9	1967	35.6	1933	40.5	1966	36.1	1950
26	38.7	1921	51.5	1972	93.1	1987	127.0	1937	107.0	1968	93.7	1932	69.0	1955	49.1	1963	40.9	1925	35.8	1930	40.7	1952	36.7	1964
27	39.1	1990	52.0	1961	93.2	1928	128.2	1957	107.3	1941	94.4	1959	70.4	1937	49.4	1965	41.2	1910	35.8	1916	41.2	1940	37.6	1955
28	40.3	1957	52.0	1922	94.1	1967	131.2	1981	108.6	1932	95.6	1924	70.6	1933	51.2	1922	41.6	1898	36.6	1964	41.4	1916	38.6	1956
29	41.5	1979	52.1	1900	94.5	1912	132.1	1932	110.6	1924	98.1	1939	70.7	1966	51.9	1898	41.9	1940	36.8	1947	41.9	1999	40.0	1918
30	42.2	1938	52.9	1944	95.9	1932	133.0	1988	112.5	1963	99.7	1930	71.8	1959	52.0	1947	42.4	1950	38.1	1975	43.0	1988	40.1	1988
31	42.8	1951	55.0	1980	96.2	1970	133.7	1987	113.8	1926	99.9	1985	72.3	1985	52.3	1923	43.1	1932	38.1	1996	44.4	1920	40.1	1944
32	43.2	1981	55.4	1919	97.9	1996	135.3	1923	114.9	1928	100.6	1971	75.3	1926	53.3	1950	44.3	1923	38.3	1909	45.5	1958	40.9	1929
33	43.3	1944	56.1	1990	98.2	1926	135.5	1905	115.5	1939	100.9	1955	77.0	1965	53.4	1900	45.5	1958	38.8	1966	46.2	1944	41.1	1920
34	43.6	1920	56.4	1941	100.2	1980	137.1	1996	115.9	1905	101.1	1994	77.5	1930	53.9	1940	46.1	1904	39.0	1935	46.5	1947	41.7	1962
35	43.8	1936	56.4	1945	101.9	1907	139.1	1900	117.8	1971	102.0	1958	80.0	1948	54.3	1959	46.3	1974	41.0	1974	48.3	1899	42.0	1999
36	44.3	1919	58.7	1970	102.5	1901	139.2	1955	119.1	1964	104.7	1997	80.0	1971	54.6	1921	47.0	1929	41.5	1920	49.3	1962	42.3	1953
37	44.4	1953	59.6	1981	104.3	1905	149.7	1980	119.2	1942	105.2	1913	80.8	1949	55.5	1967	47.3	1953	42.3	1957	49.5	1923	42.5	1900
38	45.0	1970	61.6	1979	105.2	1916	151.1	1936	122.0	1959	112.5	1941	82.3	1932	57.1	1954	49.1	1919	42.5	1971	50.1	1898	45.3	1960
39	45.7	1967	62.4	1898	106.1	1999	151.6	1942	123.0	1953	112.9	1922	83.3	1939	57.3	1960	49.2	1935	42.9	1949	50.3	1975	46.4	1905
40	46.2	1989	62.5	1904	108.4	1913	152.9	1941	124.9	1913	114.1	1972	90.1	1950	57.4	1944	49.9	1947	45.1	1987	50.7	1906	46.8	1952
41	47.5	1948	62.7	1933	108.7	1938	155.5	1917	125.9	1907	114.3	1953	90.3	1922	58.8	1899	50.4	1936	45.6	1960	53.4	1912	46.9	2000
42	51.5	1976	64.5	1947	109.4	1909	156.0	1907	127.8	1936	116.5	1926	91.5	1898	59.7	1977	51.1	1909	46.2	1955	54.2	1987	49.2	1969
43	51.7	1958	65.2	1909	109.5	1988	156.0	1898	129.1	1948	120.1	1968	91.8	1925	60.0	1925	51.3	1911	46.2	1943	55.3	1931	49.4	1943
44	52.1	1924	68.0	1924	109.5	1925	157.4	1949	135.7	1967	121.9	1978	92.2	1972	63.4	1956	51.7	1964	47.5	1967	55.6	1997	50.2	1935
45	54.0	1941	68.1	1908	112.8	1919	158.9	1970	136.5	1957	122.2	1952	97.4	1928	63.7	1909	52.4	1984	48.2	2000	55.8	1957	51.9	1940
46	54.7	1930	69.3	1967	113.9	1899	160.1	1901	138.3	1921	122.9	1937	99.2	1904	64.1	1912	52.4	1957	48.9	1999	56.0	1936	52.2	1954
47	55.4	1939	72.2	1955	114.4	1904	160.1	1935	144.4	1938	126.8	1933	99.5	1914	64.9	1906	52.8	2000	49.0	1944	56.5	1924	52.3	2002
48	57.5	2002	72.8	1926	114.5	1955	160.3	1926	148.9	1898	127.7	1898	99.8	1916	66.3	1957	53.5	1998	49.1	1929	57.4	1934	53.4	1938
49	58.0	1996	73.4	1939	115.3	2002	162.8	1959	152.0	1985	128.6	1912	105.7	1979	66.6	1919	53.9	1952	50.5	1979	58.5	1943	53.8	1906
50	58.7	2001	74.7	1911	115.4	1930	165.9	2002	152.1	1992	130.9	1902	109.1	1927	67.1	2000	54.2	1927	50.8	1934	60.2	1978	54.2	1997
51	59.2	1905	74.8	1905	116.4	1915	168.2	1909	153.0	1903	133.2	1906	109.5	1997	67.2	1939	54.4	1944	52.5	1912	60.5	1969	54.6	1978
52	59.5	1898	75.8	1929	116.8	1953	169.4	1953	156.9	1954	135.5	1954	109.8	1917	67.4	1961	54.6	1969	52.5	1997	60.5	1915	56.4	1949
53	59.6	1904	76.1	1953	122.0	1920	170.9	1946	158.1	1961	137.2	1979	110.5	1906	69.2	1916	57.9	1975	52.5	1906	61.3	1980	56.9	1932
54	59.8	1926	78.4	1935	122.5	1995	173.5	1943	159.8	1937	137.8	1907	112.2	1962	69.6	1962	58.0	1906	58.9	1923	61.5	1974	57.5	1919
55	61.8	1971	79.7	1910	123.1	1978	175.2	1928	160.4	1899	138.7	1957	112.9	1992	69.7	1946	58.4	1900	59.5	1931	62.5	1921	57.7	1966
56	61.8	1903	81.2	1965	125.1	1972	176.8	1994	160.6	1994	139.6	1946	115.2	1953	70.3	1985	58.4	1999	60.8	1936	63.2	1904	57.8	1915
57	62.4	1972	82.2	1987	126.7	1969	177.1	1992	163.6	1906	139.7	1966	116.2	1994	71.9	2001	58.5	1959	65.7	1946	63.4	1929	59.4	1957
58	62.7	1922	83.4	1903	129.6	1910	178.4	1961	166.5	1981	140.0	1967	117.1	1945	72.1	1929	59.5	1946	66.3	1919	63.4	1945	60.2	1945
59	63.3	1982	83.7	1996	131.5	1942	179.3	1999	167.5	1976	141.7	1969	117.5	1995	73.5	1927	60.0	1914	66.5	1914	64.6	1960	60.9	1925
60	63.5	1980	84.6	1995	132.3	1943	180.3	1938	170.2	1917	142.2	1981	117.8	1946	73.6	1974	60.5	1954	66.7	1991	66.6	2002	60.9	1947
61	64.7	1997	85.9	1907	132.7	1898	181.5	1972	174.8	1962	146.7	1929	119.0	1919	74.3	1926	61.8	2001	67.5	1962	66.6	2000	61.4	1995
62	66.6	1968	87.1	1906	137.5	1966	183.1	1971	179.3	1935	148.8	1904	119.5	1952	74.6	1994	62.0	1960	69.2	1990	66.9	1935	61.9	1923
63	67.0	1947	88.5	1976	138.5	1922	188.0	1976	186.1	1997	150.1	1951	121.0	1899	74.7	1987	62.5	1943	70.0	1978	68.9	1954	65.0	1924
64	68.2	1906	90.2	1912	138.9	1900	188.3	1966	187.3	1966	150.6	1918	123.3	2002	75.6	1920	63.0	1920	70.4	1992	71.2	1971	65.3	1974
65	68.3	1942	92.1	1960	139.3	1963	191.9	1933	188.7	1990	151.8	1975	123.5	1954	75.8	1984	63.7	1997	73.0	1921	71.5	1925	65.4	1959
66	70.7	1987	92.3	1925	146.7	1944	193.3	1919	189.7	1908	154.3	1899	126.7	1973	76.1	1983	63.9	1994	73.4	1924	71.6	1927	65.9	1980
67	70.7	1935	93.0	1937	147.6	1961	195.6	1995	199.7	1933	157.5	1920	127.2	1938	77.0	1938	64.2	1983	73.6	1995	72.4	2001	66.1	1968
68	70.9	1962	93.3	1994	148.8	1935	197.4	1948	203.7	1912	158.1	1965	127.7	1975	77.6	1980	65.2	1968	73.8	1925	73.2	1990	69.1	1946
69	71.1	1927	93.5	1932	149.0	1965	201.3	1944	204.6	1972	159.5	1962	130.3	1960	78.1	1945	65.9	1991	74.9	2001	73.7	1905	70.7	1979
70	73.2	1978	93.7	1959	151.0	1959	201.4	1974	204.9	1945	159.6	1980	132.3	1903	78.4	1978	66.5	1995	75.5	1984	73.8	1996	71.4	1996
71	73.8	1965	94.1	1946	151.2	1945	202.0	1950	209.3	1998	159.7	1983	133.4	1967	79.1	1935	70.6	1989	77.1	1907	78.3	1909	71.9	1981
72	74.6	1994	97.1	2002	152.2	1975	202.6	1939	210.2	1978	165.0	1935	134.3	1991	80.8	1908	74.0	1985	77.9	1905	78.9	1965	72.1	1998
73	76.9	1937	99.1	1971	154.7	1950	203.2	1975	210.8	1947	167.6	1950	136.7	1958	81.5	1991	74.6	1945	83.1	1994	79.1	1979	75.7	1911
74	77.8	1955	99.6	1915	155.0	1951	213.2	1997	211.1	1909	168.8	1919	138.5	1957	82.7	1996	74.7	1912	83.1	1945	84.1	1967	79.2	1975
75	77.9	1999	100.5	1985	158.7	1991	225.4	1985	212.1	1982	173.0	1905	141.4	1929	85.3	1942	76.7	1987	84.0	1983	84.2	1959	79.8	1942
76	78.7	1933	100.5	1930	159.5	1990	225.4	1967	217.8	1950	179.6	1942	143.4	1944	86.5	1932	76.8	1902	84.9	1980	88.7	1938	80.9	1951
77	80.0	1949	101.3	1968	161.8	1908	229.4	1903	222.4	1904	183.1	1986	143.8	2001	87.5	1997	77.2	1973	85.5	1998	89.7	1994	81.2	1921
78	81.1	1998	102.2	1951	162.7	1906	230.7	1986	224.6	1969	184.6	1982	145.5	1999	88.6	1992	78.6	1907	86.4	1968	91.3	1968	82.9	1961
79	81.7	1995	103.7	1997	164.1	1949	233.5	1913	228.1	1986	185.1	1998	146.7	1996	89.6	1958	80.1	2002	90.6	1982	91.8	1902	87.7	1984
80	83.3	1975	104.8	1950	168.1	1939	234.0	2001	229.8	1970	185.2	1909	153.7	1924	90.8	1968	80.4	1921	91.9	1900	92.0	1981	89.0	1934
81	84.8	1929	105.5	1975	169.3	1936	238.6	1916	235.8	1952	188.8	1938	154.5	1983	91.2	1970	84.4	1962	92.7	1981	92.5	1903	89.5	1927
82	87.2	1984	107.6	1992	170.9	1992	240.9	1952	235.9	1922	190.2	2000	155.4	1968	91.5	1928	89.2	1905	95.2	2002	93.0	1973	89.8	1971
83	89.2	1928	107.9	1991	171.7	1986	243.2	1991	239.3	1919	194.1	1970	156.1	1920	93.6	1973	90.3	1942	95.3	1969	95.7	1900	90.4	1994
84	89.4	1986	110.7	1943	173.5	1994	243.2	1984	244.4	1984	194.7	1960	159.7	1935	93.9	1969	90.7	1982	95.8	1942	98.7	1911	90.7	2001
85	90.7	1991	111.8	1988	174.6	1937	245.0	1904	244.8	1974	221.7	1999	161.9	1942	95.6	1905	92.0	1992	97.1	1951	99.7	1942	91.7	1902
86	90.9	1988	114.0	1998	177.0	1952	245.9	1978	254.2	1916	223.2	1915	162.6	1905	96.2	1995	93.3	1977	99.4	1938	101.1	1995	91.9	1977
87	95.5	1912	114.1	1993	182.9	1903	248.9	1969	255.7	1960	225.9	1984	167.1	1986	96.3	1998	94.1	1951	99.4	1961	103.0	1977	92.5	1941
88	96.4	1966	114.5	1986	184.2	1971	252.3	1947	256.3	1999	227.5	1990	171.3	1943	99.0	1982	98.5	1990	106.2	1959	112.6	1983	93.4	1970
89	99.6	1985	114.6	1952	185.7	1927	252.7	1906	256.9	1943	229.6	1944	174.0	2000	100.8	2002	99.3	1941	109.8	1915	116.4	1951	95.8	1967
90	100.0	1952	115.8	1928	187.8	2001	258.6	1945	257.5	1991	236.1	2002	175.7	1982	102.6	1953	99.9	1978	110.3	1928	116.6	1919	99.1	1909
91	100.3	1992	116.8	1949	188.0	1976	266.3	1982	259.1	1975	239.7	1991	176.9	1974	104.5	1952	101.7	1981	116.4	1902	120.8	1998	99.7	1990
92	107.2	1969	118.7	1962	188.4	1962	275.3	1951	270.5	1951	240.5	1916	177.8	1907	104.6	1903	102.1	1961	117.1	1970	122.6	1970	99.9	1972
93	107.8	1943	121.2	1983	193.5	1946	280.9	1912	271.4	1983	242.9	1995	187.6	1984	108.0	1943	105.5	1979	117.8	1954	123.2	1991	103.7	1965
94	114.5	1950	122.6	1938	200.9	1974	284.4	1998	271.7	1979	243.1	1917	189.2	1978	111.0	1986	108.9	1928	123.1	1985	128.8	1993	105.2	1987
95	114.9	1932	124.1	1982	202.8	1998	285.0	1962	275.0	1996	247.3	1993	195.6	1981	112.0	1951	116.5	1972	123.2	1977	131.0	1946	109.2	1993
96	115.1	1907	126.8	1966	218.5	1984	290.5	1965	276.7	1944	249.1	1945	197.0	1902	114.8	1999	118.3	1970	127.8	1973	137.0	1984	109.9	1931
97	128.4	1960	126.9	1969	219.8	1997	301.8	1960	278.6	1920	254.9	1973	200.6	1951	116.5	1979	118.6	1915	128.5	1911	144.2	1992	115.8	1928
98	135.5	1925	143.6	1942	223.4	1993	307.7	1920	278.8	1929	258.0	1943	202.8	1947	141.1	1972	120.8	1938	131.6	1927	147.7	1982	121.9	1986
99	138.4	1974	146.2	1999	225.4	1948	310.7	1922	280.7	1995	264.9	2001	203.7	1915	143.6	1990	120.9	1924	137.3	1972	156.6	1926	122.6	1973
100	140.7	1983	152.1	1984	225.8	1983	317.3	1929	281.5	1965	264.9	1996	205.1	1990	147.5	1981	125.3	1986	145.4	1965	160.5	1972	125.7	1983
101	145.6	1916	152.5	1927	233.8	1979	353.2	1983	314.7	2002	302.5	1947	211.6	1998	147.6	1907	129.7	1980	175.3	1903	162.3	1928	131.0	1926
102	168.6	1910	162.1	2001	237.4	1982	355.7	1973	320.2	1927	305.7	1974	240.7	1908	151.6	1924	130.6	1903	175.7	1941	164.0	1961	156.2	1991
103	169.7	1993	163.0	1973	243.2	1929	360.5	1927	330.6	2001	324.7	1927	243.6	1909	159.5	1902	148.3	1965	189.9	1993	167.7	1986	170.3	1985
104	173.8	1946	183.6	1974	260.6	1973	365.3	1993	340.4	1993	349.6	1908	261.7	1969	235.5	1915	221.1	1926	277.2	1926	180.0	1941	176.3	1992
105	179.7	1973	189.7	1916	309.7	1985	380.2	1979	391.5	1973	364.3	1903	446.7	1993	378.6	1993	296.2	1993	288.2	1986	207.3	1985	275.3	1982

III. Summation of Incremental Flows

A. General

This section is similar in format to the previous section. However, for this analysis, the data represents a summation of incremental inflows from Gavins Point to each key location rather than each individual reach. Again, the data were sorted and ranked for a single day and for all days in each month for the five statistical conditions. **Tables 12 through 21** indicate the incremental flow value for the five conditions using all of the days in each month. Note that these tables are not a summation of the data from the tables in the previous section. The data was resorted and ranked after summing the data from each reach. The data for the 1898 to 2002 period for each location are shown on **Plates 23, 25, 27, 29, 31, 33, 35, 37, 39, and 41**. The single day values are also shown on each plate for comparison and to show the day-to-day fluctuations. Each plate contains two plots: the top plot shows the full range of values and the lower one shows values in the lower flow range.

Note that a few of the incremental flows are shown as being negative values. In some cases, the negative flow values are a result of the average monthly depletion values being applied to daily incremental flows. In other cases, as in the winter periods, short-term changes in flows due to ice formation and temporary ice blockages cause negative incremental flow values for various days.

B. Missouri River – Gavins Point to Sioux City

In this case, the analysis is the same as in the previous section. It is repeated here for consistency. Construction of Gavins Point Dam began in 1952. Dam closure was made in July 1955. Daily flow records from Gavins Point are available beginning in August 1955 and are stored in the RCC database. Missouri River flow data at Sioux City, Iowa from October 1938 to the present are available from the USGS. Analysis of the incremental flow data was done on the 47-year period from 1956 to 2002 and the 105-year period from 1898 to 2002 (see **Table 12**).

Table 12
Daily Incremental Flows by Month
Gavins Point to Sioux City in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002
January	1.9	2.6	1.0	1.7	0.4	0.8	0.0	0.0	-0.6*	-1.0
February	3.7	3.6	2.0	2.2	1.0	1.2	0.3	0.4	-0.2	-0.2
March	11.2	12.7	6.8	5.4	3.4	2.5	1.3	1.1	0.2	0.4
April	13.9	24.0	6.7	10.4	3.2	3.7	1.1	1.4	0.2	0.5
May	10.2	12.6	6.2	6.8	2.9	3.1	1.2	1.5	0.2	0.5
June	10.5	11.6	6.3	6.9	3.0	3.2	1.0	1.6	0.0	0.4
July	6.6	8.5	4.2	4.7	2.1	2.4	0.7	1.0	0.0	0.1
August	4.4	5.3	3.0	3.2	1.6	1.9	0.6	0.8	0.0	0.1
September	3.6	4.1	2.5	2.8	1.3	1.6	0.5	0.6	0.0	0.0
October	3.2	4.7	1.9	2.7	1.1	1.6	0.3	0.7	0.0	0.0
November	3.4	4.6	1.9	3.1	1.1	1.7	0.4	0.9	0.0	0.3
December	2.6	3.7	1.4	2.4	0.7	1.4	0.2	0.6	-0.6	-0.6

* Negative values are discussed in Section III-A, page 37.

C. Missouri River – Gavins Point to Omaha

As shown in Table 1 and discussed in previous sections, the daily flow data with the shortest record in the reaches from Gavins Point to Omaha are the Gavins Point releases. Analysis of the incremental flow data was done on the 47-year period from 1956 to 2002 and the 105-year period from 1898 to 2002 (see **Table 13**).

Table 13
Summation of Daily Incremental Flows by Month
Gavins Point to Omaha in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002
January	4.9	6.3	2.6	4.5	1.4	2.4	0.4	0.7	-0.8*	-1.1
February	7.3	8.8	4.5	5.6	2.4	3.2	1.3	1.5	0.2	0.4
March	16.9	21.9	10.6	12.2	6.1	5.8	3.2	3.2	1.3	1.6
April	25.5	38.3	11.1	18.0	6.0	6.7	2.7	3.4	1.0	1.8
May	16.8	24.2	10.6	13.4	5.8	7.0	2.5	3.3	0.8	1.7
June	20.6	25.5	12.6	15.5	6.8	7.4	2.7	3.8	0.8	2.0
July	14.8	16.9	9.1	11.1	5.0	5.2	2.2	2.3	0.7	1.2
August	8.8	10.6	5.6	6.8	3.3	3.5	1.8	2.1	0.7	1.2
September	7.3	8.9	4.7	6.0	2.8	3.1	1.4	1.8	0.6	1.0
October	6.4	9.7	3.8	5.8	2.5	3.2	1.3	2.0	0.3	1.1

November	6.5	10.5	3.8	6.1	2.4	3.7	1.4	2.3	0.5	1.3
December	5.7	7.9	3.0	5.3	1.7	2.9	0.7	1.6	-0.8	-0.1

* Negative values are discussed in Section III-A, page 37.

D. Missouri River – Gavins Point to Nebraska City

As shown in Table 1 and discussed in previous sections, the daily flow data with the shortest record in the reaches from Gavins Point to Nebraska City are the Gavins Point releases. Analysis of the incremental flow data was done on the 47-year period 1956 to 2002 and the 105-year period from 1898 to 2002 (see **Table 14**).

Table 14
Summation of Daily Incremental Flows by Month
Gavins Point to Nebraska City in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002
January	10.3	12.2	7.4	9.1	5.0	6.0	2.8	3.5	0.8	0.5
February	17.0	18.8	11.7	13.2	7.7	9.0	5.0	6.0	2.6	3.8
March	33.8	38.1	22.2	24.2	13.7	13.8	8.9	9.6	5.9	6.7
April	40.9	54.4	23.9	30.0	13.3	14.1	8.3	9.3	5.0	6.4
May	32.9	42.1	23.0	24.7	13.8	14.8	7.8	9.1	4.3	5.8
June	46.0	45.0	28.6	28.0	16.2	15.2	8.4	8.8	4.4	5.6
July	33.9	27.6	21.1	17.4	10.9	9.6	5.0	4.9	2.5	3.0
August	18.0	16.2	12.3	11.6	7.2	6.5	4.2	4.1	2.5	2.9
September	15.4	14.7	10.6	9.9	6.5	6.4	3.9	4.0	2.5	2.7
October	14.3	16.7	9.3	10.0	6.6	7.1	4.1	5.1	2.7	3.6
November	14.0	16.7	9.9	11.3	7.1	8.1	5.0	6.4	3.4	5.0
December	11.8	14.3	8.3	10.5	5.9	7.3	3.3	5.2	0.6	2.2

E. Missouri River – Gavins Point to Rulo

As shown in Table 1 and discussed in previous sections, the daily flow data with the shortest record in the reaches from Gavins Point to Rulo are the Gavins Point releases. Analysis of the incremental flow data was done on the 47-year period from 1956 to 2002 and the 105-year period from 1898 to 2002 (see **Table 15**).

Table 15
Summation of Daily Incremental Flows by Month
Gavins Point to Rulo in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002
January	12.5	14.0	9.0	11.2	5.9	7.0	3.3	4.3	0.9	0.8
February	20.4	24.3	13.6	16.0	9.0	10.6	5.7	6.9	2.9	4.2
March	39.8	48.3	25.3	27.8	15.7	16.8	10.1	11.5	6.6	7.9
April	45.9	62.5	27.6	36.2	15.3	17.3	9.4	10.5	5.9	7.4
May	39.9	52.7	27.5	30.6	16.2	17.8	8.8	10.7	4.9	6.7
June	54.7	55.8	35.0	35.8	19.1	18.8	9.9	10.5	5.5	6.5
July	40.2	35.7	25.7	22.4	12.9	11.9	6.2	6.3	3.3	3.8
August	21.6	19.7	14.8	13.8	8.9	8.3	5.1	5.1	3.0	3.6
September	19.5	19.5	13.0	13.0	8.0	8.2	4.7	4.9	2.9	3.6
October	17.0	19.9	11.5	13.0	7.7	8.4	5.0	5.9	3.1	4.6
November	16.9	20.6	11.9	14.4	8.2	9.8	5.7	7.4	3.9	5.9
December	14.6	17.6	9.6	13.3	6.7	8.4	3.8	6.0	1.0	3.1

F. Missouri River – Gavins Point to St. Joseph

As shown in Table 1 and discussed in previous sections, the daily flow data with the shortest record in the reaches from Gavins Point to St. Joseph are the Gavins Point releases. Analysis of the incremental flow data was done on the 47-year period from 1956 to 2002 and the 105-year period from 1898 to 2002 (see **Table 16**).

Table 16
Summation of Daily Incremental Flows by Month
Gavins Point to St. Joseph in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002
January	15.3	17.5	11.2	13.3	7.3	8.5	3.6	4.6	0.7	1.0
February	24.1	29.3	16.4	19.1	10.9	12.7	6.5	8.1	3.3	4.5
March	45.4	56.8	28.6	31.7	17.9	19.3	11.5	12.6	7.5	8.8
April	52.2	69.2	31.8	41.7	17.6	19.6	10.6	11.5	6.8	8.3
May	47.6	63.3	32.3	36.5	18.7	21.1	10.2	12.3	5.6	7.5
June	65.5	66.4	41.0	41.2	22.4	22.2	11.6	12.3	6.9	8.0
July	49.3	44.8	31.3	26.6	16.2	14.9	7.6	7.7	4.5	5.6
August	26.2	24.0	17.8	17.3	10.8	10.2	6.2	6.3	3.8	4.4
September	24.0	25.3	15.9	16.0	9.8	9.8	5.7	5.9	3.7	4.0
October	20.6	23.7	13.6	15.0	9.1	9.8	5.8	6.7	3.6	5.5
November	20.5	23.7	14.1	17.2	9.5	11.2	6.7	8.3	4.5	6.8
December	17.6	22.1	11.7	15.2	8.1	10.1	4.6	7.0	1.5	3.7

G. Missouri River – Gavins Point to Kansas City

As shown in Table 1 and discussed in previous sections, the daily flow data with the shortest record in the reaches from Gavins Point to Kansas City are the Gavins Point releases. Analysis of the incremental flow data was done on the 47-year period from 1956 to 2002 and the 105-year period from 1898 to 2002 (see **Table 17**).

Table 17
Summation of Daily Incremental Flows by Month
Gavins Point to Kansas City in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002
January	22.2	24.6	15.6	17.5	10.3	11.3	5.7	7.0	1.8	1.4
February	36.7	47.0	23.6	27.5	15.3	16.9	9.2	10.3	4.9	6.5
March	65.7	80.7	40.0	44.0	24.9	26.4	15.1	16.2	9.9	10.5
April	80.7	96.8	51.7	64.2	25.7	27.0	14.5	15.4	9.6	10.5
May	76.2	86.0	50.7	57.4	29.5	33.6	15.3	17.5	8.3	10.5
June	107.2	97.4	65.5	61.6	37.7	37.1	19.2	20.1	10.5	12.4
July	82.4	71.1	51.8	43.5	26.5	24.7	11.5	11.4	7.0	7.8
August	42.5	40.7	27.9	25.4	17.2	15.8	9.2	9.0	5.7	5.8
September	41.3	44.3	25.4	23.7	15.7	14.7	8.6	8.4	5.1	5.5
October	35.2	45.1	21.4	22.3	13.2	13.4	8.3	8.9	5.7	6.8
November	32.8	38.9	21.6	24.5	13.6	15.1	9.1	11.3	6.2	8.5
December	26.7	32.1	16.9	21.9	11.6	14.1	6.8	9.7	2.9	5.7

H. Missouri River – Gavins Point to Waverly

As shown in Table 1 and discussed in previous sections, the daily flow data with the shortest record in the reaches from Gavins Point to Waverly are the Gavins Point releases. Analysis of the incremental flow data was done on the 47-year period from 1956 to 2002 and the 105-year period from 1898 to 2002 (see **Table 18**).

Table 18
Summation of Daily Incremental Flows by Month
Gavins Point to Waverly in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002
January	23.3	25.7	16.4	18.8	10.8	11.7	5.8	7.4	2.1	1.9
February	39.3	49.9	24.4	29.3	16.0	17.5	9.6	10.9	5.2	6.5
March	67.3	83.9	41.2	45.5	25.5	27.9	15.6	16.5	10.2	11.0
April	84.9	102.9	53.2	67.4	26.7	28.3	15.3	16.1	10.0	10.8
May	78.9	94.3	53.2	60.7	30.5	35.1	15.7	18.2	8.5	11.1
June	111.1	105.3	67.4	64.8	38.7	38.7	20.1	21.1	10.9	12.6
July	84.3	74.5	54.1	46.3	27.4	26.1	12.1	12.2	7.4	8.2
August	43.6	42.5	28.6	26.0	17.5	16.7	9.6	9.5	5.9	6.2
September	43.0	47.4	26.7	25.2	16.5	15.9	8.8	8.6	5.2	5.5
October	36.2	47.7	22.3	23.3	13.7	14.3	8.5	9.2	5.8	7.0
November	34.0	40.6	22.3	25.5	14.0	15.6	9.5	11.9	6.4	8.9
December	27.3	36.2	18.1	22.5	12.1	14.8	7.1	10.1	3.2	5.7

I. Missouri River – Gavins Point to Boonville

As shown in Table 1 and discussed in previous sections, the daily flow data with the shortest record in the reaches from Gavins Point to Boonville are the Gavins Point releases. Analysis of the incremental flow data was done on the 47-year period 1956 to 2002 and the 105-year period from 1898 to 2002 (see **Table 19**).

Table 19
Summation of Daily Incremental Flows by Month
Gavins Point to Boonville in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002
January	32.5	35.5	20.9	23.5	14.1	15.0	7.8	9.0	3.7	3.3
February	55.7	70.4	33.9	40.1	20.8	22.4	12.4	13.4	6.8	8.3
March	95.2	120.6	55.8	65.9	33.9	36.3	20.7	19.9	13.3	12.7
April	118.4	144.0	69.9	89.4	36.4	39.7	20.4	20.2	13.0	14.0
May	104.6	135.7	69.4	84.8	41.9	47.0	21.6	23.8	11.7	14.4
June	140.8	136.5	86.3	83.2	46.4	46.7	25.7	26.5	13.5	14.8
July	103.4	105.9	63.9	58.3	32.1	32.4	14.8	14.8	8.9	9.5
August	52.5	52.7	33.6	32.0	21.5	20.3	11.8	11.7	7.3	7.6
September	59.1	67.3	32.6	32.5	20.6	19.7	10.8	10.6	6.5	6.8
October	51.5	70.5	29.3	29.4	17.0	16.3	10.0	10.4	7.1	8.1

November	45.8	58.4	27.9	33.6	17.1	19.0	11.5	14.1	7.5	10.2
December	38.0	46.9	22.8	28.9	16.1	18.4	9.8	12.4	4.9	7.5

J. Missouri River – Gavins Point to Hermann

As shown in Table 1 and discussed in previous sections, the daily flow data with the shortest record in the reaches from Gavins Point to Hermann are the Gavins Point releases. Analysis of the incremental flow data was done on the 47-year period from 1956 to 2002 and the 105-year period from 1898 to 2002 (see **Table 20**).

Table 20
Summation of Daily Incremental Flows by Month
Gavins Point to Hermann in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002
January	63.7	69.5	37.0	42.1	23.8	24.8	14.2	14.3	8.6	7.5
February	90.1	109.6	56.4	68.3	32.9	37.2	20.0	21.5	12.5	13.0
March	136.6	168.6	88.1	102.3	54.6	60.3	34.7	31.3	20.9	19.4
April	176.3	200.6	103.9	127.2	59.0	69.6	35.0	34.8	21.9	20.6
May	160.2	191.5	106.9	127.7	64.6	73.8	32.2	35.3	19.4	22.2
June	194.7	189.2	126.1	121.1	67.1	71.5	34.2	37.3	19.4	22.1
July	139.3	139.3	82.7	79.9	42.6	42.9	21.3	22.2	13.0	14.2
August	69.7	68.2	44.1	42.4	28.6	27.2	16.8	16.8	10.6	11.2
September	85.9	82.8	44.5	43.3	27.8	25.1	15.1	14.8	10.2	10.3
October	84.9	108.1	43.7	42.0	23.9	21.8	14.7	14.2	10.5	10.6
November	81.1	106.0	44.8	58.5	25.8	27.9	16.6	18.1	11.1	12.3
December	65.5	88.6	39.6	52.4	25.4	28.4	15.5	17.8	9.4	11.2

K. Missouri River – Gavins Point to St. Louis

As shown in Table 1 and discussed in previous sections, the daily flow data with the shortest record in the reaches from Gavins Point to St. Louis are the Gavins Point releases. Analysis of the incremental flow data was done on the 47-year period from 1956 to 2002 and the 105-year period from 1898 to 2002 (see **Table 21**).

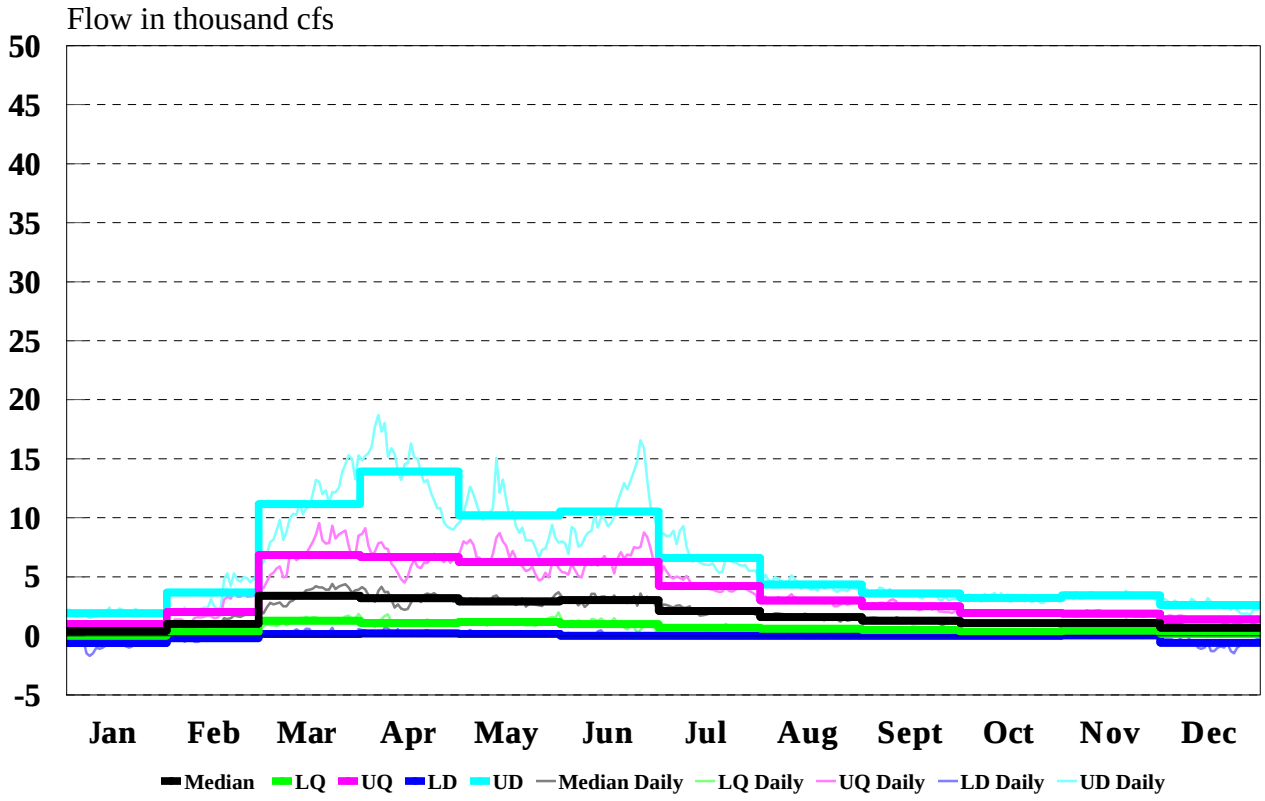
Table 21
Summation of Daily Incremental Flows by Month
Gavins Point to St. Louis in kcfs

Month	Upper Decile		Upper Quartile		Median		Lower Quartile		Lower Decile	
	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002	1898-2002	1956-2002
January	176.7	191.9	120.4	126.8	77.7	86.2	55.8	58.4	43.0	45.2
February	229.9	267.7	156.3	186.0	107.6	125.0	65.8	70.8	48.7	55.2
March	343.0	404.9	248.9	288.4	179.5	197.0	125.6	130.0	85.3	84.2
April	457.9	484.3	341.0	382.6	226.1	264.6	164.0	181.2	116.6	124.4
May	429.9	462.1	342.2	385.2	219.6	270.1	145.3	169.5	96.8	107.1
June	433.9	422.0	313.5	328.5	203.0	214.7	136.5	142.4	90.6	93.4
July	329.9	338.8	228.8	235.9	150.8	167.2	96.5	99.6	64.6	65.9
August	189.2	191.5	132.3	140.0	96.8	104.2	68.1	70.8	50.8	51.0
September	191.2	191.2	122.0	127.0	84.1	91.1	62.8	69.7	45.2	46.1
October	207.8	238.8	130.8	137.0	79.8	90.5	53.7	59.3	42.0	42.5
November	206.3	238.5	136.1	166.4	87.3	103.0	60.9	71.4	46.0	50.7
December	177.9	216.6	120.9	148.3	78.6	101.4	55.3	66.5	42.8	48.3

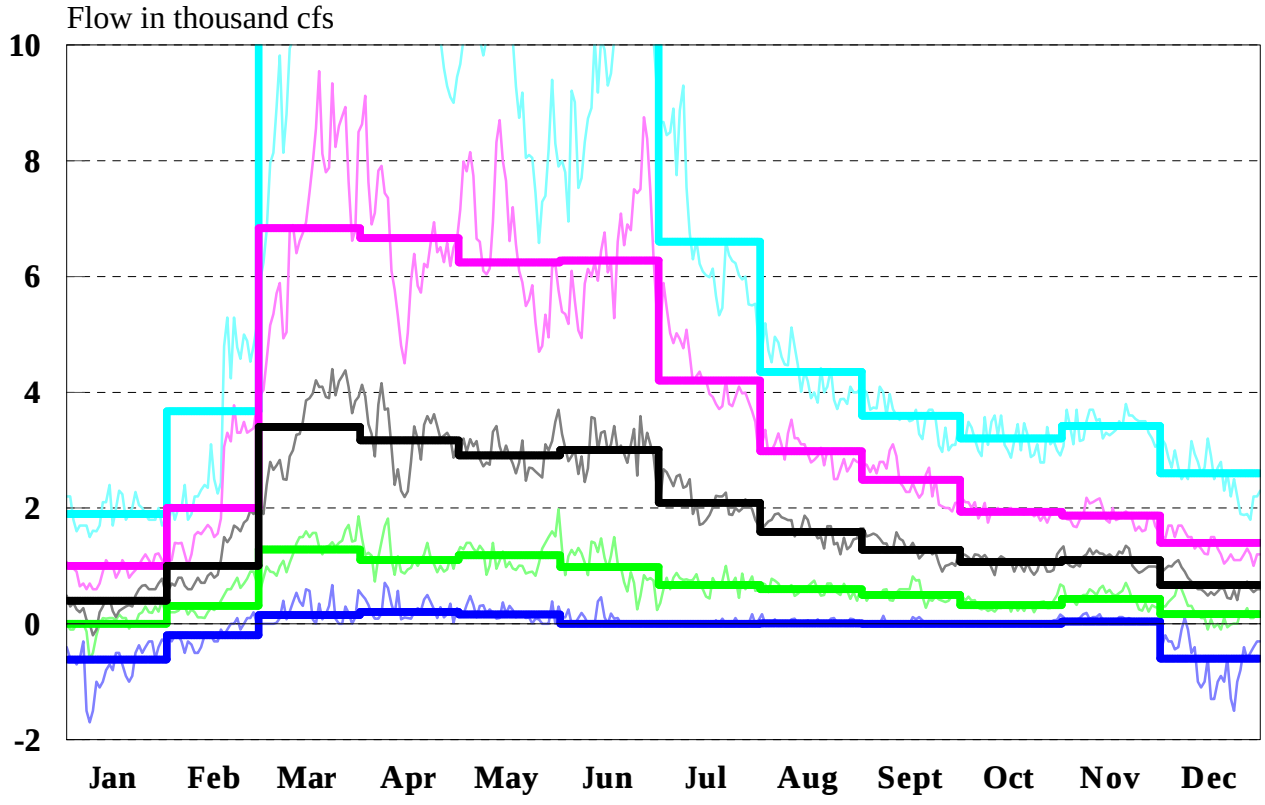
L. Ranking of Summation of Average Monthly Incremental Flows

For this section, the average monthly flows were output from the DRM. The flows from each reach were added to produce a total flow from Gavins Point to each key location. Those summed monthly average incremental flows were ranked from lowest to highest for each month and are listed on **Plates 24, 26, 28, 30, 32, 34, 36, 38, 40, and 42**.

Gavins Point to Sioux City Incremental Flows



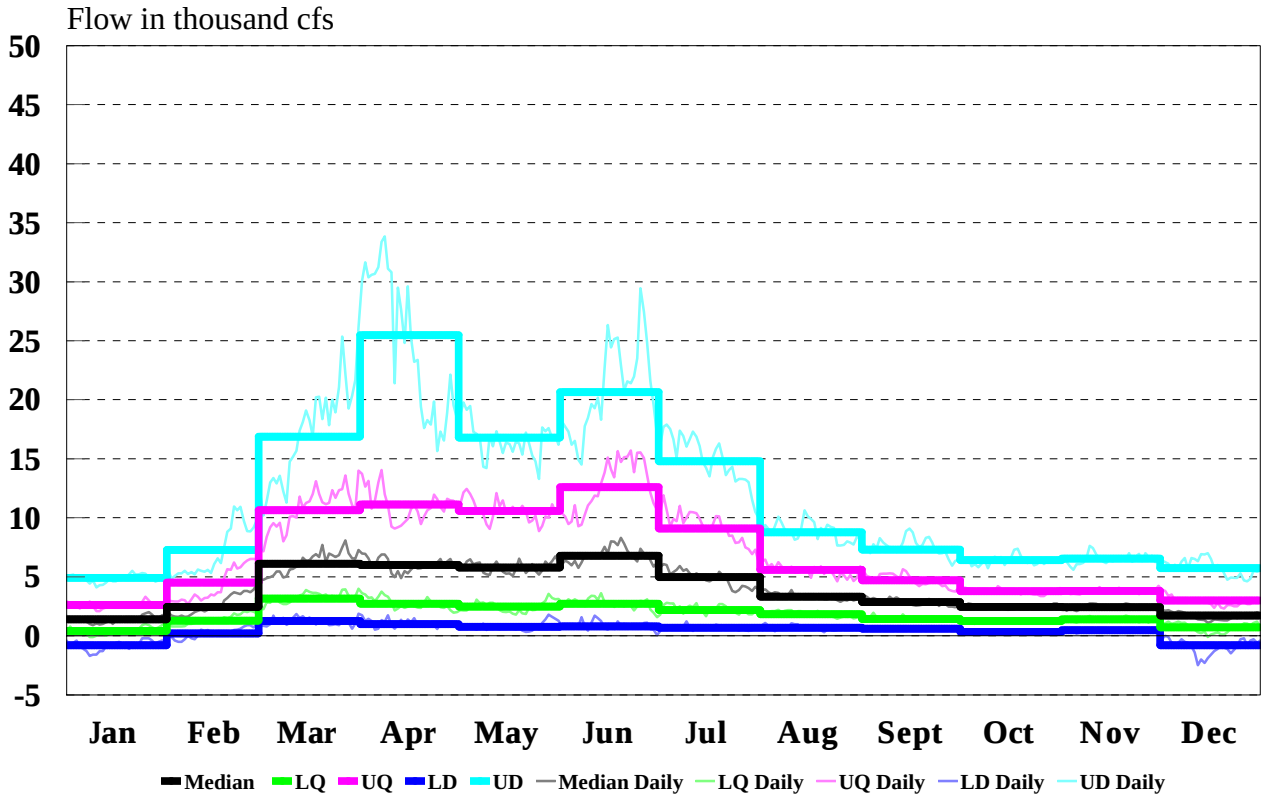
Gavins Point to Sioux City Incremental Flows (Lower Values Expanded)



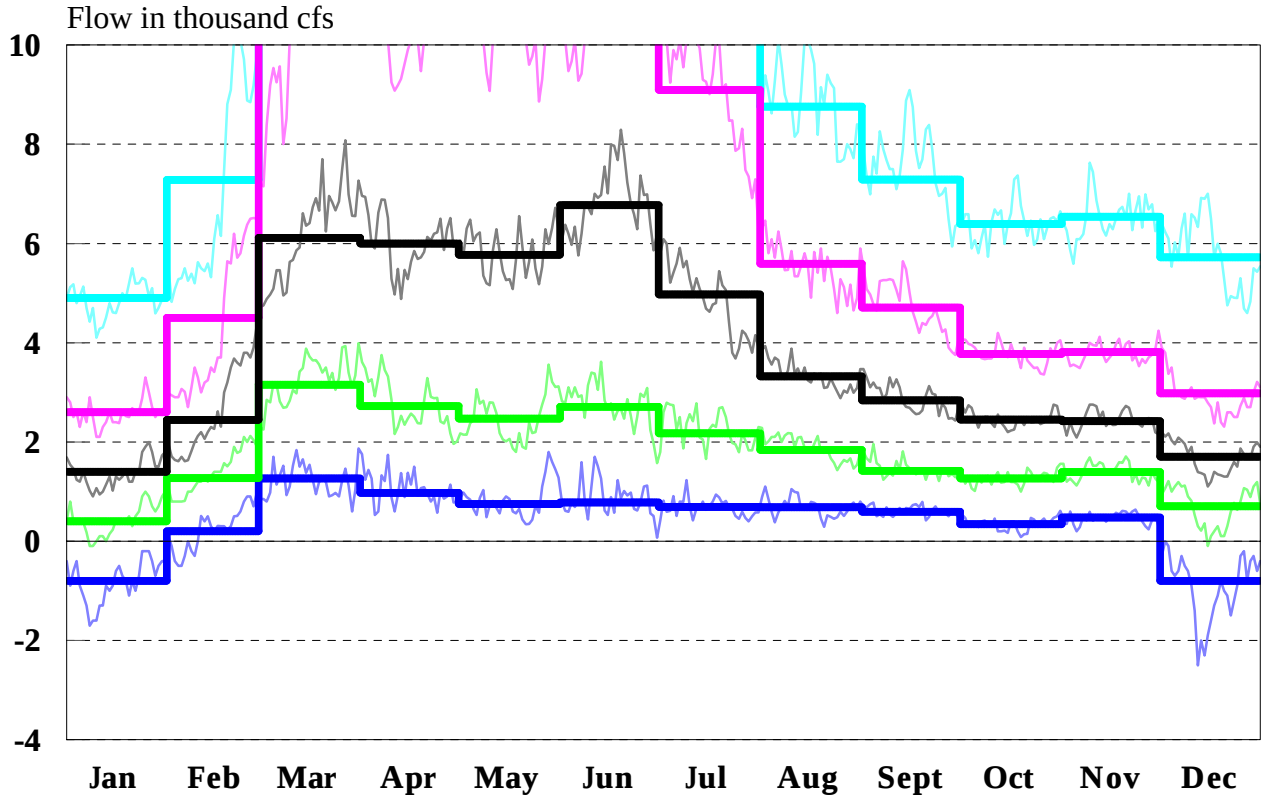
Gavins Point to Sioux City
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-1.2	1952	-0.3	1956	0.0	1955	-0.2	1955	-0.2	1955	-0.2	1955	-0.2	1955	-0.2	1955	-0.2	1955	-0.2	1955	-0.2	1955	-1.3	1950
2	-0.6	1970	-0.1	1942	0.3	1931	0.0	1990	0.1	1931	0.1	1989	0.0	1988	0.1	1989	0.0	1931	0.0	1988	-0.1	1930	-1.1	1968
3	-0.6	1971	-0.1	1930	0.4	1933	0.2	1934	0.1	1934	0.1	1956	0.1	1989	0.1	1991	0.0	1943	0.0	1935	0.1	1939	-1.1	1929
4	-0.4	1977	-0.1	1939	0.5	1925	0.3	1935	0.2	1981	0.2	1941	0.1	1943	0.2	1931	0.1	1990	0.1	1931	0.1	1924	-0.6	1989
5	-0.4	1988	0.0	1955	0.5	1934	0.3	1931	0.2	1956	0.3	1912	0.2	1931	0.2	1925	0.1	1925	0.1	1934	0.1	1934	-0.5	1990
6	-0.4	1951	0.0	1937	0.5	1991	0.3	1991	0.3	1940	0.4	1933	0.2	1933	0.2	1936	0.1	1935	0.1	1936	0.1	1936	-0.5	1943
7	-0.2	1982	0.0	1936	0.5	1990	0.3	1925	0.3	1935	0.4	1910	0.2	1936	0.2	1934	0.1	1989	0.1	1924	0.1	1931	-0.5	1940
8	-0.2	1955	0.0	1932	0.6	1935	0.4	1981	0.4	1968	0.4	1911	0.2	1956	0.2	1990	0.1	1981	0.1	1990	0.1	1969	-0.3	1944
9	-0.1	1934	0.1	1940	0.7	1943	0.5	1968	0.5	1925	0.5	1988	0.3	1925	0.2	1988	0.2	1937	0.1	1932	0.2	1925	-0.2	1949
10	-0.1	1968	0.1	1933	0.8	1964	0.6	1933	0.6	1989	0.6	1931	0.3	1947	0.3	1933	0.2	1934	0.1	1937	0.2	1933	-0.2	1953
11	-0.1	1950	0.1	1925	0.8	1940	0.7	1926	0.6	1933	0.6	1935	0.3	1981	0.3	1954	0.2	1991	0.1	1943	0.2	1935	-0.2	1983
12	-0.1	1957	0.1	1961	0.8	1981	0.8	1943	0.7	1939	0.6	1936	0.3	1968	0.3	1981	0.2	1940	0.1	1989	0.2	1921	-0.1	1938
13	-0.1	1969	0.2	1990	0.9	1968	0.9	1963	0.7	1943	0.7	1921	0.4	1934	0.3	1935	0.2	1954	0.1	1939	0.2	1932	-0.1	1941
14	-0.1	1933	0.2	1935	1.1	1975	0.9	1938	0.8	1936	0.7	1922	0.4	1932	0.3	1968	0.3	1998	0.2	1933	0.3	1943	-0.1	1947
15	-0.1	1972	0.3	1938	1.1	1926	1.0	1974	0.9	1911	0.7	1977	0.4	1940	0.4	1946	0.3	1968	0.2	1925	0.3	1910	0.0	1961
16	0.0	1930	0.3	1960	1.1	1998	1.1	1936	1.0	1932	0.8	1968	0.5	1959	0.4	1938	0.3	1926	0.2	1945	0.3	1989	0.0	1935
17	0.0	1940	0.3	1998	1.2	1959	1.1	1939	1.0	1941	0.9	1934	0.5	1977	0.4	1926	0.4	1956	0.2	1991	0.3	1937	0.0	1937
18	0.0	1962	0.3	1934	1.2	1963	1.2	1922	1.0	1938	0.9	1943	0.5	1935	0.4	1941	0.4	1922	0.3	1921	0.4	1917	0.0	1960
19	0.0	1935	0.3	1926	1.3	1958	1.2	1911	1.1	1946	1.0	1981	0.6	1970	0.5	1932	0.4	1974	0.3	1953	0.4	1990	0.0	1924
20	0.0	1936	0.4	1950	1.3	1937	1.3	1956	1.1	1974	1.0	1938	0.7	1926	0.5	1937	0.5	1939	0.4	1910	0.4	1898	0.1	1964
21	0.0	1937	0.4	1922	1.5	1922	1.4	1988	1.1	1910	1.2	1927	0.7	1942	0.5	1940	0.5	1988	0.4	1959	0.5	1927	0.1	1930
22	0.0	1925	0.4	1959	1.6	1965	1.4	1989	1.1	1988	1.2	1932	0.7	1946	0.6	1922	0.6	1932	0.4	1987	0.5	1987	0.1	1958
23	0.0	1960	0.5	1989	1.7	1957	1.5	1932	1.1	1990	1.2	1992	0.7	1990	0.6	1945	0.6	1953	0.4	1917	0.5	1918	0.1	1925
24	0.0	1961	0.6	1962	1.8	1956	1.5	1959	1.1	1991	1.2	1926	0.8	1937	0.8	1973	0.7	1945	0.5	1898	0.5	1940	0.1	1939
25	0.1	1922	0.6	1911	1.8	1969	1.5	1992	1.2	1900	1.2	1939	0.8	1939	0.8	1987	0.7	1987	0.5	1942	0.5	1954	0.1	1932
26	0.1	1926	0.6	1965	1.8	1974	1.6	1961	1.3	1977	1.3	1902	0.9	1922	0.9	1911	0.7	1947	0.5	1998	0.6	1953	0.1	1921
27	0.1	1997	0.6	1972	1.8	1911	1.6	1977	1.4	1992	1.3	1946	0.9	2002	1.0	1899	0.7	1911	0.5	1940	0.6	1901	0.2	1931
28	0.1	1942	0.7	1931	1.9	1942	1.6	1954	1.5	1924	1.4	1937	0.9	1941	1.0	1939	0.8	1977	0.5	1927	0.6	1913	0.2	1945
29	0.1	1911	0.7	1964	1.9	1989	1.7	1957	1.5	1958	1.5	1940	0.9	1930	1.0	1942	0.8	1899	0.6	1929	0.6	1929	0.2	1910
30	0.1	1932	0.7	1963	2.2	2002	1.8	1967	1.5	1928	1.6	2002	0.9	1953	1.0	1982	0.8	1929	0.6	1954	0.6	1956	0.2	1946
31	0.1	1938	0.7	1975	2.2	1967	1.8	1928	1.5	1926	1.6	1987	1.1	1911	1.0	1956	0.8	1970	0.6	1949	0.6	1904	0.3	1898
32	0.2	1899	0.8	1899	2.3	1947	1.8	1975	1.5	1963	1.7	1900	1.2	1963	1.1	1958	0.8	1959	0.6	1901	0.6	1916	0.3	1917
33	0.2	1918	0.8	1918	2.5	1988	1.9	1958	1.5	1919	1.7	1958	1.3	1985	1.1	1959	0.9	1963	0.6	1918	0.7	1903	0.3	1934
34	0.2	1919	0.8	1953	2.8	1977	2.0	1942	1.6	1937	1.7	1990	1.4	1991	1.1	1997	0.9	1918	0.6	1969	0.7	1926	0.3	1927
35	0.2	1928	0.8	1941	2.8	1960	2.1	1937	1.6	1967	1.8	1963	1.4	1974	1.2	1928	0.9	1936	0.7	1913	0.7	1974	0.3	1996
36	0.2	1902	0.9	1928	2.8	1928	2.1	1941	1.6	1922	1.9	1959	1.5	1899	1.2	1929	1.0	1919	0.7	1958	0.7	1991	0.3	1942
37	0.2	1944	0.9	1978	2.8	1941	2.2	1940	1.7	1975	2.1	1964	1.5	1918	1.2	1918	1.0	1902	0.7	1974	0.8	1938	0.3	1952
38	0.2	1914	0.9	1949	3.1	1999	2.2	1919	1.7	1954	2.2	1925	1.6	1964	1.2	1902	1.0	1928	0.7	1956	0.8	1945	0.3	1901
39	0.2	1931	0.9	1969	3.1	2000	2.3	1905	1.9	1971	2.3	1903	1.6	1966	1.2	1919	1.0	1905	0.8	1916	0.9	1968	0.3	1918
40	0.2	1905	0.9	1979	3.1	1939	2.4	1964	2.1	1917	2.4	1973	1.7	1975	1.3	1970	1.1	1973	0.8	1904	0.9	1988	0.4	1936
41	0.2	1917	1.0	1943	3.2	1899	2.4	1918	2.3	1964	2.4	1974	1.8	1950	1.3	1943	1.1	1997	0.8	1926	0.9	1959	0.4	1913
42	0.2	1927	1.0	1968	3.2	1932	2.5	1898	2.4	1957	2.5	1930	1.8	1954	1.3	1947	1.1	1914	0.8	1981	0.9	1923	0.4	1962
43	0.2	1946	1.0	1902	3.3	1918	2.6	1899	2.5	1959	2.6	1960	1.8	1919	1.4	1977	1.1	1941	0.8	1960	1.0	1961	0.4	1963
44	0.3	1904	1.0	1919	3.4	1980	2.6	1914	2.5	1904	2.7	1975	1.9	1960	1.4	1985	1.1	1958	0.9	1903	1.0	1907	0.4	1988
45	0.3	1953	1.0	1951	3.4	1919	2.7	1930	2.5	1980	2.8	1970	1.9	1902	1.4	1914	1.2	1917	1.0	1952	1.0	1994	0.4	1916
46	0.3	1967	1.0	1958	3.6	1898	2.9	1946	2.7	1973	2.8	1980	1.9	1987	1.4	2002	1.2	1982	1.0	1930	1.0	1912	0.4	1933
47	0.3	1924	1.0	1929	3.6	1992	2.9	1982	2.8	2002	2.9	1982	2.0	1928	1.5	1974	1.2	1898	1.1	1907	1.0	1963	0.4	1967
48	0.3	1941	1.1	1997	3.6	1914	2.9	1971	2.9	1961	3.0	1961	2.1	1914	1.5	1950	1.3	1933	1.1	1963	1.0	1958	0.4	1904
49	0.3	1945	1.1	1914	3.7	1982	3.0	1950	3.1	1912	3.0	1976	2.1	1938	1.5	1969	1.3	1927	1.1	1997	1.1	1920	0.4	1957
50	0.3	1898	1.1	1991	3.8	1976	3.0	1904	3.1	1930	3.0	1917	2.1	1980	1.5	1917	1.4	1904	1.1	1947	1.1	1951	0.4	1948
51	0.3	1908	1.2	1957	3.8	1944	3.1	1945	3.2	1966	3.1	1966	2.1	1898	1.5	1998	1.4	1946	1.2	1996	1.2	1915	0.5	1903
52	0.3	1958	1.2	1985	4.0	1954	3.2	1953	3.2	1982	3.1	1949	2.2	1917	1.6	1948	1.4	1948	1.2	1977	1.2	1911	0.5	1926
53	0.4	1959	1.2	1917	4.0	1905	3.3	1972	3.2	1970	3.3	1919	2.2	1961	1.6	1965	1.5	1969	1.2	1912	1.2	1960	0.6	1954
54	0.4	1913	1.2	1995	4.0	1938	3.3	1927	3.2	1948	3.5	1913	2.2	1958	1.6	1949	1.5	1952	1.2	1920	1.2	1944	0.6	1923
55	0.4	1921	1.2	1905	4.1	1917	3.5	1902	3.4	1976	3.6	1953	2.3	1949	1.6	1898	1.5	1950	1.2	1923	1.2	1947	0.6	1976
56	0.4	1954	1.3	1904	4.3	1936	3.5	1980	3.4	1987	3.8	1985	2.4	1976	1.6	1952	1.5	1961	1.2	1970	1.2	1941	0.6	1907
57	0.4	1996	1.3	1981	4.3	1996	3.6	1966	3.4	1903	3.9	1928	2.5	1982	1.7	1966	1.5	1962	1.3	1922	1.2	1950	0.6	1991
58	0.4	1910	1.4	1927	4.3	1904	3.7	1917	3.6	1945	3.9	1918	2.5	1973	1.7	1927	1.6	1966	1.3	1962	1.3	1952	0.6	1956
59	0.4	1912	1.4	1987	4.4	1953	3.8	2002	3.8	1902	4.1	1991	2.6	1927	1.8	1963	1.6	2002	1.3	1941	1.3	1909	0.7	1912
60	0.4	1916	1.4	1970	4.6	1966	3.9	1970	3.8	1949	4.2	1898	2.6	1905	1.8	1904	1.7	1967	1.3	1911	1.3	1962	0.7	1920
61	0.4	1943	1.4	1988	4.7	1962	4.1	1976	3.9	1914	4.4	1942	2.6	1965	1.8	1905	1.7	1924	1.3	1950	1.3	1906	0.7	1951
62	0.4	1901	1.5	1974	4.8	1970	4.1	1921	4.0	1923	4.4	1969	2.7	1904	2.2	1967	1.9	1908	1.4	1909	1.3	1900	0.7	1955
63	0.4	1920	1.6	1967	4.9	1951	4.2	1908	4.1	1921	4.6	1978	2.8	1948	2.2	1924	1.9	1957	1.4	1915	1.3	1928	0.8	1911
64	0.4	1923	1.6	1977	5.0	1995	4.3	1944	4.2	1942	4.9	1952	3.0	1967	2.2	1976	1.9	1994	1.4	1994	1.4	1919	0.8	1915
65	0.4	1993	1.6	1986	5.0	1927	4.5	1913	4.2	1950	5.0	1948	3.1	1929	2.4	1957	2.0	1949	1.4	1919	1.4	1914	0.8	1909
66	0.4	1949	1.6	1924	5.1	1902	4.7	1924	4.3	1947	5.0	1899	3.2	1945	2.4	1930	2.0	1971	1.4	1900	1.4	1973	0.8	1919
67	0.4	1991	1.7	1947	5.2	1961	4.9	1920	4.4	1901	5.2	1905	3.3	1924	2.4	1961	2.0	1965	1.4	1976	1.5	1985	0.8	1922
68	0.5	1907	1.7	1993	5.7	2001	4.9	1973	4.5	1998	5.4	1965	3.4	1998	2.4	1908	2.0	1938	1.5	1938	1.5	1957	0.8	1900
69	0.5	1900	1.7	1946	5.7	1924	5.1	1910	4.6	1965	5.5	1944	3.5	1908	2.5	1980	2.0	1964	1.5	1967	1.5	1942	0.8	1906
70	0.5	1903	1.8	2001	5.8	1950	5.2	1916	4.9	1905	5.5	1904	3.7	1971	2.5	1964	2.0	1930	1.6	1961	1.5	1899	0.9	1899
71	0.5	1915	1.8	1908	5.8	1952	5.3	1912	5.1	1953	5.7	1947	3.7	1913	2.6	1994	2.1	1921	1.6	1968	1.5	1902	0.9	1914
72	0.6	1906	1.8	1948	5.9	1971	5.3	1923	5.2	1985	5.8	1916	3.9	1921	2.7	1971	2.1	1980	1.6	1906	1.6	1976	1.0	1969
73	0.6	1978	1.9	1945	6.2	1908	5.7	1949	5.4	1960	5.8	1957	4.1	1986	2.7	1913	2.1	1942	1.6	1928	1.6	1997	1.0	1902
74	0.6	1990	2.0	1999	6.3	1921	5.7	1947	5.5	1962	5.8	1998	4.1	1997	2.7	1921	2.2	1920	1.6	1914	1.6	2002	1.0	1959
75	0.6	1992	2.0	2000	6.5	1987	5.8	1901	5.6	1978	5.9	1950	4.2	1920	2.9	1996	2.2	1916	1.7	1966	1.6	1966	1.0	1928
76	0.6	1939	2.0	1913	6.5	1972	6.2	1996	5.7	1918	6.1	1967	4.2	1912	2.9	1920	2.2	1996	1.7	1902	1.7	1905	1.1	1905
77	0.6	1948	2.1	1921	6.8	1913	6.4	1900	6.2	1899	6.4	1979	4.2	1916	2.9	1986	2.2	1913	1.7	1899	1.7	1922	1.1	2002
78	0.6	1909	2.1	1954	6.9	1984	6.6	1907	6.2	1996	6.4	1997	4.4	1910	2.9	1910	2.3	1910	1.8	2001	1.7	1996	1.1	1908
79	0.6	1965	2.1	1992	7.0	1912	7.1	1909	6.7	1951	6.5	1920	4.5	1972	3.0	1975	2.3	1912	1.8	1973	1.7	1967	1.2	1966
80	0.7	1964	2.1	2002	7.0	1946	7.3	1906	7.1	1994	6.6	1929	4.5	1923	3.0	1953	2.4	1960	1.9	2002	1.7	1999	1.2	1997
81	0.7	1975	2.1	1944	7.1	1923	7.4	1915	7.3	1983	7.0	1923	4.6	1907	3.0	1916	2.4	1907	2.0	1964	1.7	2000	1.2	1972
82	0.7	1976	2.2	1898	7.7	1916	7.4	1903	7.7	1916	7.5	1971	4.7	1901	3.1	1960	2.5	1901	2.0	1905	1.8	1908	1.2	1994
83	0.8	1966	2.2	1912	7.8	1907	7.6	1998	7.7	1908	7.8	1915	4.9	1994	3.1	1901	2.5	1976	2.0	1908	1.8	1981	1.5	1981
84	0.8	1979	2.2	1916	8.0	1945	8.2	1965	7.8	1898	7.8	1914	4.9	1969	3.3	1912	2.6	2001	2.2	1948	1.9	1965	1.5	1973
85	0.8	1999	2.2	1920	8.3	1948	8.9	1994	7.8	1915	7.9	1954	5.1	1957	3.4	1923	2.6	1983	2.2	1957	1.9	1970	1.5	1992
86	0.8	2000	2.3	1996	8.4	1949	9.2	1948	7.9	1929	7.9	1972	5.3	1900	3.5	2001	2.6	1923	2.3	1975	2.0	1975	1.7	1965
87	0.8	1963	2.3	1910	8.5	1920	9.4	1999	7.9	1969	8.2	1906	5.4	1979	3.5	1972	2.8	1975	2.3	1972	2.1	1949	1.7	1974
88	0.8	1989	2.4	1923	8.5	1901	9.4	2000	7.9	1913	8.3	1994	5.5	1903	3.6	1962	2.9	1915	2.4	1971	2.1	1948	1.9	1987
89	0.9	1974	2.5	1901	8.7	1993	9.9	1987	7.9	1927	8.5	1901	5.6	1915	3.7	1900	3.0	1900	2.5	1951	2.2	1977	1.9	1977
90	0.9	1929	2.5	1907	8.8	1910	10.2	1985	8.1	1999	9.1	1999	5.7	1992	3.9	1915	3.0	1972	2.5	1980	2.4	1964	2.0	1970
91	1.0	1985	2.6	1982	9.2	1979	10.4	1929	8.1	2000	9.1	2000	5.9	1952	3.9	1903	3.0	1903	2.6	1944	2.8	1983	2.0	1985
92	1.0	1956	2.8	1980	9.2	1978	11.3	1979	8.3	1944	9.4	1945	5.9	1906	4.0	1999	3.3	1944	2.6	1985	2.8	1946	2.0	1995
93	1.0	1995	2.9	1915	9.3	1915	11.7	1978	8.5	1979	9.4	1986	6.1	1978	4.0	2000	3.3	1906	2.7	1965	3.1	2001	2.1	1984
94	1.3	2001	2.9	1900	9.4	1900	13.4	1951	8.6	1972	9.6	1951	6.3	1996	4.0	1907	3.3	1985	2.7	1983	3.4	1972	2.3	1980
95	1.4	1947	3.0	1903	9.9	1985	15.0	1983	8.6	1906	10.3	2001	6.3	2001	4.1	1983	3.5	1909	2.7	1999	3.4	1980	2.3	1999
96	1.7	1987	3.0	1973	10.3	1903	17.2	1952	9.6	1909	10.5	1983	6.8	1909	4.2	1951	3.6	1995	2.7	2000	3.5	1992	2.3	2000
97	1.7	1998	3.1	1984	10.5	1906	17.9	1993	10.4	1952	10.6	1908	8.2	1995	4.3	1992	3.6	1984	3.9	1979	3.6	1971	2.4	1971
98	1.7	1981	3.3	1906	11.1	1986	19.3	1995	10.7	1907	11.3	1924	8.7	1999	4.6	1909	4.1	1999	4.0	1946	4.0	1984	2.7	1975
99	1.8	1986	3.5	1909	11.5	1909	21.0	1986	11.5	1920	11.4	1996	8.7	2000	4.8	1906	4.1	2000	4.3	1992	4.2	1993	2.7	1998
100	1.9	1994	4.1	1976	11.6	1930	27.9	1969	15.1	1993	11.7	1907	9.5	1962	5.2	1944	4.2	1992	4.3	1978	4.4	1978	3.0	2001
101	2.0	2002	4.1	1952	11.7	1997	28.2	1962	15.2	1984	12.4	1909	9.8	1983	5.3	1978	4.3	1978	4.4	1982	4.5	1986	3.1	1993
102	2.1	1980	4.6	1966	12.4	1973	28.6	1960	17.8	1986	13.8	1962	10.0	1951	5.4	1984	4.7	1979	4.9	1993	4.6	1995	3.2	1986
103	2.2	1984	4.7	1983	14.0	1994	28.6	1984	19.1	2001	18.6	1993	13.3	1944	6.1	1979	5.4	1951	6.0	1984	5.2	1998	3.3	1978
104	2.8	1973	4.7	1994	15.4	1983	30.9	2001	19.2	1997	18.7	1995	13.3	1984	6.4	1995	7.6	1993	6.2	1995	5.7	1979	4.1	1979
105	3.0	1983	6.4	1971	19.9	1929	38.3	1997	27.5	1995	33.3	1984	40.5	1993	13.8	1993	9.8	1986	7.9	1986	6.3	1982	6.2	1982

Gavins Point to Omaha Incremental Flows



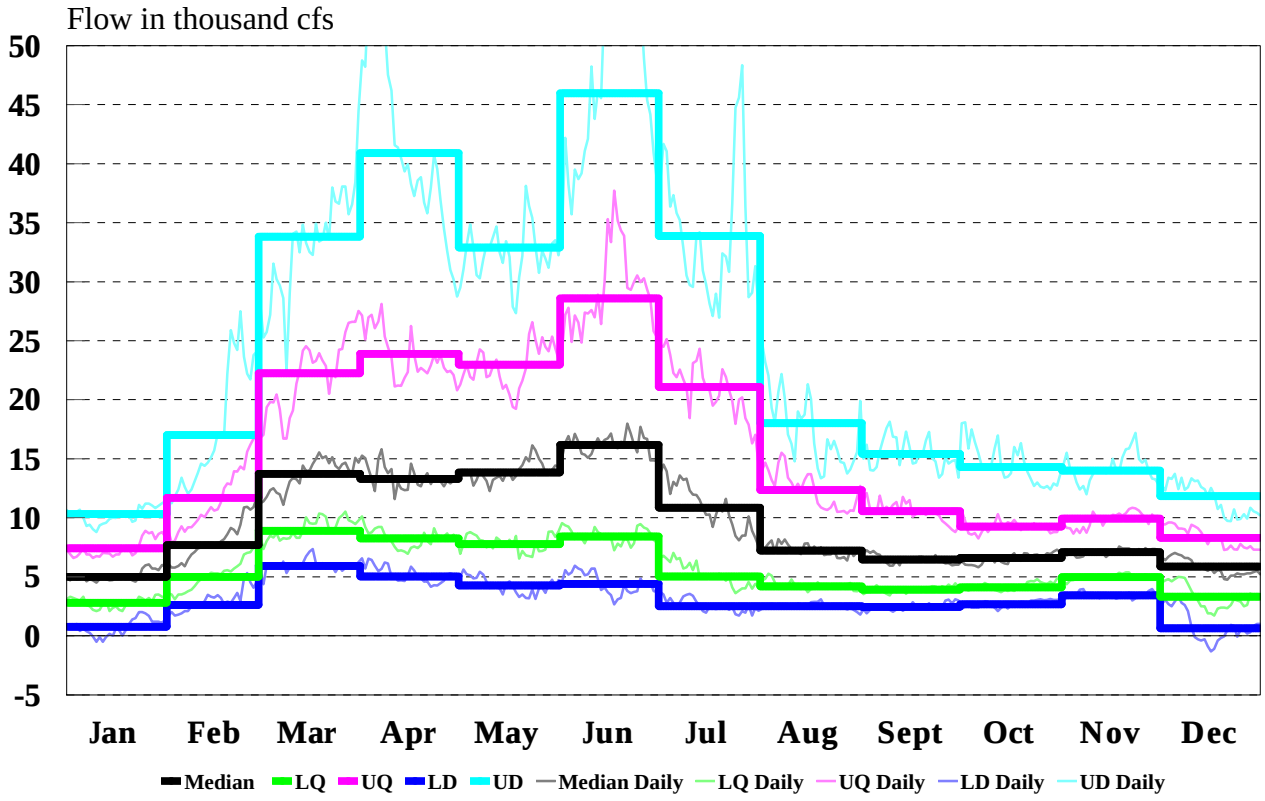
Gavins Point to Omaha Incremental Flows (Lower Values Expanded)



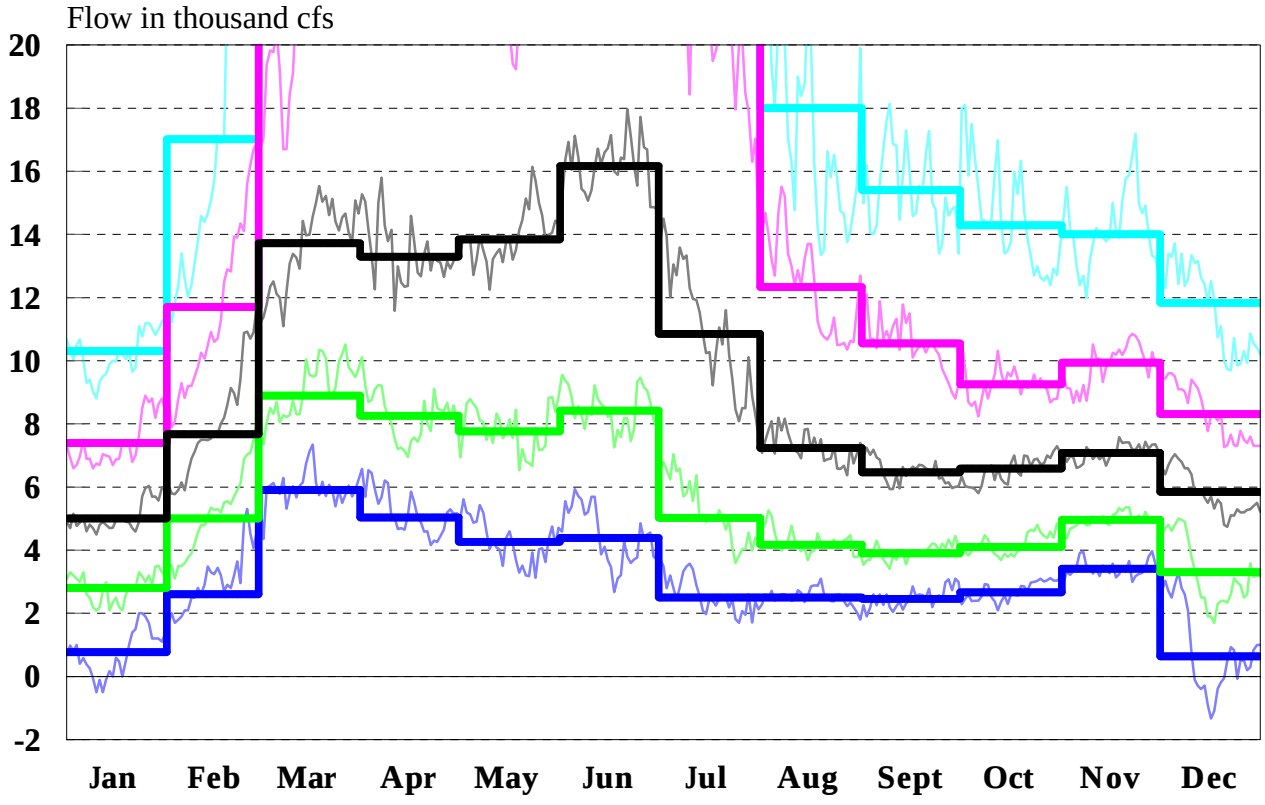
Gavins Point to Omaha
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-2.1	1952	-0.5	1933	0.3	1933	-0.1	1933	-0.1	1933	-0.8	1933	-0.8	1933	-0.5	1933	0.3	1934	0.0	1933	-0.5	1933	-1.4	1943
2	-1.7	1971	-0.3	1936	0.6	1931	0.3	1934	0.1	1934	0.4	1956	0.3	1936	0.0	1946	0.4	1935	0.1	1935	0.1	1934	-1.3	1929
3	-1.1	1972	0.0	1939	0.7	1934	0.7	1935	0.3	1931	0.7	1955	0.3	1946	0.2	1934	0.5	1933	0.1	1934	0.2	1939	-1.3	1989
4	-1.0	1954	0.1	1937	1.0	1943	0.7	1931	0.5	1940	0.7	1911	0.5	1931	0.3	1932	0.7	1931	0.1	1936	0.2	1936	-1.0	1944
5	-0.9	1969	0.2	1959	1.2	1935	0.8	1968	0.6	1955	0.8	1936	0.6	1968	0.4	1936	0.7	1956	0.2	1955	0.4	1930	-0.9	1933
6	-0.5	1977	0.2	1940	1.2	1925	1.1	1925	0.6	1968	0.9	1946	0.7	1934	0.5	1931	0.7	1940	0.2	1932	0.5	1935	-0.6	1932
7	-0.5	1937	0.3	1956	1.2	1968	1.3	1943	0.7	1956	1.1	1931	0.8	1956	0.7	1955	0.8	1937	0.3	1931	0.5	1924	-0.6	1947
8	-0.4	1960	0.5	1935	1.5	1940	1.6	1959	0.7	1946	1.2	1934	0.8	1926	0.8	1968	0.9	1955	0.3	1953	0.6	1937	-0.4	1968
9	-0.4	1936	0.7	1968	1.5	1964	1.7	1938	0.7	1935	1.3	1941	1.0	1970	0.8	1941	0.9	1953	0.4	1939	0.7	1931	-0.3	1949
10	-0.3	1957	0.7	1942	2.1	1926	1.7	1956	0.9	1939	1.3	1926	1.2	1911	1.0	1926	0.9	1947	0.5	1937	0.7	1969	-0.2	1938
11	-0.2	1938	0.8	1932	2.3	1981	1.8	1963	1.1	1925	1.4	1935	1.2	1935	1.0	1911	1.0	1946	0.5	1940	0.8	1932	-0.2	1950
12	-0.1	1967	0.9	1931	2.4	1959	1.9	1990	1.2	1943	1.5	1912	1.4	1932	1.1	1938	1.0	1968	0.5	1924	0.8	1943	-0.2	1935
13	-0.1	1940	1.0	1969	2.6	1958	2.1	1957	1.4	1911	1.8	1968	1.5	1939	1.1	1935	1.0	1939	0.5	1945	0.9	1945	-0.1	1958
14	0.0	1959	1.1	1950	2.6	1957	2.2	1939	1.4	1941	1.8	1977	1.6	1930	1.2	1958	1.0	1943	0.7	1943	0.9	1938	-0.1	1934
15	0.0	1970	1.1	1975	2.6	1955	2.2	1926	1.4	1936	1.8	1910	1.6	1940	1.3	1956	1.1	1974	0.7	1929	1.0	1929	0.0	1931
16	0.0	1929	1.2	1957	3.0	1990	2.3	1936	1.6	1958	1.9	1938	1.8	1977	1.3	1970	1.2	1959	0.8	1958	1.0	1968	0.0	1961
17	0.0	1955	1.2	1960	3.0	1956	2.3	1981	1.7	1926	1.9	1922	1.8	1959	1.6	1939	1.2	1911	0.9	1942	1.1	1910	0.0	1940
18	0.1	1944	1.2	1914	3.1	1911	2.4	1958	1.8	1977	2.0	1939	1.8	1941	1.8	1954	1.2	1958	1.0	1959	1.1	1940	0.0	1953
19	0.1	1968	1.2	1955	3.3	1928	2.6	1946	2.0	1967	2.2	1989	2.0	1963	1.8	1973	1.2	1991	1.1	1949	1.1	1917	0.1	1937
20	0.2	1925	1.3	1929	3.7	2002	2.6	1911	2.4	1928	2.2	1958	2.0	1966	1.9	1959	1.2	1954	1.1	1956	1.2	1955	0.2	1924
21	0.2	1953	1.3	1989	3.9	1899	2.6	1977	2.6	1924	2.7	1964	2.0	1974	2.1	1965	1.4	1970	1.2	1947	1.3	1956	0.2	1948
22	0.3	1935	1.3	1928	4.0	1947	2.7	1967	2.7	1963	2.9	1932	2.2	1955	2.1	1952	1.5	1922	1.3	1930	1.3	1947	0.3	1956
23	0.3	1962	1.4	1934	4.0	1974	2.8	1932	2.8	1989	3.0	1988	2.3	1964	2.1	1948	1.5	1925	1.3	1969	1.4	1923	0.3	1964
24	0.4	1948	1.7	1938	4.1	1918	2.8	1955	2.8	1971	3.1	1921	2.3	2002	2.2	1922	1.5	1932	1.3	1917	1.5	1898	0.3	1955
25	0.4	1978	1.7	1917	4.1	1937	2.9	1940	2.8	1938	3.2	1930	2.5	1989	2.2	1925	1.6	1936	1.3	1963	1.5	1926	0.4	1930
26	0.5	1982	1.7	1922	4.3	1922	3.0	1898	2.9	1932	3.4	1970	2.6	1958	2.3	1914	1.6	1929	1.4	1925	1.5	1958	0.4	1939
27	0.5	1912	1.7	1899	4.7	1998	3.0	1954	3.0	1981	3.7	1937	2.7	1961	2.3	1940	1.7	1945	1.4	1910	1.5	1925	0.4	1927
28	0.5	1930	1.7	1925	4.7	1941	3.2	1964	3.0	1910	3.8	1940	2.8	1980	2.4	1989	1.7	1948	1.5	1960	1.5	1927	0.5	1967
29	0.6	1924	1.9	1958	4.8	1960	3.4	1941	3.0	1937	3.8	1976	2.9	1925	2.4	1974	1.7	1963	1.6	1974	1.5	1942	0.6	1942
30	0.6	1950	1.9	1964	4.9	1991	3.4	1942	3.1	1954	3.8	1900	3.0	1988	2.4	1988	1.8	1952	1.7	1952	1.6	1907	0.6	1945
31	0.6	1934	2.0	1967	4.9	1963	3.5	1930	3.2	1957	3.9	1927	3.0	1949	2.4	1947	1.8	1967	1.7	1970	1.6	1914	0.7	1925
32	0.6	1932	2.0	1930	4.9	1898	3.7	1974	3.3	1948	3.9	1952	3.0	1960	2.5	1967	1.9	1977	1.8	1898	1.6	1944	0.8	1936
33	0.7	1913	2.1	1990	4.9	1952	3.7	1989	3.4	1900	4.0	1966	3.3	1898	2.5	1991	2.0	1966	1.8	1967	1.6	1974	0.8	1910
34	0.7	1945	2.1	1918	5.0	1942	3.9	1899	3.4	1961	4.3	1943	3.3	1918	2.6	1957	2.1	1990	1.8	1916	1.6	1913	0.8	1912
35	0.7	1931	2.1	1979	5.0	1975	4.1	1961	3.9	1930	4.6	1949	3.4	1953	2.6	1976	2.1	1899	1.9	1913	1.8	1953	0.8	1976
36	0.7	1905	2.1	1978	5.0	1967	4.2	1937	4.0	1922	4.6	1981	3.5	1976	2.6	1929	2.1	2002	1.9	1950	1.9	1916	1.0	1946
37	0.7	1961	2.1	1902	5.1	1977	4.3	1928	4.2	1966	4.8	1913	3.5	1938	2.7	1949	2.2	1917	1.9	1922	1.9	1963	1.0	1928
38	0.7	1941	2.2	1977	5.1	1917	4.3	1914	4.2	1914	5.0	1973	3.5	1965	2.7	1966	2.3	1941	1.9	1907	1.9	1967	1.1	1960
39	0.8	1958	2.2	1905	5.2	1939	5.0	1971	4.4	1970	5.3	1948	3.6	1981	2.8	1969	2.3	1973	2.1	1901	1.9	1951	1.2	1926
40	0.8	1949	2.3	1926	5.3	1989	5.0	1908	4.8	1901	5.4	1961	3.7	1950	2.8	1919	2.4	1971	2.1	1966	2.0	1966	1.2	1963
41	0.9	1939	2.3	1941	5.3	1966	5.0	1970	4.8	1988	5.6	2002	3.7	1948	2.8	1963	2.4	1930	2.1	1988	2.0	1941	1.2	1969
42	0.9	1942	2.3	1972	5.4	1914	5.1	1972	4.9	1980	5.8	1974	3.8	1937	2.8	1977	2.4	1961	2.2	1921	2.0	1921	1.2	1914
43	0.9	1914	2.4	1953	5.5	1976	5.1	1905	4.9	1976	6.1	1959	4.1	1967	2.9	1971	2.5	1949	2.2	1941	2.0	1950	1.3	1916
44	0.9	1975	2.4	1924	6.1	1904	5.2	1966	5.0	1923	6.5	1978	4.2	1975	2.9	1930	2.5	1981	2.2	1991	2.1	1901	1.3	1952
45	0.9	1933	2.5	1963	6.2	1954	5.3	1988	5.0	1947	6.9	1960	4.4	1954	3.0	1964	2.5	1927	2.3	1927	2.1	1911	1.3	1917
46	1.0	1915	2.5	1913	6.3	2000	5.5	1921	5.1	1950	7.0	1963	4.6	1973	3.1	1898	2.6	1950	2.3	1976	2.1	1949	1.3	1957
47	1.0	1911	2.5	1949	6.4	1927	5.6	1950	5.1	1964	7.0	1925	4.7	1914	3.1	1913	2.6	1988	2.3	1964	2.1	1904	1.3	1923
48	1.0	1943	2.5	2001	6.5	1970	5.7	1922	5.2	1917	7.0	1902	4.7	1942	3.1	1981	2.7	1957	2.3	1948	2.2	1962	1.4	1922
49	1.0	1966	2.6	1904	6.5	1980	5.8	2002	5.3	1949	7.1	1992	4.8	1901	3.2	1950	2.7	1898	2.3	1981	2.3	1961	1.4	1941
50	1.1	1908	2.6	1951	6.6	1944	5.8	1976	5.5	1912	7.4	1918	4.8	1912	3.2	1918	2.7	1942	2.4	1904	2.3	1976	1.4	1966
51	1.1	1926	2.6	1947	6.7	1946	6.3	1953	5.5	1959	7.6	1980	5.0	1943	3.3	1942	2.8	1919	2.4	1989	2.4	1912	1.4	1983
52	1.1	1917	2.7	1911	6.8	1932	6.3	1980	5.7	1974	7.6	1950	5.0	1913	3.4	1980	2.9	1976	2.6	1962	2.4	1899	1.5	1901
53	1.2	1918	2.7	1962	6.8	1988	6.4	1902	6.0	1990	7.7	1898	5.0	1919	3.5	1961	2.9	1901	2.6	1899	2.4	1954	1.5	1962
54	1.2	1919	2.8	1912	7.2	1999	6.4	1918	6.4	2002	7.9	1965	5.1	1928	3.5	1943	2.9	1924	2.7	1920	2.5	1965	1.5	1951
55	1.2	1956	2.8	1910	7.5	1919	6.4	1945	6.4	1902	8.1	1928	5.1	1929	3.5	1901	3.0	1912	2.7	1977	2.5	1948	1.5	1954
56	1.2	1909	2.9	1981	7.5	1924	6.6	1924	6.4	1973	8.1	1987	5.3	1971	3.5	1990	3.0	1998	2.7	1909	2.5	1946	1.6	1904
57	1.2	1922	3.0	1927	7.6	1953	6.9	1904	6.6	1921	8.5	1969	5.3	1910	3.6	1928	3.0	1969	2.7	1938	2.5	1952	1.6	1921
58	1.3	1927	3.0	1923	7.6	1902	6.9	1944	6.7	1919	8.6	1905	5.3	1991	3.8	1985	3.0	1913	2.8	1918	2.7	1959	1.7	1990
59	1.3	1976	3.0	1998	7.7	1936	7.0	1910	6.7	1953	8.8	1985	5.4	1985	3.8	2002	3.0	1960	2.8	1912	2.7	1960	1.7	1977
60	1.4	1898	3.1	1954	7.7	1996	7.2	1982	7.3	1978	8.8	1901	5.9	1952	4.0	1917	3.0	1904	2.8	1944	2.7	1964	1.7	1906
61	1.4	1979	3.2	1965	7.9	1921	7.2	1917	7.7	1965	9.2	1942	6.0	1922	4.0	1912	3.3	1980	2.8	1954	2.8	1970	1.7	1908
62	1.5	1951	3.2	1961	8.0	1969	7.2	1991	7.9	1929	9.3	1982	6.3	1957	4.1	1924	3.3	1964	2.8	1990	2.8	1928	1.7	1898
63	1.5	1928	3.2	1952	8.2	1913	7.8	1923	8.4	1904	9.4	1975	6.3	1990	4.1	1960	3.7	1914	2.9	1957	2.9	1920	1.8	1911
64	1.5	1946	3.3	1944	8.2	1905	8.2	1900	8.4	1975	9.6	1957	6.4	1947	4.3	1910	3.7	1908	3.1	1906	3.0	1957	1.8	1903
65	1.6	1963	3.4	2002	8.3	1950	8.2	1973	8.5	1918	9.6	1929	6.8	1972	4.3	1904	3.8	1989	3.1	1911	3.0	1903	1.8	1907
66	1.6	1923	3.4	1901	8.4	1908	8.3	1992	8.6	1992	9.8	1972	7.1	1979	4.3	1902	3.8	2001	3.1	1914	3.0	1989	1.8	1919
67	1.7	1902	3.5	1898	8.4	1923	8.6	1907	9.1	1942	9.8	1919	7.3	1945	4.4	1972	3.9	1923	3.1	1968	3.1	1906	2.0	1959
68	1.7	1921	3.6	1900	8.5	1938	8.6	1913	9.5	1952	9.9	1906	7.5	1899	4.7	1953	3.9	1918	3.2	1971	3.1	1990	2.0	1913
69	1.7	1965	3.6	1908	9.0	1992	8.8	1919	9.6	1903	10.0	1916	7.6	1917	4.7	1997	4.1	1944	3.3	1900	3.1	1973	2.1	1970
70	1.7	1901	3.6	1919	9.2	1982	9.1	1909	9.6	1905	10.0	1920	7.8	1924	4.7	1937	4.1	1965	3.4	1928	3.2	1922	2.1	1900
71	1.8	1899	3.7	1921	9.4	1965	9.2	1948	9.8	1944	10.3	1979	7.8	1900	4.7	1975	4.1	1910	3.4	1926	3.2	2002	2.1	1920
72	1.8	1907	3.7	1970	9.7	1907	9.5	1947	9.9	1908	10.6	1947	8.1	1921	4.8	1899	4.4	1972	3.4	1961	3.3	1908	2.3	1965
73	1.8	1964	3.9	1974	9.8	1972	9.5	1903	10.0	1945	10.7	1944	8.1	1927	4.9	1982	4.4	1928	3.4	1903	3.3	1915	2.3	1902
74	1.8	1974	4.0	1920	9.9	1920	9.8	1916	10.2	1982	10.7	1914	8.1	1906	5.0	1927	4.4	1907	3.4	1972	3.3	2000	2.4	1899
75	1.8	1900	4.0	1909	10.1	1912	10.1	1975	10.2	1962	11.4	1953	8.5	1905	5.0	2001	4.5	1902	3.4	1975	3.5	1919	2.5	1915
76	1.9	1916	4.4	1903	10.4	2001	10.3	1901	10.2	1927	11.7	1899	8.7	1903	5.0	1945	4.5	1975	3.5	1919	3.5	1902	2.6	1981
77	1.9	1904	4.5	1945	11.1	1910	10.4	1927	10.3	1898	12.3	1990	8.8	1916	5.1	1905	4.5	1920	3.5	1923	3.6	1900	2.6	1974
78	1.9	1947	4.6	1973	11.1	1900	10.8	1920	10.4	1998	12.5	1971	9.6	2001	5.3	1920	4.5	1916	3.6	1946	3.6	1988	2.7	1905
79	2.0	1991	4.7	1988	11.2	1901	11.3	1906	10.5	1987	13.4	1904	9.7	1978	5.3	1921	4.5	1997	3.6	2002	3.7	1918	3.0	1918
80	2.2	1906	4.8	1986	11.6	1916	11.4	1996	10.6	1991	13.7	2000	10.2	1908	5.4	1908	4.8	1906	3.6	2001	3.8	1980	3.0	2002
81	2.3	1920	4.9	1976	11.6	1995	11.4	1915	10.8	1906	14.0	1923	10.2	1997	5.7	1923	4.8	1921	3.8	1908	3.9	1991	3.1	1988
82	2.4	1988	5.0	1946	11.8	1948	12.3	2000	10.9	1960	14.2	1917	10.3	1987	5.9	1909	5.0	1909	3.8	1987	3.9	1981	3.2	1980
83	2.4	1981	5.2	1991	12.1	1906	13.0	1912	11.2	2000	14.6	1909	10.4	1920	6.1	1900	5.2	1926	3.8	1951	4.1	1905	3.2	1971
84	2.4	1903	5.2	1906	12.4	1915	13.1	1949	11.3	1907	15.9	1997	11.3	1982	6.2	1962	5.2	2000	3.9	1965	4.3	1977	3.3	1909
85	2.8	1989	5.2	1987	12.5	1951	13.9	1994	11.3	1969	16.3	1903	11.4	1923	6.2	1944	5.3	1900	4.0	2000	4.5	1985	3.5	1972
86	2.8	2001	5.3	1993	13.0	1987	14.6	1978	11.6	1899	16.8	1907	11.4	1904	6.2	1916	6.0	1962	4.0	1980	4.5	2001	3.5	1978
87	3.0	1990	5.4	1995	13.7	1961	16.6	1952	11.9	1909	16.9	1945	11.5	1969	6.7	1906	6.0	1905	4.3	1905	4.6	1971	3.6	1973
88	3.4	2002	5.5	1943	13.8	1949	16.8	1998	12.2	1972	17.0	1951	11.6	1998	6.9	1978	6.1	1987	4.6	1973	4.8	1987	4.2	1987
89	3.5	1998	5.7	2000	14.5	1971	19.5	1985	12.3	1916	17.3	1991	12.4	1986	7.1	1987	6.2	1982	4.7	1998	5.0	1909	4.3	1997
90	3.9	1993	5.7	1907	14.8	1930	19.5	1929	12.3	1913	17.4	1954	12.6	1902	7.2	2000	6.4	1915	5.0	1915	5.1	1978	4.4	1991
91	4.0	1995	5.8	1916	15.2	1903	19.7	1979	12.3	1994	17.4	1924	12.9	2000	7.3	1998	6.6	1996	5.4	1999	5.1	1997	4.6	1975
92	4.5	1986	5.8	1999	15.6	1984	19.7	1999	13.1	1996	17.8	2001	13.0	1907	7.5	1986	6.6	1995	5.5	1978	5.1	1975	4.8	2000
93	4.6	1996	5.9	1915	15.8	1985	20.4	1987	13.2	1915	17.8	1998	14.3	1909	8.2	1994	6.6	1983	5.9	1902	5.5	1994	5.1	1994
94	4.7	1992	6.0	1980	15.9	1945	24.3	1965	14.4	1985	18.5	1967	14.3	1992	8.3	1983	6.8	1994	5.9	1997	5.7	1999	5.3	2001
95	4.8	2000	6.5	1948	16.1	1909	26.1	1951	14.8	1979	18.8	1994	14.7	1994	9.3	1907	7.0	1999	6.1	1994	5.8	1996	5.5	1985
96	5.0	1999	6.6	1992	17.2	1962	27.3	1995	15.3	1951	18.9	1986	15.2	1995	9.5	1903	7.9	1985	6.1	1996	6.0	1972	5.9	1996
97	5.4	1910	7.0	1985	17.4	1978	33.0	1986	17.4	1999	20.4	1962	16.0	1962	10.0	1979	8.2	1978	6.4	1979	8.5	1983	6.0	1999
98	5.5	1994	7.3	1982	20.2	1997	35.6	1993	18.1	1920	21.2	1915	16.0	1951	10.3	1992	8.4	1984	6.9	1983	8.7	1995	6.2	1992
99	5.6	1997	7.9	1996	21.6	1993	36.0	1962	21.7	1983	21.7	1999	17.1	1999	10.3	1999	8.5	1903	7.4	1985	9.3	1993	7.1	1995
100	5.6	1980	8.8	1966	21.6	1994	36.6	1983	27.7	1997	23.9	1908	17.8	1996	10.9	1995	8.6	1979	10.6	1995	10.3	1992	7.6	1998
101	5.8	1985	9.4	1994	22.4	1986	38.5	2001	28.2	1993	24.5	1996	20.0	1944	11.3	1984	9.7	1938	10.8	1982	11.6	1984	7.7	1979
102	6.2	1973	10.7	1997	22.5	1929	39.4	1960	29.6	2001	29.9	1995	22.0	1915	13.5	1951	9.9	1951	10.9	1984	11.7	1998	8.3	1993
103	6.3	1984	10.9	1971	22.7	1973	43.4	1969	29.7	1984	30.1	1983	22.5	1983	13.8	1915	10.2	1992	11.3	1993	12.0	1986	8.7	1986
104	7.0	1987	11.8	1984	27.1	1979	44.8	1997	32.0	1986	39.0	1993	23.6	1984	15.3	1996	15.0	1986	13.8	1992	12.7	1979	9.3	1984
105	8.6	1983	14.0	1983	33.0	1983	45.4	1984	39.6	1995	59.7	1984	69.7	1993	25.2	1993	17.0	1993	16.1	1986	14.1	1982	10.9	1982

Gavins Point to Nebraska City Incremental Flows



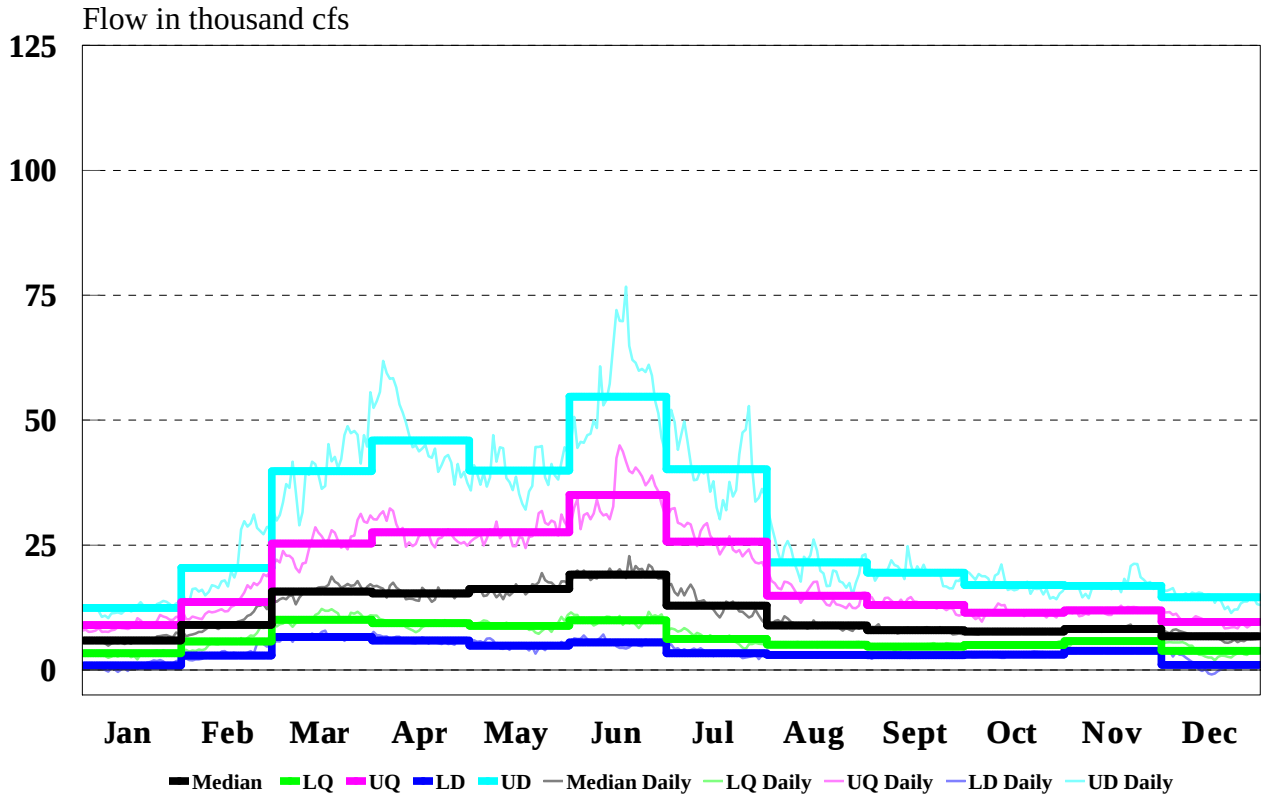
Gavins Point to Nebraska City Incremental Flows (Lower Values Expanded)



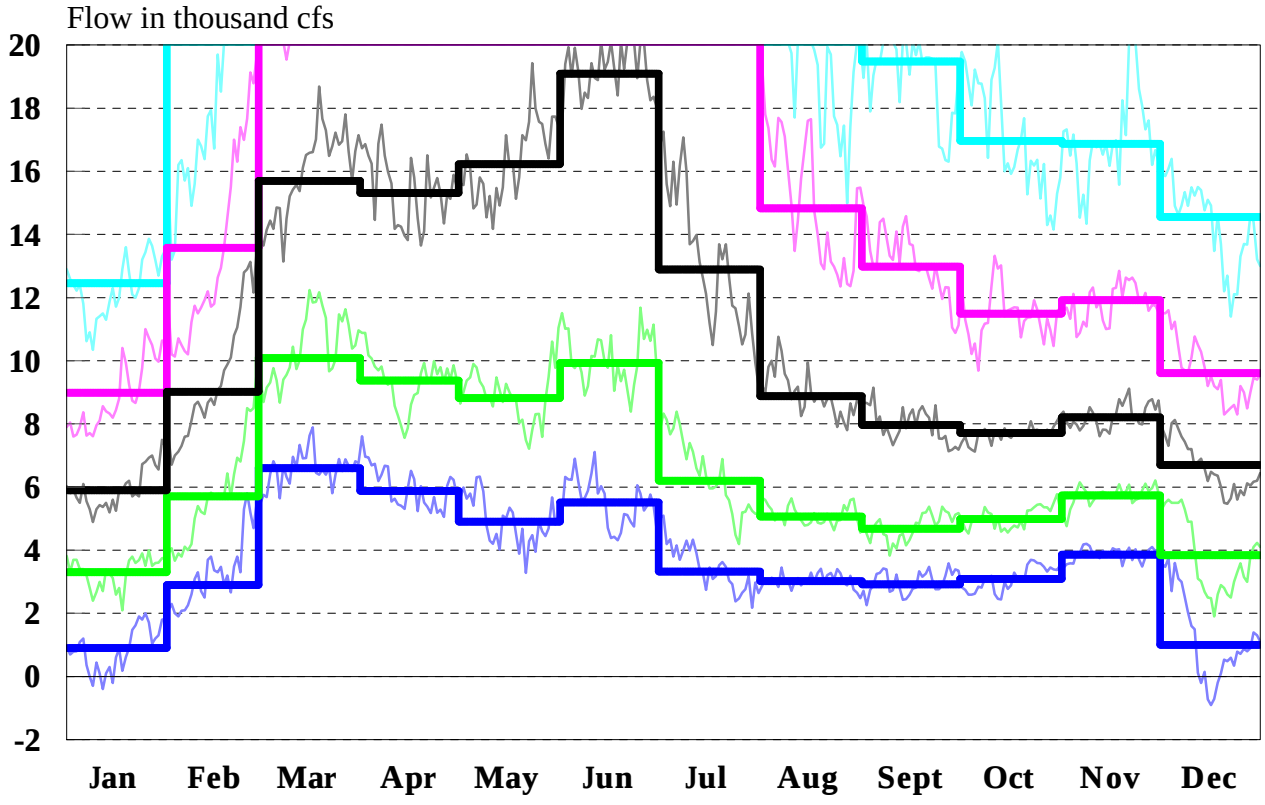
Gavins Point to Nebraska City
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-0.4	1937	1.3	1936	3.7	1925	3.7	1925	2.2	1926	1.8	1911	1.3	1926	1.5	1911	1.8	1940	1.8	1940	2.1	1924	-0.1	1943
2	0.5	1936	1.8	1914	4.8	1928	4.1	1990	2.4	1934	1.9	1926	1.3	1936	1.7	1936	1.9	1991	1.9	1936	2.1	1914	0.3	1989
3	0.5	1968	2.4	1940	5.6	1926	4.5	1898	2.9	1911	3.6	1956	1.7	1911	1.7	1934	2.0	1953	2.0	1939	2.1	1939	0.7	1924
4	0.7	1925	2.8	1939	5.7	1943	5.2	1981	3.0	1955	3.6	1933	2.1	1934	1.7	1941	2.0	1956	2.1	1924	2.8	1936	0.9	1944
5	0.8	1971	3.0	1928	6.2	1981	5.2	1934	3.1	1925	3.9	1936	2.6	1974	1.8	1946	2.1	1939	2.6	1937	3.0	1923	0.9	1927
6	1.0	1912	3.4	1917	6.4	1899	5.5	1935	4.1	1940	4.2	1989	3.0	1946	2.1	1955	2.3	1955	2.7	1935	3.1	1937	1.0	1929
7	1.1	1940	3.9	1978	6.6	1918	5.5	1956	4.5	1989	4.6	1934	3.1	1940	2.4	1931	2.4	1974	2.8	1953	3.6	1934	1.2	1932
8	1.3	1957	4.0	1933	6.8	1934	5.8	1943	4.5	1956	5.4	1931	3.1	1931	2.8	1970	2.5	1947	2.9	1934	3.7	1907	1.3	1912
9	1.3	1977	4.2	1913	6.8	1968	6.0	1968	4.5	1946	5.4	1988	3.2	1956	2.9	1933	2.8	1911	2.9	1943	3.7	1910	1.8	1940
10	1.6	1924	4.3	1937	6.9	1935	6.2	1955	4.5	1941	5.7	1912	3.2	1968	2.9	1991	2.8	1990	3.1	1991	3.7	1917	1.9	1955
11	1.6	1969	4.5	1910	7.7	1911	6.2	1989	4.7	1968	6.1	1922	3.3	2002	3.0	1926	3.0	1934	3.3	1956	3.8	1940	1.9	1934
12	1.7	1913	4.6	1956	7.7	1957	6.5	1938	4.8	1939	6.1	1939	3.5	1970	3.0	1989	3.3	1937	3.3	1974	3.8	1943	2.0	1945
13	2.0	1954	4.9	1979	7.7	1990	6.7	1942	5.1	1967	6.2	1955	3.8	1941	3.0	1976	3.3	1954	3.3	1931	3.9	1933	2.0	1956
14	2.1	1972	5.0	1912	7.8	1956	6.7	1940	5.1	1943	6.3	1968	3.9	1939	3.3	1968	3.3	1971	3.4	1955	4.0	1956	2.2	1990
15	2.2	1935	5.0	1975	7.9	1964	6.7	1967	5.2	1914	6.3	1941	3.9	1976	3.3	1988	3.5	1943	3.4	1942	4.0	1938	2.2	1914
16	2.2	1905	5.0	1957	8.4	1931	6.9	1946	5.4	1928	6.5	1910	4.3	1955	3.4	1956	3.5	1976	3.4	1933	4.1	1926	2.4	1939
17	2.4	1970	5.1	1899	8.6	1940	6.9	1936	6.0	1981	6.7	1976	4.4	1933	3.6	1939	3.5	1968	3.6	1958	4.1	1945	2.5	1950
18	2.5	1915	5.1	1924	8.6	1991	7.3	1911	6.3	1901	6.8	1981	4.5	1988	3.7	1974	3.6	1931	3.7	1947	4.2	1955	2.7	1958
19	2.5	1960	5.2	1989	8.7	1917	7.4	1926	6.7	1924	6.8	1938	4.5	1981	4.2	1971	3.7	1945	3.8	1945	4.4	1941	2.7	1925
20	2.5	1967	5.2	1923	9.4	1898	7.6	1908	6.8	1936	7.0	1977	4.6	1980	4.2	1938	3.8	1935	3.9	1922	4.6	1931	2.8	1910
21	2.7	1948	5.3	1938	9.7	1933	7.7	1933	7.2	1931	7.6	1958	4.6	1963	4.3	1947	3.9	2002	4.0	1990	4.6	1944	2.8	1937
22	3.0	1941	5.3	1942	9.8	2002	7.7	1957	7.2	1948	8.2	1948	4.6	1977	4.5	1935	3.9	1970	4.1	1989	4.6	1950	2.9	1935
23	3.1	1979	5.6	1905	9.9	1967	7.9	1941	7.4	1937	8.2	1970	4.8	1966	4.6	1913	4.0	1936	4.3	1917	4.8	1935	2.9	1963
24	3.1	1982	5.6	1990	9.9	1941	8.0	1899	7.8	1963	9.0	1946	5.3	1901	4.7	1969	4.0	1988	4.6	1988	5.0	1976	3.0	1936
25	3.1	1978	5.7	1909	10.1	1977	8.5	1939	8.1	1958	9.4	1937	5.8	1932	4.8	1965	4.0	1959	4.6	1976	5.1	1898	3.1	1949
26	3.1	1955	5.7	1955	10.9	1927	8.5	1963	8.4	1932	9.5	1913	5.8	1989	4.9	1973	4.1	1967	4.8	1932	5.2	1927	3.4	1922
27	3.2	1909	5.8	1900	11.2	1955	8.7	1937	8.5	1923	9.6	2002	5.9	1975	5.0	1940	4.2	1946	4.8	1963	5.2	1911	3.5	1938
28	3.4	1991	6.1	1902	11.4	1914	8.9	1931	9.1	1966	9.9	1901	6.1	1954	5.0	1901	4.4	1980	4.9	1910	5.3	1974	3.6	1968
29	3.5	1914	6.2	1922	11.5	1976	9.1	1977	9.3	1990	10.0	1966	6.2	1961	5.2	1980	4.5	1901	5.0	1907	5.3	1913	3.7	1942
30	3.5	1959	6.3	1969	11.7	1996	9.6	1954	9.4	1977	10.5	1974	6.7	1959	5.2	1943	4.8	1981	5.0	1941	5.3	1966	3.7	1926
31	3.5	1950	6.4	1981	11.9	1942	10.0	1932	9.5	1910	10.6	1992	6.8	1935	5.3	1963	4.9	1969	5.0	1948	5.5	1948	3.7	1908
32	3.5	1944	6.6	1918	12.1	1947	10.0	1914	9.9	1988	11.1	1900	6.8	1912	5.3	1914	5.0	1950	5.2	1975	5.5	1942	3.8	1923
33	3.5	1975	6.8	1935	12.1	1904	10.2	1921	10.0	1970	11.4	1921	7.3	1898	5.3	1954	5.0	1912	5.2	1966	5.5	1899	3.9	1976
34	3.6	1908	6.8	1901	12.3	2000	10.2	1959	10.3	1947	12.0	1940	7.4	1953	5.6	1967	5.1	1922	5.2	1949	5.6	1969	4.1	1961
35	3.6	1942	6.9	1904	12.6	1975	10.5	1964	10.4	1938	12.6	1978	7.6	1964	5.7	1990	5.2	1932	5.3	1916	5.7	1932	4.3	1916
36	3.7	1929	6.9	1959	12.7	1958	10.6	1972	10.4	1933	13.3	1927	7.7	1991	5.7	1975	5.2	1941	5.3	1938	5.7	1953	4.3	1964
37	3.8	1938	7.0	1967	12.8	1959	10.6	1988	10.6	1957	13.6	1959	8.0	1930	5.7	2002	5.3	1966	5.4	1944	5.8	1952	4.4	1967
38	3.8	1930	7.1	1941	12.8	1970	10.7	1982	10.7	1954	13.9	1972	8.2	1937	5.8	1949	5.4	1952	5.4	1925	6.0	1916	4.4	1933
39	3.9	1951	7.3	1925	12.9	1989	10.7	2002	10.7	1976	14.4	1961	8.3	1910	6.0	1942	5.5	1963	5.5	1967	6.1	1947	4.5	1948
40	3.9	1958	7.3	1977	13.0	1923	11.0	1976	10.9	1900	14.6	1950	8.7	1948	6.1	1957	5.5	1958	5.6	1959	6.2	1989	4.5	1947
41	4.0	1911	7.3	1934	13.2	1946	11.1	1991	10.9	1961	14.7	1963	8.8	1985	6.3	1964	5.6	1933	5.6	1899	6.2	1988	4.7	1906
42	4.1	1956	7.3	1964	13.2	1954	11.3	1961	12.0	1922	15.0	1979	9.2	1938	6.5	1912	5.6	1913	5.7	1964	6.2	1967	4.8	1953
43	4.1	1917	7.4	1951	13.3	1913	12.3	1930	12.5	1935	15.5	1930	9.3	1918	6.6	1961	5.6	1961	5.7	1952	6.2	1925	4.8	1960
44	4.1	1961	7.5	1929	13.5	1921	12.3	1966	12.6	1992	15.6	1906	9.6	1913	6.9	1953	5.9	1917	5.8	1981	6.2	1963	4.8	1917
45	4.2	1962	7.6	1960	13.6	1924	12.3	1971	12.6	2002	15.7	1985	9.9	1960	6.9	1997	5.9	1975	5.9	1913	6.3	1964	4.8	1966
46	4.3	1963	7.6	1958	13.8	1922	12.4	1992	12.7	1975	15.7	1969	10.6	1990	7.7	1985	6.0	1948	5.9	1980	6.4	1958	5.1	1941
47	4.3	1932	7.7	1950	14.1	1939	12.6	1928	13.3	1907	16.2	1975	10.9	1972	7.7	1977	6.1	1998	6.1	1950	6.5	1990	5.2	1954
48	4.4	1943	8.2	1898	14.1	1998	12.8	1924	13.5	1964	16.9	1932	11.2	1942	7.7	1922	6.1	1929	6.1	1971	6.6	1954	5.2	1962
49	4.4	1939	8.2	1968	14.1	1999	13.1	1958	13.5	1912	17.1	1952	11.5	1971	7.8	1937	6.2	1925	6.2	1960	6.6	1949	5.3	1911
50	4.5	1949	8.2	1965	14.7	1988	13.2	1970	14.8	2000	17.3	2000	11.6	1973	7.8	1952	6.6	1957	6.3	1898	6.7	1980	5.3	1919
51	4.6	1926	8.3	1972	14.8	1992	13.3	1948	14.9	1980	18.0	1987	11.7	1949	8.1	1898	6.7	2000	6.5	1954	7.0	1968	5.5	1901
52	4.7	1918	8.3	1944	14.8	1966	13.8	1953	15.1	1921	18.8	1943	12.0	1925	8.1	1972	6.7	1927	6.7	2002	7.1	2002	5.6	1904
53	4.7	1919	8.3	1963	14.8	1974	13.8	1910	15.3	1991	19.0	1964	12.4	1952	8.3	1930	6.8	1899	6.7	1969	7.1	1912	5.8	1974
54	4.7	1952	8.5	1949	15.0	1920	13.8	1950	15.4	1974	19.4	1918	12.5	1943	8.4	1919	6.9	1949	6.9	1970	7.1	1991	5.8	1907
55	4.8	1927	8.5	2001	15.3	1944	14.4	1900	15.5	1902	19.7	1949	12.5	1967	8.6	1932	7.1	1944	7.1	1901	7.3	1901	5.9	1931
56	4.8	1945	8.6	1927	15.4	1937	14.6	1974	15.8	1917	19.7	1898	12.7	1979	8.7	2001	7.1	1924	7.2	1909	7.3	1957	6.1	1980
57	5.0	1966	8.6	1947	15.9	1908	15.0	1905	15.9	1949	20.4	1980	12.9	1987	8.7	1945	7.6	1960	7.3	1957	7.3	1904	6.2	1957
58	5.1	1934	8.9	1961	16.2	1980	15.3	1907	15.9	1994	20.6	1914	13.0	1997	8.8	1966	7.7	1964	7.3	1977	7.4	1975	6.3	1903
59	5.2	1947	9.0	1926	16.2	1902	15.6	1996	16.3	1978	20.6	1905	13.1	1957	8.8	1981	7.9	1898	7.4	1972	7.5	1962	6.3	1952
60	5.3	1922	9.3	1921	16.3	1907	15.8	1909	17.4	1950	21.0	1953	13.8	1914	8.8	1910	8.0	2001	7.4	1987	7.7	1959	6.3	1970
61	5.5	1898	9.4	1962	16.4	1960	16.1	1923	17.5	1908	21.4	1997	13.8	1965	8.8	2000	8.0	1923	7.6	1928	7.8	1978	6.4	1959
62	5.5	1964	9.5	1903	17.2	1900	16.1	1945	18.0	1969	21.4	1965	14.8	2001	8.9	1959	8.2	1997	7.6	2000	8.0	1960	6.5	1969
63	5.5	1965	9.5	1908	17.4	1938	16.3	1902	18.0	1971	22.0	1920	14.8	1978	9.3	1925	8.8	1904	7.7	1978	8.1	1970	6.6	1921
64	5.5	1988	9.6	2002	17.6	1963	16.5	1980	18.1	1953	22.1	1973	15.7	1928	9.5	1929	8.8	1994	7.7	1920	8.3	1921	6.7	1988
65	5.5	1946	9.9	1932	17.7	1906	16.7	1947	18.1	1918	22.2	1990	15.7	1950	9.6	1978	9.0	1919	7.8	2001	8.3	1961	6.7	1900
66	5.6	1923	9.9	1931	18.1	1953	16.7	1975	18.3	1927	22.4	1960	15.7	1906	10.2	1960	9.3	1977	7.9	1962	8.4	1922	6.8	1946
67	5.8	1976	9.9	1920	18.3	1952	16.8	1903	18.4	1906	22.5	1909	16.1	1919	10.3	1918	9.3	1995	7.9	1904	8.4	1981	6.8	1898
68	6.0	1928	10.0	1911	18.3	1972	16.8	2000	18.5	1942	22.7	1928	16.4	1958	10.5	1909	9.3	1972	8.1	1906	8.5	1908	6.8	1902
69	6.0	1981	10.1	1953	18.4	1982	19.2	1917	18.8	1898	22.9	1942	16.4	1900	10.5	1950	9.4	1973	8.1	1914	8.5	1987	6.9	1951
70	6.2	1990	10.5	1991	19.0	1995	19.6	1994	19.4	1962	23.7	1925	16.4	2000	10.5	1948	9.6	1930	8.3	1927	8.8	2000	6.9	2002
71	6.2	1921	10.6	1992	19.2	1910	19.9	1918	19.9	1945	23.7	1994	17.4	1945	10.6	1924	9.7	1942	8.3	1994	9.1	1999	7.2	1920
72	6.3	1901	10.7	1945	20.2	1901	20.5	1904	20.0	1909	23.8	1957	17.9	1992	11.0	1994	9.9	1999	8.4	1912	9.2	1985	7.2	1978
73	6.3	1907	11.1	1954	20.7	1912	21.1	1944	20.4	1998	24.5	1935	18.1	1982	11.3	1944	10.0	1908	8.4	1929	9.2	1920	7.3	1930
74	6.4	1900	11.1	1993	21.6	1919	21.3	1922	21.0	1959	24.6	1916	19.0	1947	11.8	1982	10.0	1906	8.5	1999	9.2	1994	7.4	1899
75	6.4	1953	11.5	1946	21.7	1950	22.7	1913	21.3	1965	26.1	1982	19.1	1969	11.9	1987	10.1	1989	8.6	1961	9.3	1951	7.5	1913
76	6.5	1931	11.7	1980	21.9	1932	22.9	1973	22.0	1952	26.1	2001	19.8	1903	11.9	1928	10.3	1909	8.7	1997	9.4	1906	7.6	1991
77	6.7	1902	11.8	1995	22.2	1930	24.3	1949	22.8	1973	26.5	1986	21.8	1995	12.0	1958	10.4	1910	8.7	1921	9.4	1946	7.6	1977
78	6.9	1916	11.9	1906	22.3	1961	24.8	1906	22.9	1979	26.8	1902	22.1	1994	12.5	1979	10.5	1978	8.8	1996	9.4	1971	7.7	1981
79	7.0	1933	12.0	1976	22.9	1905	25.4	1916	24.3	1919	27.8	1971	22.2	1996	12.6	1917	10.6	1962	8.8	1968	9.5	1997	7.7	2000
80	7.1	1989	12.1	1970	22.9	1965	25.5	1915	24.5	1996	27.9	1954	22.7	1998	12.8	1904	10.6	1979	9.1	1911	9.5	2001	7.8	1985
81	7.3	1993	12.2	1986	23.0	1915	25.9	1901	24.6	1987	28.3	1991	22.7	1921	12.9	1962	10.7	1982	9.3	1979	9.6	1929	8.0	1971
82	7.3	1899	12.2	1988	24.5	2001	27.7	1979	24.8	1972	32.2	1919	23.0	1986	12.9	1995	10.8	1996	9.7	1930	9.7	1930	8.2	1975
83	7.4	1904	12.4	2000	24.5	1936	28.1	1985	25.1	1982	34.5	1998	23.4	1924	13.2	1906	11.0	1987	9.7	1998	9.9	1965	8.2	1928
84	7.7	1992	12.4	1998	24.7	1916	29.6	1952	25.7	1905	34.5	1907	23.6	1922	13.3	1920	11.2	1907	9.8	1908	10.3	1902	8.2	1905
85	7.7	1906	12.5	1919	25.8	1969	30.7	1978	25.7	1930	34.6	1899	24.4	1916	13.5	1998	11.3	1928	9.9	1900	10.6	1915	8.6	1915
86	8.0	2001	12.5	1985	26.4	1985	31.1	1920	26.3	1985	34.7	1944	24.4	1962	13.5	1984	12.2	1985	10.3	1918	10.8	1919	8.8	1983
87	8.1	1996	13.6	1948	26.4	1945	31.7	1998	27.2	1944	36.7	1945	26.2	1999	13.8	1923	12.3	1920	10.5	1919	10.8	1903	9.1	1965
88	8.2	1995	13.7	1987	28.0	1997	31.7	1919	27.4	1913	36.8	1999	26.2	1917	14.0	1986	12.3	1916	11.6	1923	11.0	1996	9.3	1972
89	8.5	1998	14.2	1996	28.4	1951	33.0	1999	27.7	1960	37.2	1962	27.0	1944	14.1	1900	12.4	1984	12.0	1903	11.2	1977	9.3	1994
90	8.8	1997	14.7	1943	29.2	1948	34.9	1927	27.9	1916	37.9	1923	27.3	1927	14.4	1921	12.5	1914	12.0	1951	11.4	1900	9.4	1996
91	8.8	1980	14.7	1930	29.5	1971	35.7	1951	28.6	1904	38.2	1924	28.2	1899	14.9	1902	13.1	1900	12.4	1905	12.3	1995	9.9	1973
92	8.9	1920	14.9	1999	31.7	1909	36.2	1965	29.8	1929	39.0	1996	28.2	1929	14.9	1992	14.2	1921	12.5	1926	12.4	1905	10.0	1992
93	9.0	1903	15.8	1982	32.4	1903	37.2	1995	29.9	1951	39.7	1951	28.2	1951	15.4	1983	14.2	1992	12.9	1985	12.6	1973	10.3	1997
94	9.0	2000	15.9	1994	32.8	1984	39.5	1912	30.2	1997	40.5	1904	28.7	1905	15.4	1908	14.4	1918	13.3	1946	12.8	1983	10.5	1987
95	9.0	2002	16.1	1952	32.8	1994	41.5	1987	30.3	1899	43.5	1947	31.5	1920	16.1	1927	14.4	1983	13.4	1995	13.6	1972	10.8	1999
96	9.0	1994	16.6	1915	33.7	1986	44.0	1986	30.7	1903	47.0	1929	33.4	1908	16.7	1905	15.7	1938	13.9	1983	14.6	1918	11.0	1995
97	9.4	1974	16.8	1973	34.5	1962	45.1	1993	31.1	1999	48.4	1993	33.9	1984	17.3	1916	16.4	1902	15.6	1965	14.9	1992	11.0	2001
98	9.8	1985	16.9	1907	34.6	1987	45.2	1929	31.8	1915	48.8	1995	35.1	1923	17.6	1999	17.4	1965	16.6	1992	15.6	1928	11.8	1909
99	10.1	1986	17.3	1974	38.9	1978	48.1	1962	37.6	1993	52.8	1917	40.0	1909	17.9	1899	18.4	1915	17.6	1915	15.6	1993	12.1	1918
100	10.9	1999	17.3	1966	40.5	1973	50.2	1997	39.4	1983	56.8	1983	41.7	1904	20.0	1996	18.7	1951	17.9	1984	17.9	1979	12.9	1979
101	13.1	1984	18.2	1916	43.6	1993	51.3	2001	40.4	1986	57.3	1967	41.7	1907	22.8	1951	21.9	1926	18.0	1982	18.1	1909	13.7	1998
102	13.6	1987	18.3	1997	43.7	1949	54.4	1983	40.8	1920	64.2	1903	41.9	1983	27.4	1907	23.2	1905	18.4	1993	18.6	1984	15.1	1982
103	15.1	1983	25.2	1971	44.6	1929	55.1	1969	44.3	2001	67.6	1915	49.4	1902	28.6	1903	23.7	1986	20.2	1973	19.0	1982	15.2	1993
104	15.8	1973	26.4	1983	45.7	1983	65.6	1960	55.8	1995	69.7	1908	78.5	1915	38.4	1993	26.8	1993	20.5	1902	19.0	1998	18.1	1986
105	22.5	1910	28.2	1984	48.0	1979	80.4	1984	65.0	1984	102.1	1984	107.6	1993	48.1	1915	27.2	1903	29.9	1986	20.4	1986	19.6	1984

Gavins Point to Rulo Incremental Flows



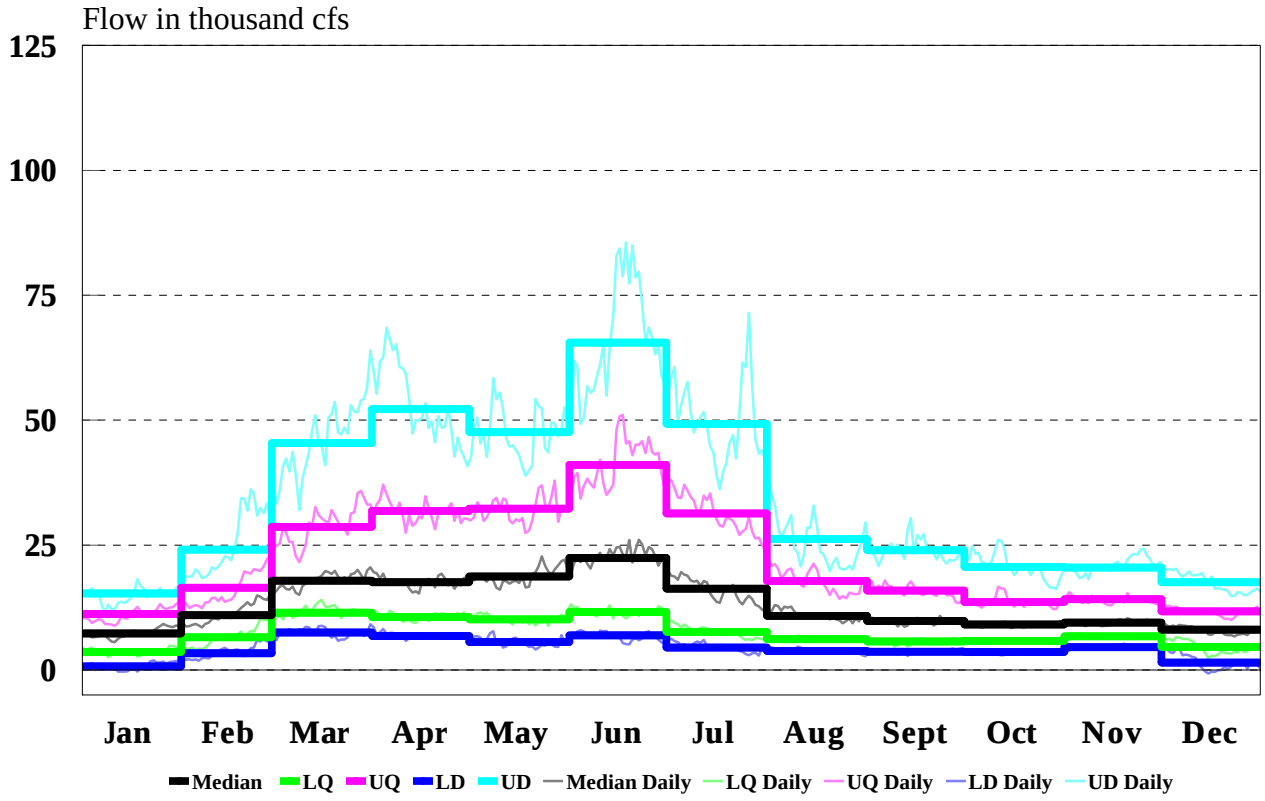
Gavins Point to Rulo Incremental Flows (Lower Values Expanded)



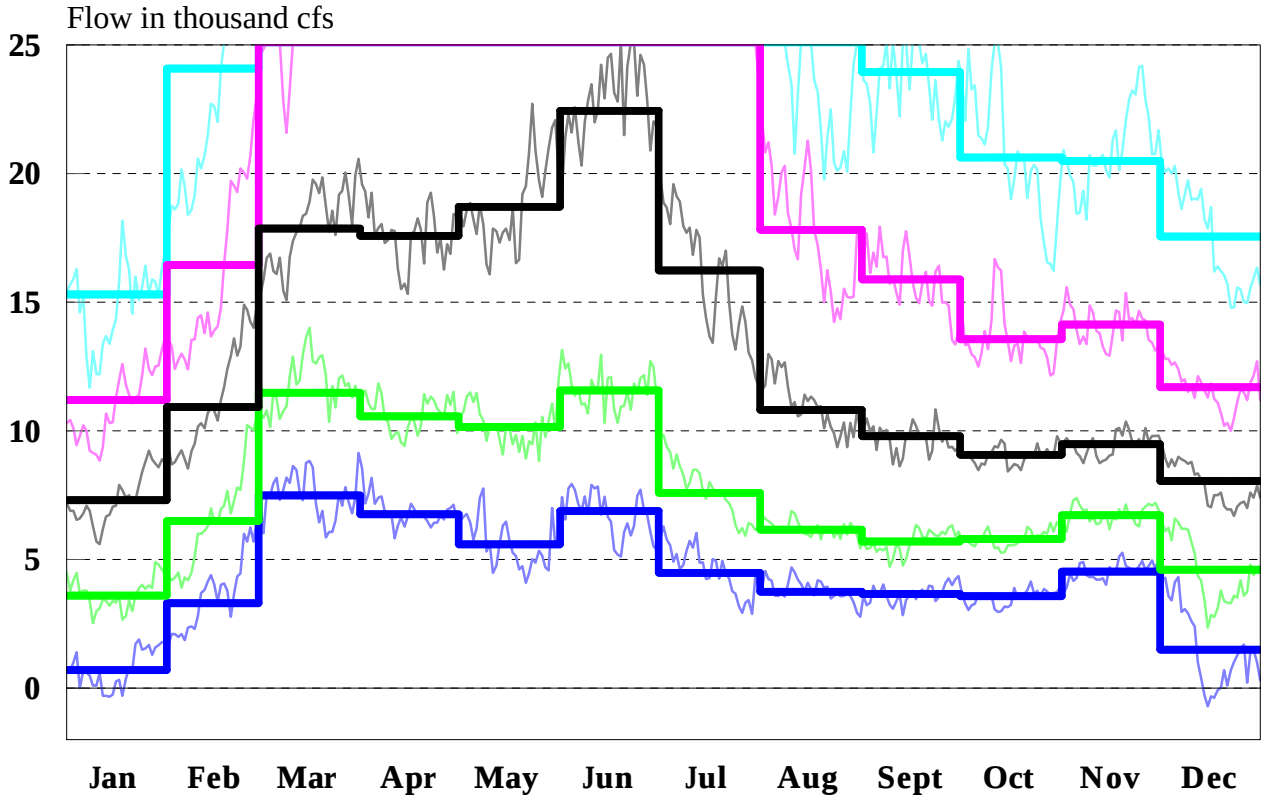
Gavins Point to Rulo
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-0.2	1937	1.4	1936	4.5	1925	4.6	1925	2.5	1934	2.2	1926	1.4	1936	1.7	1911	1.6	1953	1.9	1940	2.2	1939	0.0	1943
2	0.4	1936	2.2	1914	4.6	1928	5.4	1934	2.6	1926	2.3	1911	2.4	1911	1.7	1934	2.0	1940	2.1	1939	2.4	1914	0.8	1924
3	0.7	1925	2.3	1940	6.2	1918	5.4	1898	3.6	1911	3.8	1956	2.4	1934	1.8	1936	2.3	1939	2.2	1936	2.7	1924	0.9	1989
4	1.0	1968	3.1	1939	6.5	1981	5.6	1981	3.8	1925	4.0	1933	2.5	1926	1.9	1941	2.4	1955	2.4	1953	2.9	1936	1.1	1944
5	1.0	1912	3.7	1928	6.5	1934	5.7	1935	4.2	1955	4.5	1936	3.5	1946	2.5	1955	2.6	1956	2.6	1924	3.3	1937	1.4	1927
6	1.0	1971	4.1	1917	6.6	1943	5.8	1956	4.3	1940	4.9	1934	3.6	1931	2.7	1931	2.9	1991	2.7	1937	3.5	1923	1.4	1955
7	1.2	1940	4.3	1978	6.6	1926	6.6	1943	4.7	1956	6.7	1968	3.6	1940	2.9	1946	2.9	1947	2.9	1935	3.6	1934	1.5	1912
8	1.8	1969	4.4	1933	7.2	1899	6.7	1938	4.8	1941	6.9	1988	3.9	1970	3.2	1933	2.9	1934	2.9	1934	3.9	1943	1.7	1932
9	1.8	1924	4.7	1956	7.5	1935	6.8	1968	5.1	1939	7.1	1939	4.0	1974	3.3	1970	3.0	1911	3.0	1943	4.0	1933	1.8	1940
10	1.9	1957	4.9	1913	7.8	1968	6.8	1990	5.3	1989	7.2	1931	4.1	2002	3.4	1926	3.2	1974	3.5	1955	4.1	1940	1.9	1934
11	1.9	1977	5.2	1979	8.0	1957	6.9	1940	5.5	1946	7.2	1977	4.2	1968	3.8	1976	3.4	1937	3.6	1933	4.2	1938	2.3	1945
12	1.9	1913	5.2	1938	8.2	1956	6.9	1955	5.6	1968	7.4	1989	4.4	1956	4.2	1968	3.9	1943	3.6	1956	4.5	1910	2.3	1929
13	2.2	1954	5.3	1910	8.3	1964	7.3	1936	5.8	1943	7.4	1912	4.4	1941	4.4	1956	3.9	1954	3.7	1942	4.6	1945	2.5	1939
14	2.2	1935	5.6	1957	8.7	1931	7.4	1967	5.8	1914	7.4	1938	4.4	1933	4.5	1939	3.9	1971	4.1	1947	4.7	1907	2.6	1914
15	2.5	1905	5.7	1912	9.1	1917	7.4	1942	6.0	1967	7.5	1955	4.8	1977	4.5	1989	4.0	1990	4.1	1991	4.7	1956	2.8	1937
16	2.7	1915	5.7	1975	9.1	1940	7.6	1946	6.5	1981	7.9	1981	4.9	1939	4.5	1988	4.1	1935	4.3	1945	4.8	1926	3.0	1990
17	2.8	1959	5.8	1989	9.2	1911	7.8	1989	6.5	1928	8.2	1910	5.1	1980	4.5	1991	4.1	1968	4.4	1931	4.8	1917	3.0	1950
18	2.8	1970	6.1	1924	10.2	1933	8.2	1933	7.3	1936	8.2	1922	5.1	1955	4.6	1971	4.1	1976	4.7	1974	4.8	1944	3.0	1956
19	2.9	1967	6.1	1923	10.2	1990	8.4	1941	7.4	1901	8.9	1941	5.2	1981	4.7	1938	4.2	1945	4.8	1922	4.9	1955	3.1	1936
20	3.1	1948	6.2	1909	10.2	1927	8.4	1957	7.4	1931	8.9	1958	5.2	1976	4.8	1935	4.5	1931	5.1	1917	5.2	1935	3.2	1935
21	3.2	1972	6.2	1937	10.3	1967	8.7	1911	7.8	1948	9.1	1948	5.2	1963	5.0	1974	4.5	1970	5.2	1948	5.3	1953	3.2	1963
22	3.3	1941	6.3	1899	10.3	1941	8.9	1926	8.0	1924	9.2	1970	5.7	1966	5.2	1913	4.5	2002	5.2	1932	5.4	1976	3.4	1925
23	3.3	1979	6.4	1942	10.6	2002	8.9	1908	8.0	1937	9.5	1976	6.3	1901	5.2	1947	4.8	1980	5.3	1990	5.5	1941	3.4	1910
24	3.4	1955	6.5	1905	11.5	1898	9.1	1937	9.1	1958	10.3	1937	6.4	1988	5.5	1901	4.8	1901	5.3	1976	5.7	1950	3.4	1958
25	3.4	1944	6.6	1955	11.6	1991	9.3	1899	9.5	1963	10.4	1901	6.6	1954	6.0	1965	4.9	1967	5.5	1938	5.7	1948	3.6	1938
26	3.8	1982	6.6	1900	11.6	1977	9.3	1931	9.8	1923	10.6	2002	6.9	1932	6.2	1967	5.4	1936	5.5	1963	5.8	1942	4.0	1942
27	3.9	1909	6.8	1935	12.1	1955	9.3	1939	10.3	1966	10.9	1946	7.0	1953	6.2	1980	5.5	1988	5.5	1958	5.9	1927	4.1	1922
28	3.9	1938	6.9	1981	12.8	1976	9.6	1963	10.3	1932	12.1	1966	7.3	1935	6.2	1943	5.5	1912	5.5	1989	6.1	1966	4.1	1949
29	4.0	1978	7.2	1990	13.1	1942	9.7	1954	10.6	1977	12.1	1913	8.0	1989	6.2	1949	5.7	1981	5.9	1966	6.2	1932	4.3	1908
30	4.2	1930	7.3	1902	13.3	1954	10.2	1977	10.7	1938	12.4	1940	8.1	1930	6.3	1963	5.9	1933	5.9	1907	6.2	1911	4.3	1976
31	4.2	1914	7.3	1941	13.4	1947	11.4	2002	10.9	1954	13.5	1992	8.1	1912	6.3	1914	5.9	1950	5.9	1944	6.5	1898	4.3	1968
32	4.2	1908	7.3	1959	13.6	1904	11.5	1932	11.0	1933	13.5	1900	8.1	1961	6.4	1953	5.9	1966	6.0	1975	6.6	1947	4.4	1923
33	4.3	1958	7.5	1922	13.9	1914	11.5	1972	11.5	1970	14.2	1921	8.2	1975	6.5	1942	6.1	1946	6.0	1910	6.6	1931	4.5	1926
34	4.3	1939	7.5	1964	14.2	1913	11.7	1921	11.6	1910	14.3	1978	8.8	1937	6.6	2002	6.2	1932	6.3	1980	6.7	1913	4.7	1964
35	4.4	1950	7.6	1934	14.2	2000	11.8	1914	12.0	1957	15.4	1974	9.1	1898	6.8	1957	6.2	1959	6.3	1988	6.7	1974	4.8	1933
36	4.5	1942	7.8	1967	14.3	1923	12.3	1959	12.2	1947	15.9	1930	9.5	1948	7.3	1912	6.3	1913	6.4	1964	6.9	1899	4.8	1967
37	4.5	1991	7.9	1901	14.5	1958	12.5	1988	12.2	1990	16.3	1927	9.8	1938	7.3	1964	6.3	1941	6.4	1941	6.9	1954	4.8	1947
38	4.5	1961	8.0	1977	14.8	1946	12.6	1930	12.8	1935	16.6	1979	9.8	1991	7.3	1969	6.4	1969	6.6	1899	6.9	1980	4.9	1948
39	4.6	1951	8.0	1918	15.0	1920	12.7	1964	12.8	1988	17.0	1961	10.0	1985	7.3	1954	6.4	1922	6.6	1925	6.9	1964	5.1	1916
40	4.7	1943	8.2	1951	15.1	1975	13.0	1982	13.0	1961	17.0	1985	10.3	1910	7.3	1940	6.5	1948	6.6	1916	7.0	1963	5.3	1961
41	4.7	1963	8.3	1904	15.2	1989	13.2	1971	13.2	1900	17.2	1972	10.4	1959	7.8	1961	6.6	1963	6.6	1949	7.1	1967	5.3	1953
42	4.7	1929	8.3	1944	15.2	1959	13.3	1976	13.5	1976	17.3	1963	10.8	1913	8.0	1975	6.8	1929	6.6	1971	7.2	1916	5.4	1960
43	4.7	1956	8.4	1950	15.3	1970	13.3	1953	14.0	2002	17.7	1906	11.1	1964	8.3	1937	7.2	1917	6.8	1913	7.3	1969	5.5	1954
44	4.8	1962	8.5	1972	15.5	1966	13.4	1966	14.1	1907	17.7	1950	11.9	1960	8.4	1930	7.3	1949	6.9	1967	7.4	1925	5.6	1906
45	4.9	1911	8.5	1949	15.6	1921	13.9	1958	14.4	1992	17.9	1959	12.0	1918	8.8	1972	7.6	2000	6.9	1981	7.6	1988	5.6	1966
46	4.9	1945	8.6	1960	15.9	1924	14.4	1948	14.8	1922	18.6	1969	12.4	1971	9.2	2001	7.7	1925	7.1	1960	7.7	1958	5.8	1917
47	5.0	1975	8.8	1947	15.9	1944	14.5	1928	15.4	1980	20.0	1932	12.6	1949	9.2	1973	7.7	1944	7.3	1954	7.8	1968	5.9	1941
48	5.1	1917	9.0	1925	15.9	1996	14.7	1961	15.9	1975	20.0	1975	12.7	1942	9.3	1981	7.9	1957	7.5	2002	7.9	1990	6.0	1951
49	5.2	1934	9.2	1963	16.7	1939	14.7	1924	16.0	1964	20.4	2000	13.0	1972	9.3	1985	8.2	1927	7.5	1898	7.9	1989	6.1	1911
50	5.2	1949	9.3	1969	16.8	1922	14.9	1970	16.1	2000	20.5	1953	13.1	1943	9.5	1977	8.6	1924	7.7	1969	8.0	1912	6.1	1962
51	5.3	1947	9.3	1968	17.3	1960	15.1	1991	16.7	1949	21.5	1949	14.3	1957	9.5	1898	8.7	1899	7.8	1952	8.0	2002	6.3	1980
52	5.3	1960	9.3	1929	17.4	1988	15.9	1910	16.7	1912	21.7	1943	14.7	1925	9.7	1922	9.0	1964	7.9	1970	8.1	1949	6.5	1919
53	5.6	1919	9.5	1965	17.5	1937	16.0	1992	17.6	1953	22.6	1918	14.9	1979	9.9	1966	9.1	1975	8.0	1959	8.3	1991	6.5	1904
54	5.7	1966	9.6	1898	17.7	1953	16.0	1950	17.6	1921	22.7	1914	15.0	1967	10.0	1910	9.3	1923	8.1	2000	8.4	1978	6.6	1974
55	5.7	1926	9.8	1931	17.9	1938	16.3	1900	18.3	1902	22.8	1898	15.7	1914	10.1	1919	9.4	1952	8.2	1978	8.6	1975	6.7	1901
56	5.8	1964	10.1	1958	18.1	1980	17.3	1907	19.0	1917	22.8	1980	15.9	1990	10.2	2000	9.4	2001	8.2	1901	8.7	1901	6.8	1907
57	5.8	1918	10.2	1927	18.4	1999	18.1	1945	19.0	1994	23.1	1952	17.5	1997	10.2	1997	9.5	1898	8.7	2001	8.8	1904	7.1	1978
58	5.9	1927	10.8	2002	18.4	1907	18.2	1923	19.5	1908	24.9	1905	17.9	2001	10.2	1978	9.6	1961	8.7	1957	8.8	1957	7.2	1930
59	6.1	1953	10.8	1903	18.7	1906	18.4	1905	20.1	1971	25.4	1909	18.0	1952	10.5	1929	9.7	1960	9.1	1929	8.8	1962	7.2	1957
60	6.2	1952	10.9	1926	19.0	1992	18.6	2000	20.7	1942	25.5	1965	18.2	1919	10.6	1945	9.7	1930	9.2	1909	9.0	1960	7.3	1931
61	6.2	1965	10.9	1921	19.3	1908	18.6	1909	21.0	1906	25.5	1942	18.8	1906	10.6	1990	9.8	1998	9.2	1972	9.1	1970	7.5	1969
62	6.2	1976	11.1	1945	19.3	1902	18.9	1980	21.2	1918	25.7	1987	19.0	1978	11.0	1959	10.6	1942	9.2	1950	9.2	1959	7.6	1946
63	6.3	1932	11.2	1908	19.3	1972	19.0	1902	21.2	1898	25.7	1960	19.1	2000	11.1	1948	10.6	1904	9.3	1920	9.2	1981	7.6	1903
64	6.3	1931	11.4	1961	19.5	1900	19.4	1974	21.3	1991	25.8	1928	19.1	1928	11.3	1925	10.8	1919	9.3	1962	9.6	1952	7.6	2002
65	6.5	1946	11.6	1954	20.4	1974	19.5	1947	21.4	1927	26.3	1964	19.3	1950	11.5	1932	11.0	1958	9.3	1914	9.7	1908	7.8	1988
66	6.5	1981	11.7	2001	21.3	1998	19.9	1903	21.8	1978	26.5	1935	19.5	1945	12.2	1918	11.0	1994	9.4	1904	9.7	1922	7.8	1959
67	6.5	1922	11.7	1920	21.6	1952	20.5	1996	22.4	1909	26.6	1997	19.8	1965	12.5	1909	11.3	1997	9.5	1912	9.8	1930	7.8	1970
68	6.7	1898	11.8	1932	22.2	1995	21.9	1917	23.0	1965	26.9	1957	20.0	1900	12.5	1960	11.3	1995	9.6	1906	9.9	1985	7.9	1900
69	7.0	1923	12.0	1911	22.5	1910	22.0	1944	23.0	1974	27.0	1920	20.2	1987	12.8	1924	11.6	1906	9.6	1977	10.0	1921	7.9	1921
70	7.4	1990	12.2	1953	22.6	1982	22.1	1975	24.2	1969	27.0	1925	20.5	1973	12.8	1944	11.8	1909	9.6	1927	10.0	2000	8.0	1952
71	7.6	1989	12.6	1980	22.9	1963	22.9	1918	25.0	1962	28.7	1954	20.9	1982	13.1	1979	12.0	1908	9.6	1928	10.0	2001	8.2	1898
72	7.7	1921	12.8	1991	23.0	1912	23.0	1994	25.2	1945	29.1	1971	21.1	1947	13.5	1962	12.1	1979	9.7	1987	10.5	1946	8.2	1902
73	7.7	1907	13.2	1992	23.0	1901	23.8	1904	25.5	1979	29.1	1916	24.3	1903	13.9	1994	12.1	1982	9.8	1930	10.7	1971	8.4	1977
74	7.7	1928	13.3	1970	23.0	1930	24.5	1949	26.1	1930	29.4	1990	24.4	1969	14.3	1928	12.2	1910	10.2	1911	10.8	1929	8.5	1920
75	7.8	1901	13.4	1976	23.7	1950	25.3	1922	26.6	1950	29.5	1986	24.6	1958	14.4	1950	12.8	1962	10.3	1979	10.9	1906	8.8	1899
76	7.9	1900	13.4	1962	24.1	1932	25.9	1913	27.3	1959	30.0	1973	25.6	1992	14.5	1952	13.4	1984	10.6	1921	10.9	1965	8.8	1913
77	7.9	1933	13.8	1946	25.9	1919	28.0	1906	28.2	1952	30.1	1994	26.5	1924	14.6	1958	13.5	1985	10.7	1968	10.9	1961	8.8	1985
78	8.3	1916	13.8	1906	26.4	1915	29.3	1915	28.2	1972	31.7	1982	27.3	1995	14.8	1984	13.5	1999	11.0	1994	10.9	1920	9.0	2000
79	8.4	1902	14.1	1986	26.4	1961	29.7	1916	28.5	1998	32.1	1902	27.4	1921	15.1	1906	13.5	1928	11.4	1908	11.2	1994	9.3	1975
80	8.6	1988	14.2	1948	27.7	1985	29.8	1901	29.2	1985	34.9	1991	27.9	1922	15.4	1917	13.9	1907	11.5	1961	11.7	1902	9.3	1971
81	8.7	2001	14.3	2000	28.1	1936	30.2	1985	29.8	1919	35.3	2001	28.0	1994	15.8	1986	14.3	1978	11.8	1900	11.9	1987	9.4	1983
82	9.2	1899	14.4	1985	28.8	1965	30.3	1979	30.2	1944	38.1	1919	28.1	1944	16.0	1904	14.7	1920	12.0	1997	12.3	1915	9.5	1981
83	9.3	1993	14.8	1919	29.1	1916	35.6	1920	30.4	1905	38.5	1907	28.3	1962	16.0	1920	14.9	1972	12.3	1919	12.4	1919	9.5	1991
84	9.3	1904	14.8	1995	29.1	1905	37.1	1973	31.7	1987	40.6	1944	29.1	1917	16.3	1982	15.0	1916	12.5	1998	12.6	1903	9.7	1905
85	9.5	1906	14.9	1987	29.2	1945	37.1	1978	31.9	1960	41.0	1899	29.4	1916	16.4	1900	15.0	1914	12.7	1999	13.3	1900	9.8	1928
86	9.6	1992	15.1	1988	30.8	1951	37.5	1919	32.0	1913	41.5	1945	29.6	1929	16.6	1923	15.2	1977	12.8	1918	13.4	1951	9.9	1965
87	10.1	1980	16.2	1943	31.3	2001	37.6	1952	32.3	1929	42.6	1924	30.1	1996	16.6	1983	15.3	1973	12.9	1923	13.5	1999	10.1	1915
88	10.4	2002	16.3	1993	31.9	1997	39.4	1951	32.6	1916	43.0	1962	30.7	1986	16.7	1995	15.4	1900	14.1	1985	14.0	1997	11.8	1972
89	10.5	1995	16.5	1999	33.0	1969	39.5	1965	32.8	1973	43.0	1923	32.6	1951	17.1	1921	15.6	1983	14.7	1983	14.4	1977	11.9	1994
90	10.7	1986	16.6	1930	33.6	1948	40.1	1927	33.7	1982	47.9	1904	33.1	1927	18.0	1992	16.4	1996	14.8	1926	14.4	1905	11.9	2001
91	10.8	1996	18.3	1996	34.1	1971	41.3	1998	34.4	1904	49.3	1996	33.8	1899	18.4	1998	16.7	1938	14.8	1903	14.9	1983	12.6	1995
92	11.0	1985	18.3	1998	35.2	1986	43.3	1995	35.4	1899	50.1	1951	33.8	1998	18.7	1902	17.1	1921	14.9	1946	15.2	1995	13.9	1979
93	11.1	1920	19.2	1966	36.6	1984	44.1	1999	36.3	1996	50.4	1929	34.6	1905	18.7	1908	17.1	1987	15.0	1996	17.3	1972	14.1	1918
94	11.2	1903	19.3	1915	37.6	1994	45.6	1912	36.5	1903	50.7	1999	36.5	1920	18.8	1987	17.4	1918	15.1	1905	17.3	1973	14.1	1992
95	11.5	2000	19.3	1952	38.9	1909	46.2	1987	37.2	1997	54.3	1998	36.8	1908	19.5	1927	18.2	1989	16.5	1995	17.5	1918	14.3	1987
96	11.8	1994	19.8	1907	39.6	1987	46.5	1986	37.2	1915	56.7	1995	37.9	1999	20.2	1905	18.9	1992	17.0	1965	18.7	1928	14.4	1999
97	12.2	1998	21.2	1974	40.1	1903	47.6	1929	39.6	1951	59.2	1993	39.5	1923	20.6	1916	19.7	1902	17.6	1951	18.9	1992	14.8	1909
98	12.9	1999	21.5	1916	40.6	1962	51.9	1962	45.4	1999	60.8	1917	41.1	1984	21.9	1899	21.4	1965	18.9	1982	19.2	1979	15.5	1996
99	13.3	1997	21.5	1994	46.4	1978	53.0	2001	45.6	1983	61.1	1947	44.7	1909	23.1	1999	23.0	1915	19.1	1984	19.8	1996	15.5	1973
100	13.7	1984	21.8	1982	46.5	1929	53.9	1993	46.8	1986	63.4	1983	45.2	1983	27.1	1996	26.4	1926	19.9	1992	19.9	1984	16.2	1997
101	15.1	1987	22.5	1973	49.4	1949	57.6	1997	47.5	1920	65.7	1967	46.9	1904	29.2	1951	27.3	1951	20.4	1915	21.1	1982	16.8	1998
102	15.2	1974	23.9	1997	49.9	1983	61.4	1983	49.2	2001	74.6	1903	50.4	1907	32.9	1907	27.4	1986	23.5	1902	21.2	1993	18.5	1982
103	16.5	1983	28.2	1971	53.3	1993	61.9	1969	52.8	1993	78.7	1915	56.6	1902	33.6	1903	28.4	1905	25.7	1993	21.3	1909	19.6	1984
104	21.9	1973	30.6	1983	54.6	1973	74.0	1960	70.5	1995	78.7	1908	93.8	1915	54.7	1993	33.2	1903	30.3	1973	22.6	1998	20.1	1993
105	29.0	1910	31.1	1984	65.9	1979	88.1	1984	73.9	1984	116.0	1984	155.9	1993	58.6	1915	39.1	1993	37.9	1986	22.8	1986	20.7	1986

Gavins Point to St. Joseph Incremental Flows



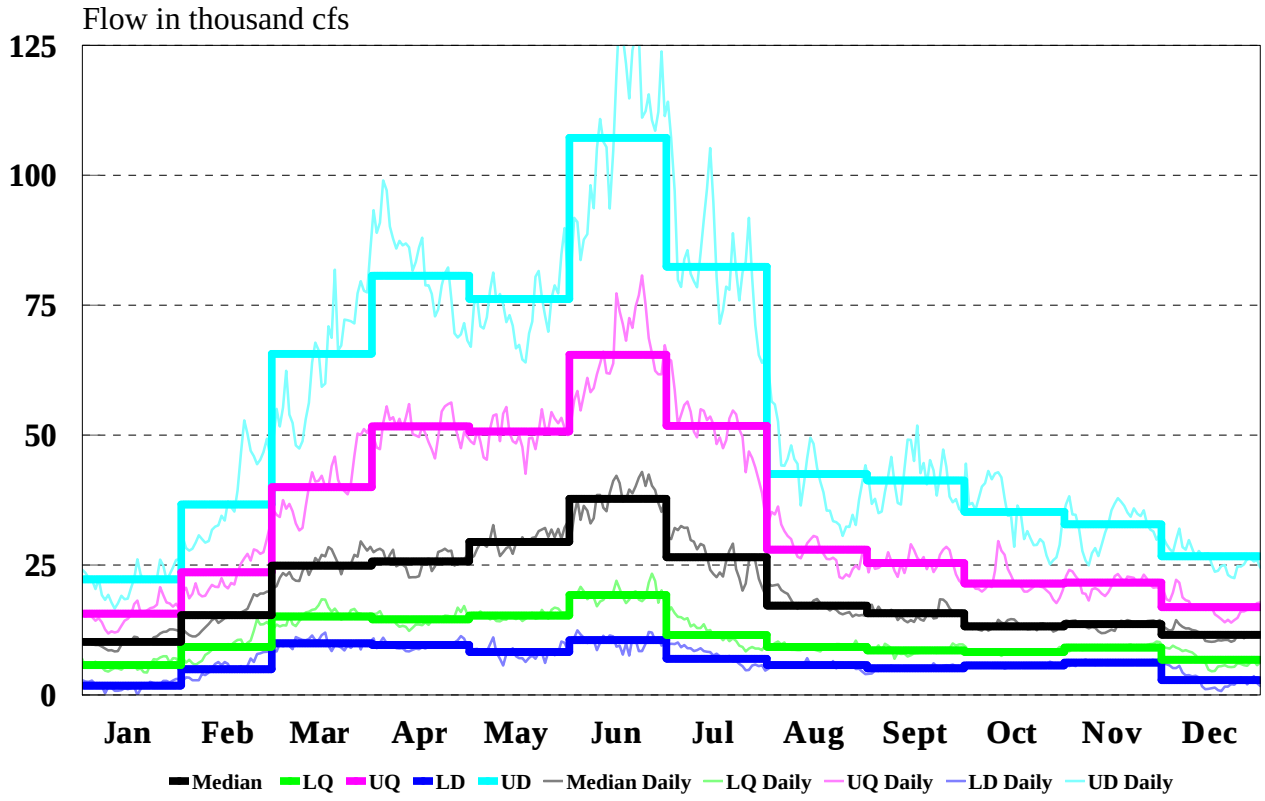
Gavins Point to St. Joseph Incremental Flows (Lower Values Expanded)



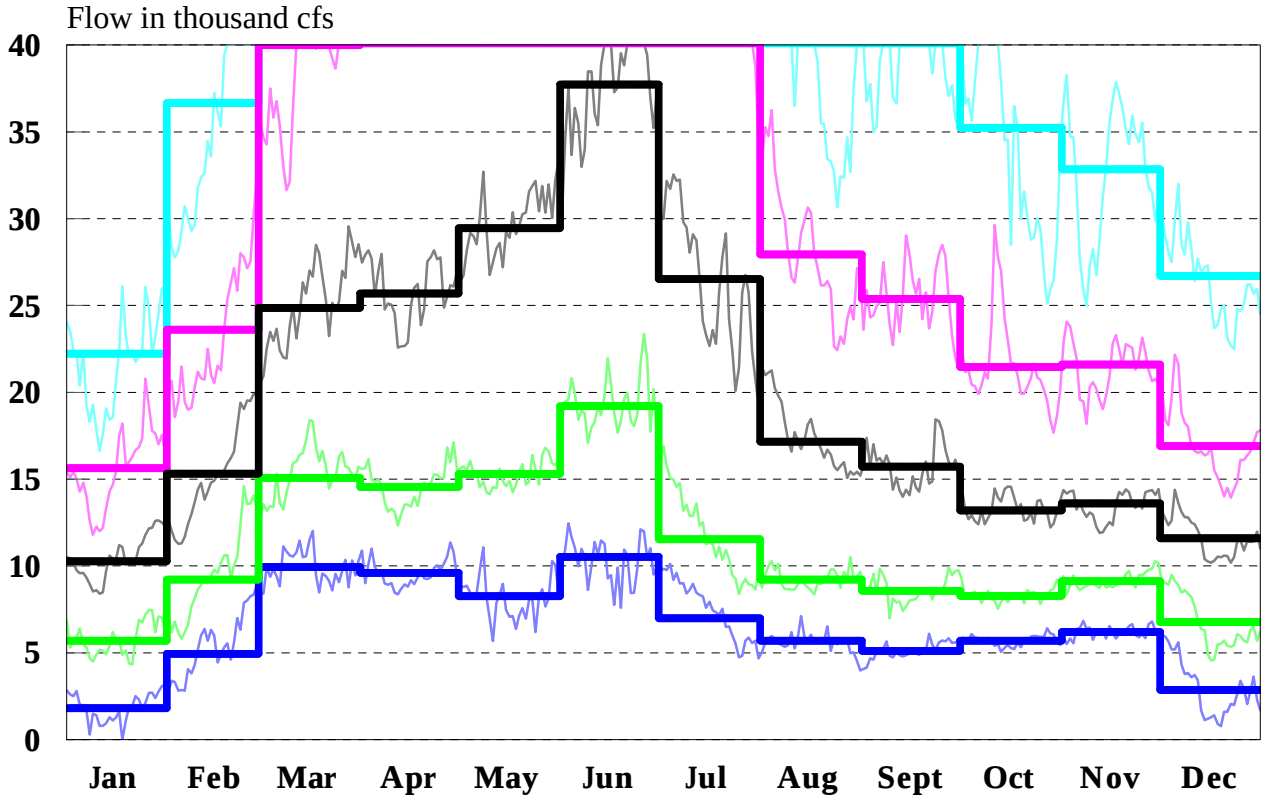
Gavins Point to St. Joseph
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	-0.4	1937	2.1	1914	5.3	1925	5.5	1934	2.6	1934	2.4	1926	1.7	1911	1.9	1934	1.4	1953	9.1	1898	2.3	1939	-0.3	1943
2	0.6	1925	2.5	1936	5.7	1928	5.6	1925	3.1	1926	2.7	1911	2.4	1936	2.2	1941	2.4	1955	7.7	1899	2.9	1914	0.7	1989
3	0.9	1936	2.8	1940	6.8	1934	6.0	1956	4.2	1925	4.5	1956	2.7	1926	2.2	1936	2.7	1940	14.4	1900	3.1	1936	1.0	1945
4	1.1	1940	4.0	1928	7.0	1943	6.4	1935	4.3	1911	4.6	1933	3.0	1934	2.7	1911	3.1	1956	10.6	1901	3.6	1924	1.1	1924
5	1.3	1971	4.1	1910	7.6	1918	6.5	1898	4.9	1955	5.2	1934	4.9	1940	2.7	1955	3.2	1939	28.1	1902	3.6	1937	1.3	1955
6	1.4	1912	4.2	1939	7.8	1926	7.4	1968	4.9	1940	7.5	1936	5.1	1933	3.5	1931	3.2	1991	17.0	1903	4.2	1923	1.4	1944
7	1.8	1954	4.5	1917	7.9	1957	7.5	1938	5.0	1956	7.9	1968	5.2	1941	3.7	1933	3.9	1954	11.5	1904	4.4	1933	2.0	1912
8	1.9	1968	4.6	1956	8.2	1968	7.6	1940	5.2	1939	8.3	1938	5.3	1946	4.5	1976	3.9	1934	17.3	1905	4.6	1934	2.1	1927
9	2.0	1957	4.7	1933	8.2	1899	7.7	1955	5.5	1989	8.3	1988	5.6	1974	4.7	1946	4.0	1947	11.7	1906	4.6	1938	2.1	1940
10	2.1	1977	5.3	1979	8.5	1956	7.8	1990	6.0	1941	8.8	1931	5.6	1956	4.9	1988	4.2	1974	6.7	1907	4.8	1943	2.2	1934
11	2.3	1924	5.5	1938	8.6	1981	8.0	1989	6.3	1914	8.9	1989	5.8	1963	4.9	1956	4.4	1971	13.6	1908	4.9	1956	2.6	1937
12	2.4	1913	5.6	1913	8.9	1964	8.3	1981	6.4	1968	9.0	1981	5.8	2002	5.0	1971	4.4	1943	12.1	1909	4.9	1940	2.6	1932
13	2.4	1959	5.8	1957	9.1	1935	8.3	1957	6.7	1967	9.1	1912	6.0	1931	5.2	1991	4.5	1911	7.0	1910	5.2	1953	2.7	1939
14	2.4	1935	5.9	1978	9.1	1931	8.8	1942	7.5	1943	9.3	1922	6.1	1970	5.4	1970	4.6	1976	12.6	1911	5.3	1955	2.8	1936
15	2.4	1969	6.2	1989	10.3	1940	9.0	1933	7.8	1946	9.5	1939	6.2	1901	5.4	1935	4.6	1990	11.9	1912	5.4	1945	3.1	1914
16	2.7	1955	6.7	1923	10.3	2002	9.1	1967	7.8	1928	9.8	1958	6.2	1966	5.6	1989	4.6	1937	8.5	1913	5.6	1944	3.1	1956
17	2.9	1915	6.8	1909	10.6	1911	9.4	1936	7.9	1931	9.8	1977	6.3	1955	5.7	1926	4.9	1935	10.3	1914	5.7	1910	3.2	1935
18	3.1	1948	6.8	1912	10.7	1933	9.8	1954	8.9	1937	9.9	1955	6.4	1968	6.2	1947	5.0	2002	24.4	1915	5.7	1926	3.3	1963
19	3.3	1905	7.1	1935	10.8	1967	10.1	1937	8.9	1948	9.9	1910	6.6	1954	6.3	1968	5.1	1968	7.7	1916	5.8	1907	3.6	1950
20	3.5	1941	7.2	1900	11.1	1917	10.1	1941	9.1	1901	10.0	1948	6.9	1953	6.3	1953	5.2	1945	6.3	1917	5.9	1942	3.6	1929
21	3.7	1979	7.3	1899	11.4	1941	10.2	1911	9.1	1981	10.8	1901	6.9	1939	6.3	1939	5.6	1988	15.9	1918	6.1	1917	3.6	1938
22	3.7	1972	7.4	1924	12.6	1991	10.3	1908	9.3	1924	11.3	1937	7.3	1976	6.3	1913	5.7	1967	15.2	1919	6.6	1935	3.7	1990
23	3.7	1944	7.5	1975	12.7	1990	10.4	1946	9.7	1936	12.7	1970	7.3	1977	6.6	1938	6.2	1901	11.2	1920	6.6	1976	4.4	1958
24	3.8	1970	7.6	1934	12.8	1927	10.4	1943	11.0	1923	13.0	2002	7.5	1980	6.7	1901	6.6	1933	12.8	1921	6.9	1954	4.5	1910
25	3.9	1938	7.7	1947	12.9	1977	10.4	1926	11.1	1954	13.3	1976	7.6	1988	6.7	1967	6.6	1980	6.0	1922	7.1	1966	4.5	1925
26	3.9	1982	7.8	1942	13.0	1898	10.5	1931	11.5	1958	13.5	1966	8.1	1989	6.8	1957	6.7	1966	15.5	1923	7.1	1950	4.8	1953
27	4.1	1939	8.0	1972	13.4	1954	11.0	2002	11.6	1933	13.8	1940	8.4	1930	6.8	1963	6.7	1931	3.1	1924	7.2	1932	4.9	1954
28	4.1	1963	8.1	1905	13.9	1947	11.5	1899	11.9	1957	13.9	1941	8.7	1912	7.0	1980	7.0	1912	8.2	1925	7.2	1963	5.2	1933
29	4.2	1967	8.1	1941	14.0	1955	11.6	1977	12.0	1932	14.4	1913	9.3	1975	7.4	1965	7.0	1963	16.6	1926	7.3	1927	5.2	1949
30	4.3	1950	8.2	1977	14.3	1976	11.7	1963	12.1	1966	15.9	1900	9.5	1981	7.6	1943	7.2	1970	11.8	1927	7.5	1964	5.3	1908
31	4.5	1956	8.3	1967	15.7	1958	12.2	1939	12.2	1938	16.0	1946	10.3	1935	7.7	1954	7.3	1948	12.3	1928	7.5	1967	5.3	1922
32	4.6	1930	8.3	1944	16.2	2000	12.5	1972	12.5	1977	16.2	1992	10.7	1932	7.9	2002	7.3	1950	10.3	1929	7.6	1911	5.3	1923
33	4.9	1909	8.7	1990	16.2	1989	13.2	1953	13.1	1963	16.2	1950	10.7	1991	8.0	1974	7.8	1936	11.0	1930	7.9	2000	5.6	1948
34	4.9	1961	8.7	1902	16.3	1904	13.5	1930	13.4	1970	16.7	1921	10.9	1961	8.1	1914	7.8	1922	5.9	1931	8.1	1898	5.7	1926
35	5.1	1991	8.7	1937	16.5	1923	13.5	1914	14.1	1910	17.3	1930	11.0	1898	8.1	1949	7.8	1957	5.8	1932	8.2	1948	5.8	1942
36	5.2	1951	8.7	1964	16.6	1942	13.6	1921	14.4	1988	18.1	1963	11.1	1937	8.3	1964	7.9	1913	3.9	1933	8.3	1974	5.9	1968
37	5.4	1908	8.8	1955	16.7	1914	13.8	1964	14.7	1947	18.2	1972	11.4	1959	8.4	1975	7.9	1959	3.9	1934	8.4	1913	5.9	1964
38	5.4	1958	9.0	1901	16.9	1970	14.0	1932	14.9	1907	18.3	1978	11.5	1913	8.7	1912	8.0	1929	3.5	1935	8.4	1899	6.0	1947
39	5.8	1914	9.3	1922	16.9	1913	14.0	1950	15.1	1935	18.9	1927	11.8	1948	8.9	1961	8.1	2000	2.9	1936	8.6	1990	6.0	1967
40	5.8	1934	9.5	1959	17.2	1996	14.2	1966	15.2	1961	19.1	1974	12.2	1938	8.9	1942	8.5	1917	3.0	1937	8.6	1989	6.4	1976
41	5.9	1949	9.7	1981	17.5	1953	14.5	1971	15.9	1900	19.3	1961	12.2	1910	9.2	1930	8.6	1981	6.3	1938	8.6	1958	6.5	1916
42	5.9	1943	9.9	1918	17.5	1920	14.5	1959	16.0	2002	19.3	1985	12.9	1964	9.2	1940	8.7	1932	2.3	1939	8.7	1968	6.5	1966
43	6.1	1911	9.9	1904	17.6	1921	15.0	1988	16.3	1990	19.6	1906	13.6	1971	9.4	1937	9.0	1969	2.2	1940	8.8	2002	6.6	1960
44	6.1	1947	9.9	1958	17.6	1944	15.2	1958	16.3	1976	19.8	1959	14.0	1960	9.9	1969	9.4	1925	13.6	1941	8.8	1947	6.8	1961
45	6.5	1953	10.0	1968	17.8	1966	15.3	1948	17.5	1953	20.4	1953	14.3	1957	10.1	1972	9.6	1927	4.4	1942	8.8	1957	6.8	1962
46	6.6	1929	10.1	1931	18.3	1988	15.8	1970	17.6	1975	22.0	1979	14.3	1972	11.0	1966	9.8	1899	3.4	1943	8.9	1949	7.2	1906
47	6.6	1946	10.3	1950	18.5	1924	16.7	1924	17.9	1964	23.8	1969	14.7	1985	11.3	2001	9.9	1952	8.1	1944	9.0	1980	7.3	1911
48	6.7	1978	10.7	1951	18.9	1938	16.8	1982	18.4	1980	23.9	1932	14.7	1943	11.5	1922	10.0	1975	5.6	1945	9.0	1916	7.3	1917
49	6.7	1952	10.9	1949	19.1	1959	16.8	1928	18.4	1949	24.5	2000	15.0	1942	11.6	1898	10.0	1924	16.8	1946	9.2	1962	7.5	1957
50	6.7	1917	11.2	2002	19.1	1975	18.2	1910	18.6	1922	25.1	1952	15.5	1918	11.9	1990	10.5	1964	5.0	1947	9.3	1925	7.7	1930
51	6.8	1931	11.4	1960	19.3	1946	18.4	1991	18.6	1992	25.4	1914	17.9	1967	11.9	2000	10.6	1941	5.6	1948	9.5	1991	7.7	1974
52	6.8	1975	11.5	1898	19.6	1937	18.5	1976	20.5	1921	25.5	1975	17.9	1950	12.0	1929	10.6	1930	7.4	1949	9.6	1988	7.7	1951
53	6.9	1942	11.6	1965	19.8	1939	18.5	1900	21.1	1908	26.7	1918	18.0	1949	12.1	1910	10.7	1960	12.3	1950	9.7	1969	7.8	1941
54	7.0	1964	11.8	1925	20.3	1907	18.6	1961	21.2	1994	26.8	1957	18.0	1914	12.3	1919	10.8	1949	17.9	1951	9.7	1960	8.1	1904
55	7.2	1966	11.8	1954	20.3	1999	19.3	1907	21.4	1912	26.9	1898	18.7	1925	12.5	1978	11.0	1944	8.1	1952	9.8	1912	8.1	2002
56	7.2	1926	12.2	1929	20.8	1972	20.6	1923	21.5	1902	27.2	1909	19.5	1990	12.8	1959	11.1	1923	2.2	1953	10.1	1952	8.2	1969
57	7.3	1919	12.2	1961	21.0	1922	20.9	1996	22.0	1971	27.5	1943	20.9	2000	13.2	1945	11.2	1998	7.3	1954	10.1	1978	8.3	1946
58	7.5	1927	12.2	1963	21.0	1906	21.0	1909	22.3	2000	28.2	1960	21.2	1952	13.6	1997	11.6	1898	3.6	1955	10.2	1941	8.3	1907
59	7.5	1918	12.7	1903	21.7	1992	21.9	1905	22.4	1917	28.8	1905	21.5	2001	13.8	1925	11.6	1946	3.7	1956	10.3	1975	8.4	1959
60	7.6	1945	12.7	1927	21.9	1908	22.1	1902	23.5	1991	29.1	1954	21.6	1919	13.8	1977	11.8	2001	8.7	1957	10.4	1959	8.5	1919
61	7.6	1965	13.3	1921	22.1	1995	22.4	1992	23.7	1898	30.0	1928	21.8	1997	13.9	1909	11.9	1995	6.1	1958	10.4	1930	8.6	1901
62	8.0	1989	14.0	1926	22.2	1900	23.1	1903	24.3	1906	30.1	1980	22.9	1906	14.2	1962	12.1	1942	10.8	1959	10.5	1970	8.7	1970
63	8.1	1962	14.0	1969	22.8	1980	23.6	1975	25.1	1918	30.5	1964	22.9	1945	14.2	1948	12.2	1994	7.9	1960	10.6	2001	8.9	1978
64	8.3	1988	14.1	1920	22.9	1902	24.0	1980	25.3	1909	30.8	1971	24.0	1979	14.4	1994	12.6	1904	15.9	1961	10.8	1904	9.0	1988
65	8.6	1922	14.1	1991	23.0	1950	24.5	1974	25.4	1950	31.3	1920	24.4	1928	14.9	1924	13.3	1919	10.3	1962	10.8	1901	9.2	1980
66	8.7	1898	14.1	1908	23.5	1952	24.7	1947	25.5	1942	31.4	1965	25.1	1900	15.1	1960	13.6	1962	5.6	1963	11.1	1931	9.2	1952
67	8.7	1981	14.1	1945	24.0	1930	25.2	1994	25.8	1927	31.8	1925	26.4	1987	15.1	1985	13.6	1906	6.7	1964	11.2	1971	9.5	2000
68	8.8	1976	14.3	1953	24.7	1974	25.2	2000	26.5	1962	32.1	1997	26.5	1978	15.1	1918	13.9	1909	19.4	1965	11.4	1999	9.8	1903
69	9.0	1923	14.5	2001	25.0	1960	25.6	1917	26.6	1965	32.3	1942	27.5	1973	15.3	1981	14.0	1961	6.2	1966	11.6	1908	9.9	1971
70	9.1	1990	14.7	1992	25.0	1998	26.6	1945	27.7	1930	32.4	1935	27.7	1982	15.3	1932	14.0	1999	8.5	1967	11.9	1922	10.0	1900
71	9.3	1933	15.1	1976	25.3	1963	26.8	1918	27.8	1969	33.6	1987	27.9	1947	16.8	1995	14.1	1997	12.0	1968	12.3	1994	10.0	1921
72	9.3	1960	15.4	1995	26.0	1910	26.9	1944	30.8	1952	34.0	1916	29.2	1994	16.8	1973	14.1	1908	10.7	1969	12.3	1921	10.1	1985
73	9.4	1907	15.5	1911	26.2	1932	27.2	1949	30.8	1978	34.1	1973	29.6	1962	17.2	1928	14.6	1910	10.1	1970	12.4	1965	10.3	1898
74	9.5	2001	15.5	1980	27.1	1901	28.2	1904	31.3	1974	34.3	1994	30.7	1965	17.2	1952	15.1	1979	6.8	1971	12.4	1946	10.4	1981
75	9.9	1928	15.7	1946	27.7	1982	29.6	1922	31.6	1998	35.3	1986	30.9	1969	17.5	1950	15.2	1907	10.6	1972	12.5	1929	10.4	1902
76	9.9	1921	15.8	1988	28.4	1912	30.3	1913	32.9	1972	36.0	1990	30.9	1944	17.5	1906	15.8	1928	48.2	1973	13.2	1906	10.7	1920
77	10.1	1901	16.0	1932	30.2	1915	31.8	1985	33.2	1960	37.2	1902	31.1	1929	17.6	1958	16.3	1958	7.2	1974	13.4	1920	10.7	1991
78	10.2	2002	16.2	1970	30.4	1961	31.8	1906	33.8	1979	39.0	1949	31.7	1924	17.7	1944	16.7	1984	7.0	1975	13.6	1981	10.8	1899
79	10.3	1900	16.2	1948	31.6	1919	33.8	1901	33.8	1985	39.7	1991	33.4	1903	17.8	1917	17.0	1983	6.9	1976	13.8	1902	10.8	1913
80	10.4	1916	16.7	1906	32.1	1951	33.9	1915	34.8	1959	41.4	2001	33.7	1996	18.1	1984	17.2	1916	13.0	1977	13.9	1985	11.4	1983
81	10.9	1902	16.9	1966	32.3	1936	34.5	1916	35.1	1944	42.8	1907	33.9	1995	18.3	1904	17.3	1920	9.5	1978	14.1	1951	11.5	1931
82	11.0	1992	17.4	1930	32.3	1985	35.1	1979	35.3	1929	43.8	1944	34.1	1958	18.3	1979	18.1	1938	13.2	1979	14.8	1915	12.2	1975
83	11.8	1995	17.8	1943	33.7	1916	41.1	1951	36.0	1905	44.2	1962	34.1	1922	18.6	1920	18.1	1978	7.8	1980	15.1	1919	12.2	1905
84	12.0	1996	18.2	2000	34.5	1945	41.8	1952	36.9	1919	45.7	1919	34.5	1921	18.8	1923	18.1	1900	9.1	1981	15.2	1997	12.3	2001
85	12.1	1904	18.2	1986	34.6	1997	41.8	1920	37.0	1945	45.8	1982	35.1	1917	19.3	1900	18.3	1996	22.3	1982	15.4	1903	12.6	1965
86	12.1	1899	18.3	1987	35.1	1905	42.7	1965	37.8	1913	48.3	1899	36.7	1992	20.0	1983	18.4	1914	16.5	1983	15.6	1987	12.7	1915
87	12.2	1906	18.4	1985	35.2	1969	44.0	1919	38.5	1916	48.5	1945	37.4	1916	20.2	1921	19.4	1972	21.7	1984	16.0	1995	12.7	1977
88	12.4	1993	18.9	1993	35.8	1971	46.5	1927	41.0	1899	48.5	1924	37.6	1998	20.8	1998	19.4	1985	22.8	1985	16.2	1900	12.8	1928
89	13.0	1932	19.2	1919	36.6	1965	47.0	1973	41.3	1904	49.5	1923	39.7	1999	21.6	1908	20.0	1982	47.8	1986	16.2	1961	13.6	1994
90	13.5	1994	19.5	1952	37.0	1948	47.2	1978	42.1	1973	54.8	1999	41.4	1986	21.7	1902	20.1	1921	13.0	1987	17.5	1905	14.0	1995
91	13.7	1980	19.5	1998	37.1	2001	47.6	1995	42.7	1903	54.9	1929	41.6	1951	22.4	1986	21.0	1918	7.1	1988	18.8	1983	14.9	1999
92	13.7	1998	19.6	1996	41.0	1984	49.3	1998	43.3	1915	56.2	1904	42.4	1927	22.6	1927	22.5	1989	6.5	1989	21.4	1993	16.0	1972
93	14.0	1984	20.5	1999	41.3	1986	50.5	1929	44.4	1982	58.3	1996	43.7	1899	22.7	1992	24.0	1902	6.0	1990	21.5	1918	17.5	1918
94	14.2	1920	21.6	1994	42.9	1962	50.7	1999	45.4	1951	62.5	1993	44.2	1905	23.5	1982	24.3	1987	4.3	1991	21.7	1972	17.7	1987
95	14.4	2000	22.7	1962	43.3	1994	52.2	1962	46.3	1996	63.2	1951	44.3	1908	24.0	1916	24.5	1973	23.4	1992	22.4	1973	18.2	1997
96	14.4	1903	24.7	1915	45.2	1909	52.5	1912	46.4	1997	63.9	1998	44.5	1920	24.2	1905	24.7	1992	30.0	1993	22.7	1979	19.0	1979
97	15.1	1997	24.8	1974	46.7	1903	52.9	2001	46.5	1987	64.7	1995	47.4	1923	24.9	1999	25.1	1915	13.2	1994	23.4	1928	19.4	1909
98	15.5	1985	25.2	1907	47.9	1987	53.2	1987	51.6	1999	72.4	1917	52.3	1983	25.4	1899	28.4	1977	17.6	1995	23.8	1977	19.6	1998
99	15.9	1999	27.6	1916	48.8	1929	54.5	1986	55.4	2001	73.4	1983	52.3	1909	28.7	1987	28.8	1965	16.2	1996	24.0	1984	19.8	1992
100	17.8	1986	28.1	1997	53.0	1949	62.2	1993	56.2	1920	73.8	1947	52.5	1984	31.4	1996	30.4	1951	14.1	1997	24.3	1992	20.5	1996
101	18.5	1987	30.4	1971	53.9	1978	62.6	1997	59.9	1986	76.3	1967	56.5	1904	33.4	1951	32.3	1926	15.3	1998	24.6	1996	20.6	1993
102	19.7	1974	33.5	1973	57.5	1993	66.3	1969	61.4	1993	90.1	1903	65.4	1907	37.5	1907	33.3	1986	11.8	1999	25.3	1982	22.3	1973
103	21.9	1983	34.1	1982	63.0	1973	73.0	1983	61.5	1983	91.6	1915	69.5	1902	39.7	1903	33.6	1905	7.2	2000	26.2	1909	24.6	1982
104	25.1	1973	38.8	1983	64.9	1983	76.3	1960	83.8	1984	92.2	1908	122.7	1915	62.2	1993	38.2	1903	9.9	2001	26.7	1998	25.1	1984
105	37.8	1910	38.9	1984	83.5	1979	99.0	1984	85.1	1995	131.1	1984	186.8	1993	66.4	1915	48.6	1993	8.8	2002	28.0	1986	27.1	1986

Gavins Point to Kansas City Incremental Flows



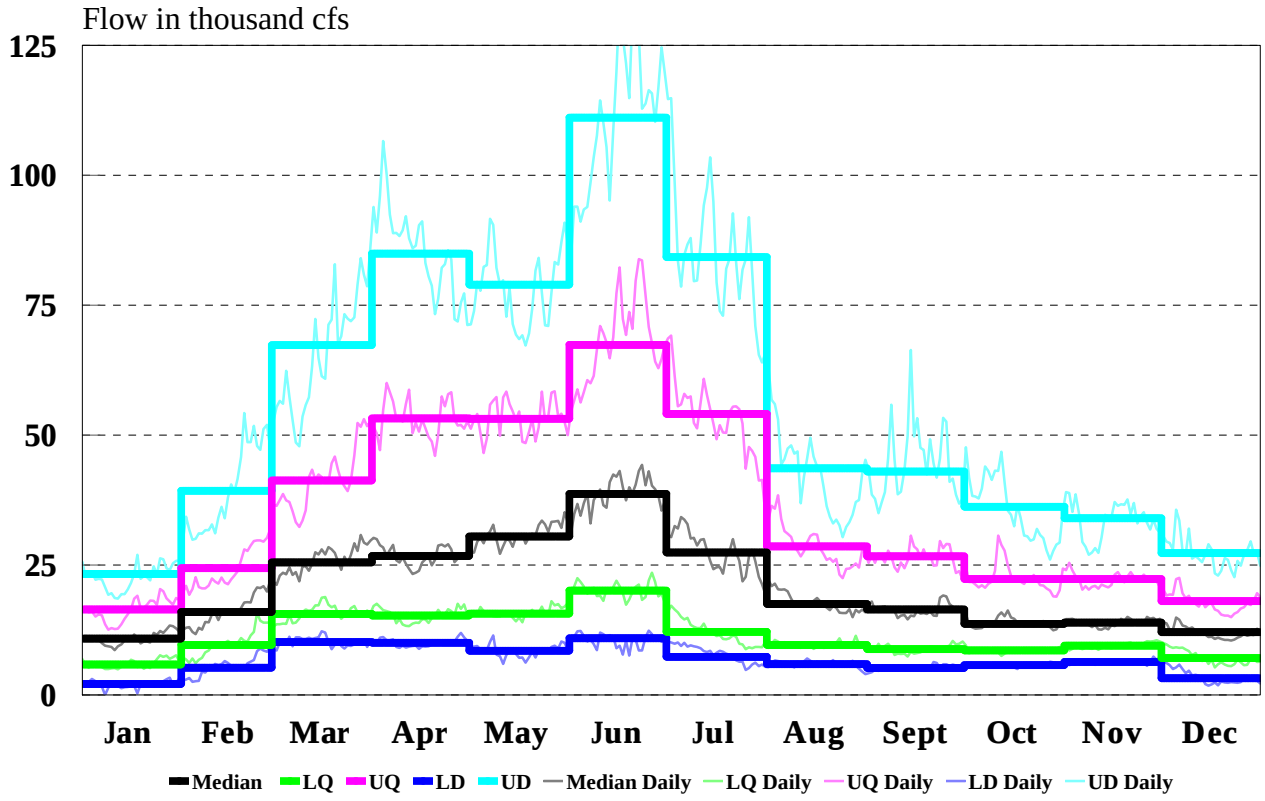
Gavins Point to Kansas City Incremental Flows (Lower Values Expanded)



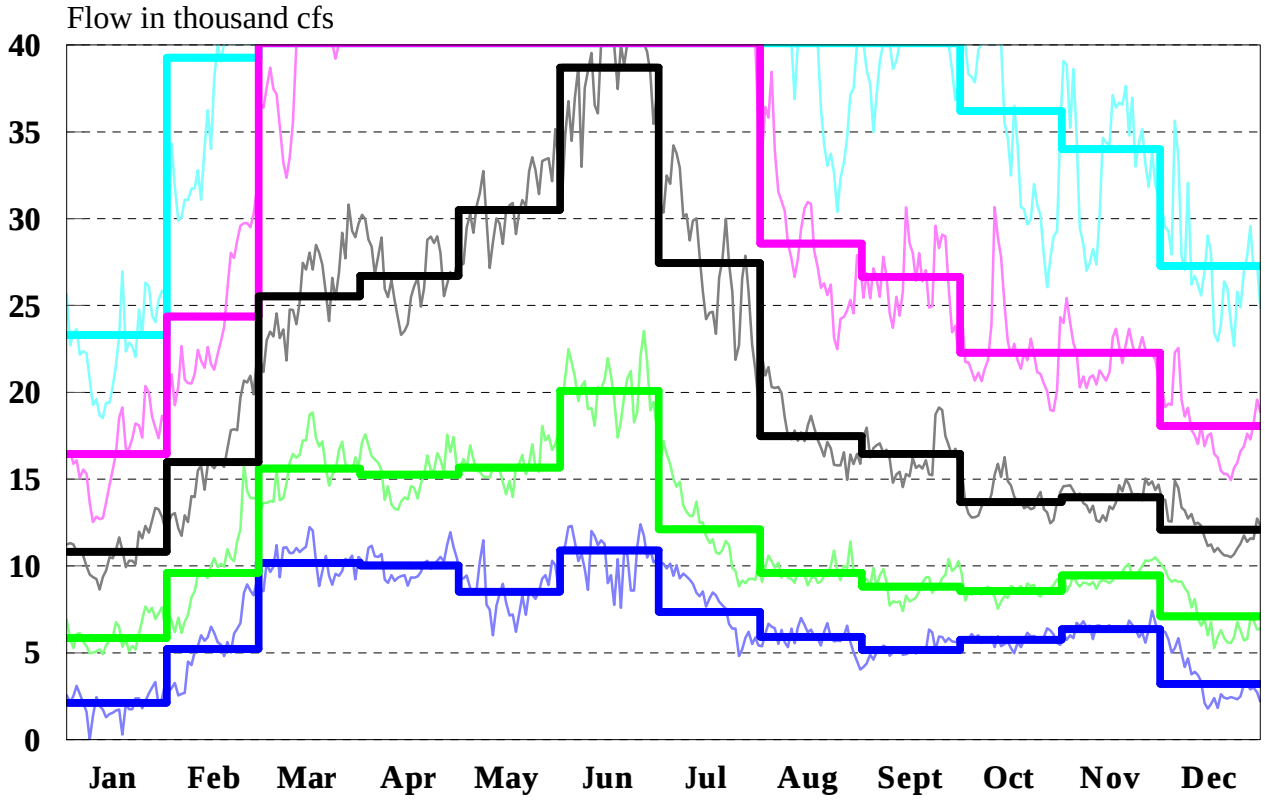
Gavins Point to Kansas City
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	0.3	1937	2.9	1914	7.8	1928	6.9	1934	3.3	1926	2.9	1926	2.7	1911	2.6	1934	3.1	1953	2.8	1939	2.9	1939	1.6	1924
2	0.6	1977	3.9	1940	8.5	1925	7.3	1956	4.6	1934	3.6	1911	3.2	1926	2.8	1911	3.6	1991	3.8	1940	3.1	1914	1.8	1943
3	1.1	1940	5.5	1939	8.6	1957	7.6	1898	5.8	1911	6.7	1933	4.1	1936	3.0	1936	3.6	1956	3.9	1937	3.8	1936	2.0	1927
4	1.7	1925	6.1	1956	8.9	1934	7.7	1935	5.9	1989	7.0	1956	4.4	1934	3.3	1955	3.9	1955	4.3	1956	4.8	1937	2.2	1912
5	2.0	1957	6.1	1928	9.5	1981	8.8	1925	6.5	1956	8.1	1934	6.8	1901	5.5	1988	4.1	1947	4.3	1953	5.1	1924	2.5	1955
6	2.1	1912	6.3	1933	10.1	1964	8.8	1989	6.9	1955	9.5	1988	6.8	1933	5.6	1991	4.3	1939	5.0	1924	5.8	1933	3.0	1937
7	2.2	1936	6.4	1989	10.3	1956	9.0	1940	7.0	1925	9.6	1989	7.3	1940	6.0	1970	4.6	1971	5.5	1936	5.8	1956	3.3	1940
8	3.3	1954	6.5	1957	10.6	1968	9.4	1981	7.2	1914	11.6	1901	8.0	2002	6.3	1976	4.7	1976	5.8	1934	6.0	1923	3.4	1945
9	3.4	1935	6.6	1917	11.0	1935	10.4	1938	7.3	1939	12.1	1968	8.1	1970	6.7	1926	5.6	1911	5.8	1947	6.1	1938	3.5	1989
10	3.6	1979	6.8	1938	11.2	1943	11.4	1990	9.6	1967	12.2	1936	8.4	1980	7.0	1956	5.9	2002	5.9	1943	6.1	1940	3.5	1936
11	3.6	1924	7.5	1910	11.3	1899	12.0	1955	9.6	1940	13.4	1931	8.6	1966	7.3	1989	6.0	1954	6.6	1933	6.7	1943	3.6	1939
12	3.7	1913	7.5	1913	11.5	1967	12.3	1957	9.8	1901	13.7	1912	8.8	1974	7.4	1933	6.0	1934	6.6	1948	6.8	1955	3.7	1956
13	3.9	1955	7.9	1978	11.6	1918	12.5	1954	10.1	1968	14.2	1922	9.0	1953	7.5	1901	6.2	1990	6.6	1955	6.9	1976	4.1	1934
14	4.0	1970	8.2	1936	11.9	1931	12.7	1937	10.3	1941	15.5	1937	9.3	1988	7.6	1913	6.4	1940	6.9	1991	7.2	1953	4.2	1914
15	4.3	1971	8.8	1935	12.0	2002	12.7	1908	11.2	1928	15.5	1910	9.5	1954	7.6	1971	6.7	1943	7.6	1976	7.5	1934	4.3	1990
16	4.6	1938	9.0	1909	12.5	1926	13.2	1977	12.1	1937	16.0	1955	10.1	1931	8.0	1953	6.8	1937	7.7	1971	7.7	1907	4.5	1963
17	4.7	1967	9.1	1934	12.9	1940	13.2	1936	13.0	1946	17.9	1940	10.2	1989	8.1	2002	6.8	1988	7.8	1922	7.8	1945	4.6	1932
18	5.0	1939	9.2	1912	13.5	1933	13.3	1967	14.0	1931	18.0	1981	10.4	1955	8.2	1946	6.8	1974	7.8	1938	8.4	1954	4.6	1938
19	5.0	1948	9.4	1947	14.2	1941	13.3	1933	14.5	1924	18.4	1976	10.7	1912	8.4	1947	7.2	1901	7.9	2000	8.7	1910	5.6	1929
20	5.2	1905	9.5	1967	14.4	1977	14.9	1941	15.1	1966	18.9	1913	10.9	1956	8.8	1935	8.6	1980	7.9	1932	8.8	1917	6.0	1935
21	5.5	1915	9.5	1964	14.7	1991	15.0	1946	15.3	1981	19.3	2002	11.0	1976	8.9	1941	8.7	1945	8.0	1990	8.9	1932	6.4	1976
22	5.5	1944	9.6	1923	15.2	1954	15.0	1931	15.3	1923	20.0	1992	11.1	1963	9.1	1980	9.1	1912	8.0	1988	9.0	1980	6.6	1950
23	5.5	1963	9.9	1990	15.6	1917	15.2	1963	15.9	1948	20.7	1946	12.6	1930	9.2	1974	9.4	1966	8.0	1975	9.0	1926	6.6	1925
24	5.7	1956	10.1	1900	16.4	1911	15.4	1972	16.9	1988	21.0	1958	12.9	1946	9.3	1975	9.8	1968	8.1	1935	9.1	1948	6.7	1954
25	6.2	1961	10.4	1924	16.8	1989	15.4	2002	17.2	1907	21.3	1972	13.1	1941	9.4	1931	9.9	2000	8.2	1966	9.2	1966	6.8	1910
26	6.2	1959	10.5	1981	18.2	1898	15.9	1968	17.3	1977	21.7	1963	13.1	1977	9.5	1964	10.2	1929	8.3	1980	9.3	2000	6.8	1953
27	6.2	1982	10.7	1944	18.4	1976	16.0	1950	17.4	1954	22.5	1966	13.2	1939	9.7	1963	10.2	1936	8.8	1974	9.9	1947	7.2	1933
28	6.3	1930	11.3	1977	19.0	1970	16.2	1899	17.6	1932	22.8	1948	13.4	1991	11.1	1914	10.3	1963	8.9	1952	10.2	2002	7.3	1966
29	6.4	1991	11.4	1972	19.1	1996	16.3	1943	17.7	1943	23.6	1939	13.5	1968	11.4	1912	10.6	1948	8.9	1963	10.2	1963	7.3	1958
30	6.5	1968	11.5	1899	19.2	1955	16.3	1911	19.9	1933	23.7	1953	14.2	1910	12.4	1939	10.7	1913	9.0	1964	10.3	1990	7.3	1922
31	6.8	1950	12.1	1941	19.5	2000	16.6	1926	20.6	1992	25.2	1938	15.1	1898	12.8	1957	10.9	1981	9.4	1945	10.3	1988	7.3	1964
32	7.0	1934	12.1	1905	19.9	1927	17.5	1953	21.0	1936	25.2	1900	17.8	1913	12.8	1965	11.7	1975	9.6	1989	10.5	1949	7.6	1908
33	7.2	1909	12.4	2002	20.2	1938	17.6	1966	21.4	1963	26.7	1906	17.9	1972	12.9	1938	12.1	1922	10.0	2002	10.6	1950	7.9	1948
34	7.5	1941	12.5	1931	21.1	1988	17.8	1930	22.0	1980	27.6	1921	17.9	1985	12.9	1943	12.9	1917	10.1	1981	10.7	1991	8.5	1949
35	7.6	1958	12.7	1979	21.1	1953	18.1	1964	22.2	1910	27.8	1978	18.0	1975	13.0	1967	13.2	1994	10.2	1917	10.8	1942	8.7	1923
36	7.7	1951	12.8	1975	21.4	1966	18.4	1971	22.5	1964	27.9	1979	18.0	1937	13.1	1949	13.7	1957	10.8	1907	11.1	2001	8.7	1926
37	7.7	1972	13.2	1968	21.4	1990	18.4	1939	22.6	1957	28.8	2000	18.4	1938	13.4	2000	13.8	1933	10.8	1931	11.1	1989	9.2	1988
38	8.3	1914	13.3	1901	21.8	1923	18.9	1942	22.8	1975	30.3	1950	18.7	1932	13.5	1966	13.8	1952	11.5	1899	11.3	1911	9.5	2002
39	8.5	1908	13.6	1902	22.8	1947	19.3	1921	23.5	2000	30.5	1952	19.0	1964	13.6	1940	13.8	1997	11.6	1960	11.4	1964	9.7	1947
40	8.5	1953	13.6	1965	23.1	1972	20.6	1988	23.9	1958	31.1	1959	21.1	1918	13.8	1937	13.9	1932	11.8	1910	11.6	1944	9.8	1967
41	8.7	1947	14.1	1950	23.1	1913	21.1	1914	24.8	1953	31.4	1977	22.4	1971	14.1	1930	14.0	1967	12.0	1972	11.6	1899	10.0	1960
42	8.8	1964	14.1	1958	23.2	1914	21.7	1996	24.8	1970	31.5	1927	23.1	1981	14.2	1969	14.1	1969	12.1	1916	12.2	1935	10.1	1957
43	9.0	1969	14.2	1954	24.0	1904	21.9	1982	25.6	1900	32.6	1985	23.2	1961	15.0	1961	14.3	1935	12.3	1978	12.2	1898	10.2	1916
44	9.1	1989	14.8	1922	24.2	1921	22.3	1970	26.5	1947	33.4	1930	24.3	2000	15.3	1997	14.7	1927	12.4	1999	12.2	1927	10.2	2000
45	9.4	1966	14.9	1942	24.9	1920	22.4	1932	27.0	2002	37.4	1974	24.5	1943	15.7	1929	14.8	1931	12.4	1929	12.4	1975	10.3	1962
46	9.7	1975	15.1	1963	25.3	1924	22.8	1948	27.6	1922	37.4	1997	24.7	1935	15.9	1978	15.1	1924	12.5	1954	12.4	1913	10.6	1906
47	9.9	1911	15.1	1955	26.0	1939	23.5	1958	28.6	1938	37.7	1909	24.8	1959	16.0	2001	15.2	1925	12.5	1942	12.6	1999	11.1	1974
48	9.9	1978	15.2	1904	26.0	1946	23.9	1991	29.1	1912	38.7	1980	26.2	1997	16.4	1954	15.3	1995	13.2	1925	12.6	1952	11.3	1930
49	9.9	1931	15.2	1918	26.1	1975	24.9	1924	29.4	1965	39.8	1970	26.6	1960	16.5	1972	15.8	1899	13.7	1913	12.8	1960	11.4	1951
50	10.0	1917	16.1	1970	26.3	1937	26.1	1959	30.7	1976	39.9	1914	26.8	1952	17.5	1910	15.9	1999	13.8	1994	13.0	1957	11.4	1952
51	10.2	1981	16.3	1951	26.3	1950	26.6	1900	31.0	1990	40.5	1932	27.9	1990	17.6	1959	16.1	1923	13.8	2001	13.5	1967	11.7	1917
52	10.5	2001	16.6	1961	26.8	1942	26.9	1910	31.8	1921	41.5	1973	28.2	1942	17.9	1898	16.4	1959	14.0	1979	13.8	1994	11.8	1980
53	10.7	1976	16.6	1992	26.8	1995	27.1	2000	32.2	1908	42.5	1918	29.1	1978	18.3	1922	16.5	1964	14.2	1958	13.9	1969	12.0	1946
54	10.8	1965	16.8	1991	27.5	1930	28.4	1907	32.3	1991	42.9	1898	29.5	1925	18.5	1994	16.7	1970	14.3	1949	14.0	1971	12.0	1911
55	10.9	1929	17.2	1898	27.5	1999	28.7	1928	33.0	1906	43.3	1961	30.4	1906	18.6	1942	17.3	1960	14.5	1957	14.1	1916	12.1	1968
56	11.4	1933	17.4	1976	27.7	1959	28.9	1909	33.1	1902	43.3	1994	30.7	1957	19.1	1909	17.5	1930	14.6	1997	14.4	1962	12.2	1991
57	11.4	1990	17.6	1953	28.3	1992	31.0	1903	33.9	1927	43.8	1905	31.2	1967	19.1	1919	17.6	1979	14.8	1944	14.5	1974	12.3	1919
58	11.5	1926	17.6	1959	28.5	1906	31.3	1992	34.7	1949	44.0	1971	31.2	1914	19.7	1952	18.0	1898	15.1	1898	14.6	1978	12.4	1959
59	11.5	1918	17.9	1995	28.9	1907	31.9	1976	34.9	1994	44.6	1960	33.1	1900	19.9	1984	18.1	1998	15.4	1969	15.0	1959	12.9	1942
60	11.5	1943	18.2	1925	28.9	1900	32.2	1923	35.0	1962	45.0	1920	35.6	2001	20.9	1932	18.9	1983	15.8	1930	15.0	1930	12.9	1970
61	11.6	1927	18.5	1937	29.2	1944	32.3	1961	35.5	1898	45.6	1954	36.2	1928	21.7	1983	19.0	1984	15.8	1970	15.3	1925	13.3	1904
62	11.6	1919	18.6	1946	30.2	1958	32.4	1974	35.6	1909	46.1	1991	36.4	1994	22.4	1945	19.8	1904	15.8	1928	15.9	1968	13.4	1901
63	11.7	2002	19.2	1903	30.5	1908	33.7	1975	36.3	1917	46.4	1969	36.8	1948	22.6	1977	20.1	1906	16.1	1909	15.9	1970	13.6	1907
64	11.7	1952	19.4	1927	32.5	1922	34.0	1994	36.6	1918	47.0	1941	37.4	1973	22.9	1925	20.3	1909	16.8	1901	15.9	1958	14.0	1971
65	12.3	1945	19.6	1980	32.8	1902	34.1	1949	37.2	1971	47.7	1957	37.4	1919	22.9	1960	21.2	1919	17.4	1920	16.1	1912	14.1	1969
66	12.5	1992	19.6	1929	33.1	1980	34.2	1905	38.9	1950	47.9	1964	38.3	1979	23.3	1924	21.6	1938	17.9	1906	17.3	1929	14.2	1961
67	13.0	1946	19.8	1948	33.3	1932	35.4	1902	39.5	1935	48.1	1986	38.4	1949	23.3	1962	21.8	1996	17.9	1914	17.4	1901	14.9	2001
68	13.1	1922	20.0	2000	33.7	1963	35.4	1985	39.9	1972	48.7	1975	41.0	1929	23.5	1990	21.9	1950	18.0	1962	17.4	1904	15.0	1978
69	13.2	1898	20.1	1921	34.9	1910	42.4	1917	40.0	1998	50.6	1990	41.2	1903	23.9	1918	22.0	1908	18.4	1987	17.9	1981	15.2	1903
70	13.4	1923	20.9	1945	35.0	1974	46.1	1918	40.6	1952	51.1	1928	44.0	1962	24.4	1948	22.4	1946	18.6	1904	18.2	1997	15.5	1900
71	13.5	1988	20.9	1960	37.9	1901	46.7	1904	41.7	1979	52.8	1916	44.1	1996	25.3	1979	22.4	1910	19.0	1995	18.5	1922	15.8	1902
72	13.7	1996	21.0	1908	39.7	1951	49.0	1951	44.4	1961	55.7	1987	44.8	1987	25.8	1906	23.2	2001	19.1	1912	18.5	1995	16.3	1977
73	14.0	1995	21.1	2001	40.1	1952	49.2	1965	45.3	1929	55.8	1965	45.2	1947	26.6	1995	23.3	1949	20.0	1927	18.6	1908	16.3	1975
74	14.7	1928	21.3	1920	40.4	1998	49.9	1913	45.3	1985	56.1	1925	45.9	1944	26.7	1968	23.5	1962	20.3	1983	19.1	1965	16.4	1921
75	14.8	1942	21.6	1988	40.5	1936	51.0	1906	46.8	1942	63.5	1962	49.1	1969	26.9	1973	24.1	1907	20.8	1911	19.3	1946	16.5	1994
76	15.0	1949	22.0	1926	40.8	1982	51.5	1922	47.1	1978	64.2	1944	51.0	1998	27.0	1981	24.1	1941	21.4	1921	19.5	1987	16.6	1898
77	15.0	1921	22.3	1932	41.4	1912	51.6	1995	50.3	1960	65.4	1902	51.2	1921	27.9	1928	24.4	1978	21.4	1967	20.4	1921	16.6	1999
78	15.0	1901	22.5	1930	41.7	1997	52.7	1915	51.0	1930	67.4	1942	51.5	1995	28.8	1920	24.7	1928	21.5	1908	21.3	1920	16.7	1981
79	15.0	1900	23.0	1996	42.9	1985	54.6	1980	51.9	1974	69.1	1907	53.5	1924	29.2	1917	25.8	1944	21.9	1968	21.5	1906	16.7	1941
80	15.1	1907	23.1	1966	43.5	1915	55.1	1947	52.3	1969	72.7	1998	54.4	1999	29.3	1923	27.4	1916	22.5	1900	23.3	1983	17.0	1920
81	15.2	1962	24.0	1911	45.1	1960	55.4	1952	54.3	1997	73.9	1929	54.6	1945	29.3	1904	27.4	1920	22.6	1996	23.3	1902	17.3	1899
82	15.9	1980	24.4	1969	45.3	1971	55.6	1916	56.1	1959	75.1	1949	54.8	1916	29.6	1900	28.2	1900	24.1	1984	24.6	1951	17.3	1983
83	16.4	1902	24.9	1906	46.9	1961	56.1	1901	56.7	1913	75.5	1919	57.9	1922	30.6	1999	28.3	1982	24.1	1919	24.7	1915	17.4	1965
84	16.7	1916	25.5	1952	47.8	1994	62.9	1929	57.0	1905	78.8	1924	58.2	1950	31.8	1921	29.7	1914	25.0	1918	24.9	1919	17.9	1995
85	16.7	1960	26.6	1987	49.1	1986	63.6	1962	58.2	1916	78.9	1899	61.0	1982	34.4	1986	30.7	1972	26.0	1946	25.9	1903	18.2	1913
86	17.8	2000	26.7	1943	49.1	1919	64.6	1986	58.5	1919	80.6	2001	61.3	1992	34.8	1985	31.2	1992	27.0	1982	26.5	1900	18.8	1985
87	17.9	1899	26.7	1986	49.6	1965	65.3	2001	58.7	1996	81.0	1999	62.0	1917	35.0	1908	32.3	1921	27.1	1923	26.8	1941	19.0	1931
88	18.1	1904	28.8	1999	50.1	1916	65.9	1945	64.9	2001	83.3	1935	62.3	1983	35.1	1902	33.8	1942	27.6	1959	26.8	1985	19.0	1905
89	18.4	1906	29.6	1994	51.2	1905	69.1	1978	66.2	1982	84.3	1996	64.6	1927	35.7	1998	33.9	1958	27.8	1992	27.1	1984	19.2	1944
90	19.3	1993	29.9	1919	55.1	2001	70.4	1979	66.5	1899	84.6	1923	67.9	1905	36.4	1958	34.6	1918	28.0	1905	28.5	1905	20.3	1915
91	19.5	1997	30.8	1998	55.6	1945	70.5	1920	67.7	1904	85.0	1993	68.3	1899	36.6	1982	34.9	1987	28.5	1950	29.6	1982	21.6	1979
92	20.0	1984	33.3	1985	56.1	1969	72.1	1998	68.0	1915	85.3	1945	68.3	1965	37.2	1927	35.5	1985	28.6	1903	31.2	1979	21.9	1928
93	20.3	1999	34.3	1949	56.4	1929	74.3	1944	70.5	1944	85.5	1983	71.1	1986	38.0	1996	38.5	1961	30.0	1926	31.4	1972	23.5	1972
94	20.5	1985	34.7	1997	61.2	1948	76.0	1919	70.7	1973	86.4	1943	71.7	1958	38.6	1916	39.8	1902	30.7	1951	35.1	1993	25.8	1987
95	20.6	1998	37.2	1915	62.0	1909	78.0	1997	71.9	1903	91.8	1982	72.6	1920	38.9	1987	40.3	1989	31.3	1977	35.7	1996	28.2	1997
96	21.4	1994	38.5	1907	63.3	1984	80.1	1999	75.5	1983	92.9	1904	77.9	1908	38.9	1905	41.4	1915	31.4	1965	35.8	1918	28.9	1909
97	21.5	1920	39.2	1993	64.5	1962	82.2	1927	76.9	1951	116.9	1995	80.8	1923	40.9	1944	47.9	1973	37.7	1961	36.2	1931	29.5	1918
98	21.5	1903	39.3	1982	65.6	1903	89.4	1969	84.8	1920	127.6	1917	81.6	1984	41.9	1950	52.0	1965	38.2	1998	36.4	1992	30.2	1996
99	22.2	1932	40.2	1971	69.2	1987	90.8	1912	85.7	1945	129.5	1967	89.8	1909	43.1	1899	54.2	1926	41.8	1915	40.4	1928	31.1	1998
100	23.6	1986	42.2	1916	73.7	1983	93.5	1987	87.0	1999	130.8	1947	97.7	1907	46.5	1992	54.7	1986	48.7	1902	41.1	1977	31.5	1984
101	25.1	1987	42.3	1974	76.5	1949	98.0	1973	87.6	1986	139.7	1951	100.1	1904	59.1	1951	56.5	1905	50.2	1993	43.3	1909	31.8	1982
102	26.5	1983	46.3	1983	78.1	1978	103.5	1983	87.9	1987	157.0	1903	120.7	1902	62.1	1907	63.4	1903	56.3	1941	43.5	1986	32.9	1993
103	37.3	1974	50.7	1984	85.6	1993	106.4	1993	109.9	1993	157.7	1915	178.7	1951	65.6	1903	67.3	1977	65.9	1985	45.2	1961	40.4	1986
104	39.5	1973	52.1	1962	107.8	1973	112.5	1960	116.2	1984	158.8	1908	188.3	1915	113.7	1915	75.8	1951	88.6	1986	64.5	1998	42.7	1992
105	55.2	1910	58.0	1973	121.5	1979	135.8	1984	130.0	1995	161.8	1984	281.5	1993	131.1	1993	95.4	1993	107.7	1973	64.7	1973	47.6	1973

Gavins Point to Waverly Incremental Flows



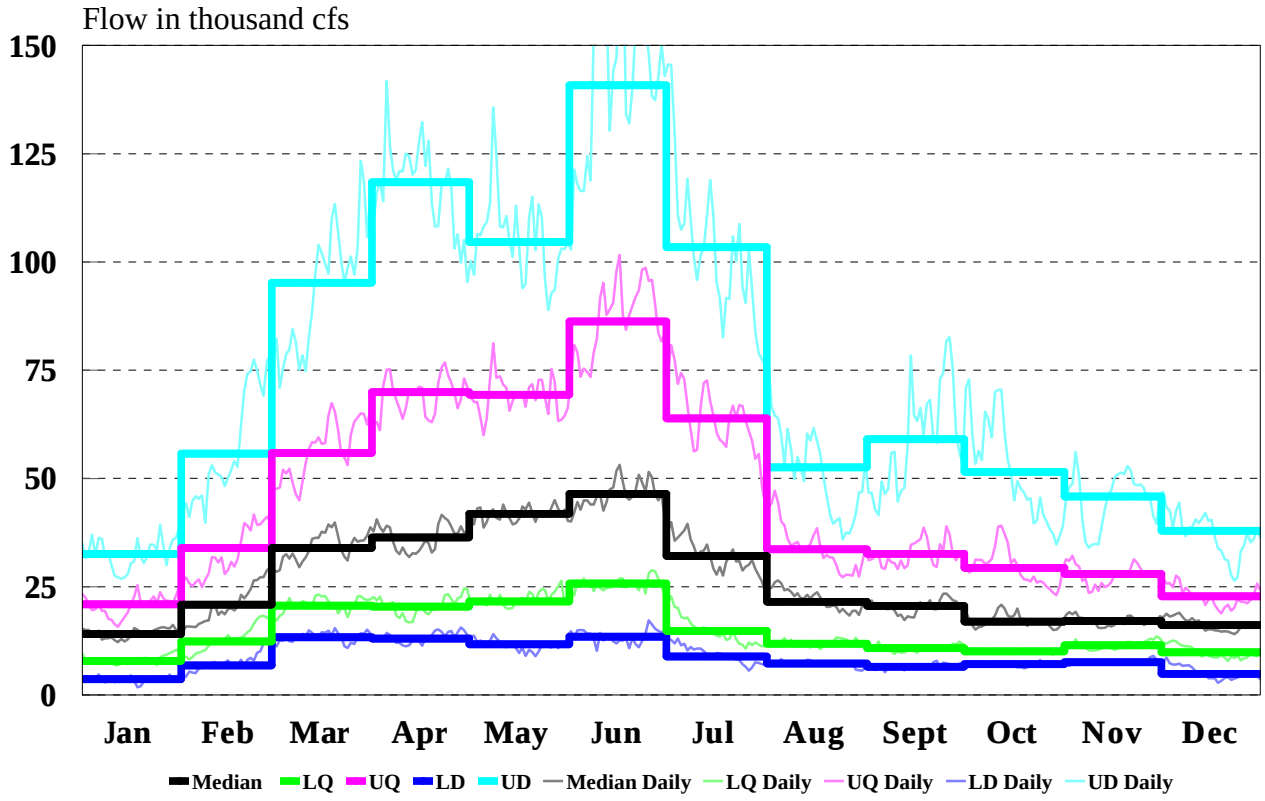
Gavins Point to Waverly Incremental Flows (Lower Values Expanded)



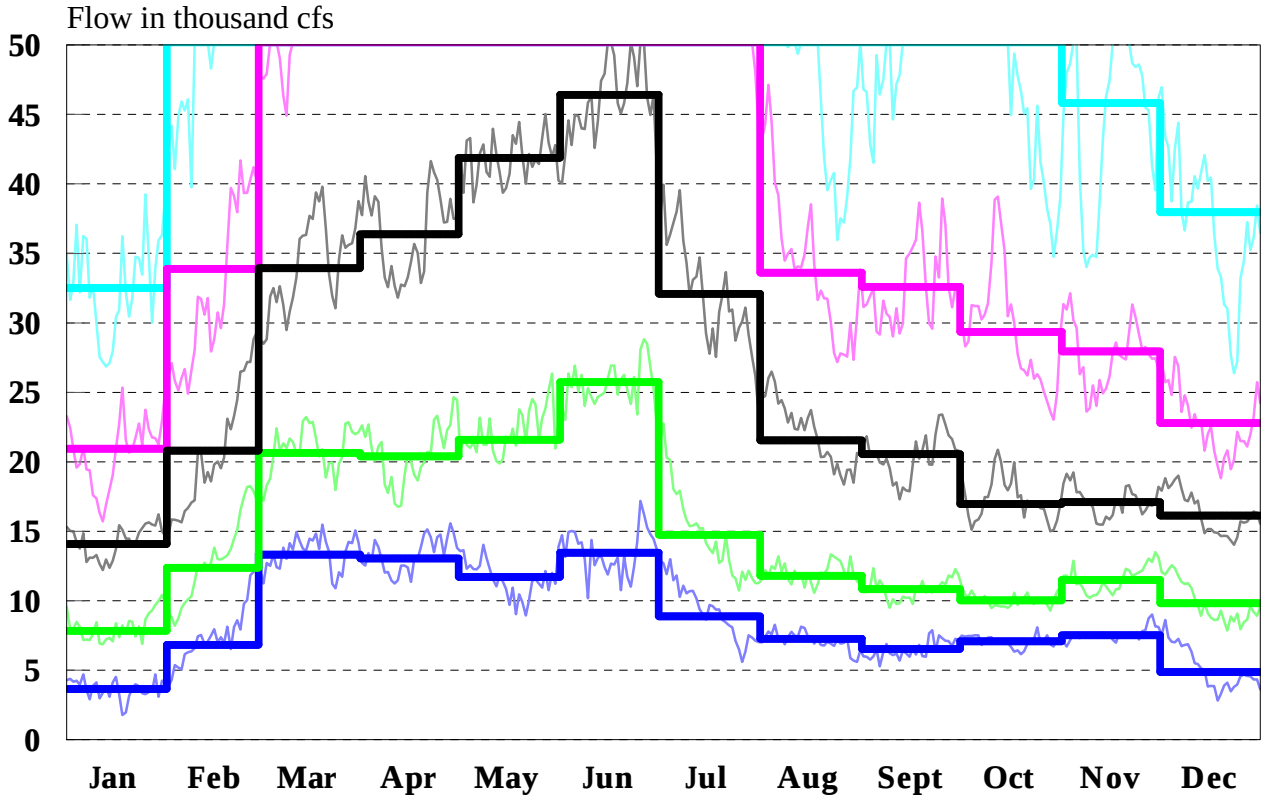
Gavins Point to Waverly
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	0.5	1977	3.1	1914	7.8	1928	6.5	1956	3.3	1926	3.6	1911	2.8	1911	2.7	1934	2.9	1956	2.9	1939	2.9	1939	2.1	1924
2	1.0	1937	3.9	1940	8.6	1957	7.0	1934	4.7	1934	3.9	1926	3.8	1926	2.8	1911	3.2	1953	3.5	1956	3.2	1914	2.3	1912
3	1.1	1940	5.6	1939	8.6	1981	8.2	1898	5.8	1956	6.2	1956	4.4	1936	3.2	1936	3.9	1955	3.8	1940	3.9	1936	2.4	1943
4	2.3	1957	5.7	1956	9.1	1925	8.4	1935	6.1	1911	7.1	1933	4.5	1934	3.7	1955	4.1	1991	4.1	1937	4.9	1937	2.8	1927
5	2.4	1912	6.4	1933	9.2	1934	8.5	1981	7.2	1914	8.3	1934	6.9	1901	5.8	1988	4.5	1939	4.3	1953	5.1	1956	3.0	1955
6	2.4	1925	6.7	1978	9.5	1956	9.2	1940	7.4	1955	9.6	1988	7.1	1933	6.0	1991	4.5	1947	5.4	1924	5.4	1924	3.1	1937
7	2.6	1936	6.8	1917	10.2	1964	9.5	1925	7.4	1939	11.5	1989	7.6	1940	6.1	1970	4.7	1971	5.8	1936	5.8	1933	3.4	1940
8	3.6	1954	7.0	1938	10.7	1968	9.9	1989	7.5	1925	11.7	1901	8.2	1970	6.3	1956	4.7	1976	6.0	1934	6.2	1940	3.5	1945
9	3.6	1935	7.1	1957	11.6	1918	11.0	1938	7.8	1989	12.5	1968	8.5	1966	6.4	1976	5.6	1954	6.0	1947	6.2	1938	3.6	1936
10	3.7	1979	7.4	1928	11.7	1967	12.0	1954	9.9	1901	12.9	1936	8.6	1980	6.9	1926	5.9	1911	6.0	1943	6.3	1923	3.7	1939
11	3.9	1924	7.4	1989	11.8	1935	12.1	1955	9.9	1940	14.3	1931	9.0	2002	7.5	1901	6.1	2002	6.6	1948	6.8	1943	4.3	1956
12	4.0	1913	7.6	1913	11.9	1899	12.2	1957	10.1	1967	14.4	1922	9.0	1954	7.6	1933	6.2	1934	6.8	1955	7.0	1976	4.4	1963
13	4.4	1938	7.9	1910	12.0	1943	13.1	1937	10.4	1941	14.5	1912	9.4	1974	7.6	1913	6.4	1990	6.8	1933	7.0	1955	4.4	1989
14	4.6	1970	9.1	1934	12.3	1931	13.4	1977	10.7	1968	15.7	1937	9.5	1953	7.7	1971	6.5	1940	7.0	1991	7.5	1953	4.5	1914
15	4.9	1955	9.4	1936	13.0	1940	13.6	1990	12.4	1928	16.2	1955	9.5	1988	8.0	1946	7.0	1943	7.7	1976	7.8	1945	4.9	1990
16	4.9	1939	9.5	1947	13.2	1926	13.8	1933	12.5	1937	17.0	1910	10.1	1956	8.3	1953	7.0	1937	7.7	1971	7.9	1934	4.9	1938
17	5.3	1905	9.6	1912	13.9	1933	13.9	1908	12.8	1946	17.2	1981	10.4	1931	8.5	1947	7.2	1901	7.9	1938	8.0	1907	5.0	1934
18	5.4	1948	9.7	1964	14.2	1941	14.0	1936	14.4	1981	18.3	1940	10.5	1955	8.9	1941	7.6	1988	8.0	1932	8.0	1954	5.4	1932
19	5.5	1956	9.7	1935	14.3	2002	14.8	1946	14.8	1931	18.5	1976	11.0	1912	9.1	1935	7.9	1974	8.1	1966	8.8	1910	5.8	1976
20	5.6	1967	9.8	1981	14.6	1977	15.0	1941	14.9	1966	18.9	1913	11.0	1976	9.2	1989	8.7	1945	8.2	1922	9.0	1917	5.9	1929
21	5.7	1944	9.8	1909	14.8	1954	15.3	1963	15.3	1924	20.4	1946	11.4	1963	9.2	2002	8.9	1980	8.2	1990	9.0	1932	6.7	1954
22	5.9	1971	9.9	1967	14.9	1991	15.5	1931	15.7	1923	20.8	1958	12.3	1989	9.3	1980	9.2	1912	8.3	1975	9.1	1966	6.9	1935
23	6.0	1915	10.0	1923	15.6	1917	15.7	1972	15.9	1948	21.5	1972	12.6	1946	9.8	1931	9.2	1966	8.5	1980	9.1	1980	6.9	1953
24	6.4	1991	10.0	1944	16.9	1911	15.7	1967	16.9	1954	22.0	1992	12.7	1930	9.9	1963	10.0	1981	8.6	1988	9.2	1948	7.1	1910
25	6.5	1930	10.2	1900	17.8	1989	16.0	1968	17.0	1988	22.0	1963	13.2	1941	9.9	1974	10.0	1968	8.7	1935	9.6	1926	7.1	1950
26	6.5	1963	10.8	1972	18.4	1976	16.1	1950	17.6	1977	22.3	2002	13.5	1939	10.1	1964	10.5	1963	8.9	1952	9.8	1949	7.3	1958
27	6.5	1959	11.0	1924	19.0	1970	16.5	1899	18.4	1907	22.4	1966	13.5	1991	10.1	1975	10.5	1929	9.0	1963	10.2	1947	7.6	1966
28	6.6	1972	11.1	1977	19.1	1898	16.8	1911	19.1	1932	23.0	1948	13.7	1968	11.2	1914	10.6	1936	9.0	1964	10.3	1963	7.6	1933
29	6.8	1934	11.6	1990	19.5	1955	17.4	1966	19.8	1943	24.2	1939	14.5	1977	11.5	1912	10.6	1948	9.3	1981	10.7	1988	7.9	1922
30	7.1	1961	11.7	1899	19.6	1996	17.5	1943	20.6	1933	25.3	1900	15.0	1910	12.4	1949	10.8	2000	9.5	1945	10.7	1950	8.0	1925
31	7.2	1958	12.3	1905	20.3	1938	17.9	1930	21.7	1963	25.6	1938	15.5	1898	12.6	1939	10.8	1913	9.6	1974	10.8	2002	8.0	1964
32	7.3	1950	12.6	1931	21.1	1927	18.2	1926	21.8	1936	26.6	1953	17.5	1985	12.7	1957	12.7	1975	9.7	2000	11.2	1990	8.4	1949
33	7.4	1968	13.3	1979	21.2	1966	18.4	1971	22.6	1957	26.7	1906	17.9	1913	13.2	1967	12.8	1922	10.0	2002	11.3	1991	8.6	1908
34	7.6	1953	13.4	1941	21.4	1953	19.1	1939	22.8	1980	27.9	1921	18.1	1972	13.3	1966	13.3	1917	10.4	1917	11.4	1944	8.7	1948
35	7.7	1909	13.5	1901	21.6	1988	19.3	1964	22.9	1992	28.3	1978	18.5	1975	13.4	1938	13.6	1957	11.1	1907	11.5	1911	9.6	1988
36	7.9	1947	13.7	1902	22.2	2000	19.8	1942	23.5	1975	29.0	1979	19.0	1937	13.6	1943	13.9	1952	11.2	1931	11.8	1899	9.7	1926
37	8.2	1951	14.2	1950	22.4	1923	19.9	2002	23.7	1958	30.5	1950	19.1	1938	13.8	1940	14.1	1933	11.4	1989	12.0	1942	9.7	1923
38	8.3	1941	14.2	1954	23.3	1972	20.3	1953	23.8	1910	30.7	1959	19.7	1932	13.9	1965	14.5	1932	11.7	1899	12.3	1964	10.3	1960
39	8.5	1914	14.5	1975	23.4	1914	20.5	1921	24.4	1964	31.5	1952	20.4	1964	14.2	1930	14.7	1967	11.8	1960	12.3	2000	10.3	1916
40	8.8	1978	14.7	1968	23.8	1913	20.8	1988	25.5	1970	32.2	1985	21.1	1918	14.5	1937	14.8	1935	12.1	1954	12.4	1913	10.5	1957
41	8.9	1969	14.9	1922	24.3	1990	22.0	1914	25.8	1900	32.6	1977	22.3	1981	15.0	1969	15.0	1927	12.2	1916	12.5	1898	10.6	2002
42	9.1	1908	15.0	1958	24.3	1947	22.5	1982	25.8	2000	33.2	1927	22.5	1971	15.9	2000	15.3	1994	12.3	1972	12.5	1927	10.6	1967
43	9.2	1964	15.1	1970	24.4	1904	22.9	1948	26.7	1953	33.6	2000	24.3	1959	16.0	1954	15.5	1931	12.5	1910	12.6	1952	10.8	1952
44	9.5	1989	15.3	1965	24.7	1921	23.0	1996	27.0	1947	33.7	1930	25.1	1943	16.0	1929	15.9	1925	12.7	1978	12.7	1975	11.0	1962
45	9.8	1931	15.4	1918	25.6	1920	23.0	1970	28.2	1922	38.3	1909	26.6	1961	16.3	1961	15.9	1924	12.8	1929	12.9	1989	11.1	1947
46	9.8	1981	15.5	1904	25.7	1924	23.4	1958	29.3	1938	38.7	1974	27.2	1935	16.6	1978	16.0	1959	13.4	1942	12.9	1957	11.2	2000
47	10.1	1917	15.6	1963	25.7	1946	23.4	1932	30.5	1912	40.0	1914	27.5	1960	16.7	1972	16.3	1899	13.5	1999	13.1	1935	11.4	1906
48	10.1	1911	15.7	1942	26.2	1939	24.7	1991	30.8	1965	40.2	1980	28.1	1952	17.1	1997	16.3	1969	13.5	1949	13.2	1960	11.4	1930
49	10.5	1975	16.4	2002	26.3	1975	25.5	1924	30.8	1976	41.3	1970	28.4	2000	17.1	1959	16.6	1923	13.7	1913	14.0	1969	11.6	1968
50	10.7	1982	16.6	1955	26.8	1950	25.7	1959	33.0	1921	42.1	1932	28.5	1990	17.7	1910	16.9	1997	13.9	1925	14.0	1999	11.7	1974
51	10.9	1966	16.6	1951	27.2	1959	26.8	1900	33.2	1906	42.6	1973	28.6	1942	17.9	2001	17.2	1964	14.0	1958	14.1	1971	12.1	1917
52	11.4	1929	16.8	1961	27.3	1937	27.4	1910	33.2	1902	42.6	1918	29.6	1925	18.2	1898	17.2	1995	14.2	1979	14.2	1916	12.2	1991
53	11.5	1933	17.0	1991	27.5	1942	28.5	1907	33.4	1908	43.3	1898	29.8	1997	18.6	1922	17.6	1930	14.4	1957	14.3	1967	12.5	1959
54	11.6	1976	17.0	1953	27.8	1930	29.3	2000	33.7	1991	43.5	1997	30.5	1978	18.9	1984	17.6	1999	14.6	1944	14.4	1962	12.6	1919
55	11.6	1945	17.2	1959	29.0	1944	29.7	1909	34.0	1949	43.9	1905	30.7	1957	19.0	1942	17.7	1960	14.8	1994	14.5	2001	12.7	1911
56	11.9	1918	17.4	1992	29.1	1907	30.9	1928	36.7	1909	44.1	1971	30.8	1906	19.4	1909	17.8	1979	15.5	1898	14.6	1959	13.2	1946
57	11.9	1990	17.6	1976	29.4	1906	31.9	1903	36.9	1962	44.8	1960	31.3	1914	19.4	1919	18.0	1984	15.9	1930	15.0	1978	13.3	1980
58	11.9	1919	17.6	1898	29.7	1900	31.9	1976	36.9	1917	45.1	1961	32.3	1967	20.0	1994	18.3	1970	16.3	1909	15.1	1930	13.3	1969
59	12.0	2001	18.7	1946	30.1	1958	32.5	1923	36.9	1918	45.1	1954	33.3	1900	20.4	1952	18.7	1898	16.3	1928	15.7	1925	13.3	1970
60	12.1	1927	18.8	1925	30.1	1995	32.8	1974	37.3	1971	45.1	1920	36.9	1948	21.6	1932	18.9	1983	16.9	1901	15.7	1958	13.6	1901
61	12.1	1943	19.9	1903	30.3	1992	33.3	1949	37.3	1898	45.1	1986	37.5	1928	21.7	1983	20.4	1906	17.2	1970	15.8	1974	13.6	1904
62	12.2	1926	20.0	1929	31.0	1908	34.6	1905	37.4	1927	45.9	1994	37.7	1949	22.4	1945	20.6	1904	17.7	1920	16.0	1970	14.0	1942
63	12.2	1965	20.0	1927	31.8	1999	35.0	1985	37.5	1994	47.4	1941	37.8	2001	23.2	1925	20.8	1909	18.1	1969	16.1	1968	14.0	1951
64	12.3	1992	20.3	1921	33.1	1902	35.4	1902	38.7	2002	47.6	1957	38.0	1919	23.3	1960	21.5	1919	18.1	1997	16.3	1912	14.2	1907
65	13.4	1922	20.5	1995	33.9	1922	35.6	1975	39.2	1950	48.1	1991	39.3	1994	23.4	1962	22.0	1950	18.2	1906	16.6	1994	15.6	1903
66	13.7	1898	20.6	1980	34.0	1963	36.4	1992	40.6	1972	49.5	1975	39.4	1979	23.7	1977	22.0	1938	18.4	2001	17.1	1981	15.7	1961
67	13.8	1923	20.9	1945	34.1	1932	37.2	1961	42.1	1990	50.7	1964	40.1	1973	23.8	1924	22.1	1946	18.5	1914	17.5	1901	15.8	1971
68	13.8	1996	20.9	2000	35.0	1910	41.0	1994	42.2	1979	50.9	1969	41.6	1903	23.9	1918	22.6	1949	18.7	1987	17.6	1904	15.9	1900
69	13.8	2002	21.0	1948	35.3	1980	42.5	1917	43.1	1998	53.0	1928	42.5	1929	24.4	1948	22.7	1908	18.8	1962	17.8	1929	15.9	1975
70	13.8	1946	21.1	1960	38.0	1974	46.4	1918	43.2	1935	55.0	1916	44.6	1962	25.0	1990	23.3	1910	19.1	1912	18.9	1922	16.1	1977
71	14.4	1952	21.6	1920	38.5	1901	48.3	1904	44.2	1952	55.9	1987	44.9	1987	25.7	1979	24.0	1962	19.7	1904	19.0	1946	16.5	1978
72	14.7	1988	21.6	1908	40.8	1951	50.8	1965	44.9	1985	56.2	1925	45.7	1944	26.1	1906	24.2	1941	19.7	1995	19.0	1908	16.6	2001
73	14.9	1942	22.2	1988	41.4	1982	50.9	1913	47.6	1929	58.4	1965	47.5	1947	26.1	1981	24.5	1907	20.3	1983	19.6	1965	16.7	1921
74	14.9	1980	22.3	1932	41.6	1936	51.6	1906	47.8	1942	58.4	1990	52.0	1996	26.9	1973	24.5	1996	21.2	1911	19.6	1987	17.0	1902
75	15.0	1928	22.9	1937	42.5	1985	52.2	1951	48.4	1961	64.0	1944	52.1	1921	27.1	1968	25.0	1978	21.7	1921	20.6	1921	17.1	1898
76	15.2	1921	23.3	1926	42.9	1912	52.9	1915	49.4	1978	65.0	1962	53.4	1969	28.5	1928	25.6	1944	21.8	1908	20.7	1995	17.2	1920
77	15.3	1900	23.4	1996	43.6	1952	55.8	1995	50.9	1960	65.6	1902	54.6	1945	29.0	1920	25.9	1998	21.9	1927	21.1	1997	17.3	1985
78	15.4	1901	23.6	1930	44.4	1915	55.9	1922	51.4	1930	68.0	1942	55.2	1916	29.4	1923	26.8	1928	22.2	1968	21.4	1920	17.4	1983
79	15.5	1949	23.9	1966	44.7	1998	56.1	1980	54.0	1969	69.6	1907	55.2	1924	29.5	1917	27.0	2001	22.9	1900	21.8	1906	17.4	1999
80	15.9	1995	24.5	1911	45.4	1971	56.8	1916	55.6	1959	74.3	1949	56.6	1998	29.7	1900	27.6	1916	23.1	1967	23.6	1983	17.5	1899
81	16.5	1902	24.9	1987	46.1	1986	56.8	1901	56.8	1913	76.0	1929	58.4	1950	29.9	1904	28.3	1900	23.1	1984	23.7	1902	17.8	1941
82	17.5	1907	25.4	1969	46.3	1960	57.7	1947	57.5	1905	76.9	1919	58.5	1922	30.3	1995	28.3	1920	24.8	1919	24.9	1915	18.0	1965
83	18.2	1962	25.8	1906	47.5	1997	61.7	1986	59.3	1916	77.3	1998	59.4	1999	31.4	1986	28.7	1982	25.0	1918	25.7	1919	18.2	1981
84	18.2	1960	25.8	2001	49.5	1919	62.3	1952	60.0	1919	79.4	1899	59.7	1995	32.3	1921	30.7	1972	25.7	1946	26.1	1951	18.7	1913
85	18.3	1899	26.6	1943	49.7	1994	63.3	1929	61.3	1974	80.3	1924	62.2	1917	32.6	1999	30.9	1914	26.4	1996	26.1	1984	19.5	1994
86	18.4	1904	27.9	1986	50.5	1916	64.3	1962	63.7	1997	85.3	1923	63.1	1982	34.4	1985	33.3	1992	27.0	1982	26.2	1903	19.6	1905
87	18.6	2000	28.2	1952	51.1	1961	66.9	1945	67.4	1899	85.4	1945	63.2	1983	35.4	1908	33.8	1958	27.1	1959	26.4	1985	20.5	1931
88	19.1	1916	30.0	1919	51.8	1905	71.0	2001	67.4	1982	86.7	1983	65.0	1927	35.6	1902	34.4	1921	27.3	1923	26.9	1900	20.8	1915
89	19.8	1906	32.3	1999	53.3	1965	71.5	1978	68.6	1915	87.6	2001	68.0	1992	36.2	1958	34.5	1942	28.7	1950	27.1	1941	20.9	1995
90	19.9	1997	32.5	1994	56.3	1945	71.7	1979	69.1	1996	88.7	1935	68.1	1986	37.4	1927	34.8	1918	29.0	1905	29.2	1905	21.4	1944
91	20.3	1984	32.6	1985	57.2	1969	71.9	1920	69.1	2001	90.5	1999	68.5	1905	38.7	1916	35.0	1987	29.1	1903	29.6	1982	21.6	1979
92	21.7	1920	32.9	1998	58.7	1929	74.3	1944	69.4	1904	90.7	1943	68.6	1899	39.0	1987	35.1	1985	30.2	1992	31.4	1979	23.3	1928
93	21.9	1903	36.0	1949	59.4	2001	76.2	1919	70.4	1944	93.6	1993	71.5	1958	39.1	1998	41.3	1902	31.5	1951	31.9	1972	25.3	1987
94	22.3	1999	38.3	1915	61.7	1948	79.2	1998	72.2	1903	94.8	1982	72.7	1920	39.2	1982	44.2	1915	31.8	1926	36.0	1918	26.2	1972
95	22.4	1986	38.9	1907	62.3	1984	85.8	1997	75.1	1973	95.0	1904	76.1	1965	39.9	1905	44.2	1989	32.4	1977	37.7	1931	29.7	1997
96	22.8	1998	39.6	1971	62.3	1909	87.8	1927	77.5	1983	96.1	1996	79.2	1908	40.7	1944	45.0	1961	32.7	1965	40.0	1996	29.8	1918
97	23.6	1932	42.3	1997	66.6	1962	91.3	1969	78.3	1951	128.4	1917	80.7	1984	41.0	1996	50.1	1973	39.9	1961	40.2	1993	29.8	1909
98	23.6	1994	43.1	1993	66.8	1903	92.3	1999	84.6	1986	134.2	1947	81.0	1923	42.4	1950	51.7	1986	42.1	1915	40.6	1986	30.6	1984
99	24.0	1985	43.7	1916	70.3	1987	92.5	1912	85.4	1920	134.3	1967	91.8	1909	43.2	1899	57.3	1965	49.5	1902	42.5	1977	34.1	1982
100	24.3	1987	44.3	1983	74.3	1983	94.8	1987	86.0	1945	137.0	1995	97.8	1907	48.0	1992	58.1	1926	50.3	1998	43.2	1992	34.7	1996
101	24.8	1993	46.5	1974	75.8	1949	104.1	1973	88.0	1987	145.2	1951	101.9	1904	60.9	1951	59.8	1905	55.2	1993	43.7	1909	36.5	1993
102	26.3	1983	48.9	1984	79.8	1978	108.8	1983	102.4	1999	158.9	1903	121.4	1902	62.3	1907	64.7	1903	56.5	1941	44.2	1928	36.6	1998
103	38.7	1974	51.4	1982	88.4	1993	113.8	1960	115.2	1984	159.9	1908	189.7	1915	65.7	1903	74.5	1977	65.5	1985	51.6	1961	39.1	1986
104	43.5	1973	56.2	1962	114.1	1973	114.6	1993	117.5	1993	160.8	1915	197.5	1951	115.2	1915	80.2	1951	85.7	1986	67.2	1973	48.4	1973
105	55.9	1910	60.1	1973	122.7	1979	134.9	1984	153.9	1995	160.9	1984	303.2	1993	138.8	1993	101.2	1993	112.7	1973	77.9	1998	55.6	1992

Gavins Point to Boonville Incremental Flows



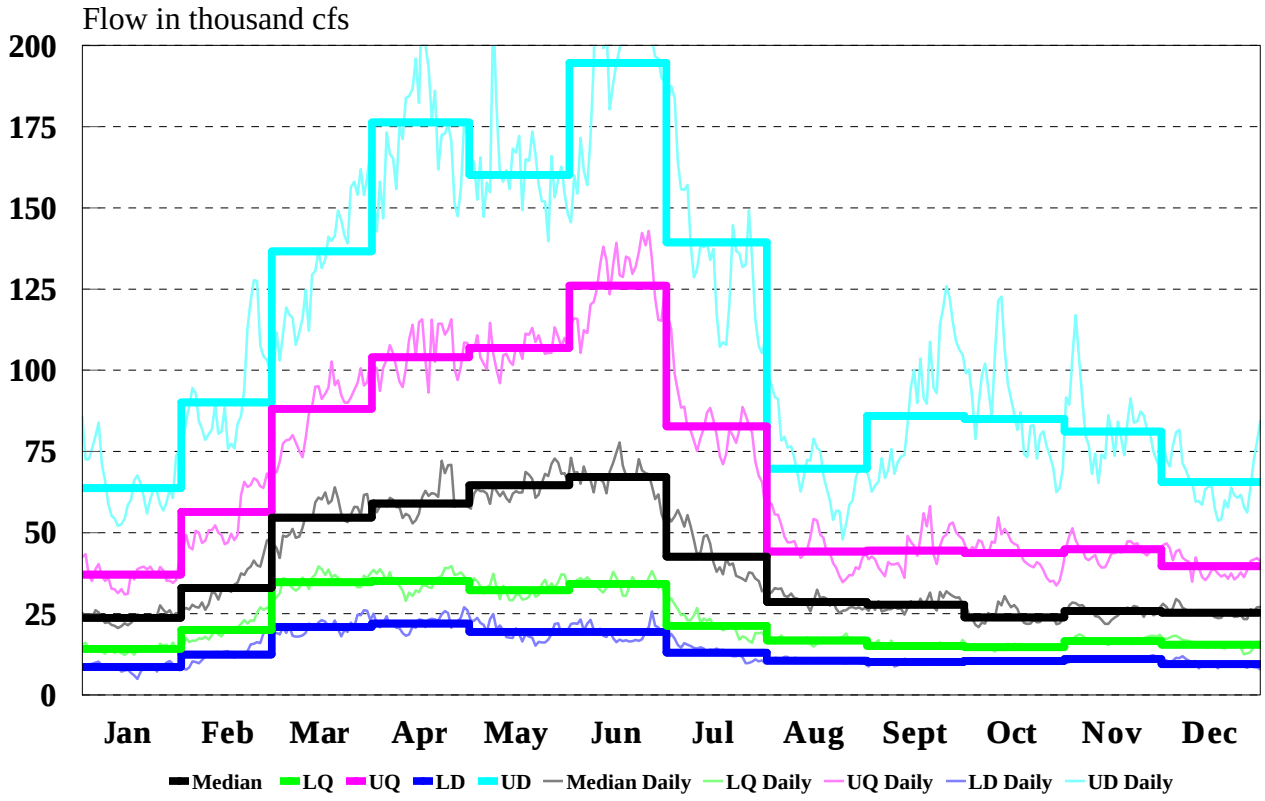
Gavins Point to Boonville Incremental Flows (Lower Values Expanded)



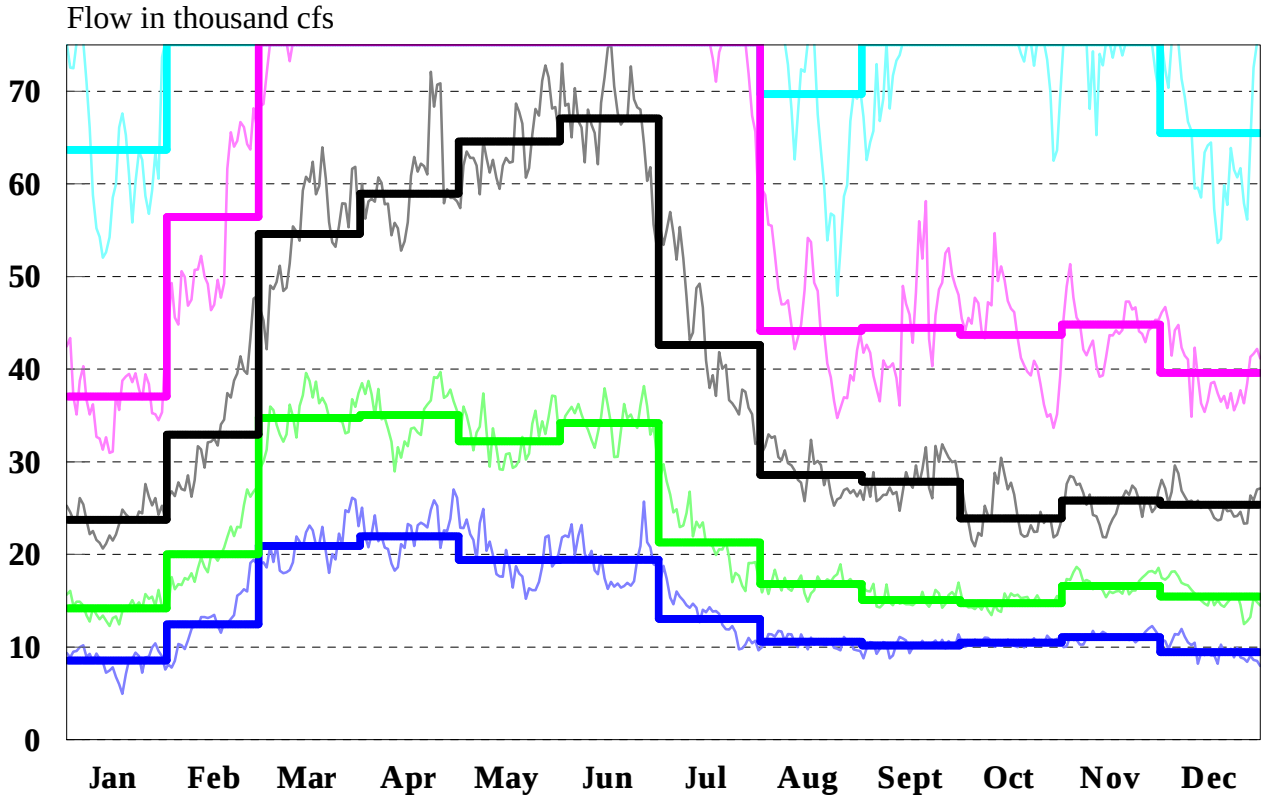
Gavins Point to Boonville
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	0.9	1940	4.4	1940	8.8	1957	6.9	1956	3.6	1926	4.1	1911	3.3	1911	3.3	1911	3.0	1956	3.4	1939	3.3	1939	3.0	1955
2	1.6	1977	6.0	1956	9.2	1928	9.6	1934	5.6	1934	6.8	1956	5.2	1936	3.7	1936	4.0	1953	3.7	1956	5.2	1914	3.2	1937
3	2.9	1957	6.4	1914	9.7	1956	11.4	1989	6.2	1956	8.5	1933	5.5	1934	4.0	1934	5.1	1955	4.4	1937	5.2	1956	3.3	1912
4	3.3	1936	6.5	1939	10.7	1934	12.4	1935	8.2	1914	9.2	1934	7.3	1901	6.8	1955	5.5	1939	4.8	1940	5.2	1936	3.5	1943
5	3.6	1954	7.6	1957	11.0	1964	12.5	1940	9.0	1911	10.1	1988	9.1	1933	7.1	1988	5.5	1976	4.9	1953	5.5	1937	4.1	1939
6	4.4	1979	7.7	1938	11.4	1981	13.9	1954	9.3	1989	12.7	1901	9.3	1940	7.3	1976	5.5	1991	6.8	1947	6.2	1933	4.6	1956
7	4.7	1912	8.5	1933	12.6	1918	14.7	1981	9.9	1939	14.1	1989	9.5	1926	8.0	1901	5.9	1971	6.8	1948	7.3	1940	4.9	1936
8	5.2	1938	9.0	1917	12.8	1968	15.0	1955	11.3	1901	14.4	1936	10.1	1980	8.1	1913	6.0	1947	7.4	1943	7.3	1943	4.9	1963
9	5.7	1939	9.1	1989	15.1	1967	15.2	1977	11.8	1941	16.3	1968	10.1	1970	8.1	1991	6.2	1954	8.2	1976	7.3	1976	4.9	1940
10	5.8	1956	9.3	1913	15.9	1931	15.9	1936	12.8	1925	16.4	1922	10.5	1988	8.9	1956	7.6	2002	8.2	1991	7.4	1938	5.3	1945
11	6.1	1944	9.3	1934	16.2	1943	16.5	1957	13.3	1955	16.5	1926	10.8	1954	9.3	1971	7.7	1940	9.1	1932	7.6	1955	6.3	1938
12	6.2	1924	9.5	1978	16.3	1941	16.8	1898	14.6	1940	19.4	1913	11.6	2002	9.4	1953	7.7	1901	9.1	1975	8.4	1953	6.8	1924
13	6.2	1937	10.4	1964	16.3	2002	17.5	1963	16.4	1967	19.8	1937	11.7	1931	9.8	1947	8.3	1911	9.2	1963	9.2	1954	7.0	1954
14	6.5	1963	11.2	1947	16.6	1917	18.2	1937	17.8	1988	20.9	1955	12.1	1966	10.2	1941	8.3	1990	9.2	1988	9.4	1945	7.3	1929
15	6.7	1905	11.8	1900	16.7	1954	18.6	1938	18.6	1968	21.4	1940	12.4	1976	10.2	1964	8.4	1937	9.3	1933	9.9	1924	7.4	1914
16	7.1	1934	11.9	1967	16.9	1977	18.8	1933	20.0	1923	23.4	1963	12.8	1963	10.3	1926	8.4	1988	9.3	1971	10.4	1948	7.7	1976
17	7.1	1959	12.1	1981	17.5	1933	19.0	1925	20.1	1931	23.4	1931	13.2	1956	10.5	1963	9.1	1943	9.5	1964	10.7	1932	7.8	1953
18	7.2	1967	13.3	1910	17.9	1925	19.0	1941	20.9	1977	24.1	1976	13.3	1912	10.7	1933	9.8	1966	9.6	1934	10.7	1966	7.9	1950
19	7.3	1913	13.3	1944	18.8	1940	20.0	1899	21.7	1954	24.4	1992	13.4	1989	11.1	2002	10.2	1912	9.6	1938	10.7	1963	8.0	1989
20	7.8	1930	13.4	1931	20.1	1989	20.5	1943	22.2	1948	24.4	1912	13.4	1955	11.2	1975	10.6	1963	9.8	1966	11.1	1949	8.3	1990
21	8.0	1925	13.5	1977	20.2	1935	20.9	1930	22.3	1966	24.7	1972	13.4	1953	11.2	1935	10.6	1934	9.9	1980	11.3	1923	8.4	1933
22	8.1	1961	13.8	1954	22.1	1970	20.9	1971	23.1	1932	26.0	1946	14.7	1930	11.6	1989	10.6	1974	10.0	1952	11.4	1910	8.9	1948
23	8.2	1948	13.9	1899	22.6	1996	20.9	1990	24.6	1980	26.7	1906	15.2	1974	11.9	1931	11.6	1948	10.0	1990	11.6	1980	8.9	1935
24	8.6	1953	13.9	1905	22.8	1899	21.0	1972	24.9	1924	26.8	1900	15.4	1977	11.9	1912	11.6	1968	10.1	1935	11.9	2002	8.9	1958
25	9.2	1951	14.2	1912	23.1	2000	21.4	1950	25.4	1936	29.8	1953	16.4	1941	12.1	1974	11.7	1913	10.9	1974	12.0	1917	9.7	1966
26	9.6	1970	14.7	1972	23.3	1938	22.4	1946	26.0	1992	31.5	1958	17.4	1939	12.1	1946	11.9	2000	11.2	1924	12.2	1988	9.8	1927
27	9.6	1958	14.8	1923	24.8	1911	23.2	1966	26.2	1937	31.9	1921	18.3	1913	12.7	1914	13.2	1929	11.2	2000	12.4	1947	9.9	1910
28	9.7	1964	14.8	1902	25.0	1926	23.9	1911	26.4	1964	32.3	1938	18.3	1946	13.2	1970	14.4	1980	11.5	1989	12.5	1907	10.7	1964
29	10.0	1931	16.0	1922	25.2	1991	24.8	1996	27.0	1928	33.3	2002	18.4	1968	14.3	1949	14.6	1945	11.6	1955	12.8	1950	11.0	1960
30	10.0	1955	16.2	1901	25.4	1966	25.4	1931	27.4	1946	33.7	1977	18.6	1985	14.4	1980	14.9	1936	11.8	1936	13.4	1964	11.4	1988
31	10.3	1935	17.1	1990	25.7	1988	26.5	1988	27.9	1957	34.4	1910	19.8	1898	15.1	1930	15.0	1975	12.0	2002	13.4	1913	11.7	1916
32	10.3	1989	17.6	1935	26.5	1955	26.6	1948	28.1	1963	36.1	1966	20.3	1991	15.2	1957	15.8	1981	13.0	1981	13.6	1944	12.0	2002
33	10.3	1981	17.9	1936	26.8	1914	27.1	1958	28.2	1900	37.5	1948	20.5	1938	15.3	1938	16.2	1952	13.1	1960	13.7	1990	12.6	1962
34	10.4	1914	18.0	1963	27.5	1976	28.8	2002	28.6	2000	38.1	1978	20.5	1972	16.2	1966	16.3	1932	13.3	1917	14.0	1975	13.0	1949
35	10.6	1947	18.1	1918	28.0	1972	29.8	1900	32.3	1933	38.7	1930	21.6	1918	16.3	1967	16.8	1957	13.4	1978	14.2	2000	13.0	1930
36	10.7	1915	18.9	1970	29.5	1953	30.0	2000	32.9	1958	38.7	1939	21.7	1975	16.8	1943	16.9	1933	13.5	1972	14.3	1899	13.0	1952
37	11.0	1917	19.1	1941	31.1	1930	30.4	1908	33.3	1907	38.8	1981	22.5	1910	17.0	1937	17.0	1935	13.7	1916	14.4	1989	13.6	1922
38	11.0	1972	19.3	1924	31.7	1923	30.5	1932	33.9	1975	39.4	1952	22.8	1964	17.8	1969	17.0	1967	14.1	1922	14.5	1952	14.0	1932
39	11.2	1976	19.3	1976	31.8	1904	30.5	1968	34.9	1981	40.1	1959	23.8	1932	17.9	1939	17.1	1994	14.1	1945	15.2	1916	14.6	2000
40	11.5	1968	19.7	1904	32.0	1924	30.6	1907	35.1	1906	40.5	1914	24.6	1971	18.1	1954	17.2	1917	14.7	1913	15.4	1991	15.0	1901
41	12.1	1991	19.7	1968	32.3	1950	31.6	1942	35.2	1902	41.2	1979	24.7	1937	18.2	1965	17.3	1927	15.0	1979	15.6	1911	15.6	1934
42	12.4	1909	20.3	1953	32.5	1907	32.2	1964	35.3	1965	42.0	1985	26.6	1959	19.0	1972	17.9	1997	15.1	1899	15.8	1930	15.6	1968
43	12.5	1911	20.3	2002	32.5	1921	33.4	1910	35.6	1947	43.0	2000	29.3	1943	19.2	2000	18.9	1930	15.5	1907	15.8	1959	15.8	1969
44	12.8	1978	20.5	1909	33.8	1995	34.1	1924	35.9	1922	43.6	1918	30.5	1925	19.3	1997	19.1	1922	15.6	1994	16.0	2001	15.9	1917
45	13.0	1971	20.9	1958	34.3	1898	34.1	1939	37.9	1949	44.5	1980	31.2	1952	20.8	1942	20.4	1995	16.3	1942	16.1	1999	15.9	1919
46	13.2	1966	22.2	1961	35.4	1910	34.6	1914	39.2	1953	45.2	1909	31.9	1997	20.9	1929	20.5	1979	16.3	1999	16.4	1942	16.5	1904
47	13.3	1945	22.4	2000	35.6	1913	34.9	1982	40.3	1918	45.9	1905	32.3	1914	21.0	1961	20.6	1960	17.0	1930	16.4	1957	16.5	1967
48	14.2	1919	22.6	1898	37.0	1902	35.4	1902	41.6	1962	46.1	1971	32.5	2000	21.2	1910	20.6	1899	17.4	1954	16.5	1962	16.5	1959
49	14.5	1990	22.9	1928	37.1	1947	35.6	1953	41.9	1938	46.6	1920	34.1	1906	21.9	1978	21.0	1923	17.7	1944	16.8	1960	16.7	1947
50	14.7	1908	22.9	1980	37.9	1920	36.0	1923	42.5	1910	47.1	1950	34.3	1957	22.0	1940	21.3	1959	17.9	1901	17.0	1898	16.9	1974
51	15.1	1918	23.2	1946	38.8	1939	37.0	1921	43.2	1976	48.1	1961	35.2	1900	22.1	1994	22.2	1925	18.0	1929	17.4	1971	17.3	1946
52	15.2	1941	23.6	1921	39.3	1932	37.8	1974	43.3	1971	49.3	1898	39.6	1961	23.0	1898	22.2	1983	18.9	1987	17.6	1927	17.8	1991
53	15.3	2002	23.9	1979	39.3	1990	39.3	1949	44.6	1917	50.1	1986	39.6	1990	23.3	1909	22.6	1984	18.9	1949	18.0	1935	17.9	1957
54	15.5	1996	24.1	1920	39.6	1992	39.6	1905	46.1	1950	50.5	1997	40.2	1935	23.3	1919	22.8	1906	19.0	1958	18.2	1934	18.5	1906
55	15.7	1929	24.3	1965	39.7	1980	39.6	1959	47.3	1912	50.9	1932	40.8	1994	23.5	1922	23.1	1931	19.6	1912	18.3	1912	18.5	2001
56	16.1	1980	24.5	1929	39.9	1908	39.7	1967	47.3	1908	51.2	1994	42.3	1948	23.7	1945	23.2	1924	19.7	1909	18.4	1926	18.5	1908
57	16.3	1927	24.8	1991	40.6	1927	40.6	1926	47.4	1921	51.3	1957	42.9	1978	24.3	2001	23.4	1938	19.8	1957	18.5	1901	18.6	1978
58	16.3	1933	25.1	1992	41.2	1975	40.8	1909	48.3	1985	53.2	1954	44.1	1960	24.4	1983	23.8	1964	20.5	1931	19.7	1969	18.8	1911
59	16.7	1922	25.4	1950	41.7	1937	41.8	1985	49.1	1909	54.6	1991	44.2	1919	24.4	1918	24.0	1946	20.6	1995	20.1	1904	19.0	1926
60	16.7	1943	25.9	1995	42.0	1946	43.4	1903	52.1	1970	54.9	1927	44.6	1949	24.5	1984	24.4	1919	21.6	2001	20.6	1968	19.1	1920
61	16.8	1950	26.8	1925	42.5	1900	43.5	1917	53.2	1972	56.0	1960	44.8	1903	24.7	1952	24.5	1950	21.8	1898	22.0	1995	19.3	1951
62	16.8	1992	27.1	1966	43.8	1958	44.3	1970	55.2	1979	56.4	1941	45.9	1942	25.0	1948	25.0	1898	22.1	1920	22.1	1994	19.3	1903
63	16.9	1969	27.2	1955	44.1	1906	46.6	1991	55.5	1952	56.4	1973	46.9	1967	25.3	1959	25.0	1999	22.1	1997	22.4	1925	19.4	1907
64	17.0	1988	27.2	1932	44.2	1959	49.7	1976	57.3	1943	56.5	1970	47.3	1979	26.6	1977	25.2	1909	23.6	1906	22.6	1965	19.5	1921
65	17.0	1921	27.2	1960	44.4	1999	49.9	1918	57.4	1998	57.7	1925	47.5	1962	26.7	1960	25.7	1969	24.1	1968	23.2	1987	19.6	1923
66	17.1	1900	27.5	1927	45.0	1944	54.9	1915	57.8	1913	58.1	1987	48.3	1944	27.1	1925	26.4	1962	24.1	1928	23.5	1978	19.9	1899
67	17.2	1982	27.5	1996	46.3	1942	56.4	1992	57.9	1930	60.1	1975	50.4	1928	27.1	1962	27.3	1907	24.2	1983	23.6	1921	20.0	1999
68	17.3	2001	27.8	1903	46.6	1963	58.8	1975	58.2	1994	65.0	1964	51.0	1973	29.9	1906	27.4	1904	24.2	1910	23.6	1981	20.0	1980
69	17.5	1923	28.1	1951	47.8	1901	59.2	1961	59.4	1898	65.4	1974	51.9	2001	30.8	1923	27.5	1949	24.4	1962	23.7	1997	20.2	1900
70	17.6	1928	28.5	1948	50.3	1974	60.1	1906	62.7	1991	67.6	1902	56.9	1929	31.1	1900	27.6	1941	24.9	1925	24.0	1920	20.7	1979
71	17.7	1975	28.5	1987	51.3	1951	60.9	1928	63.2	1905	67.9	1965	58.9	1916	31.2	1979	28.2	1996	25.5	1918	24.1	1970	20.8	1925
72	17.9	1902	28.8	1908	51.6	1936	63.3	1980	63.3	1942	70.5	1944	59.3	1987	31.6	1924	28.5	1908	26.2	1908	24.1	1946	21.1	1975
73	18.4	1898	28.9	1975	54.0	1960	63.9	1913	66.8	1969	72.8	1969	60.6	1921	31.9	1920	28.9	1944	26.6	1921	24.1	1958	21.2	1970
74	18.5	1926	29.0	1945	56.1	1986	66.6	1994	67.0	1961	74.7	1962	61.7	1981	32.8	1990	29.8	1900	27.6	1911	25.0	1974	21.4	1981
75	18.6	1901	29.4	1959	56.4	1919	66.8	1995	67.1	1959	75.0	1907	62.1	1945	33.0	1973	30.0	1916	28.5	1984	25.0	1967	21.9	1898
76	19.2	2000	29.8	1911	56.9	1916	67.3	1901	73.3	1916	77.0	1928	63.1	1996	33.3	1968	30.6	2001	28.8	1900	25.5	1922	22.1	1965
77	20.5	1952	31.6	1988	57.0	1922	67.4	1962	75.1	1929	81.8	1916	63.2	1950	34.4	1917	31.0	1910	29.1	1946	25.7	1929	22.3	1995
78	20.8	1995	32.2	1919	58.6	1915	69.3	1929	75.3	1915	84.8	1899	64.1	1917	34.8	1981	34.0	1972	29.3	1996	26.1	1908	22.5	1961
79	21.0	1899	34.0	1952	58.7	1971	69.9	1904	75.5	1903	86.8	1990	64.1	1922	35.7	1932	34.5	1978	29.8	1950	26.8	1906	22.9	1913
80	21.2	1942	34.0	1942	60.8	1994	71.0	1951	76.8	1997	90.5	1983	65.7	1983	36.8	1928	36.2	1958	29.8	1914	29.5	1915	23.4	1977
81	21.2	1904	35.0	1943	62.2	1905	71.3	1986	78.0	1899	93.2	1923	69.1	1927	37.6	1904	36.7	1918	30.8	1923	30.3	1902	23.6	1994
82	21.4	1997	36.4	1906	62.3	1997	71.7	1952	78.8	1919	93.3	1919	70.9	1947	38.2	1986	37.0	1920	32.3	1967	32.3	1903	25.3	1905
83	21.9	1949	36.9	1930	66.5	1982	73.4	1916	79.3	1927	93.5	1949	71.9	1899	39.3	1985	37.8	1987	32.4	1992	32.5	1900	25.6	1915
84	23.5	1920	38.1	1986	67.1	1969	75.9	1965	79.9	1978	95.1	1942	72.2	1924	39.5	1927	38.0	1985	33.0	1970	34.9	1979	26.2	1942
85	25.2	1903	39.2	1926	68.0	1952	79.3	1919	80.2	1960	99.8	1924	73.1	1920	39.6	1921	39.2	1942	35.1	1919	35.0	1951	26.8	1941
86	25.4	1994	40.3	1969	68.0	1912	88.9	1979	81.6	1990	102.4	1929	73.8	1982	40.2	1916	41.1	1998	35.9	1982	38.5	1918	27.3	1983
87	26.1	1984	42.3	1994	68.2	1909	90.6	2001	86.1	1935	103.2	1998	74.7	1905	41.2	1908	42.1	1914	36.5	1951	38.8	1919	27.8	1985
88	27.4	1962	43.3	1907	70.3	1985	91.5	1920	87.8	2002	105.9	1999	75.8	1998	42.4	1902	46.0	1928	37.3	1904	39.1	1982	27.8	1944
89	28.0	1965	46.0	1998	73.5	1945	94.2	1945	88.3	1974	120.4	1904	77.4	1999	42.8	1999	47.3	1970	37.5	1965	40.0	1983	28.0	1971
90	28.8	1987	48.7	1999	74.8	1998	97.2	1947	90.0	1904	120.8	1993	78.9	1992	44.2	1995	47.6	1992	37.6	1969	40.3	1905	28.8	1902
91	29.3	1986	52.2	1915	74.9	1965	102.0	1987	90.7	1951	122.6	1945	81.8	1986	45.1	1899	47.6	1982	38.4	1903	41.4	1972	29.9	1972
92	30.8	1999	53.4	2001	80.2	1961	108.1	1978	91.9	2001	127.4	1943	82.2	1995	46.0	1996	51.4	1989	39.6	1959	41.7	1984	32.6	1918
93	31.7	1960	53.5	1949	82.3	1948	114.7	1969	93.6	1920	130.8	1996	83.4	1923	46.3	1944	52.8	1921	44.6	1905	42.8	1996	36.6	1931
94	31.7	1985	55.2	1993	86.5	1987	114.9	1998	95.0	1987	138.5	1982	91.9	1908	48.5	1987	55.4	1902	47.5	1915	44.0	1941	36.8	1928
95	31.9	1906	55.4	1971	87.0	1903	115.0	1922	95.3	1944	138.9	1917	92.9	1965	49.0	1998	58.7	1973	49.4	1977	48.5	1986	38.2	1996
96	34.8	1983	55.6	1937	88.1	1984	116.1	1912	97.6	1982	146.9	2001	94.2	1984	51.9	1950	68.4	1915	54.3	1927	49.1	1993	38.3	1909
97	35.1	1998	55.8	1984	88.9	1949	116.7	1997	103.2	1983	146.9	1935	99.2	1907	52.9	1982	71.8	1986	55.3	1961	50.3	1909	39.9	1997
98	38.4	1907	58.6	1983	90.0	2001	123.0	1944	110.7	1986	154.8	1995	105.6	1969	54.5	1905	76.3	1903	61.0	1926	57.6	1985	40.1	1984
99	39.6	1993	61.6	1974	91.8	1983	126.0	1999	113.2	1973	164.9	1951	111.4	1958	56.8	1958	82.7	1961	63.2	1902	63.5	1977	41.1	1987
100	40.0	1946	62.2	1916	93.3	1962	147.7	1993	113.4	1945	173.3	1908	111.6	1909	57.9	1992	82.7	1977	76.3	1993	70.8	1992	42.2	1993
101	40.6	1916	68.5	1985	98.7	1929	154.8	1960	114.5	1996	176.5	1967	119.3	1904	64.7	1907	86.8	1965	77.2	1941	74.4	1931	48.4	1998
102	46.3	1932	69.4	1997	113.4	1978	156.5	1983	140.3	1999	182.8	1903	129.0	1902	66.1	1903	89.3	1905	87.9	1998	74.7	1973	57.8	1986
103	62.4	1910	81.6	1973	118.6	1993	164.7	1927	142.4	1984	186.7	1984	203.3	1915	75.2	1951	92.9	1926	99.0	1985	100.5	1961	66.7	1973
104	63.9	1974	86.9	1962	163.8	1979	165.2	1984	144.3	1993	198.7	1915	249.8	1951	136.6	1915	93.9	1951	136.6	1986	101.2	1998	75.5	1982
105	66.8	1973	93.2	1982	168.9	1973	185.7	1973	222.7	1995	229.2	1947	378.1	1993	190.1	1993	145.7	1993	155.8	1973	106.6	1928	79.2	1992

Gavins Point to Hermann Incremental Flows



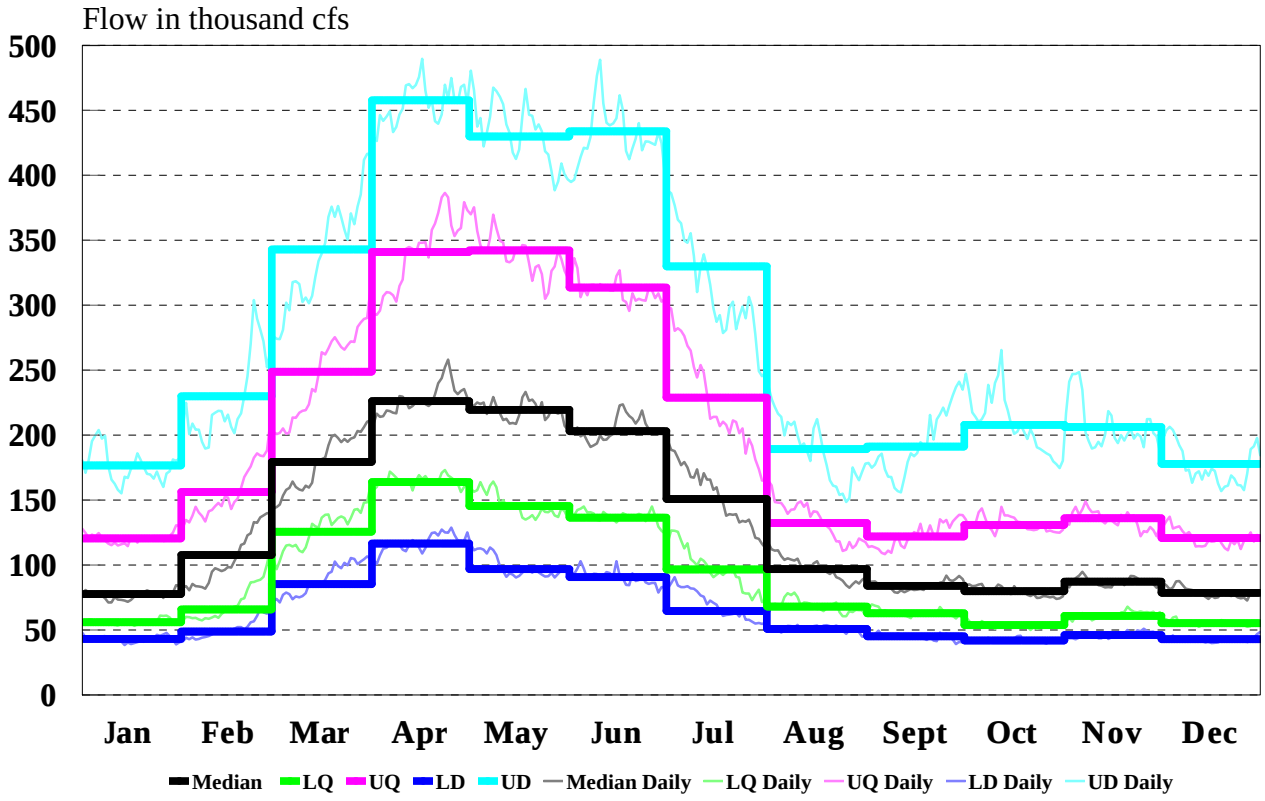
Gavins Point to Hermann Incremental Flows (Lower Values Expanded)



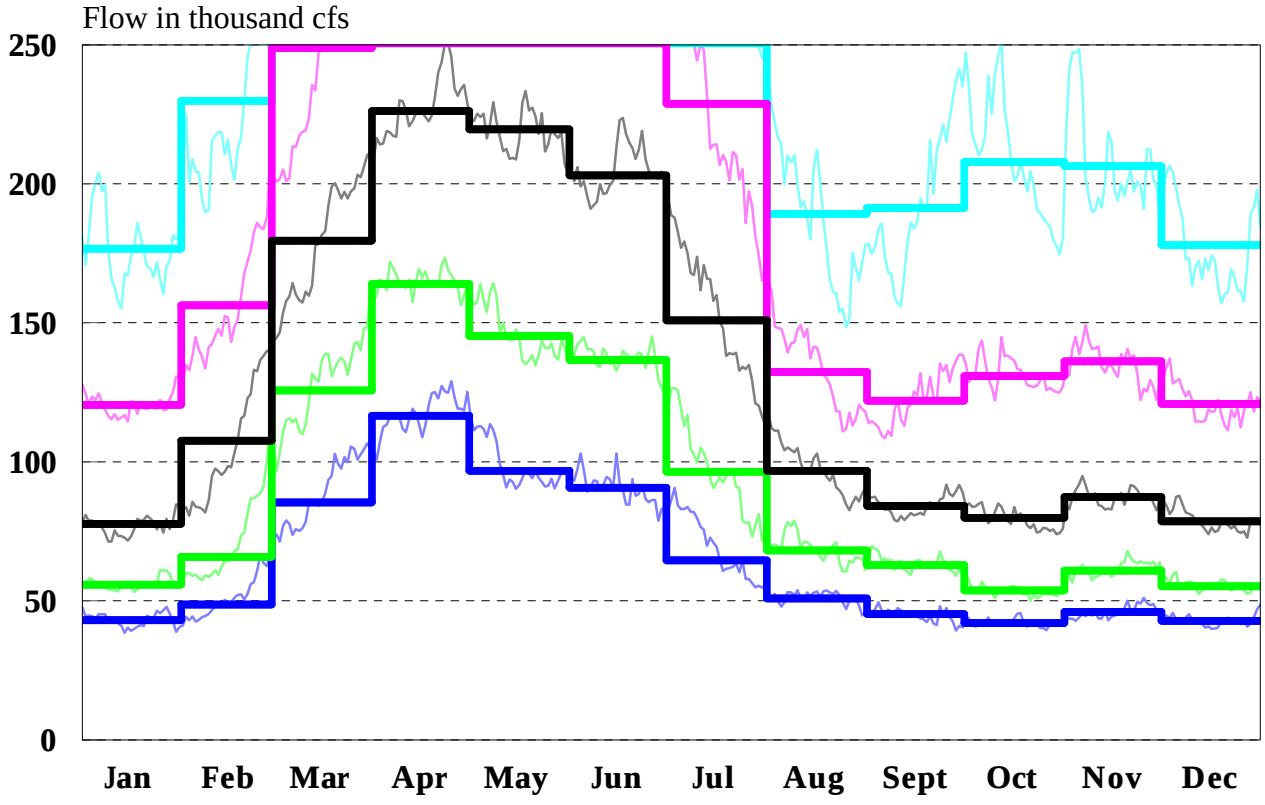
Gavins Point to Hermann
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	2.0	1977	7.2	1940	11.7	1956	9.2	1956	9.8	1926	5.3	1911	4.4	1911	4.4	1911	4.3	1956	4.5	1956	5.7	1939	5.5	1912
2	2.7	1940	9.8	1956	14.5	1981	16.8	1954	10.4	1914	12.5	1934	7.4	1936	5.7	1936	7.4	1976	5.7	1939	6.4	1956	5.7	1939
3	6.4	1954	11.9	1978	14.8	1918	17.0	1934	10.5	1934	12.8	1956	8.0	1934	8.6	1934	7.5	1953	6.4	1937	8.1	1937	7.3	1937
4	6.6	1957	12.0	1964	14.8	1964	19.6	1981	13.4	1956	13.9	1988	8.4	1901	9.1	1901	8.2	1954	7.1	1940	9.8	1914	7.4	1955
5	8.5	1936	12.9	1913	18.2	1967	20.1	1977	14.7	1901	15.0	1901	12.6	1940	9.2	1913	8.3	1955	8.0	1953	10.0	1940	7.7	1963
6	9.0	1963	13.7	1914	18.3	1954	22.6	1963	15.6	1911	18.0	1936	12.9	1954	9.4	1955	8.8	1901	9.5	1963	10.3	1976	8.1	1989
7	9.5	1939	13.9	1917	18.8	1917	23.0	1936	16.5	1989	18.3	1933	13.1	1988	9.7	1976	9.5	1991	10.9	1980	10.4	1933	8.5	1956
8	9.8	1956	14.8	1957	19.4	1941	23.8	1940	20.9	1955	20.6	1913	14.4	1933	11.1	1991	10.3	1939	11.2	1964	10.5	1955	8.9	1940
9	10.0	1905	15.4	1954	20.8	1957	24.4	1930	20.9	1941	20.9	1922	15.1	1970	11.1	1988	11.1	1963	11.4	1966	11.2	1953	9.3	1943
10	10.2	1912	15.5	1934	21.9	1934	28.0	1899	24.9	1925	21.6	1926	15.1	1931	11.3	1956	11.7	1971	11.9	1948	12.2	1966	10.0	1945
11	10.8	1967	15.5	1900	22.0	1931	28.8	1971	25.0	1940	26.7	1906	15.3	1980	12.8	1941	11.7	2002	11.9	1952	12.5	1963	10.1	1953
12	10.9	1979	16.3	1981	22.4	1928	29.9	1955	25.2	1977	27.0	1989	15.4	1963	12.9	1964	12.0	1988	12.1	1991	12.7	1980	10.5	1976
13	10.9	1934	17.3	1902	25.2	1977	30.0	1989	25.4	1932	28.2	1931	17.4	1930	12.9	1963	12.1	1947	12.4	1932	13.3	1954	11.1	1929
14	11.6	1938	17.6	1905	28.4	1940	30.7	1931	27.8	1954	29.1	1972	17.8	1926	13.0	1912	12.4	1937	12.7	1976	13.3	1943	11.8	1938
15	11.8	1924	17.7	1947	28.9	2002	31.0	1935	29.3	1936	29.4	1963	17.9	1953	13.7	1953	12.5	1912	12.9	1988	14.0	2002	12.8	1936
16	11.8	1951	18.5	1922	29.1	1943	34.0	1943	29.5	1980	30.3	1900	18.5	1956	14.1	1971	12.8	1943	13.2	1947	14.3	1932	13.5	1933
17	11.8	1964	18.5	1931	29.3	1996	35.1	2000	30.0	1923	31.6	1955	18.8	1989	15.8	1931	13.2	1940	13.5	2002	14.5	1938	13.6	1950
18	11.9	1961	18.7	1967	30.7	1968	35.1	1907	32.1	1931	33.1	1940	18.9	1912	15.8	1933	13.4	1966	13.7	1938	15.4	2000	13.6	1966
19	12.1	1931	18.8	1899	31.5	1933	35.4	1902	33.3	1939	33.4	1976	19.4	1913	16.0	1914	14.0	1913	13.7	1971	15.7	1913	14.0	1964
20	12.4	1944	19.2	1977	33.3	1991	36.2	1898	33.7	1900	33.7	1992	19.8	1966	16.5	1980	14.0	1911	13.8	2000	16.1	1952	14.0	1914
21	12.5	1981	20.6	1963	33.4	1970	36.6	1900	33.7	1948	34.4	1953	21.1	1976	16.7	1930	15.3	1990	14.2	1943	16.7	1964	14.4	1954
22	13.2	1917	21.5	1933	34.5	1914	36.7	1932	34.3	1988	34.4	1946	21.6	1955	17.0	1935	15.4	1929	14.7	1935	16.8	1945	14.8	2002
23	13.2	1953	21.5	1972	36.5	1910	36.8	1933	34.6	2000	36.9	1968	21.7	2002	17.1	1957	15.7	2000	15.3	1960	17.1	1910	15.0	1962
24	14.8	1914	22.3	1901	37.1	2000	37.4	1937	35.6	1992	41.0	1921	21.8	1974	17.3	1947	16.9	1980	16.2	1978	17.5	1916	15.1	1916
25	15.0	1913	22.4	1944	37.8	1925	37.8	1946	37.1	1967	41.6	1914	22.7	1918	17.5	1970	18.0	1957	16.6	1989	18.1	2001	15.4	1958
26	15.3	1958	23.5	1989	38.4	1972	39.6	1950	38.6	1964	44.2	1966	23.5	1972	17.9	2002	18.3	1968	16.7	1933	18.2	1990	15.9	2000
27	15.3	1959	23.9	1939	38.7	1930	39.9	1911	39.5	1906	45.0	1958	23.8	1941	19.5	1966	18.5	1948	16.9	1913	18.8	1930	16.4	1948
28	16.3	1978	24.3	1918	40.1	1926	40.7	1925	39.6	1902	45.9	1918	23.8	1939	19.7	1974	19.4	1952	17.0	1916	18.9	1944	16.5	1910
29	16.5	1970	24.6	1970	40.3	1907	42.4	1972	40.5	1928	46.4	1959	24.0	1946	19.9	1954	20.2	1967	17.1	1979	18.9	1917	16.8	1952
30	18.0	1911	24.8	1961	40.5	1966	43.0	1948	41.5	1965	46.7	1930	25.9	1968	20.1	1938	20.3	1932	17.6	1990	19.2	1949	17.9	1924
31	18.7	1976	24.9	1912	41.8	1989	44.0	1923	43.1	1966	46.8	1952	26.6	1938	21.8	1975	21.4	1936	17.8	1974	19.7	1957	18.3	1901
32	18.9	1990	25.5	1910	42.5	1911	44.2	1996	45.3	1968	47.2	1912	26.6	1991	22.4	1937	21.9	1981	17.8	1934	19.8	1999	19.0	1990
33	19.0	1948	25.8	1923	42.8	1953	44.2	2002	46.7	1963	49.0	1939	29.7	1898	23.3	1972	22.1	1934	18.4	1981	19.8	1947	19.7	1960
34	19.1	1947	26.1	1938	44.5	1938	45.8	1917	47.0	1924	50.1	1920	29.8	1975	23.4	1967	22.6	1933	18.7	1994	19.8	1962	20.7	1930
35	19.7	1919	26.3	1929	45.9	1902	46.5	1982	48.0	1918	50.4	1978	29.9	1971	23.4	1939	22.8	1935	18.9	1975	19.9	1989	22.0	1978
36	20.0	1968	27.4	1953	46.4	1924	47.1	1910	49.0	1958	50.5	1905	30.2	1964	23.5	1929	23.2	1959	19.2	1972	20.0	1899	22.1	1947
37	20.1	2001	27.4	1976	47.0	1995	47.8	1957	49.2	1962	52.3	2000	31.6	1937	23.7	1949	23.4	1960	19.8	1930	20.2	1924	23.0	1980
38	20.3	1945	28.2	1936	47.1	1899	48.9	1959	51.5	1971	53.6	1932	32.1	1959	24.9	1965	24.1	1983	19.9	1917	20.3	1948	23.1	1904
39	21.2	1980	29.1	1904	48.4	1904	50.5	1958	53.6	1922	54.1	1980	32.7	1925	25.1	1943	24.3	1930	20.1	1901	20.8	1901	23.5	1920
40	21.2	1902	30.1	1920	48.7	1932	50.8	1968	55.2	1975	54.3	1977	34.5	1914	25.5	1918	25.8	1964	20.7	1912	21.4	1950	23.7	1919
41	21.3	1925	30.1	1958	50.2	1921	51.0	1905	56.1	1946	55.6	1979	35.9	1952	26.0	1997	26.0	1999	20.8	1957	22.3	1960	24.4	1969
42	21.4	1921	30.9	1921	50.7	1976	51.9	1966	56.8	1949	56.2	1961	38.0	1985	26.2	1926	26.1	1994	21.0	1987	22.6	1975	24.5	1988
43	21.5	1900	31.4	1965	51.4	1950	53.2	1967	58.5	1953	57.0	1971	38.5	1932	27.3	1940	26.3	1917	21.2	1999	22.6	1988	24.5	1935
44	21.8	1915	31.7	1996	52.1	1992	53.5	1924	59.5	1937	59.5	1954	39.6	1900	27.3	1969	26.5	1997	21.4	1929	22.8	1923	24.7	1917
45	21.8	2002	32.4	1935	52.7	1923	54.7	1938	60.0	1913	60.9	1960	40.2	1910	27.6	1984	26.7	1984	22.2	1936	22.8	1907	25.2	1959
46	22.1	1930	33.3	1941	54.7	1935	55.3	1953	62.3	1917	61.1	1925	41.8	1906	27.7	1989	27.6	1938	22.9	1899	22.9	1912	25.3	1932
47	22.6	1996	33.8	2000	56.3	1955	57.9	1918	63.4	1981	61.2	1909	42.0	2000	28.3	1994	27.9	1946	24.2	1958	23.8	1971	25.4	1899
48	22.8	1918	33.9	1898	56.7	1947	58.8	1964	65.1	1976	63.0	1898	42.1	1977	28.4	1961	27.9	1979	24.5	1924	23.8	1959	25.4	1995
49	23.4	1909	34.5	1980	57.9	1936	59.5	1915	65.5	1947	64.8	1986	43.1	1997	28.9	1959	28.5	1906	24.9	1928	23.9	1991	26.2	1921
50	23.9	1955	35.1	1948	58.8	1939	59.9	1974	66.6	1930	66.4	1941	43.6	1943	28.9	1910	29.1	1995	25.4	1907	23.9	1936	26.3	1957
51	24.4	1922	36.4	1990	59.7	1946	60.7	1942	67.6	1907	66.9	1991	47.8	1960	28.9	2000	29.7	1931	25.6	1954	24.7	1911	26.8	1970
52	24.6	1989	37.1	1919	59.8	1963	61.3	1991	68.9	1952	68.3	1987	48.1	1978	29.2	1978	29.8	1974	25.7	1995	25.8	1904	26.9	1922
53	25.5	1966	38.2	1924	59.8	1908	62.6	1949	73.0	1957	69.4	1937	51.3	1962	29.5	1962	30.9	1899	26.1	1955	26.2	1965	27.6	1965
54	25.9	1992	38.8	1991	60.0	1980	63.1	1914	76.5	1905	72.1	1902	51.4	1957	29.8	1977	31.3	1923	26.3	1942	26.7	1997	27.8	1979
55	26.1	1972	40.2	1992	61.0	1988	65.9	1909	77.2	1933	74.4	1910	52.5	1903	29.8	1983	31.3	1919	26.6	1918	27.2	1978	28.1	2001
56	26.3	1923	40.4	1960	61.6	1959	66.2	1990	77.9	1909	74.4	1938	53.5	1994	30.1	1942	31.4	1975	27.0	1997	27.3	1898	28.2	1903
57	26.4	1901	40.8	2002	62.1	1937	67.0	1926	78.5	1985	74.6	2002	53.8	1961	30.6	1945	31.6	1927	27.0	1931	28.2	1934	28.5	1999
58	27.7	1899	42.1	1911	62.2	1913	68.0	1941	78.8	1959	76.5	1975	54.1	1944	30.9	1960	32.1	1962	27.3	1922	29.7	1920	30.1	1900
59	27.8	1926	42.2	1932	65.6	1920	68.2	1908	78.8	1972	78.3	1957	58.5	1919	32.1	1909	33.2	1900	27.5	1909	30.4	1995	30.6	1949
60	27.8	1904	42.5	1928	65.7	1942	69.6	1903	79.1	1979	79.3	1973	62.4	1973	32.2	1919	33.3	2001	29.3	1983	30.5	1921	31.5	1907
61	27.9	1920	42.9	1945	68.6	1898	69.8	1939	79.4	1908	79.6	1944	63.9	1990	32.5	1952	34.0	1922	30.1	2001	30.6	1958	31.9	1977
62	28.0	1908	45.0	1909	68.9	1901	71.3	1976	80.5	1921	81.4	1948	64.2	1979	33.9	2001	34.2	1907	31.7	1946	30.8	1942	32.7	1991
63	28.3	2000	45.2	1925	71.2	1900	74.7	1921	81.6	1998	82.5	1962	64.7	1935	34.1	1898	35.4	1909	31.8	1944	32.3	1929	32.9	1913
64	28.5	1982	45.4	1908	71.2	1916	75.2	1988	83.3	1903	85.9	1981	67.8	1916	34.2	1923	35.8	1916	32.1	1920	33.1	1987	32.9	1898
65	30.2	1898	45.4	1968	71.9	1919	77.7	1992	83.7	1950	86.3	1950	68.5	1917	34.5	1900	37.1	1925	33.1	1968	35.5	1969	33.2	1911
66	31.1	1927	46.2	1903	72.8	1986	79.5	1906	85.7	1910	87.6	1907	69.3	1949	34.5	1922	37.8	1945	34.6	1962	36.5	1981	33.5	1946
67	31.9	1935	47.2	1943	76.4	1999	82.3	1962	86.0	1912	93.2	1964	69.7	1987	35.5	1979	39.8	1898	35.8	1906	38.3	1906	34.3	1925
68	32.5	1942	47.4	1950	77.2	1960	86.1	1919	88.4	1969	94.7	1997	72.6	1942	35.9	1925	40.3	1924	36.1	1908	39.4	1979	34.7	1975
69	32.9	1903	48.1	1946	77.3	1906	86.5	1980	89.4	1991	97.4	1899	74.2	1920	38.5	1920	40.4	1996	36.2	1898	39.5	1970	34.7	1981
70	33.6	1941	48.2	1927	79.3	1971	87.6	1928	90.8	1915	97.5	1965	74.4	2001	38.8	1906	41.0	1987	36.4	1945	39.8	1915	35.1	1906
71	33.9	1929	48.2	1979	81.5	1909	90.0	1970	92.8	1938	98.6	1927	75.2	1928	39.4	1932	41.3	1918	37.1	1950	40.0	1935	36.1	1961
72	34.1	1984	48.9	1926	83.4	1927	91.3	1901	94.2	1997	99.4	1974	75.9	1983	40.1	1973	41.4	1978	37.6	1921	40.3	1922	36.7	1915
73	34.8	1971	49.3	1995	85.0	1990	92.3	1986	97.2	1942	99.7	1994	77.4	1922	42.0	1946	41.8	1972	38.0	1984	42.1	1908	36.8	1974
74	34.8	1991	50.6	1955	85.4	1905	93.6	1913	97.5	2001	99.8	1970	79.2	1927	42.4	1986	42.2	1908	38.5	1923	42.5	1927	37.3	1934
75	35.8	1965	50.8	1959	86.4	1944	95.8	1995	102.3	1899	110.9	1969	79.7	1899	43.5	1916	43.4	1904	39.2	1925	44.2	1918	38.3	1944
76	36.2	1933	50.9	1951	88.4	1958	97.0	1975	105.3	1916	111.5	1923	80.5	1921	43.8	1999	43.5	1969	41.3	1992	45.0	1968	38.6	1905
77	36.6	1928	51.4	1966	88.7	1994	98.8	1961	106.1	1987	120.3	1985	80.5	1967	45.0	1990	44.2	1944	42.0	1911	45.0	1900	39.2	1918
78	37.3	1997	53.1	1907	89.5	1951	99.1	1951	108.0	1982	128.4	1928	81.1	1996	45.5	1917	44.6	1941	42.1	1900	45.2	1902	39.4	1927
79	39.3	1952	56.8	1987	90.7	1915	103.7	1985	109.2	1970	131.0	1919	88.1	1950	47.9	1948	46.7	1949	42.1	1967	45.5	1925	40.0	1951
80	39.7	1937	59.1	1988	92.0	1982	106.1	1952	110.3	1898	132.2	1998	88.4	1948	48.5	1968	46.9	1985	42.4	1982	46.0	1903	41.2	1926
81	41.3	1962	59.6	1942	92.8	1969	111.1	1916	111.6	1951	136.9	1949	88.4	1945	49.3	1924	47.4	1950	44.4	1996	47.7	1926	41.7	1908
82	42.3	1975	60.9	1906	92.9	1965	111.4	2001	112.4	1920	141.4	1983	88.9	1923	49.6	1899	49.3	1910	50.8	1910	48.5	1982	42.8	1923
83	42.8	1960	64.0	1952	92.9	1975	118.7	1965	114.1	1974	143.5	1916	89.1	1905	53.3	1928	50.3	1958	51.3	1949	50.9	1967	44.8	1941
84	44.0	1987	64.4	1998	100.9	1983	119.0	1904	115.1	1978	144.4	1924	94.7	1986	53.6	1987	52.8	1928	52.5	1965	53.3	1994	45.2	1968
85	44.4	1994	65.1	1930	101.9	1961	121.4	1929	117.4	1935	145.0	1999	95.5	1929	54.4	1985	54.6	1942	55.3	1914	65.2	1909	45.6	1994
86	45.3	1986	70.6	1994	103.0	1952	123.2	1979	118.4	1927	145.6	1942	98.4	1999	54.5	1908	57.6	1920	57.0	1970	65.5	1905	47.2	1967
87	49.0	1988	72.3	1983	106.9	1974	136.0	1920	118.5	1960	151.2	1929	100.5	1998	55.3	1904	57.9	1998	58.3	1919	67.0	1984	48.0	1972
88	50.9	1995	76.0	1984	107.5	2001	138.0	1987	121.9	1919	154.8	1996	102.2	1982	56.1	1921	58.7	1992	59.5	1903	68.6	1919	54.3	1983
89	50.9	1943	76.2	1971	109.0	1922	147.1	1978	128.9	1986	157.6	1990	102.6	1907	57.9	1902	63.0	1989	59.6	1915	71.0	1983	54.4	1931
90	53.6	1999	76.2	2001	110.6	1948	149.6	1997	137.6	1904	162.9	1917	103.0	1947	57.9	1981	66.0	1982	61.6	1951	71.4	1974	55.6	1971
91	53.6	1969	76.9	1986	110.9	1997	154.7	1994	138.3	1994	163.3	1993	104.5	1992	58.1	1996	66.7	1973	62.3	1977	72.3	1946	56.5	1902
92	53.7	1983	82.5	1969	121.6	1929	156.4	1999	148.6	1944	178.6	1904	109.6	1965	64.0	1944	68.3	1914	65.4	1959	76.9	1951	56.8	1928
93	59.6	1949	83.5	1993	124.4	1912	157.6	1969	157.8	1990	183.4	1982	112.0	1924	66.0	1998	69.0	1970	67.8	1961	83.0	1996	57.9	1997
94	60.7	1906	84.0	1915	125.9	1949	162.9	1998	161.7	2002	185.1	1945	118.3	1984	67.3	1903	79.1	1986	77.2	1904	85.6	1931	58.2	1909
95	63.2	1950	86.1	1975	126.9	1998	169.8	1912	164.7	1996	186.8	2001	121.6	1981	70.2	1907	88.5	1902	80.0	1905	86.4	1972	60.8	1984
96	64.3	1998	87.1	1937	127.6	1987	175.2	1944	165.4	1945	187.8	1943	121.8	1908	71.4	1995	94.3	1977	94.2	1902	90.8	1977	61.5	1942
97	66.0	1932	95.1	1974	130.9	1945	179.5	1947	168.0	1973	195.7	1984	137.1	1995	72.7	1982	96.2	1921	94.3	1969	98.1	1973	66.2	1996
98	67.4	1946	96.1	1999	132.3	1903	181.5	1960	175.1	1961	196.3	1951	146.7	1902	77.7	1992	103.8	1903	101.3	1927	104.7	1941	72.6	1998
99	72.4	1985	103.5	1997	134.2	1962	183.5	1993	176.6	1983	204.2	1908	154.3	1969	82.2	1950	106.3	1926	123.5	1985	104.7	1986	74.5	1993
100	77.9	1910	104.8	1916	145.7	1993	192.8	1945	177.8	1993	210.7	1967	158.1	1909	87.7	1905	112.2	1961	132.4	1926	105.7	1993	79.4	1987
101	88.1	1907	105.7	1949	148.3	1985	207.7	1983	183.0	1984	237.7	1903	160.2	1904	92.5	1951	125.5	1915	140.1	1998	112.3	1992	94.6	1985
102	91.5	1916	110.4	1985	151.8	1984	238.5	1984	186.1	1999	244.6	1995	164.0	1958	94.1	1958	133.6	1965	140.9	1993	116.5	1928	97.0	1986
103	94.2	1993	111.0	1962	162.1	1978	249.9	1922	194.1	1943	259.5	1947	235.3	1915	94.2	1927	158.9	1951	158.0	1941	116.5	1985	108.2	1973
104	100.3	1974	115.8	1973	185.5	1979	292.4	1927	202.3	1929	267.2	1935	388.3	1951	185.3	1915	159.0	1905	186.6	1973	134.7	1961	133.0	1992
105	104.9	1973	123.4	1982	256.4	1973	302.9	1973	305.1	1995	285.5	1915	393.1	1993	268.5	1993	227.3	1993	240.3	1986	137.5	1998	149.2	1982

Gavins Point to St. Louis Incremental Flows



Gavins Point to St. Louis Incremental Flows (Lower Values Expanded)



Gavins Point to St. Louis
Ranking of Average Monthly Flows

Rank	Jan	Year	Feb	Year	Mar	Year	Apr	Year	May	Year	Jun	Year	Jul	Year	Aug	Year	Sep	Year	Oct	Year	Nov	Year	Dec	Year
1	27.1	1940	33.9	1917	57.7	1931	82.8	1931	58.0	1934	44.3	1934	36.4	1988	30.8	1936	29.1	1976	30.0	1956	34.7	1976	31.6	1910
2	28.5	1977	38.4	1940	59.4	1934	86.6	1902	78.9	1911	44.6	1988	40.4	1936	37.1	1988	34.9	1901	34.6	1939	37.0	1939	34.3	1989
3	33.8	1914	45.9	1964	66.5	1956	87.1	1934	88.5	1931	62.0	1911	43.1	1911	40.3	1934	39.9	1988	34.8	1976	39.9	1910	34.3	1976
4	39.8	1964	49.0	1934	67.1	1964	93.6	1977	91.6	1989	65.6	1901	46.8	1934	40.5	1976	42.1	1939	38.1	1940	43.0	1933	35.9	1917
5	40.7	1931	49.4	1954	71.2	1954	103.0	1911	92.3	1940	80.5	1900	59.1	1989	41.4	1964	42.3	1955	38.6	1937	43.0	1937	37.0	1914
6	41.3	1917	50.9	1902	83.0	1957	103.2	1930	92.5	1914	83.1	1956	63.3	1940	43.1	1941	42.4	1956	38.7	1963	43.2	1963	37.4	1937
7	41.8	1934	51.7	1956	83.9	1940	107.8	2000	95.1	1925	87.6	1936	67.9	1901	48.2	1931	42.8	1913	38.9	1948	43.7	1956	38.4	1963
8	42.7	1911	52.3	1914	88.5	1917	110.7	1940	96.9	1977	91.2	1977	68.0	1976	49.0	1901	45.2	1963	39.3	1953	44.7	1917	39.7	1912
9	42.9	1956	52.3	1901	88.8	1914	119.9	1954	103.8	1980	97.6	1931	74.1	1963	49.1	1911	45.2	1937	39.6	1988	44.9	1914	39.8	1939
10	44.6	1963	53.5	1931	90.1	1968	122.6	1956	103.9	1988	99.8	1992	74.3	1980	53.9	1914	45.9	1971	43.6	1917	45.4	1953	43.3	1933
11	44.9	1954	55.0	1923	94.6	1941	131.2	1925	108.6	1958	104.6	1976	75.2	1931	54.8	1971	49.0	1948	45.4	1952	49.0	1930	45.0	1955
12	46.6	1959	56.1	1913	98.1	1902	133.5	1963	109.6	1901	105.2	1989	76.1	1964	56.3	1913	52.3	1966	47.8	1964	50.4	1955	45.9	1916
13	46.9	1957	57.9	1963	99.3	1981	135.3	1899	115.8	1956	105.2	1940	78.0	1913	57.0	1930	53.9	1933	47.9	1932	50.9	1901	46.3	1936
14	48.1	1915	59.2	1977	101.0	1977	135.4	1958	116.1	1902	107.6	1963	78.3	1970	57.4	1955	54.8	1953	48.1	1989	51.1	1940	47.1	1956
15	49.6	1909	61.0	1978	103.9	1918	138.7	1968	123.0	1918	125.8	1913	82.8	1912	57.7	1933	55.0	1940	48.7	1918	51.6	1950	47.9	1904
16	49.7	1961	62.8	1957	112.2	1967	140.0	1914	123.4	1955	128.1	1921	84.9	1977	60.1	1989	55.4	1917	49.0	1913	52.0	1932	48.1	1958
17	50.5	1913	65.4	1899	113.9	1933	148.7	1989	123.6	1926	128.1	1948	85.0	1933	61.0	1910	58.1	1934	49.2	1901	52.6	1966	49.6	1950
18	52.3	1936	66.1	1989	114.9	1911	150.8	1981	128.1	2000	129.1	1914	85.2	1956	62.0	1963	59.9	1930	50.0	1947	54.1	1913	50.2	1948
19	52.4	1979	67.6	1900	114.9	1921	151.1	1918	128.2	1941	132.5	1955	85.3	1918	63.3	1918	61.1	1967	50.2	1966	54.3	1949	50.6	1964
20	53.7	1938	70.5	1922	115.6	1928	154.5	1990	132.7	1900	133.9	1922	86.0	1941	66.3	1937	62.1	1947	52.4	1933	54.7	1948	51.0	1930
21	53.9	1902	72.9	1972	116.8	1989	160.0	1915	134.0	1932	135.2	1925	86.4	1900	68.5	1966	62.3	1929	52.5	1899	55.6	1964	52.0	1929
22	54.5	1951	73.3	1958	122.0	2000	162.0	1910	134.4	1949	138.1	1926	89.9	1910	69.3	1947	63.3	1932	52.8	1916	56.6	1989	52.3	1901
23	54.6	1900	73.6	1918	127.1	1996	164.4	1937	134.7	1923	140.9	1959	90.5	1966	69.7	1975	64.8	1916	53.0	1908	56.8	1952	52.4	1953
24	55.4	1923	75.3	1944	129.6	1970	168.7	1964	148.7	1939	141.6	1961	90.6	1955	70.9	1949	65.4	1911	53.7	1935	58.8	1916	53.7	1903
25	55.7	1981	75.6	1936	130.5	1924	168.9	1932	152.3	1968	143.1	1972	93.1	1926	74.3	1965	67.3	1931	55.5	1930	61.3	1907	56.8	1962
26	55.8	1944	76.0	1981	131.3	1923	169.1	1955	152.6	1930	143.2	1987	94.9	1930	74.7	1956	68.4	2000	56.2	1971	61.7	1999	58.3	1922
27	56.5	1967	76.8	1961	138.3	1926	174.2	1936	155.4	1928	145.1	1933	102.0	1937	77.0	1954	68.7	1954	56.3	1922	65.1	1944	58.7	1943
28	56.7	1918	77.4	1920	142.1	1907	174.2	1924	157.1	1936	146.4	1930	103.9	1959	77.1	1912	68.8	1899	56.9	1958	65.6	1988	60.0	1899
29	57.6	1953	78.6	1921	144.3	2002	175.8	1900	157.6	1924	147.0	1958	107.1	1939	78.9	1967	69.9	1922	57.0	1975	66.3	1947	60.8	1940
30	58.0	1990	80.4	2000	144.6	1932	176.0	1957	157.7	1964	147.0	1939	109.9	1971	81.2	1940	70.4	1957	57.8	1910	68.3	1899	61.9	1907
31	58.4	1908	82.2	1947	145.8	1947	179.3	1923	159.2	1963	147.2	1932	110.3	1985	83.2	1959	71.8	1936	58.8	1974	69.2	1962	62.7	2000
32	58.5	1945	83.3	1970	147.3	1925	181.3	1996	160.7	1946	148.7	1953	115.6	1972	83.4	1957	72.0	1935	60.4	1943	71.7	1943	63.1	1898
33	60.1	1921	84.2	1933	153.2	1960	186.6	1905	162.8	1948	150.7	1910	120.8	1932	85.8	1922	73.3	1952	61.0	1960	71.9	1908	63.6	1952
34	60.1	1901	84.3	1948	153.2	1938	189.0	1908	166.3	1915	157.0	1968	121.2	1898	86.0	1898	75.1	1908	62.1	2000	72.3	1923	64.5	1988
35	61.5	1970	88.0	1967	154.1	1930	191.0	1935	169.4	1971	157.6	1971	122.7	1961	86.4	1923	75.4	1943	63.1	1957	73.0	1975	64.6	1920
36	63.8	1899	89.5	1980	159.7	1953	191.1	1907	172.7	1967	158.9	1923	124.5	1925	87.8	1900	75.4	1991	65.7	1909	74.0	1980	65.1	1960
37	63.9	1924	89.6	1941	160.2	1980	192.2	1898	181.5	1953	159.9	1906	124.8	1923	88.2	1960	75.6	1923	66.1	1987	74.1	1920	65.2	1938
38	64.0	1919	91.7	1904	161.0	1899	192.4	1921	184.7	1954	160.3	1964	128.0	1987	89.5	1977	76.1	1974	67.6	1979	75.5	1957	66.6	1954
39	64.3	2000	92.3	1905	161.4	1943	201.3	1917	184.9	1913	169.0	1952	133.1	1953	90.6	1939	77.0	1996	68.6	1934	75.8	1918	67.0	1908
40	64.8	1939	92.5	1990	162.8	1904	207.5	1943	187.7	1992	172.3	1978	134.0	1914	92.2	1948	77.5	1964	70.1	1999	76.0	1922	67.1	2002
41	66.5	1948	92.5	1919	163.6	1972	208.2	1988	189.0	1910	174.1	1946	134.5	1921	92.3	1917	77.9	1925	70.3	1898	76.1	1958	68.8	1913
42	67.0	1958	96.3	1898	166.2	1910	208.8	1946	190.4	1987	175.9	1912	136.3	1954	92.6	1991	79.0	1984	70.5	1929	76.2	1912	70.2	1945
43	69.2	1905	97.3	1939	169.5	1995	210.1	2002	192.4	1905	178.9	1941	141.8	1946	93.3	1974	79.7	1949	72.1	1950	76.7	1924	70.6	1999
44	70.1	1976	99.4	1945	170.5	1988	211.6	1959	193.5	1907	183.9	1966	145.0	2002	94.0	1980	80.3	1919	72.3	1955	77.4	1898	71.3	1966
45	70.9	1989	102.1	1929	170.6	1913	211.9	1971	200.8	1959	190.7	1898	150.1	1949	95.6	1929	81.5	1898	73.2	1912	79.8	1936	72.6	1900
46	71.5	1920	103.5	1953	170.7	1955	212.3	1942	203.2	1906	192.3	1937	152.3	1906	95.8	1961	81.5	1918	73.5	1920	80.1	1945	73.6	1969
47	76.8	1930	105.3	1910	171.4	1901	220.0	1949	209.5	1957	192.7	1979	152.5	1997	95.8	1909	81.7	1959	78.8	1991	80.7	2002	74.7	1935
48	78.8	2001	106.2	1924	174.1	1958	220.8	1941	216.4	1942	195.0	1954	153.8	1938	95.9	2000	83.5	1968	79.5	1997	82.1	2000	76.6	1978
49	79.3	2002	109.8	1979	176.4	1916	223.9	1972	218.9	1921	196.5	1918	155.4	1952	95.9	1925	84.4	1999	80.8	1944	82.2	1954	78.4	1944
50	80.5	1996	110.2	1909	178.0	1966	224.6	1953	219.3	1937	199.4	1997	157.5	1975	96.1	1935	85.5	1960	82.4	1996	82.2	1997	79.2	1918
51	84.7	1980	110.8	1935	182.4	1999	227.3	1926	224.0	1962	200.8	1994	160.9	1991	97.1	1938	85.7	1927	83.0	1936	85.6	1934	81.2	1919
52	86.2	1947	112.5	1965	184.7	1919	228.7	1933	229.9	1981	203.1	1902	163.5	1962	98.8	1919	86.4	1906	86.2	1978	86.9	1960	82.2	1932
53	86.6	1968	113.5	1908	187.6	1920	234.1	1909	230.4	1966	207.5	1920	167.6	1916	99.1	1962	86.5	1909	86.5	1931	87.3	1987	82.9	1924
54	87.1	1922	115.0	1912	189.7	1905	235.0	1938	230.5	1985	212.4	1949	167.7	1922	100.1	1904	87.1	1912	86.8	1990	87.4	1978	83.0	1947
55	87.4	1904	115.4	1996	190.9	1909	236.2	1980	232.5	1917	213.7	1980	168.4	1948	100.5	1926	87.3	1946	88.3	1906	89.0	1906	84.9	1905
56	87.6	1926	115.9	1976	191.9	1991	240.1	1966	232.6	1976	216.4	1928	169.7	1994	102.9	1994	88.3	1983	89.6	1967	89.0	1904	85.7	1957
57	87.6	1941	116.8	1911	197.1	1942	240.4	1948	236.3	1903	217.0	1957	169.8	1979	103.4	1984	89.3	1975	94.2	1949	90.4	2001	86.9	1995
58	88.5	1972	121.7	1926	199.0	1963	241.5	1950	237.2	1938	220.2	1985	172.6	1928	103.7	1906	89.4	1904	94.5	1904	91.4	1990	87.0	1949
59	89.5	1978	122.8	1955	201.3	1898	248.9	1970	259.2	1898	223.5	1905	177.6	1919	105.8	2001	89.8	1950	95.8	1980	93.0	1921	88.8	1906
60	89.6	1898	129.6	1903	203.5	1935	251.4	1901	262.7	1899	225.4	1907	178.0	1960	105.9	1983	90.0	1994	97.3	1946	95.0	1971	88.9	1980
61	91.8	1982	132.5	1960	206.1	1950	254.8	1992	269.1	1908	228.1	1981	178.1	1950	107.6	1978	90.3	1997	97.4	1923	95.7	1929	90.6	1959
62	94.8	1903	134.0	1995	207.1	1915	259.3	1976	276.3	1947	228.3	1975	178.3	1917	108.4	1899	90.6	1910	97.9	1924	96.1	1969	94.5	1915
63	96.6	1971	135.7	1932	210.2	1900	261.3	1974	276.9	1933	240.0	1924	181.3	1968	108.7	1945	91.6	1900	99.2	1995	100.3	1915	95.2	1925
64	100.7	1942	137.5	1925	212.7	1959	262.8	1928	280.3	1997	242.0	1962	184.8	1903	108.7	1970	91.8	2002	101.8	1994	103.3	1938	98.4	1979
65	101.7	1955	138.0	2002	218.9	1912	271.8	1987	283.4	1972	242.5	2000	186.5	1965	110.7	1921	95.1	2001	102.1	1962	105.1	1965	102.1	1974
66	102.0	1997	139.0	1907	219.5	1969	272.3	1939	289.0	1909	246.4	1909	188.3	1927	111.7	1946	95.6	1995	102.6	1907	106.9	1935	102.6	1946
67	102.2	1927	139.0	1987	220.7	1987	277.1	1961	289.4	1922	247.9	1986	189.1	1973	112.7	1916	95.8	1958	105.0	2001	108.1	1959	104.8	1923
68	102.7	1935	142.1	1946	221.6	1908	278.6	1967	289.7	1912	251.7	1899	189.9	1957	113.5	1997	98.0	1969	108.7	2002	114.1	1927	106.7	1981
69	105.7	1912	144.5	1959	223.0	1992	279.4	1919	290.9	1998	252.6	1969	197.6	1944	114.1	1920	98.6	1944	110.6	1921	117.1	1925	107.3	1921
70	109.6	1965	146.7	1968	227.0	1939	291.4	1995	296.7	1935	253.9	1950	198.6	1974	115.5	1942	111.4	1998	111.1	1981	118.6	1979	108.9	1911
71	112.2	1962	146.7	1991	227.3	1936	299.0	1903	298.9	1994	255.6	1965	200.6	1899	116.2	1953	112.4	1945	111.8	1992	123.4	1911	111.3	1968
72	114.7	1987	147.8	1992	233.1	1944	300.2	1975	301.5	1950	255.6	1960	205.5	1945	118.7	2002	112.8	1907	113.0	1938	128.5	1981	112.2	1997
73	114.9	1933	148.0	1906	236.7	1937	304.4	1991	304.7	1952	263.2	1938	213.9	1967	121.2	1969	113.8	1990	113.1	1925	130.4	1942	114.0	1975
74	116.6	1937	148.7	1938	238.6	1976	312.8	1982	313.0	1969	293.9	1970	214.9	1943	121.4	1944	116.5	1962	113.3	1983	131.5	1995	118.7	1990
75	118.7	1929	152.1	1950	240.0	1906	323.0	1986	314.2	1975	297.8	1929	216.0	2000	124.7	1985	117.6	1987	113.5	1984	132.8	1974	118.7	2001
76	119.0	1994	153.1	1951	241.9	1965	327.1	1913	320.1	1982	299.7	1919	217.4	1992	126.0	1932	120.6	1920	119.5	1968	135.0	1967	119.0	1961
77	121.3	1984	158.0	1943	244.5	1986	329.1	1985	323.0	1965	301.1	1983	218.3	2001	128.3	1987	120.9	1985	119.5	1945	136.3	1968	120.1	1970
78	121.9	1966	158.3	1928	244.6	1990	331.5	1994	325.3	1978	306.5	1991	224.3	1935	133.1	1943	123.6	1981	121.8	1914	137.0	1902	120.9	1951
79	125.5	1991	163.9	1994	244.6	1951	332.2	1906	333.2	1961	309.2	1944	227.8	1996	133.6	1973	128.3	1914	122.1	1942	138.5	1903	123.8	1977
80	125.5	1975	165.6	1930	245.1	1975	335.7	1999	339.1	1970	310.8	2002	230.4	1920	135.3	1908	133.5	1979	124.6	1919	139.2	1905	126.4	1934
81	125.8	1928	170.8	1988	247.5	1922	345.4	2001	346.5	1990	317.3	1998	230.4	1983	135.4	1950	133.6	1989	133.0	1982	140.7	1900	129.0	1927
82	126.2	1992	175.3	1971	249.6	1961	347.0	1952	346.9	1991	325.2	1942	234.6	1942	137.1	1952	141.2	1978	134.0	1900	140.9	1931	131.3	1965
83	128.8	1906	178.2	1966	253.2	1946	349.7	1916	350.8	1979	327.4	1904	236.8	1929	139.3	1968	143.8	1941	135.2	1928	143.0	1994	135.9	1994
84	131.5	1999	178.4	1998	262.2	1994	362.8	1997	357.0	1986	334.2	1973	237.3	1978	140.8	1996	143.9	1973	143.4	1954	143.5	1909	137.3	1941
85	132.5	1995	178.5	1952	263.5	1971	364.0	1904	358.8	1974	346.4	1951	243.9	1999	144.8	1928	144.9	1942	156.5	1972	147.1	1991	137.6	1996
86	134.7	1986	180.1	1937	269.0	1927	367.3	1962	359.5	1916	350.7	1967	251.6	1905	151.9	1979	146.6	1980	157.9	1905	156.9	1996	141.2	1942
87	139.3	1952	183.6	1915	280.0	1952	374.4	1951	360.0	1904	366.7	1999	254.6	1995	153.4	1986	148.4	1938	158.8	1951	162.1	1970	143.0	1967
88	139.6	1949	191.4	1986	282.1	1945	376.5	1944	361.2	1919	367.9	1982	259.4	1904	158.5	1999	150.7	1992	167.2	1961	183.6	1983	144.6	1998
89	139.9	1988	191.6	1975	285.2	1978	393.0	1978	370.3	1945	384.0	1916	261.8	1986	162.3	1998	156.7	1982	169.4	1915	185.2	1919	145.4	1971
90	145.4	1998	193.4	1983	290.0	1949	406.6	1969	374.2	1960	385.1	1990	265.7	1924	164.4	1972	158.3	1972	170.4	1911	191.1	1973	147.9	1972
91	156.7	1925	197.6	1993	295.4	2001	409.2	1965	382.1	1951	405.1	1974	269.0	1990	166.3	1992	161.2	1924	171.6	1959	193.2	1951	148.1	1902
92	158.7	1943	200.6	1927	307.8	1974	431.8	1947	391.0	1920	406.0	1917	277.9	1982	167.6	1995	161.6	1928	174.1	1970	193.8	1977	148.5	1984
93	160.8	1969	203.2	1942	315.2	1903	438.7	1929	425.3	1944	410.6	1993	280.3	1907	167.7	1927	165.3	1902	185.5	1977	196.2	1982	157.3	1909
94	171.2	1960	207.2	1997	322.6	1962	443.7	1920	427.4	1984	419.7	1996	300.7	1958	171.7	1982	176.6	1921	189.6	1969	203.4	1946	164.3	1931
95	172.1	1985	209.4	1969	326.6	1983	447.3	1998	428.1	2001	421.5	1984	305.9	1947	171.9	1903	187.3	1970	197.9	1965	204.0	1984	172.3	1926
96	177.7	1950	210.9	1985	329.4	1982	450.7	1912	438.6	1927	423.3	1927	305.9	1984	183.3	1905	187.6	1977	210.6	1902	204.3	1926	172.7	1928
97	181.0	1932	222.5	1949	329.7	1998	451.4	1945	439.7	1996	432.2	1935	312.1	1998	183.7	1958	204.4	1986	225.6	1998	234.5	1993	180.0	1983
98	194.3	1983	228.1	1984	330.7	1997	481.7	1984	442.3	1999	434.2	1945	317.2	1981	188.6	1990	214.2	1961	232.8	1927	246.9	1972	183.8	1993
99	203.2	1907	229.6	1962	335.9	1948	483.3	1960	448.1	1983	445.8	1943	343.7	1902	200.9	1924	234.3	1903	234.8	1903	256.5	1992	184.6	1987
100	237.1	1916	238.3	2001	364.9	1929	503.5	1979	451.0	1943	451.6	2001	362.5	1908	204.6	1951	244.1	1915	246.6	1985	258.2	1998	188.9	1991
101	238.7	1974	242.3	1999	369.2	1993	548.8	1993	476.3	2002	487.5	1995	401.6	1909	205.4	1981	248.2	1905	314.4	1973	272.4	1986	218.9	1986
102	241.2	1946	247.5	1982	370.3	1984	560.5	1922	481.1	1929	508.8	1915	416.0	1969	217.4	1902	253.0	1951	330.8	1993	278.8	1928	230.9	1973
103	246.5	1910	278.8	1974	419.3	1979	560.9	1983	518.2	1993	553.8	1908	439.0	1915	217.8	1907	281.9	1965	333.7	1941	284.7	1941	265.0	1985
104	263.9	1993	278.8	1973	458.1	1985	652.9	1927	559.5	1973	562.0	1947	588.9	1951	420.7	1915	327.4	1926	409.6	1926	298.7	1961	309.3	1992
105	284.5	1973	294.5	1916	517.0	1973	658.6	1973	585.8	1995	601.9	1903	839.8	1993	647.1	1993	523.4	1993	528.5	1986	323.8	1985	424.5	1982