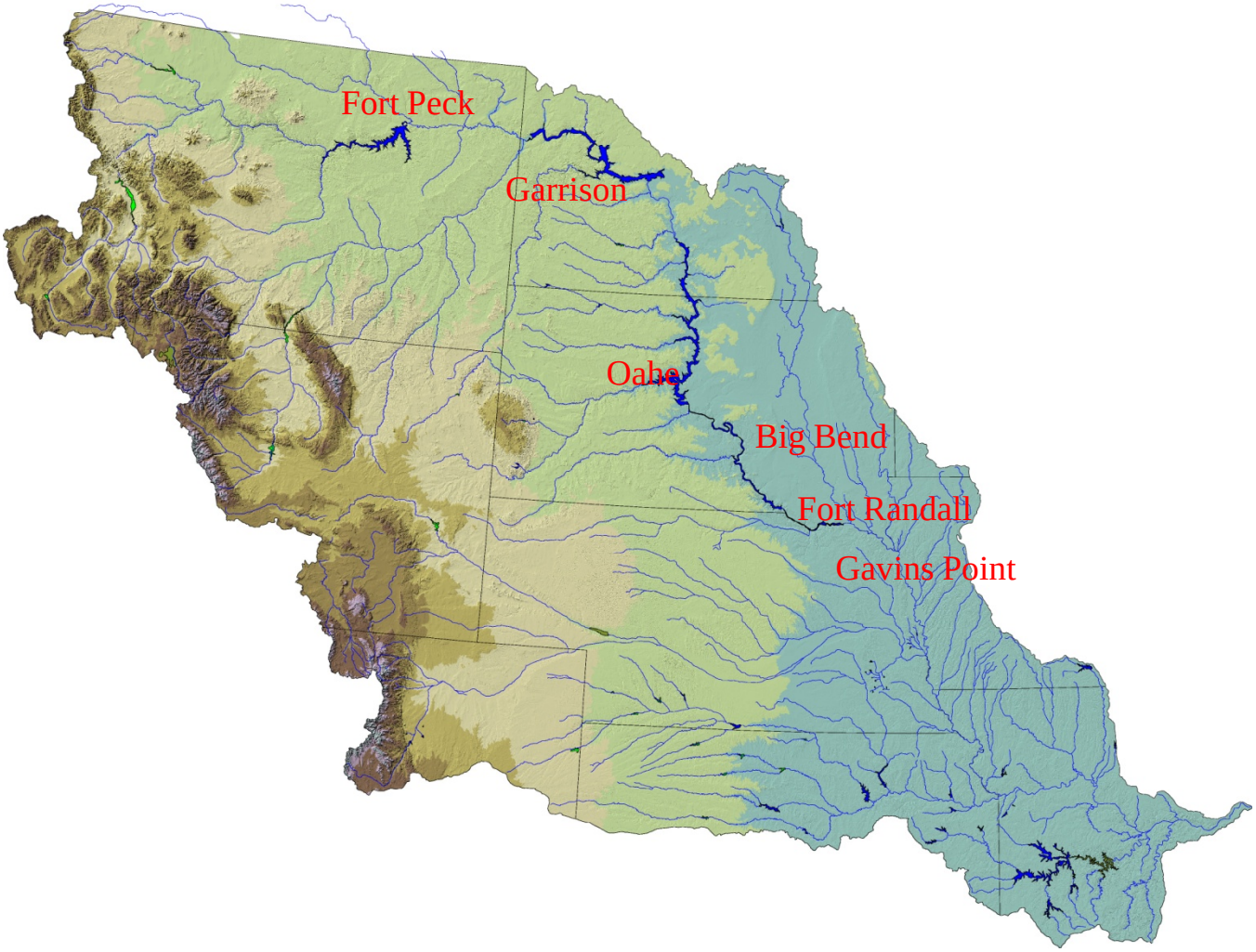
US Army Corps of Engineers ®
Northwestern Division

Missouri River Incremental Flows Below Gavins Point

Technical Report



Missouri River Basin Water Management Division
Omaha, Nebraska

July 2014

Missouri River Incremental Flows Below Gavins Point

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List of Acronyms

cfs	cubic feet per second
CO	Colorado
Corps	U.S. Army Corps of Engineers
DRM	Daily Routing Model
FEIS	Final Environmental Impact Statement
IA	Iowa
kcfs	1,000 cubic feet per second
KS	Kansas
LD	Lower Decile
LQ	Lower Quartile
LRS	Long Range Study
MAF	Million Acre Feet
MN	Minnesota
MO	Missouri
MRBWM	Missouri River Basin Water Management
ND	North Dakota
NE	Nebraska
NWD	Northwestern Division
SD	South Dakota
System	Missouri River Mainstem Reservoir System
UD	Upper Decile
UQ	Upper Quartile
USGS	U.S. Geological Service
WY	Wyoming

I. Introduction

A. Purpose and Scope

The purpose of this report is to update the incremental flows at key locations for the Missouri River below Gavins Point. Results of this analysis include the development of statistical data for daily and monthly reach inflows for seven 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 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. That 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 report titled “Missouri River Incremental Flows Below Gavins Point Dam, RCC Technical Report JY-05” was published in July 2005. That report was based on the incremental flow information for the period from 1898 to 2002. This updated study includes the additional years from 2003 through 2012.

The Missouri River Mainstem Reservoir System (System) Master Water Control Manual (Master Manual) was updated in 2004 and again in 2006. As part of the Missouri River Master Manual Review and Update Study (Master Manual Review) 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 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 update was completed by the Missouri River Basin Water Management (MRBWM) office, U.S. Army Corps of Engineers and is published as MRBWM Technical Report “Missouri River Incremental Flows Below Gavins Point, July 2014”.

B. Data Source and Preparation

Computer model simulation studies have been used by the MRBWM office since the 1960’s to simulate the regulation of the System using a long-term hydrologic record. As previously noted, the Daily Routing Model (DRM) was developed during the 1990’s as part of the Master Manual

Review 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. Previous to the DRM, the Long Range Study (LRS) model, which used a monthly time-step, was used for regulation studies.

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 Gavins Point at: 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 Missouri River Basin Water Management database, U.S. Geological Survey (USGS) gaging records, and the 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 Master Manual Review 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 used in the DRM is generally updated annually and has since been extended through 2012. 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 2012 incremental flows (referred to as local flows in the DRM program and QL in the DRM output files) 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	Aug. 1955-current
Missouri River at Sioux City, Iowa	Oct. 1928-Sep. 1931, and Oct. 1938-current
Missouri River at Omaha, Nebraska	Sept. 1928-current
Missouri River at Nebraska City, Nebraska	Sept. 1928-current
Missouri River at Rulo, Nebraska	Oct. 1949-current
Missouri River at St. Joseph, Missouri	Oct. 1928-current
Missouri River at Kansas City, Missouri	Oct. 1928-current
Missouri River at Waverly, Missouri	Oct. 1928-current
Missouri River at Boonville, Missouri	Oct. 1925-current
Missouri River at Hermann, Missouri	Oct. 1928-current
Mississippi River at St. Louis, Missouri	Apr. 1933-current

Availability is for USGS data except for Gavins Point, 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 2012, and the period for which actual daily data was available, which varies from reach to reach. 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.

C. Missouri River Basin – Recent Runoff Conditions

The basin has experienced a wide range of runoff conditions since the previous report (JY-05) was prepared. For example, 2011 was the fourth year in a row with above average runoff conditions following the drought of 2000-2007 in the Missouri River basin. Runoff above Sioux City, Iowa during 2010 was 38.7 MAF, 156% of normal, the fourth highest runoff year on record (1898-2012). The 2011 runoff year was the highest runoff year since record-keeping began in 1898, resulting in a total annual runoff of 61.0 MAF, 246% of normal. Although 2011 was a record runoff above Sioux City, Iowa, runoff volume measured at Hermann, Missouri was higher in 2010. Following four high runoff years, 2012 runoff was below normal, and conditions downstream of the System were extremely dry. Figure 1 shows the variability in runoff for the period 2000-2012.

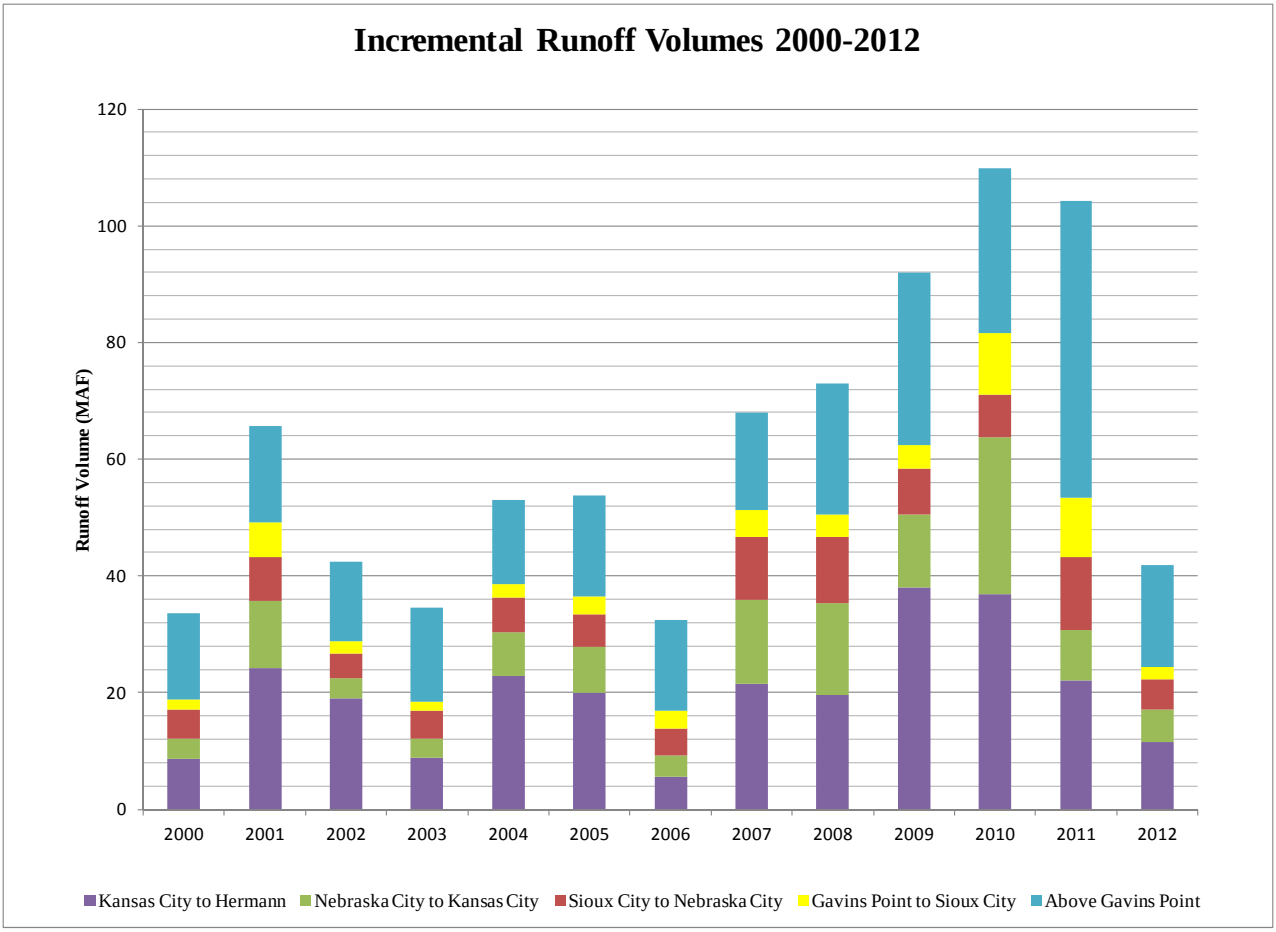


Figure 1: Missouri River Incremental Runoff Volumes

II. Incremental Flows by Reach

A. General

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 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. A detailed description of the basin and basin characteristics can be found in Chapter III of the Master Manual.

The incremental flow data set produced by the DRM was used to develop statistical data for reach incremental flows for seven conditions of statistical significance implied by their titles: minimum, lower decile (LD), lower quartile (LQ), median, upper quartile (UQ), upper decile (UD), and maximum. 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 seven conditions using daily data for each month. Graphical depictions of the data are shown on Plate 3 through Plate 12. Each of these plates contains two graphs. The top graph shows the daily incremental flows for the five statistical conditions from lower decile to upper decile and includes an inset with the maximum and minimum flows added. The lower graph shows the statistical monthly incremental flow for the five statistical conditions plus the mean monthly flow. The monthly average data for the 1898 to 2012 period for each reach are shown as ranked tables on Plate 13 through Plate 22.

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 2012. The January median incremental flow value using all days in the month 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 from 1956 to 2012, and the median incremental flow value was 0.7 kcfs. The top graph of Plate 3 shows the variation of the single-day values, and the bottom graph shows the monthly flows. Next, all of the monthly averages were ranked in ascending value order by month and year as shown on Plate 13.

Note that a few of the incremental flows are shown as being negative values. In winter periods, short-term changes in flows due to ice formation and temporary ice blockages cause negative incremental flow values for various days. In addition, as noted earlier, the incremental flows are computed by applying routing coefficients to actual flow values. Application of these general routing coefficients to all flow conditions may also cause negative incremental flows in some cases. For example, during flood periods, flows can exceed channel capacity and produce longer travel times between gages than would normally be expected. In some cases, the negative flow values may be a result of the average monthly depletion values being applied to daily incremental flows.

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 MRBWM 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 57-year period from 1956 to 2012 and the 115-year period from 1898 to 2012 (see Table 2). See Plate 3 for graphical depictions of statistical data for 1898-2012.

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

` Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012
January	-12.6	-12.6	-0.6	-0.9	0.0	0.1	0.4	1.0	1.2	1.9	2.2	3.0	8.4	8.4
February	-6.0	-6.0	-0.2	-0.2	0.4	0.5	1.1	1.3	2.1	2.4	3.8	3.8	42.0	42.0
March	-3.4	-3.4	0.2	0.5	1.3	1.3	3.5	2.9	6.9	5.7	11.3	13.3	60.1	60.1
April	-0.2	0.0	0.3	0.7	1.2	1.6	3.4	4.0	7.2	10.9	15.2	25.0	75.3	75.3
May	-0.2	-0.1	0.2	0.6	1.3	1.7	3.2	3.7	6.9	8.1	10.9	13.9	37.8	37.8
June	-0.8	-0.8	0.0	0.6	1.2	1.8	3.4	3.8	6.9	7.9	11.2	13.1	93.0	93.0
July	-0.2	-0.2	0.0	0.2	0.8	1.1	2.2	2.6	4.4	5.3	7.1	9.5	64.1	64.1
August	-1.3	-1.3	0.0	0.1	0.6	0.8	1.7	2.0	3.0	3.4	4.6	5.7	39.7	39.7
September	-1.3	-1.3	0.0	0.0	0.5	0.7	1.3	1.7	2.5	2.9	3.8	4.4	41.1	41.1
October	-1.6	-1.1	0.0	0.0	0.4	0.8	1.1	1.7	2.1	3.0	3.8	5.3	38.5	38.5
November	-11.8	-1.2	0.0	0.4	0.5	0.9	1.2	1.8	2.1	3.2	3.7	4.8	9.9	9.9
December	-11.4	-11.4	-0.5	-0.4	0.2	0.7	0.7	1.4	1.5	2.5	2.8	3.9	28.7	10.0

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

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, Iowa and has a drainage area of approximately 8,424 square miles including portions of South Dakota, Minnesota, and Iowa. Figure 2 shows the three main tributary basins of this reach. The Missouri River reach between Gavins Point and Sioux City is primarily un-channelized. The channelized reach begins at river mile 735.

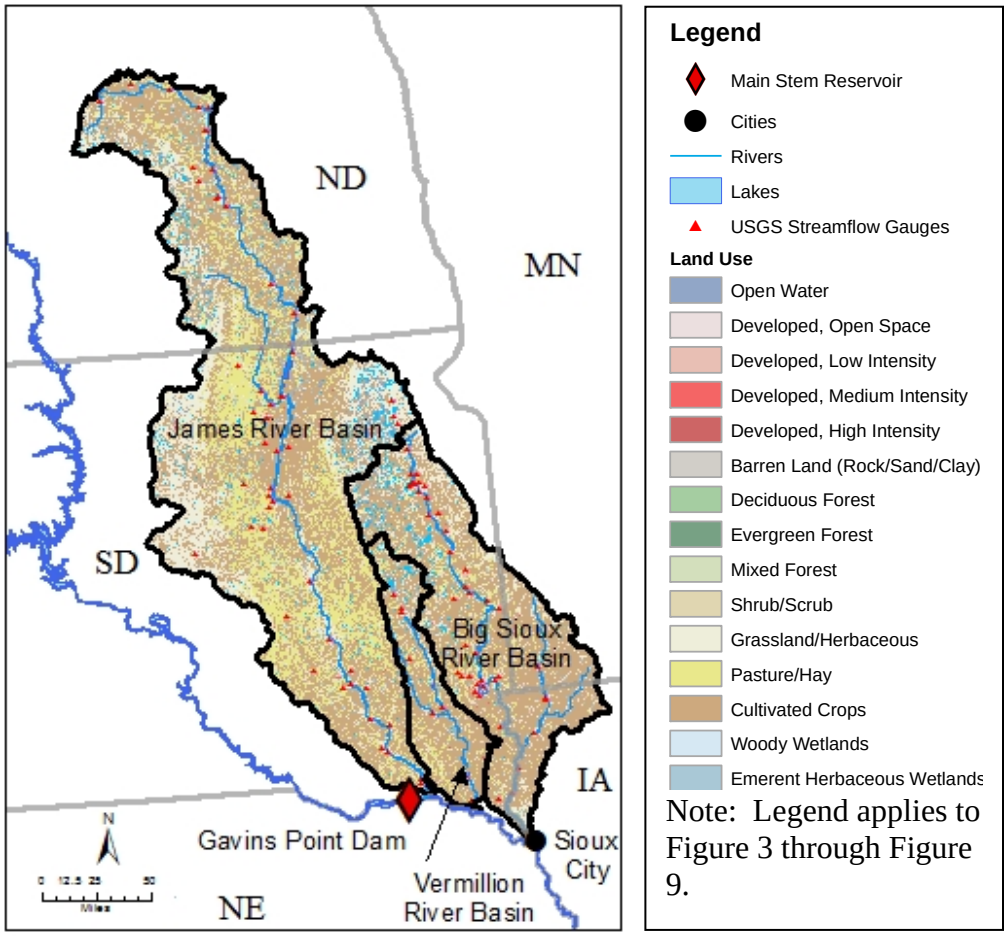


Figure 2: Gavins Point to Sioux City Tributary Basins.

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 1928. 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 84-year period from 1929 to 2012 and the 115-year period from 1898-2012 (see Table 3). See Plate 4 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012
January	-14.1	-14.1	-0.6	-0.9	0.3	0.1	1.1	1.1	2.0	2.4	3.8	4.1	15.0	15.0
February	-6.6	-6.6	-0.1	-0.4	0.5	0.5	1.4	1.5	2.7	3.2	4.7	5.5	28.7	28.7
March	-2.5	-2.5	0.0	0.0	0.9	0.8	2.3	2.7	4.5	5.5	8.1	9.6	72.0	72.0
April	-4.2	-1.2	0.0	0.0	0.9	0.7	2.5	2.4	5.2	5.8	9.7	11.2	54.3	54.3
May	-3.4	-3.4	0.0	0.0	0.6	0.3	2.4	2.4	5.3	5.9	9.1	10.4	55.0	55.0
June	-19.2	-19.2	0.0	0.0	1.0	0.7	3.2	3.1	6.6	6.7	12.4	13.2	63.9	63.9
July	-1.2	-1.2	0.0	0.0	0.6	0.4	2.6	2.2	5.6	5.2	9.3	9.3	51.0	51.0
August	-3.0	-3.0	0.0	0.0	0.4	0.3	1.7	1.3	3.2	3.3	5.6	6.1	49.5	49.5
September	-1.3	-1.3	0.0	0.0	0.5	0.3	1.4	1.1	2.7	2.8	4.9	5.3	25.9	25.9
October	-1.6	-1.6	0.0	0.0	0.4	0.1	1.3	1.1	2.4	2.7	4.7	5.2	21.0	21.0
November	-4.0	-4.0	0.0	0.0	0.5	0.2	1.3	1.2	2.5	3.2	4.6	5.4	11.3	11.3
December	-8.9	-8.9	-0.5	-0.8	0.3	0.2	1.1	1.1	2.1	2.7	3.9	4.5	16.4	16.4

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

The main tributaries in this reach are the Floyd, Little Sioux, Soldier, and Boyer Rivers, all left bank tributaries. The Little Sioux River is the largest in northwest Iowa and drains approximately 2,625 square miles within Iowa and 232 square miles in Minnesota. The Floyd, Soldier and Boyer Rivers are small tributaries that drain approximately 902, 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. Figure 3 shows the main tributary basins of this reach.

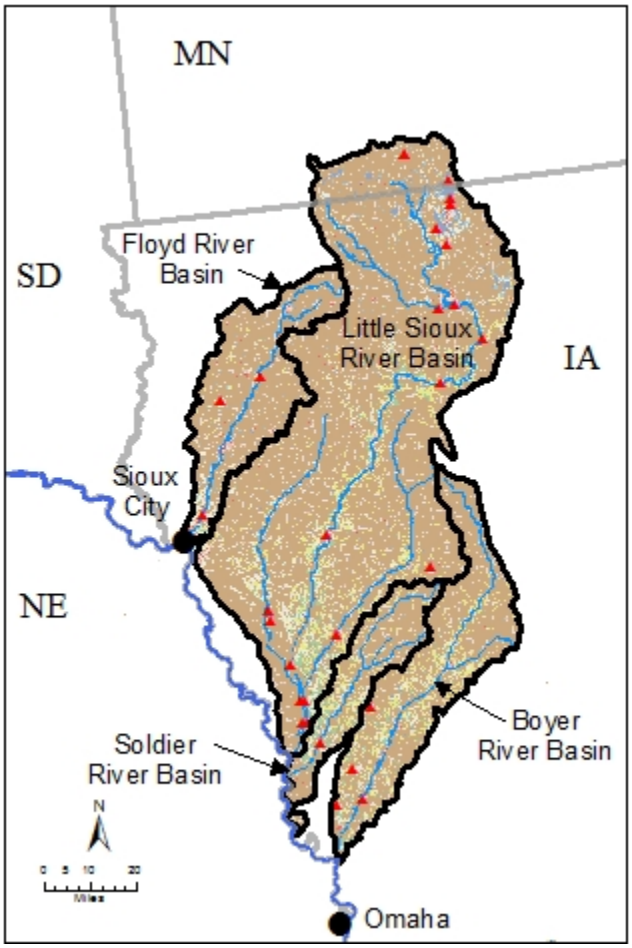


Figure 3: Sioux City to Omaha Tributary Basins

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 84-year period from 1929 to 2012 and the 115-year period from 1898 to 2012 (see Table 4). See Plate 5 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012
January	-5.6	-5.6	0.8	0.7	2.1	2.0	3.7	3.6	5.2	5.4	6.8	7.0	26.1	26.1
February	-14.1	-4.7	1.6	2.0	3.4	3.7	5.2	5.6	7.8	8.3	11.4	12.1	52.2	52.2
March	-9.1	0.0	3.0	4.0	5.1	5.6	7.5	7.9	11.2	11.4	17.8	18.7	83.5	83.5
April	-2.2	0.0	3.0	2.9	4.7	4.6	7.1	6.6	11.3	10.2	17.9	16.2	61.5	61.5
May	-3.6	-1.0	2.3	2.6	4.2	4.3	7.3	6.9	12.1	11.3	18.7	18.4	56.9	56.9
June	-6.9	-1.9	2.2	2.1	4.3	4.0	8.3	7.2	16.3	14.4	28.8	25.1	108.5	108.5
July	-17.8	-17.8	0.8	0.8	2.1	1.8	5.0	4.0	11.0	7.7	21.0	13.6	112.3	112.3
August	-8.9	-4.0	0.8	0.7	1.7	1.5	3.4	2.7	6.6	4.8	10.8	8.2	64.6	45.8
September	-2.4	-0.7	1.0	0.8	1.9	1.6	3.5	2.8	5.9	4.7	9.2	7.3	37.9	37.9
October	-5.3	0.0	1.5	1.5	2.4	2.2	3.8	3.4	6.0	5.3	8.7	8.0	46.1	46.1
November	-1.6	0.0	2.3	2.3	3.2	3.2	4.3	4.2	6.2	5.9	8.1	7.9	23.6	23.6
December	-12.4	-12.4	1.0	1.0	2.4	2.5	4.0	4.1	5.6	5.8	7.3	7.5	18.4	18.4

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. Figure 4 shows the main tributary basins of this reach.

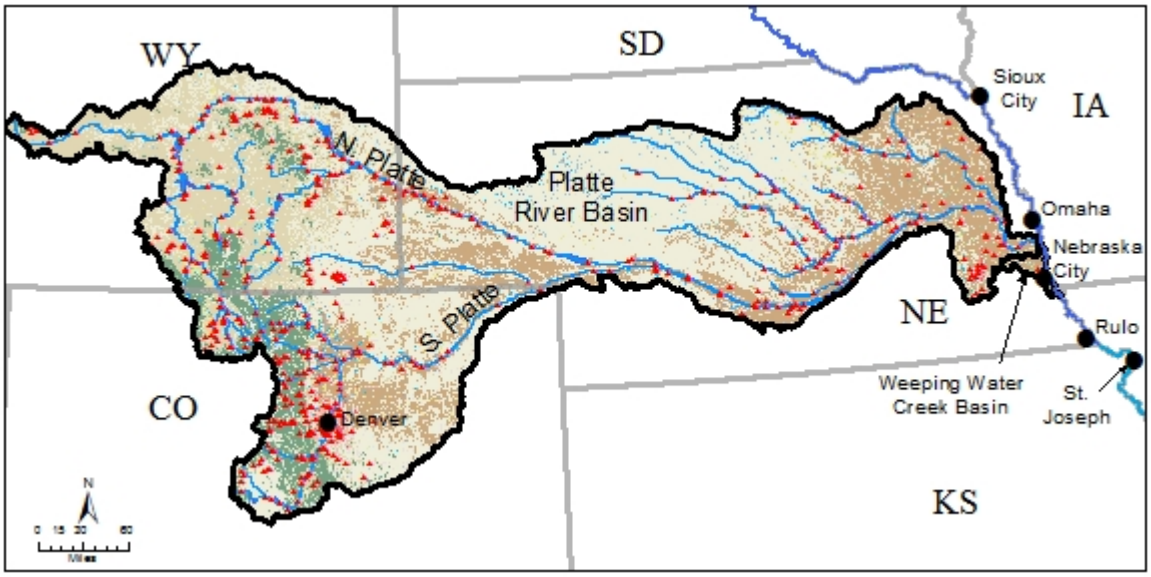


Figure 4: Omaha to Nebraska City Tributary Basins

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 63-year period from 1950 to 2012 and the 115-year period from 1898 to 2012 (see Table 5). See Plate 6 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1950-2012	1898-2012	1950-2012	1898-2012	1950-2012	1898-2012	1950-2012	1898-2012	1950-2012	1898-2012	1950-2012	1898-2012	1950-2012
January	-5.4	-5.4	-0.2	-0.2	0.2	0.3	0.8	1.0	1.7	1.9	2.7	3.2	38.3	38.3
February	-8.4	-5.3	-0.2	-0.2	0.3	0.4	1.2	1.3	2.1	2.6	3.9	4.8	29.1	29.1
March	-6.2	-6.2	0.0	0.0	0.6	0.7	1.8	2.1	3.5	4.3	6.3	7.6	43.2	43.2
April	-3.8	-3.8	0.0	0.0	0.6	0.8	1.9	2.1	3.6	4.5	6.2	8.1	51.5	51.5
May	-10.7	-10.7	0.0	0.0	0.7	1.1	2.2	2.6	4.4	5.8	7.9	10.8	98.6	98.6
June	-38.8	-38.8	0.0	0.0	1.0	1.0	2.7	2.6	5.5	6.4	10.1	12.9	90.2	90.2
July	-3.0	-3.0	0.0	0.0	0.7	0.8	1.9	2.0	4.0	4.5	8.1	9.8	109.9	109.9
August	-5.4	-5.4	0.0	0.0	0.5	0.5	1.3	1.3	2.8	2.9	5.0	5.8	61.1	61.1
September	-6.5	-1.8	0.0	0.0	0.4	0.5	1.2	1.2	2.4	2.8	4.7	5.8	44.9	44.9
October	-1.2	-1.2	0.0	0.0	0.5	0.5	1.0	1.2	1.9	2.3	3.5	4.9	41.5	41.5
November	-0.8	-0.8	0.1	0.1	0.5	0.6	1.1	1.3	1.9	2.5	3.3	4.1	32.0	32.0
December	-9.5	-9.5	-0.1	-0.2	0.3	0.4	0.9	1.1	1.7	2.2	3.0	4.0	22.5	22.5

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

The main tributaries in this reach are the Nishnabotna, Little Nemaha, and Tarkio Rivers. The Nishnabotna River is a left bank tributary located approximately 20 miles downstream of Nebraska City and has a total drainage area of 3,123 square miles. The Tarkio River is a left bank tributary located approximately 55 miles downstream of Nebraska City and has a total drainage area of 1,131 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. Figure 5 shows the main tributary basins of this reach.

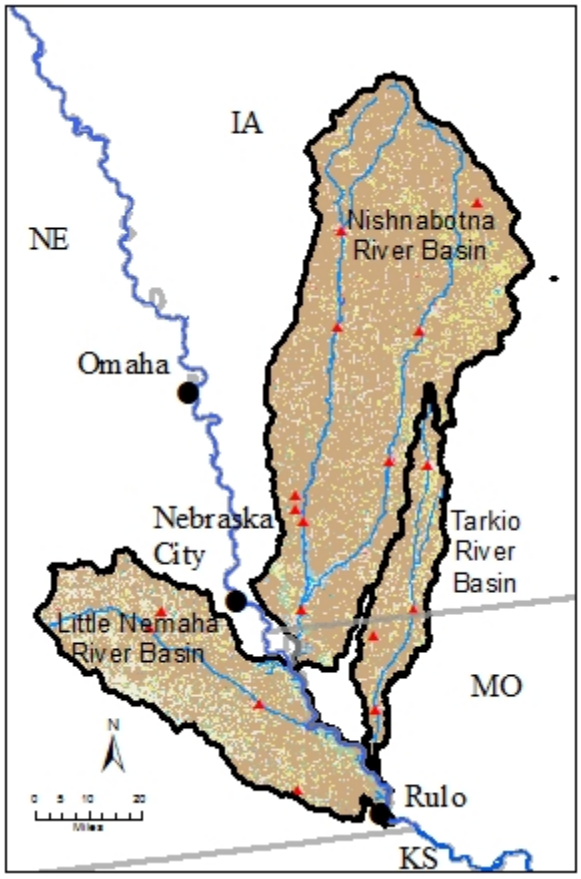


Figure 5: Nebraska City to Rulo Tributary Basins

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 1928. Analysis of the incremental flow data was done on the 63-year period from 1950 to 2012 and the 115-year period from 1898 to 2012 (see Table 6). See Plate 7 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1950-2012	1898-2012	1950-2012	1898-2012	1950-2012	1898-2012	1950-2012	1898-2012	1950-2012	1898-2012	1950-2012	1898-2012	1950-2012
January	-13.1	-13.1	-0.7	-0.8	0.3	0.2	1.2	1.2	2.4	2.5	4.1	4.4	43.4	43.4
February	-18.6	-18.6	-0.5	-0.5	0.3	0.3	1.5	1.6	3.0	3.4	5.0	5.8	64.5	64.5
March	-9.4	-9.4	0.0	0.0	0.4	0.4	1.9	1.7	3.8	4.0	6.3	7.0	61.5	61.5
April	-4.8	-4.8	0.0	0.0	0.5	0.2	2.0	1.6	4.1	4.3	6.9	7.9	48.8	48.8
May	-7.8	-7.8	0.0	0.0	0.6	0.7	2.4	2.4	5.1	5.9	8.6	11.1	71.9	71.9
June	-60.6	-60.6	0.0	0.0	0.7	0.7	2.7	2.4	5.6	5.3	10.9	10.6	81.4	81.4
July	-11.1	-11.1	0.0	0.0	0.7	0.6	2.3	2.0	5.8	4.7	10.0	8.9	79.3	76.5
August	-6.7	-6.7	0.0	0.0	0.5	0.3	1.6	1.3	3.0	3.2	5.2	5.8	49.6	49.6
September	-9.6	-2.8	0.0	0.0	0.4	0.1	1.5	1.1	2.7	2.8	4.9	5.9	63.4	63.4
October	-3.4	-2.6	0.0	0.0	0.4	0.3	1.3	1.2	2.2	2.4	4.0	4.3	88.5	88.5
November	-3.6	-3.6	0.0	0.0	0.5	0.3	1.4	1.2	2.5	2.7	3.9	4.6	43.3	43.3
December	-13.7	-13.7	-0.4	-0.5	0.4	0.3	1.3	1.3	2.4	2.9	4.1	5.0	42.7	42.7

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

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. Figure 6 shows the main tributary basins of this reach.

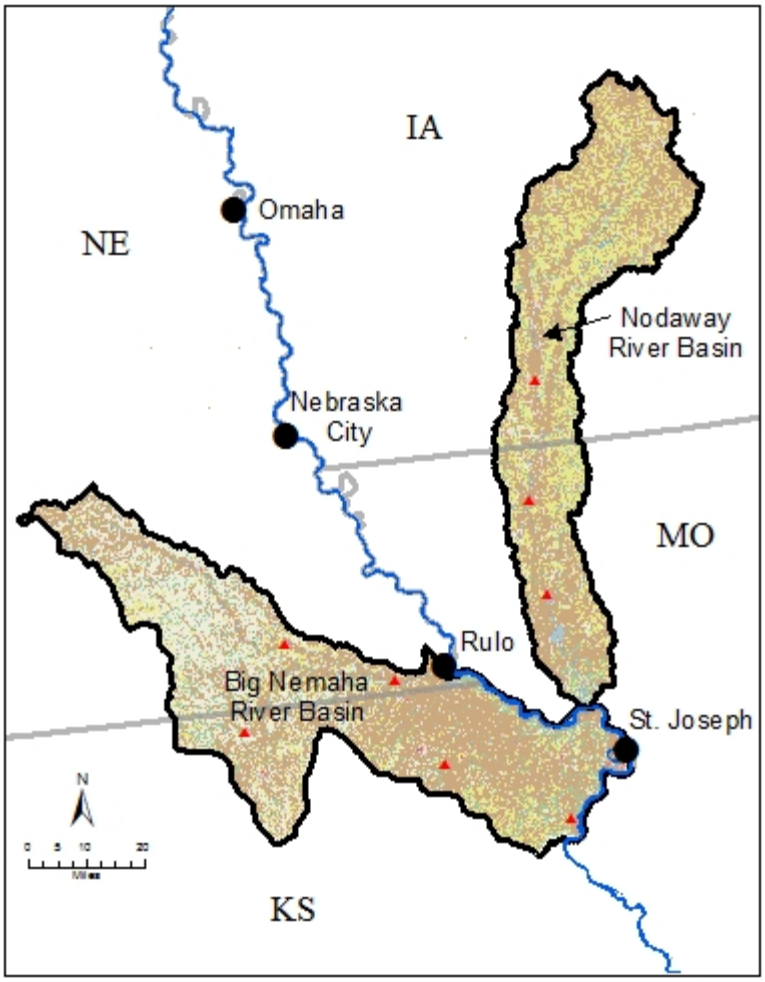


Figure 6: Rulo to St. Joseph Tributary Basins

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 84-year period from 1929 to 2012 and the 115-year period from 1898 to 2012 (see Table 7). See Plate 8 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012
January	-12.8	-12.8	0.4	0.2	1.4	1.2	2.9	2.5	5.1	4.8	7.9	8.0	99.1	99.1
February	-9.4	-6.7	0.7	0.5	1.8	1.5	4.2	3.5	7.6	7.5	12.2	12.9	73.2	73.2
March	-2.9	-2.9	1.1	0.8	2.8	2.2	6.1	5.3	11.5	11.3	20.6	23.6	118.9	118.9
April	-3.9	-3.9	1.0	0.8	3.2	2.7	7.4	5.7	15.9	13.2	29.5	29.5	185.7	185.7
May	-4.5	-4.5	1.3	1.5	3.7	3.8	9.2	8.6	17.5	16.9	30.1	33.2	125.8	125.8
June	-49.0	-49.0	1.6	1.7	5.0	4.4	12.7	11.5	25.2	23.5	44.6	41.5	179.5	179.5
July	-20.9	-20.9	0.9	0.9	3.0	2.7	8.7	6.7	19.1	15.4	34.0	30.8	474.4	474.4
August	-6.0	-6.0	0.6	0.5	2.1	1.7	5.6	4.2	10.6	9.0	18.1	16.7	129.8	129.8
September	-3.7	-3.7	0.5	0.3	2.1	1.6	5.0	3.8	9.8	8.5	18.7	18.7	143.4	143.4
October	-2.1	-2.1	0.6	0.4	1.7	1.3	3.9	2.8	8.0	6.6	15.9	17.4	129.1	129.1
November	-1.2	-1.2	0.7	0.6	1.6	1.3	3.7	3.0	7.4	6.1	12.7	12.8	94.2	94.2
December	-6.8	-6.8	0.7	0.6	1.7	1.5	3.4	3.0	6.0	5.8	10.0	10.4	97.2	97.2

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

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. Figure 7 shows the main tributary basins of this reach.

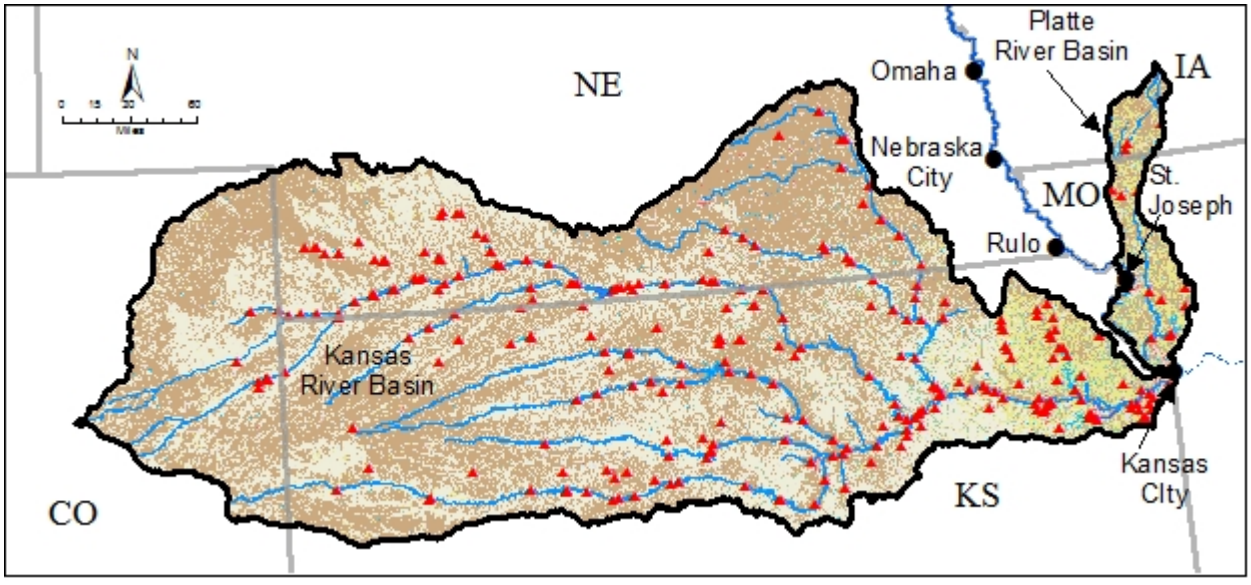


Figure 7: St. Joseph to Kansas City Tributary Basins

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 33-year period from 1980 to 2012 (see Table 7b), following construction and fill of these projects.

Table 7b
Daily Incremental Flows by Month
St. Joseph to Kansas City (kcfs)
1980-2012

Month	Minimum 1980-2012	Lower Decile 1980-2012	Lower Quartile 1980-2012	Median 1980-2012	Upper Quartile 1980-2012	Upper Decile 1980-2012	Maximum 1980-2012
January	-2.1	0.8	1.6	3.0	5.3	8.1	36.8
February	-4.6	0.8	1.7	4.2	8.4	12.5	60.7
March	-2.1	1.1	2.5	5.6	11.9	21.5	91.9
April	-3.9	0.8	2.9	6.8	16.0	35.5	94.5
May	-4.5	1.5	3.7	10.0	22.2	38.3	125.8
June	-49.0	1.1	4.3	11.6	24.1	41.4	111.3
July	-20.9	0.7	2.7	7.7	17.6	33.2	211.8
August	-5.3	0.4	1.4	4.5	10.9	22.1	129.8
September	-3.7	0.3	1.4	3.4	7.4	17.0	91.0
October	-2.1	0.4	1.2	2.6	6.1	20.5	129.1
November	-0.3	0.4	1.3	2.6	6.2	14.4	94.2
December	-2.0	0.8	1.8	3.8	8.9	12.8	65.3

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

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 84-year period from 1929 to 2012 and the 115-year period from 1898 to 2012 (see Table 8). See Plate 9 for graphical depictions of statistical data for 1898-2012.

There are no major tributaries in this reach. This Missouri River reach is part of the channelized reach.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012
January	-8.6	-8.6	-0.9	-1.2	-0.1	-0.3	0.5	0.5	1.2	1.5	2.5	2.9	52.5	52.5
February	-10.1	-10.1	-1.3	-1.6	-0.2	-0.4	0.5	0.6	1.5	2.0	3.2	4.0	46.5	46.5
March	-6.0	-6.0	-0.2	-0.4	0.0	0.0	0.4	0.2	1.2	1.7	3.4	4.1	29.3	29.3
April	-9.3	-9.3	-0.2	-0.4	0.0	0.0	0.5	0.4	1.8	2.2	4.7	5.8	36.8	36.8
May	-25.5	-25.5	-0.2	-0.4	0.0	0.0	0.4	0.3	1.8	2.4	5.2	7.2	78.4	78.4
June	-7.5	-7.5	-0.2	-0.4	0.0	0.0	0.4	0.3	2.0	2.7	5.8	7.3	45.2	45.2
July	-41.2	-41.2	-0.2	-0.4	0.0	0.0	0.3	0.3	1.2	1.6	3.5	4.6	120.6	120.6
August	-10.0	-10.0	-0.2	-0.4	0.0	0.0	0.2	0.1	0.7	1.1	2.2	2.7	23.9	23.9
September	-12.9	-12.9	-0.2	-0.4	0.0	0.0	0.3	0.1	1.1	1.2	3.1	3.4	58.8	58.8
October	-37.7	-37.7	-0.2	-0.4	0.0	0.0	0.2	0.1	0.7	0.8	2.1	2.6	68.6	68.6
November	-3.1	-3.1	-0.2	-0.4	0.0	0.0	0.2	0.1	0.7	1.1	2.3	2.9	42.6	42.6
December	-8.6	-8.6	-0.7	-1.0	0.0	-0.1	0.5	0.7	1.4	1.6	2.6	3.0	65.9	65.9

Note: 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 84-year period from 1929 to 2012 and the 115-year period from 1898 to 2012 (see Table 9). See Plate 10 for graphical depictions of statistical data for 1898-2012.

Table 9
Daily Incremental Flows by Month
Waverly to Boonville (kcfs)

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012
January	-19.2	-19.2	0.0	-0.2	1.2	0.9	2.7	2.5	5.3	5.4	11.0	11.8	109.4	109.4
February	-11.2	-9.8	0.3	0.1	1.7	1.5	4.1	3.9	9.1	9.8	19.1	22.6	169.4	169.4
March	-3.3	-3.3	0.6	0.6	2.8	2.4	7.5	6.7	14.6	16.1	31.7	36.8	114.6	114.6
April	-1.6	-1.6	0.5	0.3	2.5	2.1	7.2	6.2	17.4	17.5	37.7	41.2	213.2	213.2
May	-4.0	-4.0	0.6	0.7	2.8	2.9	8.0	8.1	17.9	20.1	35.2	43.9	154.0	154.0
June	-5.5	-5.5	0.1	0.0	1.9	2.2	6.7	6.8	17.9	19.0	35.8	42.5	179.5	179.5
July	-39.2	-39.2	0.0	0.0	1.1	1.2	3.3	3.2	8.9	9.3	20.2	25.1	202.9	202.9
August	-9.1	-9.1	0.0	0.0	1.0	1.0	2.8	2.6	5.7	6.0	10.6	11.6	214.6	214.6
September	-8.0	-8.0	0.0	0.0	1.0	0.8	2.8	2.1	6.1	5.1	16.5	14.9	184.0	184.0
October	-10.9	-10.9	0.0	0.0	0.8	0.6	2.5	1.7	6.4	4.7	15.4	14.3	167.5	167.5
November	-3.5	-3.5	0.3	0.2	1.2	0.9	2.8	2.4	5.6	4.9	12.1	13.3	119.8	119.8
December	-9.9	-9.9	0.4	0.2	1.5	1.2	3.1	2.5	6.0	5.5	11.7	12.6	106.6	106.6

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

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 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. Figure 8 shows the main tributary basins of this reach.

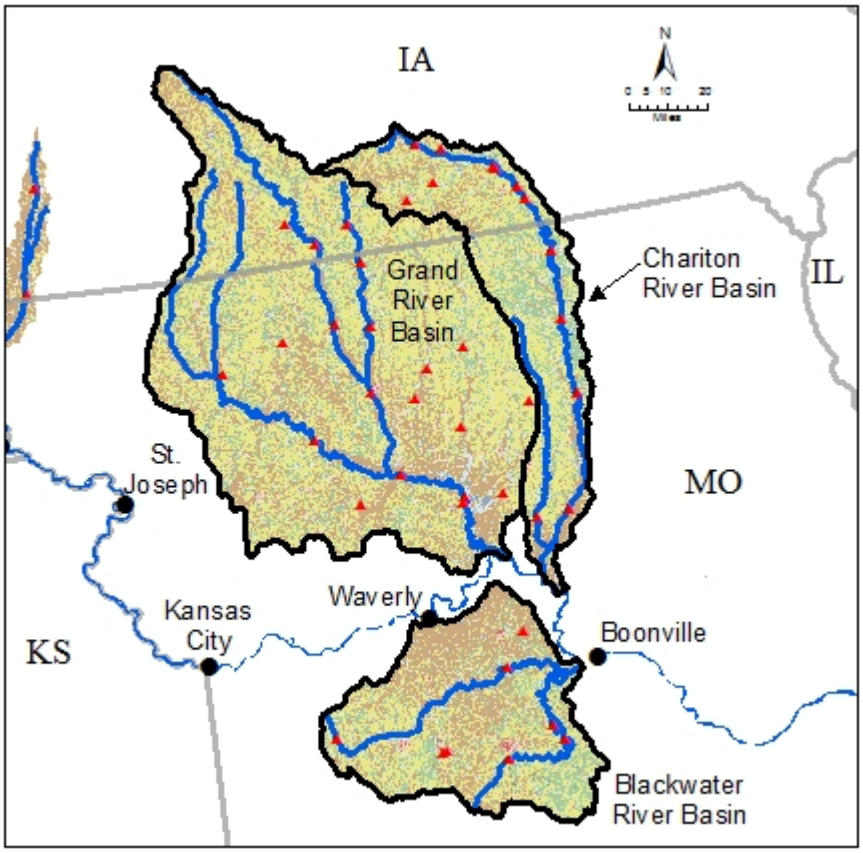


Figure 8: Waverly to Boonville Tributary Basins

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 84-year period from 1929 to 2012 and the 115-year period from 1898 to 2012 (see Table 10). See Plate 11 for graphical depictions of statistical data for 1898-2012.

Table 10
Daily Incremental Flows by Month
Boonville to Hermann (kcfs)

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012	1898-2012	1929-2012
January	-10.2	-10.2	2.0	1.7	4.2	3.8	8.4	9.2	17.1	19.6	34.8	36.7	181.6	181.6
February	-10.0	-10.0	2.4	2.3	5.8	6.0	11.4	12.2	22.3	25.5	38.2	42.1	149.7	149.7
March	-10.4	-10.4	3.5	3.4	8.9	8.0	18.0	17.5	32.0	33.4	51.8	56.0	145.8	145.8
April	-3.5	-3.5	3.1	3.4	8.9	8.7	20.8	20.7	39.9	41.0	60.6	62.3	264.3	264.3
May	-40.4	-40.4	2.7	3.6	7.2	7.5	17.7	18.6	37.5	40.6	62.3	70.8	307.3	307.3
June	-17.2	-17.2	1.6	2.4	4.9	5.7	14.6	15.2	37.5	37.6	60.3	63.8	184.2	184.2
July	-111.2	-111.2	1.3	2.0	3.4	3.9	8.3	8.2	19.2	19.0	41.2	45.8	205.2	205.2
August	-11.9	-11.9	0.6	0.6	2.7	2.6	5.6	5.1	10.9	9.6	21.6	19.2	165.6	165.6
September	-14.2	-14.2	1.1	0.8	3.1	2.6	6.3	5.2	12.8	10.3	28.3	23.5	188.2	188.2
October	-12.2	-12.2	1.4	1.3	2.6	2.4	6.1	4.6	14.2	10.6	32.5	29.7	210.4	210.4
November	-3.1	-3.1	1.7	1.5	3.2	2.7	7.3	5.8	15.9	16.3	35.5	41.6	159.0	159.0
December	-21.1	-21.1	2.2	2.0	4.3	3.7	8.5	7.6	17.1	17.1	30.5	35.2	206.3	206.3

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 basin. 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. Figure 9 shows the main tributary basins of this reach.

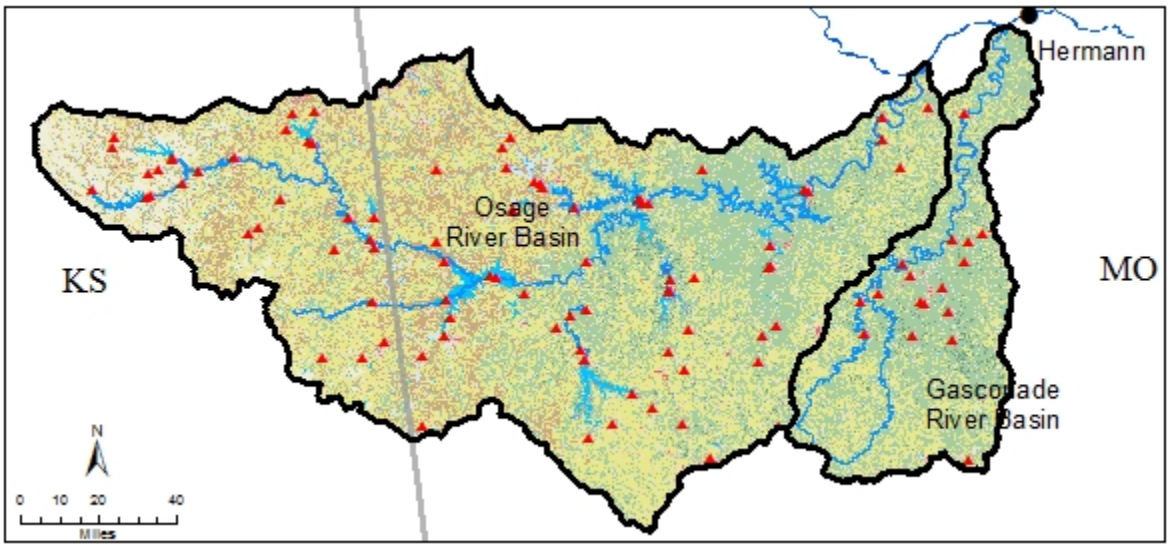


Figure 9: Boonville to Hermann Tributary Basins

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 33-year period from 1980 to 2012 (see Table 10b), following construction and fill of these projects.

Table 10b
Daily Incremental Flows by Month
Boonville to Hermann (kcfs)
1980-2012

Month	Minimum 1980-2012	Lower Decile 1980-2012	Lower Quartile 1980-2012	Median 1980-2012	Upper Quartile 1980-2012	Upper Decile 1980-2012	Maximum 1980-2012
January	-5.7	1.7	5.0	11.3	23.1	43.3	181.6
February	-6.6	4.0	8.5	16.1	29.6	42.8	149.7
March	-10.4	4.8	9.3	20.1	40.8	59.3	141.6
April	-3.5	3.9	10.0	27.2	45.3	61.6	264.3
May	-40.4	3.0	8.6	26.4	49.8	71.2	211.1
June	-17.2	3.8	9.0	25.7	43.2	64.2	184.2
July	-111.2	2.3	5.3	11.0	26.5	51.0	146.5
August	-11.9	0.8	2.9	6.1	13.6	25.9	165.6
September	-14.2	0.9	2.7	5.5	10.6	22.1	188.2
October	-12.2	1.3	2.3	4.3	9.6	41.9	202.7
November	-3.1	1.5	2.5	6.4	26.3	49.0	155.0
December	-15.5	2.0	4.0	10.5	27.2	47.6	206.3

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 79-year period from 1934 to 2012 and the 115-year period from 1898 to 2012 (see Table 11). See Plate 12 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1934-2012	1898-2012	1934-2012	1898-2012	1934-2012	1898-2012	1934-2012	1898-2012	1934-2012	1898-2012	1934-2012	1898-2012	1934-2012
January	5.9	5.9	30.9	34.2	39.6	43.4	58.3	61.1	86.4	88.8	123.9	127.0	323.9	323.9
February	10.5	16.3	34.4	35.8	45.9	47.4	71.4	77.1	105.7	113.9	144.9	152.9	320.1	320.1
March	16.8	16.8	58.0	58.5	85.8	90.2	118.3	132.5	171.1	189.1	224.3	239.3	398.8	398.8
April	34.6	34.6	86.4	91.6	121.1	128.2	169.5	180.2	237.8	241.1	300.1	300.0	553.2	553.2
May	23.5	29.8	73.1	78.1	107.6	115.9	153.5	172.1	232.7	242.3	295.7	306.8	572.9	572.9
June	13.0	13.0	60.1	62.0	90.6	94.2	132.4	135.3	198.3	210.5	265.9	271.5	477.7	477.7
July	16.1	16.9	44.3	44.5	63.6	66.8	103.9	109.5	156.2	159.2	210.1	218.8	616.2	616.2
August	16.0	16.0	34.4	32.9	45.6	45.7	64.4	69.4	91.9	95.2	130.2	130.8	483.3	483.3
September	4.7	10.1	30.3	30.6	39.8	41.4	54.7	58.4	80.3	82.3	120.4	126.6	370.3	367.4
October	0.0	11.2	27.4	29.0	35.4	37.9	54.8	56.7	91.6	94.8	133.7	137.6	391.3	391.3
November	12.1	16.8	31.9	34.1	41.7	44.9	61.3	66.7	90.1	99.6	134.2	143.3	353.9	353.9
December	0.0	14.5	29.7	33.6	37.1	43.7	56.0	61.1	84.8	90.8	116.1	124.3	387.3	387.3

There are no major tributaries in this reach, however the Missouri River flows into the Mississippi River just upstream of St. Louis. This Missouri River reach is the lowest portion of the channelized reach.

L. Ranking of Average Monthly Incremental Flows by Reach

For this section, monthly average incremental flows were calculated and then ranked from lowest to highest for each month. Results are listed on Plate 13 through Plate 22.

III. Summation of Incremental Flows

A. General

This chapter is similar in format to Chapter II. However, for this analysis, the data represents a summation of incremental inflows from Gavins Point to each key location rather than each individual reach as in Chapter II. Again, the data were sorted and ranked for a single day and for all days in each month for the seven statistical conditions. Tables 12 through 21 indicate the incremental flow value for the seven conditions using daily data for each month. Note that these tables are not a summation of the data from the tables in the previous chapter. Graphical depictions of the data are shown on Plate 23 through Plate 32. Each of these plates contains two graphs. The top graph shows the daily incremental flows for the five statistical conditions from lower decile to upper decile and includes an inset with the maximum and minimum flows added. The lower graph shows the statistical monthly incremental flow for the five statistical conditions plus the mean monthly flow. The monthly average data was sorted and ranked after summing the data from Gavins Point to each key location. The data for the 1898 to 2012 period for each location are shown as ranked tables on Plate 33 through Plate 42.

Note that a few of the incremental flows are shown as being negative values. In winter periods, short-term changes in flows due to ice formation and temporary ice blockages cause negative incremental flow values for various days. In addition, as noted earlier, the incremental flows are computed by applying routing coefficients to actual flow values. Application of these general routing coefficients to all flow conditions may also cause negative incremental flows in some cases. For example, during flood periods, flows can exceed channel capacity and produce longer travel times between gages than would normally be expected. In some cases, the negative flow values may be a result of the average monthly depletion values being applied to daily incremental flows

B. Missouri River – Gavins Point to Sioux City

In this reach, the analysis is the same as in Chapter II. 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 57-year period from 1956 to 2012 and the 115-year period from 1898 to 2012 (see Table 12). See Plate 23 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012
January	-12.6	-12.6	-0.6	-0.9	0.0	0.1	0.4	1.0	1.2	1.9	2.2	3.0	8.4	8.4
February	-6.0	-6.0	-0.2	-0.2	0.4	0.5	1.1	1.3	2.1	2.4	3.8	3.8	42.0	42.0
March	-3.4	-3.4	0.2	0.5	1.3	1.3	3.5	2.9	6.9	5.7	11.3	13.3	60.1	60.1
April	-0.2	0.0	0.3	0.7	1.2	1.6	3.4	4.0	7.2	10.9	15.2	25.0	75.3	75.3
May	-0.2	-0.1	0.2	0.6	1.3	1.7	3.2	3.7	6.9	8.1	10.9	13.9	37.8	37.8
June	-0.8	-0.8	0.0	0.6	1.2	1.8	3.4	3.8	6.9	7.9	11.2	13.1	93.0	93.0
July	-0.2	-0.2	0.0	0.2	0.8	1.1	2.2	2.6	4.4	5.3	7.1	9.5	64.1	64.1
August	-1.3	-1.3	0.0	0.1	0.6	0.8	1.7	2.0	3.0	3.4	4.6	5.7	39.7	39.7
September	-1.3	-1.3	0.0	0.0	0.5	0.7	1.3	1.7	2.5	2.9	3.8	4.4	41.1	41.1
October	-1.6	-1.1	0.0	0.0	0.4	0.8	1.1	1.7	2.1	3.0	3.8	5.3	38.5	38.5
November	-11.8	-1.2	0.0	0.4	0.5	0.9	1.2	1.8	2.1	3.2	3.7	4.8	9.9	9.9
December	-11.4	-11.4	-0.5	-0.4	0.2	0.7	0.7	1.4	1.5	2.5	2.8	3.9	28.7	10.0

Note: Negative values are discussed in Section III-A, page 23.

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 57-year period from 1956 to 2012 and the 115-year period from 1898 to 2012 (see Table 13). See Plate 24 for graphical depictions of the statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012
January	-15.5	-15.5	-0.7	-0.8	0.5	1.0	1.5	2.7	3.0	4.7	5.2	6.4	22.0	22.0
February	-6.7	-6.7	0.3	0.6	1.4	1.7	2.6	3.4	4.8	5.6	7.4	8.9	53.1	53.1
March	-1.5	-1.5	1.4	1.8	3.3	3.3	6.2	6.1	11.0	12.5	17.9	24.1	105.9	105.9
April	-3.4	0.0	1.1	2.0	3.0	3.8	6.2	7.6	11.8	19.1	27.5	37.8	101.4	101.4
May	-1.2	0.0	0.8	2.0	2.8	3.8	6.4	8.4	11.4	15.5	18.5	26.0	66.1	66.1
June	-8.1	-8.1	0.9	2.1	3.0	4.2	7.2	8.4	13.3	16.2	21.7	27.3	112.1	112.1
July	-1.2	0.0	0.8	1.3	2.3	2.6	5.2	5.9	9.6	12.0	15.7	18.9	106.2	106.2
August	-2.2	-0.2	0.7	1.2	1.9	2.2	3.4	3.7	5.7	7.0	9.4	11.4	63.6	63.6
September	-1.1	-1.1	0.6	1.0	1.5	1.9	2.9	3.3	4.9	6.3	7.9	9.7	44.6	44.6
October	-1.2	-0.4	0.4	1.1	1.3	2.0	2.6	3.4	4.2	6.4	7.5	10.8	39.6	39.6
November	-11.8	-0.4	0.5	1.3	1.5	2.4	2.6	3.9	4.1	6.6	7.9	10.4	19.3	19.3
December	-13.2	-13.2	-0.7	0.3	0.8	1.7	1.8	3.1	3.3	5.4	6.1	8.2	26.8	20.5

Note: Negative values are discussed in Section III-A, page 23.

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 57-year period from 1956 to 2012 and the 115-year period from 1898 to 2012 (see Table 14). See Plate 25 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012
January	-16.8	-16.8	0.9	1.0	3.0	3.7	5.2	6.5	8.0	9.7	11.0	12.7	34.6	34.6
February	-14.0	-6.1	2.8	4.0	5.2	6.2	8.0	9.5	12.1	13.7	17.3	19.3	87.6	87.6
March	-2.0	1.5	6.0	6.9	9.0	9.7	13.9	14.1	22.4	24.3	34.6	40.6	140.4	140.4
April	-3.9	3.0	5.3	6.9	8.6	9.6	13.8	15.1	24.5	31.0	41.6	52.7	162.9	162.9
May	-1.2	1.3	4.5	6.4	8.2	9.8	14.8	16.2	24.3	26.5	33.9	42.4	113.8	113.8
June	-6.4	1.5	4.8	6.0	8.8	9.3	16.8	16.9	29.2	29.1	47.4	48.0	169.1	169.1
July	-1.6	0.3	2.5	3.2	5.2	5.2	11.2	10.5	21.4	18.7	35.0	30.3	174.7	174.7
August	-6.6	0.0	2.4	2.8	4.2	4.1	7.3	6.8	12.5	12.1	19.0	18.1	75.9	75.4
September	-0.6	-0.6	2.4	2.6	3.9	4.0	6.6	6.7	10.7	10.4	16.2	16.2	55.1	55.1
October	-1.0	1.1	2.7	3.5	4.2	5.2	6.8	7.5	9.8	11.3	15.8	18.5	67.7	67.7
November	-8.7	1.3	3.5	5.0	5.1	6.4	7.2	8.3	10.3	12.9	15.3	17.6	29.1	29.1
December	-12.6	-12.6	0.8	2.6	3.5	5.4	6.1	7.6	8.7	10.9	12.2	15.0	36.5	36.1

Note: Negative values are discussed in Section III-A, page 23.

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 57-year period from 1956 to 2012 and the 115-year period from 1898 to 2012 (see Table 15). See Plate 26 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012
January	-10.8	-10.8	1.0	1.5	3.5	4.7	6.2	7.6	9.7	11.6	13.0	14.4	72.9	72.9
February	-20.2	-6.5	3.1	4.5	5.9	7.2	9.3	11.0	14.0	16.1	20.6	24.6	103.5	103.5
March	-6.6	1.7	6.7	8.1	10.1	11.4	16.0	17.1	25.5	27.8	40.9	49.2	143.2	143.2
April	-2.9	3.2	6.1	8.2	9.7	11.0	16.2	18.9	28.5	36.8	46.6	59.5	174.4	174.4
May	-1.4	1.3	5.2	7.2	9.4	11.6	17.2	19.4	28.9	33.0	41.8	52.7	212.4	212.4
June	-10.1	-10.1	5.7	7.0	10.4	11.0	19.9	20.2	35.7	36.8	56.7	60.3	196.4	196.4
July	-0.6	0.4	3.4	3.9	6.4	6.7	13.3	12.8	26.1	23.6	41.4	40.9	279.3	279.3
August	-8.4	0.1	3.0	3.6	5.1	5.2	9.0	8.6	15.0	14.5	22.7	21.4	131.0	131.0
September	-0.6	-0.1	2.9	3.5	4.7	4.9	8.1	8.5	13.2	13.4	20.3	21.3	98.8	98.8
October	-1.7	1.1	3.2	4.5	5.1	5.9	8.0	8.9	11.9	13.7	18.4	22.1	106.9	106.9
November	-5.4	1.7	4.0	5.9	5.8	7.4	8.4	10.0	12.4	15.5	18.2	20.8	52.8	52.8
December	-10.9	-10.9	1.2	3.5	4.1	6.2	7.0	8.7	10.1	13.4	14.9	17.7	55.6	55.6

Note: Negative values are discussed in Section III-A, page 23.

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 57-year period from 1956 to 2012 and the 115-year period from 1898 to 2012 (see Table 16). See Plate 27 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012
January	-11.6	-11.6	0.9	1.5	3.8	5.2	7.6	9.1	11.7	13.7	15.8	18.3	113.2	113.2
February	-26.4	-8.1	3.5	5.0	6.8	8.4	11.2	13.0	16.8	19.2	24.2	29.3	114.8	114.8
March	-7.8	1.6	7.6	8.9	11.5	12.4	18.2	19.9	29.0	31.8	45.9	56.9	184.9	184.9
April	-3.0	3.8	7.0	9.0	10.8	12.0	18.5	20.5	32.8	41.8	53.0	67.0	174.4	174.4
May	-2.1	1.9	5.9	8.5	10.8	13.2	19.9	23.4	34.1	38.6	49.5	62.4	204.6	204.6
June	-9.6	-9.6	7.1	8.5	12.0	13.1	23.4	23.8	41.5	42.3	66.9	69.9	196.4	196.4
July	-4.5	1.3	4.5	5.6	7.8	8.0	16.4	15.9	31.7	27.4	51.1	52.3	303.3	303.3
August	-8.7	1.3	3.7	4.2	6.2	6.3	10.8	10.4	18.0	17.7	28.0	27.6	147.5	147.5
September	-1.5	-0.3	3.6	3.9	5.7	5.8	9.9	10.0	16.0	16.1	24.7	25.9	128.0	128.0
October	-3.4	1.3	3.6	5.3	5.9	6.8	9.4	10.4	14.0	16.1	21.9	25.7	170.4	170.4
November	-1.0	3.0	4.6	6.7	6.9	8.3	9.7	11.4	14.8	18.4	21.7	23.9	94.4	94.4
December	-11.2	-9.5	1.7	4.0	4.9	7.1	8.3	10.2	12.0	15.6	18.2	21.8	83.0	83.0

Note: Negative values are discussed in Section III-A, page 23.

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 57-year period from 1956 to 2012 and the 115-year period from 1898 to 2012 (see Table 17). See Plate 28 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012
January	-15.2	-15.2	2.0	1.4	6.1	5.6	10.7	10.1	16.2	16.1	22.6	23.1	147.2	147.2
February	-32.3	-8.9	5.3	5.3	9.4	9.4	15.7	15.7	23.9	24.8	36.8	39.6	173.4	173.4
March	-2.5	3.0	10.0	10.3	15.1	14.9	25.1	24.9	40.4	41.1	65.8	72.5	284.2	284.2
April	-2.2	-2.1	9.9	9.5	14.9	13.7	26.7	22.8	51.8	52.3	79.4	84.4	252.4	252.4
May	-1.9	0.8	8.6	9.4	15.9	15.7	30.6	30.3	52.3	51.5	76.8	80.8	297.5	297.5
June	-5.1	0.4	11.1	11.3	19.6	18.2	38.3	36.1	66.8	63.8	108.9	105.9	235.4	235.4
July	-2.6	0.6	7.2	6.9	11.7	10.5	26.9	21.6	51.6	41.6	82.5	69.0	513.3	513.3
August	-8.3	-0.1	5.6	5.2	9.3	8.5	17.4	14.3	28.3	24.7	44.3	40.1	277.3	277.3
September	-0.2	-0.2	5.1	4.6	8.6	7.6	15.7	13.7	25.4	22.2	41.5	40.6	216.5	216.5
October	-1.5	-1.5	5.7	5.4	8.3	7.5	13.7	11.8	21.9	20.8	36.4	39.0	274.1	274.1
November	-0.3	0.1	6.3	6.2	9.2	9.0	13.7	12.9	22.2	21.0	32.9	33.7	130.7	130.7
December	-10.5	-10.5	3.1	3.0	7.1	6.9	11.9	11.6	17.5	17.9	27.1	28.8	127.7	127.7

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 57-year period from 1956 to 2012 and the 115-year period from 1898 to 2012 (see Table 18). See Plate 29 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012
January	-15.1	-15.1	2.4	1.8	6.3	5.7	11.2	10.7	17.2	17.3	23.8	24.5	166.0	166.0
February	-31.7	-7.9	5.5	5.4	9.9	9.8	16.4	16.5	25.2	26.5	39.5	43.1	180.0	180.0
March	-1.1	2.3	10.3	10.6	15.6	15.3	26.2	25.9	41.9	43.3	67.5	74.7	286.3	286.3
April	-2.2	-2.1	10.2	9.8	15.6	14.4	27.7	24.3	53.6	54.2	84.4	88.2	254.4	254.4
May	-1.4	0.8	9.0	9.9	16.5	16.3	31.8	31.5	54.8	54.4	81.3	88.2	324.8	324.8
June	-4.6	0.4	11.5	11.9	20.4	19.1	39.3	37.1	69.3	66.6	113.7	111.1	259.2	259.2
July	-2.5	0.8	7.6	7.3	12.3	11.0	27.7	22.2	54.0	43.6	85.0	73.1	544.0	544.0
August	-7.8	0.0	5.9	5.4	9.7	8.8	17.8	14.8	29.0	25.5	45.4	41.9	287.9	287.9
September	0.0	0.0	5.2	4.7	9.0	7.7	16.6	14.6	26.8	23.6	43.7	42.2	207.5	207.5
October	-1.5	-1.5	5.8	5.5	8.6	7.7	14.4	12.2	23.0	21.7	37.7	40.6	243.7	243.7
November	-0.1	0.1	6.5	6.4	9.6	9.4	14.2	13.4	22.8	22.2	34.0	35.2	173.3	173.3
December	-9.6	-9.6	3.4	3.3	7.5	7.2	12.4	12.1	18.6	19.3	28.4	30.4	170.9	170.9

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 57-year period 1956 to 2012 and the 115-year period from 1898 to 2012 (see Table 19). See Plate 30 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012
January	-21.6	-21.6	4.0	3.1	8.5	7.3	14.7	13.7	22.0	22.4	32.9	32.9	197.7	197.7
February	-24.1	-4.4	7.2	6.8	12.5	12.0	21.2	21.4	34.4	36.3	56.1	62.2	255.8	255.8
March	-0.4	3.2	13.3	12.7	20.7	18.9	34.5	33.5	57.8	62.7	97.3	108.5	318.9	318.9
April	1.2	1.2	13.2	12.1	20.8	17.9	37.4	33.1	70.7	72.8	117.5	123.0	365.1	365.1
May	-0.6	1.2	12.4	13.0	22.5	21.4	43.4	43.2	71.9	75.8	110.0	128.0	360.7	360.7
June	-2.6	0.5	14.2	14.2	25.9	24.0	47.0	46.0	89.3	89.0	147.1	149.5	385.7	385.7
July	-0.9	0.9	9.0	8.7	14.9	13.2	32.4	27.5	64.1	54.6	106.1	96.7	622.4	622.4
August	-6.5	0.1	7.2	6.7	11.7	10.7	21.9	18.6	34.4	31.3	56.4	53.5	502.5	502.5
September	0.4	0.4	6.5	5.8	11.0	9.6	20.7	17.5	33.1	29.5	60.4	55.9	262.9	262.9
October	-0.6	-0.6	7.2	6.4	10.1	9.0	17.8	14.4	30.2	27.7	52.8	55.5	279.0	279.0
November	0.0	0.6	7.6	7.2	11.6	10.7	17.5	16.2	28.5	28.1	46.0	48.2	229.6	229.6
December	-7.5	-7.5	5.2	4.5	10.2	9.4	16.5	15.3	23.8	24.7	38.0	41.7	226.4	226.4

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 57-year period from 1956 to 2012 and the 115-year period from 1898 to 2012 (see Table 20). See Plate 31 for graphical depictions of statistical data for 1898-2012.

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

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012
January	-16.9	-16.9	8.9	8.0	14.6	13.3	24.6	24.8	38.2	41.1	65.3	65.9	278.9	278.9
February	-10.7	-1.2	12.7	12.5	20.0	20.2	33.6	34.4	57.6	63.9	90.6	99.2	398.7	398.7
March	1.6	4.4	20.8	19.7	34.7	30.9	55.3	55.7	90.0	97.2	139.0	150.8	387.9	387.9
April	4.9	4.9	22.1	19.7	35.3	30.1	60.4	59.0	105.3	113.1	175.3	179.7	472.7	472.7
May	-0.6	6.0	20.8	21.7	33.4	33.3	67.5	68.7	111.0	121.9	163.9	184.3	516.6	516.6
June	0.2	3.2	20.0	20.2	34.4	34.1	68.7	69.3	127.9	126.9	197.2	201.6	422.9	422.9
July	-0.9	3.8	13.0	12.7	21.4	19.7	43.4	38.6	83.1	75.3	139.4	136.2	692.5	692.5
August	-1.3	0.9	10.5	10.3	16.7	15.3	29.1	24.5	46.0	41.5	72.9	70.9	568.1	568.1
September	1.1	1.1	10.2	9.7	15.5	13.9	28.3	23.9	45.2	40.2	86.0	76.2	418.2	418.2
October	0.6	0.6	10.4	9.5	14.8	13.2	24.5	20.4	44.0	38.5	83.8	84.0	460.9	460.9
November	0.0	3.9	11.1	10.4	16.4	14.6	26.4	23.9	45.0	44.4	81.3	91.0	292.8	292.8
December	-3.5	-3.5	9.8	8.9	15.9	14.0	26.0	24.1	40.1	41.2	65.1	74.5	359.5	359.5

K. Missouri River – Gavins Point to St. Louis

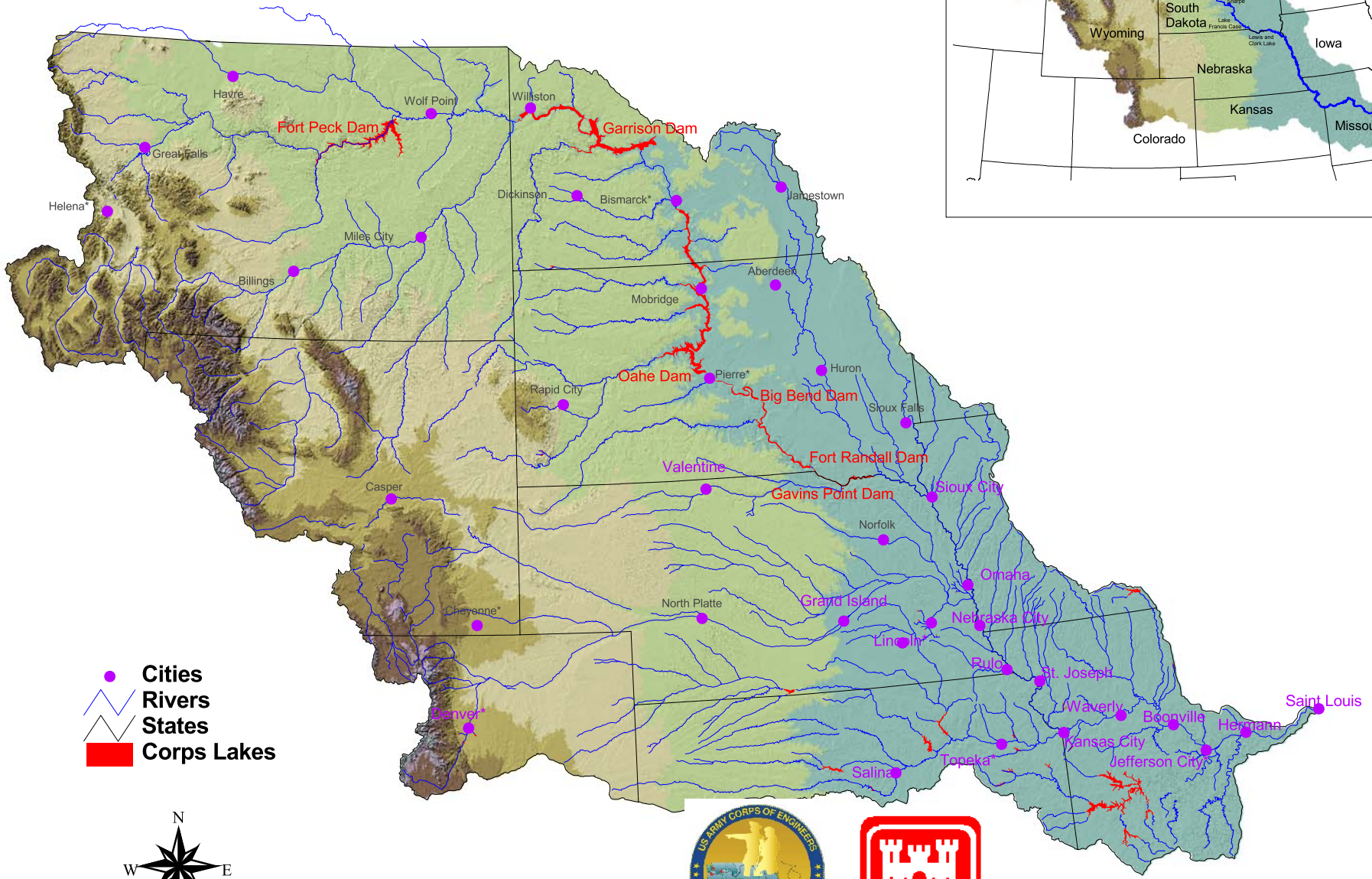
As shown in Table 1 and discussed in previous sections, the daily flow data with the shortest record in the reaches from Gavins Point to St. Louis are the Gavins Point releases. Analysis of the incremental flow data was done on the 57-year period from 1956 to 2012 and the 115-year period from 1898 to 2012 (see Table 21). See Plate 32 for graphical depictions of statistical data for 1898-2012.

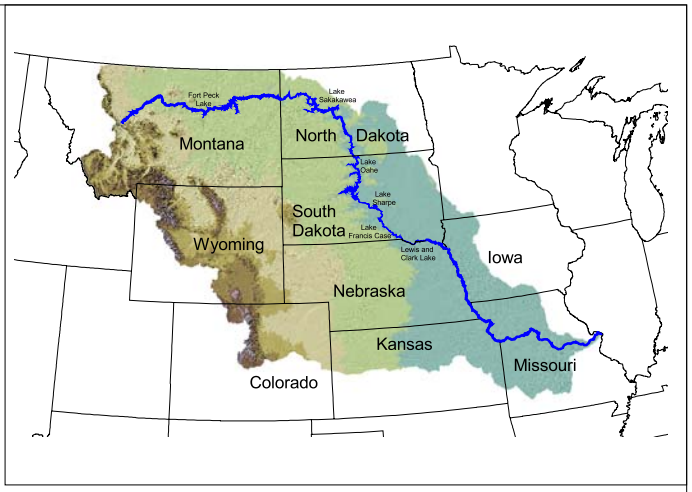
Table 21
Summation of Daily Incremental Flows by Month
Gavins Point to St. Louis (kcfs)

Month	Minimum		Lower Decile		Lower Quartile		Median		Upper Quartile		Upper Decile		Maximum	
	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012	1898-2012	1956-2012
January	11.3	11.3	44.1	44.2	56.9	58.0	81.7	87.9	124.0	128.0	182.0	185.2	501.4	501.4
February	20.6	26.8	49.8	51.1	67.0	68.3	107.8	115.1	159.4	174.1	233.8	248.5	628.6	628.6
March	40.5	40.5	86.2	79.4	126.2	127.3	181.0	191.6	257.8	281.9	350.1	375.8	744.8	744.8
April	53.8	53.8	117.9	113.5	165.5	166.9	229.8	238.0	345.1	360.6	459.3	464.4	840.8	840.8
May	42.2	42.2	99.1	105.4	150.8	157.3	226.0	242.4	350.6	374.2	439.2	461.8	790.4	790.4
June	33.4	33.4	93.3	92.8	138.2	136.9	206.5	212.4	324.2	331.8	440.7	438.6	729.6	729.6
July	27.6	27.6	64.9	62.4	97.1	94.8	153.1	154.1	232.5	224.2	344.0	342.0	1039.0	1039.0
August	23.5	23.5	50.2	47.4	67.6	64.9	97.0	96.2	136.3	134.8	194.1	189.9	884.2	884.2
September	22.2	22.2	45.1	43.5	63.0	59.2	84.7	83.5	124.5	119.1	197.1	190.2	694.3	694.3
October	22.6	22.6	41.9	39.8	54.1	52.6	82.9	79.1	133.0	129.5	210.5	210.5	703.7	703.7
November	24.9	24.9	46.4	45.6	61.9	60.5	88.8	91.5	138.5	145.5	208.3	220.6	526.4	526.4
December	17.7	17.7	43.4	44.2	56.6	57.5	81.9	87.2	123.2	130.1	180.3	195.6	727.9	727.9

L. Ranking of Summation of Average Monthly Incremental Flows

For this section, total incremental flows from Gavins Point to each key location were used. Average monthly incremental flows were calculated and then ranked from lowest to highest for each month. Results are listed on Plates 33 through 42.



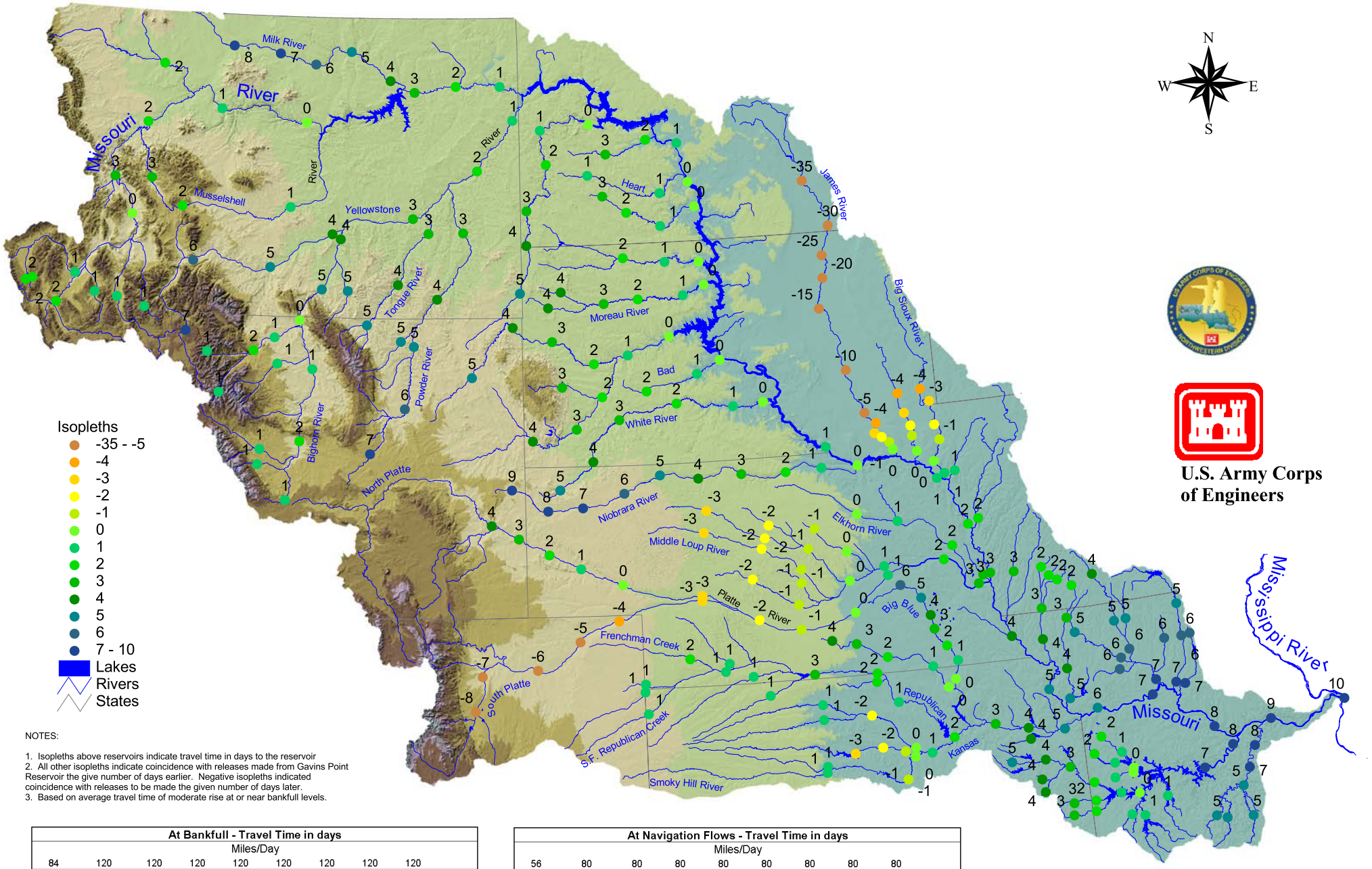


U.S. Army Corps of Engineers

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

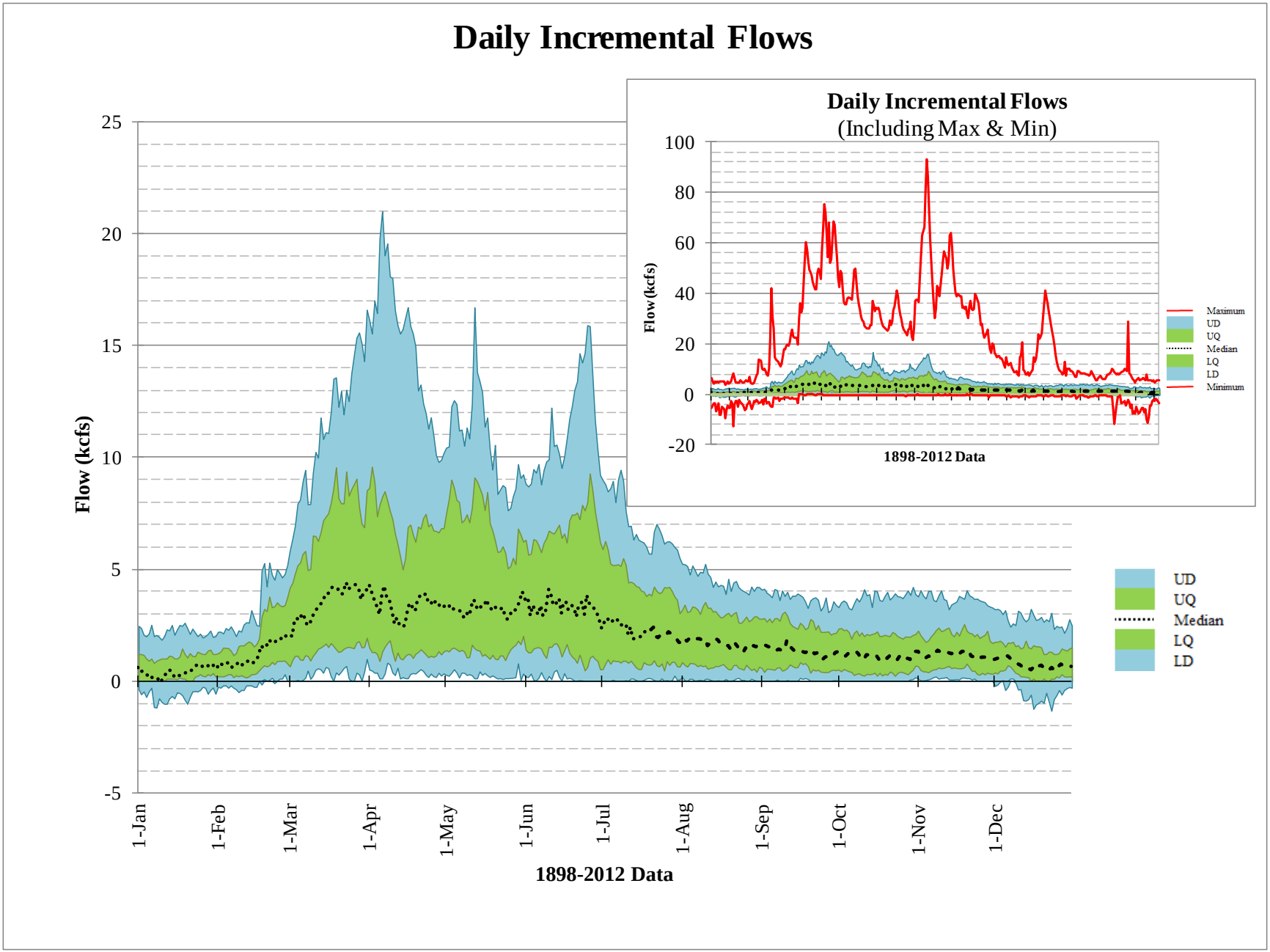
Miles/Day								
56	80	80	80	80	80	80	80	80
GAPT								
1	SUX							
3	1	OMA						
4	2	1	NCNE					
5	4	2	1	STJ				
6	5	3	2	1	MKC			
7	5	4	3	2	1	WVMO		
8	7	5	5	3	2	1	BNMO	
9	8	6	6	4	3	2	1	HEMO
11	9	8	7	6	5	4	2	1	STL

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



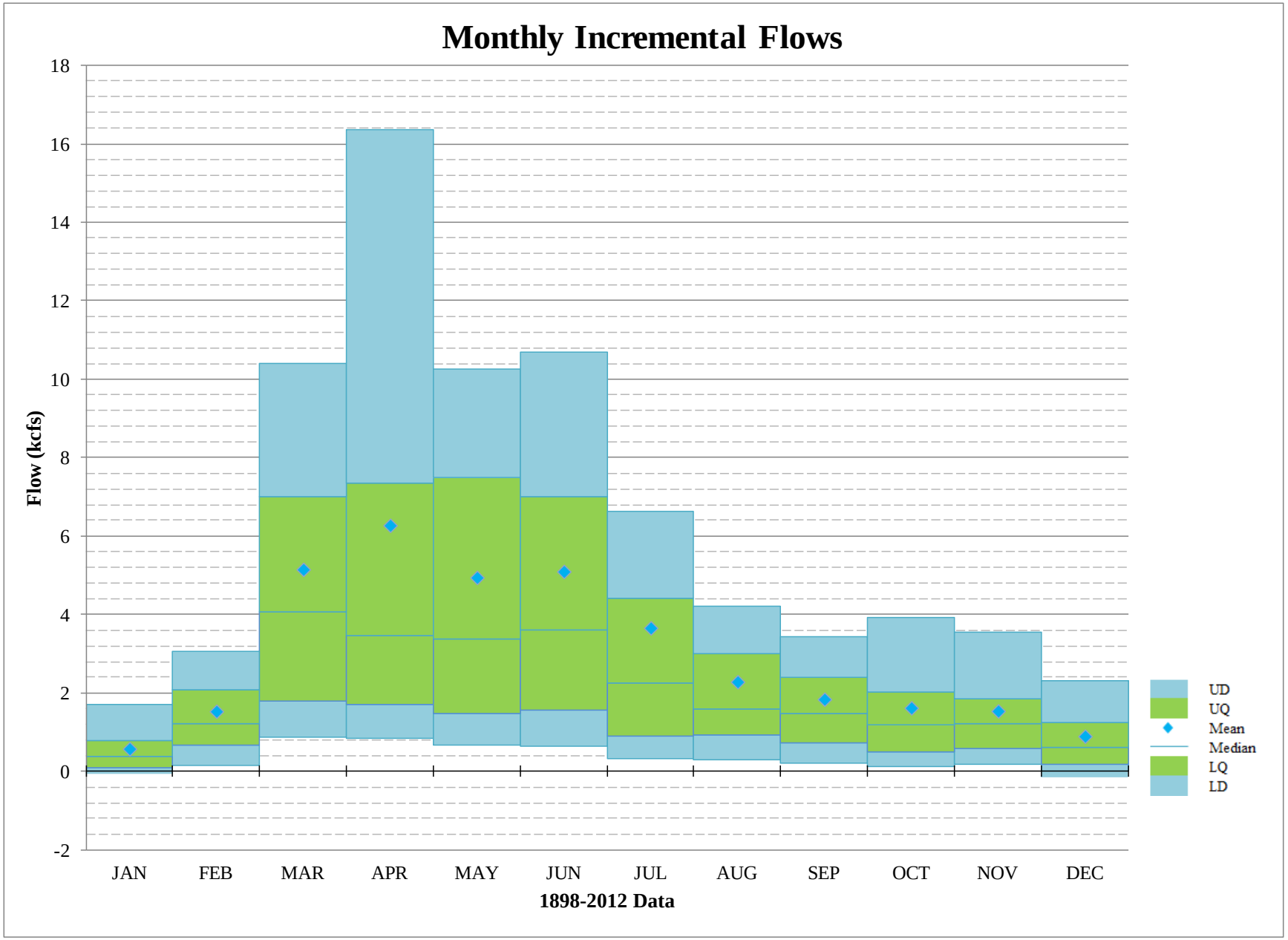
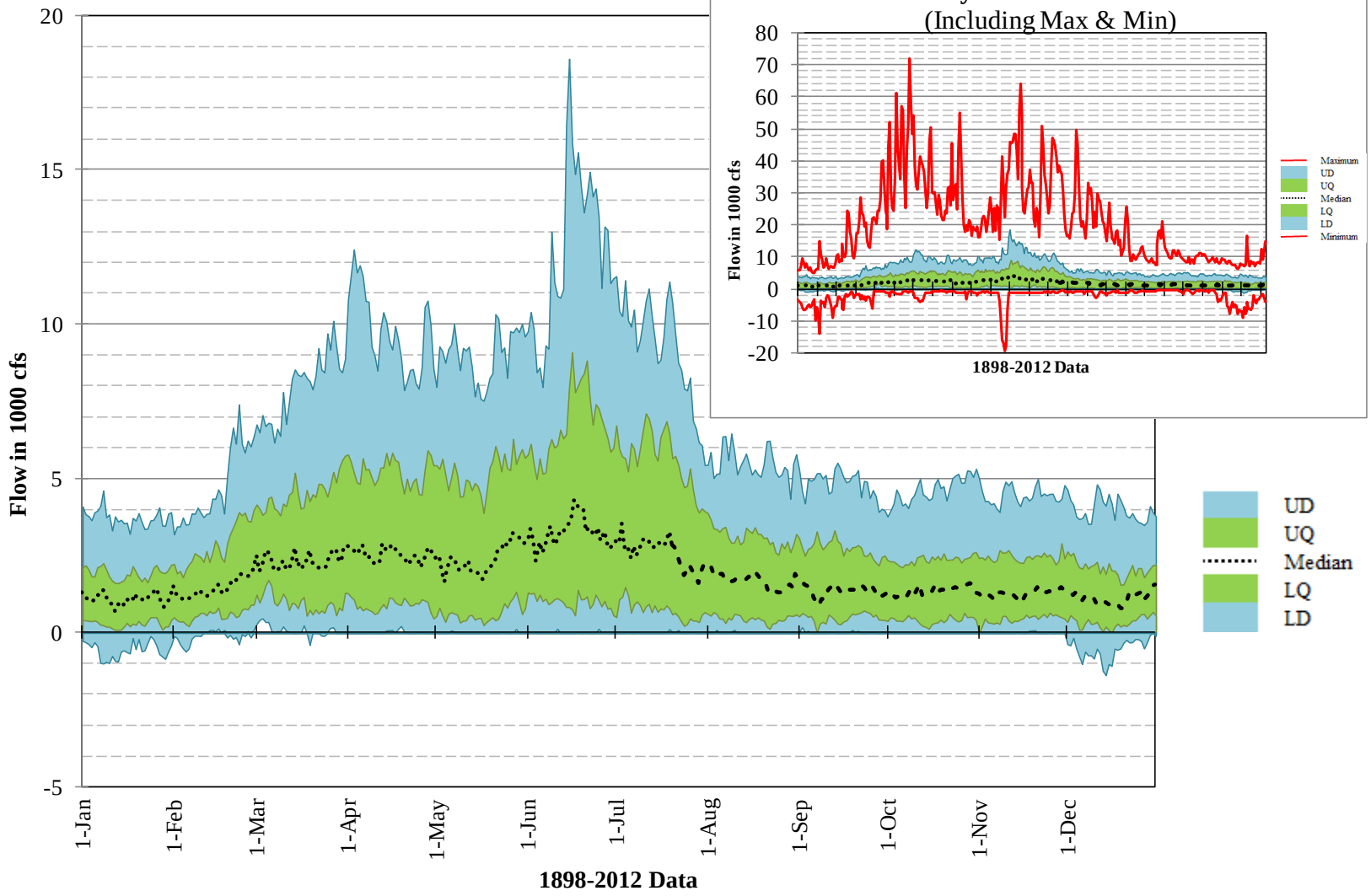


Plate 3. Gavins Point to Sioux City Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Sioux City to Omaha

Daily Incremental Flows



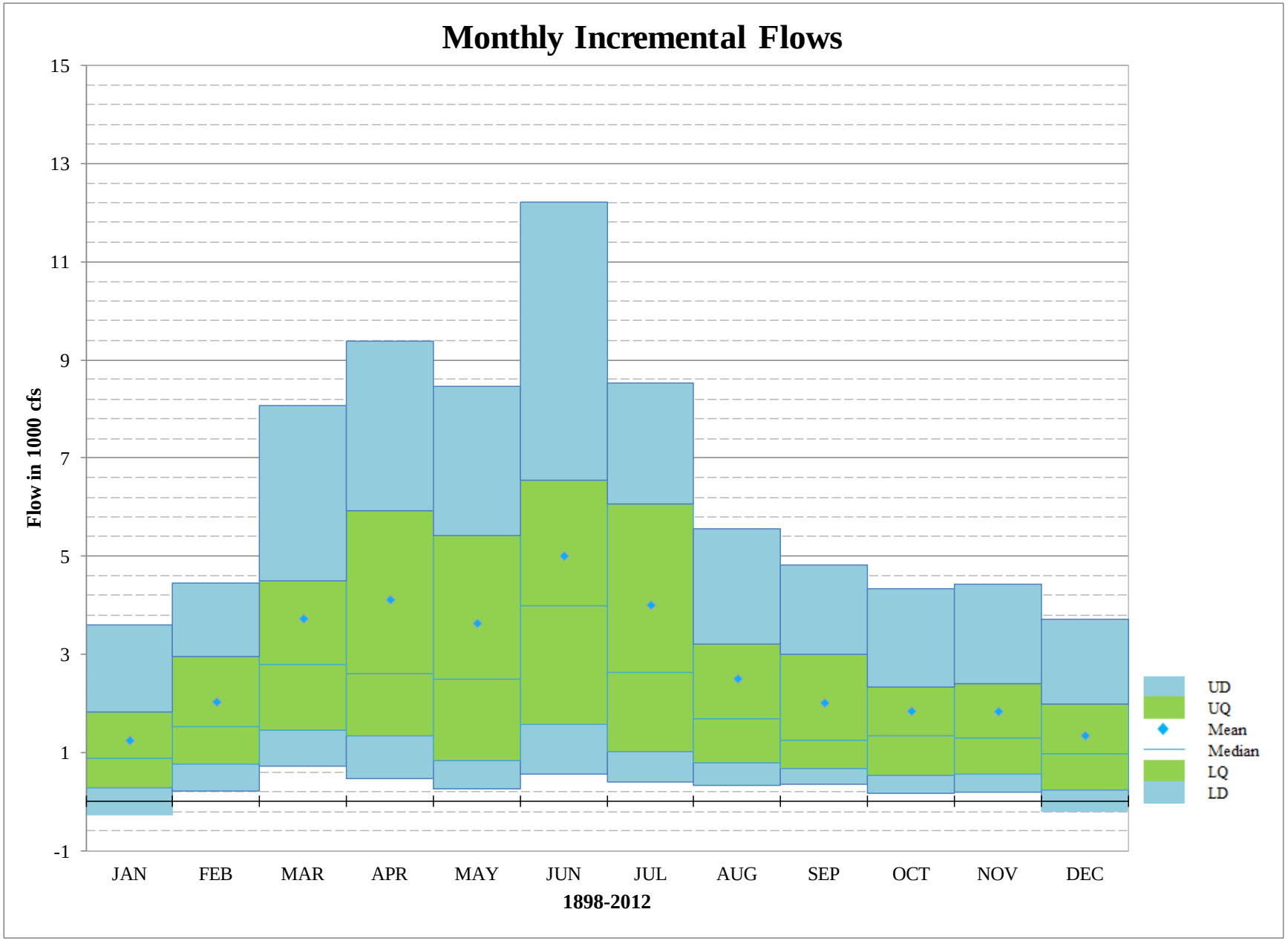
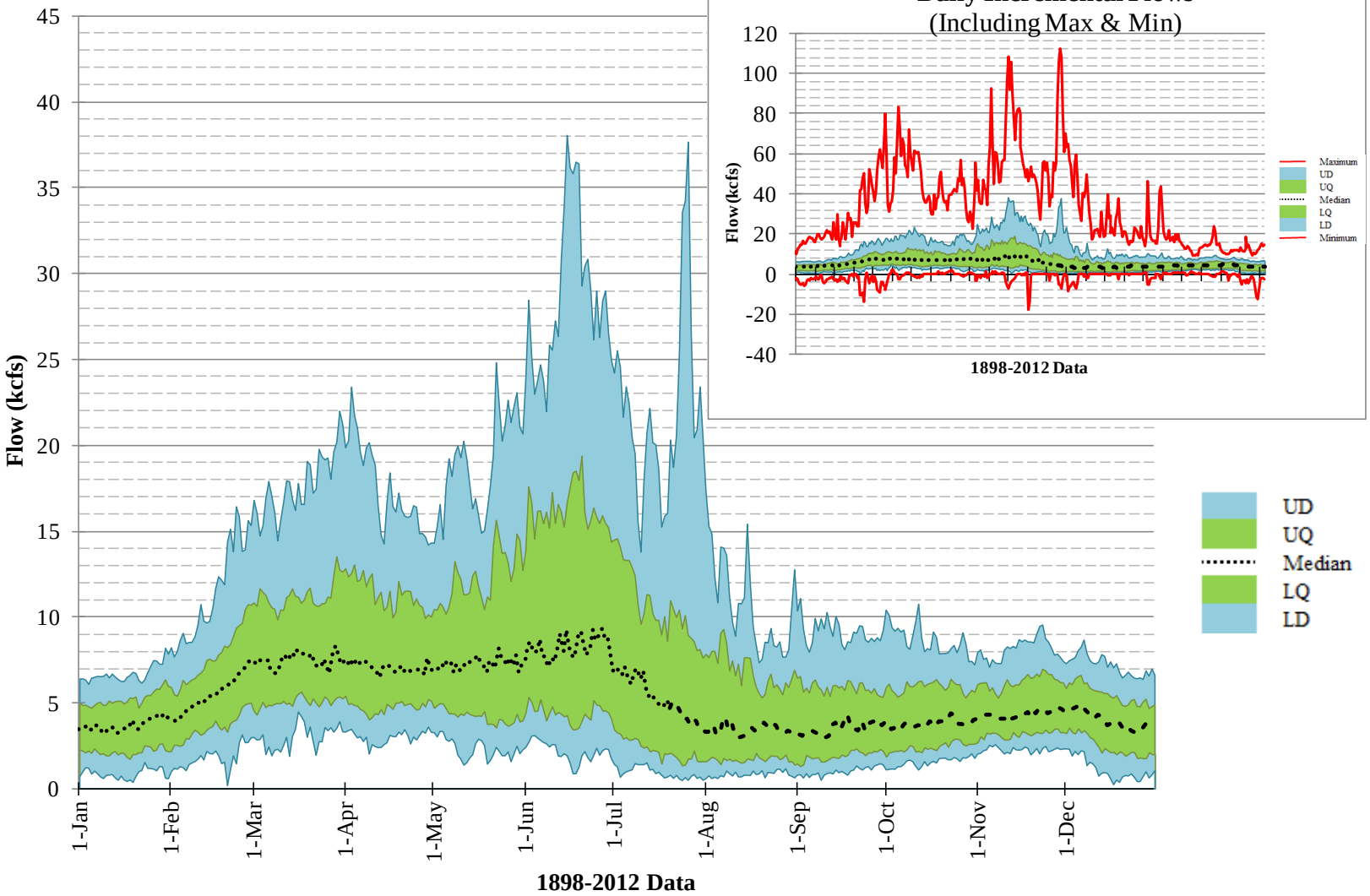


Plate 4. Sioux City to Omaha Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Omaha to Nebraska City

Daily Incremental Flows



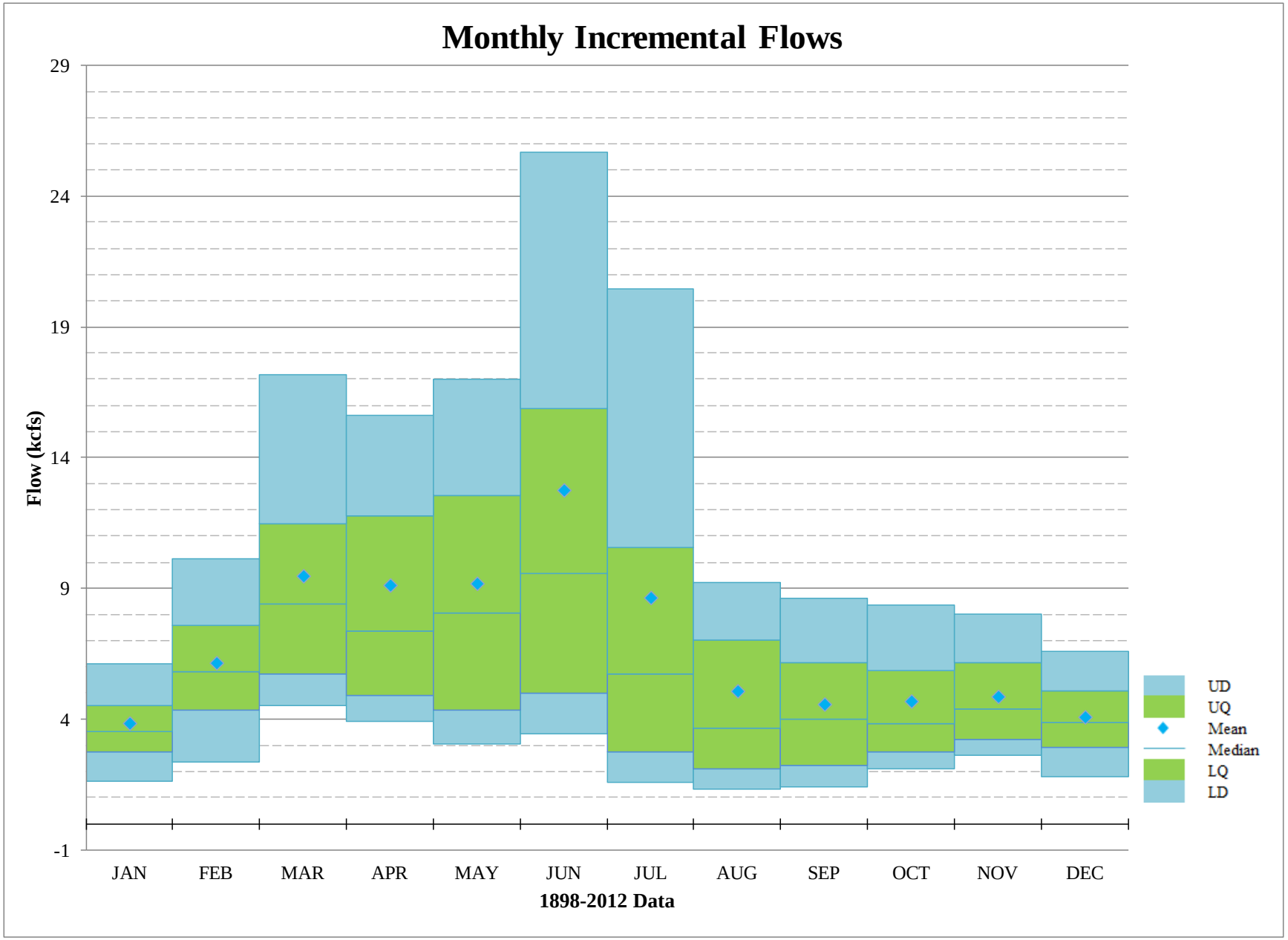
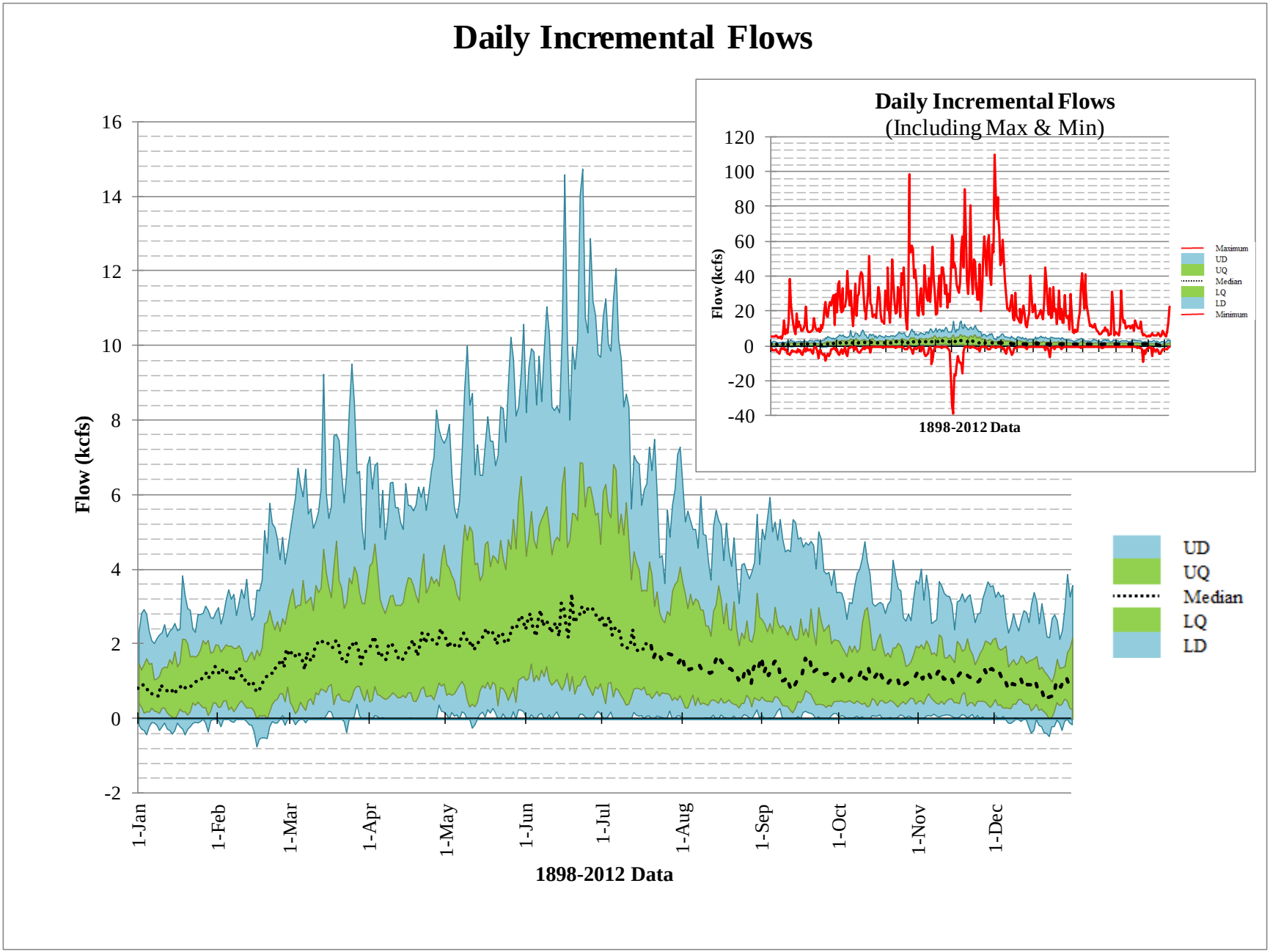


Plate 5. Omaha to Nebraska City Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Nebraska City to Rulo



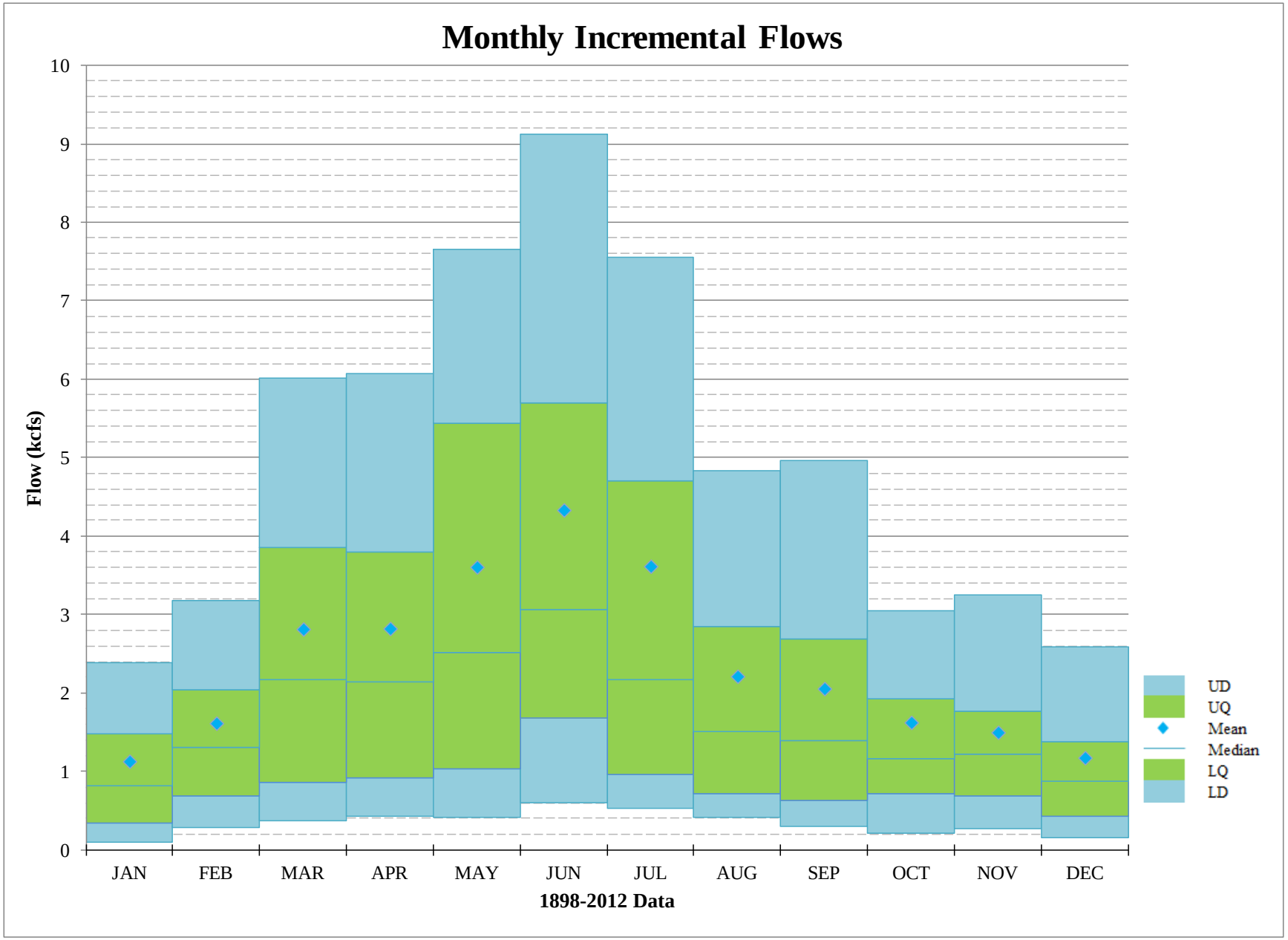
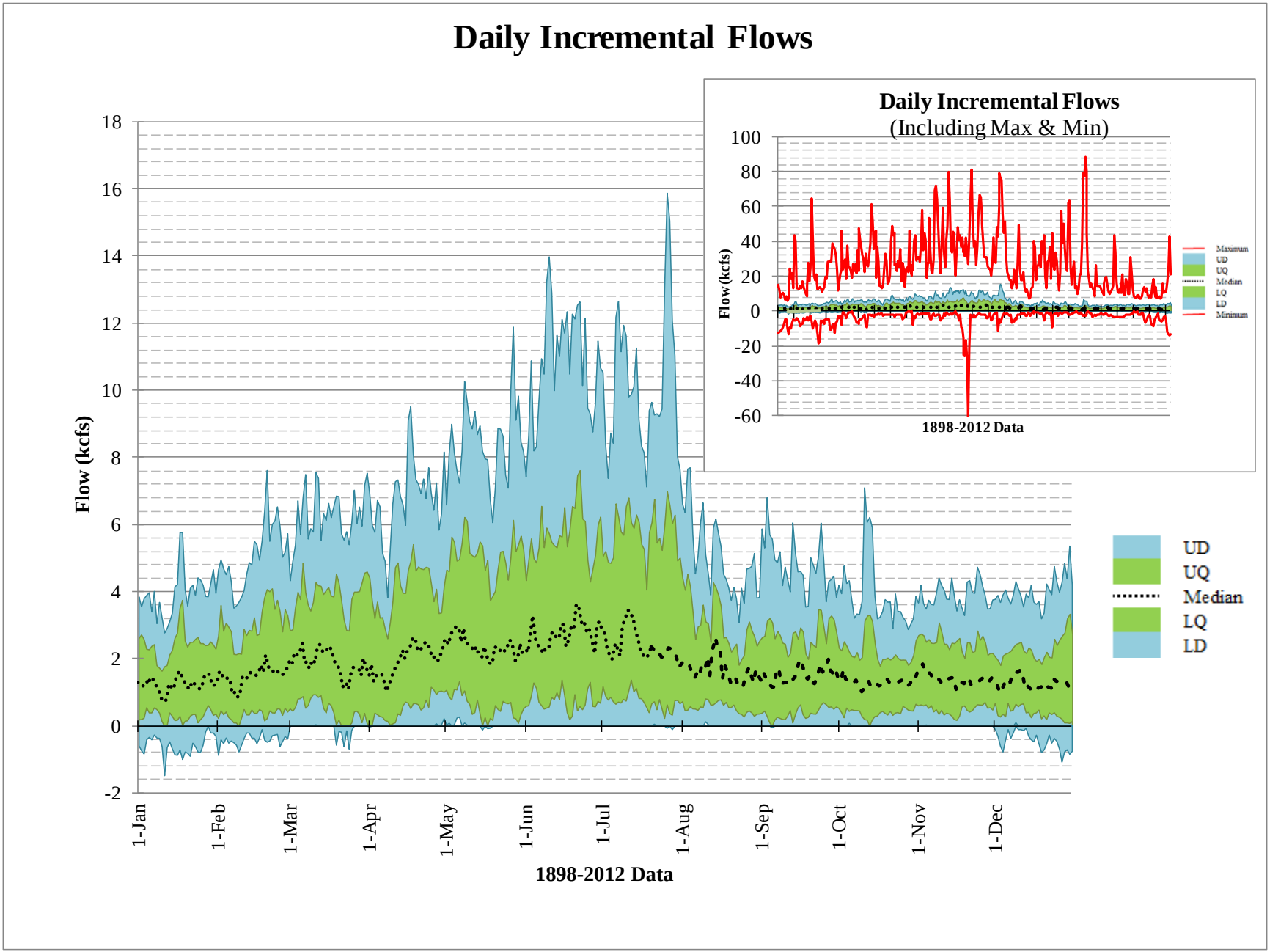


Plate 6. Nebraska City to Rulo Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Rulo to St. Joseph



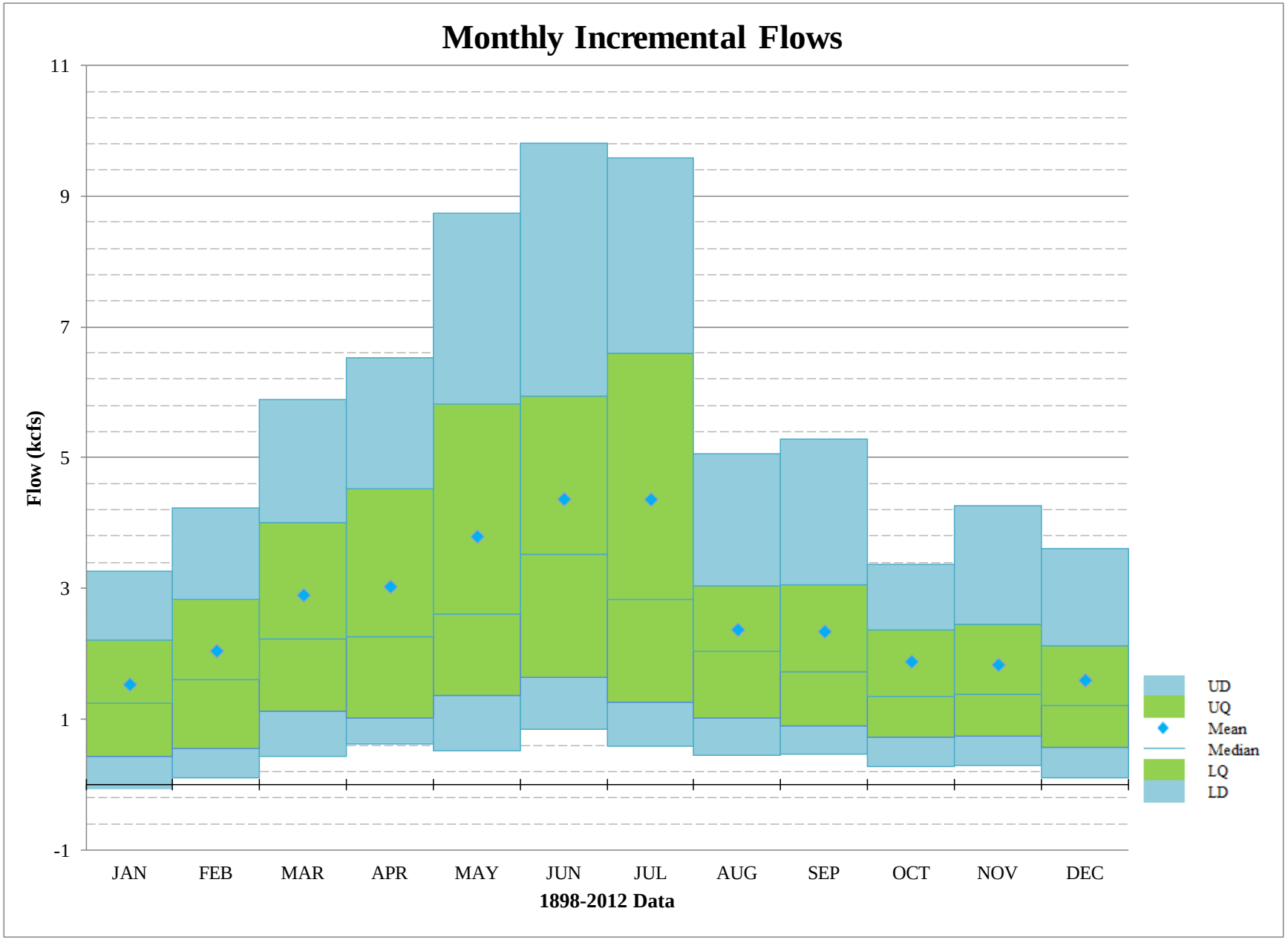
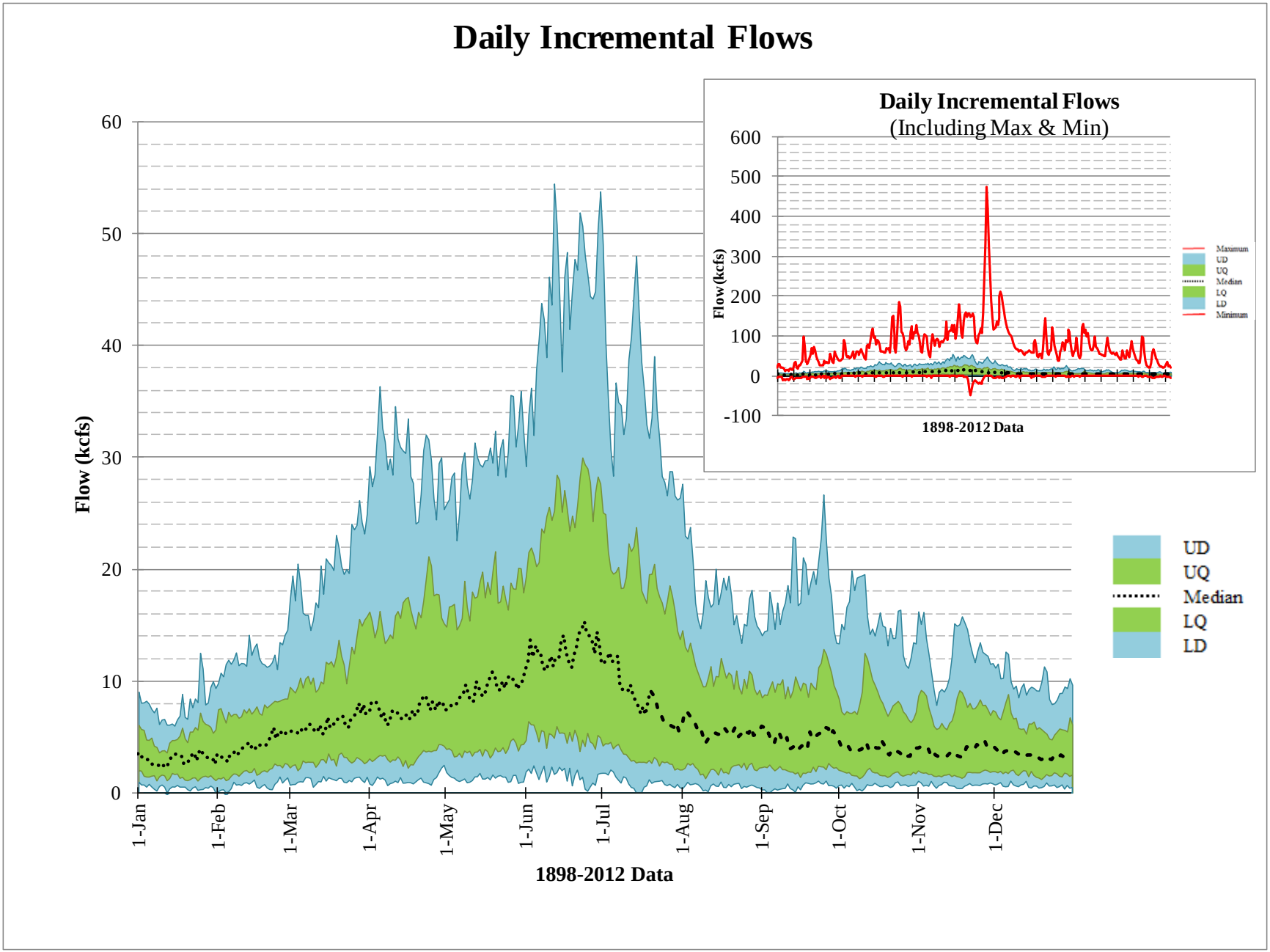


Plate 7. Rulo to St. Joseph Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

St. Joseph to Kansas City



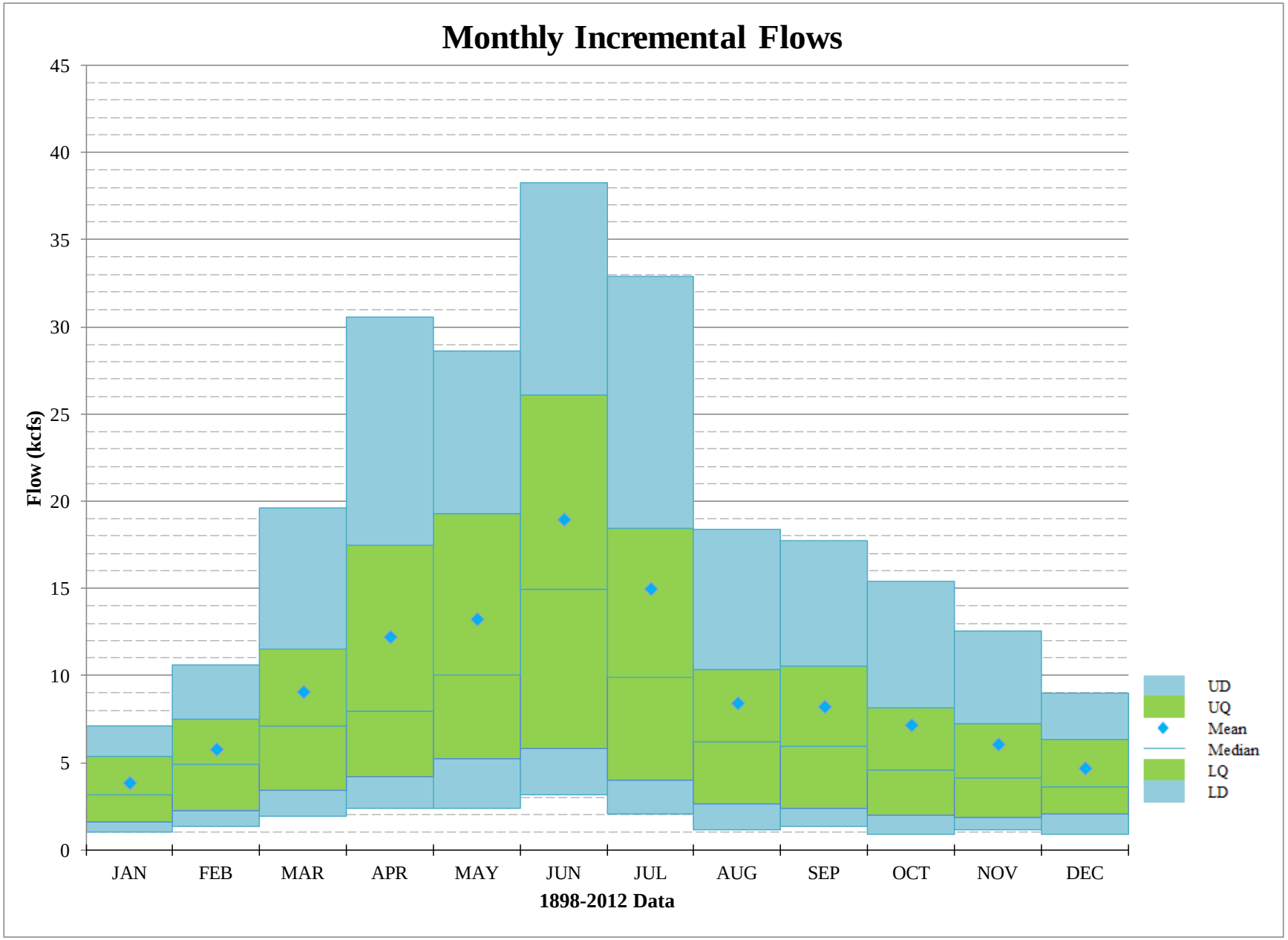
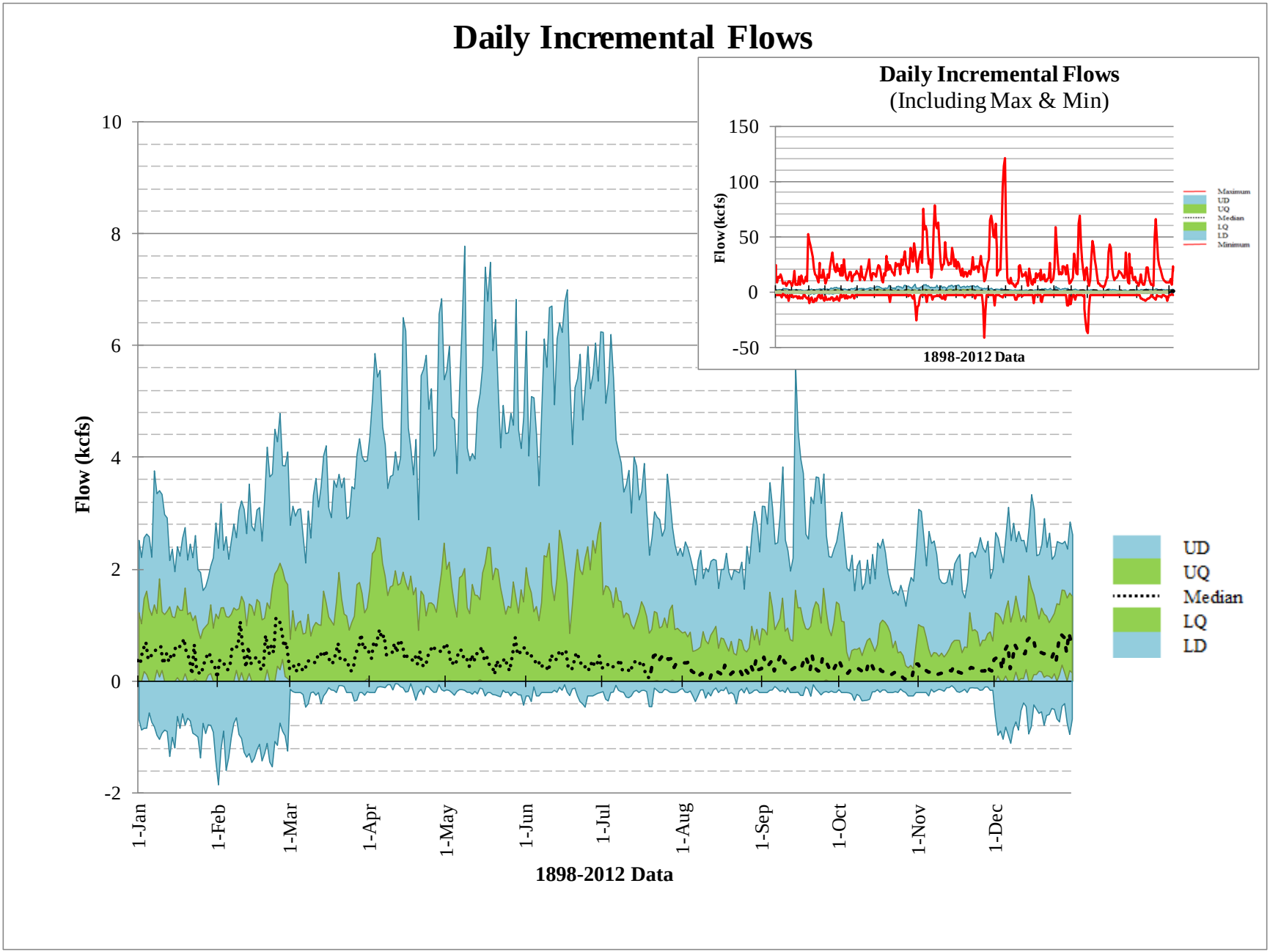


Plate 8. St. Joseph to Kansas City Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Kansas City to Waverly



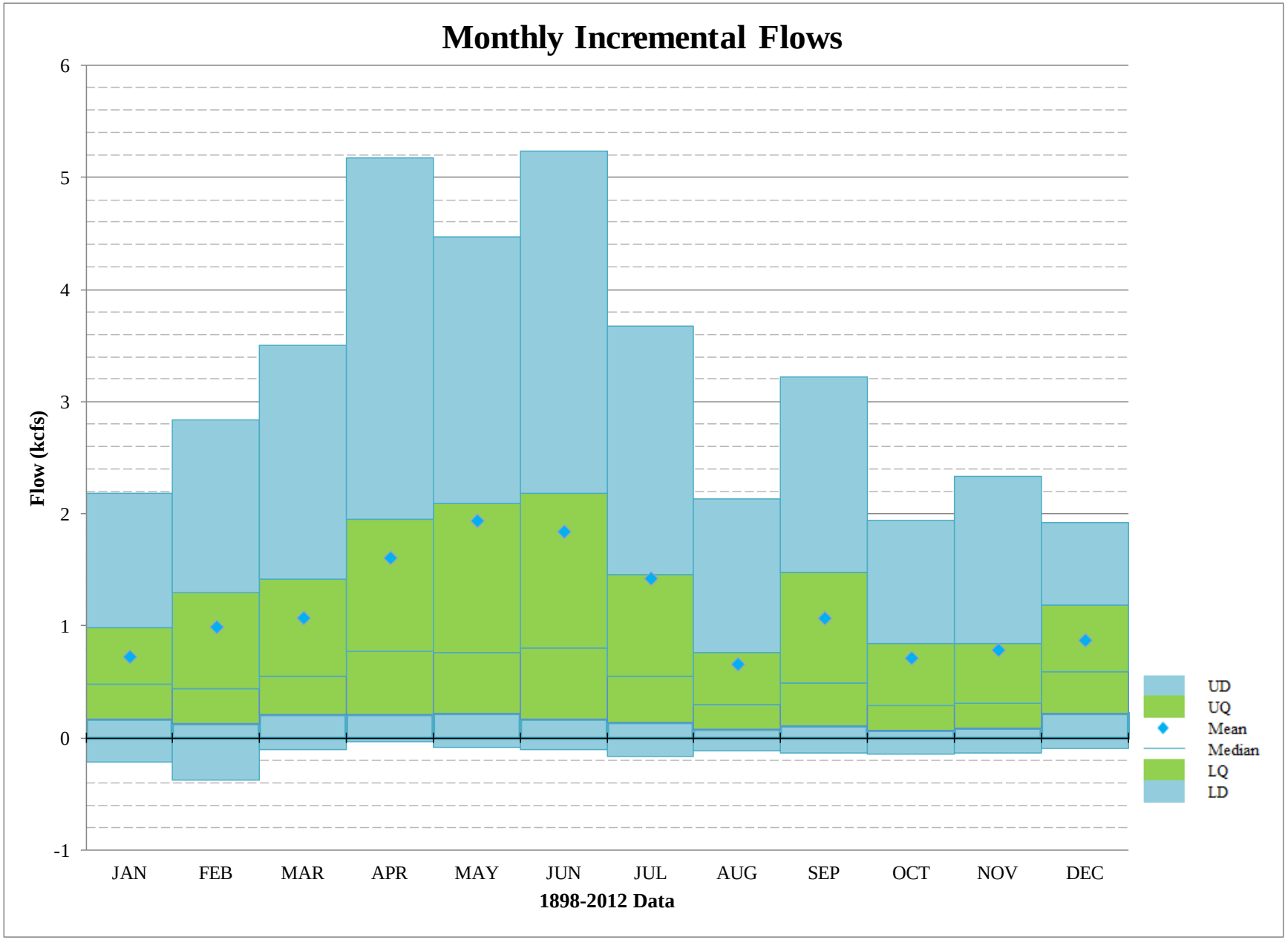
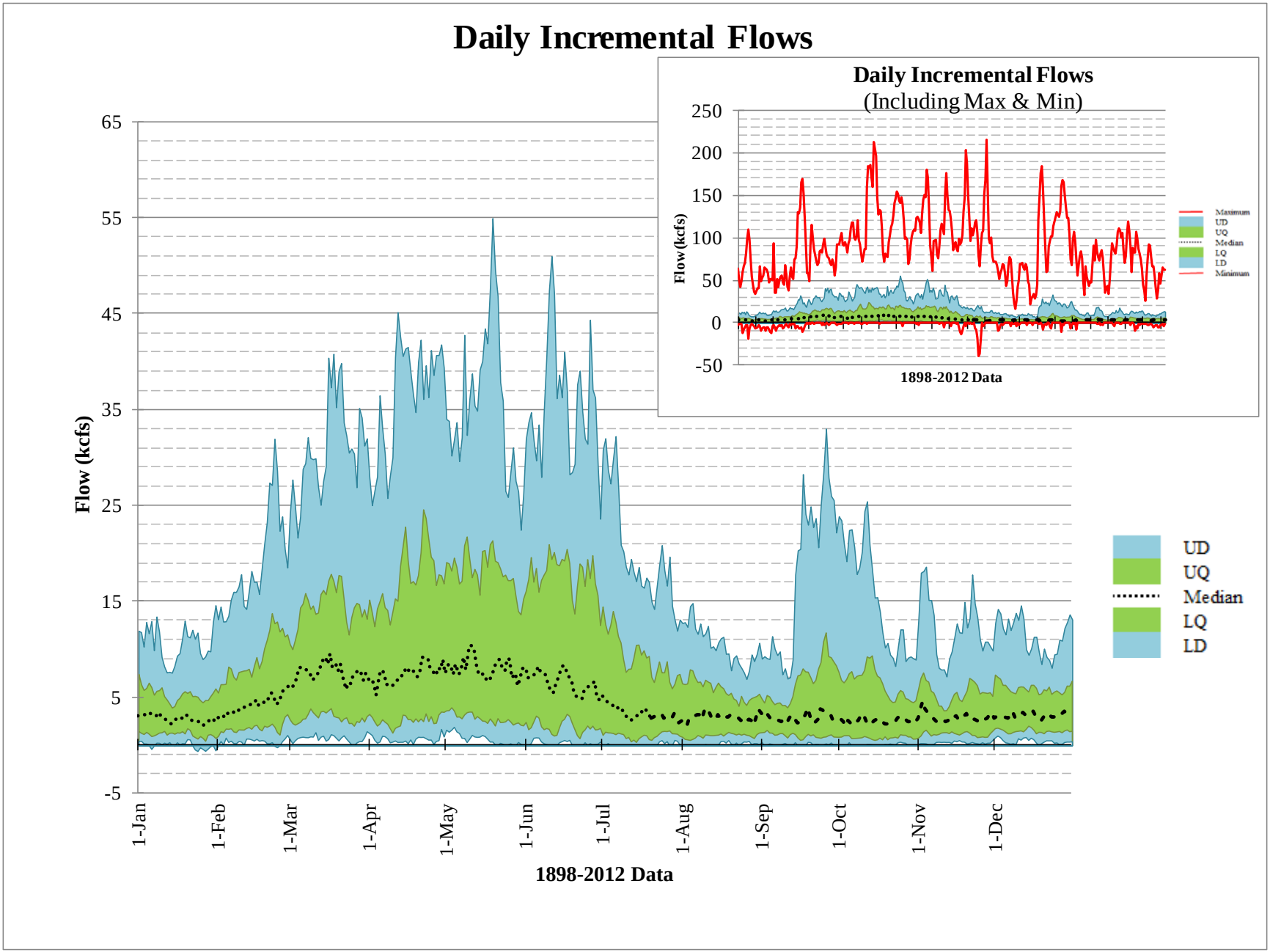


Plate 9. Kansas City to Waverly Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Waverly to Boonville



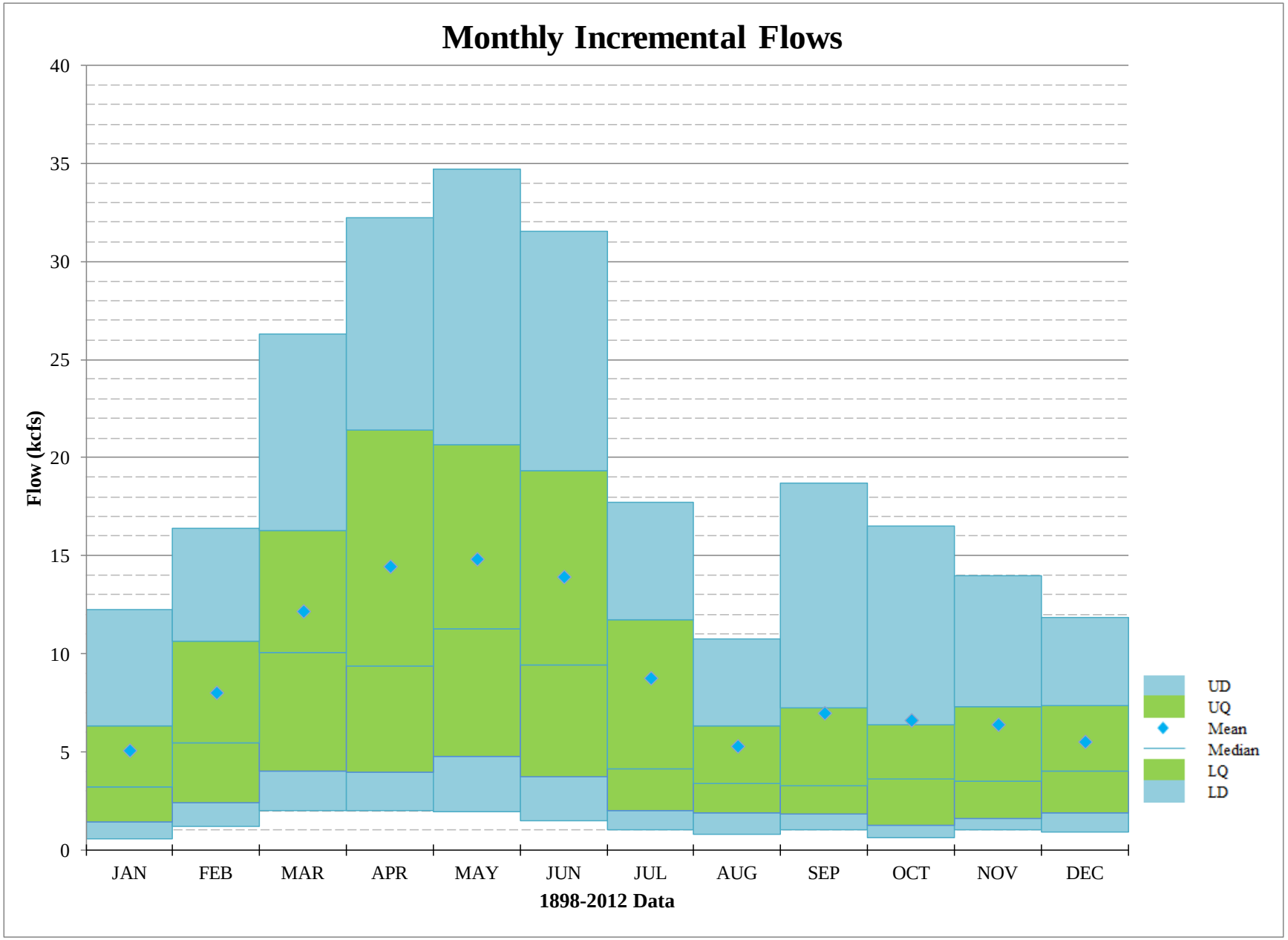
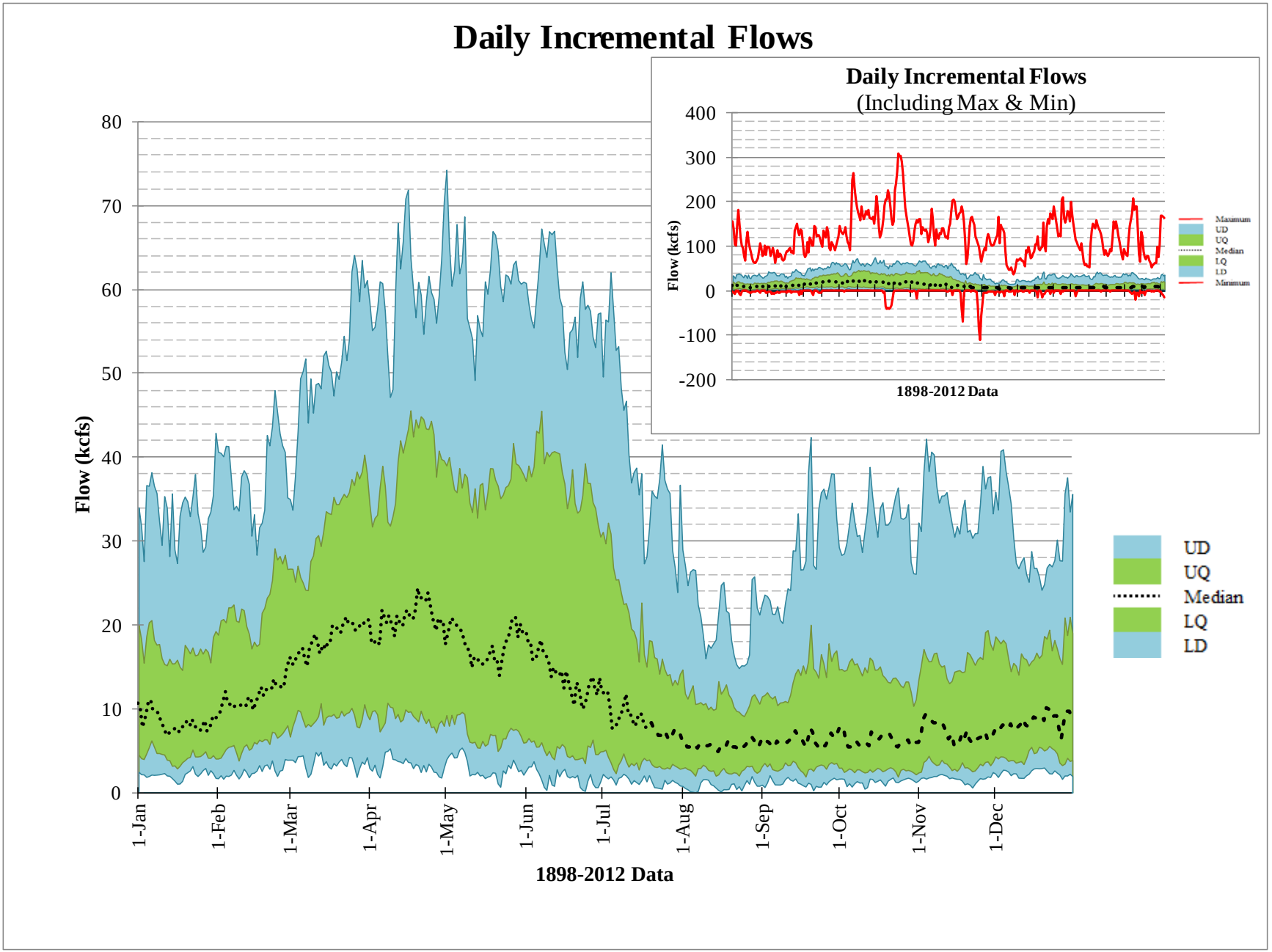


Plate 10. Waverly to Boonville Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Boonville to Hermann



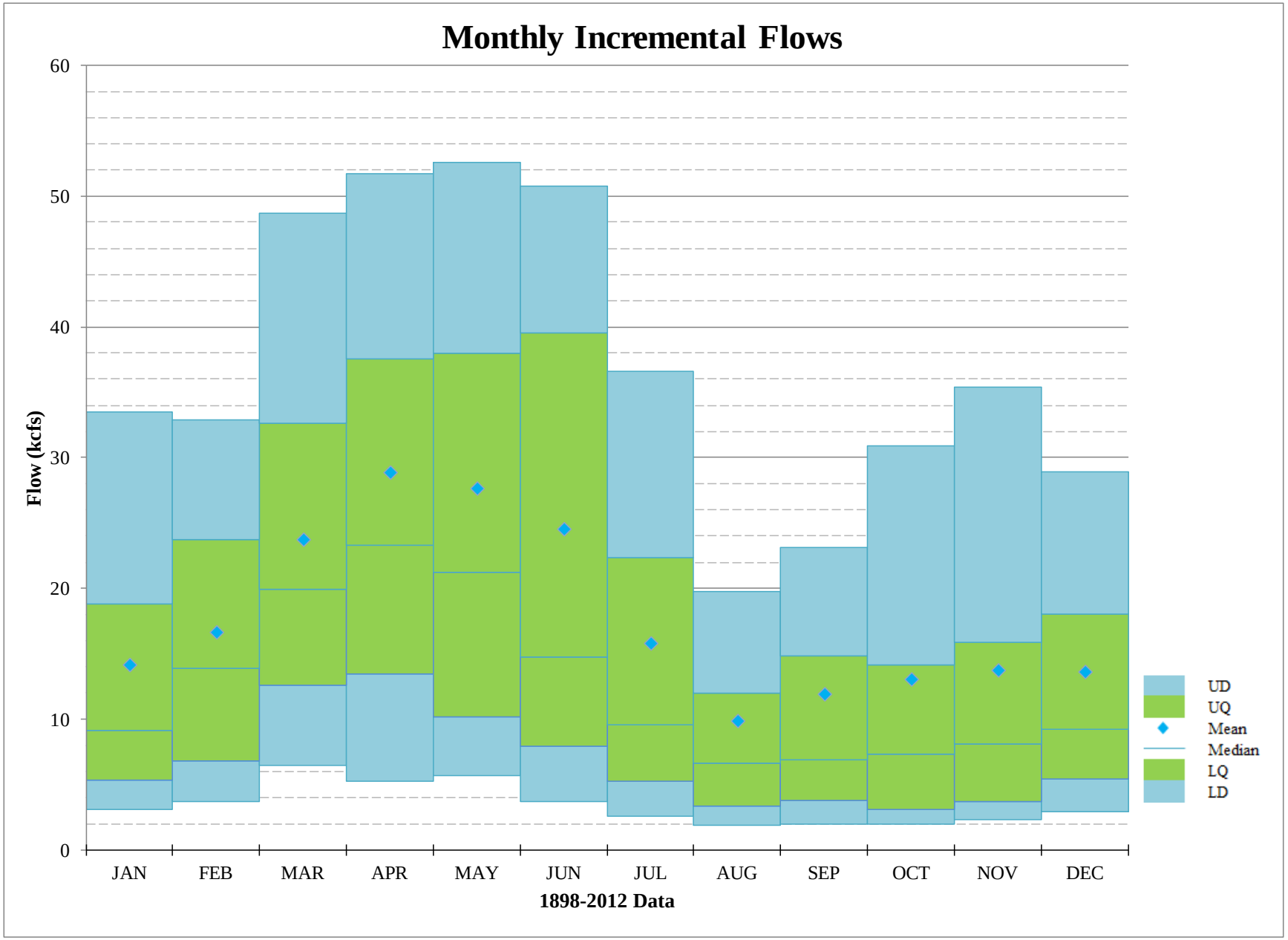
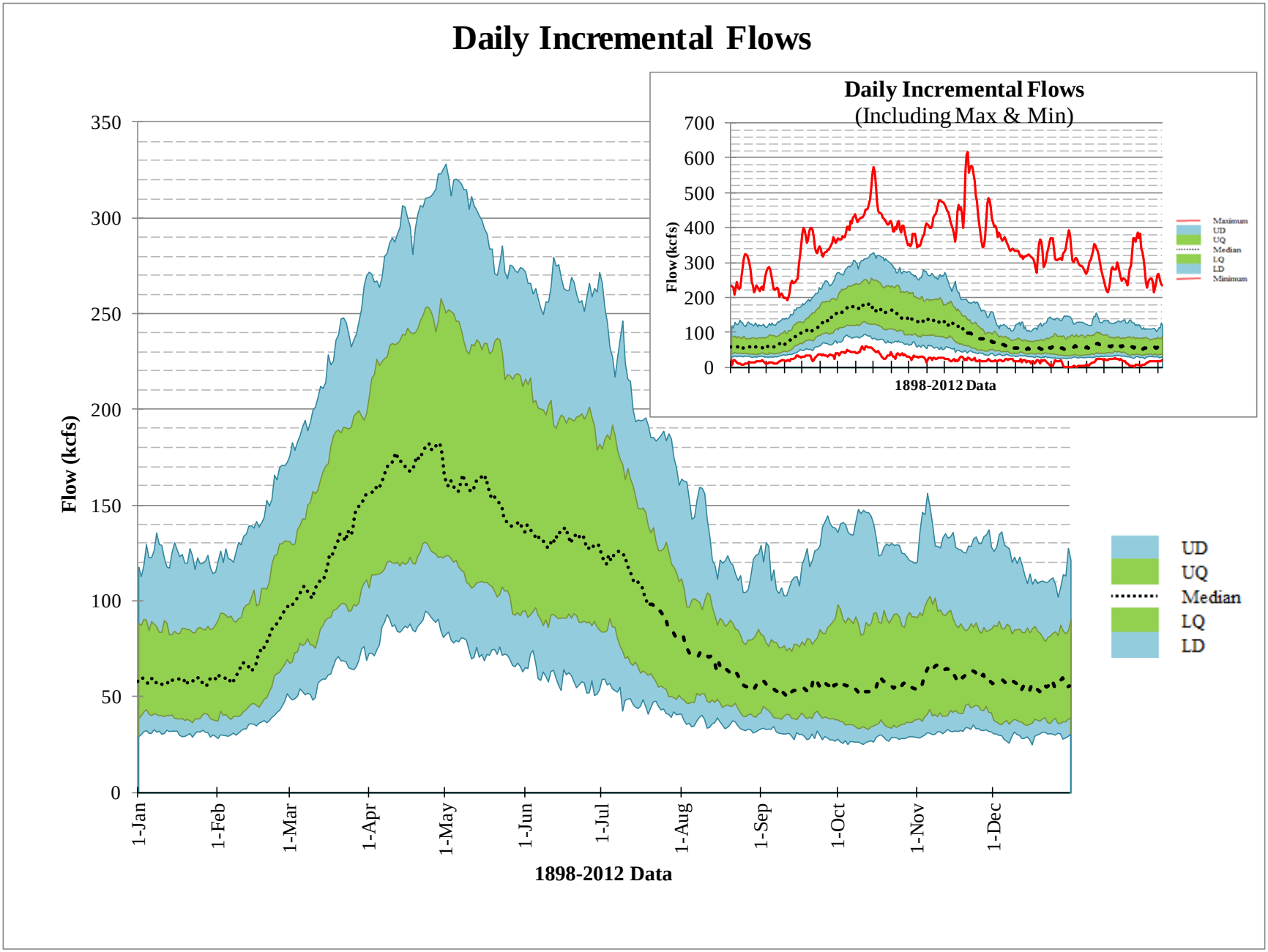


Plate 11. Boonville to Hermann Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Hermann to St. Louis



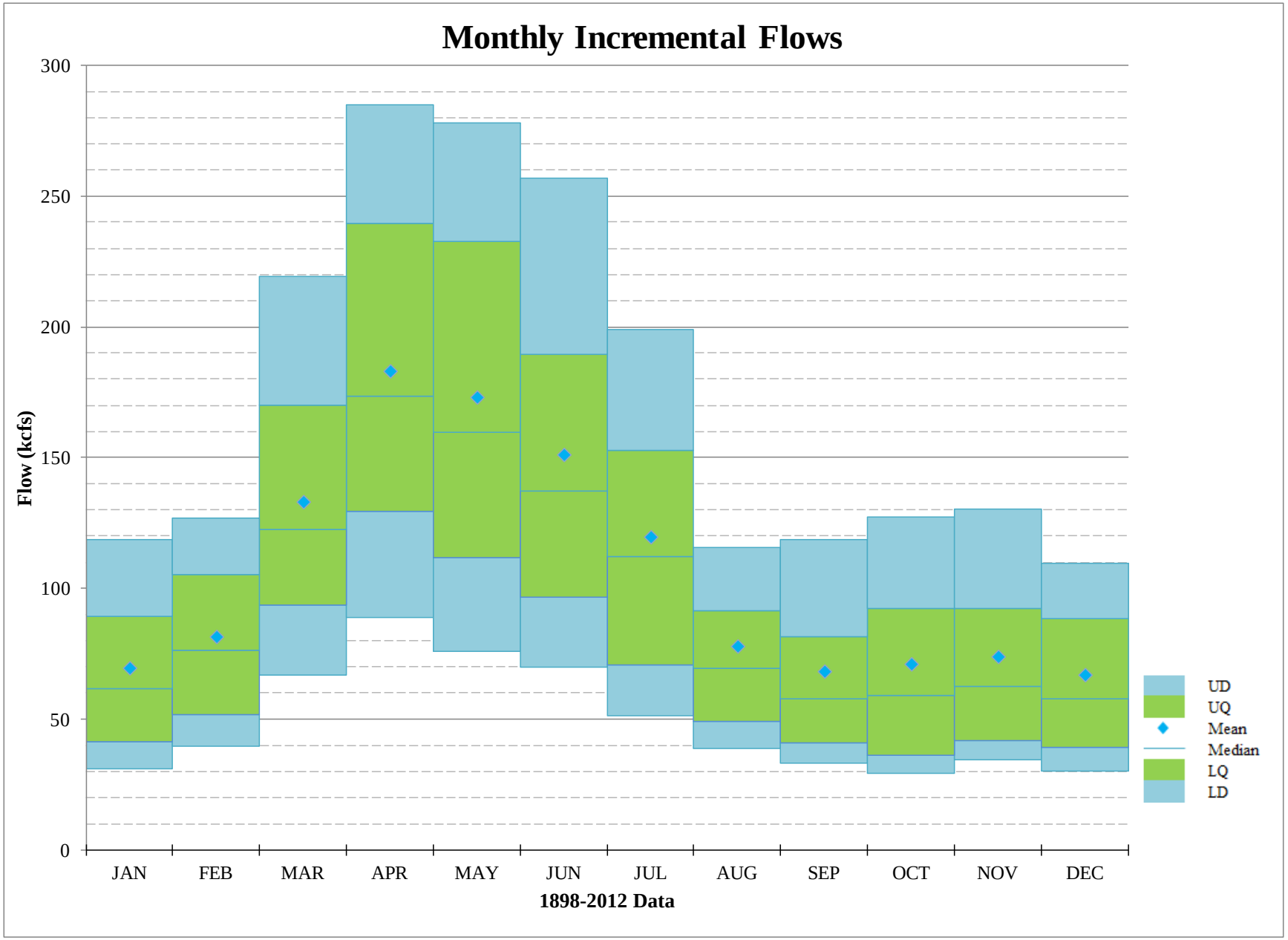


Plate 12. Hermann to St. Louis Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Gavins Point to Sioux City, Iowa

Ranking of Average Monthly Flows (kcfs)

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	-0.6	2012	-0.5	2012	-0.4	2012	-1.3	1950
2	-0.8	2004	-0.1	1942	0.3	1931	0.0	1990	0.1	1931	0.1	1989	0.0	1988	-0.1	2012	-0.2	1955	-0.2	1955	-0.2	1955	-1.1	1968
3	-0.6	1970	-0.1	1930	0.4	1933	0.2	1934	0.1	1934	0.1	1956	0.1	1989	0.1	1989	0.0	1931	0.0	1988	-0.1	1930	-1.1	1929
4	-0.6	1971	-0.1	1939	0.5	1925	0.3	1935	0.2	1981	0.2	1941	0.1	1943	0.1	1991	0.0	1943	0.0	1935	0.1	1939	-0.6	1989
5	-0.4	1977	0.0	1955	0.5	1934	0.3	1931	0.2	1956	0.3	1912	0.2	1931	0.2	1931	0.1	1990	0.1	1931	0.1	1924	-0.5	1990
6	-0.4	1988	0.0	1937	0.5	1991	0.3	1991	0.3	1940	0.4	1933	0.2	1933	0.2	1936	0.1	1925	0.1	1936	0.1	1934	-0.5	1943
7	-0.4	1951	0.0	1936	0.5	1990	0.3	1925	0.3	1935	0.4	1910	0.2	1936	0.2	1925	0.1	1935	0.1	1934	0.1	1936	-0.5	1940
8	-0.2	1982	0.0	1932	0.6	1935	0.4	1981	0.4	1968	0.4	1911	0.2	1956	0.2	1934	0.1	1989	0.1	1924	0.1	1931	-0.3	2000
9	-0.2	1955	0.0	1940	0.7	1943	0.5	1968	0.5	1925	0.5	1988	0.3	1925	0.2	1990	0.1	1981	0.1	1990	0.1	1969	-0.3	1944
10	-0.1	1934	0.1	1933	0.8	1964	0.6	1933	0.5	1989	0.5	1931	0.3	1947	0.2	1988	0.2	1937	0.1	1932	0.2	1925	-0.2	1953
11	-0.1	1968	0.1	1925	0.8	1940	0.7	1926	0.6	1933	0.6	1935	0.3	1981	0.3	1933	0.2	1934	0.1	1943	0.2	1933	-0.2	1949
12	-0.1	1950	0.1	1961	0.8	1981	0.8	1943	0.6	1939	0.6	1936	0.3	1968	0.3	1954	0.2	1991	0.1	1937	0.2	1935	-0.2	1983
13	-0.1	1957	0.2	1990	0.9	1968	0.9	1963	0.7	1943	0.7	1921	0.3	1934	0.3	1981	0.2	1940	0.1	1989	0.2	1921	-0.1	1938
14	-0.1	1969	0.2	1935	1.1	2005	0.9	1938	0.8	1936	0.7	1922	0.4	1932	0.3	1935	0.2	1954	0.1	1939	0.2	1932	-0.1	1941
15	0.0	1972	0.3	1938	1.1	1975	1.0	1974	0.9	1911	0.7	1977	0.4	1940	0.3	2003	0.3	1998	0.2	1933	0.3	1943	0.0	1947
16	0.0	1933	0.3	1960	1.1	1998	1.1	1936	0.9	1932	0.8	1968	0.5	1959	0.3	1968	0.3	1968	0.2	1925	0.3	1910	0.0	1961
17	0.0	1930	0.3	1998	1.1	1926	1.1	1939	1.0	1941	0.9	1934	0.5	1977	0.3	2000	0.3	1926	0.2	1945	0.3	1989	0.0	1935
18	0.0	1962	0.3	1934	1.2	1959	1.2	1922	1.0	1938	0.9	1943	0.5	1935	0.3	1946	0.4	2003	0.2	1991	0.3	1937	0.0	1937
19	0.0	1940	0.3	1926	1.2	1963	1.2	1911	1.0	1946	1.0	1981	0.6	1970	0.4	1938	0.4	1956	0.3	1953	0.4	1917	0.0	1960
20	0.0	1935	0.4	1950	1.2	2000	1.3	1956	1.1	1974	1.0	1938	0.6	2012	0.4	1941	0.4	1974	0.3	1921	0.4	1990	0.0	1924
21	0.0	1936	0.4	1922	1.3	1958	1.4	1988	1.1	1990	1.2	1927	0.7	1926	0.4	1926	0.4	1922	0.4	2003	0.4	1898	0.1	1964
22	0.0	1937	0.4	1959	1.3	1937	1.4	1989	1.1	1910	1.2	1992	0.7	1942	0.4	1937	0.5	1939	0.4	1959	0.5	1927	0.1	1930
23	0.0	1960	0.4	2004	1.5	1922	1.5	1932	1.1	1988	1.2	1932	0.7	1946	0.5	1932	0.5	1988	0.4	1910	0.5	1987	0.1	1958
24	0.0	1925	0.5	1989	1.6	1965	1.5	1959	1.1	1991	1.2	1939	0.7	1990	0.5	1940	0.6	1932	0.4	1987	0.5	1918	0.1	1925
25	0.0	1961	0.6	1962	1.7	2003	1.5	1992	1.2	1900	1.2	1926	0.8	1937	0.6	1922	0.6	1953	0.4	1917	0.5	1940	0.1	1939
26	0.1	1926	0.6	1911	1.7	1957	1.6	1961	1.3	1977	1.3	1902	0.8	1939	0.6	1945	0.6	1987	0.5	1898	0.5	1954	0.1	1932
27	0.1	1922	0.6	1965	1.8	1956	1.6	1977	1.4	1992	1.3	1946	0.9	2002	0.8	1987	0.6	1945	0.5	1942	0.6	1953	0.1	1921
28	0.1	1997	0.6	1972	1.8	1969	1.6	1954	1.4	1924	1.4	1937	0.9	1922	0.8	1973	0.7	1947	0.5	1998	0.6	1929	0.1	1931
29	0.1	1942	0.7	1931	1.8	1974	1.7	1957	1.5	1958	1.5	1940	0.9	1941	0.9	1911	0.7	1911	0.5	1940	0.6	1913	0.1	1945
30	0.1	1911	0.7	1964	1.8	1911	1.7	2000	1.5	1928	1.6	2002	0.9	1953	1.0	1899	0.7	1977	0.5	1927	0.6	1901	0.2	1910
31	0.1	1932	0.7	1963	1.9	1942	1.8	1967	1.5	1963	1.6	1987	0.9	1930	1.0	1939	0.8	1899	0.5	1954	0.6	1956	0.2	1946
32	0.1	1938	0.7	1975	1.9	1989	1.8	1928	1.5	1926	1.7	1900	1.1	1911	1.0	1982	0.8	1929	0.6	1929	0.6	1904	0.3	1917
33	0.2	1919	0.8	1899	2.2	2002	1.8	1975	1.5	1919	1.7	1958	1.2	1963	1.0	1942	0.8	1970	0.6	1949	0.6	1916	0.3	1898
34	0.2	1928	0.8	1918	2.2	1967	1.8	2004	1.6	1937	1.7	1990	1.3	2006	1.0	1956	0.8	1959	0.6	1901	0.7	1903	0.3	1934
35	0.2	1899	0.8	1953	2.3	1947	1.9	1958	1.6	1967	1.8	1963	1.3	1985	1.0	1958	0.9	1963	0.6	1918	0.7	1926	0.3	1996
36	0.2	1918	0.8	1941	2.5	1988	2.0	2003	1.6	1922	1.9	1959	1.4	1991	1.1	1959	0.9	1918	0.6	1969	0.7	1974	0.3	1927
37	0.2	1944	0.9	1928	2.8	1977	2.0	1942	1.6	1975	2.1	1964	1.4	1974	1.1	1997	0.9	1936	0.7	1958	0.7	1991	0.3	1942
38	0.2	1902	0.9	1978	2.8	1960	2.1	1937	1.7	1954	2.2	1925	1.5	1899	1.2	1928	1.0	1919	0.7	1913	0.8	1945	0.3	1952
39	0.2	1914	0.9	1949	2.8	1928	2.1	1941	1.9	1971	2.3	1903	1.5	1918	1.2	1929	1.0	1902	0.7	1974	0.8	1938	0.3	1901
40	0.2	1931	0.9	1969	2.8	1941	2.1	1940	2.1	1917	2.4	1973	1.6	2000	1.2	1918	1.0	1928	0.7	1956	0.9	1968	0.3	1918
41	0.2	1946	0.9	1979	3.1	1999	2.2	1919	2.3	1964	2.4	1974	1.6	1966	1.2	1902	1.0	1905	0.7	1916	0.9	1988	0.3	1936
42	0.2	1905	0.9	1943	3.1	1939	2.3	1905	2.4	1957	2.5	1930	1.6	1964	1.2	1919	1.1	1973	0.8	1981	0.9	1959	0.4	1913
43	0.2	1917	1.0	1968	3.1	2006	2.4	1964	2.5	1959	2.6	2000	1.7	1975	1.3	1970	1.1	2000	0.8	1904	0.9	1923	0.4	1962
44	0.2	1927	1.0	1902	3.2	1899	2.4	1918	2.5	1904	2.6	1960	1.8	1950	1.3	1947	1.1	1997	0.8	1926	1.0	1961	0.4	1988
45	0.3	1904	1.0	1919	3.2	1932	2.5	1898	2.5	1980	2.7	1975	1.8	1954	1.3	1943	1.1	1914	0.8	1960	1.0	1907	0.4	1963
46	0.3	1953	1.0	1951	3.3	1918	2.6	1899	2.7	1973	2.8	1970	1.8	1919	1.3	1977	1.1	1941	0.9	1903	1.0	1994	0.4	1916
47	0.3	1967	1.0	1958	3.4	1980	2.6	1914	2.8	2002	2.8	1980	1.9	1960	1.4	1985	1.1	1958	1.0	1952	1.0	1912	0.4	1967
48	0.3	1924	1.0	1929	3.4	1919	2.7	1930	2.9	1961	2.9	1982	1.9	1902	1.4	1914	1.2	1917	1.0	1930	1.0	1963	0.4	1933
49	0.3	1945	1.1	1997	3.6	1898	2.9	1982	3.1	2003	3.0	1961	1.9	1987	1.4	2002	1.2	1982	1.1	1907	1.0	1958	0.4	1957
50	0.3	1941	1.1	2003	3.6	1992	2.9	1946	3.1	1912	3.0	1976	2.0	1928	1.5	1974	1.2	1898	1.1	1963	1.1	2003	0.4	1904
51	0.3	1898	1.1	1914	3.6	1914	2.9	1971	3.1	1930	3.0	1917	2.1	1938	1.5	1969	1.3	1933	1.1	1997	1.1	1920	0.4	1948
52	0.3	1908	1.1	1991	3.7	1982	3.0	1950	3.1	2004	3.0	2003	2.1	1914	1.5	1950	1.3	1927	1.1	2000	1.1	1951	0.5	1903
53	0.3	1958	1.2	1957	3.8	1976	3.0	1904	3.2	1966	3.1	1966	2.1	1980	1.5	1917	1.4	1904	1.1	1947	1.2	1915	0.5	1926
54	0.3	1959	1.2	1985	3.8	1944	3.1	1945	3.2	1982	3.1	1949	2.1	1898	1.5	1998	1.4	1946	1.2	1996	1.2	2006	0.5	1954
55	0.4	1913	1.2	2005	4.0	1954	3.2	1953	3.2	1970	3.3	1919	2.2	1917	1.6	2006	1.4	2008	1.2	1977	1.2	1960	0.6	1923
56	0.4	1921	1.2	1917	4.0	1905	3.3	1972	3.2	1948	3.5	1913	2.2	1961	1.6	1965	1.4	1948	1.2	1920	1.2	1911	0.6	1976

57	0.4	1954	1.2	2000	4.0	1938	3.3	1927	3.4	1976	3.6	1953	2.2	1958	1.6	1948	1.4	2007	1.2	1912	1.2	1944	0.6	1991
58	0.4	1996	1.2	1995	4.1	2009	3.5	2012	3.4	1987	3.6	2006	2.3	1949	1.6	1949	1.5	1969	1.2	1923	1.2	1947	0.6	1907
59	0.4	1912	1.2	1905	4.1	1917	3.5	1902	3.4	1903	3.8	1985	2.4	1976	1.6	1898	1.5	1952	1.2	1970	1.2	1941	0.6	1956
60	0.4	1916	1.3	1904	4.3	1996	3.5	1980	3.6	1945	3.9	1928	2.5	1982	1.6	1952	1.5	1950	1.3	1962	1.2	1950	0.7	1951
61	0.4	1910	1.3	1981	4.3	1936	3.6	1966	3.7	2000	3.9	1918	2.5	1973	1.7	1966	1.5	1961	1.3	1922	1.3	1952	0.7	1912
62	0.4	1943	1.3	2008	4.3	2004	3.7	1917	3.8	1902	4.1	1991	2.6	1927	1.7	1927	1.5	1962	1.3	1941	1.3	1909	0.7	1920
63	0.4	1923	1.4	1927	4.3	1904	3.8	2002	3.8	1949	4.2	1898	2.6	1905	1.8	1963	1.5	1966	1.3	1911	1.3	1962	0.7	1955
64	0.4	1901	1.4	1987	4.4	1953	3.9	1970	3.9	1914	4.4	1942	2.6	2003	1.8	1905	1.6	2002	1.3	1950	1.3	1906	0.7	1911
65	0.4	1920	1.4	1970	4.6	1966	4.0	2005	4.0	1923	4.4	1969	2.6	1965	1.8	1904	1.7	1967	1.3	1909	1.3	1928	0.7	1915
66	0.4	1993	1.4	1988	4.7	1962	4.1	1976	4.1	1921	4.5	2012	2.7	1904	2.0	2008	1.7	1924	1.3	1915	1.3	1900	0.8	2003
67	0.4	1991	1.5	1974	4.7	2012	4.1	1921	4.2	1950	4.6	1978	2.8	1948	2.1	2004	1.9	1908	1.4	1994	1.4	1919	0.8	1909
68	0.4	1949	1.6	1977	4.8	1970	4.2	1908	4.2	1942	4.9	1952	2.9	1967	2.1	1967	1.9	1957	1.4	1919	1.4	1914	0.8	1922
69	0.5	1907	1.6	1967	4.9	1951	4.3	1944	4.3	2005	5.0	1948	3.1	1929	2.2	1924	1.9	2006	1.4	1900	1.4	1973	0.8	1919
70	0.5	1900	1.6	1986	4.9	1995	4.5	1913	4.3	1947	5.0	1899	3.2	1945	2.2	1976	1.9	1994	1.4	1976	1.5	1985	0.8	1900
71	0.5	1915	1.6	1924	5.0	1927	4.7	1924	4.4	1901	5.2	1905	3.3	1924	2.3	1957	2.0	1949	1.5	1938	1.5	1957	0.8	1906
72	0.5	1903	1.7	1947	5.1	1902	4.9	1920	4.5	1998	5.4	1965	3.4	2004	2.4	1930	2.0	1971	1.5	1967	1.5	1942	0.9	2012
73	0.5	1978	1.7	1993	5.2	1961	4.9	1973	4.6	1965	5.4	1944	3.4	1998	2.4	1961	2.0	1965	1.6	1961	1.5	1899	0.9	1899
74	0.5	1992	1.7	1946	5.6	2008	5.1	1910	4.9	1905	5.5	2004	3.5	1908	2.4	1908	2.0	1938	1.6	1968	1.5	1902	0.9	1914
75	0.6	1906	1.8	2001	5.7	2001	5.2	1916	5.1	1953	5.5	1904	3.7	1971	2.5	1980	2.0	1964	1.6	1906	1.6	1976	0.9	1969
76	0.6	1990	1.8	1908	5.7	1924	5.3	1912	5.2	1985	5.7	1947	3.7	1913	2.5	1964	2.0	1930	1.6	1928	1.6	1997	1.0	1902
77	0.6	2007	1.8	1948	5.8	1950	5.3	1923	5.4	1960	5.8	1916	3.9	1921	2.6	1994	2.1	1921	1.6	1914	1.6	2002	1.0	1959
78	0.6	1939	1.9	1945	5.8	1952	5.7	1949	5.5	1962	5.8	1998	4.0	2005	2.7	1971	2.1	1980	1.6	1966	1.6	1966	1.0	1928
79	0.6	1948	2.0	1999	5.9	1971	5.7	1947	5.6	1978	5.8	1957	4.1	1986	2.7	1913	2.1	1942	1.7	1902	1.7	1922	1.1	1905
80	0.6	1965	2.0	1913	6.2	1908	5.8	1901	5.7	1918	5.9	1950	4.1	1997	2.7	1921	2.2	1920	1.7	2006	1.7	1905	1.1	2002
81	0.6	1909	2.1	1921	6.3	1921	6.2	1996	6.2	1899	6.1	1967	4.1	2008	2.9	1996	2.2	1996	1.7	1899	1.7	1996	1.1	1908
82	0.7	2005	2.1	1954	6.5	1987	6.4	2008	6.2	1996	6.4	1979	4.2	1920	2.9	1920	2.2	1916	1.8	2001	1.7	1967	1.1	1966
83	0.7	1975	2.1	2007	6.5	1972	6.4	1900	6.4	2006	6.4	1997	4.2	2007	2.9	1986	2.2	1913	1.8	1973	1.7	1999	1.2	1997
84	0.7	1964	2.1	2010	6.7	1913	6.6	1907	6.7	1951	6.5	1920	4.2	1912	2.9	1910	2.3	1910	1.9	2002	1.8	1908	1.2	1972
85	0.7	1976	2.1	2002	6.9	1984	7.1	1909	7.1	1994	6.6	1929	4.2	1916	3.0	1975	2.3	1912	2.0	1964	1.8	1981	1.2	2006
86	0.8	1966	2.1	1992	7.0	1912	7.3	1906	7.3	1983	7.0	1923	4.4	1910	3.0	1953	2.4	1960	2.0	1905	1.8	2000	1.2	1994
87	0.8	1979	2.1	1944	7.0	1946	7.4	1915	7.6	2008	7.0	2009	4.5	1972	3.0	1916	2.4	1907	2.0	1908	1.9	1965	1.3	2004
88	0.8	1999	2.2	1898	7.1	1923	7.4	1903	7.7	1916	7.5	1971	4.5	1923	3.0	2005	2.5	1901	2.2	1948	1.9	2004	1.3	2008
89	0.8	1963	2.2	1912	7.7	1916	7.6	1998	7.7	1908	7.8	1915	4.6	1907	3.1	1960	2.5	1976	2.2	1957	1.9	1970	1.5	1981
90	0.8	1989	2.2	1916	7.8	1907	8.2	2009	7.8	1915	7.8	1914	4.7	1901	3.1	1901	2.6	2001	2.3	1975	2.0	1975	1.5	1973
91	0.9	1974	2.2	1920	8.0	1945	8.2	1965	7.8	1898	7.8	2007	4.9	1994	3.1	2007	2.6	2004	2.3	2004	2.1	1949	1.5	1992
92	0.9	1929	2.3	1996	8.2	1948	8.9	1994	7.9	1929	7.9	1954	4.9	1969	3.3	1912	2.6	1983	2.3	1972	2.1	1948	1.7	1965
93	1.0	1985	2.3	2012	8.4	1949	9.2	1948	7.9	1969	7.9	1972	5.1	1957	3.4	1923	2.6	1923	2.3	1971	2.2	1977	1.7	1974
94	1.0	2003	2.3	1910	8.5	1920	9.4	1999	7.9	1913	8.2	1906	5.3	1900	3.5	2001	2.8	1975	2.5	1951	2.3	2005	1.8	1987
95	1.0	1956	2.4	1923	8.5	1901	9.9	1987	7.9	1927	8.3	1994	5.4	1979	3.5	1972	2.9	2005	2.5	2008	2.4	1964	1.9	2007
96	1.0	1995	2.5	1907	8.7	1993	10.2	1985	8.1	1999	8.5	1901	5.5	1903	3.6	1962	2.9	1915	2.5	1980	2.7	2007	1.9	1977
97	1.3	2001	2.5	1901	8.8	1910	10.4	1929	8.3	1944	9.1	1999	5.6	1915	3.7	1900	3.0	1900	2.5	1944	2.8	1983	1.9	2009
98	1.4	1947	2.6	1982	9.2	1979	11.3	1979	8.4	2012	9.4	1945	5.7	1992	3.9	1915	3.0	2009	2.6	1985	2.8	1946	2.0	1970
99	1.4	2000	2.8	1980	9.2	1978	11.7	1978	8.5	1979	9.4	1986	5.9	1952	3.9	1903	3.0	1972	2.7	1983	2.9	2008	2.0	1985
100	1.5	2008	2.9	1915	9.3	1915	11.8	2007	8.6	1972	9.6	1951	5.9	1906	4.0	1999	3.0	1903	2.7	1965	3.1	2001	2.0	1995
101	1.7	1987	2.9	1900	9.4	1900	12.0	2006	8.6	1906	10.3	2001	6.1	1978	4.0	1907	3.3	1944	2.7	1999	3.4	1972	2.1	1984
102	1.7	2009	3.0	1903	9.9	1985	13.4	1951	9.6	1909	10.4	1983	6.3	1996	4.1	1983	3.3	1906	3.4	2009	3.4	1980	2.2	1980
103	1.7	1998	3.0	1973	10.3	1903	15.0	1983	10.0	2009	10.6	1908	6.3	2001	4.2	2009	3.3	1985	3.9	1979	3.4	1992	2.3	2005
104	1.7	1981	3.1	1984	10.5	1906	17.2	1952	10.4	1952	10.8	2005	6.8	1909	4.2	1951	3.5	1909	3.9	1946	3.6	1971	2.3	1999
105	1.8	1986	3.3	2006	11.0	1986	17.8	1993	10.7	1907	11.3	1924	8.2	1995	4.3	1992	3.6	1995	4.3	1992	4.0	1984	2.4	1971
106	1.9	1994	3.3	1906	11.5	1909	19.3	1995	11.4	2010	11.4	1996	8.7	1999	4.6	1909	3.6	1984	4.3	1978	4.2	1993	2.7	1975
107	2.0	2002	3.5	1909	11.6	1930	20.1	2010	11.5	1920	11.7	1907	8.9	2009	4.8	1906	4.1	1999	4.3	2005	4.4	1978	2.7	1998
108	2.1	1980	4.1	1976	11.7	1997	21.0	1986	14.0	2007	12.4	1909	9.5	1962	5.2	1944	4.2	1992	4.4	1982	4.5	1986	3.0	2001
109	2.2	2010	4.1	1952	12.4	1973	27.9	1969	15.1	1993	13.7	2008	9.8	1983	5.3	1978	4.3	1978	4.6	2007	4.6	1995	3.1	1993
110	2.2	1984	4.1	2009	13.8	2007	28.2	1962	15.2	1984	13.8	1962	10.0	1951	5.4	1984	4.7	1979	4.9	1993	4.8	2011	3.2	1986
111	2.8	1973	4.6	1966	14.0	1994	28.6	1984	17.8	1986	15.4	2011	13.3	1944	6.1	1979	5.4	1951	5.1	2011	5.1	2009	3.3	1978
112	2.9	2006	4.7	1983	15.4	1983	28.6	1960	19.1	2001	18.6	1993	13.3	1984	6.4	1995	5.7	2011	6.0	1984	5.2	1998	4.1	1979
113	3.0	1983	4.7	1994	18.1	2011	30.9	2001	19.2	1997	18.7	1995	20.7	2011	9.9	2011	7.6	1993	6.2	1995	5.3	2010	4.3	2011
114	3.4	2012	6.4	1971	19.9	1929	33.5	2011	25.4	2011	23.5	2010	22.9	2010	13.8	1993	9.8	1986	7.9	1986	5.7	1979	4.4	2010
115	3.9	2011	7.1	2011	26.6	2010	38.3	1997	27.5	1995	33.3	1984	40.5	1993	20.1	2010	12.8	2010	13.0	2010	6.3	1982	6.2	1982

Plate 13. Gavins Point to Sioux City Ranking of Average Monthly Flows

Sioux City, Iowa to Omaha, Nebraska
Ranking of Average Monthly Flows (kcfs)

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	0.0	1948	0.0	1929	0.1	1936	0.1	1936	0.0	1970	0.1	1958	0.0	1936	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	0.1	1911	0.1	1934	0.2	1967	0.0	1934	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	0.1	1901	0.1	1911	0.3	1947	0.0	1947	0.1	1936	-0.5	1947
7	-0.5	1937	0.1	1939	0.4	1931	0.2	1968	0.1	1958	0.3	1901	0.1	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	0.1	1926	0.3	1911	0.3	1968	0.2	1936	0.3	1956	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	1934	0.2	1957	0.3	1953	0.1	1953	0.1	1938	-0.3	1934
10	-0.4	1936	0.2	1940	0.7	1940	0.4	1957	0.2	1931	0.3	1934	0.3	1931	0.2	1971	0.3	1935	0.1	1932	0.1	1939	-0.3	1929
11	-0.4	1967	0.2	1914	0.7	1966	0.5	1898	0.2	1968	0.5	1931	0.4	1958	0.3	1956	0.3	1952	0.1	1948	0.2	1914	-0.2	1948
12	-0.3	1938	0.2	1931	0.7	1964	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	0.3	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	1939	0.3	1937	-0.2	1935
15	-0.2	1978	0.4	1975	0.7	1899	0.8	1925	0.4	1967	0.8	1930	0.5	1956	0.4	1941	0.4	1971	0.2	1930	0.3	1935	-0.1	1931
16	-0.1	1977	0.4	1967	0.9	1957	0.8	1908	0.4	1935	0.8	1939	0.6	1912	0.4	1913	0.5	1911	0.2	1931	0.3	1964	-0.1	1938
17	-0.1	1944	0.5	1928	1.0	1926	0.8	1940	0.4	1901	0.8	1976	0.6	1974	0.4	1901	0.5	1901	0.3	1944	0.3	1966	0.0	1949
18	-0.1	1953	0.5	1917	1.0	1917	0.8	1938	0.4	1911	0.9	1935	0.7	1935	0.5	1968	0.5	1966	0.3	1967	0.3	1980	0.0	1928
19	0.0	1940	0.5	1910	1.2	1956	0.8	1964	0.5	1943	0.9	1955	0.7	1930	0.5	1964	0.5	1940	0.3	1956	0.3	1948	0.0	1961
20	0.1	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	1937	0.4	1944	0.1	1937
21	0.1	1925	0.5	1909	1.3	1958	0.9	1967	0.5	1961	0.9	1968	0.7	1963	0.5	1965	0.6	1970	0.3	1945	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	0.5	2012	0.6	1949	0.3	1964	0.5	1924	0.1	1924
23	0.2	1956	0.6	1977	1.3	1923	1.0	1977	0.6	1925	1.0	1941	0.7	1964	0.6	1930	0.6	1939	0.3	1955	0.5	1923	0.1	1927
24	0.2	1966	0.6	1912	1.3	1911	1.0	1939	0.6	1907	1.0	1977	0.7	1949	0.6	1948	0.6	1942	0.4	1942	0.5	1958	0.1	1912
25	0.2	1968	0.6	1900	1.3	1927	1.1	1970	0.7	1947	1.2	1912	0.9	1910	0.6	1939	0.6	1912	0.4	1966	0.5	1940	0.2	1970
26	0.2	1939	0.6	1923	1.4	2006	1.2	1936	0.7	1936	1.2	1922	0.9	1965	0.6	1926	0.6	2012	0.4	1924	0.5	1930	0.2	1964
27	0.3	1935	0.7	1950	1.4	2003	1.2	1899	0.8	1930	1.4	1910	0.9	1948	0.7	1938	0.6	1960	0.5	1949	0.5	1969	0.2	1978
28	0.3	1975	0.8	1976	1.5	2005	1.3	1932	0.8	1957	1.4	1913	0.9	1941	0.7	1912	0.6	1931	0.5	1950	0.5	1931	0.2	1966
29	0.3	1913	0.8	1924	1.5	1920	1.3	1941	0.8	1955	1.5	1949	1.0	1976	0.8	1935	0.7	1937	0.5	1970	0.6	1965	0.2	1976
30	0.3	1924	0.8	2001	1.5	1913	1.4	1942	0.9	1950	1.7	1906	1.0	1932	0.8	1959	0.7	1968	0.6	1959	0.6	1943	0.2	1939
31	0.3	1962	0.8	1989	1.5	2002	1.4	1921	0.9	1928	1.7	1932	1.1	1967	0.8	1955	0.7	1936	0.6	1943	0.6	1932	0.2	1969
32	0.3	1945	0.8	1932	1.5	1981	1.4	1911	0.9	1971	1.7	1950	1.1	1960	0.9	1914	0.7	1974	0.6	1922	0.6	1907	0.2	1953
33	0.4	1949	0.8	1958	1.6	1906	1.4	1954	1.0	1923	1.8	1972	1.2	1898	0.9	1974	0.8	1913	0.6	1960	0.7	1956	0.3	1942
34	0.4	1958	0.9	1942	1.6	1921	1.5	1926	1.0	1966	1.9	1978	1.2	1957	0.9	1980	0.8	1957	0.6	1969	0.7	1978	0.3	1930
35	0.4	1941	0.9	1960	1.6	1947	1.5	1966	1.2	1924	2.1	2006	1.2	1940	1.0	1972	0.8	1944	0.7	1957	0.7	1976	0.3	1914
36	0.4	1905	0.9	1947	1.7	1976	1.7	1914	1.2	1970	2.1	1989	1.3	1977	1.0	1960	0.8	1929	0.7	1952	0.8	1917	0.4	1936
37	0.4	1915	1.0	1905	1.8	1970	1.8	1976	1.2	1963	2.1	1900	1.3	2006	1.0	1966	0.9	1963	0.7	2012	0.8	1926	0.5	1940
38	0.4	1931	1.0	1901	1.8	1914	1.8	2003	1.4	1954	2.2	1940	1.3	1959	1.0	1961	0.9	1961	0.8	1976	0.8	1910	0.5	1945
39	0.5	1932	1.0	1899	1.8	1904	1.8	1900	1.5	1937	2.3	1909	1.3	1913	1.1	1944	1.0	1954	0.9	1971	0.8	1941	0.6	1922
40	0.5	1947	1.1	1954	1.8	1924	1.8	1924	1.5	1949	2.3	1937	1.4	2002	1.1	1973	1.0	1932	0.9	1974	0.8	1950	0.6	1925
41	0.6	1930	1.1	1934	1.8	1900	1.8	1990	1.5	1944	2.4	1961	1.5	1938	1.1	1949	1.0	1943	0.9	1907	0.8	1970	0.6	1910
42	0.6	1909	1.1	1902	1.9	1907	1.9	1972	1.5	1976	2.4	1921	1.5	2012	1.1	1947	1.0	1991	0.9	1917	0.8	1951	0.6	1908
43	0.6	1943	1.1	1944	1.9	1941	1.9	1981	1.6	1953	2.5	1965	1.6	1971	1.1	1963	1.0	2005	0.9	1899	0.9	1963	0.6	1965
44	0.6	1976	1.2	1979	2.0	1960	2.0	2002	1.7	1978	2.5	1988	1.7	1979	1.1	2005	1.0	1945	0.9	1941	0.9	1974	0.6	1968
45	0.6	1970	1.2	1964	2.1	1939	2.0	1910	1.8	1938	2.6	1973	1.8	1918	1.3	1969	1.1	1955	1.0	1910	0.9	1911	0.7	1926
46	0.7	1979	1.3	1904	2.2	1974	2.0	1909	1.9	1910	2.7	1927	1.9	1950	1.3	1909	1.1	1917	1.0	1916	0.9	1899	0.7	1923
47	0.7	1950	1.3	1978	2.2	1908	2.0	1907	2.0	1932	2.9	1914	2.0	1929	1.3	1910	1.1	1922	1.2	1972	1.0	1962	0.8	1946
48	0.7	1981	1.3	1955	2.3	1954	2.0	1971	2.2	1906	3.0	1929	2.1	1973	1.4	2003	1.1	1950	1.2	1978	1.0	1971	0.8	1971
49	0.7	1961	1.3	1918	2.3	1977	2.1	1937	2.2	1908	3.4	1943	2.2	1906	1.5	1898	1.1	1941	1.2	1925	1.1	1898	0.8	1963
50	0.7	1982	1.3	1922	2.3	1910	2.1	1903	2.2	1900	3.4	1974	2.4	1972	1.5	1929	1.1	2000	1.2	1913	1.1	1927	0.8	1951
51	0.7	1934	1.3	2002	2.5	1990	2.3	1989	2.2	1989	3.5	1918	2.4	1955	1.5	1954	1.2	1980	1.2	1975	1.1	1913	0.8	1974
52	0.7	1914	1.4	1898	2.5	1902	2.4	1923	2.3	1980	3.5	1898	2.4	1989	1.5	1977	1.2	2001	1.2	1965	1.1	2006	0.9	1906
53	0.7	1908	1.4	1938	2.5	1950	2.4	1928	2.3	1909	3.5	1920	2.5	1975	1.5	2001	1.2	1977	1.2	1938	1.2	2005	0.9	1916
54	0.7	1963	1.5	1903	2.6	1955	2.5	2004	2.3	1912	3.5	1905	2.5	1900	1.6	1978	1.2	1924	1.3	2000	1.2	2012	0.9	1957
55	0.8	1942	1.5	2007	2.6	1929	2.5	1961	2.3	1927	3.6	1981	2.5	1953	1.6	1922	1.2	1927	1.3	1962	1.2	1916	0.9	1959
56	0.9	1917	1.5	1941	2.6	1901	2.5	2012	2.3	1922	3.8	1957	2.6	1954	1.6	1919	1.2	1923	1.3	1909	1.2	1953	0.9	2005

57	0.9	1911	1.5	1951	2.8	1922	2.6	1944	2.5	1898	3.9	1979	2.6	1925	1.7	2006	1.2	1973	1.3	1898	1.3	1952	1.0	1980
58	0.9	1974	1.5	2006	2.8	1944	2.6	1974	2.5	1921	4.0	2002	2.6	1914	1.7	1953	1.3	1964	1.4	1951	1.3	1961	1.0	1952
59	1.0	1933	1.5	1953	2.8	1967	2.7	1950	2.6	1902	4.1	1969	2.9	1937	1.7	1950	1.3	1972	1.4	2003	1.4	1912	1.0	1954
60	1.0	1927	1.6	1927	2.9	1937	2.8	1980	2.8	1918	4.2	1959	3.0	1988	1.8	1975	1.4	1899	1.5	1901	1.4	1925	1.0	1911
61	1.0	1918	1.6	1925	3.1	1942	2.9	1902	2.8	1964	4.2	1916	3.1	2007	1.8	1940	1.4	1925	1.5	1920	1.4	1955	1.0	1917
62	1.0	1919	1.6	1921	3.1	1915	2.9	1905	2.8	1981	4.2	1928	3.1	1928	1.9	1906	1.5	1898	1.5	1914	1.4	2001	1.0	1919
63	1.0	1926	1.6	1973	3.1	1912	2.9	1978	3.0	1959	4.3	1960	3.2	1903	1.9	1924	1.5	1906	1.5	1906	1.5	1957	1.1	1960
64	1.1	1965	1.6	1981	3.2	1980	2.9	2000	3.1	1917	4.4	2009	3.2	1919	2.0	1925	1.5	1909	1.5	1977	1.5	1960	1.1	1981
65	1.1	1898	1.6	1949	3.2	1953	3.0	1955	3.1	2000	4.5	2000	3.2	2001	2.1	1918	1.5	1969	1.5	1980	1.5	1928	1.1	1950
66	1.1	1964	1.7	1972	3.2	1930	3.1	1953	3.1	1965	4.6	2012	3.3	1981	2.1	1943	1.6	2003	1.5	1968	1.5	1901	1.1	1962
67	1.2	1923	1.7	1908	3.2	2000	3.3	1945	3.4	1969	4.6	2005	3.5	2005	2.2	1988	1.7	1904	1.6	1981	1.5	1908	1.2	1904
68	1.2	1922	1.7	1920	3.3	1972	3.3	2009	3.5	2012	4.7	1980	3.7	1978	2.3	1989	1.7	1975	1.6	1904	1.5	1922	1.2	1907
69	1.3	1946	1.8	2003	3.3	1989	3.3	1973	3.6	2002	4.8	1925	3.9	1991	2.3	1942	1.7	2006	1.6	1912	1.5	1904	1.2	1901
70	1.3	1907	1.8	1963	3.4	1936	3.4	2005	3.6	2009	4.9	1947	4.0	1942	2.3	1923	1.8	1910	1.7	2002	1.6	2011	1.3	2012
71	1.3	1901	1.9	1990	3.4	1996	3.5	1917	3.6	1972	4.9	1942	4.1	1945	2.3	1900	1.8	1908	1.8	1927	1.6	2000	1.3	2006
72	1.3	1928	1.9	1926	3.5	2009	3.8	1947	3.7	1973	4.9	2007	4.1	1985	2.3	1920	1.8	1919	1.8	1908	1.6	2002	1.3	1903
73	1.3	1900	1.9	1906	3.5	2012	3.9	1918	3.7	1988	4.9	2003	4.2	2000	2.4	2002	2.0	1907	1.8	1911	1.7	1973	1.3	1902
74	1.3	1921	2.1	1911	3.5	1948	3.9	1906	4.3	2004	5.0	1971	4.2	1921	2.4	1991	2.0	2009	1.8	1928	1.8	1959	1.3	1900
75	1.4	2002	2.1	1930	3.6	1932	3.9	1904	4.4	1913	5.0	1985	4.5	1916	2.4	2004	2.0	1990	1.8	1961	1.8	1920	1.4	1941
76	1.4	2004	2.1	1962	3.6	1998	4.0	1988	4.5	1916	5.1	1907	4.5	1924	2.4	1928	2.1	1988	1.8	2001	1.8	1906	1.5	1921
77	1.5	1916	2.3	1970	3.7	1963	4.1	1915	4.6	1974	5.1	1963	4.7	2004	2.4	1985	2.1	1965	1.9	2006	1.8	1921	1.5	1898
78	1.5	1902	2.3	2004	3.8	1916	4.1	1913	4.7	1905	5.2	1944	4.8	1943	2.5	1917	2.2	2008	1.9	1921	1.9	1954	1.5	1899
79	1.5	2003	2.4	1974	3.9	1975	4.3	1982	4.7	1962	5.7	1902	5.1	1922	2.5	1904	2.3	1900	1.9	1900	2.0	1902	1.5	1920
80	1.5	1991	2.5	1965	4.1	1999	4.5	1916	4.8	2003	5.9	2011	5.4	1917	2.6	1962	2.3	1920	2.0	1991	2.1	1915	1.6	1913
81	1.6	2001	2.6	1919	4.1	1919	4.5	1922	4.9	1942	5.9	1992	5.6	1927	2.6	1921	2.3	1916	2.0	1919	2.1	1919	1.6	1905
82	1.6	1906	2.7	2012	4.2	1905	4.5	1901	4.9	1990	6.1	1924	5.6	1990	2.8	2008	2.4	1981	2.1	1988	2.2	1981	1.6	1983
83	1.6	1904	2.7	1945	4.3	1988	4.9	1994	5.1	1919	6.1	2004	5.9	1905	2.8	1981	2.6	1914	2.2	1918	2.2	1977	1.7	2003
84	1.6	1899	2.7	1998	4.3	2004	5.1	1996	5.3	1994	6.5	1982	6.0	1899	2.9	1908	2.7	1998	2.3	1954	2.3	1903	1.8	1915
85	1.7	2007	2.8	2010	4.3	1991	5.7	2011	5.3	2011	6.5	1987	6.0	2009	3.1	1902	2.7	1921	2.3	1989	2.3	1900	1.8	1975
86	1.8	1951	2.9	2008	4.5	1938	5.9	1920	5.4	1915	6.5	1919	6.0	1951	3.2	1927	3.0	1999	2.3	1905	2.4	2003	1.9	2002
87	1.8	1998	3.0	1961	4.5	1909	5.9	2006	5.4	1899	6.6	1962	6.1	1997	3.2	1916	3.0	1918	2.3	1923	2.4	1905	2.1	2008
88	1.8	2005	3.1	1915	4.7	2001	6.4	1997	5.5	1960	6.7	1899	6.1	1947	3.3	2000	3.0	1995	2.5	1979	2.6	1972	2.1	1973
89	1.9	2009	3.2	1986	5.0	1903	6.7	1919	5.9	1904	6.8	1975	6.1	1920	3.3	1990	3.4	1928	2.5	1903	2.7	1989	2.2	1990
90	1.9	2006	3.2	1907	5.3	1949	6.7	2008	5.9	1998	7.0	1923	6.4	1962	3.4	1905	3.5	1997	2.6	1926	2.7	1990	2.2	2004
91	1.9	1903	3.2	1946	5.4	1992	6.8	1992	6.1	1903	7.3	1951	6.5	1969	3.5	2009	3.5	1915	2.7	1999	2.7	1988	2.2	1972
92	1.9	1920	3.3	1980	5.4	1982	6.9	1991	6.2	2005	7.4	2001	6.7	1944	3.6	1997	3.5	1902	2.7	1990	3.1	1985	2.3	2001
93	2.0	1989	3.3	1988	5.8	2011	7.1	1927	6.3	2006	7.5	1945	6.7	1908	3.8	1899	3.6	1989	2.8	1973	3.1	1975	2.4	1987
94	2.4	2012	3.6	1993	5.9	1985	7.4	1949	6.3	1979	7.8	1953	6.8	2008	3.9	1982	3.8	2007	3.0	2005	3.2	1991	2.5	2007
95	2.5	2008	3.6	1916	6.2	1969	7.6	2001	6.4	1945	7.9	1904	6.9	1923	3.9	1979	3.9	1979	3.3	2011	3.2	1918	2.5	1909
96	2.5	1990	3.7	2000	6.3	2008	7.7	1912	6.5	2010	9.5	1954	7.0	1995	4.2	1983	3.9	1978	3.4	1987	3.3	2004	2.5	2000
97	2.7	1986	3.8	1999	6.5	1987	7.8	1962	6.6	1920	9.5	1997	7.5	1909	4.3	1937	4.0	1983	3.6	2009	3.5	1997	2.6	1918
98	2.8	1988	3.9	1987	6.6	1995	8.0	1995	6.7	1975	9.5	1986	7.6	2003	4.4	1945	4.3	1996	3.7	1915	3.8	1909	2.7	1988
99	2.9	2010	4.1	1991	7.4	2007	8.3	1975	6.9	1996	10.5	1994	8.2	1998	4.5	1995	4.5	1962	4.0	2008	3.9	1999	3.1	1997
100	3.0	1995	4.1	2005	7.6	1951	8.4	1979	7.0	1982	10.6	1990	8.3	1907	4.5	1986	4.5	1951	4.2	2004	3.9	2008	3.5	1985
101	3.4	1973	4.1	1966	7.6	1994	9.1	1929	7.1	1987	11.2	1917	8.4	1986	4.7	2007	4.6	1985	4.2	1983	4.1	1996	3.5	1979
102	3.5	1993	4.1	1995	7.8	1965	9.2	1998	7.2	1992	11.2	1995	8.4	1999	5.3	1907	4.8	1984	4.2	1998	4.1	1995	3.6	2009
103	3.5	1980	4.5	1971	7.9	1945	9.3	1985	8.4	2008	12.0	1998	8.4	1987	5.6	1994	4.8	1994	4.2	1902	4.3	1987	3.6	1999
104	3.7	1994	4.5	1992	8.2	1978	9.4	2010	8.5	1997	12.4	1967	8.6	1992	5.6	1903	4.8	1926	4.4	1995	4.5	1994	3.8	1991
105	4.0	2000	4.5	1943	8.4	1961	10.3	1999	8.6	1951	12.6	1999	8.8	1904	5.7	1998	4.9	2010	4.7	1994	4.9	2009	3.8	1994
106	4.1	1984	4.6	1994	8.5	1997	10.4	2007	9.2	1985	13.2	1991	8.8	1982	5.9	1984	5.0	1982	4.8	1997	4.9	2010	3.9	2011
107	4.2	1992	4.7	1948	8.6	1971	10.6	1987	9.3	1999	13.2	1996	9.8	1994	6.0	1992	5.0	2004	4.8	1985	5.1	1993	4.7	1992
108	4.2	2011	4.7	1982	8.7	1984	10.8	1960	9.4	1991	13.3	2010	10.2	1984	6.3	1999	5.0	1905	4.8	1984	5.2	2007	4.7	1982
109	4.2	1999	5.6	2009	10.3	1973	12.0	1986	10.5	2001	13.3	1908	10.7	1902	6.4	1987	5.2	1986	4.9	1996	5.7	1983	4.9	1998
110	4.2	1996	5.6	1996	11.4	1986	12.7	1951	12.1	1995	13.5	1915	11.5	1996	9.2	1951	5.4	1987	6.3	2010	6.5	1998	4.9	2010
111	4.8	1985	5.8	1985	12.5	1962	15.5	1969	13.1	1993	13.9	1903	12.6	2011	10.0	1915	5.4	1903	6.3	1982	6.9	1992	5.1	1995
112	5.0	1910	6.8	2011	12.9	1993	16.1	1965	14.2	1986	17.1	2008	12.7	1983	11.4	1993	6.1	1992	6.4	1993	7.0	1979	5.3	1993
113	5.3	1987	8.7	1984	15.9	2010	16.8	1984	14.3	1983	19.6	1983	13.8	2010	12.4	1996	7.7	1938	8.0	2007	7.5	1986	5.5	1986
114	5.5	1997	9.3	1983	17.6	1983	17.7	1993	14.5	1984	20.4	1993	16.4	1915	14.0	2010	7.7	2011	8.1	1986	7.6	1984	5.6	1996
115	5.6	1983	9.6	1997	17.9	1979	21.6	1983	14.6	2007	26.4	1984	29.3	1993	15.6	2011	9.4	1993	9.5	1992	7.8	1982	7.2	1984

Plate 14. Sioux City to Omaha Ranking of Average Monthly Flows

Omaha, Nebraska to Nebraska City, Nebraska
Ranking of Average Monthly Flows (kcfs)

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	1953	0.6	1976	0.9	1991	0.5	1914	0.5	1912
2	0.4	1968	1.6	1936	2.5	1918	2.3	1990	1.0	1914	1.0	1901	0.5	1901	0.4	1934	0.7	1990	1.1	1990	1.6	1923	0.5	1927
3	0.5	1925	1.6	1928	2.5	1925	2.5	1989	1.5	1911	1.0	1911	0.5	1911	0.5	1930	0.7	1991	1.3	1940	1.6	1924	0.5	1924
4	0.5	1912	1.7	1917	2.5	1899	2.6	1925	1.5	1901	2.1	1989	0.5	1926	0.6	1936	0.9	1971	1.5	1924	2.0	1939	0.5	1990
5	0.8	1936	1.7	1910	3.5	1926	2.6	1908	1.7	1989	2.2	1981	0.5	1974	0.7	1911	1.1	1940	1.7	2003	2.1	1907	1.0	1914
6	1.0	1924	1.7	1909	3.5	1917	2.9	1981	2.0	1907	2.4	1988	0.9	1981	0.9	1941	1.1	1939	1.7	1989	2.4	1975	1.3	1943
7	1.0	1913	1.7	1913	3.7	1991	3.3	1942	2.0	1925	2.5	2006	1.0	2002	0.9	1933	1.1	1980	1.7	1939	2.4	1941	1.4	1945
8	1.2	1940	1.7	1978	3.9	1981	3.3	1955	2.3	1934	2.9	1948	1.0	1936	0.9	1935	1.1	2012	1.7	1974	2.6	1937	1.5	1955
9	1.5	1991	2.2	1912	4.0	1996	3.5	1982	2.4	1955	3.0	1976	1.4	1934	1.2	1931	1.1	1953	1.7	1936	2.6	1988	1.6	1989
10	1.5	1915	2.2	1940	4.5	1923	3.8	1940	2.6	1997	3.1	1936	1.5	1940	1.3	1926	1.3	1974	1.7	1975	2.6	1936	1.7	1963
11	1.5	1905	2.2	1923	4.5	1898	3.8	1956	3.0	1981	3.2	1956	1.5	1988	1.3	1949	1.3	1956	1.9	1980	2.6	1950	1.7	1940
12	1.6	1957	2.2	1900	4.5	1911	3.9	1991	3.0	1928	3.4	1934	1.6	2006	1.3	1955	1.4	1988	2.0	1922	2.6	1926	1.8	1956
13	1.6	1979	2.7	1924	4.5	1927	4.0	1967	3.1	1967	3.5	1992	1.6	2012	1.4	1901	1.4	1955	2.2	1937	2.6	1917	1.9	1932
14	1.8	1977	2.8	1979	4.7	1990	4.0	1948	3.1	1941	3.6	2000	1.7	1975	1.4	1971	1.4	2000	2.2	1956	2.6	1910	1.9	1944
15	1.9	1935	2.8	1939	4.7	1943	4.1	1992	3.3	1990	4.0	2002	1.7	1954	1.5	1937	1.5	1975	2.2	1978	2.7	1956	1.9	1934
16	2.0	1909	3.3	1901	4.8	1956	4.2	1899	3.5	1923	4.1	1972	1.8	1980	1.5	1938	1.5	2004	2.2	1943	2.7	1978	2.0	1939
17	2.2	1941	3.3	1905	4.8	1967	4.2	1996	3.6	2000	4.2	1912	2.0	1941	1.5	1981	1.5	1947	2.3	1994	2.7	2003	2.0	1910
18	2.4	1948	3.3	1899	5.0	1977	4.3	1946	3.6	1994	4.2	1922	2.0	1912	1.6	2001	1.6	1911	2.3	2012	2.7	1940	2.0	1922
19	2.4	1951	3.5	1981	5.0	1913	4.5	1943	3.6	1940	4.2	1939	2.1	1955	1.7	1942	1.6	1901	2.3	1976	2.7	1976	2.0	1908
20	2.4	1970	3.5	1990	5.0	1920	4.5	2004	3.7	1946	4.3	1931	2.4	1939	1.8	1970	1.6	2005	2.5	1988	2.9	1980	2.0	1925
21	2.4	1971	3.6	1938	5.1	1957	4.5	2000	3.8	1956	4.4	1933	2.4	1991	1.8	1913	1.7	2002	2.5	1953	3.0	1955	2.2	1936
22	2.5	2003	3.8	1957	5.2	2005	4.5	1941	3.9	2006	4.5	1968	2.5	1956	1.9	1967	1.9	2003	2.5	1944	3.0	1943	2.3	1985
23	2.5	1908	3.8	1975	5.2	1941	4.6	1937	3.9	1939	4.7	1974	2.5	1970	1.9	1948	1.9	1969	2.5	1942	3.0	1948	2.3	1929
24	2.5	1914	3.8	1989	5.5	1921	4.7	1936	3.9	1943	4.7	1979	2.6	1987	1.9	2006	2.0	1994	2.5	1947	3.0	1944	2.5	1926
25	2.5	1969	3.9	1902	5.5	1906	4.7	1921	3.9	1948	4.7	1913	2.6	1963	1.9	1962	2.0	1979	2.6	1938	3.1	1938	2.5	1923
26	2.6	1982	4.0	1992	5.6	1968	4.7	1911	3.9	1992	4.7	1910	2.6	1968	2.0	1979	2.0	1954	2.6	1935	3.1	1899	2.7	1950
27	2.6	1975	4.2	1937	5.6	2003	4.8	1935	4.0	1924	4.8	1970	2.6	1931	2.0	1978	2.1	1945	2.7	1948	3.1	1911	2.8	1937
28	2.6	1967	4.3	1904	5.7	2006	4.8	1938	4.1	1968	5.0	1994	2.7	1946	2.0	1912	2.1	1912	2.7	1995	3.2	1989	2.8	1958
29	2.7	1963	4.4	1956	5.7	1992	4.9	1934	4.3	1975	5.0	1938	2.7	1997	2.0	1976	2.2	1967	2.7	1997	3.2	1991	2.9	2000
30	2.7	1978	4.4	1955	5.8	1935	4.9	2002	4.4	1937	5.1	1941	2.8	1966	2.1	1972	2.3	1981	2.7	1996	3.2	1945	2.9	1980
31	2.7	2004	4.5	1918	5.9	2000	5.2	1968	4.7	1991	5.1	2012	2.8	1977	2.1	2012	2.3	1978	2.8	1934	3.3	1952	3.0	2003
32	2.8	1942	4.5	1922	6.0	1976	5.2	1976	4.9	1966	5.2	1977	3.0	1910	2.2	1957	2.4	1950	2.8	1992	3.4	1966	3.0	1906
33	2.9	1950	4.5	1933	6.0	1934	5.2	2003	5.0	1963	5.3	2003	3.1	2003	2.2	2002	2.4	1936	2.8	1941	3.4	1990	3.0	1916
34	2.9	1956	4.5	2006	6.0	1924	5.2	1926	5.1	1988	5.4	1958	3.3	1989	2.2	1939	2.4	1937	2.9	1958	3.4	1934	3.1	1935
35	2.9	1960	4.6	1942	6.1	1904	5.3	1988	5.3	1947	5.5	1997	3.4	1985	2.3	1968	2.5	1943	2.9	1979	3.5	1999	3.1	1976
36	2.9	1992	4.6	2004	6.1	1900	5.4	1972	5.4	1936	5.6	1955	3.5	2000	2.4	1947	2.5	1970	2.9	2005	3.6	1995	3.1	1942
37	3.0	1954	4.7	1898	6.1	1914	5.4	1997	5.5	1932	5.7	1906	3.6	1961	2.5	1964	2.5	1968	2.9	1971	3.6	1964	3.2	1991
38	3.0	1911	4.8	1941	6.1	2002	5.6	1957	5.6	1970	5.7	1937	3.6	1992	2.5	1943	2.6	1913	3.0	2004	3.6	2005	3.2	1974
39	3.0	1917	4.8	1951	6.3	1970	5.7	1914	5.9	1976	6.0	1966	3.9	2005	2.5	1963	2.7	1995	3.0	1931	3.6	1898	3.4	1949
40	3.1	1955	5.0	1903	6.4	1964	5.7	1994	6.0	2009	6.1	1978	4.0	1953	2.5	1956	2.7	1934	3.0	1907	3.6	1927	3.4	1966
41	3.1	1988	5.0	1944	6.6	1907	6.3	1924	6.2	2002	6.7	1975	4.0	1898	2.6	1980	2.8	1999	3.0	1899	3.6	1913	3.5	2012
42	3.1	1958	5.1	1967	6.6	1946	6.3	1900	6.5	1958	6.9	2004	4.1	1972	2.7	1914	2.9	1959	3.0	1917	3.7	1974	3.5	1919
43	3.1	1990	5.1	1965	6.9	1942	6.3	1939	6.6	1910	6.9	1985	4.1	2007	2.7	1929	3.0	1941	3.1	2002	3.7	1994	3.5	1911
44	3.2	1972	5.1	1977	7.0	1999	6.5	1977	6.6	1969	6.9	1950	4.3	1990	2.7	1946	3.0	1931	3.1	1999	3.7	2012	3.5	1917
45	3.2	1980	5.3	1969	7.0	1954	6.6	1975	6.9	1931	7.2	1969	4.4	1932	2.8	1966	3.0	1944	3.1	1966	3.7	1987	3.6	1996
46	3.2	1997	5.3	1991	7.1	1940	6.6	1954	7.4	1957	7.3	1900	4.4	1996	3.0	1965	3.1	1946	3.2	1955	3.8	2002	3.6	1988
47	3.3	1930	5.4	2003	7.4	1995	6.7	1963	7.5	1961	7.5	1986	4.5	1937	3.0	1910	3.2	1998	3.3	1945	3.9	2006	3.6	1975
48	3.4	1947	5.4	1964	7.4	1930	6.8	1910	7.6	1938	7.6	1959	4.5	1913	3.1	1961	3.2	1961	3.4	1964	3.9	1931	3.6	1938
49	3.4	1943	5.6	1925	7.6	1908	6.8	1907	7.6	1908	7.8	1963	4.9	1959	3.1	1988	3.3	1966	3.4	1933	4.0	1953	3.7	1954
50	3.4	1944	5.6	1921	7.6	1989	6.8	1909	7.6	1900	7.8	1909	4.9	1948	3.1	2003	3.4	1935	3.5	1981	4.0	1942	3.7	1960
51	3.4	1993	5.6	1927	7.7	1975	7.0	2005	7.6	1906	8.0	1946	5.0	1978	3.1	1983	3.6	1952	3.5	1963	4.2	1916	3.7	1962
52	3.4	1961	5.6	1985	7.7	2009	7.1	1966	7.6	1977	8.2	1940	5.2	2001	3.2	1984	3.6	1932	3.5	1910	4.2	1954	3.7	1978
53	3.5	1996	5.6	1980	7.8	1931	7.2	1961	7.6	1954	8.3	1921	5.2	1933	3.3	1974	3.6	1917	3.5	1916	4.2	2004	3.8	1941
54	3.5	1959	5.7	1961	7.9	1997	7.2	1932	7.8	2012	8.4	2001	5.3	1964	3.3	2000	3.6	1922	3.6	1987	4.3	1983	3.9	1967
55	3.5	1994	5.7	1958	7.9	1988	7.2	1947	8.0	2004	9.0	1961	5.6	1935	3.4	1898	3.7	1997	3.6	2000	4.3	1967	3.9	2002
56	3.5	1939	5.8	1993	8.1	1910	7.3	1903	8.1	1922	9.4	1927	5.6	1979	3.5	1989	3.7	1963	3.7	1954	4.3	1963	3.9	1995

57	3.5	1927	5.9	1963	8.2	1947	7.3	1964	8.1	1912	9.4	1993	5.7	2009	3.5	2005	3.9	1957	3.7	1967	4.3	1957	3.9	1992
58	3.5	1926	5.9	1934	8.4	2004	7.4	1971	8.1	1927	9.6	1953	5.7	1938	3.7	1944	4.0	2008	3.8	2006	4.4	1935	3.9	2005
59	3.5	1918	5.9	1920	8.4	2012	7.5	1953	8.1	1909	9.9	1987	6.0	1918	3.7	1991	4.0	1992	4.0	1972	4.4	1997	3.9	2004
60	3.5	1919	5.9	1908	8.5	1972	7.8	1933	8.1	1979	9.9	1914	6.3	1971	3.7	1985	4.0	1984	4.0	1952	4.4	1933	4.0	1968
61	3.5	2005	6.0	1972	8.6	1902	7.9	2006	8.2	2005	9.9	1990	6.4	2004	3.9	2009	4.2	1923	4.0	1913	4.5	1981	4.0	1907
62	3.6	1981	6.0	1947	8.6	1961	8.0	2009	8.4	1964	10.6	1954	6.4	1930	4.5	1919	4.2	1924	4.0	1925	4.5	1949	4.0	1904
63	3.7	1929	6.0	1949	8.7	1955	8.0	1979	8.4	1986	10.8	2005	6.5	1942	4.5	1977	4.2	1927	4.1	1949	4.6	1992	4.0	1901
64	3.7	1964	6.0	2001	8.7	1944	8.1	2012	8.6	1921	11.0	1991	6.6	1995	4.7	1986	4.2	2001	4.2	1928	4.6	1985	4.1	1964
65	3.7	1932	6.2	2002	8.9	1939	8.2	1970	8.6	1898	11.3	2009	6.6	1952	4.7	1906	4.3	1996	4.2	2001	4.7	1912	4.1	1961
66	3.7	1949	6.2	1945	8.9	1938	8.2	1950	9.0	1978	12.0	1898	6.8	1957	4.8	1945	4.3	1958	4.3	1950	4.7	1925	4.2	1982
67	3.8	1965	6.2	1929	9.1	1901	8.2	1931	9.1	2003	12.0	1918	6.8	1982	4.8	1918	4.3	1985	4.4	1957	4.8	1947	4.2	1970
68	3.9	1962	6.2	1996	9.3	1982	8.3	1923	9.1	1902	12.0	1920	6.9	1960	4.9	1954	4.3	1948	4.5	1909	4.8	1932	4.2	1994
69	4.0	1938	6.3	2008	9.4	1933	8.3	1928	9.3	1962	12.0	1905	7.0	1944	5.0	1922	4.4	2006	4.5	1898	4.8	1971	4.3	1948
70	4.0	1966	6.3	1935	9.4	1998	8.6	1959	9.3	1942	12.2	1930	7.0	1973	5.1	1909	4.4	1949	4.6	1932	4.9	1982	4.4	2008
71	4.0	1946	6.3	1960	9.5	1966	8.6	1985	9.4	1993	12.8	1980	7.4	1994	5.4	1925	4.4	1964	4.6	1959	4.9	1958	4.5	1959
72	4.0	1898	6.4	1995	9.6	1922	8.8	1930	9.6	1918	13.1	1952	7.5	1943	5.5	1959	4.5	1929	4.7	1977	4.9	1969	4.5	1903
73	4.0	1922	6.6	1994	9.6	1980	9.6	1993	9.7	1974	13.5	1965	7.6	1906	5.5	1924	4.6	1962	4.7	1960	5.0	2001	4.5	1900
74	4.0	1923	6.6	1946	10.2	1958	9.6	1951	9.8	2010	13.7	1942	7.7	1969	5.6	2008	4.6	1982	5.0	1906	5.1	1959	4.5	1902
75	4.1	1985	6.6	1950	10.2	2008	9.7	1945	9.9	1945	13.9	2007	8.5	1962	5.7	1900	4.6	1960	5.0	1920	5.2	1901	4.7	2009
76	4.1	1945	6.7	2000	10.4	1959	9.7	2008	10.0	1998	14.0	1932	8.5	1967	5.7	1960	4.7	1925	5.0	1901	5.2	1904	4.7	2006
77	4.2	2000	6.7	1959	10.5	1945	9.9	1995	10.0	1980	14.2	1957	8.6	1900	6.0	1975	4.7	1899	5.0	1914	5.2	1908	4.7	1971
78	4.2	1989	6.7	1926	10.5	1953	9.9	1902	10.5	1933	14.5	1996	8.7	1949	6.2	1940	4.8	2009	5.1	1998	5.2	1922	4.8	1953
79	4.2	1995	6.7	1906	10.6	1915	9.9	1905	10.6	1949	14.5	1943	9.1	1914	6.2	1928	4.9	1987	5.2	1970	5.2	1996	4.8	1957
80	4.3	2007	6.7	1962	10.6	1912	9.9	2010	10.6	1917	14.6	1916	9.1	1925	6.5	2004	5.0	1972	5.2	1961	5.3	1960	4.9	1999
81	4.4	1934	7.1	1948	10.6	1985	10.2	1980	11.3	1996	14.6	1928	9.1	1999	6.6	1969	5.1	1933	5.3	1962	5.3	1979	5.0	1921
82	4.5	1976	7.2	1976	10.6	2011	10.7	1958	11.4	1953	15.1	1999	10.1	1945	6.6	1958	5.2	1898	5.4	1969	5.3	1962	5.0	1920
83	4.5	1921	7.3	1911	10.8	1974	10.9	1974	11.8	1935	15.1	1949	10.2	2008	6.7	1920	5.2	1906	5.5	1985	5.4	1970	5.0	1898
84	4.5	1907	7.4	1986	11.2	1994	11.1	1986	11.9	1985	15.2	2011	10.2	1965	6.8	1921	5.2	1909	5.5	1912	5.5	2000	5.0	1899
85	4.5	1928	7.4	1968	11.2	1986	11.3	1949	12.3	1950	15.3	1971	10.3	1984	6.9	1917	5.7	1904	5.5	1904	6.0	1968	5.0	1952
86	4.5	1900	7.5	1988	11.3	1937	11.7	1969	12.5	1952	15.4	1960	10.6	1986	7.0	1923	6.0	1938	5.7	1968	6.0	1961	5.1	1981
87	4.5	1901	7.6	1997	11.6	1960	11.9	1965	12.6	1972	16.3	1964	10.6	1928	7.1	1994	6.3	1908	6.0	1911	6.3	1920	5.1	1947
88	5.0	1998	7.7	1953	12.4	2007	12.0	1917	13.6	1965	16.7	1998	11.1	1903	7.1	1932	6.3	1919	6.0	1927	6.3	1906	5.2	1979
89	5.0	2006	7.9	1954	12.6	1983	12.1	1962	13.7	1999	16.7	1925	11.1	1919	7.1	1992	6.3	1910	6.1	1908	6.3	1921	5.3	1969
90	5.0	1902	8.0	2010	12.7	1963	12.9	2001	14.1	1987	16.8	1982	11.1	1998	7.3	1904	6.4	1989	6.6	1900	6.3	1993	5.3	1933
91	5.0	1916	8.4	1970	13.1	1916	13.0	1952	14.2	2008	16.8	1962	12.0	1950	7.4	1916	6.5	2007	6.6	1921	6.8	1902	5.3	1951
92	5.1	2001	8.4	1987	13.3	1952	13.3	1999	14.6	1951	17.1	1973	12.2	1951	8.1	1997	6.7	2011	6.6	2010	6.9	1977	5.5	1913
93	5.5	2008	8.5	1982	13.4	1950	13.3	2007	14.7	2001	17.7	1907	12.6	1947	8.1	1908	6.8	1907	6.9	2009	6.9	1946	5.5	1905
94	5.5	1899	8.5	2005	13.5	1965	13.5	1906	14.9	1982	18.9	1995	13.8	1958	8.1	1927	6.9	1928	7.0	1983	6.9	1984	5.7	2001
95	5.5	1906	8.6	1966	14.1	2001	13.5	1918	14.9	2011	19.7	1945	14.0	2011	8.2	1905	6.9	1942	7.0	1984	7.0	2007	5.7	1946
96	5.5	1904	8.6	2007	14.1	1919	13.5	1904	15.1	1913	19.8	1902	14.6	1921	8.3	1995	7.1	1973	7.1	1919	7.3	1915	5.8	1972
97	5.6	2002	8.8	2012	14.6	1905	13.6	2011	15.2	1971	20.8	1924	15.6	1916	8.3	1902	7.2	1930	7.1	1993	7.3	1919	5.8	1931
98	5.6	1986	8.9	1919	15.0	1971	14.1	1913	15.5	1959	22.4	1919	15.6	1924	8.4	1950	7.3	1977	7.2	1982	7.3	1998	6.0	1977
99	5.8	1931	9.0	1931	15.1	1932	14.1	1915	15.6	1916	22.8	1951	17.6	1922	8.6	1899	7.8	1920	7.6	1918	7.4	1951	6.0	1997
100	5.9	1999	9.0	1932	15.6	1909	14.1	1944	16.1	1905	22.9	1899	18.7	1917	8.6	1973	7.8	1983	7.6	1929	7.5	1965	6.1	1915
101	5.9	2011	9.2	1999	16.0	1951	14.6	1973	16.2	1995	23.0	1935	19.2	1927	8.6	2007	7.8	1900	8.1	1905	7.7	1972	6.1	1998
102	5.9	2009	9.2	1943	16.8	1936	14.9	1998	16.4	1973	24.0	1923	19.4	1983	9.1	1982	7.8	1916	8.1	1923	7.8	1900	6.3	1987
103	6.0	1933	9.4	1998	17.1	1903	15.6	1916	16.8	1960	24.1	1944	20.2	1905	9.1	2010	8.4	2010	8.2	1951	7.8	1903	6.4	1973
104	6.2	1953	10.6	2009	17.2	1984	15.6	1922	17.1	2007	26.7	1983	20.7	1899	9.3	1998	8.8	1986	8.5	1930	8.1	2010	6.7	2007
105	6.5	1983	10.6	1915	17.4	1962	15.6	1901	17.4	1944	27.1	1904	21.2	1920	10.1	1990	8.9	1951	8.6	1903	8.1	2011	6.8	1965
106	6.6	1903	11.2	1907	17.4	1948	16.1	1978	17.6	1919	32.9	1947	21.8	2010	10.6	1903	8.9	1914	8.7	2008	8.3	1905	6.9	2010
107	6.6	1920	12.2	1973	17.8	1973	17.9	1983	17.7	1983	33.3	2008	23.1	1929	10.8	1999	9.4	1921	9.1	1926	8.4	1986	6.9	1993
108	6.6	1987	12.3	2011	17.8	1969	20.3	1920	18.7	1899	37.3	1929	23.2	1908	11.1	1907	9.7	1993	9.2	2011	8.5	2009	7.0	1930
109	6.8	1984	12.4	1983	19.3	2010	21.1	1987	18.7	1915	38.6	1917	23.7	1923	11.1	1951	10.4	1918	9.7	1946	8.6	1929	7.1	2011
110	6.8	1952	12.4	1916	21.0	1979	22.9	1919	20.2	1904	38.9	1967	25.7	1909	11.6	1952	12.0	1902	11.0	2007	9.2	2008	7.2	1928
111	6.8	2012	12.7	1930	21.5	1978	24.5	1927	21.2	1903	42.4	1984	28.7	1907	13.1	1987	12.0	1915	11.8	1965	9.4	1930	7.3	1983
112	6.9	2010	12.9	1952	21.6	1987	25.7	1929	21.8	1930	45.8	1908	30.2	1904	13.2	1996	13.3	1965	12.6	1915	9.5	1973	8.6	1909
113	7.6	1974	13.5	1974	22.0	1993	26.1	1960	22.0	1929	46.1	2010	36.8	1902	18.2	2011	16.7	1926	13.9	1986	10.9	1918	9.1	1918
114	9.7	1973	14.3	1971	22.1	1929	26.6	1912	22.7	1920	46.4	1915	37.8	1993	19.2	1915	17.2	1905	14.6	1902	12.7	1928	9.4	1986
115	17.1	1910	16.5	1984	29.9	1949	35.0	1984	35.3	1984	47.9	1903	56.5	1915	34.3	1993	18.8	1903	15.6	1973	13.0	1909	10.3	1984

Plate 15. Omaha to Nebraska City Ranking of Average Monthly Flows

Nebraska City, Nebraska to Rulo, Nebraska
Ranking of Average Monthly Flows (kcfs)

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	-0.6	1927	-0.4	1953	-1.1	2011	-0.4	1953	-0.4	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	-0.5	1953	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	0.1	1934	0.2	1977	0.1	1930	0.1	1930	0.0	1930	0.1	1939	0.1	1930	-0.1	1978
4	-0.1	1939	0.0	1949	-0.2	1934	0.2	1934	0.2	1940	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	1956	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	0.2	1954	0.4	1933	0.3	1934	0.2	1941	0.2	2003	0.1	1955	0.1	1933	0.0	1934
7	0.0	1925	0.1	1956	0.1	1954	0.3	1940	0.3	1931	0.4	1940	0.4	1970	0.3	1933	0.2	1937	0.1	1943	0.1	1936	0.0	1940
8	0.0	1936	0.1	1936	0.2	1981	0.3	1956	0.3	1939	0.4	1968	0.5	1954	0.3	1935	0.2	1911	0.1	1940	0.2	1938	0.0	1984
9	0.0	1940	0.1	1964	0.2	1957	0.3	1930	0.3	1935	0.5	1930	0.5	1946	0.3	1931	0.2	1935	0.1	1938	0.2	1937	0.1	1936
10	0.1	1947	0.2	1972	0.3	1931	0.4	1931	0.3	1941	0.5	1901	0.5	1980	0.4	1926	0.3	1940	0.1	1933	0.2	1980	0.1	1943
11	0.1	1935	0.2	1941	0.3	2006	0.4	1936	0.4	1938	0.5	1911	0.5	1935	0.4	1949	0.3	1933	0.1	1948	0.3	1944	0.1	1924
12	0.1	1938	0.3	1934	0.4	2003	0.4	1937	0.4	1930	0.6	1938	0.5	1931	0.4	1955	0.3	1901	0.2	1935	0.3	1948	0.2	1912
13	0.1	1945	0.3	1947	0.4	1941	0.4	1941	0.4	1926	0.6	1936	0.5	1940	0.4	1901	0.3	2012	0.3	1956	0.3	1942	0.2	1938
14	0.1	1969	0.3	2006	0.4	1956	0.4	1981	0.5	1936	0.7	1954	0.6	1938	0.4	1971	0.4	1949	0.3	1942	0.3	1954	0.2	1944
15	0.1	1934	0.3	1979	0.4	1917	0.5	1933	0.5	1980	0.9	1937	0.6	1937	0.4	1937	0.4	1980	0.3	1947	0.3	1940	0.2	1939
16	0.2	1924	0.3	1939	0.4	1967	0.5	2006	0.5	1981	0.9	1948	0.6	1941	0.5	1938	0.4	1943	0.3	1980	0.3	2012	0.2	1980
17	0.2	1979	0.4	1933	0.4	1964	0.7	1957	0.5	1914	1.0	1970	0.6	1943	0.5	1981	0.4	1947	0.4	1936	0.3	1914	0.2	1935
18	0.2	1937	0.4	1945	0.5	1933	0.7	1967	0.6	1948	1.0	1939	0.6	1981	0.5	2001	0.4	2004	0.5	1932	0.4	1976	0.3	1963
19	0.2	1915	0.4	1914	0.5	1935	0.7	1946	0.6	1933	1.0	2002	0.6	1963	0.5	1942	0.5	1948	0.5	1945	0.4	1935	0.3	1942
20	0.2	1955	0.4	1978	0.6	1938	0.8	2002	0.6	1937	1.0	1981	0.7	1911	0.5	1970	0.5	1912	0.5	2000	0.4	1945	0.3	1945
21	0.2	1954	0.5	1959	0.6	1940	0.8	1955	0.7	1943	1.2	2006	0.7	2006	0.5	1913	0.5	1945	0.5	1971	0.5	1947	0.3	1947
22	0.3	1913	0.5	1981	0.6	1944	0.8	1942	0.7	1911	1.3	1955	0.8	2002	0.6	1967	0.5	1956	0.5	1978	0.5	2001	0.3	1914
23	0.3	1971	0.5	1954	0.7	1966	0.8	1943	0.7	1925	1.3	1958	0.8	1955	0.6	1948	0.6	1970	0.5	2012	0.5	1932	0.3	1954
24	0.3	1941	0.5	1909	0.7	1899	0.8	1968	0.8	1949	1.3	1971	0.8	1949	0.6	2006	0.6	1971	0.6	1944	0.6	1923	0.3	1964
25	0.3	1905	0.5	1957	0.8	1930	0.9	1971	0.8	1907	1.3	1985	0.9	1948	0.6	1962	0.6	2002	0.6	1924	0.6	2005	0.3	1933
26	0.3	1964	0.6	1989	0.8	2005	0.9	1925	0.8	1989	1.5	1988	0.9	2012	0.6	1979	0.6	1968	0.6	1963	0.6	1924	0.4	1976
27	0.3	1943	0.6	1948	0.8	1925	0.9	1958	0.9	1967	1.5	2011	0.9	1971	0.7	1978	0.6	1954	0.6	2003	0.6	1978	0.4	1948
28	0.3	1930	0.6	1977	0.9	1955	0.9	1898	0.9	1968	1.6	1979	0.9	1966	0.7	1912	0.6	1966	0.7	1966	0.6	1964	0.4	1927
29	0.3	1948	0.7	1913	0.9	1960	0.9	1939	1.0	1946	1.7	1978	1.0	2003	0.7	1976	0.6	1976	0.7	1976	0.7	1926	0.4	1932
30	0.3	1961	0.7	1950	0.9	1943	0.9	1944	1.1	1901	1.7	1910	1.0	1939	0.7	1972	0.6	1944	0.7	1929	0.7	1985	0.4	1950
31	0.4	1970	0.7	1967	0.9	2002	1.0	2003	1.1	1958	1.7	1912	1.0	1901	0.8	2012	0.6	1913	0.7	1964	0.7	1927	0.4	1967
32	0.4	1958	0.7	1917	0.9	1968	1.0	1972	1.2	1977	1.8	1931	1.0	1968	0.8	1957	0.7	1929	0.8	1975	0.7	2004	0.5	2005
33	0.4	1967	0.8	1975	1.0	1913	1.0	1977	1.2	1928	1.9	1949	1.1	1932	0.9	2002	0.7	2005	0.8	2002	0.7	1955	0.5	1953
34	0.4	1976	0.8	1912	1.0	1972	1.1	1966	1.2	1966	2.0	1935	1.1	1944	0.9	1939	0.8	1931	0.8	1917	0.8	1956	0.5	1908
35	0.4	1968	0.8	2003	1.0	1926	1.1	1963	1.2	1955	2.0	1946	1.2	1956	0.9	1968	0.8	1974	0.8	1954	0.8	1968	0.6	1989
36	0.4	1963	0.8	1928	1.1	1906	1.1	1948	1.3	1923	2.1	1906	1.2	1926	0.9	1947	0.8	1967	0.9	1983	0.8	1963	0.6	1960
37	0.5	1981	0.8	1910	1.2	1942	1.2	1899	1.3	1924	2.1	1966	1.2	1976	1.0	1964	0.9	2009	0.9	2001	0.8	1966	0.6	1923
38	0.5	1989	0.8	1951	1.2	1947	1.3	1908	1.3	2000	2.1	1914	1.2	1913	1.0	1943	0.9	1981	0.9	1960	0.8	2006	0.6	1910
39	0.5	2003	0.8	1900	1.3	2011	1.4	1911	1.4	1957	2.1	1922	1.3	1985	1.0	1963	0.9	1942	0.9	1922	0.8	1981	0.6	1983
40	0.6	1957	0.8	2004	1.3	1976	1.4	1926	1.4	2002	2.4	1900	1.3	1912	1.0	1956	0.9	1938	0.9	1899	0.8	1910	0.6	1925
41	0.6	1984	0.9	1923	1.3	1985	1.4	2011	1.5	1970	2.4	1980	1.3	1957	1.0	1980	0.9	1991	0.9	1970	0.9	1912	0.7	2004
42	0.6	1977	0.9	1963	1.3	1923	1.5	1932	1.6	2006	2.5	1963	1.4	1929	1.0	1914	0.9	1950	0.9	1913	0.9	1965	0.7	1922
43	0.6	1962	0.9	1980	1.4	1904	1.5	1989	1.6	1965	2.6	1941	1.5	1974	1.1	1929	0.9	2006	1.0	2004	0.9	1970	0.7	2006
44	0.6	1909	0.9	1955	1.5	1977	1.5	1921	1.7	1963	2.6	1942	1.5	1942	1.1	1946	1.0	1984	1.0	1907	0.9	1967	0.7	2002
45	0.6	1956	0.9	1905	1.5	1986	1.7	2001	1.9	1992	2.6	1961	1.8	1898	1.1	1966	1.0	1932	1.0	1982	0.9	2002	0.7	1958
46	0.7	1908	1.0	1924	1.5	1911	1.7	1970	1.9	1947	2.6	1913	1.9	1961	1.2	1965	1.0	2000	1.0	1991	1.0	1911	0.7	1911
47	0.7	1986	1.0	1942	1.6	2012	1.7	1914	1.9	1932	2.8	2012	1.9	2007	1.2	1910	1.1	1941	1.0	1969	1.0	1907	0.8	1990
48	0.7	1965	1.1	1960	1.6	1946	1.8	2000	2.0	1908	2.8	1921	1.9	1914	1.2	1961	1.1	1963	1.0	1910	1.1	1917	0.8	1968
49	0.7	2006	1.1	1901	1.8	1958	1.9	1928	2.1	1910	2.8	1976	1.9	1988	1.2	1988	1.2	1983	1.1	1911	1.1	1941	0.8	1926
50	0.7	1949	1.1	1968	1.9	1929	1.9	1924	2.1	1961	2.8	1992	2.0	1960	1.2	2003	1.2	1923	1.1	1979	1.1	1960	0.8	1977
51	0.7	1966	1.2	1899	1.9	1980	1.9	1900	2.1	1971	2.9	1969	2.0	1910	1.2	1983	1.2	1990	1.1	1931	1.1	1950	0.8	1941
52	0.7	1951	1.2	2002	2.0	2000	1.9	1988	2.3	1942	2.9	1909	2.0	1947	1.3	1984	1.2	1922	1.1	1981	1.1	2011	0.8	1946
53	0.7	1982	1.2	1987	2.0	1898	2.0	1907	2.3	1900	3.0	1943	2.1	1972	1.3	1974	1.3	1985	1.1	2006	1.1	1946	0.8	1965
54	0.8	1914	1.2	1902	2.0	1937	2.0	1945	2.4	1898	3.0	1986	2.1	1919	1.4	2000	1.3	1957	1.1	1901	1.2	1925	0.8	1966
55	0.8	2001	1.3	1965	2.0	1950	2.1	1985	2.5	1909	3.0	1957	2.1	2005	1.4	1898	1.3	1964	1.1	2005	1.2	1908	0.8	1916
56	0.8	2005	1.3	1970	2.1	1921	2.1	1923	2.5	1964	3.0	1927	2.1	1945	1.5	1989	1.4	1917	1.1	1984	1.2	1929	0.8	1974

57	0.8	1942	1.3	1922	2.1	2009	2.1	1959	2.5	1929	3.1	2005	2.2	1979	1.5	2005	1.4	1982	1.2	1925	1.2	1975	0.8	1962
58	0.8	2012	1.3	1976	2.2	1907	2.1	1910	2.5	1921	3.1	1932	2.2	1989	1.5	1944	1.4	1936	1.2	1898	1.2	1916	0.9	2001
59	0.9	1919	1.4	1903	2.2	1932	2.2	1950	2.5	1979	3.1	1898	2.2	1991	1.6	1991	1.4	1969	1.2	1912	1.2	2000	0.9	2012
60	0.9	1911	1.4	1904	2.3	1989	2.3	1976	2.6	1906	3.1	2000	2.3	1975	1.7	1985	1.5	2001	1.2	1985	1.2	1991	0.9	1904
61	0.9	2004	1.4	1918	2.3	1924	2.3	1964	2.6	2012	3.1	1989	2.5	1967	1.7	2009	1.5	1924	1.2	1914	1.2	1979	0.9	1906
62	0.9	1978	1.4	2007	2.3	1912	2.4	1980	2.7	1976	3.1	1928	2.6	2000	1.7	1919	1.5	1927	1.3	1916	1.3	1958	0.9	1956
63	0.9	1950	1.4	1898	2.3	1900	2.4	1982	2.8	1922	3.1	1950	2.7	1918	1.8	1977	1.5	1979	1.3	1927	1.3	1971	1.0	1917
64	0.9	1946	1.5	1943	2.3	1951	2.4	1929	2.8	1902	3.1	2003	2.7	1925	1.9	1986	1.5	1988	1.3	1923	1.3	1962	1.0	1949
65	1.0	1933	1.6	2005	2.4	1959	2.4	2005	2.9	1990	3.3	1918	2.8	1982	1.9	1906	1.5	1925	1.4	1990	1.3	1899	1.0	1907
66	1.0	2011	1.6	1990	2.5	1975	2.4	2009	2.9	1988	3.3	1925	2.9	1917	1.9	1945	1.5	1909	1.4	1965	1.3	1922	1.0	1969
67	1.0	1917	1.6	1999	2.5	1914	2.5	2004	2.9	1985	3.4	1960	3.0	2004	1.9	1918	1.6	1898	1.4	1962	1.3	1898	1.0	1979
68	1.0	1929	1.6	1921	2.5	1970	2.5	1986	3.0	1944	3.4	1972	3.1	1924	2.0	1954	1.6	1906	1.4	1949	1.4	1984	1.1	1985
69	1.1	1991	1.7	1927	2.5	1990	2.7	1979	3.0	1994	3.4	1929	3.1	2001	2.0	1922	1.7	2008	1.4	1967	1.4	1990	1.1	1957
70	1.1	1926	1.7	1925	2.7	1939	2.7	1990	3.1	1927	3.8	1975	3.1	1906	2.0	1909	1.8	1919	1.4	1974	1.4	1902	1.1	1975
71	1.1	1918	1.7	1908	2.8	1988	2.7	1917	3.1	1918	4.0	1907	3.3	1983	2.1	1925	1.8	1904	1.4	1989	1.4	1988	1.1	1988
72	1.1	1972	1.8	2012	2.8	1901	2.8	1902	3.2	1912	4.1	1965	3.4	1908	2.1	1959	1.9	1899	1.4	1904	1.4	1913	1.1	1961
73	1.1	1927	1.8	1929	2.8	1945	2.8	1909	3.2	1975	4.3	1959	3.5	1928	2.2	1924	1.9	1910	1.4	1906	1.4	1904	1.2	1919
74	1.2	1985	1.8	1920	2.9	2004	2.8	1947	3.2	1917	4.3	1905	3.6	1964	2.2	2008	1.9	1946	1.5	1941	1.4	1901	1.2	1901
75	1.2	1990	1.8	1985	3.0	1922	2.9	1918	3.3	2003	4.4	1924	3.6	1950	2.3	1900	2.0	1995	1.5	1957	1.5	1974	1.2	1900
76	1.2	1980	1.9	1930	3.0	1991	3.1	1903	3.4	2009	4.4	2004	3.6	1900	2.3	1960	2.0	1908	1.5	2009	1.5	1959	1.3	2000
77	1.3	1922	1.9	1966	3.1	1902	3.2	1906	3.4	1972	4.6	1916	3.6	1959	2.3	1975	2.1	1960	1.5	1908	1.5	2003	1.3	2003
78	1.3	1898	1.9	1986	3.2	1995	3.3	1913	4.2	1960	4.8	1945	3.8	2009	2.4	1940	2.1	2007	1.6	1946	1.5	1906	1.3	1903
79	1.4	1907	1.9	1932	3.3	1910	3.3	1904	4.6	1913	5.0	1974	3.8	1962	2.4	1928	2.2	1959	1.6	1920	1.5	1949	1.3	1921
80	1.4	2002	1.9	2000	3.4	1908	3.3	1965	4.7	1905	5.0	1920	4.3	1922	2.4	2004	2.2	1994	1.7	1988	1.5	1957	1.3	1913
81	1.4	1923	1.9	1937	3.4	1952	3.3	1905	4.7	1916	5.0	2007	4.3	1978	2.5	1969	2.2	1928	1.8	1972	1.6	1919	1.3	1971
82	1.4	1952	1.9	1906	3.4	1915	3.4	1961	4.8	2001	5.0	1923	4.4	1951	2.6	1958	2.3	1962	1.8	1919	1.7	1921	1.3	1920
83	1.4	1983	1.9	1926	3.4	2008	3.4	1994	4.9	2005	5.2	1997	4.4	1923	2.7	1920	2.4	1900	1.9	1968	1.7	1989	1.3	2010
84	1.4	1975	1.9	2011	3.6	1936	3.6	1992	5.1	1899	5.3	1902	4.5	1997	2.7	1921	2.4	1920	1.9	1921	1.7	1969	1.3	1929
85	1.4	1916	2.0	2008	3.7	2007	3.7	1951	5.3	1945	5.4	2009	4.5	1903	2.8	1917	2.5	1914	1.9	1958	1.7	1915	1.4	1899
86	1.4	1921	2.0	2010	3.8	1997	3.8	1915	5.4	1915	5.6	1982	4.7	1921	2.8	1923	2.7	1916	1.9	1900	1.7	1920	1.4	1902
87	1.5	1901	2.0	1911	3.9	1984	3.8	1962	5.5	1919	5.8	1962	4.7	1909	2.9	1994	2.7	1907	2.0	1909	1.8	1903	1.4	1959
88	1.5	1900	2.1	1953	4.1	1961	3.9	1901	5.6	1978	5.9	1944	4.9	1920	2.9	1932	2.9	1921	2.0	1928	1.9	1900	1.4	1931
89	1.5	1987	2.1	2009	4.2	1982	3.9	1922	5.6	1962	5.9	1919	5.0	1916	3.0	1992	3.0	1918	2.1	1952	2.0	1905	1.4	1898
90	1.6	2007	2.2	1946	4.2	1983	4.0	1991	5.8	1903	6.0	1952	5.2	1904	3.2	1904	3.1	1997	2.3	1977	2.0	1931	1.5	1905
91	1.7	1928	2.3	1919	4.2	1996	4.3	1916	5.8	1904	6.3	1899	5.2	1969	3.3	1916	3.2	1975	2.3	1926	2.0	1994	1.5	1970
92	1.7	1902	2.4	1991	4.3	1919	4.5	1920	6.0	1991	6.4	1994	5.3	1990	3.3	1997	3.3	1902	2.3	1987	2.1	1983	1.6	1915
93	1.8	1906	2.4	1961	4.3	1999	4.6	1987	6.2	1952	6.6	1991	5.5	1995	3.3	1908	3.6	1999	2.4	1918	2.1	2008	1.6	1928
94	1.9	1904	2.5	1958	4.3	1992	4.8	1974	6.2	1969	6.6	1983	5.6	1952	3.4	1927	3.7	1998	2.5	1959	2.2	1982	1.6	1995
95	1.9	1899	2.7	1992	4.3	1948	4.9	2012	6.3	1983	7.1	1990	5.7	1899	3.4	1905	3.7	1986	2.7	1994	2.4	1986	1.6	1952
96	1.9	1992	2.7	1915	4.4	1916	4.9	1996	6.4	1959	7.3	1964	5.8	1927	3.8	1995	3.9	1978	2.7	1905	2.6	2010	1.8	1981
97	2.0	1932	2.9	1984	4.6	1971	5.2	2008	6.4	1986	7.4	1904	5.9	1994	3.8	1902	3.9	2010	2.8	1998	2.6	1961	1.9	1991
98	2.0	2009	2.9	1988	4.9	1994	5.2	1927	6.8	1920	7.7	1987	5.9	1905	3.9	1950	3.9	1961	2.8	2010	2.7	2009	2.0	2009
99	2.0	1993	3.0	1907	5.1	1987	5.4	1975	6.9	1997	7.9	1973	6.0	1965	4.0	1899	4.0	1952	2.8	1915	2.9	1918	2.0	1918
100	2.1	1999	3.0	1969	5.3	1963	5.6	2007	7.1	2008	7.9	1995	6.1	2008	4.4	1973	4.1	1965	2.8	1903	2.9	1995	2.1	2011
101	2.2	1995	3.0	1971	5.6	1974	5.7	1919	7.1	1987	8.0	1917	7.2	1902	4.4	2007	4.5	1926	2.9	2008	3.1	1928	2.3	2007
102	2.3	1920	3.1	1995	5.7	1949	5.8	2010	7.6	1974	8.4	1967	7.3	1984	4.5	1982	4.6	1915	2.9	1961	3.2	2007	2.5	2008
103	2.3	1903	3.1	2001	5.9	1965	6.0	1995	7.6	2004	9.0	1908	7.4	1987	4.7	2010	4.6	1992	3.0	1902	3.2	1977	2.6	1994
104	2.5	2008	3.2	1952	6.1	1962	6.1	1912	7.7	2010	9.2	2001	7.7	1992	4.9	1998	5.2	1905	3.1	1995	3.3	1909	2.6	1972
105	2.5	2000	3.3	1916	6.2	1905	6.4	1978	8.1	1998	10.3	1996	7.7	1986	5.0	1990	5.5	1958	3.1	1950	3.4	1987	2.6	1986
106	2.7	2010	3.9	1974	6.9	2001	6.8	1969	8.6	1982	10.4	1951	7.9	1996	5.0	1903	5.5	1996	3.3	1992	3.6	1998	2.9	1909
107	2.7	1996	4.0	1962	7.2	1969	6.9	1983	8.9	1984	10.4	1903	8.2	1958	5.4	1999	5.6	1972	3.3	1997	3.7	1972	3.0	1998
108	2.8	1994	4.1	1996	7.2	1909	7.4	1997	9.2	1950	10.9	1993	8.7	1907	5.5	1907	5.9	1973	3.4	2011	3.8	1952	3.4	1982
109	2.8	1960	4.3	1983	7.2	1998	7.6	1984	9.7	1951	11.1	1915	8.9	1973	6.4	1951	5.9	1977	4.2	1999	4.0	1951	3.6	1999
110	3.1	1988	5.2	1993	7.5	1978	8.0	1952	9.9	1973	11.5	2010	10.6	2010	6.7	1952	6.0	1903	5.6	1951	4.0	1992	3.7	1987
111	3.7	1998	5.5	1994	7.7	1903	8.5	1960	11.8	1996	13.9	1984	11.1	1998	6.9	1987	6.1	1987	6.2	1996	4.4	1999	4.0	1992
112	4.6	1997	5.5	1997	9.7	1993	8.8	1993	14.3	1999	13.9	1999	11.7	1999	7.2	1996	7.0	2011	7.3	1993	4.5	1997	4.9	1993
113	5.8	1974	5.6	1973	13.0	2010	9.6	1998	14.7	1995	17.6	1947	12.9	2011	7.7	2011	8.0	1989	7.5	2007	4.7	1973	5.6	1973
114	6.1	1973	5.9	1998	14.1	1973	11.1	1999	15.2	1993	19.8	1998	15.3	1915	10.4	1915	8.5	1951	8.0	1986	5.6	1993	5.9	1997
115	6.4	1910	6.1	1982	17.9	1979	14.2	1973	24.1	2007	27.4	2008	48.3	1993	16.3	1993	12.3	1993	10.1	1973	8.8	1996	6.0	1996

Plate 16. Nebraska City to Rulo Ranking of Average Monthly Flows

Rulo, Missouri to St. Joseph, Missouri
Ranking of Average Monthly Flows (kcfs)

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	-1.2	1950	-4.3	2011	-1.4	1950	-0.1	1953	-0.2	1953	-0.9	1999	-2.2	1999	-1.3	1945
2	-0.6	2005	-1.2	1910	-0.3	2002	-0.5	2002	-0.3	2000	-1.5	1950	-0.7	1911	-0.1	1957	-0.2	2006	-0.2	1953	-0.4	2000	-0.6	1954
3	-0.6	1963	-1.1	1947	-0.1	1953	-0.2	1953	-0.2	1953	-0.1	1953	-0.1	1901	0.0	2006	-0.1	1957	-0.1	1957	-0.1	1953	-0.5	1953
4	-0.4	1954	-1.1	2009	-0.1	2005	-0.1	2001	-0.1	1957	0.0	1957	-0.1	1953	0.0	2004	0.0	1954	0.0	1954	0.0	1957	-0.4	2003
5	-0.4	1959	-0.4	1972	0.0	1995	0.0	1957	0.1	1939	0.2	1926	-0.1	1957	0.1	1995	0.0	1955	0.2	1971	0.0	1954	-0.3	1936
6	-0.3	1988	-0.2	1958	0.0	1957	0.1	1954	0.1	1954	0.3	1934	0.0	1954	0.2	1934	0.1	1988	0.2	1963	0.1	1939	-0.3	1943
7	-0.2	1937	-0.1	1956	0.0	2007	0.1	1934	0.2	1934	0.4	1901	0.2	1989	0.2	1955	0.2	2005	0.2	1955	0.1	1942	-0.2	1937
8	-0.2	2002	-0.1	1914	0.0	1954	0.2	1956	0.3	1989	0.4	1911	0.2	1926	0.3	1941	0.4	1991	0.2	1956	0.2	1956	-0.1	1989
9	-0.2	1956	0.0	1944	0.3	1934	0.3	1989	0.3	1956	0.5	1954	0.3	1930	0.4	1988	0.4	2003	0.2	1939	0.2	1993	-0.1	1955
10	-0.2	1939	0.0	1934	0.3	1956	0.3	1962	0.4	1925	0.6	1933	0.4	1966	0.4	1975	0.4	1976	0.2	1991	0.2	1936	0.0	1938
11	-0.2	2004	0.1	1979	0.4	1931	0.3	1996	0.5	1931	0.7	1956	0.5	1934	0.4	1971	0.4	2012	0.3	1952	0.2	1963	0.0	1935
12	-0.1	1950	0.1	2006	0.4	2006	0.6	1968	0.5	1926	0.8	1963	0.6	1963	0.4	1954	0.5	1963	0.3	1937	0.3	1937	0.1	2004
13	0.0	1940	0.1	1994	0.4	1968	0.6	1940	0.5	1914	0.9	1948	0.6	1912	0.5	1936	0.5	1971	0.3	1940	0.3	1955	0.1	1956
14	0.0	1925	0.1	1952	0.5	1943	0.7	2004	0.6	1940	0.9	1938	0.6	1933	0.5	1933	0.5	1999	0.3	1933	0.3	1933	0.2	1939
15	0.0	1938	0.2	1954	0.5	1947	0.7	1935	0.6	1933	0.9	2006	0.7	1913	0.5	1963	0.5	1943	0.3	1964	0.4	1967	0.2	1963
16	0.0	1948	0.2	2003	0.5	1964	0.7	2000	0.7	1955	0.9	1958	0.7	2006	0.5	1956	0.5	2000	0.3	2000	0.4	1962	0.3	1957
17	0.1	1982	0.3	1957	0.5	1933	0.8	1955	0.7	1967	1.0	1937	0.8	1941	0.5	1967	0.5	1956	0.3	2012	0.4	1914	0.3	1924
18	0.2	1957	0.3	1977	0.5	1967	0.8	2003	0.8	1907	1.0	1972	0.8	2007	0.6	1994	0.5	2002	0.3	1943	0.5	1971	0.3	1934
19	0.2	1946	0.3	1928	0.7	1925	0.8	1966	0.8	1911	1.1	1922	0.9	1991	0.6	1935	0.5	1952	0.4	1966	0.5	1938	0.3	1940
20	0.2	1977	0.3	1935	0.8	2003	0.8	1930	0.8	1968	1.1	1981	0.9	2004	0.7	1962	0.6	1990	0.4	1951	0.5	2004	0.4	1944
21	0.2	1915	0.3	1938	0.9	1988	0.8	1933	0.8	1937	1.2	2007	1.0	1936	0.7	1991	0.6	1995	0.5	2003	0.5	2001	0.4	2012
22	0.2	1935	0.3	1931	1.0	1938	0.8	1938	1.1	1948	1.2	1968	1.0	1959	0.7	1976	0.7	1940	0.5	1948	0.5	1952	0.4	2001
23	0.3	1971	0.3	1933	1.0	1991	0.9	2007	1.2	1941	1.2	1962	1.0	2005	0.8	1931	0.7	1933	0.5	1924	0.6	1964	0.4	1933
24	0.3	1941	0.4	2002	1.0	1989	0.9	1970	1.2	1923	1.4	1966	1.1	1975	0.8	1930	0.7	1948	0.5	2011	0.6	2003	0.5	1912
25	0.3	1944	0.4	1917	1.0	1930	1.0	1948	1.3	2004	1.4	1930	1.2	1971	0.8	2012	0.8	1962	0.6	1935	0.7	1930	0.5	1914
26	0.3	1984	0.5	2005	1.1	1899	1.0	1937	1.3	1928	1.4	1988	1.2	1994	0.9	1980	0.8	1967	0.6	1932	0.7	1960	0.5	1993
27	0.4	1912	0.5	1989	1.1	1928	1.0	1990	1.3	1924	1.4	1940	1.2	1988	0.9	2000	0.8	1966	0.6	1958	0.7	1923	0.5	2002
28	0.4	1979	0.5	1940	1.1	1941	1.0	2006	1.3	1960	1.5	1989	1.2	1955	1.0	1911	0.8	1935	0.7	1990	0.7	1990	0.5	1930
29	0.4	1930	0.5	1967	1.1	1940	1.0	1972	1.3	2006	1.6	1931	1.2	1956	1.0	1947	0.9	1975	0.7	1936	0.7	1951	0.5	1999
30	0.4	1953	0.6	1900	1.1	1926	1.0	1925	1.4	1938	1.7	1971	1.3	2012	1.0	1964	0.9	1968	0.7	1942	0.8	1944	0.6	1959
31	0.4	1961	0.6	1909	1.2	2000	1.1	1964	1.5	1962	1.7	1912	1.3	1940	1.0	1961	0.9	1945	0.8	1960	0.8	1989	0.6	1950
32	0.4	2003	0.6	1995	1.2	1996	1.1	1898	1.5	2005	1.8	1910	1.3	1972	1.1	1966	1.0	1939	0.8	1907	0.8	2002	0.6	1971
33	0.5	1972	0.6	1923	1.2	1958	1.2	1931	1.5	1930	1.9	1909	1.4	1962	1.1	1989	1.0	1930	0.8	1988	0.8	1949	0.7	1948
34	0.5	1913	0.7	1968	1.3	1977	1.2	2005	1.5	1908	1.9	1959	1.5	1974	1.2	1913	1.0	1974	0.8	1949	0.8	1995	0.7	1969
35	0.5	1989	0.7	1913	1.3	1951	1.2	1958	1.6	1988	1.9	1906	1.6	1929	1.2	1937	1.0	1960	0.9	1938	0.8	1945	0.7	1946
36	0.5	1931	0.7	1988	1.4	1918	1.3	1971	1.7	1932	2.0	1952	1.6	1943	1.2	1901	1.0	1934	0.9	1947	0.9	1940	0.7	1962
37	0.5	1936	0.8	1941	1.4	1911	1.3	1942	1.7	1949	2.1	2000	1.8	1964	1.3	2008	1.0	2004	1.0	1914	0.9	1943	0.8	1927
38	0.5	1924	0.8	1930	1.4	1976	1.4	1908	1.7	1901	2.2	2004	1.8	1946	1.3	1990	1.1	1947	1.0	1934	0.9	2006	0.8	1990
39	0.6	1952	0.8	1961	1.5	1972	1.5	1977	1.8	1975	2.3	1913	1.8	2002	1.3	2002	1.1	1899	1.0	1962	0.9	1924	0.8	2005
40	0.6	1991	1.0	1939	1.6	1898	1.5	1911	1.8	1943	2.3	1961	1.8	1999	1.3	1972	1.2	1929	1.0	1989	0.9	1958	0.8	1970
41	0.6	1934	1.0	1899	1.6	1935	1.6	1926	1.8	1966	2.3	1985	1.9	1910	1.4	1965	1.2	1937	1.1	1910	0.9	1966	0.9	1966
42	0.7	1951	1.1	1936	1.6	1970	1.6	1975	1.8	1971	2.3	2002	2.0	1898	1.4	1943	1.2	1994	1.1	1975	1.0	1968	0.9	1923
43	0.7	1949	1.1	1912	1.7	1971	1.6	1985	1.9	1970	2.4	1900	2.1	1960	1.4	1912	1.2	1917	1.1	1899	1.0	1926	0.9	1981
44	0.7	1969	1.2	2004	1.7	1944	1.7	1951	1.9	1964	2.4	1939	2.1	1939	1.4	2005	1.3	1907	1.1	1916	1.0	1932	0.9	1932
45	0.8	2001	1.2	1901	1.9	1907	1.7	1967	1.9	1977	2.4	1955	2.1	1976	1.4	1909	1.3	1983	1.1	1995	1.0	1934	1.0	1958
46	0.8	1905	1.2	1998	1.9	1955	1.7	1914	2.0	2002	2.5	1960	2.2	1968	1.5	1929	1.4	1950	1.2	1917	1.0	1994	1.0	1910
47	0.8	2000	1.3	1964	1.9	1952	1.8	1941	2.1	2012	2.5	1921	2.2	1970	1.5	2003	1.4	1927	1.2	2001	1.0	2005	1.0	1908
48	0.9	1947	1.3	1991	1.9	2011	1.9	1921	2.2	1991	2.6	1927	2.2	1937	1.8	1946	1.4	1938	1.2	1922	1.1	2012	1.0	2006
49	0.9	2006	1.3	1924	1.9	1999	2.0	1924	2.2	1961	2.7	1977	2.3	2003	1.8	1999	1.4	1901	1.2	1929	1.1	1907	1.1	2000
50	0.9	1968	1.3	2000	2.0	1921	2.0	1907	2.2	1994	2.7	1914	2.3	1948	1.8	1959	1.4	1922	1.2	1996	1.2	1959	1.1	1974
51	1.0	1970	1.3	1996	2.0	1917	2.0	1936	2.3	1958	2.7	1992	2.3	2000	1.8	1914	1.4	1924	1.2	1930	1.2	1991	1.1	1949
52	1.1	1909	1.4	1942	2.1	1932	2.1	1963	2.3	1946	2.8	2005	2.3	1942	1.8	1922	1.5	1998	1.2	2004	1.2	1910	1.2	1925
53	1.1	1908	1.4	1902	2.2	1981	2.2	1900	2.4	1935	2.9	2012	2.3	1914	1.8	1939	1.5	1964	1.2	2006	1.2	1976	1.2	1947
54	1.2	1958	1.4	1992	2.2	2004	2.2	1959	2.4	1936	3.1	1936	2.4	1938	1.9	1940	1.5	1912	1.3	1945	1.2	1997	1.2	1964
55	1.2	1911	1.5	1990	2.2	1923	2.2	1994	2.5	1910	3.2	1944	2.4	1931	1.9	1949	1.5	1942	1.3	2005	1.3	1917	1.2	1988
56	1.2	1943	1.5	1905	2.2	1937	2.2	1960	2.5	1947	3.2	2003	2.4	1980	1.9	1938	1.6	1911	1.3	2002	1.3	1911	1.2	1926

57	1.2	1964	1.6	1978	2.2	2009	2.2	1899	2.5	1898	3.3	1993	2.5	1977	2.0	2007	1.6	1913	1.3	1978	1.3	1935	1.2	1960
58	1.2	1996	1.6	1943	2.2	1966	2.3	1910	2.6	1952	3.5	1970	2.8	1961	2.0	1970	1.7	2009	1.3	1968	1.4	1950	1.2	1952
59	1.3	1967	1.6	1904	2.2	1969	2.4	1928	2.6	1981	3.6	1974	2.8	1944	2.1	1968	1.7	1959	1.4	1972	1.4	1927	1.2	1911
60	1.3	1995	1.7	1976	2.3	1906	2.4	1909	2.7	1900	3.8	1976	2.8	1967	2.1	2001	1.7	1925	1.4	2009	1.4	1970	1.2	1967
61	1.4	1933	1.7	1975	2.3	1962	2.4	1923	2.8	1976	3.9	1905	3.0	1935	2.1	1924	1.8	1923	1.5	1980	1.5	1965	1.2	1922
62	1.4	2009	1.8	1922	2.3	1929	2.5	1932	2.8	1921	3.9	1932	3.1	1952	2.1	1910	1.9	1980	1.5	1931	1.5	1899	1.2	1991
63	1.4	1992	1.9	1903	2.4	1963	2.5	1988	2.9	1909	4.0	1978	3.4	1945	2.1	1919	1.9	1996	1.6	1976	1.6	1974	1.2	1985
64	1.4	1965	1.9	1950	2.5	1990	2.7	1949	2.9	1929	4.0	1918	3.4	1919	2.2	1898	2.0	1906	1.6	1967	1.6	1898	1.3	1929
65	1.4	1998	1.9	1918	2.5	1920	2.7	1981	3.0	1980	4.1	1898	3.6	1918	2.2	1923	2.0	1904	1.6	1898	1.7	1913	1.4	1916
66	1.5	1966	1.9	1898	2.6	1924	2.7	1946	3.1	1998	4.1	1999	3.6	2001	2.3	1978	2.1	1908	1.7	1925	1.7	1975	1.4	1995
67	1.5	1926	1.9	1946	2.6	1927	2.8	1929	3.2	1902	4.2	1973	3.6	1996	2.3	1904	2.1	1898	1.7	1913	1.7	1912	1.5	1917
68	1.6	1927	2.0	1948	2.6	1908	2.9	1939	3.3	2003	4.2	1928	3.7	1990	2.3	1926	2.1	1915	1.8	1983	1.8	1929	1.5	1907
69	1.6	1914	2.1	1965	2.6	1900	3.1	1902	3.4	1906	4.2	1994	3.8	1998	2.4	1998	2.1	1909	1.8	1926	1.8	1978	1.5	1968
70	1.6	1917	2.1	1953	2.7	1992	3.2	1965	3.5	1917	4.2	1964	3.8	1932	2.4	1942	2.2	2008	1.9	1920	1.8	1916	1.5	1904
71	1.7	1990	2.2	1959	2.7	1913	3.2	1903	3.5	1969	4.3	1920	3.9	2008	2.4	1906	2.2	1916	1.9	1946	1.9	1946	1.6	1961
72	1.7	1994	2.2	1955	2.7	1904	3.4	1991	3.6	1965	4.3	1907	3.9	2009	2.4	1925	2.3	1928	2.0	2008	1.9	1925	1.6	1906
73	1.7	1918	2.3	1971	2.8	1997	3.5	1905	3.7	1963	4.5	1929	4.1	1925	2.5	1917	2.3	1931	2.1	1997	2.0	1908	1.7	1951
74	1.7	1907	2.4	1921	2.8	1914	3.6	1917	3.7	1922	4.8	1925	4.1	1906	2.5	1960	2.3	2001	2.1	1904	2.0	2007	1.8	1942
75	1.8	1919	2.4	1949	3.0	1939	3.7	1982	3.9	1918	4.8	1916	4.4	1997	2.5	1920	2.4	1910	2.2	1906	2.0	1988	1.8	1994
76	1.8	1997	2.4	1920	3.4	1948	3.8	1943	4.0	1990	4.9	1991	4.4	1981	2.6	1945	2.4	1936	2.2	1994	2.0	1980	1.8	1978
77	1.9	1929	2.5	1937	3.5	1910	3.8	1906	4.2	1992	5.0	1941	4.6	1985	2.6	1969	2.5	1919	2.2	1903	2.1	1904	1.8	1941
78	1.9	1975	2.5	1927	3.5	1942	3.9	1918	4.4	1927	5.1	1946	5.1	1900	2.7	1952	2.5	2007	2.2	1927	2.1	1901	1.9	1901
79	1.9	1898	2.5	2007	3.5	1949	3.9	1961	4.6	1985	5.1	1902	5.2	1924	2.8	1928	2.6	1932	2.2	1981	2.1	1922	2.0	1997
80	2.0	1923	2.5	1951	3.6	1902	4.0	1901	4.7	1972	5.1	1969	5.3	1928	2.9	1908	2.6	1920	2.2	1944	2.2	1902	2.0	1919
81	2.0	1922	2.5	1993	3.7	1998	4.2	1952	4.7	1912	5.4	1979	5.4	1949	2.9	1900	2.6	1969	2.2	1908	2.2	1947	2.0	1913
82	2.1	1916	2.7	2012	3.8	1915	4.3	1995	4.8	1942	5.5	1997	6.0	1917	2.9	1918	2.7	1970	2.2	1921	2.4	1969	2.0	1983
83	2.1	2007	2.8	1960	3.9	1959	4.3	1913	4.9	1944	5.5	1975	6.2	1987	3.0	1958	2.7	1900	2.2	1905	2.4	1906	2.0	1899
84	2.2	2008	2.8	2001	3.9	2012	4.4	1969	5.6	1905	5.7	1943	6.2	1922	3.0	1902	2.8	1997	2.3	1970	2.4	1921	2.1	1900
85	2.2	1981	2.8	1970	4.0	1961	4.4	1922	5.7	1899	5.9	1986	6.5	1969	3.0	1974	2.9	1981	2.4	1965	2.4	2008	2.1	1921
86	2.2	1928	2.8	1981	4.0	2010	4.5	1904	5.8	1951	5.9	1965	6.6	2010	3.0	1950	3.0	1979	2.4	1901	2.4	1948	2.1	1976
87	2.2	1921	2.8	1929	4.0	1975	4.6	1915	5.8	1913	6.0	1935	6.6	1995	3.1	1921	3.1	1921	2.4	1911	2.5	1920	2.1	1898
88	2.3	2012	2.8	1925	4.1	1936	4.7	1979	5.9	1916	6.0	1924	6.7	1982	3.1	1927	3.1	1951	2.4	1912	2.5	1915	2.2	1920
89	2.3	1901	2.9	1906	4.1	1901	4.7	2009	5.9	2008	6.1	2001	6.8	1947	3.1	1948	3.3	1944	2.5	1923	2.5	2011	2.2	1903
90	2.4	1900	2.9	1908	4.2	1993	4.8	2008	6.1	1915	6.5	1923	6.9	1973	3.4	2009	3.3	1914	2.6	1974	2.6	1919	2.2	1902
91	2.5	1942	3.0	1980	4.2	1922	4.8	1916	6.1	2010	6.7	1990	7.1	1921	3.4	1984	3.4	1984	2.6	1900	2.8	1903	2.4	2007
92	2.5	1902	3.0	1963	4.3	1974	4.8	2012	6.2	1999	6.8	1942	7.1	1983	3.4	1916	3.5	1949	2.6	2010	2.9	1900	2.5	1905
93	2.7	1976	3.0	1945	4.3	1984	4.9	1944	6.2	1903	7.0	1945	7.5	1978	3.4	1997	3.6	1918	2.7	1984	3.0	1905	2.5	2008
94	2.7	1906	3.1	1926	4.5	1946	4.9	2011	6.2	2001	7.3	1980	7.5	1908	3.4	1983	3.7	2010	2.7	1928	3.5	2009	2.5	1915
95	2.7	1945	3.4	1987	4.6	1916	5.0	1997	6.6	2009	7.4	1899	7.5	1909	3.5	1899	3.7	1978	2.8	1979	3.5	1979	2.8	1965
96	2.7	1978	3.5	1911	4.6	1985	5.1	1980	6.9	1904	7.5	1919	7.9	1923	3.9	1932	4.1	2011	2.8	1998	3.7	1987	2.8	1998
97	2.7	1904	3.6	1974	4.7	1980	5.1	1974	7.0	1919	7.9	1987	8.0	1920	4.0	1905	4.2	1941	2.8	1959	3.8	2010	2.8	1980
98	2.9	1899	3.8	2008	5.1	1982	5.2	1947	7.4	2007	8.0	1995	8.0	1916	4.3	1951	4.3	1902	2.8	1919	4.0	1983	2.9	2011
99	3.0	1999	3.9	1999	5.4	1945	5.2	1976	7.5	1959	8.3	2009	9.1	1951	4.3	1996	4.4	1989	3.0	1969	4.0	1984	2.9	1975
100	3.1	1920	4.0	2010	5.4	1912	6.1	1920	8.2	1974	8.3	1904	9.1	1903	4.3	1977	4.4	1961	3.0	1909	4.0	1918	2.9	1928
101	3.2	1993	4.0	1985	5.7	1994	6.3	1927	8.3	1979	8.7	2010	9.1	1979	4.6	1907	4.5	1972	3.1	1950	4.0	1985	3.4	1918
102	3.2	1903	4.2	1986	5.8	2001	6.4	1992	8.6	1920	9.0	1996	9.3	1927	4.7	1992	5.0	1903	3.1	1918	4.1	1998	3.5	2009
103	3.2	1973	4.2	1932	5.8	1919	6.5	2010	8.6	1993	9.6	1998	9.5	1958	4.9	1944	5.2	1905	3.3	1987	4.1	1982	3.5	1987
104	3.3	1962	4.2	1997	6.0	1905	6.6	1919	8.8	2011	10.0	1983	9.6	1905	5.2	2011	5.3	1958	3.4	1982	4.3	1981	3.7	2010
105	3.3	1987	4.3	1919	6.1	1986	6.6	1999	9.0	1978	10.0	2008	9.7	1904	5.2	1979	5.6	1946	3.4	1977	4.5	1972	4.2	1972
106	3.6	1980	4.8	1969	6.4	1909	6.9	1912	9.2	1997	10.6	1967	9.9	1899	5.7	2010	5.8	1992	3.6	1992	4.5	1931	4.2	1977
107	4.0	1960	5.4	1907	6.6	1903	7.1	1987	9.3	1973	11.6	1917	10.7	1986	5.7	1985	5.9	1986	4.0	1915	4.7	1928	4.3	1931
108	4.5	1985	5.4	1915	7.0	2008	8.0	1986	9.9	1984	12.7	1947	10.8	1965	6.0	1981	5.9	1985	4.2	2007	4.8	1941	4.7	1909
109	4.5	1974	5.9	2011	7.5	1978	8.0	1998	10.0	1996	13.0	1915	11.1	1992	6.1	1903	5.9	1926	4.3	1993	4.8	1996	5.1	1996
110	4.7	2011	6.2	1916	7.7	1960	8.3	1993	10.7	1982	13.1	1951	11.4	2011	6.6	1986	7.1	1987	4.4	1961	4.8	1909	5.1	1979
111	4.8	2010	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
112	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
113	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
114	7.0	1986	11.1	1973	15.0	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
115	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

Plate 17. Rulo to St. Joseph Ranking of Average Monthly Flows

St. Joseph, Missouri to Kansas City, Missouri
Ranking of Average Monthly Flows (kcfs)

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	-7.1	2011	0.1	1911	-0.3	1997	0.5	1980	0.1	1980	-0.1	1927
2	-0.1	1979	0.2	1989	0.6	1957	0.8	1996	0.3	1989	0.7	1989	0.6	1926	0.2	2002	0.1	1947	0.5	1956	0.2	1914	0.0	1976
3	0.0	1940	0.7	1957	0.7	1967	1.0	1981	0.6	1901	0.8	1901	0.7	1901	0.4	1991	0.2	1976	0.5	1997	0.3	1976	0.3	1912
4	0.0	1957	0.8	1914	0.8	2003	1.1	1898	0.9	1914	0.9	1911	0.9	1980	0.6	1955	0.2	1971	0.6	1939	0.5	2001	0.3	1988
5	0.2	1970	0.8	1964	0.9	1981	1.3	1956	1.2	2000	1.2	1988	1.0	1911	0.6	1988	0.4	1991	0.6	1999	0.6	1939	0.4	1937
6	0.5	1967	0.9	1981	1.2	1964	1.3	1935	1.5	1911	1.6	2012	1.4	1934	0.7	1970	0.6	1956	0.6	1994	0.7	2012	0.5	1924
7	0.7	1937	1.0	1940	1.3	1938	1.4	1934	1.6	1956	2.1	1933	1.7	1988	0.7	1934	0.9	2002	0.6	2000	0.7	1936	0.6	1990
8	0.7	1912	1.2	2003	1.5	1977	1.4	1940	2.0	1955	2.4	1956	1.7	1936	0.8	1936	1.0	1901	0.7	1976	0.8	1988	0.6	1956
9	0.7	1938	1.2	1967	1.7	2002	1.5	1977	2.0	1934	2.8	2006	1.8	1933	0.8	1901	1.0	1994	0.8	1952	0.9	1956	0.7	2000
10	0.9	1939	1.3	1990	1.7	1956	1.9	2000	2.0	1992	2.9	1934	2.0	1910	1.0	1975	1.1	1939	0.8	1979	1.0	1948	0.8	1966
11	1.0	2001	1.3	2002	1.9	1954	2.0	1950	2.2	1939	3.1	1972	2.0	1970	1.0	1926	1.1	1911	0.8	1947	1.1	1947	0.8	1936
12	1.0	1989	1.3	1939	1.9	1935	2.4	2003	2.3	1907	3.1	2003	2.0	1912	1.1	1974	1.3	1988	0.9	1937	1.1	1991	0.9	1939
13	1.0	1935	1.3	1938	2.0	1996	2.4	1908	2.5	1988	3.3	1953	2.1	1989	1.2	1913	1.4	1955	0.9	1971	1.2	1940	1.0	1938
14	1.1	1925	1.4	1934	2.1	1991	2.6	1937	2.8	1925	3.6	1963	2.2	2012	1.2	1964	1.6	1990	0.9	1988	1.2	1937	1.1	1955
15	1.1	2003	1.5	1956	2.1	1934	2.6	2004	2.9	1965	3.8	1992	2.2	2002	1.5	2000	1.7	1953	1.0	1948	1.3	1999	1.2	1914
16	1.1	1934	1.5	1933	2.1	1928	2.7	1954	2.9	1967	4.1	1940	2.2	1953	1.6	1997	1.7	1975	1.0	1981	1.4	2002	1.2	1940
17	1.2	1956	1.7	1947	2.1	1970	2.8	1972	3.0	1966	4.2	1968	2.4	1940	1.7	1983	1.8	2000	1.0	1975	1.4	1933	1.2	1963
18	1.2	1955	1.7	1935	2.3	1972	2.9	1938	3.0	2003	4.2	1937	2.5	1966	1.7	1953	1.9	1983	1.3	2002	1.4	2000	1.4	2002
19	1.2	1936	1.8	2000	2.4	1968	3.2	1925	3.2	1937	4.3	2000	2.6	1978	1.7	1989	1.9	1999	1.4	1972	1.4	1938	1.5	1964
20	1.3	1913	1.9	1913	2.6	1940	3.4	1966	3.4	1928	4.5	1913	2.7	1991	1.8	1984	2.0	2012	1.4	1995	1.5	1994	1.5	1991
21	1.3	2004	1.9	1992	2.7	1988	3.5	1963	3.6	1980	4.5	1912	2.7	2003	1.8	1976	2.0	1980	1.5	2012	1.5	1955	1.7	2006
22	1.3	1961	2.0	1978	2.8	1941	3.6	1990	3.7	1968	4.7	1931	2.9	1954	2.0	2003	2.1	1934	1.5	1938	1.5	2006	1.7	1999
23	1.3	1924	2.0	2004	2.8	1931	3.6	1985	4.3	1941	4.7	1946	3.1	2006	2.1	2012	2.1	1912	1.6	1974	1.5	1924	1.8	1954
24	1.3	1991	2.1	1965	2.9	1933	3.8	1936	4.3	1923	4.7	1936	3.2	1974	2.1	1980	2.1	1954	1.6	2003	1.5	1954	1.9	1934
25	1.4	1963	2.1	1928	3.1	1899	3.9	1957	4.6	1964	4.9	1922	3.2	1985	2.1	1956	2.1	1929	1.6	1940	1.6	1949	1.9	1929
26	1.5	1992	2.1	1917	3.2	2006	3.9	1971	4.7	1940	5.1	1976	3.4	2000	2.2	1947	2.2	1937	1.8	1922	1.7	1990	2.0	1932
27	1.5	2002	2.2	1909	3.2	1925	3.9	2011	4.8	1977	5.4	1997	3.6	1972	2.4	1952	2.3	1984	1.9	1924	1.7	1932	2.0	1953
28	1.5	1981	2.3	1976	3.3	1950	4.0	1995	5.2	1975	5.4	1952	3.7	1976	2.5	1966	2.3	1981	1.9	1934	1.7	1923	2.0	1933
29	1.5	1954	2.4	1912	3.3	2000	4.2	1967	5.2	1924	5.6	1910	4.0	1898	2.6	1971	2.4	1943	1.9	1990	1.9	1907	2.0	1922
30	1.6	1996	2.4	1954	3.5	1930	4.2	1955	5.2	1946	6.0	1979	4.0	1955	2.6	2011	2.4	1936	2.0	1966	1.9	1943	2.1	2012
31	1.7	1964	2.4	1944	3.6	1953	4.3	1964	5.6	1932	6.1	1955	4.1	1931	2.7	1912	2.5	1979	2.1	1932	1.9	2005	2.1	1943
32	1.7	1944	2.4	1931	3.6	1966	4.3	1953	6.1	2004	6.4	1991	4.2	1930	2.9	1963	2.7	1974	2.1	1953	2.0	1953	2.1	1925
33	1.7	1930	2.4	1995	4.0	1918	4.3	1930	6.2	1981	6.4	2002	4.4	1997	3.1	1914	2.7	1966	2.1	1929	2.1	1975	2.2	2003
34	1.7	2011	2.7	1991	4.1	1943	4.3	1933	6.2	1931	7.1	1906	5.3	1956	3.4	1935	2.8	1913	2.3	1964	2.2	1966	2.3	1952
35	1.8	1905	2.8	1923	4.1	1976	4.4	2002	6.3	1954	7.3	1973	5.4	1963	3.5	1978	2.9	2003	2.4	1984	2.3	2003	2.3	1908
36	1.9	1976	2.9	2006	4.5	1917	4.5	2006	6.6	2012	8.6	1980	5.5	1918	3.6	1946	3.3	1963	2.4	2010	2.4	1945	2.3	1910
37	2.0	1948	2.9	1900	4.5	1994	4.5	1931	6.8	2006	8.9	1998	5.6	1952	3.7	1933	3.3	1948	2.5	1943	2.5	1995	2.3	1948
38	2.0	1953	2.9	1963	4.7	1926	4.6	1946	7.0	1972	9.0	1994	5.8	1977	3.7	1929	3.3	1995	2.6	1936	2.5	1952	2.4	1945
39	2.1	1933	2.9	1946	4.7	2005	4.8	1941	7.0	1948	9.1	1966	6.1	1964	4.0	1994	3.5	1996	2.6	1991	2.5	1989	2.6	1979
40	2.2	1958	3.0	1924	4.7	1995	4.8	1899	7.3	1953	9.1	1981	6.2	1938	4.2	2006	3.5	1945	2.7	1933	2.7	1917	2.6	2005
41	2.2	1980	3.1	1977	5.2	1898	5.1	1982	7.6	1912	9.4	1900	6.3	1939	4.3	1969	3.5	1938	2.8	1978	2.8	1971	2.6	1957
42	2.2	2007	3.2	1968	5.2	1955	5.5	1991	7.9	1997	9.5	1978	6.3	1913	4.4	1937	3.6	1940	3.0	1955	2.9	1934	2.6	2001
43	2.2	1909	3.3	1953	5.3	1923	5.6	1988	8.0	1979	10.4	1909	6.9	2007	4.4	1940	3.9	2006	3.0	1989	3.0	1910	2.6	1980
44	2.3	1995	3.4	1972	5.7	2007	5.7	2005	8.1	1927	10.9	1921	7.0	1937	4.7	2001	3.9	1952	3.3	1963	3.0	1997	2.8	1989
45	2.3	1966	3.4	1996	5.8	1911	5.7	1921	8.2	1910	11.1	1958	7.1	1968	4.8	1959	4.3	1922	3.4	2004	3.0	1963	2.8	1935
46	2.3	1982	3.4	1910	6.2	1939	5.9	1943	8.3	1963	11.3	1959	7.1	2005	4.9	1930	4.4	1917	3.5	2006	3.0	2011	2.8	1994
47	2.3	1990	3.6	1948	6.2	1913	6.1	1911	8.3	1933	12.1	1983	7.2	1994	5.0	1949	4.7	1968	3.6	1928	3.1	1960	2.9	1958
48	2.4	1951	3.7	2007	6.5	1914	6.2	1926	8.4	1998	12.6	1927	7.5	1906	5.2	1909	4.9	2009	3.7	1960	3.1	1984	3.0	1926
49	2.5	1950	3.8	1950	6.6	1992	6.3	1939	8.5	1962	12.8	1986	7.6	1946	5.4	1943	5.1	1923	3.8	1899	3.2	1899	3.0	1950
50	2.5	1914	4.0	1941	6.6	1921	6.5	1965	8.6	2011	12.9	1948	7.8	1903	5.4	1910	5.1	1924	3.8	1983	3.3	1926	3.2	2004
51	2.5	1947	4.0	1980	6.7	1937	6.5	1970	8.7	1906	13.2	1985	7.9	1941	5.4	1965	5.1	1969	3.9	1917	3.5	2004	3.3	1949
52	2.6	1915	4.1	1905	6.7	1946	6.9	1949	8.7	2005	13.3	1971	8.0	1932	5.5	1932	5.2	1927	3.9	1945	3.5	1950	3.4	1960
53	2.9	1975	4.2	1958	6.8	1900	7.5	1948	8.8	1991	13.7	1920	8.0	1900	5.8	1999	5.2	1932	3.9	2001	3.7	1911	3.4	1923
54	2.9	2012	4.2	1899	6.8	1924	7.6	1914	9.1	1922	14.1	1950	8.4	1990	5.9	1931	5.2	2004	3.9	1909	3.9	1964	3.4	1906
55	3.0	1971	4.2	1901	7.0	1975	7.9	1909	9.5	2001	14.1	1939	8.7	1975	6.0	1957	5.8	1925	4.1	1907	3.9	1987	3.4	1974
56	3.0	1931	4.4	2012	7.1	1932	7.9	1903	9.7	1900	14.5	1914	8.9	1971	6.1	1961	5.8	2007	4.3	1992	4.0	1913	3.5	1962

57	3.1	1908	4.4	1961	7.1	1927	8.0	1951	9.8	1952	14.5	1990	9.7	1943	6.1	1939	5.9	1957	4.4	1916	4.1	1898	3.6	1930
58	3.1	1965	4.9	2011	7.1	1997	8.0	1974	10.0	1929	14.9	1905	9.9	1929	6.2	1898	5.9	1899	4.6	2009	4.2	2010	3.6	1977
59	3.2	1978	4.9	1902	7.2	1999	8.1	1900	10.2	1943	15.0	2004	9.9	1973	6.3	1938	6.1	1964	4.6	1935	4.2	1957	3.7	1946
60	3.2	1917	5.1	1930	7.4	1920	8.2	1924	10.3	1909	15.3	2011	10.0	1983	6.3	1967	6.3	1978	4.6	1982	4.2	1969	3.7	1916
61	3.4	2000	5.2	1982	7.5	1906	8.4	1958	10.7	1957	15.9	1918	10.4	1996	6.4	1972	6.4	1909	4.7	1910	4.3	1982	3.7	1951
62	3.8	1911	5.3	1904	7.6	1929	8.4	1932	11.0	2002	16.0	1898	10.7	1925	6.6	1996	6.4	1898	4.8	1930	4.3	1981	3.8	1947
63	3.8	2006	5.3	1975	7.6	1951	8.5	1968	11.1	1908	16.1	1930	11.2	2009	6.7	1941	6.5	1906	4.8	1969	4.4	1983	3.8	1967
64	3.8	1959	5.3	1918	7.7	1904	8.7	1910	11.3	1936	16.3	1960	11.8	1928	6.8	1922	6.5	1992	4.9	1931	4.5	1978	3.8	1995
65	4.0	1918	5.5	1922	7.8	1986	8.8	1994	11.3	1921	16.5	1954	12.2	1961	6.9	1919	6.6	1960	5.0	1925	4.6	1930	3.8	1919
66	4.0	1941	5.6	1951	7.8	2011	8.9	1992	11.4	1970	16.6	1932	12.6	1960	7.0	1979	6.9	1930	5.1	1913	4.6	1959	4.0	1959
67	4.0	1972	5.6	1936	7.8	2012	9.0	1907	11.5	1985	16.9	1938	13.2	1942	7.6	2008	6.9	2005	5.2	1954	4.8	1929	4.1	1971
68	4.1	1927	5.7	1898	8.3	1936	10.0	1975	11.6	1902	17.4	1964	13.2	1914	7.8	1960	6.9	1998	5.4	1987	4.9	1927	4.1	2010
69	4.3	1926	5.8	1988	8.5	1963	10.1	1986	11.6	1918	18.3	1974	13.3	1967	8.3	1906	7.2	1904	5.7	1970	4.9	1942	4.1	1975
70	4.3	1929	6.1	1952	8.6	1959	10.2	1942	11.8	1898	18.8	1916	13.4	1998	8.3	2005	7.2	1933	5.9	1957	5.1	1916	4.3	1970
71	4.3	1919	6.3	1966	8.6	1908	11.1	2012	11.8	1947	19.0	1929	13.4	1959	8.4	1924	7.8	1910	6.0	1898	5.1	1962	4.4	1917
72	4.3	1923	6.3	1932	8.6	1907	11.4	1962	12.4	2008	19.3	1962	13.6	1981	8.7	1954	7.8	1919	6.2	1906	5.4	1970	4.8	1911
73	4.4	1997	6.3	1955	8.7	1990	11.4	2007	12.4	1996	20.4	1944	14.0	2001	8.8	1918	8.0	1908	6.3	1920	5.6	2007	4.8	1965
74	4.4	1999	6.4	2009	8.8	1983	11.6	1923	12.5	1958	20.8	1957	14.3	1979	8.8	1977	8.1	1931	6.3	1901	5.6	1935	4.8	1901
75	4.5	1922	6.4	1925	8.9	1910	11.6	1959	13.5	1950	21.1	1928	14.4	1962	9.1	1925	8.3	1982	6.4	1996	6.0	1944	5.3	1904
76	4.5	1898	6.5	1903	8.9	1947	11.7	2008	13.7	1994	21.6	1977	14.5	1935	9.2	1962	8.4	1967	6.6	2011	6.0	1967	5.3	1907
77	4.6	1968	6.6	1997	9.5	1971	11.9	1928	13.8	1917	22.1	1987	14.6	1999	9.2	1945	8.5	1959	6.7	1944	6.0	1925	5.3	1902
78	4.6	1983	6.7	2001	9.9	1902	12.3	2001	14.0	1983	22.4	1993	14.9	1944	9.6	2009	8.9	1928	6.8	1949	6.2	1974	5.4	1903
79	4.7	1945	6.7	1927	10.1	1942	12.3	1905	14.4	1976	22.6	1969	15.8	1919	9.7	1942	8.9	1907	7.1	1912	6.4	1912	5.5	1900
80	4.7	1900	6.7	1945	10.3	1980	12.4	1929	14.7	1990	22.8	2009	16.5	1957	9.9	1995	9.4	1935	7.1	1904	6.6	1901	5.9	1983
81	4.8	1928	6.8	1921	10.3	1974	13.3	1902	15.3	1971	23.2	1975	16.7	1921	10.1	1973	9.5	1970	7.6	1914	6.6	1904	5.9	1969
82	4.9	1901	6.9	1908	10.6	1985	13.4	1976	16.2	1978	23.6	2010	17.3	1947	10.1	2007	10.0	1962	7.7	1962	6.6	1922	6.1	1978
83	4.9	1952	7.1	1942	10.8	1901	13.6	1952	16.3	1949	24.0	1961	17.4	1916	10.1	1948	10.0	1900	7.9	1908	6.7	1965	6.2	1981
84	5.0	1985	7.2	1920	10.9	2009	13.7	1961	16.5	1938	24.3	1925	17.6	1995	10.1	1987	10.0	1920	8.1	1958	6.9	1946	6.3	1968
85	5.1	1921	7.4	1979	11.5	1922	15.4	1997	17.0	1960	24.4	1965	18.2	1969	10.2	1920	10.1	1916	8.1	1942	6.9	1908	6.3	1920
86	5.2	1988	7.5	1929	11.5	1944	16.8	1917	18.9	1913	26.0	1996	18.4	1987	10.3	1900	10.4	2011	8.2	1900	7.2	1968	6.3	1898
87	5.5	1902	7.5	1983	11.5	2004	18.1	2009	19.6	1916	26.2	1999	18.5	2004	10.4	1923	10.7	1987	8.2	1927	7.3	1958	6.4	1921
88	5.5	2009	8.0	1926	13.0	1965	18.5	1904	20.7	1974	26.3	1907	20.5	1949	10.5	2004	10.8	1946	8.2	1911	7.9	1920	6.4	1984
89	5.6	1943	8.1	1994	13.1	1912	18.9	1915	21.0	1905	27.1	1970	20.8	2008	10.7	1928	11.2	1972	8.6	1921	8.0	1921	6.5	1899
90	5.7	2005	8.1	1959	13.1	1982	19.1	1906	21.3	1959	27.7	2005	21.8	1924	11.0	1904	11.3	1914	9.0	1919	8.2	1906	6.8	1905
91	5.7	1907	8.2	1906	13.3	1915	19.3	1918	21.3	1942	27.7	2007	22.2	1927	11.4	1917	11.4	2001	9.1	1918	8.5	1979	7.2	1942
92	5.8	1986	8.3	1987	14.5	1958	19.6	1913	21.6	1919	28.2	1902	23.7	1905	11.6	1990	11.5	2010	9.2	1946	9.5	1902	7.2	1982
93	5.9	1899	8.4	1999	15.4	1998	21.1	2010	21.8	1982	29.9	1919	23.8	1922	11.6	1921	12.2	1921	9.9	1968	9.6	1972	7.4	1913
94	6.0	1984	8.4	1986	15.4	2008	21.1	1916	23.4	1930	30.2	1924	24.6	1899	11.7	1981	12.6	1949	10.7	1905	9.8	1919	7.4	1961
95	6.0	1904	8.6	1911	16.2	1905	21.9	1922	24.0	2009	30.6	1899	24.6	1992	12.0	1986	13.6	1918	11.6	1903	9.9	1915	7.5	1931
96	6.2	1906	8.8	2010	16.4	1916	21.9	1978	24.3	1935	30.7	1984	25.0	1948	13.1	1982	13.6	1941	11.6	1923	9.9	2009	7.5	1972
97	6.3	1916	8.8	2008	16.5	1952	22.2	1901	24.6	1969	31.0	2008	26.9	1917	13.4	1902	13.6	2008	12.1	1965	10.4	1900	7.7	1915
98	6.3	1946	8.8	1943	16.5	2010	22.8	1998	24.8	1915	33.2	1941	28.0	2010	13.4	1908	14.7	1950	12.2	2005	10.5	1903	7.7	2009
99	6.5	1969	9.5	1960	16.6	1961	23.2	1969	25.0	2010	35.0	1942	28.1	1920	14.6	1916	14.8	1944	12.7	1951	10.5	1951	8.1	1987
100	6.7	1987	9.7	1971	16.7	1909	28.7	1920	25.5	1899	35.1	1923	29.1	1984	14.7	1927	15.7	1902	12.9	1967	11.1	1905	8.1	2011
101	6.9	1993	9.8	1937	17.5	1919	29.4	1999	26.4	1904	36.0	1949	29.7	1986	14.7	1905	16.1	1985	13.4	2008	11.1	1996	8.4	2008
102	7.0	1998	10.2	2005	18.0	2001	30.4	1947	27.7	1986	36.7	1904	31.6	1945	15.0	1998	16.3	1915	13.4	1926	11.2	2008	8.7	1985
103	7.1	1903	10.4	1969	18.9	1903	30.6	1983	28.6	1920	36.8	1945	32.3	1907	17.7	1899	17.6	1958	14.3	2007	12.1	1992	8.9	1941
104	7.1	1962	10.7	1919	20.1	1960	30.6	1980	28.6	1973	39.2	2001	33.3	1982	18.8	1958	17.8	1989	16.1	1950	12.9	1985	9.1	1928
105	7.2	1920	11.3	1998	20.9	1969	32.0	1919	29.1	1903	45.9	1982	33.4	1923	19.6	2010	21.4	1986	16.7	1959	13.8	1993	9.5	1909
106	7.4	1960	11.8	1984	21.1	1945	35.4	1979	29.2	1961	50.9	1935	33.6	1908	19.7	1985	21.8	1942	17.4	1915	14.3	1918	9.7	1996
107	7.9	1994	12.5	1915	21.3	1987	35.7	1927	31.5	1951	52.2	1995	37.5	1909	20.4	1968	21.9	1926	18.3	1977	15.5	1986	10.0	1997
108	7.9	1942	13.3	1907	21.6	1962	36.3	1960	32.4	1984	53.1	1967	37.6	1958	23.2	1944	22.9	1905	20.2	1993	16.6	1941	10.5	2007
109	8.3	2008	14.6	1916	22.3	1984	36.8	1984	35.3	1999	55.2	1917	37.7	1965	23.9	1992	23.3	1965	20.6	1902	17.0	1928	11.5	1998
110	9.1	1949	14.9	1985	23.6	1949	38.3	1912	35.5	1944	57.0	1947	40.3	1950	24.5	1950	23.5	1973	21.8	1961	17.2	1909	12.0	1918
111	9.2	1932	17.5	1974	24.2	1948	39.3	1945	41.4	1987	59.0	1943	43.6	1904	24.6	1907	24.6	1961	22.9	1998	17.3	1977	12.3	1993
112	14.4	1973	20.3	1993	24.2	1978	40.2	1987	42.9	2007	66.1	1915	51.2	1902	25.6	1951	25.2	1903	40.9	1986	25.0	1931	13.2	1986
113	14.4	2010	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
114	17.4	1910	24.4	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
115	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

Plate 18. St. Joseph to Kansas City Ranking of Average Monthly Flows

Kansas City, Missouri to Waverly, Missouri
Ranking of Average Monthly Flows (kcfs)

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	-1.4	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	-0.8	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	-0.7	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	-0.4	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	-0.4	1954	-0.5	1959	-0.4	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	1958	-0.2	1958	-0.2	1958	-0.2	1944	-0.2	2005	-0.2	1958	-0.2	1958	-0.2	1958	-0.2	1958	-0.2	1977
11	-0.2	1983	-0.5	1953	-0.2	1944	-0.2	1966	-0.2	1944	-0.2	1958	-0.2	1944	-0.1	1966	-0.2	1944	-0.2	1944	-0.2	1966	-0.2	1963
12	-0.2	1992	-0.4	1959	-0.2	1966	0.0	1957	-0.1	1966	-0.2	1966	-0.2	1958	-0.1	1944	-0.2	1966	-0.2	1966	-0.2	1944	-0.1	1949
13	-0.2	1938	-0.3	1956	0.0	1957	0.0	1944	0.0	1957	0.0	1957	-0.1	1966	-0.1	1957	-0.1	1957	-0.1	2007	-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	2003	0.0	1973	0.0	1983	-0.1	1957	0.0	1952	-0.1	1991
15	-0.1	1956	0.0	1943	0.0	1910	0.0	1976	0.0	1926	0.0	1976	0.0	1957	0.0	1948	0.0	1976	0.0	2002	0.0	1982	0.0	1958
16	-0.1	1931	0.0	2006	0.0	1976	0.0	1950	0.0	1971	0.0	1913	0.0	1945	0.0	1983	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	0.0	1976	0.0	1976	0.0	1948	0.0	1953	0.0	1939	0.0	1979
18	-0.1	1977	0.0	1932	0.1	1918	0.0	1971	0.1	1941	0.0	1911	0.0	1911	0.0	2007	0.0	1955	0.0	1983	0.0	1945	0.0	1959
19	0.0	1969	0.0	1945	0.1	1941	0.1	1917	0.1	1939	0.0	1945	0.0	1913	0.0	1971	0.0	1987	0.0	1940	0.0	1976	0.0	1983
20	0.0	1940	0.0	1954	0.1	1964	0.1	1955	0.1	1913	0.1	1971	0.0	1920	0.0	1945	0.0	1971	0.0	1948	0.0	1969	0.1	1940
21	0.1	1991	0.0	1934	0.1	1928	0.1	1948	0.1	1914	0.1	1901	0.0	1918	0.0	1911	0.1	1901	0.0	1964	0.0	1963	0.1	1945
22	0.1	1942	0.1	1931	0.1	1968	0.1	1930	0.1	1988	0.1	1918	0.0	1901	0.0	1901	0.1	1950	0.0	1976	0.0	1933	0.1	1937
23	0.1	1996	0.1	1946	0.1	1971	0.1	1907	0.1	1934	0.1	1925	0.1	1971	0.0	1918	0.1	1941	0.0	1945	0.0	1971	0.1	1930
24	0.1	1917	0.1	1950	0.1	1938	0.1	1915	0.1	1976	0.1	1920	0.1	1948	0.0	1903	0.1	1952	0.0	1912	0.1	1916	0.1	1912
25	0.1	1979	0.1	1947	0.2	1977	0.2	1934	0.1	1901	0.1	1900	0.1	1914	0.0	1913	0.1	1953	0.0	1918	0.1	1901	0.1	1939
26	0.1	1933	0.1	1902	0.2	1940	0.2	1941	0.1	2003	0.1	1988	0.1	1925	0.0	1912	0.1	1972	0.0	1982	0.1	1913	0.1	1916
27	0.1	1935	0.1	1922	0.2	1975	0.2	1968	0.2	1906	0.2	1905	0.1	1930	0.1	1941	0.1	1963	0.1	1939	0.1	1987	0.1	1901
28	0.2	1905	0.1	1913	0.2	1907	0.2	1940	0.2	1902	0.2	1902	0.1	1991	0.1	1962	0.1	1912	0.1	1901	0.1	1962	0.2	1953
29	0.2	1902	0.1	1900	0.2	1914	0.2	1988	0.2	1900	0.2	1922	0.1	1941	0.1	1987	0.1	1913	0.1	1913	0.1	1930	0.2	1920
30	0.2	1930	0.1	1905	0.2	1991	0.2	1919	0.2	1911	0.2	1948	0.1	1987	0.1	1970	0.1	1939	0.1	1963	0.1	1936	0.2	1899
31	0.2	1900	0.1	1939	0.2	1967	0.2	1900	0.2	1945	0.2	1937	0.1	1907	0.1	1916	0.1	1930	0.1	1971	0.1	1980	0.3	1938
32	0.2	1914	0.2	1938	0.2	1963	0.3	1918	0.3	1918	0.2	1972	0.2	1934	0.1	1914	0.2	1900	0.1	1916	0.1	1940	0.3	1966
33	0.2	1920	0.2	1933	0.2	1972	0.3	1899	0.3	1903	0.2	1934	0.2	1955	0.1	1900	0.2	1940	0.1	1991	0.1	1970	0.3	1904
34	0.2	1921	0.2	1991	0.2	1902	0.3	1923	0.3	1940	0.2	1987	0.2	1988	0.1	1923	0.2	1968	0.1	1938	0.1	1914	0.3	1910
35	0.2	1954	0.2	1961	0.2	1939	0.3	1977	0.3	1963	0.2	1955	0.2	1970	0.1	1934	0.2	1937	0.1	1941	0.1	1912	0.3	1918
36	0.2	1944	0.2	1960	0.3	1934	0.3	2012	0.4	1950	0.3	1950	0.2	1972	0.1	1930	0.2	1979	0.1	1947	0.1	1943	0.3	1921
37	0.3	1919	0.2	1919	0.3	1955	0.3	1972	0.4	1923	0.3	1930	0.2	1900	0.1	1947	0.2	1990	0.2	1932	0.1	1932	0.3	1914
38	0.3	1924	0.2	1899	0.3	1953	0.4	1905	0.4	1977	0.3	1960	0.2	1917	0.1	1899	0.2	1934	0.2	1955	0.1	1950	0.3	1960
39	0.3	1912	0.2	1917	0.3	1931	0.4	1974	0.4	1930	0.3	2003	0.2	1968	0.1	1927	0.2	1918	0.2	1933	0.1	1937	0.3	1929
40	0.3	1911	0.2	2007	0.3	1930	0.4	2003	0.4	1925	0.3	1963	0.2	1980	0.2	1967	0.2	1980	0.2	1930	0.1	1938	0.3	1988
41	0.3	1928	0.2	1964	0.3	1909	0.4	1910	0.5	1905	0.3	1921	0.2	1950	0.2	1936	0.2	2002	0.2	1943	0.2	1918	0.3	1919
42	0.3	1984	0.2	1920	0.4	1933	0.4	1929	0.5	1947	0.3	1940	0.2	1912	0.2	1933	0.2	1943	0.2	1980	0.2	1910	0.4	1957
43	0.3	1957	0.2	1976	0.4	1916	0.5	1937	0.5	1937	0.3	1941	0.2	1923	0.2	1907	0.3	1927	0.2	1960	0.2	1899	0.4	1917
44	0.3	1959	0.2	1901	0.4	1924	0.5	1931	0.5	1979	0.4	1933	0.2	1933	0.2	1939	0.3	1916	0.2	1917	0.2	1920	0.4	1903
45	0.3	1899	0.2	1918	0.4	1919	0.5	1938	0.5	1967	0.4	1938	0.3	1936	0.2	1963	0.3	1911	0.2	1934	0.2	1904	0.4	1970
46	0.3	1904	0.3	1921	0.4	2006	0.5	1911	0.5	1955	0.4	1968	0.3	1940	0.2	1920	0.3	1906	0.2	1899	0.2	1979	0.4	1933
47	0.3	1948	0.3	1914	0.4	1904	0.5	1933	0.5	1968	0.4	1907	0.3	1963	0.2	1972	0.3	1933	0.2	1923	0.2	1921	0.4	1900
48	0.4	1922	0.3	2004	0.5	1911	0.6	1898	0.6	1915	0.4	1899	0.3	1939	0.2	1980	0.3	1929	0.2	1909	0.2	1968	0.4	1913
49	0.4	1913	0.3	1951	0.5	1921	0.6	1906	0.6	1922	0.5	1898	0.3	1931	0.2	2003	0.3	1919	0.2	1937	0.2	1917	0.5	1950
50	0.4	1918	0.3	1904	0.5	1948	0.6	1924	0.6	1917	0.5	1939	0.3	1906	0.2	1926	0.3	1907	0.2	1987	0.2	1955	0.5	1898
51	0.4	1901	0.3	1907	0.5	1950	0.7	1982	0.7	1938	0.5	2006	0.3	1903	0.2	1910	0.4	1982	0.3	1950	0.2	1911	0.5	1924
52	0.4	1903	0.4	2003	0.5	1988	0.7	1939	0.7	1920	0.6	1978	0.3	1899	0.2	1940	0.4	1936	0.3	1990	0.3	1941	0.5	1915
53	0.4	1989	0.4	1929	0.5	1996	0.7	1925	0.7	1972	0.6	2012	0.4	1942	0.3	1925	0.4	1960	0.3	1920	0.3	1898	0.5	1955
54	0.4	1997	0.4	1912	0.5	2003	0.7	1962	0.7	1975	0.6	1909	0.4	1916	0.3	1906	0.4	1947	0.3	1907	0.3	1915	0.5	1990
55	0.4	1923	0.4	1923	0.5	1908	0.7	1970	0.7	1960	0.6	1923	0.4	1927	0.3	1919	0.4	1917	0.3	1908	0.3	1907	0.5	1907
56	0.5	1936	0.4	1898	0.5	1925	0.7	1991	0.7	1933	0.7	1942	0.4	1898	0.3	1909	0.4	1938	0.3	1979	0.3	1924	0.6	1965

57	0.5	1990	0.4	1996	0.6	1923	0.8	1935	0.7	1970	0.7	1936	0.5	1953	0.3	1953	0.5	1962	0.3	1968	0.3	1906	0.6	1956
58	0.5	1927	0.4	1911	0.6	1901	0.8	1901	0.8	1931	0.8	1975	0.6	1975	0.3	1935	0.5	1899	0.3	1972	0.3	1927	0.6	1905
59	0.5	1950	0.4	1910	0.6	1983	0.8	1909	0.8	1924	0.8	1912	0.6	1974	0.3	1988	0.5	1909	0.3	1921	0.3	1923	0.6	1922
60	0.5	1964	0.5	1967	0.6	1905	0.8	1936	0.8	1980	0.8	1931	0.6	1962	0.3	1922	0.5	1923	0.3	1936	0.3	1953	0.6	1943
61	0.5	1929	0.5	1963	0.6	1982	0.8	1903	0.8	1936	0.9	1917	0.6	1922	0.3	1929	0.5	2005	0.3	1975	0.3	1988	0.6	1974
62	0.5	1951	0.6	1908	0.6	1899	0.9	1942	0.9	1899	1.0	1926	0.6	1926	0.3	1898	0.5	1935	0.3	1929	0.3	1947	0.6	1911
63	0.5	1943	0.6	1979	0.6	2005	0.9	1914	1.0	1942	1.0	1979	0.6	1990	0.3	1917	0.5	1991	0.3	1906	0.3	1975	0.6	2006
64	0.5	2009	0.6	1927	0.7	1945	1.0	1913	1.0	1909	1.1	1952	0.6	1943	0.3	1960	0.5	1932	0.3	1915	0.3	1900	0.7	1964
65	0.5	1909	0.7	1957	0.7	1913	1.0	1945	1.1	1916	1.1	1973	0.6	1905	0.4	1991	0.6	1978	0.4	2003	0.4	2007	0.7	2005
66	0.5	1915	0.7	1903	0.7	1942	1.0	1932	1.1	1908	1.1	1908	0.6	1919	0.4	1979	0.6	1942	0.4	1900	0.4	1903	0.7	1962
67	0.5	1898	0.7	1925	0.7	1926	1.1	1989	1.2	1921	1.2	1977	0.7	2006	0.4	1968	0.6	1967	0.4	1922	0.4	1983	0.7	1906
68	0.5	1949	0.7	1988	0.7	1920	1.2	1964	1.2	1928	1.2	1983	0.8	1910	0.4	1955	0.6	1964	0.4	1924	0.4	1934	0.7	1927
69	0.6	2007	0.7	1924	0.7	1935	1.2	1921	1.2	1907	1.3	1919	0.8	1902	0.4	1908	0.7	1908	0.4	1911	0.4	1902	0.8	1948
70	0.6	2003	0.7	1966	0.8	1900	1.2	1908	1.3	1982	1.4	1974	0.8	1938	0.4	1942	0.7	1931	0.4	1898	0.4	1922	0.8	1999
71	0.6	1970	0.8	1942	0.8	1943	1.2	1916	1.4	1965	1.4	1910	0.9	1960	0.5	1931	0.7	1925	0.4	1931	0.4	1909	0.8	1973
72	0.6	2006	0.8	1992	0.8	1932	1.2	1979	1.4	1912	1.5	1970	0.9	1983	0.5	1902	0.7	1922	0.4	1978	0.4	1925	0.8	1967
73	0.6	1925	0.9	1958	0.8	1915	1.2	1943	1.4	1991	1.5	1962	0.9	1921	0.5	1921	0.7	1898	0.5	1928	0.4	1978	0.8	1934
74	0.6	1908	0.9	1906	0.9	1906	1.3	1960	1.5	1951	1.6	1932	0.9	2012	0.5	1938	0.8	1904	0.5	1988	0.4	1960	0.9	1932
75	0.7	1937	0.9	1909	0.9	1898	1.3	1996	1.5	1932	1.6	1980	1.0	1937	0.5	1924	0.8	1924	0.6	2012	0.4	1908	0.9	1935
76	0.7	1926	0.9	1935	0.9	1989	1.3	2006	1.5	2006	1.6	1924	1.0	2002	0.5	1904	0.8	2000	0.6	1903	0.5	1972	0.9	1909
77	0.7	1910	0.9	1989	1.0	1937	1.3	1987	1.5	1910	1.7	2004	1.0	1932	0.5	1950	0.8	1988	0.6	1919	0.5	2012	0.9	1989
78	0.8	1975	1.0	2000	1.1	1987	1.4	1920	1.5	1919	1.8	1927	1.1	1979	0.5	1964	0.9	1910	0.7	1935	0.5	1929	1.0	2012
79	0.8	1941	1.0	1969	1.1	1936	1.5	2005	1.7	1904	1.8	1961	1.2	1967	0.6	1928	0.9	2006	0.7	1925	0.5	1965	1.0	1926
80	0.9	1946	1.0	1980	1.1	1969	1.6	1980	1.7	1969	2.0	1903	1.3	1908	0.6	1978	1.0	1920	0.7	1914	0.5	1926	1.0	2000
81	0.9	2000	1.1	1915	1.1	1951	1.6	1904	1.8	1898	2.0	1928	1.3	1928	0.6	1937	1.0	1975	0.7	1910	0.6	2005	1.0	1908
82	0.9	1961	1.1	1930	1.2	1927	1.6	1965	1.9	1962	2.0	1989	1.3	1977	0.7	1943	1.1	1974	0.7	1995	0.6	1991	1.0	1923
83	0.9	1967	1.2	1936	1.2	1903	1.6	1926	1.9	1989	2.0	1992	1.4	1952	0.7	1932	1.2	2007	0.8	2005	0.6	2002	1.1	2002
84	0.9	1976	1.2	1948	1.2	1960	1.7	1912	1.9	1953	2.1	1991	1.4	1915	0.7	1952	1.3	1914	0.8	1962	0.7	1905	1.1	2008
85	1.0	1968	1.2	1986	1.2	1979	1.7	2004	2.0	1964	2.1	1904	1.4	1964	0.7	1974	1.3	1903	0.8	1951	0.8	1967	1.1	1942
86	1.0	1963	1.3	1928	1.4	1922	1.9	1969	2.1	1983	2.2	1929	1.4	1978	0.7	2012	1.5	2012	0.8	1902	0.8	1919	1.2	1941
87	1.0	2011	1.3	1926	1.5	1912	2.0	1975	2.1	1943	2.2	1916	1.5	1929	0.8	1975	1.5	2009	0.8	1942	0.9	2003	1.2	2010
88	1.0	1955	1.4	1941	1.5	1947	2.2	2000	2.2	2012	2.5	2011	1.7	1924	0.8	1969	1.5	2011	0.9	1974	0.9	2006	1.2	1902
89	1.1	1988	1.4	2012	1.7	1978	2.2	1928	2.2	1992	2.6	1994	1.8	1904	1.0	1905	1.6	1902	1.0	1905	0.9	1990	1.3	1946
90	1.2	2004	1.5	1955	1.9	1994	2.3	1990	2.3	1929	2.6	1965	1.9	2011	1.0	1977	1.6	2003	1.0	1994	0.9	1964	1.3	1925
91	1.4	1906	1.5	1916	2.1	1992	2.4	1978	2.3	2000	2.8	1964	2.0	2007	1.1	2002	1.6	1970	1.1	1904	1.0	1935	1.3	1947
92	1.4	1932	1.5	1968	2.2	1962	2.4	1967	2.4	1978	2.9	1953	2.0	1909	1.1	1965	1.7	1999	1.1	1977	1.1	1942	1.4	1928
93	1.4	1974	1.6	2009	2.2	2004	2.6	1947	2.6	1994	2.9	2007	2.1	2004	1.2	2006	2.0	1995	1.1	1999	1.2	2010	1.4	1980
94	1.4	1965	1.7	1965	2.2	1980	2.8	1953	3.0	2005	3.0	2002	2.1	1989	1.3	1961	2.1	1921	1.2	2011	1.3	1974	1.5	1961
95	1.4	2001	1.7	1990	2.3	2002	3.2	1951	3.1	1998	3.0	1982	2.1	1982	1.5	1915	2.1	1992	1.3	1965	1.3	2008	1.5	1997
96	1.5	1960	1.7	1975	2.4	1929	3.8	2011	3.5	1927	3.1	1915	2.2	2001	1.5	1990	2.1	1994	1.4	1970	1.4	1999	1.5	1978
97	1.5	1966	1.7	1949	2.7	2000	3.9	2007	3.6	1952	3.4	1947	2.4	1947	1.5	1994	2.2	1928	1.4	2006	1.4	1977	1.5	1981
98	1.6	1971	1.9	2010	2.8	1993	4.3	1995	3.7	1935	4.3	1943	2.4	1935	1.5	1992	2.2	1973	1.6	2008	1.5	1951	1.6	1931
99	1.8	1995	2.1	1998	2.9	1990	4.3	1922	3.9	1961	4.5	1998	2.7	1973	1.8	1997	2.2	1969	1.7	1967	1.6	1931	1.7	2009
100	2.0	1999	2.2	1973	3.0	1974	4.5	2002	4.0	2004	4.6	1969	2.9	2009	1.9	1951	2.7	1915	1.8	1926	1.7	2011	1.7	2001
101	2.1	2002	2.6	1995	3.3	1995	4.7	2010	4.2	2001	4.7	2000	2.9	1994	1.9	1989	2.7	1996	1.9	2000	1.7	1989	1.7	2004
102	2.2	1998	2.7	1952	3.3	2011	4.8	1961	4.2	2011	4.9	1967	3.4	1961	2.0	2001	2.9	2004	1.9	1989	1.7	2009	1.8	2003
103	2.2	1994	2.7	2011	3.4	2008	5.1	1992	4.4	1973	4.9	2009	3.6	1997	2.0	1999	3.1	1997	1.9	2009	2.2	1995	1.8	1971
104	2.3	2012	2.9	1994	3.6	1952	5.2	1983	4.5	2008	5.4	1935	3.7	2008	2.2	2005	3.3	1905	2.0	1927	2.4	1973	2.0	2011
105	2.4	1907	3.5	1999	3.6	2007	5.6	2008	4.9	2009	5.5	1951	4.0	2000	2.6	2000	3.8	2001	2.1	1961	2.7	2004	2.1	1944
106	2.4	1916	3.9	1993	3.7	1965	5.6	1927	6.2	2007	5.7	2005	4.1	2010	2.6	2009	3.9	1989	2.1	2004	2.8	1994	2.2	2007
107	2.6	2010	4.0	2002	4.1	2010	5.8	2001	7.6	1993	6.0	1997	4.4	1969	2.6	1982	3.9	1926	2.4	1992	2.9	1997	2.3	1982
108	2.7	2008	4.2	1962	4.1	1961	6.2	1973	8.3	2010	7.0	2001	5.1	1999	2.9	2004	4.4	1951	2.6	2010	3.0	2000	2.6	1951
109	2.8	1952	4.2	1974	4.2	2012	6.9	1952	9.3	1997	7.9	1990	5.6	1998	3.0	1996	5.2	1965	2.6	1969	3.4	2001	2.7	1972
110	3.0	1962	4.4	1937	4.2	1999	6.9	2009	9.4	1974	8.4	2008	6.7	1992	3.3	2008	5.6	2008	3.4	1997	3.8	1928	3.0	1994
111	3.2	2005	4.4	2005	4.3	1998	7.0	1994	10.4	1996	8.7	1993	7.8	1965	3.4	2010	5.7	1993	3.8	1996	4.3	1996	3.1	1995
112	3.6	1985	4.7	2001	4.3	2001	7.1	1998	11.1	1990	9.6	1999	7.8	1996	3.4	1998	6.5	1961	4.6	2001	5.0	1993	3.6	1993
113	4.0	1973	7.6	1997	5.1	2009	7.8	1997	11.7	2002	10.8	2010	8.2	1995	3.7	2011	7.1	2010	5.0	1973	6.5	1961	4.5	1996
114	4.5	1982	7.9	2008	5.8	1997	8.1	1993	15.5	1999	11.9	1996	18.7	1951	3.7	1995	7.2	1977	5.1	1993	6.8	1992	5.5	1998
115	5.5	1993	12.1	1982	6.3	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

Plate 19. Kansas City to Waverly Ranking of Average Monthly Flows

Waverly, Missouri to Boonville, Missouri
Ranking of Average Monthly Flows (kcfs)

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	0.4	1956	0.4	1956	0.4	1988	0.5	1918	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	1918	0.5	1901	0.2	1987	0.4	1933	0.1	1937
4	0.1	1954	0.4	1957	0.8	1964	1.0	2006	0.9	1934	0.5	1914	0.5	1911	0.5	1901	0.6	1966	0.2	1948	0.4	1939	0.2	1948
5	0.2	1931	0.6	1940	0.9	2000	1.0	1917	1.0	1914	0.5	1913	0.5	1920	0.5	1913	0.6	1954	0.2	1963	0.4	1963	0.3	1956
6	0.3	1956	0.7	1938	1.0	1918	1.5	1989	1.0	1913	0.6	1956	0.8	1936	0.5	1903	0.8	1953	0.3	1937	0.5	1943	0.4	1954
7	0.3	1934	0.8	1964	1.0	1917	1.8	1977	1.4	1941	0.9	1934	0.9	1934	0.5	1911	0.8	1976	0.5	1964	0.6	1937	0.4	1939
8	0.4	1944	0.8	1931	1.4	1928	1.8	1996	1.4	1901	1.0	1918	0.9	1925	0.5	1936	0.8	1988	0.5	1912	0.7	1955	0.5	1963
9	0.4	1964	0.9	1939	1.4	2003	1.9	1936	1.4	1989	1.0	1901	0.9	1914	0.5	2003	0.9	2006	0.5	1918	0.7	1930	0.7	1960
10	0.5	1981	0.9	2006	1.5	1934	1.9	1954	1.7	1980	1.1	1977	1.0	1977	0.6	1948	1.0	1912	0.5	1939	0.8	1953	0.8	1933
11	0.5	2006	1.1	1922	1.9	1954	2.0	1915	1.9	1906	1.4	1963	1.0	1989	0.7	2012	1.0	1913	0.6	1976	1.0	1916	0.8	1950
12	0.6	2000	1.1	1902	2.0	2002	2.0	1907	1.9	1902	1.5	1933	1.0	1988	0.7	1963	1.0	1939	0.6	1953	1.0	1901	0.9	1953
13	0.6	1959	1.3	2003	2.0	1941	2.0	2003	2.0	1964	1.5	1920	1.1	1985	0.9	1930	1.0	1948	0.7	1978	1.0	1913	1.0	1912
14	0.6	1957	1.5	2000	2.0	1968	2.2	1963	2.4	1900	1.5	1925	1.2	2006	1.0	1976	1.0	1997	0.7	1988	1.0	2002	1.0	2005
15	0.7	1979	1.6	1900	2.2	2006	2.5	1971	2.5	1939	1.5	1900	1.3	1931	1.1	2006	1.2	1940	0.7	1979	1.0	1964	1.1	1943
16	0.7	1936	1.6	1905	2.3	1977	2.5	1934	2.8	2000	1.5	1936	1.3	1938	1.1	1975	1.2	2000	0.8	1975	1.1	1940	1.3	1936
17	0.7	1939	1.6	1913	2.4	1989	2.9	1955	2.9	1911	1.7	2012	1.4	1963	1.1	1953	1.2	1971	0.8	2006	1.1	1938	1.4	1929
18	0.8	1938	1.7	1947	2.7	1981	3.0	1943	3.1	1992	2.0	1905	1.4	1976	1.2	1941	1.2	1955	0.8	1947	1.1	1954	1.4	1938
19	0.9	1989	1.8	1989	2.9	1938	3.0	1930	3.3	1977	2.0	1922	1.4	1907	1.3	1988	1.3	2012	0.8	1994	1.2	2006	1.4	2002
20	0.9	1917	1.8	1976	3.0	1996	3.0	1900	3.4	1918	2.0	1902	1.4	1980	1.3	1947	1.3	1930	0.9	1995	1.3	1959	1.4	1916
21	1.0	1961	1.9	1967	3.0	1970	3.0	1919	3.4	1903	2.0	1971	1.6	1994	1.3	1934	1.4	1991	1.0	1940	1.3	1948	1.4	1901
22	1.0	1951	2.1	1933	3.2	1930	3.1	1962	3.4	1985	2.2	1987	1.6	2012	1.3	1945	1.4	1938	1.0	1901	1.3	1949	1.4	1995
23	1.0	1953	2.2	1917	3.3	1967	3.4	1940	3.6	1936	2.4	1992	1.7	1954	1.5	1923	1.4	1937	1.0	1913	1.3	2012	1.5	1940
24	1.0	1977	2.2	1899	3.4	1907	3.5	1923	3.9	1949	2.5	1989	1.8	1940	1.5	1900	1.4	2002	1.1	1930	1.3	1995	1.6	1962
25	1.2	1980	2.2	1919	3.4	1914	3.5	1899	4.0	1932	3.1	1961	1.8	1970	1.5	1914	1.4	1900	1.1	1952	1.3	1936	1.6	1930
26	1.3	2003	2.3	1980	3.6	1933	3.5	1918	4.3	1923	3.1	1940	1.9	1917	1.5	1916	1.5	1947	1.1	1932	1.3	1975	1.6	1958
27	1.3	1930	2.4	1981	3.6	1931	3.6	1948	4.5	1965	3.2	1953	1.9	2005	1.7	1971	1.6	1968	1.1	1950	1.5	1988	1.8	1945
28	1.4	1902	2.4	1977	3.7	1995	3.8	1958	4.6	1940	3.2	1972	1.9	1900	1.7	1942	1.8	1994	1.2	1991	1.6	2001	1.8	1988
29	1.4	1905	2.4	1963	3.9	1902	4.0	1935	4.7	1962	3.7	1957	2.0	1930	1.9	1949	1.8	1932	1.2	1974	1.6	1989	1.9	2001
30	1.5	1997	2.6	1920	4.1	1988	4.0	1941	4.8	1954	3.8	1968	2.0	1933	1.9	1938	1.8	2005	1.3	1972	1.6	1966	1.9	1920
31	1.6	1967	2.7	1901	4.1	1966	4.3	1957	5.3	1925	3.8	1983	2.0	1997	1.9	2002	1.9	1946	1.3	1960	1.6	1945	1.9	1976
32	1.6	2002	2.7	1918	4.2	1943	5.0	1974	5.3	1957	4.0	1921	2.1	1971	1.9	1899	1.9	1918	1.4	1935	1.6	1932	2.0	1935
33	1.7	1996	2.7	1978	4.4	1980	5.0	1933	5.3	1931	4.1	1937	2.2	1959	2.0	1935	1.9	1990	1.4	2003	1.8	2000	2.1	1978
34	1.7	1945	3.2	1953	4.7	1972	5.0	1905	5.8	2006	4.2	2006	2.3	1923	2.1	1931	2.1	1943	1.4	1943	1.9	1952	2.1	2012
35	1.8	1994	3.2	1921	4.7	2005	5.1	1937	5.8	1905	4.3	1980	2.4	1912	2.1	1994	2.2	1935	1.4	2012	2.0	1914	2.1	1966
36	1.8	2012	3.2	1914	5.2	1932	5.3	1950	5.9	1955	4.7	1955	2.4	1972	2.1	1927	2.3	1927	1.4	1980	2.0	1912	2.2	1952
37	1.8	1900	3.3	1966	5.5	1950	5.4	1972	6.0	1971	4.9	1986	2.4	1964	2.2	1991	2.3	1952	1.5	1916	2.1	1999	2.4	1899
38	1.8	1920	3.3	1944	5.7	1940	5.7	2004	6.3	1948	5.0	1930	2.6	1983	2.2	1954	2.3	1975	1.5	2000	2.1	1962	2.5	1969
39	1.8	1921	3.6	1987	5.9	1909	5.8	1988	6.3	1967	5.3	1994	2.6	1944	2.2	1997	2.4	1967	1.6	1971	2.1	2003	2.6	1999
40	1.8	1914	3.8	1970	6.4	1916	5.8	1966	6.4	1963	5.5	1907	2.6	2002	2.2	1974	2.4	1906	1.7	1938	2.1	1950	2.7	1964
41	2.3	1966	3.8	1972	6.4	1924	6.0	1949	6.5	1930	5.5	1899	2.8	2003	2.2	1972	2.4	1916	1.7	1966	2.2	1947	2.8	1904
42	2.3	1919	3.9	2004	6.9	1919	6.0	1929	6.8	1915	5.6	1976	2.9	1955	2.4	1989	2.4	1911	1.8	1990	2.3	1944	2.8	1918
43	2.3	1912	3.9	2002	7.0	1955	6.0	1910	6.9	1950	5.6	1946	2.9	1962	2.4	1907	2.4	1958	1.8	1968	2.3	2007	2.8	1910
44	2.3	1911	4.1	1996	7.4	1904	6.3	1981	7.1	1987	5.7	2003	3.1	1952	2.5	1937	2.5	1962	2.0	2002	2.4	2005	2.8	1921
45	2.3	1988	4.1	1904	7.7	1960	6.7	1985	7.3	1966	5.9	1898	3.1	1956	2.5	1957	2.5	1950	2.2	1992	2.5	1980	2.8	1914
46	2.3	2011	4.4	1907	7.9	1911	7.0	1911	7.6	1922	6.5	1944	3.2	1975	2.7	1983	2.7	1974	2.5	2005	2.5	1990	3.1	2010
47	2.4	1924	4.5	1929	7.9	1921	7.1	1932	7.7	1917	6.5	1991	3.2	1941	2.7	1956	2.7	2007	2.5	1933	2.5	1920	3.1	2007
48	2.4	1958	4.5	1946	8.1	1953	7.1	1980	8.0	1968	6.7	1938	3.2	1903	2.7	1969	2.7	1929	2.8	1999	2.5	1899	3.2	1981
49	2.6	1928	4.6	1912	8.5	1935	7.2	1987	8.2	1920	7.0	1909	3.3	1899	2.9	1966	2.7	1979	2.8	1996	2.5	1910	3.3	1919
50	2.6	1990	4.8	1923	8.8	1925	7.3	1990	8.6	1947	7.0	1997	3.3	1906	2.9	1920	2.9	1933	2.9	1942	2.5	1918	3.4	2000
51	2.6	1947	4.9	1932	8.8	1908	7.6	1946	9.2	1958	7.9	1952	3.6	1966	3.0	1977	2.9	1987	2.9	1917	2.5	1904	3.4	2006
52	2.7	2007	5.0	1898	9.1	1976	7.6	1938	9.6	2003	8.0	1923	3.6	1957	3.1	1967	2.9	1907	3.1	1944	2.6	1997	3.5	1996
53	2.8	1899	5.0	1968	9.2	1992	8.5	1906	9.6	1924	8.1	1954	3.7	1916	3.1	1955	2.9	1919	3.2	2001	2.8	1996	3.5	1990
54	2.8	1904	5.3	1911	9.3	1923	8.5	1924	10.1	2005	8.8	1932	3.9	1939	3.2	1933	2.9	1960	3.4	1946	3.0	1917	3.6	1989
55	2.8	1948	5.4	1910	9.3	1901	8.5	1898	10.4	1975	9.0	1941	3.9	1953	3.2	1943	2.9	1985	3.4	1909	3.0	1921	3.7	1972
56	3.2	1922	5.4	1995	9.9	1969	9.0	2002	10.6	1899	9.2	1931	4.1	1932	3.3	2000	3.1	1995	3.4	1899	3.0	1965	3.8	1917

57	3.2	1913	5.5	1961	10.0	1986	9.1	2005	11.0	2012	9.4	1959	4.1	2000	3.3	1926	3.2	1957	3.4	1923	3.3	1971	3.8	1903
58	3.2	1901	5.5	1990	10.0	1936	9.4	1952	11.3	1952	9.4	2000	4.1	1927	3.4	1910	3.3	1972	3.6	1934	3.5	1957	4.0	1946
59	3.2	1918	5.6	1941	10.1	2007	9.5	1925	11.5	1959	9.4	1965	4.2	1943	3.5	1960	3.3	1944	3.6	2011	3.5	1979	4.0	1959
60	3.3	1903	5.8	1952	10.3	1905	9.6	1986	11.7	1933	9.7	1962	4.2	2011	3.7	1962	3.3	1983	3.7	1981	3.6	1960	4.1	1968
61	3.7	1923	5.9	2009	10.4	1991	9.9	1931	12.2	2004	9.8	1978	4.3	1898	3.9	1909	3.4	1941	3.9	1983	3.6	1987	4.1	1965
62	4.0	1978	5.9	2012	10.4	1951	10.5	1901	12.4	1976	9.8	1985	4.7	1950	3.9	1906	3.6	2001	4.1	1997	3.8	2011	4.1	1994
63	4.1	1968	6.0	1958	10.8	1899	11.0	1995	12.4	1951	9.9	1912	4.8	1968	3.9	1919	3.7	1996	4.1	2007	4.0	1911	4.2	1913
64	4.2	1927	6.2	1960	11.2	1994	11.0	1909	12.5	1909	10.5	1917	5.5	1948	3.9	1925	3.9	1917	4.4	1908	4.1	1991	4.3	1900
65	4.3	1929	6.9	1984	11.8	1913	11.5	1903	12.5	1953	10.6	1975	5.7	1922	4.2	1946	4.3	1899	4.4	1920	4.4	1942	4.6	1949
66	4.4	1972	7.2	1908	11.8	1926	11.8	1942	12.6	1972	10.7	1958	5.7	1926	4.3	1952	4.3	1936	4.4	1907	4.5	1968	4.7	1898
67	4.5	1987	7.4	1948	12.3	1920	12.4	1982	12.6	1938	11.0	2002	5.7	1946	4.3	1965	4.3	1923	4.6	1945	4.6	1907	4.7	1924
68	4.5	1992	7.5	1927	12.3	1974	12.5	1914	12.8	1969	11.1	1960	5.7	1937	4.5	2007	4.4	1909	4.7	1965	4.6	1924	4.8	1915
69	4.6	2004	7.7	1992	12.6	1963	12.9	1964	13.0	1979	12.3	1979	5.9	1974	4.7	1961	4.4	1934	4.9	2004	4.6	1898	5.1	1974
70	4.7	1943	7.8	1991	12.6	1939	13.0	1913	13.1	1997	12.7	1926	6.1	1919	4.9	1898	4.6	1984	4.9	1921	4.6	1915	5.2	1975
71	4.7	1898	7.9	1935	12.7	1999	13.8	2012	13.7	1937	13.4	1908	6.2	1905	4.9	1929	4.7	1942	4.9	1955	4.8	2010	5.2	1907
72	4.7	1909	8.0	1903	12.8	1900	13.9	1959	13.9	1908	13.7	1966	6.8	1991	4.9	1922	4.9	1949	5.0	1951	4.9	1935	5.3	1951
73	4.7	1915	8.0	1925	12.8	1947	14.1	2007	13.9	1916	13.9	1973	7.0	1949	4.9	1917	5.4	1959	5.0	1958	5.1	1906	5.6	1947
74	4.8	1933	8.2	1945	13.1	1949	14.5	1968	14.3	1998	14.3	1964	7.5	1910	4.9	1985	5.5	2011	5.2	1929	5.1	1923	5.7	1922
75	4.9	1995	8.2	1924	13.3	1971	15.0	1939	14.4	1921	14.5	1948	7.5	1945	5.1	1996	5.6	1980	5.3	1915	5.1	1927	5.7	1991
76	5.1	1970	8.4	1943	13.8	1958	15.3	1953	14.6	1928	14.6	1939	7.6	1902	5.1	1980	5.6	2003	5.3	1957	5.1	1946	5.7	1905
77	5.1	1955	8.6	1936	14.2	1915	16.6	1908	14.6	1946	15.2	1970	7.9	1979	5.3	1939	5.8	1908	5.4	1954	5.5	1994	5.7	1993
78	5.2	1937	8.9	1965	14.4	1937	16.6	1921	14.9	1907	15.4	1999	8.5	1921	5.3	1978	5.8	1981	5.4	1949	5.6	1900	5.9	1967
79	5.3	2001	9.2	2010	14.7	1906	16.6	1916	15.6	1942	15.4	2011	9.4	2009	5.5	1979	5.9	2009	5.4	1984	5.8	1969	6.1	1911
80	5.6	1908	9.3	1988	14.8	1997	17.2	1979	16.8	1912	15.6	2007	9.6	2007	5.5	1944	5.9	1945	5.4	1906	6.1	1903	6.2	2011
81	5.6	1925	9.7	2007	14.8	2012	17.8	1976	18.3	2008	15.8	2005	10.1	2004	5.6	1984	6.3	1898	5.6	1962	6.5	1981	6.5	1944
82	5.7	1991	9.8	1994	14.9	1975	18.9	1951	18.6	1961	16.4	1919	10.6	1982	5.7	2005	6.3	1922	5.9	1924	6.6	1922	6.7	1980
83	5.9	1984	10.1	1986	15.0	1990	19.5	2001	18.7	1910	16.6	1950	10.8	1992	5.8	1908	6.3	1925	5.9	1922	6.6	1909	6.8	1961
84	6.1	1952	10.6	1955	15.2	1898	19.5	1920	18.8	1919	17.4	1910	10.9	1973	6.1	1973	6.7	1964	5.9	1900	6.6	1902	7.1	1927
85	6.2	1942	10.6	1909	16.0	1944	19.9	1992	20.5	1981	17.8	1995	11.1	1990	6.2	1968	6.8	1904	6.0	1936	6.6	1925	7.1	1906
86	6.3	2008	10.7	1906	16.3	1987	21.2	1970	20.7	1904	19.3	1949	11.1	1996	6.3	2011	7.2	1989	6.4	1898	7.1	1908	7.3	1977
87	6.3	1926	10.7	1979	16.3	1946	21.6	1904	20.7	1994	19.4	1924	12.4	1978	6.4	2001	7.3	1924	6.4	1911	7.5	1973	7.5	1957
88	6.4	1949	11.2	1950	17.0	1959	21.9	1991	21.1	2011	19.7	1951	12.7	1908	6.8	1986	7.4	1999	7.8	1928	7.9	1929	7.5	2004
89	6.5	1982	11.4	1951	17.2	1945	22.0	2011	22.1	1898	21.6	1981	12.9	1928	6.8	1902	7.6	1931	9.0	1982	7.9	1986	7.8	1970
90	6.5	1910	12.1	1993	17.3	2004	22.0	1961	22.8	2001	21.7	1927	12.9	1961	7.1	1970	7.7	1910	9.2	1967	8.1	1970	8.5	1909
91	6.7	1935	12.2	1959	17.6	1983	22.4	1926	25.0	1944	21.9	1969	13.1	1935	7.3	1921	8.2	1977	9.3	1931	8.4	1958	8.5	1932
92	6.8	1941	13.1	1998	18.8	1942	23.1	1975	25.6	1983	22.5	2004	13.6	1915	7.8	1904	8.6	1973	9.3	1903	8.6	1978	8.9	1941
93	6.9	1986	13.3	1930	19.5	1927	23.3	1969	26.1	1986	23.9	1903	13.6	1984	7.8	1924	8.7	1920	10.3	1919	8.8	1951	9.0	2003
94	7.1	1971	13.8	1915	20.2	1903	23.6	1912	26.5	1970	24.0	1928	13.7	1986	7.8	1990	9.4	1969	10.6	2010	8.9	1926	9.3	1926
95	7.3	1975	14.3	1983	20.6	1948	24.1	1967	26.8	1993	25.4	1904	14.1	2001	8.2	1959	9.5	1978	11.0	1925	8.9	1993	9.5	1984
96	7.7	1985	14.4	1975	20.8	2011	25.1	1965	26.9	1974	25.9	1984	14.4	1987	8.2	1940	11.1	2004	11.3	1914	9.2	1974	9.9	1923
97	8.0	1969	14.8	1969	21.6	1965	25.6	1994	27.2	1984	25.9	1998	14.4	1929	8.4	1928	11.1	1914	11.4	2008	9.5	1972	9.9	1908
98	8.5	1999	15.0	1974	23.1	1922	25.8	2009	27.5	1945	26.4	1929	14.6	1967	8.7	1981	11.6	1903	11.8	1910	9.5	1982	9.9	1983
99	8.6	1983	15.5	1928	24.2	2008	26.1	2010	27.5	1929	26.6	1974	16.6	1960	9.5	1950	13.7	1951	12.5	1959	10.2	1934	10.3	1997
100	9.2	1962	15.6	2011	24.3	1952	27.3	1945	29.0	1991	26.9	1916	16.8	1965	9.5	1987	14.0	1902	13.7	1902	10.7	1967	10.4	1985
101	9.3	2009	15.8	1971	25.1	1982	30.0	1928	29.2	1960	27.0	1942	16.9	1924	9.8	1992	14.3	1992	15.4	1961	11.1	1905	10.7	1934
102	9.5	1950	15.9	1926	25.1	1912	30.3	1984	30.2	1982	27.2	1993	17.3	1942	9.9	1998	15.2	1998	15.7	1905	11.7	2008	11.3	2009
103	12.1	1906	16.0	2008	25.8	1984	30.9	1997	30.5	1978	28.4	1990	17.4	1904	10.2	1999	18.4	1921	15.8	1970	13.2	1919	11.8	1902
104	12.3	1998	16.4	2005	26.7	1962	33.1	1993	37.5	1943	33.6	2009	18.0	1999	11.2	2010	18.9	1982	17.0	1977	14.5	2004	11.8	1998
105	13.4	1960	16.4	1999	27.8	1985	33.7	1999	37.9	1999	34.7	1996	19.2	1998	13.7	1982	19.2	1928	17.6	1904	15.5	1984	12.2	1971
106	14.8	1993	17.5	1949	29.1	1961	35.8	1998	38.1	1973	36.7	1943	19.8	1909	13.8	1995	20.0	1986	19.5	1969	16.3	1983	12.2	1942
107	15.8	1965	18.3	1942	30.1	1998	36.6	1978	39.5	1990	37.3	1945	22.4	1995	14.2	1932	24.2	1915	20.7	1941	17.0	1941	12.8	1925
108	16.7	2005	18.5	1916	30.2	1993	39.1	2008	42.0	1927	37.9	1915	23.4	1947	14.2	1951	29.0	1970	21.1	1993	21.0	1977	13.0	2008
109	17.5	2010	21.4	1973	30.6	2001	39.5	1947	43.0	1935	42.2	1967	26.0	2010	14.6	1905	29.5	1965	23.1	2009	22.4	2009	13.6	1928
110	20.9	1907	27.2	1997	32.4	2009	41.0	1960	45.4	1996	43.8	1982	39.4	1981	15.1	2004	29.5	1905	29.3	1926	23.4	1998	15.9	1987
111	21.5	1916	27.5	2001	33.6	1978	47.8	1983	47.5	2007	45.9	2010	39.8	1958	20.0	2008	34.8	1926	32.3	1927	27.7	1992	16.0	1931
112	22.8	1932	30.7	1962	33.6	2010	48.7	1944	48.2	2009	57.3	2008	45.6	2008	20.1	2009	36.7	2010	33.5	1985	31.2	1985	18.3	1973
113	23.2	1973	32.7	1937	40.0	1929	59.1	1922	49.1	2002	58.2	1935	52.2	1969	20.5	1958	37.7	1961	37.6	1998	36.7	1931	18.7	1986
114	25.2	1974	35.9	1985	41.1	1979	76.8	1927	61.0	2010	59.3	2001	52.3	1951	21.4	1915	44.5	1993	43.1	1973	48.9	1961	23.6	1992
115	26.2	1946	41.7	1982	54.8	1973	81.6	1973	68.7	1995	95.1	1947	74.9	1993	51.3	1993	49.1	2008	50.9	1986	62.4	1928	41.5	1982

Plate 20. Waverly to Boonville Ranking of Average Monthly Flows

Boonville, Missouri to Hermann, Missouri
Ranking of Average Monthly Flows (kcfs)

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	0.0	1902	2.2	1913	0.0	1906	1.1	1920	0.9	1999	0.5	1963	0.3	1963	1.1	1980	0.1	1989
2	1.8	1940	1.6	1954	1.6	1954	2.3	1917	2.2	1914	1.1	1911	1.1	1911	1.1	1913	0.9	1999	0.8	1956	1.2	1956	1.3	2000
3	2.1	2006	1.8	1929	2.1	1956	2.3	1956	2.3	1932	1.1	1913	1.1	1913	1.1	1911	1.1	1901	0.8	1928	1.3	2000	1.6	1939
4	2.1	1964	2.4	1902	2.2	1918	2.9	1954	3.3	1901	1.1	1914	1.1	1901	1.1	1918	1.1	1957	1.0	1980	1.5	1966	1.7	2005
5	2.2	1931	2.4	1922	2.2	1917	3.4	2006	3.9	1936	2.3	1918	1.1	1918	1.1	1901	1.1	2011	1.0	1957	1.6	1952	2.2	1912
6	2.2	1981	2.5	1978	3.1	1967	3.5	1930	4.3	1977	2.3	1901	1.3	2011	1.1	1912	1.3	1956	1.1	1918	1.8	1963	2.3	1953
7	2.2	1917	2.6	1963	3.1	1941	4.6	1907	4.4	1902	2.7	1932	2.1	1954	1.1	1903	1.9	1959	1.1	1912	2.0	2001	2.4	1962
8	2.5	1963	2.6	1961	3.1	1981	4.6	1915	4.4	1906	3.2	1934	2.2	1925	1.4	2011	1.9	1983	1.5	2002	2.1	2006	2.8	1976
9	2.6	1951	2.8	1940	3.8	1964	4.9	1981	4.8	1934	3.4	1920	2.2	1914	1.6	1930	1.9	1976	1.6	1966	2.1	2012	2.8	1963
10	2.8	2001	3.7	1905	5.3	2006	4.9	1977	5.0	1980	3.4	1925	2.3	1936	1.6	2006	1.9	2006	1.7	1964	2.2	2002	2.8	2002
11	2.8	1954	3.7	1913	6.1	1931	5.1	2000	5.5	1900	3.4	1900	2.5	1934	1.7	1954	1.9	2012	1.8	2012	2.3	1913	2.9	2007
12	2.9	2003	3.7	1900	6.3	1936	5.1	1963	5.5	2001	3.6	1936	2.6	1963	1.8	2012	2.0	1964	1.9	1952	2.3	1916	2.9	2012
13	3.3	1905	3.8	1956	6.7	1996	5.3	1931	6.0	2000	3.9	1988	2.6	1988	1.9	1957	2.0	1954	2.0	1937	2.3	1901	3.0	1980
14	3.3	1902	3.8	2006	7.7	1930	6.2	1932	6.1	1954	4.4	1972	2.7	1930	2.0	1936	2.2	1929	2.1	1987	2.4	1939	3.1	1995
15	3.6	1967	4.1	2003	7.7	1914	6.9	1919	6.2	1926	4.4	2012	2.9	1972	2.1	1980	2.3	1913	2.1	1979	2.4	2005	3.3	1964
16	3.6	1978	4.1	1996	7.7	1907	6.9	1900	6.2	1965	4.6	1905	3.1	2012	2.3	1963	2.3	1912	2.2	1913	2.5	1937	3.3	1916
17	3.7	1957	4.2	1981	8.0	1991	7.1	1936	6.3	2005	4.6	1922	3.3	1940	2.4	1976	2.5	1980	2.2	1901	2.7	1940	3.3	1901
18	3.7	1961	4.9	1899	8.3	1977	7.4	1934	6.6	1911	4.6	1902	3.3	1907	2.4	1956	2.7	2001	2.3	2006	2.7	2007	3.4	1978
19	3.8	1939	4.9	1919	8.8	1902	7.8	1971	7.2	1956	4.6	1953	3.4	1931	2.4	1962	2.8	1960	2.3	1939	2.8	1953	3.7	1952
20	3.8	1934	4.9	1917	9.0	1983	8.0	1918	7.3	1989	4.7	1931	3.5	2003	2.6	1929	3.1	1987	2.3	1960	2.8	1955	3.9	1929
21	4.0	1956	5.1	1931	9.5	1932	8.0	1923	7.6	1955	5.0	1960	3.7	1960	2.6	1941	3.1	1955	2.3	1940	2.9	1997	3.9	1966
22	4.4	1990	5.7	1970	9.7	1940	8.0	1899	7.6	1962	5.0	1926	3.8	1962	2.6	1964	3.2	1952	2.6	1946	3.0	1930	3.9	1956
23	4.4	1921	5.8	1977	9.7	2003	8.3	2003	7.7	1918	5.9	2006	3.8	2006	2.6	1955	3.2	1967	2.6	2000	3.1	1976	4.0	1940
24	4.4	1920	5.9	1920	10.5	1972	9.2	1959	7.7	1903	6.0	1956	4.4	1917	2.9	1991	3.4	1900	2.7	2010	3.3	1957	4.1	1937
25	4.4	1900	6.1	1901	11.2	1934	11.2	1940	8.2	1971	6.0	1963	4.4	1900	3.1	1984	3.5	1953	2.7	1978	3.3	1964	4.4	1920
26	4.4	1914	6.1	1918	11.3	1970	11.4	1905	8.7	1930	6.3	1954	4.5	1953	3.2	1977	3.5	1988	2.7	1930	3.3	1962	4.4	1955
27	4.6	1953	6.1	1934	12.1	1957	11.6	1982	9.1	1941	6.4	1959	4.7	1952	3.3	1966	3.6	1966	2.9	2003	3.6	1965	4.7	1945
28	5.1	1980	6.5	1947	12.2	2007	12.9	2005	9.7	1992	7.4	1952	5.1	1970	3.3	1923	3.7	2000	3.0	1953	3.6	1932	5.1	1933
29	5.2	1936	6.6	1948	12.5	1992	13.4	1967	10.0	1923	7.8	1962	5.2	1978	3.3	1914	3.7	1943	3.1	1994	3.7	1978	5.4	1947
30	5.5	1919	6.8	1967	12.6	2002	13.5	1943	10.4	1982	8.0	1961	5.2	1980	3.3	1916	3.8	1946	3.1	2011	3.7	1999	5.5	1938
31	5.5	1924	6.8	1972	12.9	1943	13.7	1910	10.4	1940	8.1	1966	5.3	1956	3.3	1900	4.0	1991	3.3	1932	3.8	2011	5.5	1899
32	5.5	1912	7.1	1953	13.2	1928	14.7	1991	11.1	1987	8.1	1930	5.3	1933	3.6	1959	4.0	1937	3.3	1916	4.1	2010	5.5	1965
33	5.5	1911	7.1	1965	13.2	1995	14.9	1955	11.5	1948	8.4	1946	5.3	1971	3.7	1932	4.0	1932	3.4	1929	4.1	1954	5.6	1970
34	5.6	1958	7.2	1957	13.2	1963	14.9	1962	11.7	1959	8.9	1984	5.4	1989	3.9	1931	4.1	1984	3.4	2007	4.2	1933	5.7	1950
35	6.3	1944	7.3	1914	13.3	1909	15.4	2002	11.9	1931	9.0	1944	5.5	1959	4.0	1988	4.1	2002	3.7	1988	4.5	1990	5.8	1943
36	6.4	1938	7.3	1921	13.4	1953	15.5	1946	12.1	1964	9.1	1921	5.5	1912	4.1	1960	4.2	1938	3.7	2004	4.5	1979	6.3	2006
37	6.5	1979	8.1	1976	14.0	2000	16.0	1911	12.2	1925	9.3	1976	5.5	1923	4.2	1986	4.6	1918	3.9	1991	4.6	1912	6.3	2010
38	6.5	2002	9.0	1944	14.0	1933	16.5	1948	13.3	1905	9.3	1992	5.7	1946	4.2	2003	4.8	1939	4.1	1938	4.6	1914	6.4	1958
39	6.6	1904	9.2	1958	14.4	1916	18.0	1933	13.4	1952	9.4	2000	5.9	1944	4.3	1970	5.1	2004	4.4	1971	5.2	1944	6.6	1921
40	6.6	1899	9.5	1904	14.4	1924	18.2	1950	13.5	1928	9.5	1980	6.1	1938	4.3	1979	5.4	1930	4.5	1976	5.4	1989	6.6	1910
41	6.9	1970	9.7	1926	14.7	2009	18.6	1935	15.5	1915	9.8	1933	6.2	1991	4.3	1953	5.5	1940	4.6	1935	5.5	1960	6.6	1918
42	7.0	1945	9.8	1907	15.1	1926	18.7	1989	16.1	1958	9.8	2004	6.4	1939	4.3	1972	5.7	1962	4.8	1997	5.7	1910	6.6	1904
43	7.1	2012	10.2	1936	15.1	1966	19.2	1937	16.6	1988	10.0	1941	6.5	1974	4.4	1899	5.7	1933	4.9	1999	5.7	1904	6.6	1914
44	7.1	1996	10.6	2004	15.5	1919	19.4	1996	17.2	2007	10.1	1987	6.8	1937	4.4	2009	5.7	1906	5.0	1995	5.7	1920	7.0	1979
45	7.4	1976	10.6	1912	15.5	2005	19.4	1898	17.4	1997	10.2	1939	7.4	1964	4.5	2010	5.7	1916	5.1	1989	5.7	1918	7.4	1954
46	7.7	1918	11.0	1923	16.6	1904	19.4	1906	17.7	1917	10.7	1955	7.4	1941	4.6	1934	5.7	1911	5.1	1948	5.7	1899	7.5	1948
47	7.7	1901	11.4	1898	16.7	1986	19.4	1924	17.7	1922	10.8	1971	7.5	1968	4.8	1971	5.8	1935	5.1	1983	6.0	1943	7.7	1930
48	7.7	1913	11.4	2000	17.5	1959	19.7	1953	18.2	1986	11.7	1940	7.7	1966	4.8	1938	5.8	1971	5.2	1958	6.3	2003	7.7	1919
49	7.7	1903	11.6	1980	17.5	2001	20.3	1968	18.6	1963	11.9	2003	7.7	1899	5.1	1933	6.0	1981	5.4	1981	6.4	1971	7.9	1936
50	7.7	1922	12.2	1910	17.7	1921	20.8	2001	18.8	1920	12.2	1991	7.7	1903	5.1	1987	6.1	1947	5.7	1972	6.5	1958	8.3	1957
51	7.8	1965	12.2	1911	17.7	1911	21.0	1986	18.9	1949	12.3	1978	7.7	1906	5.3	1940	6.5	1936	6.1	2005	6.6	1929	8.5	1969
52	8.0	1984	12.2	1943	17.7	1946	21.3	1992	19.3	1953	12.6	1899	8.1	1975	5.4	1983	6.6	1931	6.4	1947	6.9	1917	8.5	1977
53	8.1	1959	12.5	2012	18.0	1965	21.4	1972	19.5	2006	12.6	1907	8.2	1955	5.4	1937	6.7	1968	6.5	1982	6.9	1921	8.6	1999
54	8.5	1968	13.0	1933	18.0	1968	21.6	1976	19.6	2003	12.9	1989	8.3	1926	5.5	1939	6.7	1928	6.5	1931	7.2	1938	8.7	1959
55	8.6	1947	13.2	1960	19.1	1950	21.7	1925	20.6	1967	13.5	1958	8.6	1976	5.5	1907	6.9	1978	6.6	1917	7.3	1945	8.8	1960
56	8.8	1923	13.6	1983	19.4	1942	22.1	1974	20.9	1966	13.7	1898	8.8	1916	5.8	1935	6.9	1919	6.7	1943	7.4	1947	8.8	1917

57	9.1	2000	13.8	2007	19.6	1947	23.2	1980	20.9	1951	14.3	1979	9.5	2000	6.2	1994	6.9	1907	6.9	1974	8.0	1959	8.8	1903
58	9.1	1992	13.9	1945	19.9	1925	23.3	1949	21.2	1975	14.8	1986	9.5	2005	6.6	1965	6.9	1948	7.3	1950	8.1	1949	9.2	2008
59	9.2	2011	14.0	1991	19.9	1908	23.3	1958	21.6	1969	16.0	1909	10.0	1898	6.6	1920	7.0	1990	7.5	1933	8.4	1995	9.6	2001
60	9.3	1926	14.2	1941	20.0	1939	24.0	1901	21.8	1976	16.4	1975	10.1	2002	6.7	1997	7.2	2007	7.6	1990	8.5	1991	9.8	2011
61	9.8	2008	14.3	1989	20.3	1980	24.6	2004	22.1	1924	18.3	1923	10.1	1927	6.8	2002	7.4	1986	7.7	1909	8.6	1950	10.0	1913
62	10.1	2007	14.8	1935	20.4	1937	25.1	1909	22.8	2012	20.5	1977	10.1	1983	6.9	1945	7.4	1979	7.7	1923	8.6	1975	10.0	1900
63	10.9	1948	15.0	1932	20.7	1971	26.3	1903	23.4	1939	20.6	1968	10.4	1987	7.1	1967	7.8	1972	7.7	1899	9.1	1911	10.5	1944
64	11.1	1915	15.0	1992	21.0	1923	26.4	1926	23.9	1979	22.9	1912	11.2	1997	7.1	1973	7.9	2003	8.1	1954	9.4	1982	10.6	1990
65	11.1	1909	16.6	1908	21.0	1901	26.6	1964	24.2	1998	22.9	1973	11.4	1973	7.3	1978	8.0	1973	8.3	1934	9.9	1948	11.1	1915
66	11.2	1960	17.0	2009	21.3	1938	26.7	1928	24.3	1899	23.0	2008	11.5	2004	7.3	1961	8.7	1997	8.5	2001	9.9	1928	11.1	1898
67	11.3	1942	17.4	1939	21.7	1989	26.7	1960	25.6	1972	24.0	1996	12.6	1994	7.5	1947	8.7	1995	9.0	1992	9.9	1987	11.1	1924
68	11.3	1982	18.4	1998	21.7	1979	28.1	1951	25.8	1974	24.0	1917	12.9	1986	7.6	1974	8.9	1985	9.0	1968	10.0	1934	11.4	1932
69	11.8	1898	18.4	1903	21.7	1961	28.6	1914	26.7	1991	26.2	2005	13.3	1922	7.7	1910	9.0	1994	9.5	1984	10.3	1924	12.2	1907
70	12.3	1966	18.4	1925	22.9	1929	28.7	1966	26.7	1968	27.0	1957	14.3	1961	7.9	1952	9.1	1917	9.8	1975	10.3	1907	13.0	1988
71	13.3	1925	18.4	1938	23.1	1960	28.9	2007	27.3	2004	28.1	2011	14.3	1943	8.3	1943	10.2	2009	9.8	1967	10.3	1915	13.3	1905
72	13.3	1908	18.9	1924	23.1	1976	29.0	1995	28.5	1981	28.2	1964	14.4	1905	8.8	1906	10.3	1909	10.0	1920	10.3	1898	13.3	1922
73	13.9	1955	19.2	2011	23.2	1905	29.1	1942	28.7	1946	29.1	1998	14.4	1919	8.8	1919	10.3	1899	10.0	1907	10.5	1988	13.3	1981
74	13.9	1962	19.3	1990	24.3	1899	29.6	2011	28.8	1909	29.6	1965	14.7	1932	8.8	1925	10.3	1923	10.0	1908	11.2	1931	13.5	1925
75	14.3	1989	19.6	1928	25.2	2012	29.7	1913	29.9	1947	30.3	2010	15.0	2009	8.8	1909	11.1	1992	10.0	1942	11.4	1906	13.6	1961
76	14.3	1930	20.2	1984	25.5	1982	30.4	1999	30.2	1985	30.3	1947	15.1	1993	9.4	1942	11.5	1934	10.2	1962	11.4	1923	13.6	1975
77	14.8	1927	20.5	2002	25.7	1969	31.3	1957	31.2	1935	30.5	2007	16.6	1965	9.4	2005	11.6	1977	10.4	1936	12.3	2008	14.4	1911
78	15.1	1972	20.6	2008	26.5	1913	32.9	1997	32.1	1908	30.9	1908	16.9	1979	9.4	1949	11.6	1989	11.1	1921	12.6	1900	14.9	1991
79	15.2	1987	20.7	1927	27.2	1993	33.6	2012	32.1	1916	31.5	1951	17.1	1957	9.6	1969	12.2	1996	12.2	1915	12.9	1981	15.6	1935
80	15.5	1910	20.8	1971	27.6	1920	34.3	1979	33.2	1921	34.1	1974	17.7	1902	9.6	2001	13.4	1926	12.2	1906	13.7	1903	15.6	2003
81	15.9	2009	21.4	1959	27.9	1994	34.4	1952	33.2	1937	34.1	1967	17.7	1910	9.7	2000	13.7	1908	12.6	1961	14.4	1942	16.3	1946
82	15.9	1997	22.0	1950	28.3	1948	35.6	1939	33.5	1993	37.7	1919	18.1	1996	10.6	1975	13.8	2005	12.9	1977	14.9	1922	16.6	1906
83	16.0	1986	22.9	2001	28.8	1900	35.8	1993	33.9	1942	38.1	2009	19.4	1985	11.1	1922	14.1	1958	13.3	1924	14.9	1909	17.6	1949
84	18.2	1929	22.9	1951	29.8	1955	36.0	1987	34.3	1907	38.1	1969	19.9	1921	11.1	1898	14.3	1927	13.3	1922	14.9	1902	17.8	1931
85	18.5	1941	23.4	1995	31.9	1999	36.1	1938	35.2	1978	39.0	1999	21.1	1999	11.1	1917	14.9	1898	13.3	1900	15.4	1970	18.0	1997
86	18.7	1952	23.5	1955	32.1	1915	37.4	2010	37.6	1950	39.2	1950	22.2	2010	11.9	2004	14.9	1922	14.0	1944	15.8	1969	18.0	1941
87	18.8	1983	24.0	1962	33.2	1906	37.7	1916	38.3	1960	39.9	2001	22.6	2001	12.1	1996	14.9	1925	14.3	1925	16.0	1908	18.1	1972
88	19.0	1928	24.2	1979	33.2	2010	37.7	1921	38.7	1912	40.0	1910	24.0	1984	12.2	1990	15.3	1944	14.4	1898	18.6	1936	19.9	1974
89	19.0	1994	24.3	1966	34.3	1898	37.7	1908	39.0	1927	41.4	2002	24.4	1990	13.3	1908	15.5	1942	14.4	1911	22.0	1935	19.9	1909
90	19.7	1932	24.5	1909	34.5	1935	38.3	1975	40.6	1984	42.1	1938	24.4	1935	14.7	2008	16.0	1904	14.5	1955	23.2	1925	20.0	1928
91	19.9	1933	24.5	1906	35.1	1952	39.0	1978	41.2	2010	42.5	1993	24.7	1949	15.2	1985	16.4	1975	15.0	1965	23.4	1973	20.7	1951
92	21.7	1935	24.9	1946	35.3	1988	39.2	2009	41.8	2011	43.3	1970	24.7	1998	15.2	1968	16.8	1998	15.1	1996	24.4	1968	20.7	1984
93	21.9	1971	25.5	1942	37.0	1949	39.6	1961	43.1	1910	43.3	1949	24.7	1928	15.5	1902	17.0	1941	15.2	2008	24.9	1927	21.7	1934
94	22.7	1991	25.7	1968	38.3	1951	42.8	1965	43.1	1919	43.7	1927	24.9	1950	15.9	1926	17.1	1924	21.0	1903	25.1	1905	22.0	1994
95	22.8	1999	27.5	1988	40.8	2004	43.0	1969	44.9	1933	43.9	1948	25.6	1992	16.2	1989	17.7	1969	22.3	1945	25.3	1984	22.3	1926
96	23.3	2004	28.2	1930	40.9	1962	44.6	1920	45.1	1957	44.2	1997	26.3	1945	16.4	1928	18.3	1910	23.2	1919	25.9	1967	22.7	2009
97	24.5	1975	28.3	1994	41.1	1987	45.3	1990	45.8	1999	44.6	1924	26.7	1977	16.6	1921	18.4	1982	24.0	1970	27.3	1977	23.2	1923
98	27.4	1946	28.3	1993	41.3	1944	45.7	1970	47.6	1904	44.8	1982	26.8	1942	17.0	1998	19.2	1949	24.5	1985	29.2	1926	23.2	1908
99	28.8	1906	28.3	1987	42.8	1927	47.9	1998	50.1	1996	47.1	1981	28.4	1982	17.4	1951	19.2	1974	25.1	1951	29.7	1919	24.1	1998
100	29.2	1998	30.0	1952	44.6	1958	48.7	1988	50.9	1898	48.5	1994	29.9	1908	17.7	1944	19.9	2010	25.4	1914	30.2	2004	27.1	1983
101	30.1	1995	30.2	1982	45.3	1903	49.0	1941	50.9	1938	48.7	1929	32.1	1915	17.7	1924	20.6	1920	25.8	1959	31.1	1983	27.6	1971
102	32.0	1988	31.5	1937	45.8	1990	49.1	1904	51.4	2008	49.6	1937	32.1	1947	17.7	1904	21.7	1970	26.5	1910	31.2	1994	27.6	1902
103	33.4	2010	31.8	1915	48.5	1997	51.2	1983	52.0	1945	50.6	1942	33.6	1967	19.8	1982	23.0	1950	30.8	1973	34.2	1961	28.0	1996
104	33.5	1937	33.6	1974	48.8	1978	52.1	1929	53.0	2009	50.9	1983	38.5	1929	19.8	1992	23.2	1945	31.0	1902	36.2	1998	29.6	1968
105	34.2	1943	34.0	1997	51.8	1975	52.2	1944	53.3	1944	51.4	1928	39.8	1924	22.8	2007	26.3	1914	32.4	1949	40.2	1996	29.6	1927
106	36.4	1974	34.2	1973	52.0	1922	53.7	1912	54.9	1973	54.9	1903	40.9	1904	22.9	1948	27.4	1903	35.4	1905	41.4	1992	30.7	1967
107	36.7	1969	38.9	1986	52.1	1998	61.9	1985	57.2	1970	58.3	1904	46.1	1948	23.1	1981	29.5	1961	39.8	1904	41.9	1951	31.8	2004
108	37.7	1949	39.6	2010	52.3	2011	70.1	2008	73.5	1983	60.4	1943	46.4	1909	27.2	1995	33.1	1902	47.0	1927	45.1	1972	32.4	1993
109	38.1	1973	41.9	1985	56.4	1912	73.3	1984	73.9	2002	61.7	1916	48.5	2008	29.9	1946	40.3	2008	50.4	2009	46.4	1974	35.3	1942
110	40.7	1985	42.2	1969	56.6	1974	82.3	1947	76.2	1990	62.5	1945	48.7	1969	30.2	1950	43.4	1921	52.2	1998	48.3	1946	38.2	1987
111	46.4	1950	42.6	1916	57.4	1945	88.1	1994	80.2	1994	70.8	1990	50.9	2007	33.2	1905	46.8	1965	56.7	1969	51.4	2009	39.2	1986
112	49.8	1907	46.4	2005	58.6	2008	98.6	1945	82.5	1995	78.3	1985	52.6	1958	37.3	1958	57.1	1915	64.6	1993	56.3	1986	41.6	1973
113	50.9	1916	47.4	1999	63.7	1984	117.2	1973	108.1	1961	86.8	1915	54.9	1995	48.7	1915	65.0	1951	71.4	1926	56.7	1993	53.7	1992
114	54.6	1993	52.1	1949	78.1	1985	127.7	1927	127.2	1929	89.7	1995	59.9	1981	54.6	1927	69.7	1905	80.8	1941	58.9	1985	66.9	1985
115	74.2	2005	57.2	1975	87.4	1973	134.8	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

Plate 21. Boonville to Hermann Ranking of Average Monthly Flows

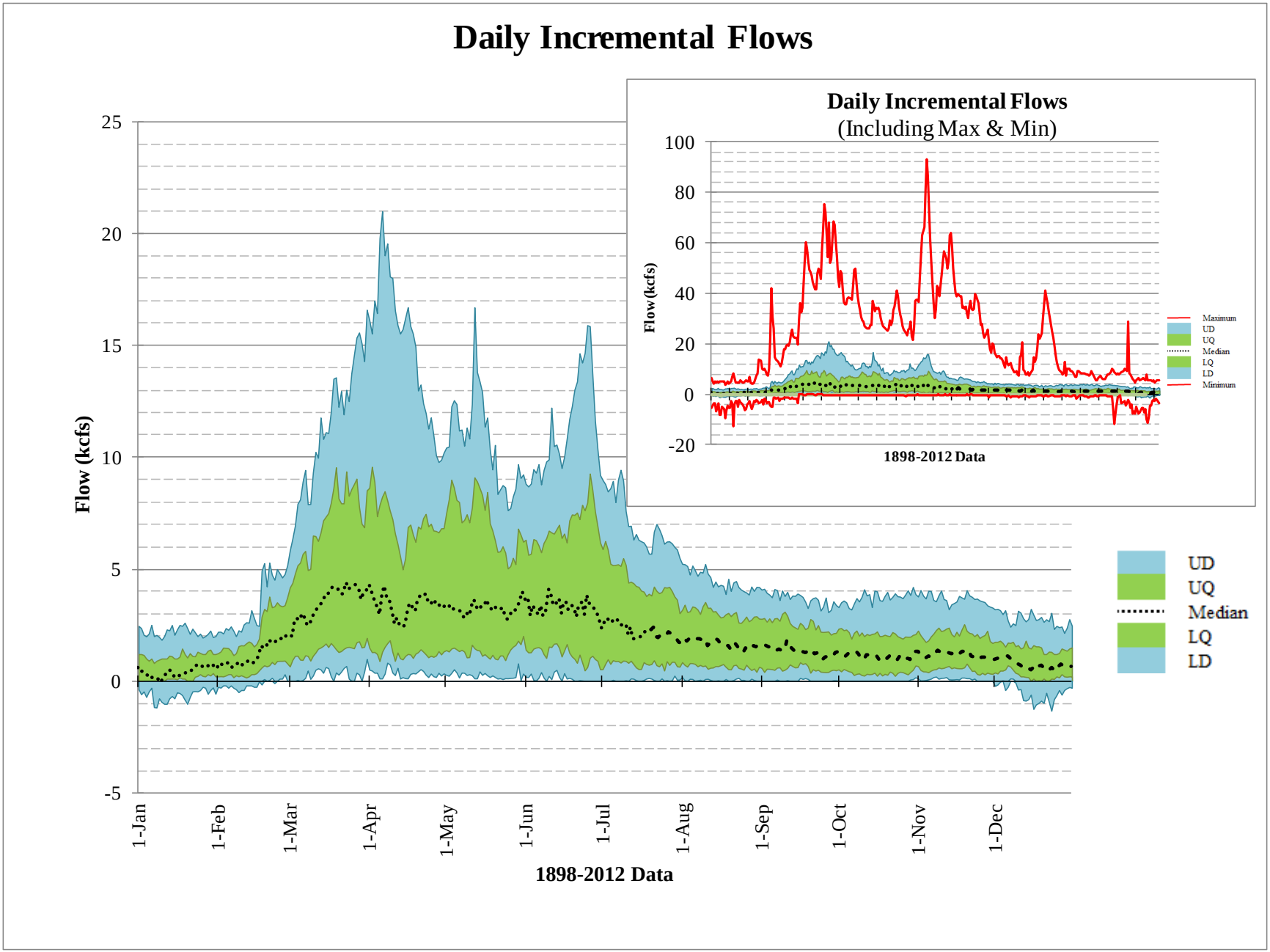
Hermann, Missouri to St. Louis, Missouri
Ranking of Average Monthly Flows (kcfs)

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	27.5	2012	17.3	1904	25.8	1917	23.0	1914
4	26.2	1909	30.1	1940	52.3	1902	70.2	1934	63.3	1911	46.7	1948	38.8	1911	30.3	1941	27.9	1988	22.1	1976	29.9	1908	23.9	1976
5	26.4	1915	32.7	1964	53.0	1954	72.7	2000	67.3	1940	47.4	1923	38.8	1934	30.8	1976	28.8	1913	22.1	1918	30.1	1901	24.8	1904
6	26.5	1977	33.5	1934	54.2	1914	73.5	1977	69.6	1988	50.2	1900	40.4	1989	31.7	1934	29.1	1916	23.7	1917	30.2	1950	25.3	1908
7	28.0	1964	33.6	1902	54.8	1956	76.9	1914	70.1	1925	50.6	1901	42.8	1977	32.2	1910	29.1	1917	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	30.6	1948	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	31.3	1933	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	35.6	2012	31.8	1939	28.9	1939	31.6	1918	30.0	1937
11	30.4	1908	38.5	1914	62.7	2003	87.8	1968	75.1	1989	69.4	1931	49.7	1910	37.8	1918	32.8	1937	28.9	1922	32.6	1933	30.2	1898
12	30.9	1934	39.9	1977	64.7	1921	88.3	1990	75.5	1915	69.6	1936	50.7	1940	37.9	1914	32.9	1908	29.1	1901	34.2	1953	30.3	1930
13	31.4	1959	40.4	1956	69.7	1917	89.8	2003	76.5	1902	70.3	1956	51.8	2006	39.7	2005	33.0	1949	29.2	1963	34.4	1948	30.4	1907
14	32.7	1902	41.1	2003	72.4	1911	90.5	1925	77.6	1949	71.2	1976	54.0	1921	39.9	1901	34.0	1955	29.7	1899	34.9	1937	30.8	1963
15	33.1	1900	42.6	1989	75.0	1989	93.2	1918	82.1	1914	72.2	1940	58.3	1987	40.3	1930	34.1	1963	31.1	1940	35.0	1949	30.8	1916
16	33.1	1956	43.2	1913	75.2	1941	100.5	1915	84.3	1987	74.1	1925	58.5	1913	40.7	1971	34.2	1971	31.3	1953	35.2	1914	31.5	1922
17	33.7	1901	43.2	1958	75.8	1977	103.1	1954	86.0	1930	75.0	1987	58.7	1963	41.9	1933	35.6	1930	31.5	1989	35.7	1922	32.8	1958
18	33.8	1918	45.7	1920	76.0	1960	104.3	2012	93.5	2000	75.5	1949	59.0	1980	43.3	2006	36.0	1922	31.6	2003	36.7	1989	33.6	1936
19	35.5	1913	45.8	1936	78.6	1923	107.3	1899	95.0	1901	76.3	1910	59.5	1901	43.9	1937	36.0	1934	32.1	1913	37.1	2012	33.8	1948
20	35.6	1963	46.6	1899	82.4	1933	109.9	1964	99.0	1900	78.2	1963	60.0	1931	44.3	1948	36.6	1996	32.2	1937	37.3	1956	34.0	1901
21	36.1	2000	46.6	2000	84.0	1924	110.9	1963	102.4	1956	78.2	1989	62.2	1941	44.6	1911	37.3	2003	32.7	1958	37.7	1932	34.1	1939
22	36.1	1899	47.5	1948	84.8	1981	113.4	1956	102.5	1955	85.4	1961	62.6	1918	44.8	1904	37.6	1931	33.1	2012	38.3	1913	34.2	1912
23	37.8	1961	47.7	1921	85.0	2000	114.9	1910	103.3	1910	87.1	1921	63.2	1970	46.9	1917	37.8	1899	33.5	1952	38.5	1907	34.6	1899
24	38.2	1945	48.0	1957	85.7	1958	117.7	1921	104.6	1946	87.5	1914	64.0	1912	47.1	1913	38.1	1956	34.1	1898	38.9	1964	35.9	1913
25	38.5	1954	49.1	1978	89.1	1918	118.7	1989	104.7	1923	88.0	1928	66.7	1956	47.2	1949	38.9	1966	34.9	1950	39.9	1955	36.1	1950
26	38.7	1921	49.3	1918	89.1	1947	120.7	1924	107.0	1968	90.2	2006	68.9	1961	48.0	1975	40.3	1918	35.5	1932	40.5	1966	36.7	1964
27	39.1	1990	49.7	1972	93.1	2006	120.8	1908	107.3	1941	93.7	1932	69.0	1955	48.0	1955	40.9	1967	35.6	1933	40.7	1952	37.2	2012
28	40.3	1957	51.1	1944	93.1	1987	127.0	1937	108.6	1932	94.4	1959	70.4	1937	49.0	1966	40.9	1925	35.8	1930	41.2	1940	37.6	1955
29	41.4	2003	52.0	1961	93.2	1928	128.2	1957	110.6	1924	95.6	1924	70.6	1933	49.1	1963	40.9	2005	35.8	1916	41.4	1916	38.6	1956
30	41.5	1979	52.0	1922	94.1	1967	131.2	1981	112.5	1963	98.1	1939	70.7	1966	49.4	1965	41.2	1910	36.6	1964	41.9	1999	40.0	1918
31	42.2	1938	52.1	1900	94.5	1912	132.1	1932	113.8	1926	99.7	1930	71.8	1959	50.0	2003	41.6	1898	36.8	1947	43.0	1988	40.1	1988
32	42.8	1951	53.1	1980	95.9	1932	133.0	1988	114.9	1928	99.9	1985	72.3	1985	51.2	1922	41.9	1940	38.1	1975	44.4	1920	40.1	1944
33	43.2	1981	55.4	1919	96.2	1970	133.7	1987	115.5	1939	100.6	1971	72.4	2012	51.9	1898	42.4	1950	38.1	1996	45.5	1958	40.9	1929
34	43.3	1944	56.1	1990	97.9	1996	135.3	1923	115.9	1905	100.9	1955	74.3	2007	52.0	1947	43.1	1932	38.3	1909	46.2	1944	41.1	1920
35	43.6	1920	56.4	1941	98.2	1926	135.5	1905	117.8	1971	101.1	1994	75.3	1926	52.3	1923	44.3	1923	38.8	1966	46.5	1947	41.7	1962
36	43.8	1936	56.4	1945	99.9	2005	137.1	1996	119.1	1964	102.0	1958	77.0	1965	53.3	1950	45.5	1958	39.0	1935	48.3	1899	42.0	1999
37	44.3	1919	56.5	2004	100.2	1980	139.1	1900	119.2	1942	104.7	1997	77.5	1930	53.4	1900	46.1	1904	41.0	1974	49.3	1962	42.3	1953
38	44.4	1953	58.7	1970	101.9	1907	139.2	1955	122.0	1959	105.2	1913	80.0	1948	53.9	1940	46.3	1974	41.5	1920	49.5	1923	42.5	1900
39	45.0	1970	59.6	1981	102.5	1901	141.6	2004	123.0	1953	106.4	2012	80.0	1971	54.3	1959	47.0	1929	42.3	1957	50.1	1898	45.3	1960
40	45.7	1967	60.4	1904	104.3	1905	149.7	1980	124.4	2005	112.5	1941	80.8	2005	54.6	1921	47.3	1953	42.5	1971	50.3	1975	46.4	1905
41	46.2	1989	61.6	1979	105.2	1916	151.1	1936	124.9	1913	112.9	1922	80.8	1949	55.5	1967	49.1	1919	42.9	1949	50.6	2006	46.8	1952
42	47.5	1948	62.4	1898	106.1	1999	151.6	1942	125.9	1907	113.2	2005	82.3	1932	57.1	1954	49.2	1935	45.1	1987	50.7	1906	46.9	2000
43	51.5	1976	62.7	1933	106.9	2012	152.9	1941	127.8	1936	114.1	1972	83.3	1939	57.3	1960	50.0	1947	45.6	1960	53.4	1912	49.2	1969
44	51.7	1958	63.3	2006	108.4	1913	155.5	1917	129.1	1948	114.3	1953	90.1	1950	57.4	1944	50.4	1936	46.2	1955	53.6	2005	49.4	1943
45	52.1	1924	64.5	1947	108.7	1938	156.0	1907	135.7	1967	116.5	1926	90.3	1922	58.8	1899	51.1	1909	46.2	1943	54.2	1987	50.2	1935
46	54.0	1941	65.2	1909	109.4	1909	156.0	1898	136.5	1957	120.1	1968	91.5	1898	59.7	1977	51.3	1911	47.5	1967	55.3	1931	51.7	2005
47	54.7	1930	65.6	1924	109.5	1988	157.4	1949	138.3	1921	121.9	1978	91.8	1925	60.0	1925	51.7	1964	48.2	2000	55.6	1997	51.9	1940
48	55.4	1939	65.7	1908	109.5	1925	158.9	1970	144.4	1938	122.2	1952	92.2	1972	63.4	1956	52.4	1984	48.9	1999	55.8	1957	52.2	1954
49	57.4	2002	69.3	2007	112.8	1919	160.1	1901	147.9	2004	122.9	1937	97.4	1928	63.7	1909	52.4	2006	49.0	1944	56.0	1936	52.3	2002
50	58.0	1996	69.3	1967	113.9	1899	160.1	1935	148.9	1898	125.3	2007	99.2	1904	64.1	1912	52.4	1957	49.1	1929	56.5	1924	53.4	1938
51	58.7	2001	71.9	2012	114.4	1904	160.3	1926	149.8	2012	126.8	1933	99.5	1914	64.9	1906	52.8	2000	50.0	2006	57.4	1934	53.8	1906
52	58.9	2012	72.2	1955	114.5	1955	162.8	1959	152.0	1985	127.7	1898	99.8	1916	66.3	1957	53.5	1998	50.5	1979	58.5	1943	54.2	1997
53	59.2	1905	72.8	1926	115.3	2002	165.1	2005	152.1	1992	128.6	1912	105.7	1979	66.6	1919	53.9	1952	50.8	1934	60.2	1978	54.6	1978
54	59.5	1898	73.4	1939	115.4	1930	165.9	2002	153.0	1903	130.2	2003	109.1	1927	67.0	2000	54.2	1927	52.5	1912	60.5	1969	56.4	1949
55	59.6	1904	74.7	1911	116.4	1915	168.2	1909	154.6	2006	130.9	1902	109.5	1997	67.2	1939	54.4	1944	52.5	1997	60.5	1915	56.9	1932
56	59.8	2004	74.8	1905	116.8	1953	169.4	1953	156.9	1954	133.2	1906	109.8	1917	67.4	1961	54.6	1969	52.5	1906	61.3	1980	57.5	1919

57	59.8	1926	75.8	1929	122.0	1920	170.9	1946	158.1	1961	135.5	1954	110.5	1906	69.2	1916	57.9	1975	56.0	2011	61.5	1974	57.7	1966
58	61.8	1971	76.1	1953	122.5	1995	173.5	1943	159.8	1937	137.2	1979	112.2	1962	69.6	1962	58.0	1906	58.9	1923	62.5	1921	57.8	1915
59	61.8	1903	78.4	1935	123.1	1978	175.2	1928	160.4	1899	137.8	1907	112.9	1992	69.7	1946	58.4	1900	59.5	1931	63.2	1904	59.4	1957
60	62.4	1972	79.7	1910	125.1	1972	176.8	1994	160.6	1994	138.7	1957	115.2	1953	70.3	1985	58.4	1999	60.8	1936	63.4	1929	60.2	1945
61	62.7	1922	80.8	1996	126.7	1969	177.2	1992	163.6	1906	139.6	1946	116.2	1994	71.9	2001	58.5	1959	65.7	1946	63.4	1945	60.9	1925
62	63.3	1982	81.2	1965	129.6	1910	178.4	1961	166.5	1981	139.7	1966	117.1	1945	72.1	1929	59.5	1946	66.3	1919	64.6	1960	60.9	1947
63	63.5	1980	82.2	1987	131.5	1942	179.1	2006	167.5	1976	140.0	1967	117.5	1995	73.5	1927	60.0	1914	66.5	1914	66.6	2002	61.4	1995
64	64.7	1997	83.4	1903	132.3	1943	179.3	1999	170.2	1917	141.7	1969	117.8	1946	73.6	1974	60.5	1954	66.7	1991	66.6	2000	61.9	1923
65	65.7	2006	84.6	1995	132.7	1898	180.3	1938	174.8	2007	142.2	1981	119.0	1919	74.3	1926	61.8	2001	67.5	1962	66.9	1935	65.0	1924
66	66.6	1968	85.4	1976	137.5	1966	181.5	1972	174.8	1962	146.7	1929	119.5	1952	74.6	1994	62.0	1960	69.2	1990	67.0	2011	65.3	1974
67	67.0	1947	85.9	1907	138.5	1922	183.1	1971	179.3	1935	148.8	1904	121.0	1899	74.7	1987	62.5	1943	70.0	1978	68.4	2003	65.4	1959
68	68.2	1906	87.0	1912	138.9	1900	188.0	1976	186.1	1997	150.1	1951	123.3	2002	75.6	1920	63.0	1920	70.4	1992	68.9	1954	65.9	1980
69	68.3	1942	87.1	1906	139.3	1963	188.3	1966	187.3	1966	150.6	1918	123.5	1954	75.8	1984	63.7	1997	71.3	2004	71.2	1971	66.1	1968
70	70.7	1987	88.9	1960	142.4	2004	191.9	1933	188.7	1990	151.8	1975	126.7	1973	76.1	1983	63.9	1994	73.0	1921	71.5	1925	69.1	1946
71	70.7	1935	90.3	1932	146.7	1944	193.3	1919	189.7	1908	154.3	1899	127.2	1938	77.0	1938	64.2	1983	73.4	1924	71.6	1927	70.7	1979
72	70.9	1962	92.3	1925	147.6	1961	195.6	1995	199.7	1933	157.5	1920	127.7	1975	77.6	1980	65.2	1968	73.6	1995	72.1	2008	71.4	1996
73	71.1	1927	93.0	1937	148.8	1935	197.4	1948	203.7	1912	158.1	1965	130.3	1960	78.1	1945	65.9	1991	73.8	1925	72.4	2001	71.9	1981
74	73.2	1978	93.3	1994	149.0	1965	201.3	1944	204.6	1972	159.5	1962	132.3	1903	78.4	1978	66.4	2011	74.9	2001	73.2	1990	72.0	1998
75	73.8	1965	93.7	1959	151.0	1959	201.4	1974	204.9	1945	159.6	1980	133.4	1967	79.1	1935	66.5	1995	75.5	1984	73.7	1905	72.3	2007
76	74.6	1994	94.1	1946	151.2	1945	202.0	1950	209.3	1998	159.7	1983	134.3	1991	80.8	1908	70.6	1989	76.8	2005	73.8	1996	75.7	1911
77	76.9	1937	97.1	2002	152.2	1975	202.6	1939	210.2	1978	165.0	1935	136.7	1958	81.5	1991	74.0	1985	77.1	1907	78.3	1909	79.2	1975
78	77.8	1955	97.8	1968	154.7	1950	203.2	1975	210.8	1947	167.6	1950	137.9	2003	82.7	1996	74.6	1945	77.9	1905	78.9	1965	79.3	2003
79	77.9	1999	99.1	1971	155.0	1951	213.2	1997	211.1	1909	168.8	1919	138.5	1957	83.6	2004	74.7	1912	83.1	1994	79.1	1979	79.5	2010
80	78.7	1933	99.6	1915	158.7	1991	225.4	1985	212.1	1982	173.0	1905	140.2	2009	85.3	1942	76.1	2004	83.1	1945	84.1	1967	79.8	1942
81	80.0	1949	100.5	1985	159.5	1990	225.4	1967	216.4	2003	179.6	1942	141.4	1929	86.5	1932	76.7	1987	84.0	1983	84.2	1959	80.9	1951
82	81.1	1998	100.5	1930	161.8	1908	229.4	1903	217.8	1950	183.1	1986	143.4	1944	87.5	1997	76.8	1902	84.9	1980	88.7	1938	81.2	1921
83	81.7	1995	102.2	1951	162.7	1906	230.7	1986	222.4	1904	184.6	1982	143.8	2001	88.6	1992	77.2	1973	85.5	1998	89.7	1994	82.4	2011
84	83.3	1975	103.7	1997	164.1	1949	233.5	1913	224.6	1969	185.1	1998	145.4	1999	89.6	1958	78.6	1907	86.4	1968	91.3	1968	82.9	1961
85	84.8	1929	103.9	1992	168.1	1939	234.0	2001	228.1	1986	185.2	1909	146.7	1996	90.8	1968	80.1	2002	90.6	1982	91.8	1902	84.5	2008
86	87.2	1984	104.8	1950	169.3	1936	238.6	1916	229.8	1970	188.8	1938	152.2	2004	91.2	1970	80.4	1921	91.9	1900	92.0	1981	87.7	1984
87	89.2	1928	105.5	1975	170.9	1992	240.9	1952	235.8	1952	190.2	2000	153.7	1924	91.5	1928	83.0	2009	92.7	1981	92.5	1903	89.1	1934
88	89.4	1986	107.9	1991	171.7	1986	242.2	2009	235.9	1922	194.1	1970	154.5	1983	93.6	1973	84.4	1962	95.2	2002	93.0	1973	89.5	1927
89	90.7	1991	107.9	1988	173.5	1994	243.2	1991	239.3	1919	194.7	1960	155.4	1968	93.9	1969	89.2	1905	95.3	1969	93.9	2007	89.6	2006
90	90.9	1988	110.6	1952	174.6	1937	243.2	1984	244.4	1984	219.5	2009	156.1	1920	95.6	1905	90.3	1942	95.8	1942	95.7	1900	89.8	1971
91	92.3	2011	110.7	1943	177.0	1952	245.0	1904	244.8	1974	221.7	1999	159.7	1935	96.1	2007	90.7	1982	97.1	1951	98.7	1911	90.4	1994
92	95.5	1912	111.8	1928	182.9	1903	245.9	1978	252.9	2010	223.2	1915	161.9	1942	96.2	1995	92.0	1992	98.3	2008	99.7	1942	90.7	2001
93	96.4	1966	114.0	1998	184.2	1971	248.9	1969	254.2	1916	225.9	1984	162.6	1905	96.3	1998	93.3	1977	99.4	1938	101.1	1995	91.7	1902
94	99.6	1985	114.1	1993	185.7	1927	249.2	2007	255.7	1960	227.5	1990	167.1	1986	99.0	1982	94.1	1951	99.4	1961	103.0	1977	91.9	1977
95	100.0	1952	114.5	1986	187.8	2007	252.3	1947	256.2	1999	229.6	1944	171.3	1943	100.1	2009	98.5	1990	106.2	1959	112.6	1983	92.5	1941
96	100.3	1992	116.8	1949	187.8	2001	252.7	1906	256.9	1943	236.1	2002	174.0	2000	100.8	2002	99.3	1941	109.8	1915	113.9	2004	93.4	1970
97	105.9	2007	118.7	1962	188.0	1976	258.6	1945	257.5	1991	239.7	1991	175.7	1982	102.6	1953	99.9	1978	110.3	1928	116.4	1951	95.8	1967
98	107.2	1969	121.2	1983	188.4	1962	266.3	1982	259.1	1975	240.5	1916	176.9	1974	104.5	1952	101.7	1981	116.4	1902	116.6	1919	99.1	1909
99	107.8	1943	122.6	1938	193.5	1946	273.3	2010	270.5	1951	242.9	1995	177.8	1907	104.6	1903	102.1	1961	117.1	1970	120.8	1998	99.7	1990
100	109.1	2008	124.1	1982	200.9	1974	275.3	1951	271.4	1983	243.1	1917	187.6	1984	108.0	1943	105.5	1979	117.8	1954	122.6	1970	99.9	1972
101	114.5	1950	124.2	2009	202.8	1998	280.5	2008	271.7	1979	247.3	1993	189.2	1978	111.0	1986	108.9	1928	123.1	1985	123.2	1991	103.7	1965
102	114.9	1932	124.4	2010	205.3	2008	280.9	1912	275.0	1996	249.1	1945	195.6	1981	112.0	1951	116.5	1972	123.2	1977	127.9	2010	105.2	1987
103	115.1	1907	126.8	1966	218.5	1984	284.4	1998	276.7	1944	254.9	1973	197.0	1902	114.8	1999	118.3	1970	126.5	2007	128.8	1993	109.2	1993
104	121.2	2009	126.9	1969	219.8	1997	285.0	1962	278.6	1920	258.0	1943	200.6	1951	116.5	1979	118.6	1915	127.8	1973	131.0	1946	109.9	1931
105	128.4	1960	131.4	2008	223.4	1993	289.2	2011	278.8	1929	264.9	2001	202.8	1947	126.3	2008	120.8	1938	128.5	1911	137.0	1984	115.8	1928
106	135.5	1925	133.1	2011	225.4	1948	290.5	1965	280.7	1995	264.9	1996	203.7	1915	141.1	1972	120.9	1924	131.6	1927	144.2	1992	119.9	2004
107	138.4	1974	143.6	1942	225.6	2010	301.8	1960	281.5	1965	269.2	2010	205.1	1990	142.4	2011	121.7	2007	137.3	1972	147.7	1982	121.9	1986
108	140.7	1983	146.2	1999	225.8	1983	307.7	1920	292.5	2009	288.8	2004	211.6	1998	143.6	1990	125.3	1986	137.9	2009	156.6	1926	122.6	1973
109	145.6	1916	146.9	1984	227.5	2011	310.7	1922	308.7	2011	302.5	1947	227.0	2011	147.5	1981	129.7	1980	145.4	1965	160.5	1972	125.7	1983
110	149.8	2010	147.5	2005	233.8	1979	317.3	1929	314.7	2002	305.7	1974	240.7	1908	147.6	1907	130.6	1903	175.3	1903	162.3	1928	131.0	1926
111	153.9	2005	152.5	1927	234.2	2009	353.2	1983	320.2	1927	324.4	2011	243.6	1909	151.6	1924	148.3	1965	175.7	1941	164.0	1961	156.2	1991
112	168.6	1910	162.1	2001	237.4	1982	355.7	1973	320.9	2008	324.7	1927	261.7	1969	159.5	1902	167.2	2010	185.4	2010	167.7	1986	156.5	2009
113	169.7	1993	163.0	1973	243.2	1929	360.5	1927	330.6	2001	349.6	1908	301.6	2008	235.5	1915	175.8	2008	189.9	1993	180.0	1941	170.3	1985
114	173.8	1946	183.2	1916	260.6	1973	365.3	1993	340.4	1993	356.1	2008	335.9	2010	285.7	2010	221.1	1926	277.2	1926	207.3	1985	176.3	1992
115	179.7	1973	183.6	1974	309.7	1985	380.2	1979	391.5	1973	364.3	1903	446.7	1993	378.6	1993	296.2	1993	288.2	1986	258.3	2009	275.3	1982

Plate 22. Hermann to St. Louis Ranking of Average Monthly Flows

Gavins Point to Sioux City



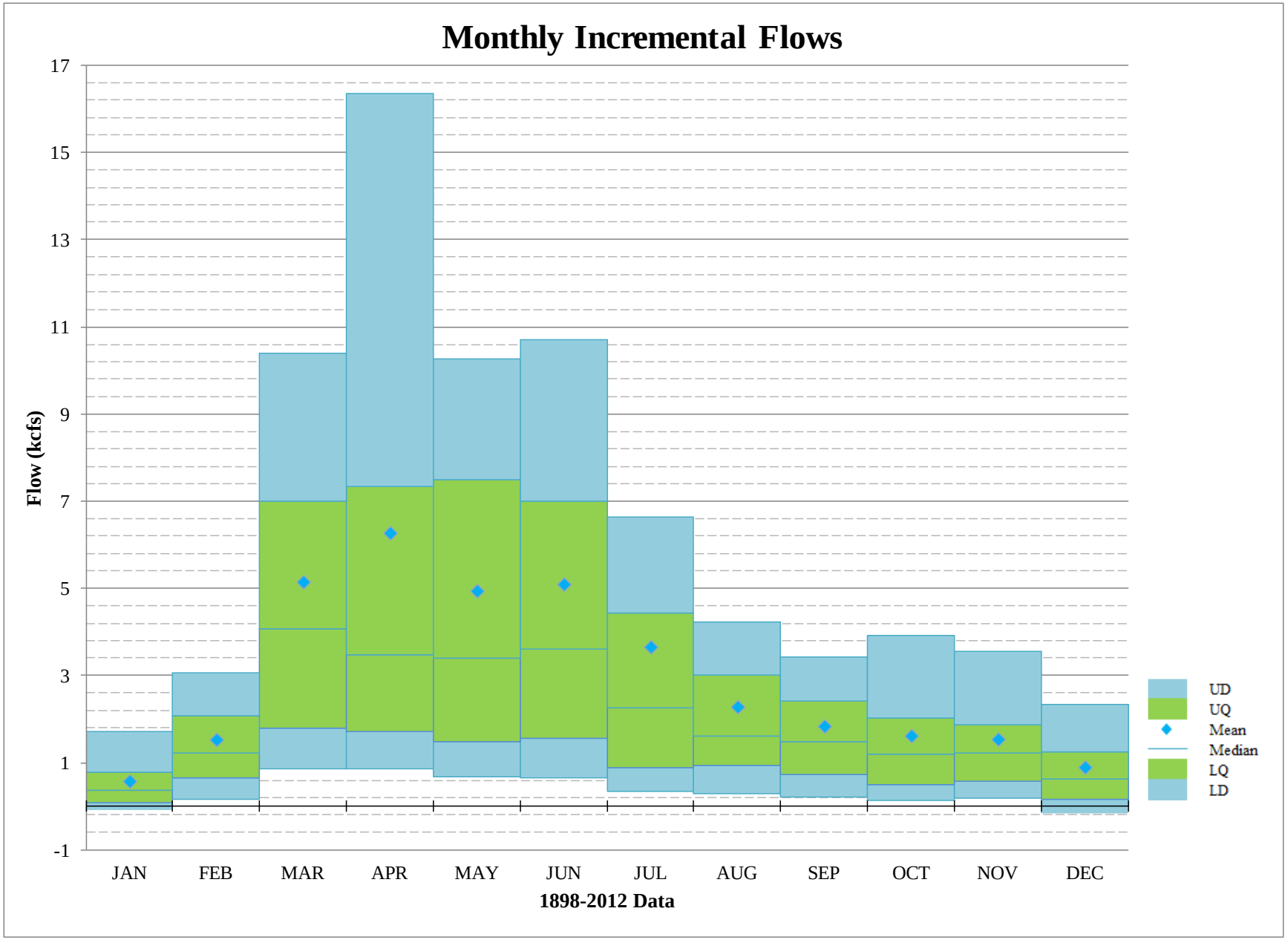
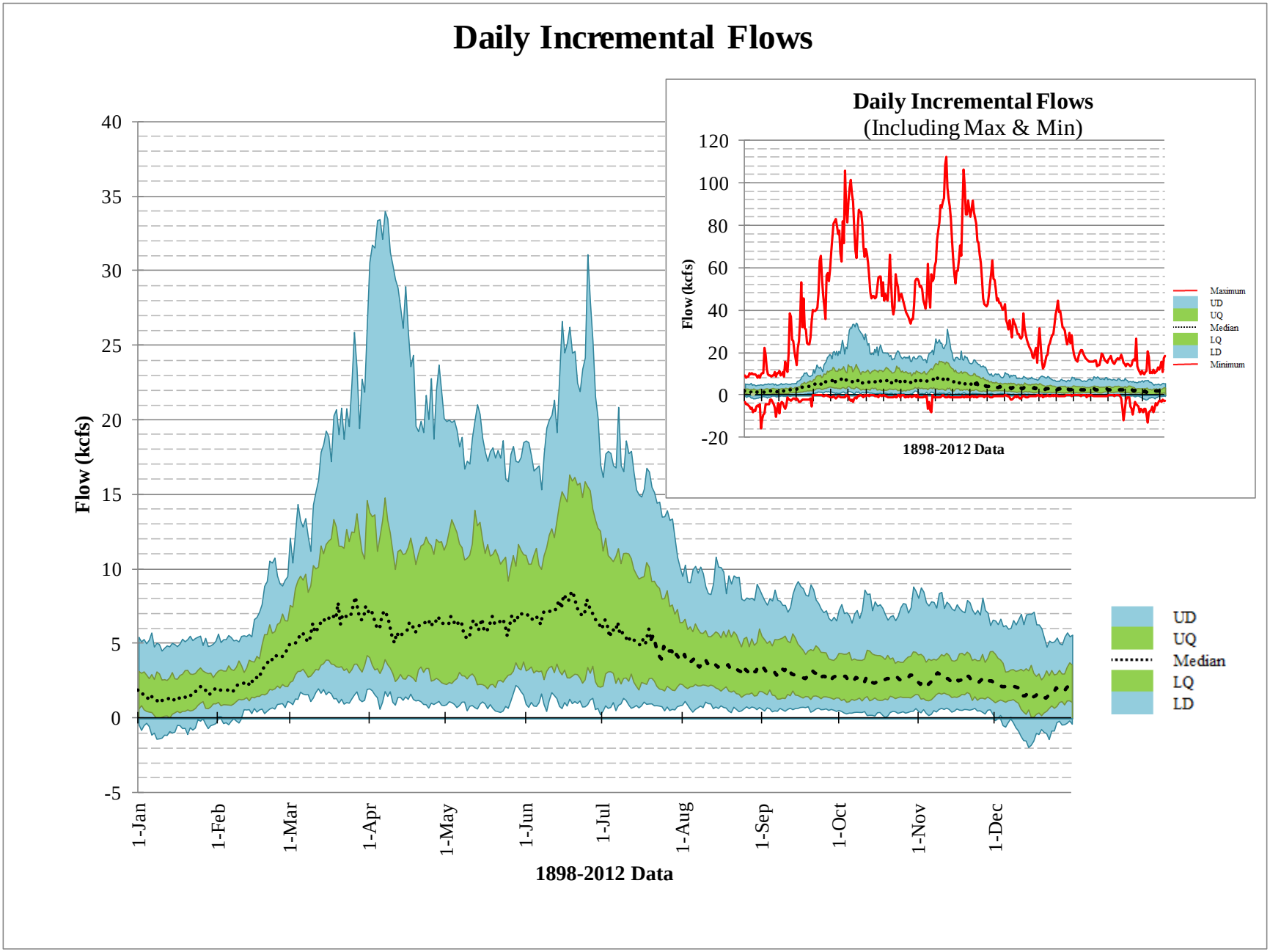


Plate 23. Gavins Point to Sioux City Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Gavins Point to Omaha



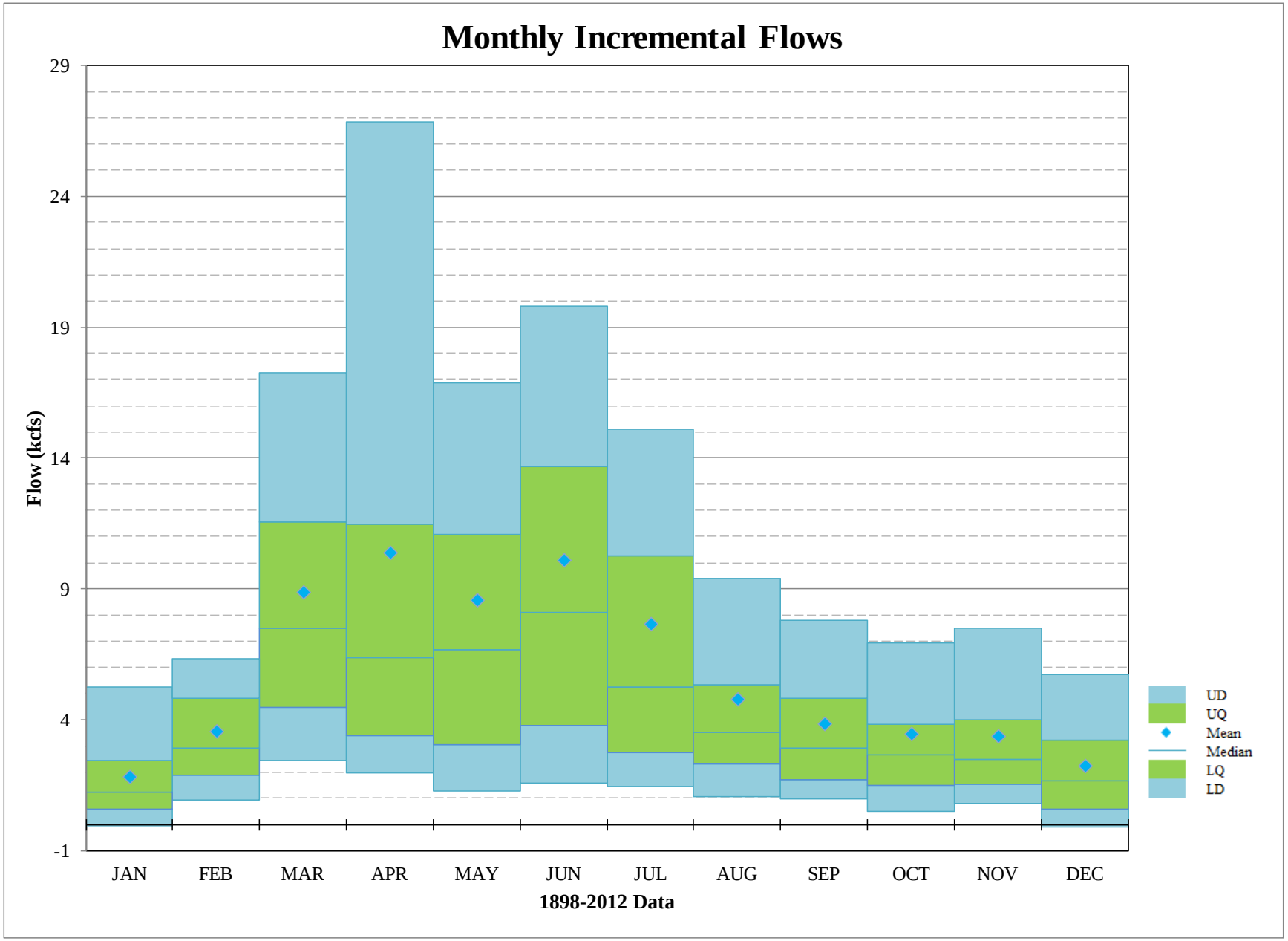
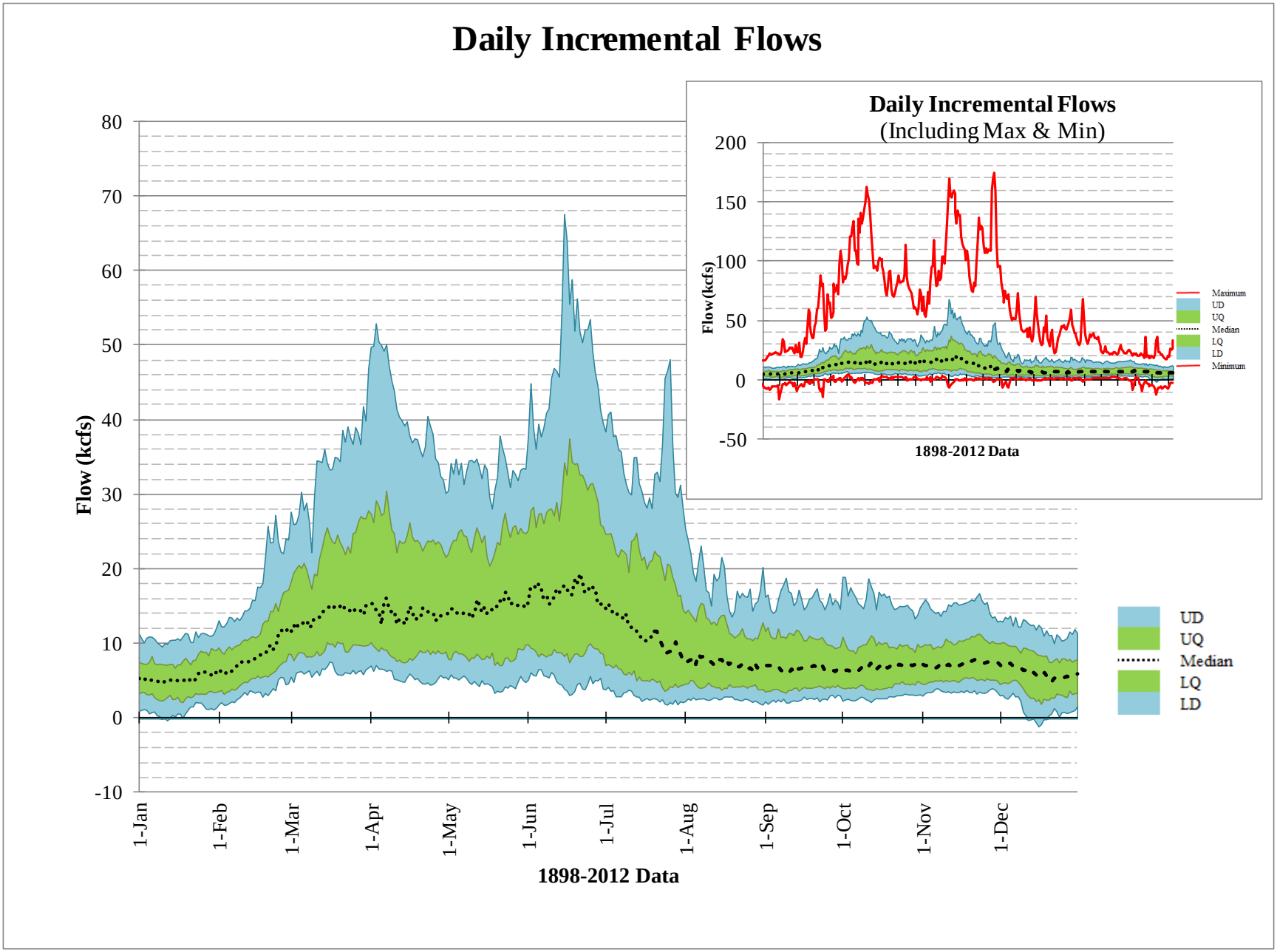


Plate 24. Gavins Point to Omaha Incremental Flows

MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Gavins Point to Nebraska City



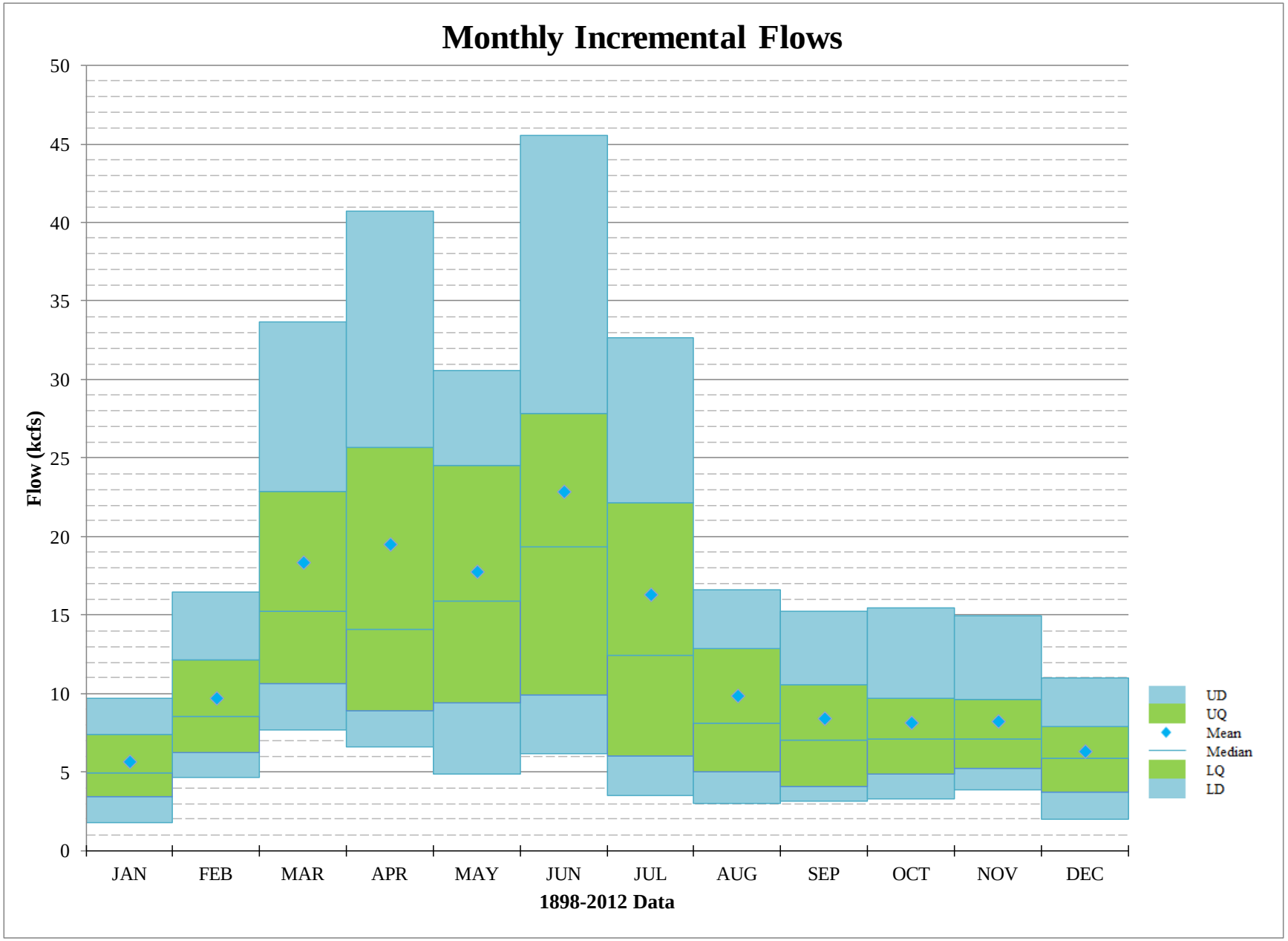
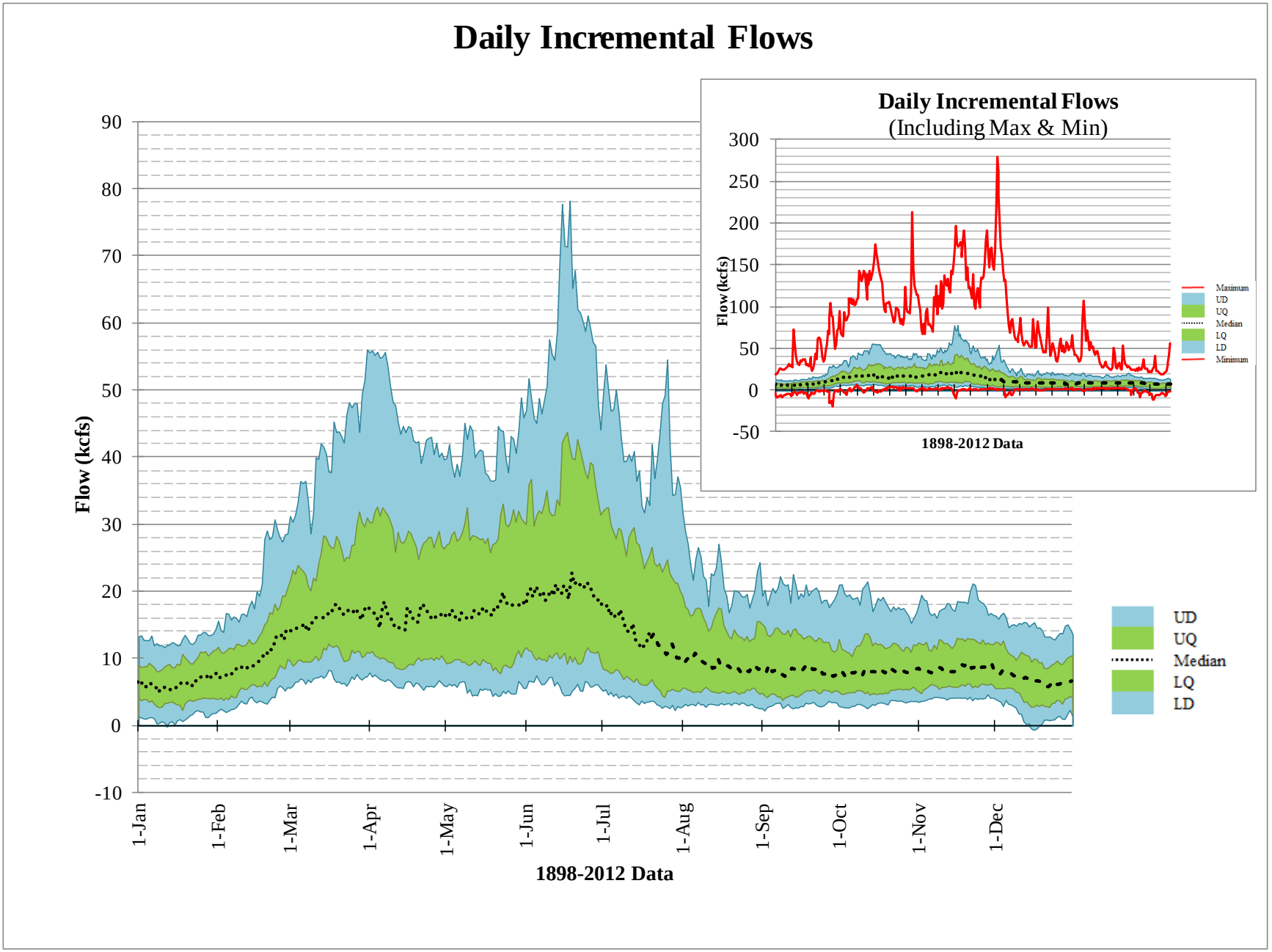


Plate 25. Gavins Point to Nebraska City Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Gavins Point to Rulo



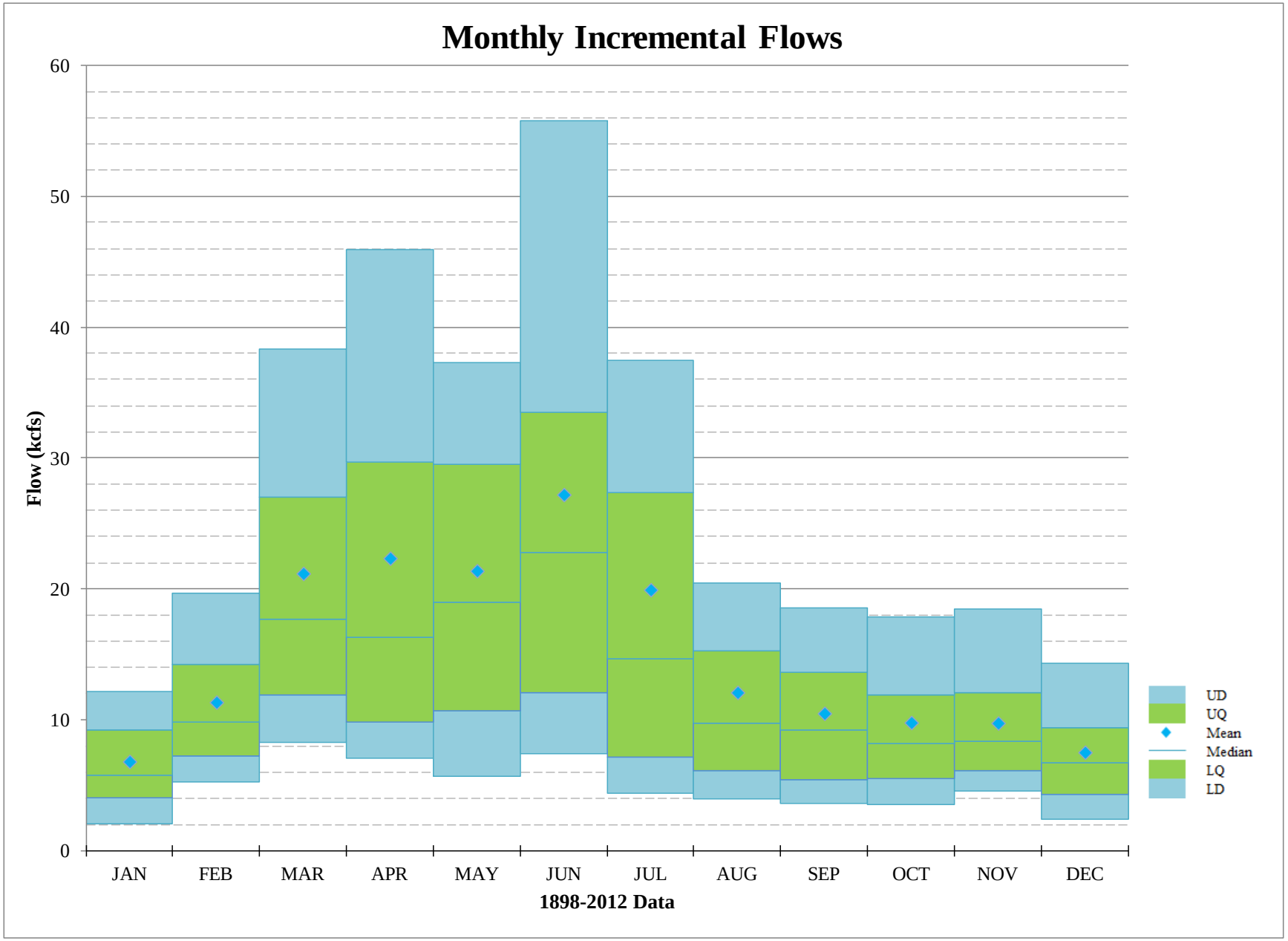
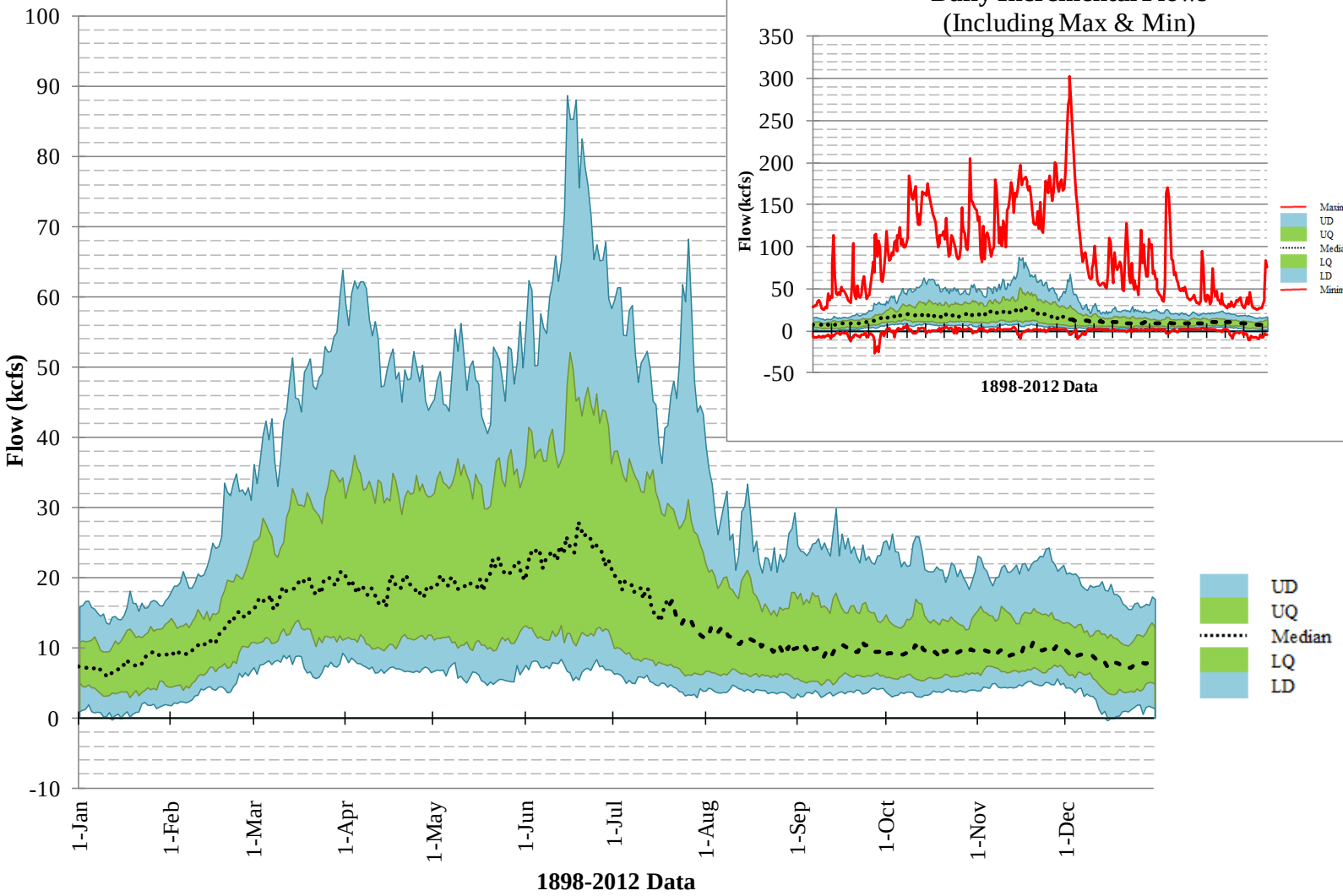


Plate 26. Gavins Point to Rulo Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Gavins Point to St. Joseph

Daily Incremental Flows



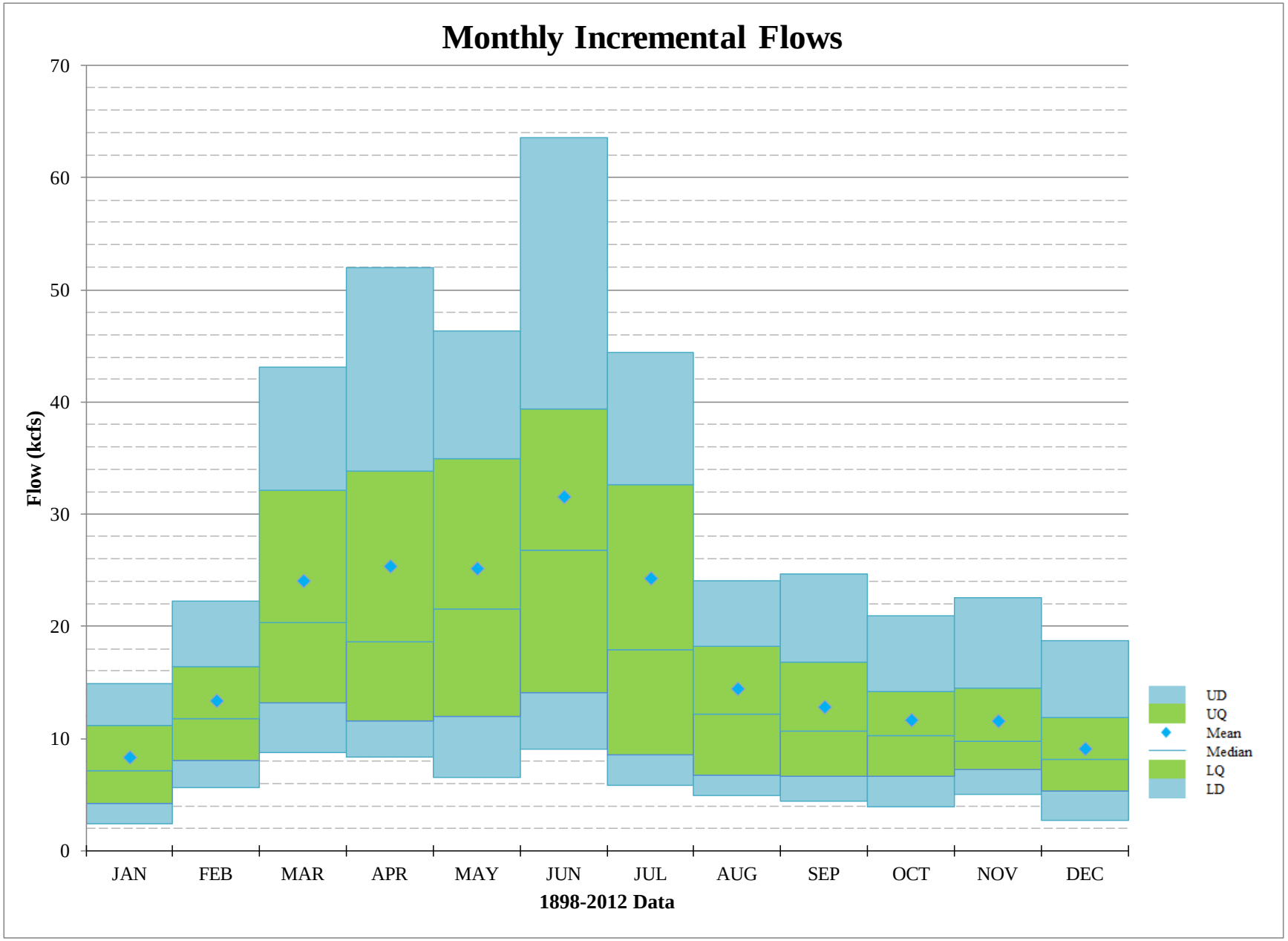
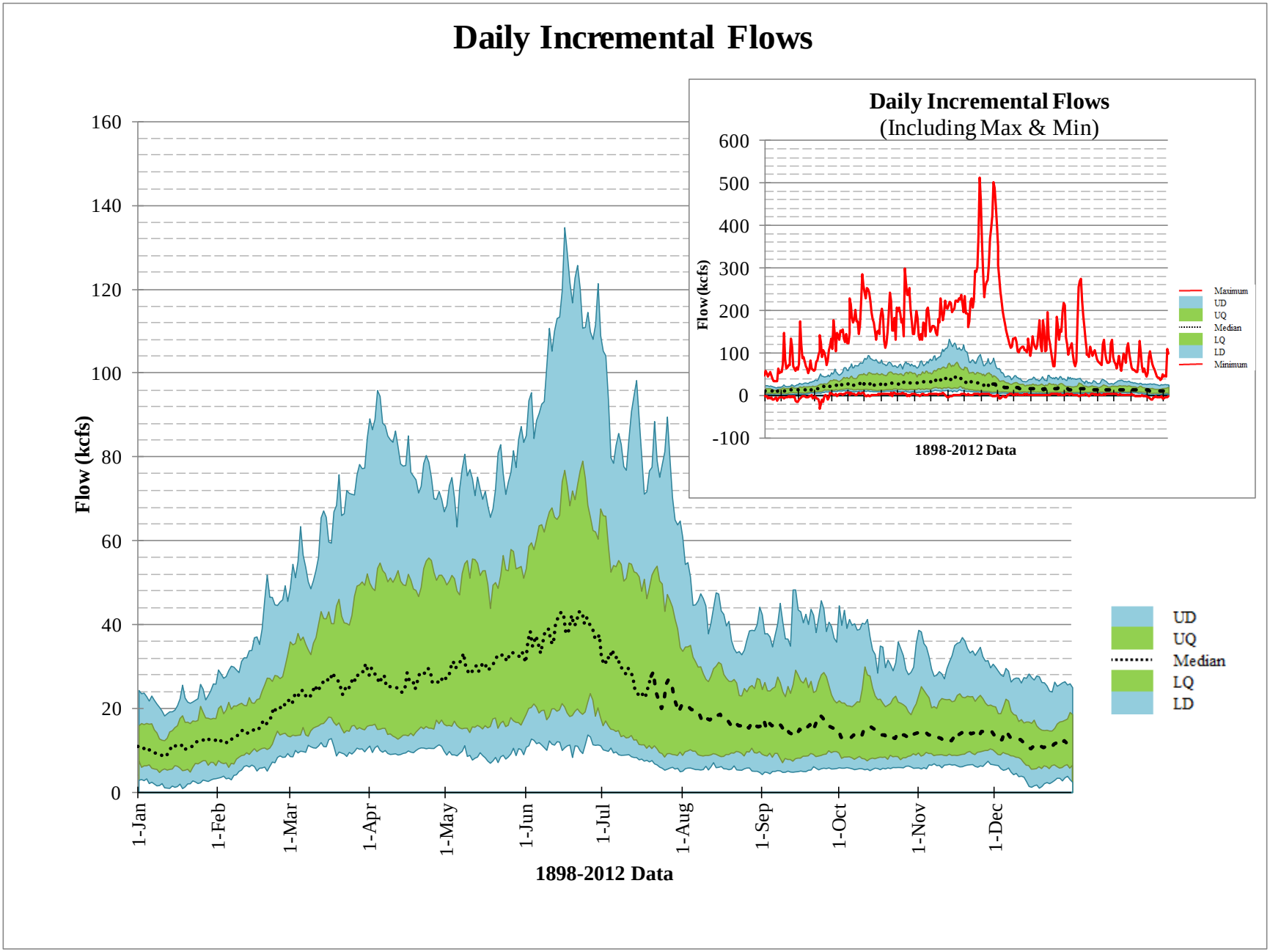


Plate 27. Gavins Point to St. Joseph Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Gavins Point to Kansas City



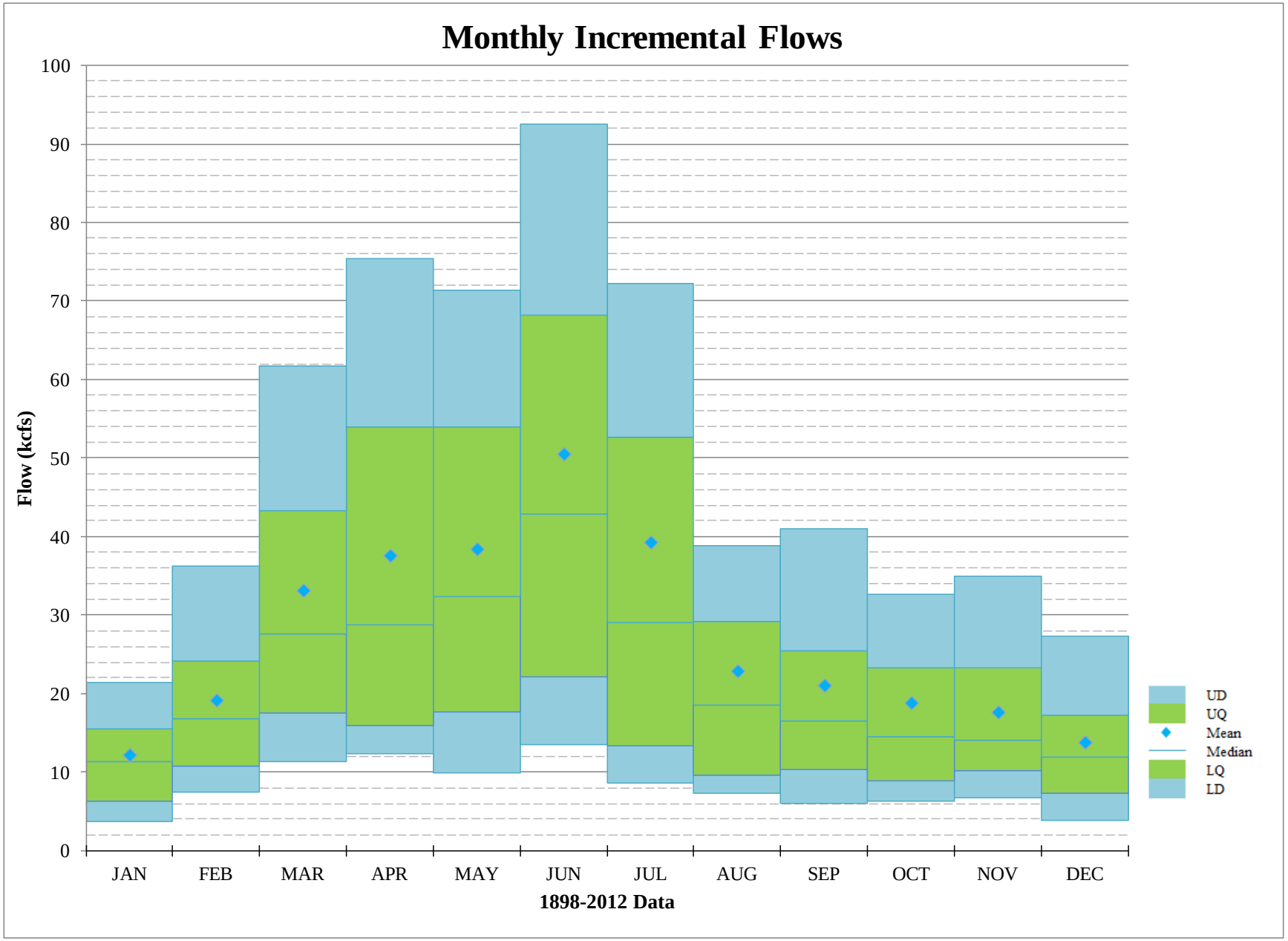
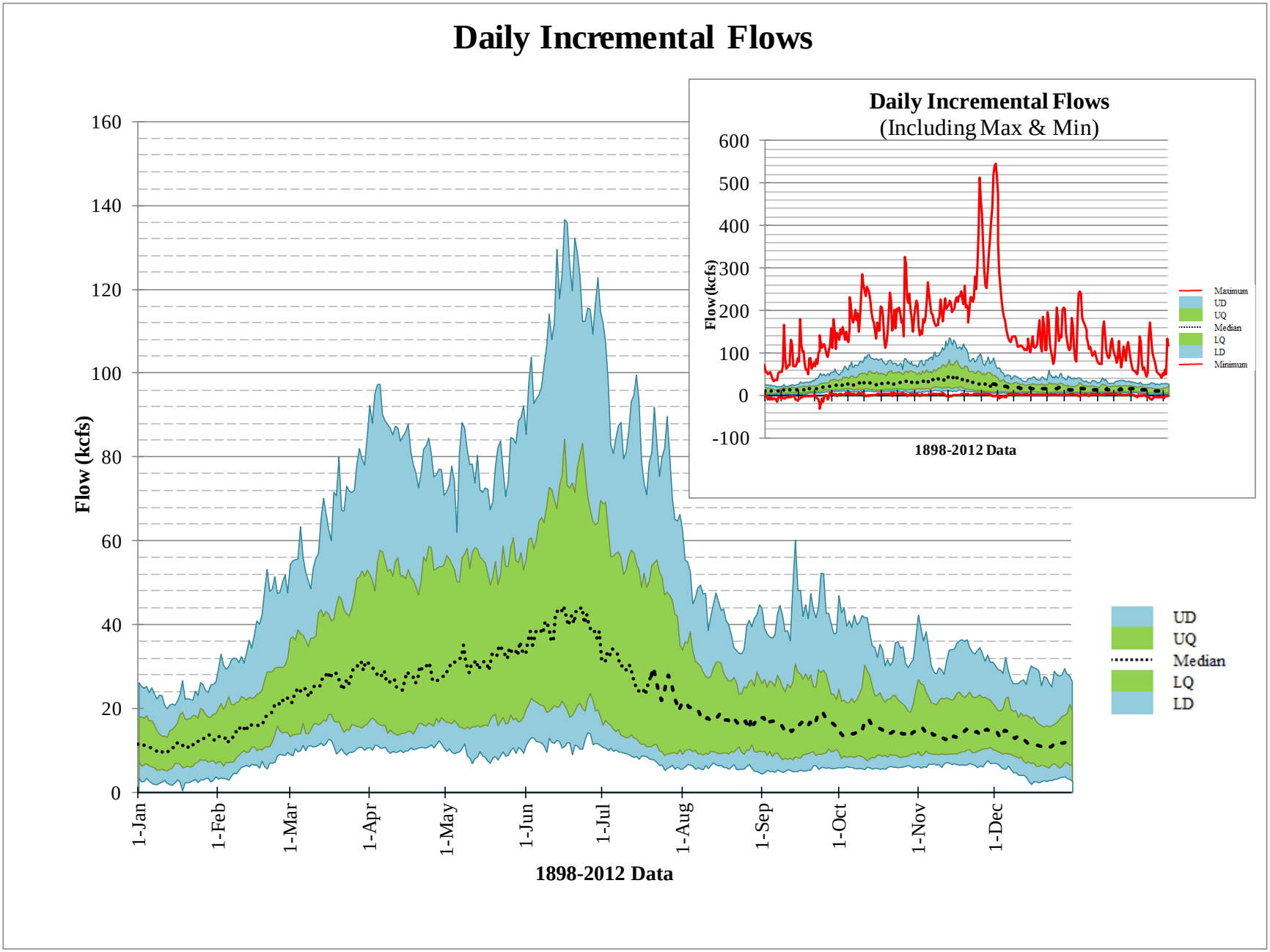


Plate 28. Gavins Point to Kansas City Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Gavins Point to Waverly



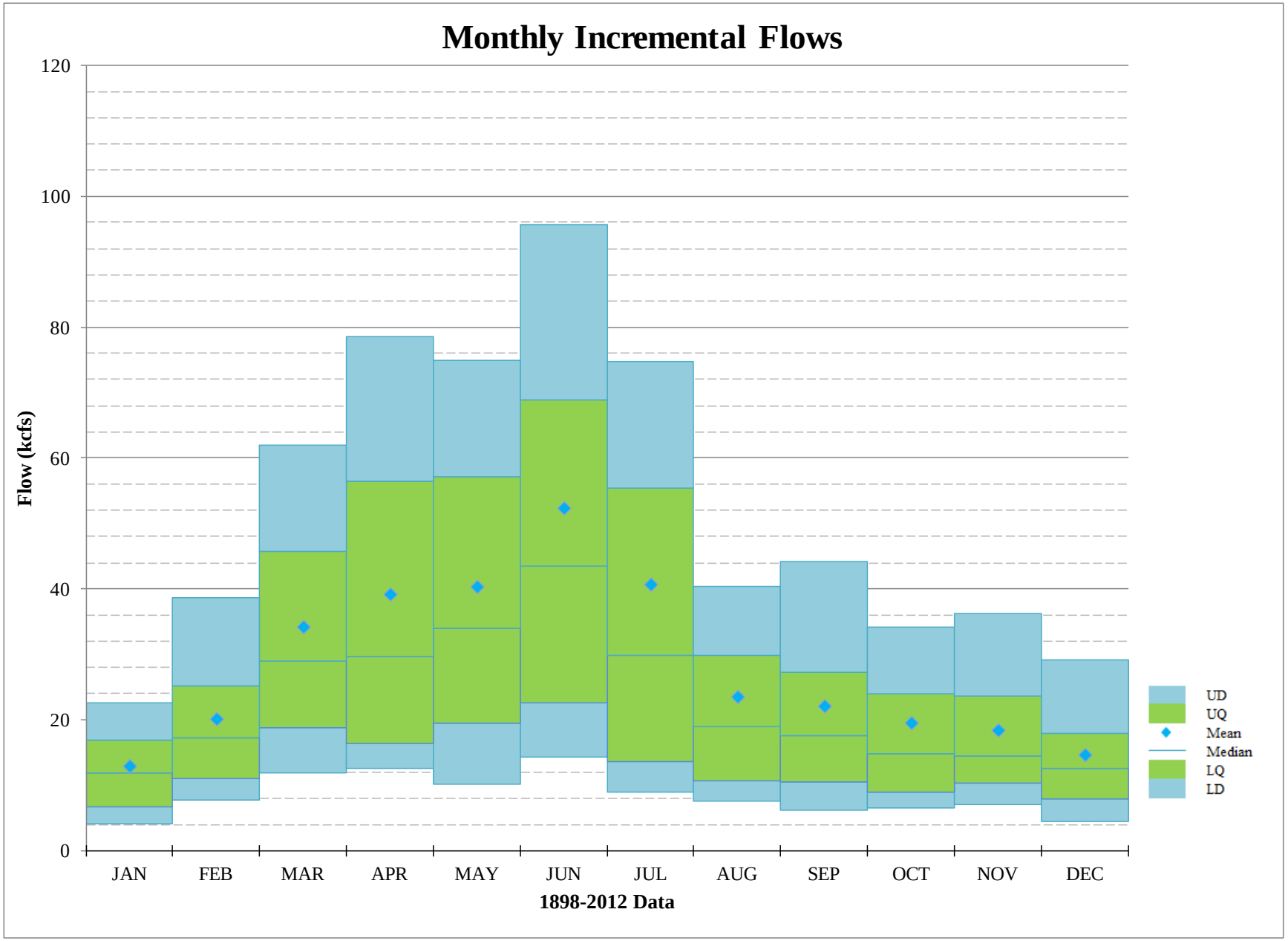
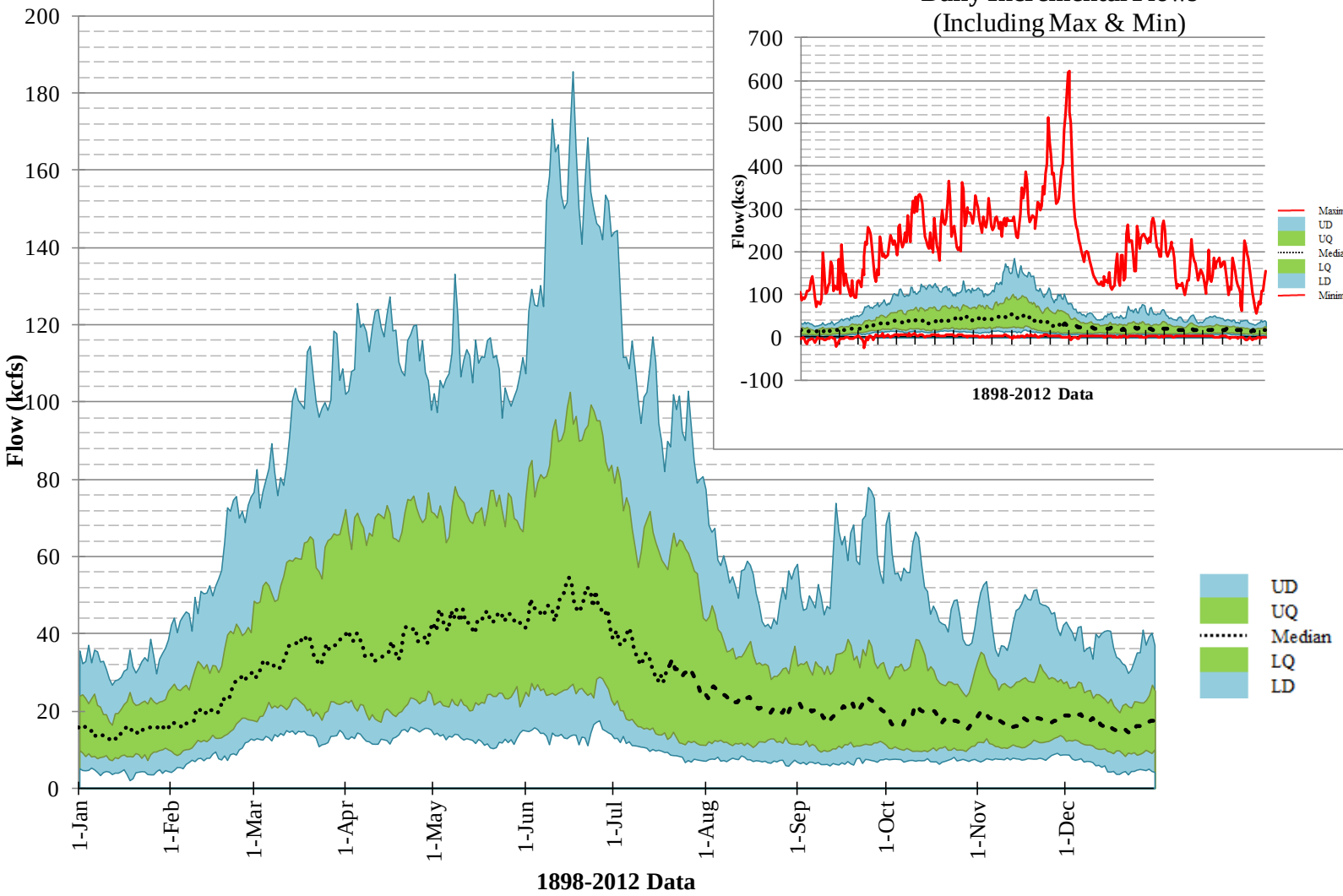


Plate 29. Gavins Point to Waverly Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Gavins Point to Boonville

Daily Incremental Flows



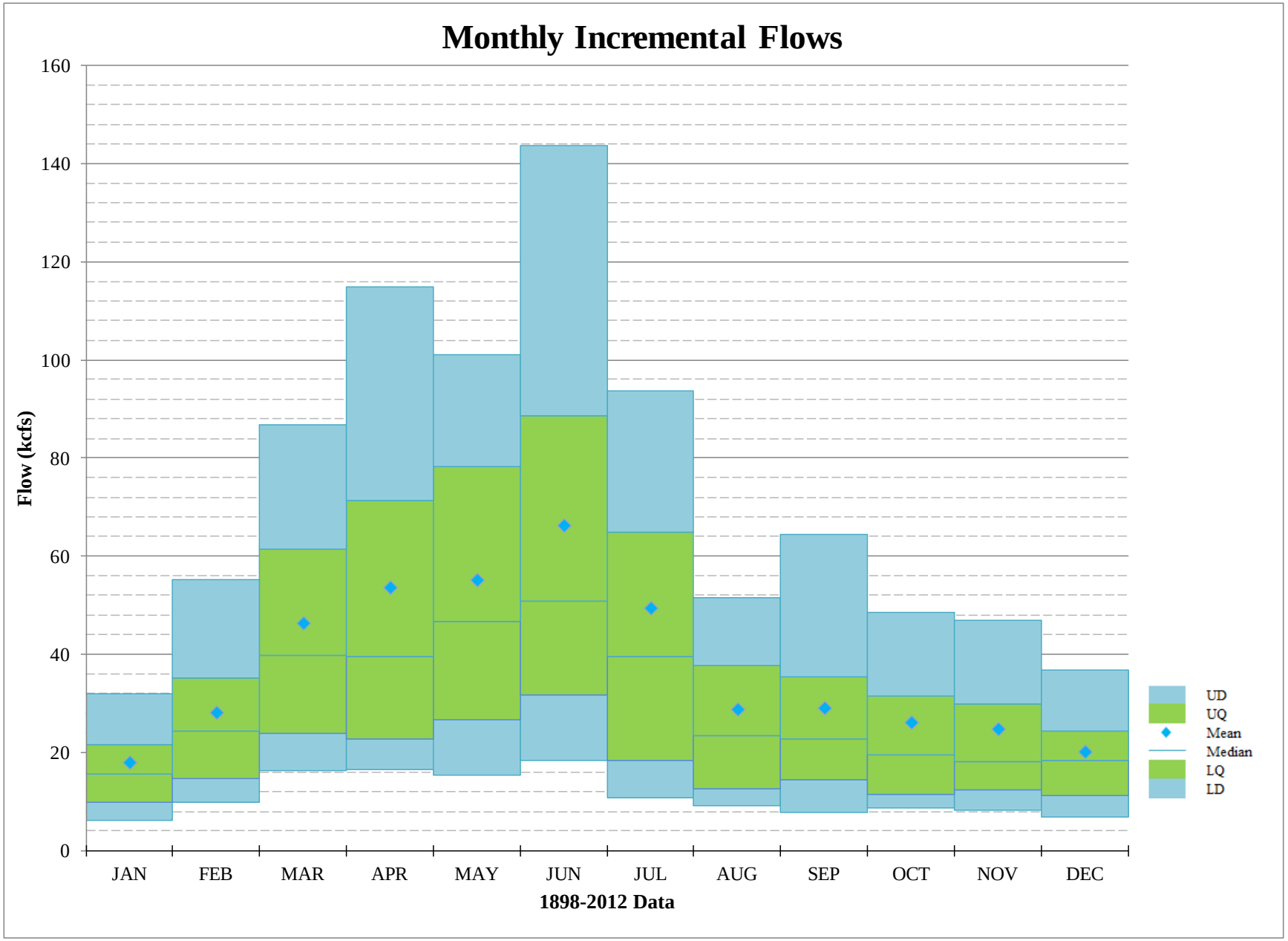
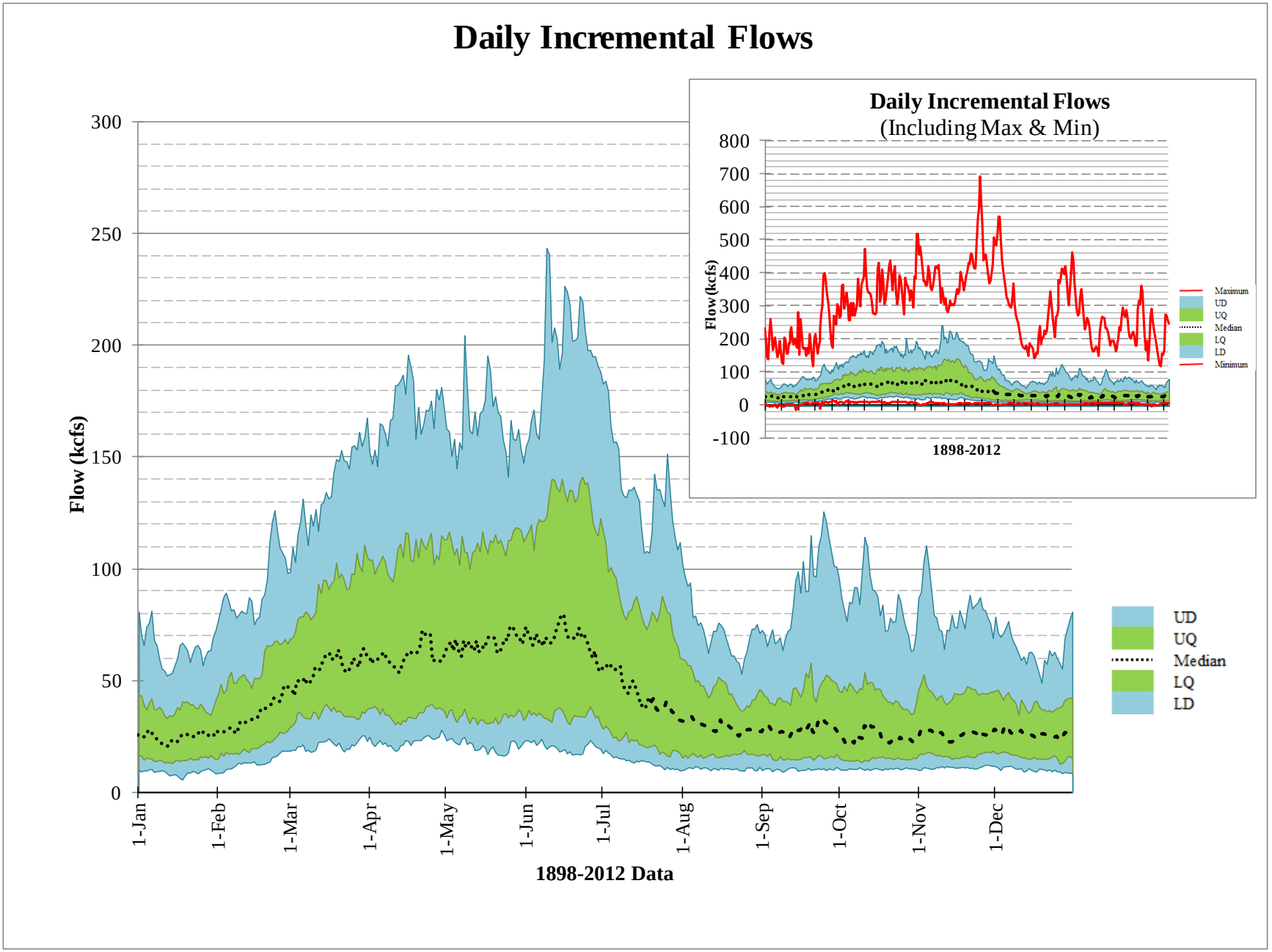


Plate 30. Gavins Point to Boonville Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Gavins Point to Hermann



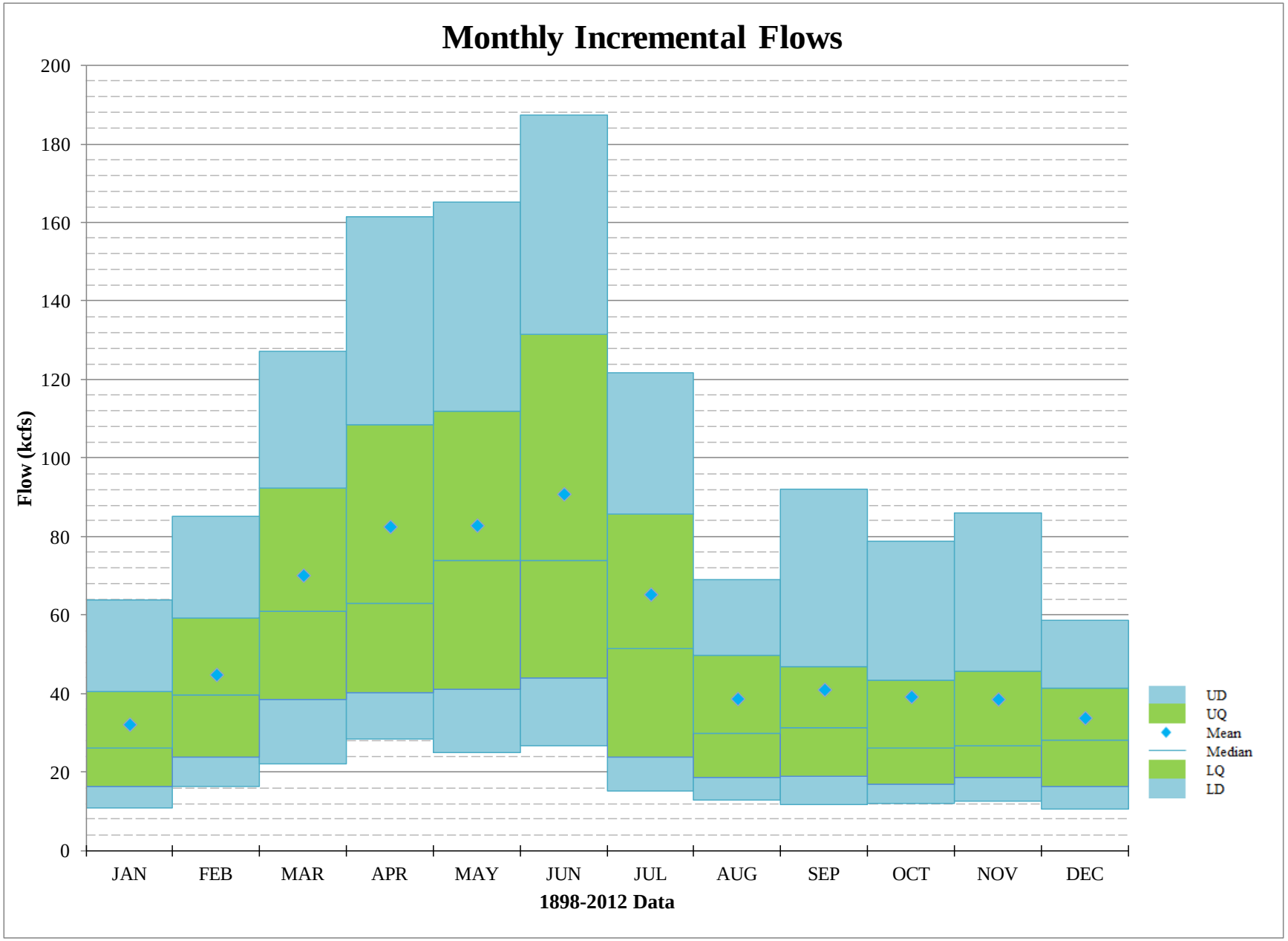
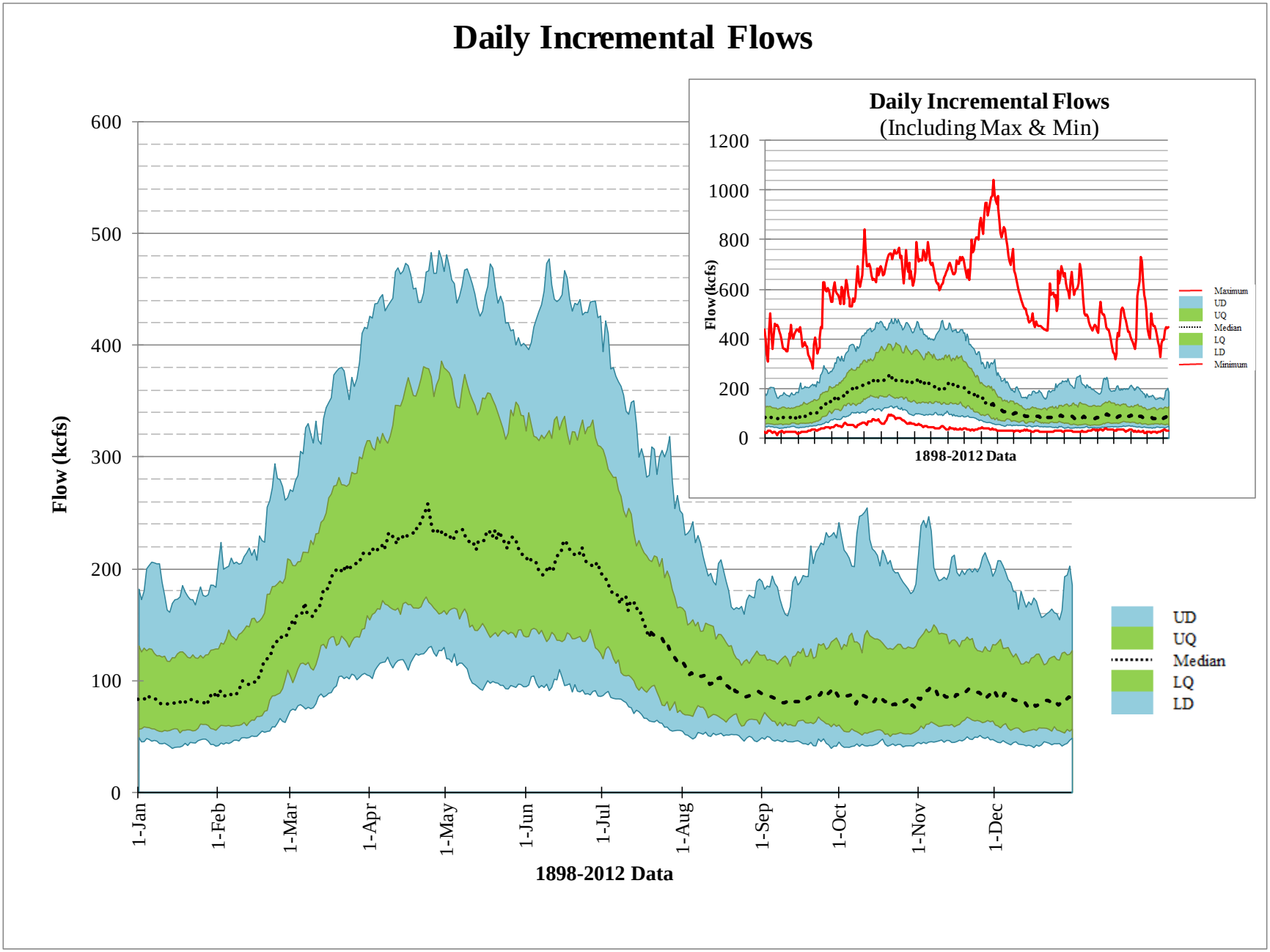


Plate 31. Gavins Point to Hermann Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Gavins Point to St. Louis



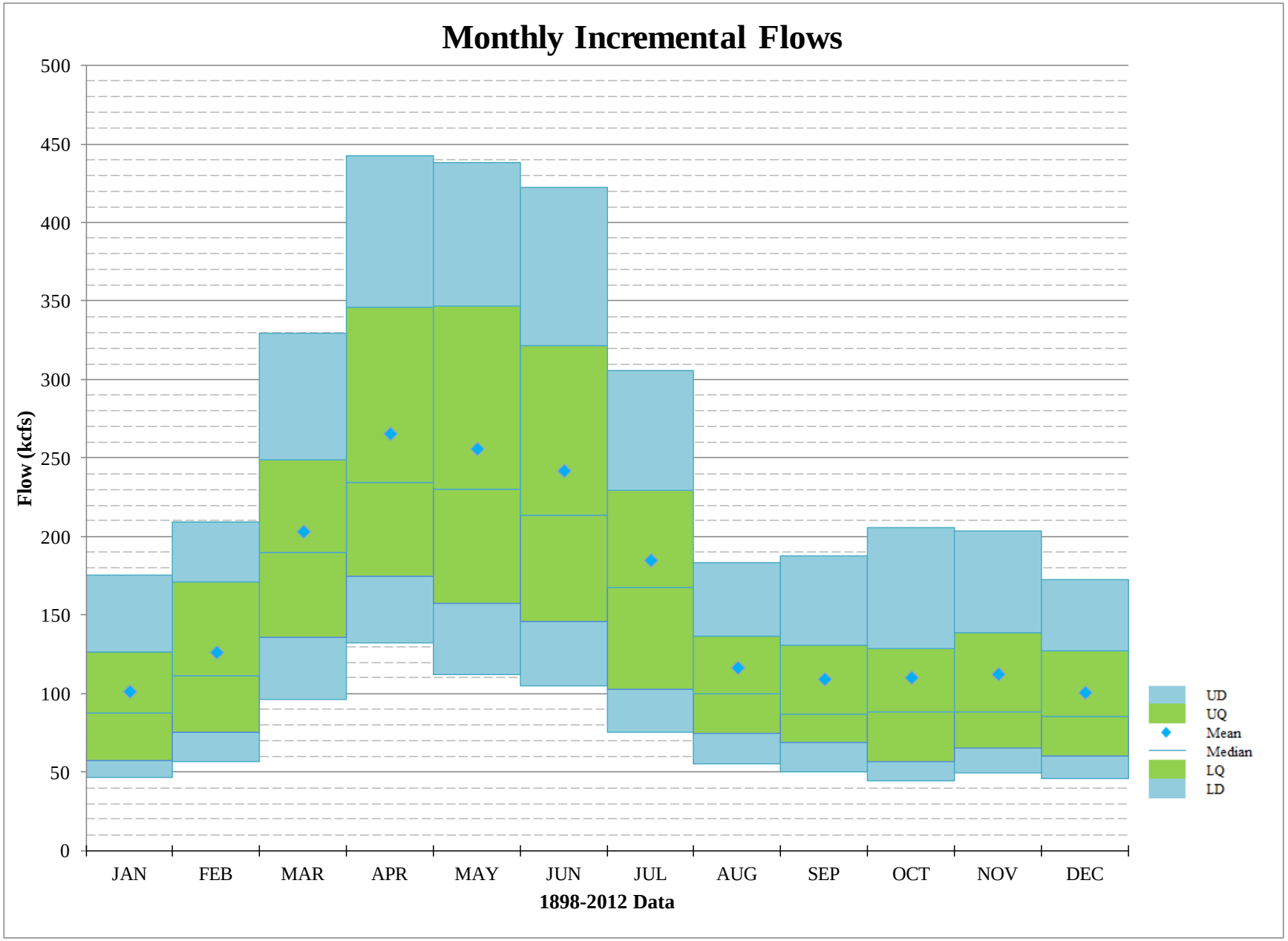


Plate 32. Gavins Point to St. Louis Incremental Flows
MRBWM Technical Report – Incremental Flows Below Gavins Point, July 2014

Gavins Point to Sioux City, Iowa

Ranking of Average Monthly Flows (kcfs)

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	-0.6	2012	-0.5	2012	-0.4	2012	-1.3	1950
2	-0.8	2004	-0.1	1942	0.3	1931	0.0	1990	0.1	1931	0.1	1989	0.0	1988	-0.1	2012	-0.2	1955	-0.2	1955	-0.2	1955	-1.1	1968
3	-0.6	1970	-0.1	1930	0.4	1933	0.2	1934	0.1	1934	0.1	1956	0.1	1989	0.1	1989	0.0	1931	0.0	1988	-0.1	1930	-1.1	1929
4	-0.6	1971	-0.1	1939	0.5	1925	0.3	1935	0.2	1981	0.2	1941	0.1	1943	0.1	1991	0.0	1943	0.0	1935	0.1	1939	-0.6	1989
5	-0.4	1977	0.0	1955	0.5	1934	0.3	1931	0.2	1956	0.3	1912	0.2	1931	0.2	1931	0.1	1990	0.1	1931	0.1	1924	-0.5	1990
6	-0.4	1988	0.0	1937	0.5	1991	0.3	1991	0.3	1940	0.4	1933	0.2	1933	0.2	1936	0.1	1925	0.1	1936	0.1	1934	-0.5	1943
7	-0.4	1951	0.0	1936	0.5	1990	0.3	1925	0.3	1935	0.4	1910	0.2	1936	0.2	1925	0.1	1935	0.1	1934	0.1	1936	-0.5	1940
8	-0.2	1982	0.0	1932	0.6	1935	0.4	1981	0.4	1968	0.4	1911	0.2	1956	0.2	1934	0.1	1989	0.1	1924	0.1	1931	-0.3	2000
9	-0.2	1955	0.0	1940	0.7	1943	0.5	1968	0.5	1925	0.5	1988	0.3	1925	0.2	1990	0.1	1981	0.1	1990	0.1	1969	-0.3	1944
10	-0.1	1934	0.1	1933	0.8	1964	0.6	1933	0.5	1989	0.5	1931	0.3	1947	0.2	1988	0.2	1937	0.1	1932	0.2	1925	-0.2	1953
11	-0.1	1968	0.1	1925	0.8	1940	0.7	1926	0.6	1933	0.6	1935	0.3	1981	0.3	1933	0.2	1934	0.1	1943	0.2	1933	-0.2	1949
12	-0.1	1950	0.1	1961	0.8	1981	0.8	1943	0.6	1939	0.6	1936	0.3	1968	0.3	1954	0.2	1991	0.1	1937	0.2	1935	-0.2	1983
13	-0.1	1957	0.2	1990	0.9	1968	0.9	1963	0.7	1943	0.7	1921	0.3	1934	0.3	1981	0.2	1940	0.1	1989	0.2	1921	-0.1	1938
14	-0.1	1969	0.2	1935	1.1	2005	0.9	1938	0.8	1936	0.7	1922	0.4	1932	0.3	1935	0.2	1954	0.1	1939	0.2	1932	-0.1	1941
15	0.0	1972	0.3	1938	1.1	1975	1.0	1974	0.9	1911	0.7	1977	0.4	1940	0.3	2003	0.3	1998	0.2	1933	0.3	1943	0.0	1947
16	0.0	1933	0.3	1960	1.1	1998	1.1	1936	0.9	1932	0.8	1968	0.5	1959	0.3	1968	0.3	1968	0.2	1925	0.3	1910	0.0	1961
17	0.0	1930	0.3	1998	1.1	1926	1.1	1939	1.0	1941	0.9	1934	0.5	1977	0.3	2000	0.3	1926	0.2	1945	0.3	1989	0.0	1935
18	0.0	1962	0.3	1934	1.2	1959	1.2	1922	1.0	1938	0.9	1943	0.5	1935	0.3	1946	0.4	2003	0.2	1991	0.3	1937	0.0	1937
19	0.0	1940	0.3	1926	1.2	1963	1.2	1911	1.0	1946	1.0	1981	0.6	1970	0.4	1938	0.4	1956	0.3	1953	0.4	1917	0.0	1960
20	0.0	1935	0.4	1950	1.2	2000	1.3	1956	1.1	1974	1.0	1938	0.6	2012	0.4	1941	0.4	1974	0.3	1921	0.4	1990	0.0	1924
21	0.0	1936	0.4	1922	1.3	1958	1.4	1988	1.1	1990	1.2	1927	0.7	1926	0.4	1926	0.4	1922	0.4	2003	0.4	1898	0.1	1964
22	0.0	1937	0.4	1959	1.3	1937	1.4	1989	1.1	1910	1.2	1992	0.7	1942	0.4	1937	0.5	1939	0.4	1959	0.5	1927	0.1	1930
23	0.0	1960	0.4	2004	1.5	1922	1.5	1932	1.1	1988	1.2	1932	0.7	1946	0.5	1932	0.5	1988	0.4	1910	0.5	1987	0.1	1958
24	0.0	1925	0.5	1989	1.6	1965	1.5	1959	1.1	1991	1.2	1939	0.7	1990	0.5	1940	0.6	1932	0.4	1987	0.5	1918	0.1	1925
25	0.0	1961	0.6	1962	1.7	2003	1.5	1992	1.2	1900	1.2	1926	0.8	1937	0.6	1922	0.6	1953	0.4	1917	0.5	1940	0.1	1939
26	0.1	1926	0.6	1911	1.7	1957	1.6	1961	1.3	1977	1.3	1902	0.8	1939	0.6	1945	0.6	1987	0.5	1898	0.5	1954	0.1	1932
27	0.1	1922	0.6	1965	1.8	1956	1.6	1977	1.4	1992	1.3	1946	0.9	2002	0.8	1987	0.6	1945	0.5	1942	0.6	1953	0.1	1921
28	0.1	1997	0.6	1972	1.8	1969	1.6	1954	1.4	1924	1.4	1937	0.9	1922	0.8	1973	0.7	1947	0.5	1998	0.6	1929	0.1	1931
29	0.1	1942	0.7	1931	1.8	1974	1.7	1957	1.5	1958	1.5	1940	0.9	1941	0.9	1911	0.7	1911	0.5	1940	0.6	1913	0.1	1945
30	0.1	1911	0.7	1964	1.8	1911	1.7	2000	1.5	1928	1.6	2002	0.9	1953	1.0	1899	0.7	1977	0.5	1927	0.6	1901	0.2	1910
31	0.1	1932	0.7	1963	1.9	1942	1.8	1967	1.5	1963	1.6	1987	0.9	1930	1.0	1939	0.8	1899	0.5	1954	0.6	1956	0.2	1946
32	0.1	1938	0.7	1975	1.9	1989	1.8	1928	1.5	1926	1.7	1900	1.1	1911	1.0	1982	0.8	1929	0.6	1929	0.6	1904	0.3	1917
33	0.2	1919	0.8	1899	2.2	2002	1.8	1975	1.5	1919	1.7	1958	1.2	1963	1.0	1942	0.8	1970	0.6	1949	0.6	1916	0.3	1898
34	0.2	1928	0.8	1918	2.2	1967	1.8	2004	1.6	1937	1.7	1990	1.3	2006	1.0	1956	0.8	1959	0.6	1901	0.7	1903	0.3	1934
35	0.2	1899	0.8	1953	2.3	1947	1.9	1958	1.6	1967	1.8	1963	1.3	1985	1.0	1958	0.9	1963	0.6	1918	0.7	1926	0.3	1996
36	0.2	1918	0.8	1941	2.5	1988	2.0	2003	1.6	1922	1.9	1959	1.4	1991	1.1	1959	0.9	1918	0.6	1969	0.7	1974	0.3	1927
37	0.2	1944	0.9	1928	2.8	1977	2.0	1942	1.6	1975	2.1	1964	1.4	1974	1.1	1997	0.9	1936	0.7	1958	0.7	1991	0.3	1942
38	0.2	1902	0.9	1978	2.8	1960	2.1	1937	1.7	1954	2.2	1925	1.5	1899	1.2	1928	1.0	1919	0.7	1913	0.8	1945	0.3	1952
39	0.2	1914	0.9	1949	2.8	1928	2.1	1941	1.9	1971	2.3	1903	1.5	1918	1.2	1929	1.0	1902	0.7	1974	0.8	1938	0.3	1901
40	0.2	1931	0.9	1969	2.8	1941	2.1	1940	2.1	1917	2.4	1973	1.6	2000	1.2	1918	1.0	1928	0.7	1956	0.9	1968	0.3	1918
41	0.2	1946	0.9	1979	3.1	1999	2.2	1919	2.3	1964	2.4	1974	1.6	1966	1.2	1902	1.0	1905	0.7	1916	0.9	1988	0.3	1936
42	0.2	1905	0.9	1943	3.1	1939	2.3	1905	2.4	1957	2.5	1930	1.6	1964	1.2	1919	1.1	1973	0.8	1981	0.9	1959	0.4	1913
43	0.2	1917	1.0	1968	3.1	2006	2.4	1964	2.5	1959	2.6	2000	1.7	1975	1.3	1970	1.1	2000	0.8	1904	0.9	1923	0.4	1962
44	0.2	1927	1.0	1902	3.2	1899	2.4	1918	2.5	1904	2.6	1960	1.8	1950	1.3	1947	1.1	1997	0.8	1926	1.0	1961	0.4	1988
45	0.3	1904	1.0	1919	3.2	1932	2.5	1898	2.5	1980	2.7	1975	1.8	1954	1.3	1943	1.1	1914	0.8	1960	1.0	1907	0.4	1963
46	0.3	1953	1.0	1951	3.3	1918	2.6	1899	2.7	1973	2.8	1970	1.8	1919	1.3	1977	1.1	1941	0.9	1903	1.0	1994	0.4	1916
47	0.3	1967	1.0	1958	3.4	1980	2.6	1914	2.8	2002	2.8	1980	1.9	1960	1.4	1985	1.1	1958	1.0	1952	1.0	1912	0.4	1967
48	0.3	1924	1.0	1929	3.4	1919	2.7	1930	2.9	1961	2.9	1982	1.9	1902	1.4	1914	1.2	1917	1.0	1930	1.0	1963	0.4	1933
49	0.3	1945	1.1	1997	3.6	1898	2.9	1982	3.1	2003	3.0	1961	1.9	1987	1.4	2002	1.2	1982	1.1	1907	1.0	1958	0.4	1957
50	0.3	1941	1.1	2003	3.6	1992	2.9	1946	3.1	1912	3.0	1976	2.0	1928	1.5	1974	1.2	1898	1.1	1963	1.1	2003	0.4	1904
51	0.3	1898	1.1	1914	3.6	1914	2.9	1971	3.1	1930	3.0	1917	2.1	1938	1.5	1969	1.3	1933	1.1	1997	1.1	1920	0.4	1948
52	0.3	1908	1.1	1991	3.7	1982	3.0	1950	3.1	2004	3.0	2003	2.1	1914	1.5	1950	1.3	1927	1.1	2000	1.1	1951	0.5	1903
53	0.3	1958	1.2	1957	3.8	1976	3.0	1904	3.2	1966	3.1	1966	2.1	1980	1.5	1917	1.4	1904	1.1	1947	1.2	1915	0.5	1926
54	0.3	1959	1.2	1985	3.8	1944	3.1	1945	3.2	1982	3.1	1949	2.1	1898	1.5	1998	1.4	1946	1.2	1996	1.2	2006	0.5	1954
55	0.4	1913	1.2	2005	4.0	1954	3.2	1953	3.2	1970	3.3	1919	2.2	1917	1.6	2006	1.4	2008	1.2	1977	1.2	1960	0.6	1923
56	0.4	1921	1.2	1917	4.0	1905	3.3	1972	3.2	1948	3.5	1913	2.2	1961	1.6	1965	1.4	1948	1.2	1920	1.2	1911	0.6	1976

57	0.4	1954	1.2	2000	4.0	1938	3.3	1927	3.4	1976	3.6	1953	2.2	1958	1.6	1948	1.4	2007	1.2	1912	1.2	1944	0.6	1991
58	0.4	1996	1.2	1995	4.1	2009	3.5	2012	3.4	1987	3.6	2006	2.3	1949	1.6	1949	1.5	1969	1.2	1923	1.2	1947	0.6	1907
59	0.4	1912	1.2	1905	4.1	1917	3.5	1902	3.4	1903	3.8	1985	2.4	1976	1.6	1898	1.5	1952	1.2	1970	1.2	1941	0.6	1956
60	0.4	1916	1.3	1904	4.3	1996	3.5	1980	3.6	1945	3.9	1928	2.5	1982	1.6	1952	1.5	1950	1.3	1962	1.2	1950	0.7	1951
61	0.4	1910	1.3	1981	4.3	1936	3.6	1966	3.7	2000	3.9	1918	2.5	1973	1.7	1966	1.5	1961	1.3	1922	1.3	1952	0.7	1912
62	0.4	1943	1.3	2008	4.3	2004	3.7	1917	3.8	1902	4.1	1991	2.6	1927	1.7	1927	1.5	1962	1.3	1941	1.3	1909	0.7	1920
63	0.4	1923	1.4	1927	4.3	1904	3.8	2002	3.8	1949	4.2	1898	2.6	1905	1.8	1963	1.5	1966	1.3	1911	1.3	1962	0.7	1955
64	0.4	1901	1.4	1987	4.4	1953	3.9	1970	3.9	1914	4.4	1942	2.6	2003	1.8	1905	1.6	2002	1.3	1950	1.3	1906	0.7	1911
65	0.4	1920	1.4	1970	4.6	1966	4.0	2005	4.0	1923	4.4	1969	2.6	1965	1.8	1904	1.7	1967	1.3	1909	1.3	1928	0.7	1915
66	0.4	1993	1.4	1988	4.7	1962	4.1	1976	4.1	1921	4.5	2012	2.7	1904	2.0	2008	1.7	1924	1.3	1915	1.3	1900	0.8	2003
67	0.4	1991	1.5	1974	4.7	2012	4.1	1921	4.2	1950	4.6	1978	2.8	1948	2.1	2004	1.9	1908	1.4	1994	1.4	1919	0.8	1909
68	0.4	1949	1.6	1977	4.8	1970	4.2	1908	4.2	1942	4.9	1952	2.9	1967	2.1	1967	1.9	1957	1.4	1919	1.4	1914	0.8	1922
69	0.5	1907	1.6	1967	4.9	1951	4.3	1944	4.3	2005	5.0	1948	3.1	1929	2.2	1924	1.9	2006	1.4	1900	1.4	1973	0.8	1919
70	0.5	1900	1.6	1986	4.9	1995	4.5	1913	4.3	1947	5.0	1899	3.2	1945	2.2	1976	1.9	1994	1.4	1976	1.5	1985	0.8	1900
71	0.5	1915	1.6	1924	5.0	1927	4.7	1924	4.4	1901	5.2	1905	3.3	1924	2.3	1957	2.0	1949	1.5	1938	1.5	1957	0.8	1906
72	0.5	1903	1.7	1947	5.1	1902	4.9	1920	4.5	1998	5.4	1965	3.4	2004	2.4	1930	2.0	1971	1.5	1967	1.5	1942	0.9	2012
73	0.5	1978	1.7	1993	5.2	1961	4.9	1973	4.6	1965	5.4	1944	3.4	1998	2.4	1961	2.0	1965	1.6	1961	1.5	1899	0.9	1899
74	0.5	1992	1.7	1946	5.6	2008	5.1	1910	4.9	1905	5.5	2004	3.5	1908	2.4	1908	2.0	1938	1.6	1968	1.5	1902	0.9	1914
75	0.6	1906	1.8	2001	5.7	2001	5.2	1916	5.1	1953	5.5	1904	3.7	1971	2.5	1980	2.0	1964	1.6	1906	1.6	1976	0.9	1969
76	0.6	1990	1.8	1908	5.7	1924	5.3	1912	5.2	1985	5.7	1947	3.7	1913	2.5	1964	2.0	1930	1.6	1928	1.6	1997	1.0	1902
77	0.6	2007	1.8	1948	5.8	1950	5.3	1923	5.4	1960	5.8	1916	3.9	1921	2.6	1994	2.1	1921	1.6	1914	1.6	2002	1.0	1959
78	0.6	1939	1.9	1945	5.8	1952	5.7	1949	5.5	1962	5.8	1998	4.0	2005	2.7	1971	2.1	1980	1.6	1966	1.6	1966	1.0	1928
79	0.6	1948	2.0	1999	5.9	1971	5.7	1947	5.6	1978	5.8	1957	4.1	1986	2.7	1913	2.1	1942	1.7	1902	1.7	1922	1.1	1905
80	0.6	1965	2.0	1913	6.2	1908	5.8	1901	5.7	1918	5.9	1950	4.1	1997	2.7	1921	2.2	1920	1.7	2006	1.7	1905	1.1	2002
81	0.6	1909	2.1	1921	6.3	1921	6.2	1996	6.2	1899	6.1	1967	4.1	2008	2.9	1996	2.2	1996	1.7	1899	1.7	1996	1.1	1908
82	0.7	2005	2.1	1954	6.5	1987	6.4	2008	6.2	1996	6.4	1979	4.2	1920	2.9	1920	2.2	1916	1.8	2001	1.7	1967	1.1	1966
83	0.7	1975	2.1	2007	6.5	1972	6.4	1900	6.4	2006	6.4	1997	4.2	2007	2.9	1986	2.2	1913	1.8	1973	1.7	1999	1.2	1997
84	0.7	1964	2.1	2010	6.7	1913	6.6	1907	6.7	1951	6.5	1920	4.2	1912	2.9	1910	2.3	1910	1.9	2002	1.8	1908	1.2	1972
85	0.7	1976	2.1	2002	6.9	1984	7.1	1909	7.1	1994	6.6	1929	4.2	1916	3.0	1975	2.3	1912	2.0	1964	1.8	1981	1.2	2006
86	0.8	1966	2.1	1992	7.0	1912	7.3	1906	7.3	1983	7.0	1923	4.4	1910	3.0	1953	2.4	1960	2.0	1905	1.8	2000	1.2	1994
87	0.8	1979	2.1	1944	7.0	1946	7.4	1915	7.6	2008	7.0	2009	4.5	1972	3.0	1916	2.4	1907	2.0	1908	1.9	1965	1.3	2004
88	0.8	1999	2.2	1898	7.1	1923	7.4	1903	7.7	1916	7.5	1971	4.5	1923	3.0	2005	2.5	1901	2.2	1948	1.9	2004	1.3	2008
89	0.8	1963	2.2	1912	7.7	1916	7.6	1998	7.7	1908	7.8	1915	4.6	1907	3.1	1960	2.5	1976	2.2	1957	1.9	1970	1.5	1981
90	0.8	1989	2.2	1916	7.8	1907	8.2	2009	7.8	1915	7.8	1914	4.7	1901	3.1	1901	2.6	2001	2.3	1975	2.0	1975	1.5	1973
91	0.9	1974	2.2	1920	8.0	1945	8.2	1965	7.8	1898	7.8	2007	4.9	1994	3.1	2007	2.6	2004	2.3	2004	2.1	1949	1.5	1992
92	0.9	1929	2.3	1996	8.2	1948	8.9	1994	7.9	1929	7.9	1954	4.9	1969	3.3	1912	2.6	1983	2.3	1972	2.1	1948	1.7	1965
93	1.0	1985	2.3	2012	8.4	1949	9.2	1948	7.9	1969	7.9	1972	5.1	1957	3.4	1923	2.6	1923	2.3	1971	2.2	1977	1.7	1974
94	1.0	2003	2.3	1910	8.5	1920	9.4	1999	7.9	1913	8.2	1906	5.3	1900	3.5	2001	2.8	1975	2.5	1951	2.3	2005	1.8	1987
95	1.0	1956	2.4	1923	8.5	1901	9.9	1987	7.9	1927	8.3	1994	5.4	1979	3.5	1972	2.9	2005	2.5	2008	2.4	1964	1.9	2007
96	1.0	1995	2.5	1907	8.7	1993	10.2	1985	8.1	1999	8.5	1901	5.5	1903	3.6	1962	2.9	1915	2.5	1980	2.7	2007	1.9	1977
97	1.3	2001	2.5	1901	8.8	1910	10.4	1929	8.3	1944	9.1	1999	5.6	1915	3.7	1900	3.0	1900	2.5	1944	2.8	1983	1.9	2009
98	1.4	1947	2.6	1982	9.2	1979	11.3	1979	8.4	2012	9.4	1945	5.7	1992	3.9	1915	3.0	2009	2.6	1985	2.8	1946	2.0	1970
99	1.4	2000	2.8	1980	9.2	1978	11.7	1978	8.5	1979	9.4	1986	5.9	1952	3.9	1903	3.0	1972	2.7	1983	2.9	2008	2.0	1985
100	1.5	2008	2.9	1915	9.3	1915	11.8	2007	8.6	1972	9.6	1951	5.9	1906	4.0	1999	3.0	1903	2.7	1965	3.1	2001	2.0	1995
101	1.7	1987	2.9	1900	9.4	1900	12.0	2006	8.6	1906	10.3	2001	6.1	1978	4.0	1907	3.3	1944	2.7	1999	3.4	1972	2.1	1984
102	1.7	2009	3.0	1903	9.9	1985	13.4	1951	9.6	1909	10.4	1983	6.3	1996	4.1	1983	3.3	1906	3.4	2009	3.4	1980	2.2	1980
103	1.7	1998	3.0	1973	10.3	1903	15.0	1983	10.0	2009	10.6	1908	6.3	2001	4.2	2009	3.3	1985	3.9	1979	3.4	1992	2.3	2005
104	1.7	1981	3.1	1984	10.5	1906	17.2	1952	10.4	1952	10.8	2005	6.8	1909	4.2	1951	3.5	1909	3.9	1946	3.6	1971	2.3	1999
105	1.8	1986	3.3	2006	11.0	1986	17.8	1993	10.7	1907	11.3	1924	8.2	1995	4.3	1992	3.6	1995	4.3	1992	4.0	1984	2.4	1971
106	1.9	1994	3.3	1906	11.5	1909	19.3	1995	11.4	2010	11.4	1996	8.7	1999	4.6	1909	3.6	1984	4.3	1978	4.2	1993	2.7	1975
107	2.0	2002	3.5	1909	11.6	1930	20.1	2010	11.5	1920	11.7	1907	8.9	2009	4.8	1906	4.1	1999	4.3	2005	4.4	1978	2.7	1998
108	2.1	1980	4.1	1976	11.7	1997	21.0	1986	14.0	2007	12.4	1909	9.5	1962	5.2	1944	4.2	1992	4.4	1982	4.5	1986	3.0	2001
109	2.2	2010	4.1	1952	12.4	1973	27.9	1969	15.1	1993	13.7	2008	9.8	1983	5.3	1978	4.3	1978	4.6	2007	4.6	1995	3.1	1993
110	2.2	1984	4.1	2009	13.8	2007	28.2	1962	15.2	1984	13.8	1962	10.0	1951	5.4	1984	4.7	1979	4.9	1993	4.8	2011	3.2	1986
111	2.8	1973	4.6	1966	14.0	1994	28.6	1984	17.8	1986	15.4	2011	13.3	1944	6.1	1979	5.4	1951	5.1	2011	5.1	2009	3.3	1978
112	2.9	2006	4.7	1983	15.4	1983	28.6	1960	19.1	2001	18.6	1993	13.3	1984	6.4	1995	5.7	2011	6.0	1984	5.2	1998	4.1	1979
113	3.0	1983	4.7	1994	18.1	2011	30.9	2001	19.2	1997	18.7	1995	20.7	2011	9.9	2011	7.6	1993	6.2	1995	5.3	2010	4.3	2011
114	3.4	2012	6.4	1971	19.9	1929	33.5	2011	25.4	2011	23.5	2010	22.9	2010	13.8	1993	9.8	1986	7.9	1986	5.7	1979	4.4	2010
115	3.9	2011	7.1	2011	26.6	2010	38.3	1997	27.5	1995	33.3	1984	40.5	1993	20.1	2010	12.8	2010	13.0	2010	6.3	1982	6.2	1982

Plate 33. Gavins Point to Sioux City Ranking of Average Monthly Flows

Gavins Point to Omaha, Nebraska

Ranking of Average Monthly Flows (kcfs)

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	0.0	2012	0.0	1933	-0.5	1933	-1.4	1943
2	-1.6	1971	-0.3	1936	0.6	1931	0.3	1934	0.1	1934	0.4	1956	0.3	1936	0.0	1946	0.3	1934	0.1	1935	0.1	1934	-1.3	1929
3	-1.0	1972	0.0	1939	0.7	1934	0.7	1935	0.3	1931	0.7	1955	0.3	1946	0.2	1934	0.4	1935	0.1	1936	0.1	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	0.5	1933	0.1	1934	0.2	1936	-0.9	1944
5	-0.9	1969	0.2	1959	1.2	1935	0.8	1968	0.6	1955	0.7	1936	0.6	1968	0.4	1936	0.7	1931	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	0.4	2012	0.7	1956	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	1.0	1931	0.8	1956	0.5	1931	0.7	1940	0.2	2012	0.5	1924	-0.6	1947
8	-0.4	1960	0.4	1935	1.5	1940	1.6	1959	0.7	1946	1.2	1934	0.8	1926	0.7	1955	0.8	1937	0.3	1931	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	1968	0.9	1955	0.3	1953	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	0.8	1941	0.9	1953	0.4	1939	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	1926	0.9	1947	0.5	1937	0.7	2012	-0.2	1950
12	-0.1	1967	0.9	1931	2.4	1959	1.8	1990	1.2	1943	1.5	1912	1.4	1932	1.0	1911	1.0	1968	0.5	1940	0.8	1932	-0.2	1935
13	0.0	1940	1.0	1969	2.5	2005	2.1	1957	1.4	1941	1.8	1968	1.5	1939	1.1	1938	1.0	1946	0.5	1924	0.8	1943	-0.1	1958
14	0.0	1959	1.1	1975	2.6	1958	2.2	1939	1.4	1911	1.8	1977	1.6	1930	1.1	1935	1.0	1943	0.5	1945	0.9	1945	0.0	1934
15	0.0	1970	1.1	1950	2.6	1957	2.2	1926	1.4	1936	1.8	1910	1.6	1940	1.2	1958	1.0	1939	0.7	1943	0.9	1938	0.0	1931
16	0.0	1955	1.2	1957	2.6	1955	2.3	1981	1.6	1958	1.9	1938	1.8	1977	1.3	1956	1.1	1974	0.7	1929	1.0	1929	0.0	1961
17	0.0	1929	1.2	1960	3.0	1990	2.3	1936	1.7	1926	1.9	1922	1.8	1959	1.3	1970	1.2	1959	0.7	1958	1.0	1968	0.0	1953
18	0.1	1944	1.2	1914	3.0	1956	2.4	1958	1.8	1977	2.0	1939	1.8	1941	1.6	1939	1.2	1911	0.9	1942	1.1	1910	0.0	1940
19	0.1	1968	1.2	1955	3.1	2003	2.6	1946	2.0	1967	2.2	1989	2.0	1963	1.8	2003	1.2	1958	1.0	1959	1.1	1940	0.1	1937
20	0.2	1925	1.3	1989	3.1	1911	2.6	1911	2.4	1928	2.2	1958	2.0	1966	1.8	1954	1.2	1991	1.1	1949	1.1	1917	0.2	1924
21	0.2	1953	1.3	1929	3.3	1928	2.6	1977	2.6	1924	2.7	1964	2.0	1974	1.8	1973	1.2	1954	1.1	1956	1.2	1955	0.2	1948
22	0.3	1935	1.3	1928	3.7	2002	2.7	1967	2.7	1963	2.9	1932	2.1	2012	1.9	1959	1.4	1970	1.2	1947	1.3	1956	0.3	1956
23	0.3	1962	1.4	1934	3.9	1899	2.8	1932	2.8	1989	3.0	1988	2.2	1955	2.1	1965	1.5	1925	1.3	1930	1.3	1947	0.3	1964
24	0.4	1978	1.7	1938	4.0	1947	2.8	1955	2.8	1971	3.1	1921	2.3	1964	2.1	1952	1.5	1922	1.3	1969	1.4	1923	0.3	1955
25	0.4	1948	1.7	1917	4.0	1974	2.9	1940	2.8	1938	3.2	1930	2.3	2002	2.1	1948	1.5	1932	1.3	1917	1.5	1898	0.4	1930
26	0.5	1982	1.7	1922	4.1	1918	3.0	1898	2.9	1932	3.4	1970	2.5	1989	2.2	1922	1.6	1936	1.3	1963	1.5	1926	0.4	1939
27	0.5	1930	1.7	1925	4.1	1937	3.0	1954	3.0	1981	3.7	1937	2.6	2006	2.2	1925	1.6	1929	1.4	1925	1.5	1942	0.4	1927
28	0.5	1912	1.7	1899	4.3	1922	3.2	1964	3.0	1910	3.8	1940	2.6	1958	2.3	1914	1.7	1945	1.4	1910	1.5	1958	0.5	1967
29	0.6	1924	1.9	1958	4.4	2000	3.4	1942	3.0	1937	3.8	1976	2.6	1961	2.3	1940	1.7	1948	1.4	1960	1.5	1925	0.6	1942
30	0.6	1950	1.9	1964	4.5	2006	3.4	1941	3.1	1954	3.8	1900	2.8	1980	2.4	1989	1.7	1963	1.6	1974	1.5	1927	0.6	1945
31	0.6	1934	2.0	1967	4.7	1998	3.5	1930	3.2	1957	3.9	1927	2.9	1925	2.4	1974	1.8	1952	1.7	1952	1.6	1914	0.7	1925
32	0.6	1932	2.0	1930	4.7	1941	3.6	1974	3.3	1948	3.9	1952	3.0	1988	2.4	1988	1.8	1967	1.7	1970	1.6	1907	0.8	1936
33	0.6	2004	2.1	1990	4.8	1960	3.7	1989	3.4	1900	4.0	1966	3.0	1949	2.4	1947	1.9	1977	1.8	1967	1.6	1944	0.8	1910
34	0.6	1945	2.1	1918	4.9	1991	3.8	2003	3.4	1961	4.3	1943	3.0	1960	2.5	1967	2.0	2003	1.8	1916	1.6	1974	0.8	1912
35	0.7	1913	2.1	1979	4.9	1963	3.8	1899	3.9	1930	4.6	1949	3.3	1918	2.5	1991	2.0	1966	1.8	1898	1.6	1913	0.8	1976
36	0.7	1931	2.1	1978	4.9	1898	4.1	1961	4.0	1922	4.6	1981	3.3	1898	2.6	1957	2.1	1990	1.8	2003	1.8	1953	1.0	1946
37	0.7	1905	2.1	1902	4.9	1952	4.1	1937	4.2	1966	4.8	1913	3.4	1953	2.6	1976	2.1	1899	1.9	1950	1.9	1916	1.0	1928
38	0.7	1961	2.2	1977	5.0	1942	4.3	1928	4.2	1914	5.0	1973	3.5	1976	2.6	1929	2.1	2002	1.9	1913	1.9	1967	1.1	1960
39	0.7	1941	2.2	1905	5.0	1975	4.3	1914	4.4	1970	5.3	1948	3.5	1938	2.7	1949	2.2	2000	1.9	1922	1.9	1963	1.2	1926
40	0.8	1958	2.3	1926	5.0	1967	4.4	2004	4.8	1901	5.4	1961	3.5	1965	2.7	1966	2.2	1917	1.9	1907	1.9	1951	1.2	1969
41	0.8	1949	2.3	1941	5.1	1977	4.6	2000	4.8	1988	5.6	2002	3.6	1981	2.8	1969	2.3	1941	2.0	1901	2.0	1966	1.2	1963
42	0.8	1939	2.3	1972	5.1	1917	5.0	1971	4.9	1980	5.7	2006	3.7	1950	2.8	1919	2.3	1973	2.1	1966	2.0	1941	1.2	1914
43	0.9	1942	2.4	1953	5.2	1939	5.0	1908	4.9	1976	5.8	1974	3.7	1948	2.8	1963	2.4	1971	2.1	1988	2.0	1921	1.3	1916
44	0.9	1914	2.4	1924	5.3	1989	5.0	1970	5.0	1923	6.1	1959	3.8	1937	2.8	1977	2.4	1930	2.2	1921	2.0	1950	1.3	1917
45	0.9	1975	2.5	1963	5.3	1966	5.1	1972	5.0	1947	6.5	1978	4.1	1967	2.9	1971	2.4	1961	2.2	1941	2.1	1901	1.3	1952
46	0.9	1933	2.5	1949	5.4	1914	5.1	1905	5.1	1950	6.9	1960	4.2	1975	2.9	1930	2.5	1949	2.2	1991	2.1	1949	1.3	1957
47	1.0	1915	2.5	1913	5.5	1976	5.2	1966	5.1	1964	7.0	1963	4.4	1954	3.0	1964	2.5	1981	2.3	1927	2.1	1911	1.3	1923
48	1.0	1911	2.5	2001	6.1	1904	5.3	1988	5.2	1917	7.0	1925	4.6	1973	3.1	1898	2.5	1927	2.3	1976	2.1	1904	1.4	1966
49	1.0	1943	2.6	1951	6.2	1954	5.5	1921	5.3	1949	7.0	1902	4.7	1942	3.1	1913	2.6	1950	2.3	1964	2.2	1962	1.4	1922
50	1.0	1966	2.6	1904	6.3	1927	5.6	1950	5.5	1912	7.1	1992	4.7	1914	3.1	1981	2.6	1988	2.3	1948	2.3	1961	1.4	1941
51	1.1	1908	2.6	1947	6.5	1970	5.7	1922	5.5	1959	7.1	2000	4.8	1901	3.2	2006	2.7	1957	2.3	1981	2.3	1976	1.4	1983
52	1.1	1926	2.7	1911	6.5	1980	5.8	2002	5.7	1974	7.4	1918	4.8	1912	3.2	1950	2.7	1898	2.4	1904	2.3	2006	1.5	1901
53	1.1	1917	2.7	1962	6.6	1944	5.8	1976	6.0	1990	7.6	1980	5.0	1943	3.2	1918	2.7	1942	2.4	1989	2.4	1912	1.5	1962
54	1.2	1919	2.8	2004	6.7	1946	6.0	2012	6.4	2002	7.6	1950	5.0	1913	3.3	1942	2.8	1919	2.4	2000	2.4	1899	1.5	1951
55	1.2	1918	2.8	1912	6.8	1932	6.3	1953	6.4	1902	7.7	1898	5.0	1919	3.4	1980	2.9	1976	2.6	1962	2.4	1954	1.5	1954
56	1.2	1956	2.8	1910	6.8	1988	6.3	1980	6.4	1973	7.9	1965	5.1	1929	3.5	1961	2.9	1901	2.6	1899	2.5	1965	1.6	1921

57	1.2	1909	2.8	2003	7.2	1999	6.4	1918	6.6	1921	7.9	2003	5.1	1928	3.5	1943	2.9	1924	2.6	1977	2.5	1948	1.6	1904
58	1.2	1922	2.9	1981	7.5	1919	6.4	1902	6.7	1919	8.1	1928	5.2	1971	3.5	1901	2.9	1912	2.7	1920	2.5	1946	1.7	1990
59	1.3	1927	3.0	1927	7.5	1924	6.4	1945	6.7	1953	8.1	1987	5.3	1910	3.5	1990	3.0	1998	2.7	1909	2.5	1952	1.7	1977
60	1.3	1976	3.0	1923	7.6	2009	6.6	1924	6.8	2000	8.5	1969	5.3	1991	3.6	1928	3.0	1969	2.7	1938	2.7	1959	1.7	1906
61	1.4	1898	3.0	1998	7.6	1953	6.9	1904	7.3	1978	8.6	1905	5.4	1985	3.6	2000	3.0	1913	2.8	1918	2.7	1960	1.7	1908
62	1.4	1979	3.1	1954	7.6	1902	6.9	1944	7.4	2004	8.8	1985	5.8	2000	3.8	1985	3.0	1960	2.8	1912	2.7	1964	1.7	1898
63	1.5	1951	3.1	1965	7.7	1936	7.0	1910	7.7	1965	8.8	1901	5.9	1952	3.8	2002	3.0	1904	2.8	1944	2.7	1970	1.8	1903
64	1.5	1928	3.2	1961	7.7	1996	7.2	1982	7.9	1929	9.1	2012	6.0	1922	4.0	1917	3.3	1980	2.8	1954	2.8	1928	1.8	1911
65	1.5	1946	3.2	1952	7.9	1921	7.2	1917	7.9	2003	9.2	1942	6.3	1957	4.0	1912	3.3	1964	2.8	1990	2.9	1920	1.8	1907
66	1.5	1963	3.3	1944	8.0	1969	7.2	1991	8.4	1904	9.3	1982	6.3	1990	4.1	1960	3.6	2006	2.9	1957	2.9	1957	1.8	1919
67	1.6	1923	3.4	2002	8.2	1913	7.3	2005	8.4	1975	9.4	1975	6.4	1947	4.1	1924	3.6	2008	3.1	1906	3.0	1903	2.0	1959
68	1.7	1902	3.4	1901	8.2	1905	7.7	1923	8.5	1918	9.6	1957	6.8	1972	4.1	2005	3.7	1914	3.1	1911	3.0	1989	2.0	1913
69	1.7	1921	3.5	1898	8.3	1950	8.2	1900	8.6	1992	9.6	1929	7.1	1979	4.2	1910	3.7	1908	3.1	1914	3.1	1906	2.1	1970
70	1.7	1965	3.5	1900	8.3	2012	8.2	1973	9.1	1942	9.8	1972	7.3	1945	4.3	1904	3.7	1989	3.1	1968	3.1	1990	2.1	1900
71	1.7	1901	3.5	1908	8.4	1908	8.3	1992	9.5	1952	9.8	1919	7.3	2007	4.3	1902	3.8	2001	3.2	1971	3.1	1973	2.1	1920
72	1.8	1907	3.6	2007	8.4	1923	8.6	1907	9.6	1903	9.9	1906	7.5	1899	4.4	1972	3.8	1923	3.3	1900	3.2	1922	2.2	2000
73	1.8	1899	3.6	1919	8.5	1938	8.6	1913	9.6	1905	10.0	1916	7.6	2005	4.5	2004	3.9	2005	3.4	1928	3.2	2002	2.2	2012
74	1.8	1974	3.7	1921	8.6	2004	8.8	1919	9.8	1944	10.0	1920	7.6	1917	4.7	1953	3.9	1918	3.4	1926	3.3	1915	2.3	1965
75	1.8	1964	3.7	1970	9.0	1992	9.0	1909	9.9	1908	10.3	1979	7.8	1924	4.7	1997	4.1	1944	3.4	1961	3.3	1908	2.3	1902
76	1.8	1900	3.9	1974	9.2	1982	9.2	1948	9.9	1945	10.6	1947	7.8	1900	4.7	1975	4.1	1965	3.4	1972	3.4	2000	2.4	1899
77	1.9	1916	4.0	1920	9.4	1965	9.5	1947	10.2	1982	10.7	1944	8.1	2004	4.7	1937	4.1	1910	3.4	1903	3.4	2005	2.5	2003
78	1.9	1904	4.0	1909	9.7	1907	9.5	1903	10.2	1962	10.7	1914	8.1	1921	4.8	1899	4.4	1972	3.4	1975	3.4	2003	2.5	1915
79	1.9	1947	4.2	2008	9.8	1972	9.8	1916	10.2	1927	11.4	1953	8.1	1927	4.8	2008	4.4	1928	3.5	1919	3.5	1919	2.5	2006
80	1.9	1991	4.4	1903	9.9	1920	10.1	1975	10.3	1898	11.4	2009	8.1	1906	4.9	1982	4.4	1907	3.5	1923	3.5	1902	2.6	1981
81	2.2	1906	4.5	1945	10.1	1912	10.3	1901	10.4	1998	11.5	2004	8.5	1905	5.0	1927	4.5	1902	3.6	1946	3.6	1900	2.6	1974
82	2.3	2007	4.6	1973	10.4	2001	10.4	1927	10.5	1987	11.7	1899	8.7	1903	5.0	2001	4.5	1975	3.6	2006	3.6	1988	2.7	1905
83	2.3	1920	4.7	1988	11.1	1910	10.8	1920	10.5	2005	12.3	1990	8.8	1916	5.0	1945	4.5	1920	3.6	2002	3.7	1918	3.0	1918
84	2.4	1988	4.8	1986	11.1	1900	11.3	1906	10.6	1991	12.5	1971	9.6	2001	5.1	1905	4.5	1916	3.6	2001	3.8	1980	3.0	2002
85	2.4	1981	4.8	2006	11.2	1901	11.4	1996	10.8	1906	12.7	2007	9.7	1978	5.3	1920	4.5	1997	3.8	1908	3.9	1991	3.1	1988
86	2.4	1903	4.9	1976	11.5	1916	11.4	1915	10.9	1960	13.4	1904	10.2	1997	5.3	1921	4.8	1906	3.8	1987	3.9	1981	3.2	1980
87	2.5	2003	4.9	2010	11.6	1995	11.5	2009	11.3	1907	14.0	1923	10.2	1908	5.3	1908	4.8	1921	3.8	1951	4.1	1905	3.2	1971
88	2.5	2005	4.9	2000	11.8	1948	13.0	1912	11.3	1969	14.2	1917	10.3	2003	5.7	1923	5.0	2009	3.9	1965	4.3	1977	3.3	2005
89	2.8	1989	5.0	2012	11.9	2008	13.0	2008	11.6	1899	14.6	1909	10.3	1987	5.9	1909	5.0	1909	4.0	1980	4.5	1985	3.3	1909
90	2.8	2001	5.0	1946	12.1	1906	13.1	1949	11.8	2012	15.4	2005	10.3	1920	6.1	1900	5.2	1926	4.3	1905	4.5	2001	3.4	2008
91	3.0	1990	5.2	1991	12.4	1915	13.9	1994	11.9	1909	15.9	1997	10.9	2008	6.2	1962	5.2	1900	4.6	1973	4.6	1971	3.4	1972
92	3.4	2002	5.2	1906	12.4	1951	14.6	1978	12.2	1972	16.3	1903	11.3	1982	6.2	1944	5.2	2007	4.7	1998	4.8	1987	3.5	2004
93	3.5	1998	5.2	1987	13.0	1987	16.6	1952	12.2	1916	16.8	1907	11.4	1923	6.2	1916	6.0	1962	5.0	1915	5.0	1909	3.5	1978
94	3.6	2009	5.3	1993	13.7	1961	16.8	1998	12.3	1913	16.9	1945	11.4	1904	6.7	1906	6.0	1905	5.4	1999	5.1	1978	3.6	1973
95	3.9	1993	5.3	2005	13.8	1949	18.0	2006	12.3	1994	17.0	1951	11.5	1969	6.9	1978	6.1	1987	5.5	1978	5.1	1997	4.2	1987
96	4.0	2008	5.4	1995	14.5	1971	19.5	1985	12.6	2006	17.3	1991	11.6	1998	7.1	1987	6.2	1982	5.9	1902	5.1	1975	4.3	1997
97	4.0	1995	5.5	1943	14.8	1930	19.5	1929	13.1	1996	17.3	1954	12.4	1986	7.3	1998	6.4	1915	5.9	1997	5.2	2004	4.3	2007
98	4.5	1986	5.7	1907	15.2	1903	19.7	1979	13.2	1915	17.4	1924	12.6	1902	7.5	1986	6.6	1996	6.1	1994	5.5	1994	4.4	1991
99	4.6	1996	5.8	1999	15.6	1984	19.7	1999	13.6	2009	17.7	2001	13.0	1907	7.7	2009	6.6	1995	6.1	1996	5.7	1999	4.5	1975
100	4.7	1992	5.8	1916	15.8	1985	20.4	1987	14.4	1985	17.8	1998	14.3	1909	7.8	2007	6.6	1983	6.3	1979	5.8	1996	5.1	1994
101	4.8	2006	5.9	1915	15.9	1945	22.2	2007	14.8	1979	18.4	1967	14.3	1992	8.2	1994	6.7	1994	6.4	2004	6.0	1972	5.3	2001
102	5.0	1999	6.0	1980	16.1	1909	24.3	1965	15.3	1951	18.8	1994	14.7	1994	8.3	1983	7.0	1999	6.5	2008	6.3	2011	5.5	2009
103	5.1	2010	6.5	1948	17.2	1962	26.1	1951	16.1	2008	18.9	1986	14.9	2009	9.3	1907	7.6	2004	6.9	1983	6.8	2008	5.5	1985
104	5.4	2000	6.6	1992	17.4	1978	27.3	1995	17.4	1999	20.4	1962	15.2	1995	9.5	1903	7.9	1985	7.0	2009	7.9	2007	5.9	1996
105	5.4	1910	7.0	1985	20.2	1997	29.5	2010	17.9	2010	21.2	1915	16.0	1962	10.0	1979	8.2	1978	7.4	2005	8.5	1983	6.0	1999
106	5.5	1994	7.3	1982	21.2	2007	32.9	1986	18.1	1920	21.4	2011	16.0	1951	10.2	1992	8.4	1984	7.4	1985	8.7	1995	6.2	1992
107	5.6	1997	7.9	1996	21.6	1994	35.6	1993	21.7	1983	21.7	1999	17.1	1999	10.3	1999	8.5	1903	8.4	2011	9.3	1993	7.1	1995
108	5.6	1980	8.8	1966	21.6	1993	36.0	1962	27.7	1997	23.9	1908	17.8	1996	10.9	1995	8.5	1979	10.6	1995	10.0	2009	7.6	1998
109	5.8	1985	9.4	1994	22.4	1986	36.6	1983	28.2	1993	24.5	1996	20.0	1944	11.3	1984	9.7	1938	10.8	1982	10.2	2010	7.7	1979
110	5.9	2012	9.7	2009	22.5	1929	38.5	2001	28.6	2007	29.9	1995	22.0	1915	13.5	1951	9.9	1951	10.9	1984	10.3	1992	8.2	2011
111	6.2	1973	10.7	1997	22.7	1973	39.2	2011	29.6	2001	30.1	1983	22.5	1983	13.8	1915	10.2	1992	11.3	1993	11.6	1984	8.3	1993
112	6.3	1984	10.9	1971	23.9	2011	39.4	1960	29.7	1984	30.7	2008	23.6	1984	15.3	1996	13.4	2011	12.6	2007	11.7	1998	8.7	1986
113	7.0	1987	11.8	1984	27.1	1979	43.4	1969	30.7	2011	36.8	2010	33.3	2011	25.2	1993	15.0	1986	13.8	1992	12.0	1986	9.3	1984
114	8.1	2011	13.9	2011	33.0	1983	44.8	1997	32.0	1986	38.9	1993	36.7	2010	25.5	2011	17.0	1993	16.0	1986	12.7	1979	9.3	2010
115	8.6	1983	14.0	1983	42.5	2010	45.4	1984	39.6	1995	59.7	1984	69.7	1993	34.1	2010	17.7	2010	19.3	2010	14.1	1982	10.9	1982

Plate 34. Gavins Point to Omaha Ranking of Average Monthly Flows

Gavins Point to Nebraska City, Nebraska
Ranking of Average Monthly Flows (kcfs)

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	0.9	1911	1.1	2012	1.8	1940	2.1	1924	-0.1	1943
2	0.4	1936	1.8	1914	4.8	1928	4.1	1990	2.4	1934	1.9	1926	1.3	1936	1.5	2012	1.8	1940	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	1.9	1991	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	1936	2.0	1953	2.0	1924	2.7	1936	0.9	1944
5	0.8	1971	3.0	1928	6.2	1981	5.2	1934	3.1	1925	3.9	1936	2.5	1974	1.7	1941	2.0	1956	2.5	2012	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	1.8	1955	2.1	1939	2.6	1937	3.1	1937	1.0	1929
7	1.1	1940	3.9	1978	6.6	1918	5.5	1956	4.4	1989	4.6	1934	3.1	1940	2.1	1931	2.3	1955	2.7	1935	3.6	1934	1.2	1932
8	1.3	1977	4.0	1933	6.7	1934	5.8	1943	4.5	1946	5.4	1931	3.1	1931	2.4	1946	2.4	1974	2.8	1953	3.7	1907	1.3	1912
9	1.3	1957	4.2	1913	6.8	1968	5.9	1968	4.5	1956	5.4	1988	3.2	1956	2.8	1933	2.5	1947	2.9	1934	3.7	1910	1.8	1940
10	1.6	1924	4.3	1937	6.9	1935	6.2	1955	4.5	1941	5.6	1912	3.2	1968	2.9	1970	2.8	1990	2.9	1943	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	2.9	1926	2.8	1911	3.1	1991	3.8	1940	1.9	1934
12	1.7	1913	4.6	1956	7.7	2005	6.5	1938	4.8	1939	6.1	1939	3.5	1970	3.0	1976	3.0	1934	3.3	1956	3.8	1943	2.0	1945
13	2.0	1954	4.9	1979	7.7	1957	6.6	1942	5.1	1967	6.2	1955	3.6	2012	3.0	1968	3.3	1937	3.3	1974	3.9	1933	2.0	1956
14	2.1	1972	5.0	1912	7.7	1990	6.7	1940	5.1	1943	6.3	1968	3.8	1941	3.0	2003	3.3	1954	3.3	1931	4.0	1956	2.2	1990
15	2.2	1935	5.0	1975	7.8	1956	6.7	1967	5.2	1914	6.3	1941	3.9	1939	3.0	1956	3.3	1971	3.4	1955	4.0	1938	2.2	1914
16	2.2	1905	5.0	1957	7.9	1964	6.9	1946	5.4	1928	6.5	1910	3.9	1976	3.3	1939	3.5	1943	3.4	1942	4.1	1926	2.4	1939
17	2.4	1970	5.1	1899	8.4	1931	6.9	1936	6.0	1981	6.7	1976	4.1	2006	3.3	1989	3.5	1976	3.4	1933	4.1	1945	2.5	1950
18	2.5	1915	5.1	1924	8.6	1940	7.3	1911	6.3	1901	6.8	1981	4.3	1955	3.4	1988	3.5	1968	3.5	2003	4.2	1955	2.7	1958
19	2.5	1960	5.2	1989	8.6	1991	7.4	1926	6.7	1924	6.8	1938	4.4	1933	3.6	1991	3.6	1931	3.6	1958	4.4	1941	2.7	1925
20	2.5	1967	5.2	1923	8.7	1917	7.6	1908	6.8	1936	7.0	1977	4.5	1988	3.7	1971	3.7	2000	3.7	1947	4.4	2012	2.8	1910
21	2.7	1948	5.3	1938	8.8	2003	7.7	1933	7.1	1931	7.6	1958	4.5	1981	4.2	1938	3.7	1945	3.8	1945	4.6	1931	2.8	1937
22	3.0	1941	5.3	1942	9.4	1898	7.7	1957	7.2	1948	8.2	1948	4.6	1963	4.2	1935	3.8	1935	3.9	1922	4.6	1944	2.9	1935
23	3.1	1979	5.6	1905	9.7	1933	7.9	1941	7.4	1937	8.2	1970	4.6	1980	4.3	1974	3.9	2002	4.0	1990	4.6	1950	2.9	1963
24	3.1	1982	5.6	1990	9.8	2002	8.0	1899	7.7	1963	8.2	2006	4.6	1977	4.4	1913	3.9	1970	4.1	1989	4.8	1935	3.0	1936
25	3.1	1978	5.7	1955	9.9	1967	8.4	1939	8.1	1958	9.0	1946	4.8	1966	4.6	1947	3.9	2003	4.3	1917	5.0	1976	3.1	1949
26	3.1	1955	5.7	1909	9.9	1941	8.5	1963	8.4	1932	9.4	1937	5.3	1901	4.7	1901	4.0	1936	4.6	1988	5.1	1898	3.4	1922
27	3.2	1909	5.8	1900	10.1	1977	8.7	1937	8.5	1923	9.5	1913	5.8	1932	4.8	1965	4.0	1988	4.6	1976	5.2	1927	3.5	1938
28	3.4	2004	6.0	1902	10.2	2006	8.9	2004	9.1	1966	9.6	2002	5.8	1989	4.9	2006	4.0	1959	4.7	1932	5.2	1911	3.6	1968
29	3.4	1991	6.2	1922	10.4	2000	8.9	1931	9.3	1990	9.9	1901	5.9	1975	5.0	1967	4.1	1967	4.8	1963	5.3	1974	3.7	1942
30	3.4	1914	6.3	1969	10.9	1927	9.0	2003	9.4	1977	10.0	1966	6.1	1954	5.0	1980	4.2	1946	4.9	1910	5.3	1913	3.7	1926
31	3.5	1959	6.4	1981	11.2	1955	9.1	2000	9.5	1910	10.5	1974	6.2	1961	5.2	1943	4.4	1980	5.0	1907	5.3	1966	3.7	1908
32	3.5	1950	6.6	1918	11.4	1914	9.1	1977	9.9	1988	10.6	1992	6.7	1959	5.2	1949	4.5	1901	5.0	1941	5.5	1948	3.8	1923
33	3.5	1944	6.8	1935	11.5	1976	9.6	1954	10.0	1970	10.7	2000	6.8	1935	5.2	1963	4.8	1981	5.0	1948	5.5	1942	3.9	1976
34	3.5	1975	6.8	1901	11.7	1996	10.0	1932	10.3	1947	11.1	1900	6.8	1912	5.3	1914	4.9	1969	5.2	1975	5.5	1899	4.1	1961
35	3.6	1908	6.9	1904	11.9	1942	10.0	1914	10.3	2000	11.4	1921	7.3	1898	5.3	1953	4.9	1950	5.2	1966	5.6	1969	4.3	1916
36	3.6	1942	6.9	1959	12.1	1947	10.2	1921	10.4	1938	12.0	1940	7.4	1953	5.3	1942	5.0	1912	5.2	1949	5.7	1932	4.3	1964
37	3.7	1929	7.0	1967	12.1	1904	10.2	1959	10.4	1933	12.6	1978	7.6	1964	5.5	2000	5.1	1922	5.3	1916	5.7	1953	4.4	1967
38	3.8	1938	7.1	1941	12.6	1975	10.5	1964	10.6	1957	13.3	2003	7.7	1991	5.6	2002	5.2	1932	5.3	1938	5.8	1952	4.4	1933
39	3.8	1930	7.3	1925	12.7	1958	10.6	1972	10.7	1954	13.3	1927	8.0	1930	5.6	1957	5.2	1941	5.3	1944	6.0	1916	4.5	1948
40	3.8	1951	7.3	1977	12.8	1959	10.6	1988	10.7	1976	13.6	1959	8.2	1937	5.7	1912	5.3	1966	5.4	1925	6.1	1947	4.5	1947
41	3.9	1958	7.3	1934	12.8	1970	10.7	1982	10.9	1900	13.9	1972	8.3	1910	5.7	1969	5.4	1952	5.5	1967	6.2	2003	4.7	1906
42	4.0	1911	7.3	1964	12.9	1989	10.7	2002	10.9	1961	14.2	2012	8.7	1948	5.8	1964	5.5	1963	5.5	1959	6.2	1989	4.8	1953
43	4.1	1956	7.3	2004	12.9	1923	11.0	1976	12.0	1922	14.3	1961	8.8	1985	6.0	1954	5.5	2005	5.6	1899	6.2	2006	4.8	1960
44	4.1	1917	7.4	1951	13.2	1946	11.1	1991	12.5	1935	14.5	1950	9.2	1938	6.0	1940	5.5	1958	5.7	1964	6.2	1988	4.8	1966
45	4.1	1961	7.5	1929	13.2	1954	11.2	1961	12.6	1992	14.7	1963	9.3	2000	6.3	2005	5.6	1933	5.7	1952	6.2	1967	4.8	1917
46	4.2	1962	7.6	1960	13.3	1913	12.3	1966	12.6	2002	15.0	1979	9.3	1918	6.3	1961	5.6	1913	5.8	1981	6.2	1925	5.1	2000
47	4.3	1963	7.6	1958	13.5	1921	12.3	1930	12.7	1975	15.4	1930	9.6	1913	6.5	1975	5.6	1961	5.9	1913	6.2	1963	5.1	1941
48	4.3	1932	7.7	1950	13.5	1924	12.3	1971	13.3	1907	15.6	1906	9.9	1960	6.6	1937	5.9	1917	5.9	1980	6.3	1964	5.2	1954
49	4.3	1943	8.2	1968	13.8	1922	12.4	1992	13.5	1964	15.7	1985	10.6	1990	6.9	1930	5.9	1975	6.0	2000	6.4	1958	5.2	1962
50	4.4	1939	8.2	1898	14.1	1939	12.6	1928	13.5	1912	15.7	1969	10.9	1972	6.9	1972	6.0	1948	6.1	1971	6.5	1990	5.3	1911
51	4.5	1949	8.2	2003	14.1	1998	12.8	1924	14.9	1980	16.2	1975	11.2	1942	7.0	2001	6.1	1998	6.1	1950	6.6	1954	5.3	1919
52	4.6	1926	8.2	1965	14.1	1999	13.1	1958	15.1	1921	16.9	1932	11.4	2007	7.7	1973	6.1	1929	6.2	1960	6.6	1949	5.5	2003
53	4.7	1919	8.3	1972	14.7	1988	13.2	1970	15.3	1991	17.1	1952	11.4	2005	7.7	1981	6.1	1925	6.3	1898	6.7	1980	5.5	1901
54	4.7	1918	8.3	1944	14.7	1992	13.2	1948	15.4	1974	18.0	1987	11.5	1971	7.7	1985	6.6	1957	6.5	1954	7.0	1968	5.6	1904
55	4.7	1952	8.3	1963	14.8	1974	13.8	1953	15.4	2004	18.4	2004	11.6	1973	7.8	2004	6.7	1927	6.7	2002	7.0	2005	5.7	2012
56	4.8	1945	8.5	1949	14.8	1966	13.8	1910	15.5	1902	18.8	1943	11.7	1949	7.8	1977	6.8	1899	6.7	1969	7.1	2002	5.8	1974

57	4.8	1927	8.5	2001	15.0	1920	13.8	1950	15.8	1917	19.0	1964	12.0	1925	8.1	1898	6.9	1949	6.9	1970	7.1	1912	5.8	1907
58	5.0	2003	8.6	1927	15.2	2009	14.1	2012	15.9	1949	19.4	1918	12.4	1952	8.1	1922	7.1	1944	7.1	1901	7.1	1991	5.9	1931
59	5.0	1966	8.6	1947	15.3	1944	14.3	2005	15.9	1994	19.7	1949	12.5	1943	8.3	1966	7.1	1924	7.2	1909	7.3	1901	6.1	1980
60	5.1	1934	8.9	1961	15.4	1937	14.4	1900	16.3	1978	19.7	1898	12.5	1967	8.4	1910	7.6	1960	7.3	1957	7.3	1957	6.2	1957
61	5.2	1947	9.0	1926	15.9	1908	14.6	1974	16.5	2006	20.4	1980	12.7	1979	8.6	1919	7.6	2008	7.3	1977	7.3	1904	6.3	1903
62	5.3	1922	9.3	1921	16.2	1980	15.0	1905	16.9	2003	20.6	1914	12.9	1987	8.7	1997	7.7	1964	7.4	1972	7.4	1975	6.3	1970
63	5.5	1898	9.3	2006	16.2	1902	15.3	1907	17.4	1950	20.6	1905	13.0	1997	8.7	1978	7.9	1898	7.4	1987	7.5	1962	6.3	1952
64	5.5	1964	9.4	1962	16.3	1907	15.6	1996	17.5	1908	21.0	1953	13.1	1957	8.8	1929	8.0	2001	7.4	2006	7.7	1959	6.4	1959
65	5.5	1965	9.5	1903	16.4	1960	15.8	1909	18.0	1969	21.4	1997	13.4	2003	8.8	1945	8.0	1923	7.6	1928	7.7	1978	6.4	1969
66	5.5	1988	9.5	1908	16.7	2012	16.1	1923	18.0	1971	21.4	1965	13.8	1914	8.8	1990	8.0	2006	7.7	1978	8.0	1960	6.6	1921
67	5.5	1946	9.6	2002	17.0	2004	16.1	1945	18.1	1953	22.0	1920	13.8	1965	8.9	1959	8.2	1997	7.7	1920	8.1	1970	6.7	1988
68	5.6	1923	9.9	1932	17.2	1900	16.3	1902	18.1	1918	22.1	1973	14.5	2004	9.3	1948	8.8	1904	7.8	2001	8.3	1921	6.7	1900
69	5.8	1976	9.9	1931	17.4	1938	16.5	1980	18.3	1927	22.2	1990	14.8	2001	9.5	1925	8.8	1994	7.9	1962	8.3	1961	6.7	1946
70	6.0	1928	9.9	1920	17.6	1963	16.7	1947	18.4	1906	22.4	1960	14.8	1978	9.6	1932	9.0	1919	7.9	1904	8.4	1922	6.8	1898
71	6.0	2005	9.9	1911	17.6	1906	16.7	1975	18.5	1942	22.5	1909	15.7	1928	9.6	2008	9.1	2004	8.1	1906	8.4	1981	6.8	1902
72	6.0	1981	10.1	1953	18.1	1953	16.8	1903	18.7	2005	22.7	1928	15.7	1950	10.2	1918	9.3	1977	8.1	1914	8.5	1908	6.8	1951
73	6.2	1990	10.5	2008	18.2	1952	19.2	1917	18.8	1898	22.7	2009	15.7	1906	10.3	1909	9.3	1995	8.3	1927	8.5	1987	6.8	2002
74	6.2	1921	10.5	1991	18.3	1972	19.5	2009	19.4	1962	22.9	1942	16.1	1919	10.5	1960	9.3	1972	8.3	1994	8.9	2000	7.1	2005
75	6.3	1901	10.6	1992	18.4	1982	19.6	1994	19.5	2009	23.7	1925	16.4	1958	10.5	1924	9.4	1973	8.3	1912	9.1	1999	7.2	1920
76	6.3	1907	10.7	1945	18.9	1995	19.9	1918	19.7	2012	23.7	1994	16.4	1900	10.5	1944	9.6	1930	8.4	1929	9.2	1985	7.2	1978
77	6.3	1900	11.1	1954	19.2	1910	20.5	1904	19.9	1945	23.8	1957	17.4	1945	10.6	1979	9.7	1942	8.5	1999	9.2	1920	7.3	2006
78	6.4	1953	11.1	1993	20.2	1901	21.1	1944	20.0	1909	24.5	1935	17.9	1992	11.0	1962	9.7	2009	8.6	1961	9.2	1994	7.3	1930
79	6.5	1931	11.5	1946	20.7	1912	21.3	1922	20.4	1998	24.6	1916	18.1	1982	11.3	1994	9.9	1999	8.7	1997	9.3	1951	7.4	2004
80	6.6	2007	11.6	2000	21.6	1919	22.7	1913	21.0	1959	26.1	1982	19.0	1947	11.8	1928	10.0	1908	8.7	1921	9.4	1906	7.4	1899
81	6.7	1902	11.7	1980	21.7	1950	22.8	2008	21.3	1965	26.1	2001	19.1	1969	11.9	1950	10.0	1906	8.8	1996	9.4	1946	7.5	1913
82	6.9	1916	11.8	1995	21.9	1932	22.9	1973	22.0	1952	26.3	2005	19.8	1903	11.9	1952	10.1	1989	8.8	1968	9.4	1971	7.6	1991
83	7.0	1933	11.9	1906	22.0	2008	24.3	1949	22.8	1973	26.5	1986	20.6	2009	12.0	1958	10.3	1909	9.1	1911	9.5	2004	7.6	1977
84	7.1	1989	12.0	1976	22.2	1930	24.8	1906	22.9	1979	26.6	2007	21.1	2008	12.5	1984	10.4	1910	9.3	1979	9.5	1997	7.6	1981
85	7.3	1993	12.1	1970	22.3	1961	25.4	1916	24.3	1919	26.8	1902	21.8	1995	12.6	1906	10.4	1978	9.4	2004	9.5	2001	7.8	1985
86	7.3	1899	12.2	2007	22.9	1905	25.5	1915	24.5	1996	27.8	1971	22.1	1994	12.8	2009	10.6	1962	9.7	1930	9.6	1929	7.8	2008
87	7.4	1904	12.2	1986	22.9	1965	25.9	2006	24.6	1987	27.9	1954	22.2	1996	12.8	1917	10.6	1979	9.7	1998	9.7	1930	8.0	1971
88	7.7	1992	12.2	1988	23.0	1915	25.9	1901	24.8	1972	28.2	1991	22.7	1998	12.9	1986	10.7	1982	9.8	1908	9.9	1965	8.2	1975
89	7.7	1906	12.4	1998	24.5	2001	27.7	1979	25.1	1982	32.2	1919	22.7	1921	13.2	1904	10.8	1996	9.9	1900	10.3	1902	8.2	1928
90	8.0	2001	12.5	1919	24.5	1936	28.1	1985	25.7	1905	34.5	1998	23.0	1986	13.3	1920	11.0	1987	10.3	2005	10.6	1915	8.2	1905
91	8.1	1996	12.5	1985	24.7	1916	29.6	1952	25.7	1930	34.5	1907	23.4	1924	13.4	1982	11.2	1907	10.3	1918	10.8	1919	8.6	1915
92	8.2	1995	12.9	2010	25.8	1969	30.7	1978	26.3	1985	34.6	1899	23.6	1922	13.5	1900	11.3	1928	10.5	1919	10.8	1903	8.8	1983
93	8.5	1998	13.6	1948	26.3	1985	31.1	1920	27.2	1944	34.7	1944	24.4	1916	13.5	1923	11.7	2007	11.6	1923	11.0	1996	9.1	1965
94	8.8	1997	13.7	1987	26.4	1945	31.7	1998	27.4	1913	36.6	2011	24.4	1962	13.8	1983	12.2	1985	12.0	1903	11.2	1977	9.3	1972
95	8.8	1980	13.7	2012	28.0	1997	31.7	1919	27.7	1960	36.6	1945	26.2	1999	14.0	1995	12.3	1920	12.0	1951	11.4	1900	9.3	1994
96	8.9	1920	13.8	2005	28.4	1951	33.0	1999	27.8	2010	36.8	1999	26.2	1917	14.1	1921	12.3	1916	12.4	1905	12.3	1995	9.4	1996
97	9.0	1903	14.2	1996	29.2	1948	34.9	1927	27.9	1916	37.2	1962	27.0	1944	14.4	1992	12.4	1984	12.5	1926	12.4	1905	9.9	1973
98	9.0	2002	14.7	1943	29.5	1971	35.5	2007	28.5	1904	37.9	1923	27.3	1927	14.9	1998	12.5	1914	12.9	1985	12.6	1973	10.0	1992
99	9.0	1994	14.7	1930	31.7	1909	35.7	1951	29.8	1929	38.2	1924	28.2	1899	14.9	1902	13.1	1900	13.3	1946	12.8	1983	10.2	2009
100	9.4	1974	14.9	1999	32.4	1903	36.2	1965	29.9	1951	39.0	1996	28.2	1951	15.4	1908	14.2	1921	13.4	1995	13.6	1972	10.3	1997
101	9.5	2008	15.8	1982	32.7	1984	37.2	1995	30.2	1997	39.7	1951	28.2	1929	15.4	1987	14.2	1992	13.8	1983	14.5	2011	10.5	1987
102	9.5	2009	15.9	1994	32.8	1994	39.5	2010	30.3	1899	40.5	1904	28.6	1905	16.1	1927	14.4	1918	13.9	2009	14.6	1918	10.8	1999
103	9.6	2000	16.1	1952	33.7	1986	39.5	1912	30.3	2008	43.5	1947	31.5	1920	16.4	1905	14.4	1983	15.2	2008	14.9	1992	11.0	1995
104	9.8	2006	16.5	1915	33.7	2007	41.5	1987	30.7	1903	46.9	1929	33.4	1908	16.7	1916	15.7	1938	15.6	1965	15.0	2007	11.0	2001
105	9.8	1985	16.8	1973	34.5	1962	44.0	1986	31.1	1999	48.4	1993	33.9	1984	17.3	2007	16.4	1902	16.6	1992	15.6	1928	11.1	2007
106	10.1	1986	16.9	1907	34.5	2011	45.1	1993	31.8	1915	48.8	1995	35.1	1923	17.6	1899	17.4	1965	17.6	2011	15.6	1993	11.8	1909
107	10.9	1999	17.3	1974	34.6	1987	45.2	1929	37.6	1993	52.8	1917	40.0	1909	17.9	1999	18.4	1915	17.6	1915	16.0	2008	12.0	1918
108	12.0	2010	17.3	1966	38.9	1978	48.1	1962	39.3	1983	56.8	1983	41.7	1904	20.0	1996	18.7	1951	17.9	1984	17.9	1979	12.9	1979
109	12.7	2012	18.2	1916	40.5	1973	50.2	1997	40.4	1986	57.3	1967	41.7	1907	22.8	1951	20.1	2011	18.0	1982	18.1	1909	13.7	1998
110	13.1	1984	18.3	1997	43.6	1993	51.3	2001	40.8	1920	64.1	2008	41.9	1983	27.4	1907	21.8	1926	18.4	1993	18.3	2010	15.1	1982
111	13.6	1987	20.3	2009	43.7	1949	52.8	2011	44.3	2001	64.2	1903	47.4	2011	28.6	1903	23.2	1905	20.2	1973	18.5	2009	15.2	1993
112	13.9	2011	25.1	1971	44.6	1929	54.4	1983	45.6	2011	67.6	1915	49.4	1902	34.6	2011	23.7	1986	20.5	1902	18.6	1984	15.3	2011
113	15.1	1983	26.2	2011	45.6	1983	55.1	1969	45.7	2007	69.7	1908	58.5	2010	38.4	2010	26.1	2010	23.6	2007	18.9	1982	16.2	2010
114	15.8	1973	26.4	1983	48.0	1979	65.6	1960	55.8	1995	82.8	2010	78.5	1915	42.3	1993	26.8	1993	25.9	2010	19.0	1998	18.1	1986
115	22.5	1910	28.2	1984	61.8	2010	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

Plate 35. Gavins Point to Nebraska City Ranking of Average Monthly Flows

Gavins Point to Rulo, Nebraska

Ranking of Average Monthly Flows (kcfs)

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	1.4	2012	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	2012	1.6	1953	2.1	1939	2.4	1914	0.8	1924
3	0.6	1925	2.3	1940	6.2	1918	5.4	1898	3.6	1911	3.8	1956	2.4	1934	1.7	1934	2.0	1940	2.2	1936	2.7	1924	0.9	1989
4	1.0	1968	3.1	1939	6.4	1981	5.6	1981	3.8	1925	4.0	1933	2.5	1926	1.8	1936	2.3	1939	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	1.9	1941	2.4	1955	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	2.5	1955	2.6	1956	2.7	1937	3.5	1923	1.4	1955
7	1.1	1940	4.3	1978	6.6	1926	6.6	1943	4.7	1956	6.7	1968	3.6	1940	2.7	1931	2.9	1991	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	2.9	1946	2.9	1947	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	3.2	1933	2.9	1934	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	3.3	1970	3.0	1911	3.1	2012	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	3.4	1926	3.2	1974	3.5	1955	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	3.8	1976	3.4	1937	3.5	1933	4.5	1910	2.3	1929
13	2.2	1954	5.3	1910	8.3	1964	7.3	1936	5.7	1943	7.4	1912	4.4	1941	4.2	1968	3.9	1943	3.5	1956	4.6	1945	2.5	1939
14	2.2	1935	5.5	1957	8.5	2005	7.4	1967	5.8	1914	7.4	1938	4.4	1933	4.2	2003	3.9	1954	3.7	1942	4.7	1907	2.6	1914
15	2.5	1905	5.7	1912	8.7	1931	7.4	1942	6.0	1967	7.5	1955	4.5	2012	4.4	1956	3.9	1971	4.0	1947	4.7	1956	2.8	1937
16	2.7	1915	5.7	1975	9.1	1917	7.6	1946	6.5	1981	7.9	1981	4.8	1977	4.5	1939	4.0	1990	4.1	1991	4.7	2012	3.0	1990
17	2.8	1959	5.8	1989	9.1	2003	7.7	1989	6.5	1928	8.2	1910	4.8	2006	4.5	1989	4.0	1935	4.1	2003	4.8	1926	3.0	1956
18	2.8	1970	6.0	1924	9.1	1940	8.1	1933	7.3	1936	8.2	1922	4.9	1939	4.5	1988	4.1	2003	4.3	1945	4.8	1917	3.0	1950
19	2.9	1967	6.1	1923	9.2	1911	8.4	1941	7.4	1901	8.9	1941	5.1	1980	4.5	1991	4.1	1968	4.4	1931	4.8	1944	3.1	1936
20	3.1	1948	6.2	1909	10.1	1933	8.4	1957	7.4	1931	8.9	1958	5.1	1955	4.6	1971	4.1	1976	4.7	1974	4.9	1955	3.1	1935
21	3.2	1972	6.2	1937	10.2	1990	8.7	1911	7.8	1948	9.1	1948	5.1	1981	4.7	1938	4.2	1945	4.8	1922	5.2	1935	3.2	1963
22	3.2	1941	6.2	1899	10.2	1927	8.9	1926	8.0	1924	9.2	1970	5.2	1976	4.8	1935	4.4	1931	5.1	1917	5.3	1953	3.3	1925
23	3.3	1979	6.4	1942	10.3	1967	8.9	1908	8.0	1937	9.4	2006	5.2	1963	5.0	1974	4.5	1970	5.2	1948	5.4	1976	3.4	1910
24	3.3	1955	6.5	1905	10.3	1941	9.1	1937	9.1	1958	9.5	1976	5.7	1966	5.2	1913	4.5	2002	5.2	1932	5.5	1941	3.4	1958
25	3.4	1944	6.6	1955	10.5	2006	9.2	1899	9.5	1963	10.3	1937	6.3	1901	5.2	1947	4.6	2000	5.3	1976	5.7	1950	3.6	1938
26	3.8	1982	6.6	1900	10.6	2002	9.3	1931	9.8	1923	10.4	1901	6.4	1988	5.5	1901	4.8	1980	5.3	1990	5.7	1948	4.0	1942
27	3.8	1909	6.8	1935	11.4	1898	9.3	1939	10.2	1966	10.6	2002	6.6	1954	6.0	1965	4.8	1901	5.4	1963	5.8	1942	4.1	1922
28	3.9	1938	6.9	1981	11.6	1991	9.6	1963	10.3	1932	11.0	1946	6.9	1932	6.1	2006	4.9	1967	5.5	1938	5.9	1927	4.1	1949
29	4.0	1978	7.2	1990	11.6	1977	9.7	1954	10.6	1977	12.1	1966	7.0	1953	6.2	1967	5.4	1936	5.5	1958	6.1	1966	4.3	1908
30	4.2	1930	7.3	1902	12.1	1955	9.9	2003	10.8	1938	12.1	1913	7.3	1935	6.2	1980	5.5	1988	5.5	1989	6.2	1932	4.3	1976
31	4.2	1914	7.3	1941	12.4	2000	10.1	1977	10.9	1954	12.4	1940	8.0	1989	6.2	1943	5.5	1912	5.9	1966	6.2	1911	4.3	1968
32	4.2	1908	7.3	1959	12.8	1976	10.9	2000	11.0	1933	13.4	1992	8.1	1912	6.2	1949	5.7	1981	5.9	1907	6.4	1898	4.4	1923
33	4.2	1958	7.5	1922	13.1	1942	11.3	2004	11.5	1970	13.5	1900	8.1	1930	6.3	1963	5.9	1933	5.9	1944	6.6	1947	4.5	1926
34	4.3	2004	7.5	1964	13.3	1954	11.4	2002	11.6	1910	13.8	2000	8.1	1961	6.3	1914	5.9	1950	6.0	1975	6.6	1931	4.7	1964
35	4.3	1939	7.6	1934	13.4	1947	11.5	1932	11.7	2000	14.2	1921	8.2	1975	6.4	1953	5.9	1966	6.0	1910	6.7	1913	4.8	1933
36	4.4	1950	7.8	1967	13.6	1904	11.5	1972	12.0	1957	14.3	1978	8.8	1937	6.5	1942	6.1	1946	6.3	1980	6.7	1974	4.8	1967
37	4.5	1942	7.8	1901	13.9	1914	11.7	1921	12.2	1947	15.4	1974	9.1	1898	6.5	2000	6.1	1932	6.3	1988	6.8	1899	4.8	1947
38	4.5	1961	8.0	1977	14.2	1913	11.8	1914	12.2	1990	15.9	1930	9.5	1948	6.6	2002	6.2	2005	6.4	1964	6.9	1954	4.9	1948
39	4.5	1991	8.0	1918	14.3	1923	12.3	1959	12.8	1935	16.3	1927	9.8	1938	6.8	1957	6.2	1959	6.4	1941	6.9	1980	5.1	1916
40	4.6	1951	8.2	1951	14.5	1958	12.5	1988	12.8	1988	16.4	2003	9.8	1991	7.3	1912	6.2	1913	6.5	2000	6.9	1964	5.3	1961
41	4.7	1943	8.2	2004	14.8	1946	12.6	1930	13.0	1961	16.6	1979	10.0	1985	7.3	1969	6.3	1941	6.6	1916	7.0	2006	5.3	1953
42	4.7	1963	8.3	1904	15.0	1920	12.7	1964	13.2	1900	17.0	2012	10.3	1910	7.3	1964	6.3	1969	6.6	1899	7.0	1963	5.4	1960
43	4.7	1929	8.3	1944	15.1	1975	13.0	1982	13.5	1976	17.0	1961	10.3	1959	7.3	1954	6.4	1922	6.6	1925	7.1	1967	5.5	1954
44	4.7	1956	8.4	1950	15.2	1989	13.2	1971	14.0	2002	17.0	1985	10.8	1913	7.3	1940	6.5	1948	6.6	1949	7.2	1916	5.6	1966
45	4.8	1962	8.5	1972	15.2	1959	13.3	1976	14.1	1907	17.2	1972	11.1	1964	7.8	2005	6.6	1963	6.6	1971	7.3	1969	5.6	1906
46	4.9	1911	8.5	1949	15.3	1970	13.3	1953	14.4	1992	17.2	1963	11.9	1960	7.8	1961	6.8	1929	6.8	1913	7.4	1925	5.8	1917
47	4.9	1945	8.6	1960	15.5	1966	13.4	1966	14.8	1922	17.7	1906	11.9	2000	8.0	1975	7.2	1917	6.9	1967	7.6	1988	5.9	1941
48	5.0	1975	8.8	1947	15.6	1921	13.9	1958	15.4	1980	17.7	1950	12.0	1918	8.3	1937	7.3	1949	6.9	1981	7.6	2005	6.0	1951
49	5.1	1917	9.0	1925	15.9	1924	14.4	1948	15.9	1975	17.9	1959	12.4	1971	8.4	1930	7.7	1925	7.1	1960	7.6	2003	6.1	1911
50	5.2	1934	9.0	2003	15.9	1944	14.4	1928	16.0	1964	18.6	1969	12.6	1949	8.8	1972	7.7	1944	7.3	1954	7.7	1958	6.1	1962
51	5.2	1949	9.2	1963	15.9	1996	14.6	1961	16.7	1949	20.0	1932	12.7	1942	9.1	2001	7.9	1957	7.5	2002	7.8	1968	6.3	2000
52	5.3	1947	9.3	1969	16.7	1939	14.7	1924	16.7	1912	20.0	1975	13.0	1972	9.2	1973	8.2	1927	7.5	1898	7.9	1989	6.3	1980
53	5.3	1960	9.3	1968	16.8	1922	14.9	1970	17.6	1953	20.5	1953	13.1	1943	9.3	1981	8.6	1924	7.7	1969	7.9	1990	6.5	1919
54	5.5	2003	9.3	1929	17.3	1960	15.1	1991	17.6	1921	21.5	1949	13.3	2007	9.3	1985	8.7	1899	7.8	1952	8.0	1912	6.5	1904
55	5.6	1919	9.5	1965	17.4	2009	15.9	1910	18.1	2006	21.7	1943	13.6	2005	9.4	2004	9.0	2006	7.9	1970	8.0	2002	6.6	2012
56	5.7	1966	9.6	2006	17.4	1988	16.0	1992	18.3	1902	22.6	1918	14.3	2003	9.5	1977	9.0	1964	8.0	1959	8.1	1949	6.6	1974

57	5.7	1926	9.6	1898	17.5	1937	16.0	1950	19.0	1994	22.7	1914	14.3	1957	9.5	1898	9.1	1975	8.2	1978	8.3	1991	6.7	1901
58	5.8	1964	9.8	1931	17.6	1953	16.3	1900	19.0	1917	22.8	2004	14.7	1925	9.7	1922	9.2	1923	8.2	1901	8.3	1978	6.7	2003
59	5.8	1918	10.1	1958	17.9	1938	16.8	2005	19.5	1908	22.8	1898	14.9	1979	9.9	1966	9.3	2008	8.6	2006	8.6	1975	6.8	1907
60	5.9	1927	10.2	1927	18.1	1980	17.3	1907	20.1	1971	22.8	1980	15.0	1967	10.0	1910	9.4	1952	8.7	2001	8.7	1901	7.1	1978
61	6.1	1953	10.8	2002	18.3	2012	18.1	1945	20.2	2003	23.1	1952	15.7	1914	10.1	1919	9.4	2001	8.7	1957	8.8	1904	7.2	1930
62	6.1	1952	10.8	1903	18.4	1999	18.2	1923	20.7	1942	24.9	1905	15.9	1990	10.2	1997	9.5	1898	9.1	1929	8.8	1957	7.2	1957
63	6.2	1965	10.9	1926	18.4	1907	18.4	1905	20.9	1906	25.4	1909	17.5	1997	10.2	1978	9.5	2004	9.2	1909	8.8	1962	7.3	1931
64	6.2	1976	10.9	1921	18.7	1906	18.6	1909	21.2	1918	25.5	1965	17.5	2004	10.5	1929	9.6	1961	9.2	1972	9.0	1960	7.5	1969
65	6.3	1932	11.1	1945	19.0	1992	18.9	1980	21.2	1898	25.5	1942	17.9	2001	10.6	1945	9.6	1960	9.2	1950	9.1	1970	7.5	1946
66	6.3	1931	11.2	1908	19.3	1908	19.0	2012	21.3	1991	25.7	1987	18.0	1952	10.6	1990	9.7	1930	9.3	1962	9.2	1959	7.6	2002
67	6.5	1946	11.3	1961	19.3	1902	19.0	1902	21.4	1927	25.7	1960	18.2	1919	11.0	1959	9.8	1998	9.3	1920	9.2	1981	7.6	1903
68	6.5	1981	11.6	1954	19.3	1972	19.4	1974	21.9	1978	25.8	1928	18.8	1906	11.1	1948	10.6	1942	9.3	1914	9.6	1952	7.6	2005
69	6.5	1922	11.7	2001	19.5	1900	19.5	1947	22.3	2012	26.3	1964	19.0	1978	11.3	1925	10.6	1904	9.4	1904	9.7	1908	7.8	1988
70	6.7	1898	11.7	1920	19.9	2004	19.9	1903	22.4	1909	26.5	1935	19.1	1928	11.5	1932	10.6	2009	9.5	1912	9.7	1922	7.8	1959
71	6.8	2005	11.8	1932	20.4	1974	20.5	1996	22.9	2009	26.6	1997	19.3	1950	11.8	2008	10.8	1919	9.6	1906	9.8	1930	7.8	1970
72	7.0	1923	12.0	1911	21.3	1998	21.9	2009	23.0	1965	26.8	1957	19.5	1945	12.2	1918	10.9	1994	9.6	1977	9.8	1985	7.9	1900
73	7.4	1990	12.2	1953	21.6	1952	21.9	1917	23.0	1974	27.0	1920	19.8	1965	12.5	1909	10.9	1958	9.6	1927	9.9	1921	7.9	1921
74	7.6	1989	12.5	2008	22.2	1995	22.0	1944	23.0	2004	27.0	1925	20.0	1900	12.5	1960	11.3	1997	9.6	1928	10.0	2001	7.9	2006
75	7.7	1921	12.5	1980	22.5	1910	22.1	1975	23.6	2005	28.1	2009	20.2	1987	12.8	1924	11.3	1995	9.7	1987	10.1	2000	8.0	1952
76	7.7	1907	12.8	1991	22.6	1982	22.9	1918	24.2	1969	28.7	1954	20.5	1973	12.8	1944	11.6	1906	9.8	1930	10.2	2004	8.0	2004
77	7.7	1928	13.2	1992	22.9	1963	23.0	1994	25.0	1962	29.1	1971	20.9	1982	13.1	1979	11.8	1909	10.2	1911	10.5	1946	8.2	1898
78	7.8	1901	13.3	1970	23.0	1912	23.8	1904	25.2	1945	29.1	1916	21.1	1947	13.5	1962	12.0	1908	10.3	1979	10.7	1971	8.2	1902
79	7.9	1900	13.3	1976	23.0	1930	24.5	1949	25.5	1979	29.3	2005	24.3	2009	13.9	1994	12.1	1979	10.3	2004	10.8	1929	8.4	1977
80	7.9	1933	13.4	1962	23.0	1901	25.3	1922	26.1	1930	29.4	1990	24.3	1903	14.3	1928	12.1	1982	10.6	1921	10.9	1906	8.5	1920
81	8.1	2007	13.5	2000	23.7	1950	25.9	1913	26.6	1950	29.5	1986	24.3	1969	14.4	1950	12.3	1910	10.7	1968	10.9	1965	8.8	1899
82	8.3	1916	13.6	2007	24.1	1932	26.4	2006	27.3	1959	30.0	1973	24.6	1958	14.5	1952	12.8	1962	11.0	1994	10.9	1961	8.8	1913
83	8.4	1902	13.8	1946	25.5	2008	27.9	2008	28.2	1972	30.1	1994	25.6	1992	14.6	1958	13.4	1984	11.4	1908	10.9	1920	8.8	1985
84	8.6	1988	13.8	1906	25.9	1919	28.0	1906	28.2	1952	31.7	2007	26.5	1924	14.8	1984	13.5	1985	11.4	2005	11.2	1994	9.2	1975
85	8.7	2001	14.1	1986	26.4	1915	29.3	1915	28.5	1998	31.7	1982	27.2	2008	15.1	1906	13.5	1999	11.5	1961	11.6	1902	9.3	1971
86	9.2	1899	14.2	1948	26.4	1961	29.7	1916	29.2	1985	32.1	1902	27.3	1995	15.2	2009	13.5	1928	11.8	1900	11.9	1987	9.4	1983
87	9.2	1993	14.4	1985	27.7	1985	29.8	1901	29.8	1919	34.8	1991	27.4	1921	15.4	1917	13.8	2007	12.0	1997	12.3	1915	9.5	1991
88	9.3	1904	14.8	1995	28.1	1936	30.2	1985	30.2	1944	35.3	2001	27.9	1922	15.8	1986	13.9	1907	12.3	1919	12.4	1919	9.5	1981
89	9.5	1906	14.8	1919	28.8	1965	30.3	1979	30.4	1905	38.1	2011	28.0	1994	16.0	1904	14.3	1978	12.5	1998	12.6	1903	9.7	1905
90	9.6	1992	14.8	1987	29.1	1916	35.6	1920	31.7	1987	38.1	1919	28.1	1944	16.0	1920	14.7	1920	12.7	1999	13.3	1900	9.8	1928
91	10.1	1980	14.9	2010	29.1	1905	37.1	1973	31.9	1960	38.5	1907	28.3	1962	16.3	1982	14.9	1972	12.8	1918	13.4	1951	9.9	1965
92	10.4	2002	15.1	1988	29.2	1945	37.1	1978	32.0	1913	40.6	1944	29.1	1917	16.4	1900	15.0	1916	12.9	1923	13.5	1999	10.1	1915
93	10.4	1995	15.4	2005	30.8	1951	37.5	1919	32.3	1929	41.0	1899	29.4	1916	16.6	1923	15.0	1914	14.1	1985	14.0	1997	10.3	2008
94	10.5	2006	15.5	2012	31.3	2001	37.6	1952	32.6	1916	41.5	1945	29.6	1929	16.6	1983	15.2	1977	14.7	1983	14.4	1977	11.8	1972
95	10.7	1986	16.2	1943	31.9	1997	39.4	1951	32.8	1973	42.6	1924	30.1	1996	16.7	1995	15.3	1973	14.8	1926	14.4	1905	11.9	1994
96	10.8	1996	16.3	1993	33.0	1969	39.5	1965	33.7	1982	43.0	1962	30.7	1986	17.1	1921	15.4	1900	14.8	1903	14.9	1983	11.9	2001
97	11.0	1985	16.5	1999	33.6	1948	40.1	1927	34.4	1904	43.0	1923	32.6	1951	17.9	1992	15.6	1983	14.9	1946	15.2	1995	12.2	2009
98	11.1	1920	16.6	1930	34.1	1971	41.1	2007	35.4	1899	47.9	1904	33.1	1927	18.4	1998	16.4	1996	15.0	1996	15.6	2011	12.6	1995
99	11.2	1903	18.3	1996	35.2	1986	41.3	1998	35.5	2010	49.3	1996	33.8	1899	18.7	1902	16.7	1938	15.1	1905	17.3	1972	13.4	2007
100	11.4	2009	18.3	1998	35.8	2011	43.2	1995	36.3	1996	50.1	1951	33.8	1998	18.7	1908	17.1	1921	15.4	2009	17.3	1973	13.9	1979
101	11.8	1994	19.2	1966	36.6	1984	44.1	1999	36.5	1903	50.4	1929	34.6	1905	18.8	1987	17.1	1987	16.5	1995	17.5	1918	14.1	1918
102	11.9	2008	19.3	1915	37.4	2007	45.3	2010	37.2	1997	50.7	1999	36.5	1920	19.5	1927	17.4	1918	17.0	1965	18.1	2008	14.1	1992
103	12.1	2000	19.3	1952	37.6	1994	45.6	1912	37.2	1915	54.3	1998	36.8	1908	20.2	1905	18.1	1989	17.6	1951	18.2	2007	14.2	1987
104	12.2	1998	19.8	1907	38.9	1909	46.2	1987	37.3	2008	56.7	1995	37.9	1999	20.6	1916	18.9	1992	18.1	2008	18.6	1928	14.4	1999
105	12.9	1999	21.2	1974	39.6	1987	46.5	1986	39.5	1951	59.2	1993	39.5	1923	20.9	2007	19.7	1902	18.9	1982	18.9	1992	14.7	1909
106	13.3	1997	21.5	1916	40.1	1903	47.6	1929	44.6	2011	60.8	1917	41.1	1984	21.9	1899	21.4	1965	19.0	1984	19.2	1979	15.5	1996
107	13.5	2012	21.5	1994	40.6	1962	51.9	1962	45.4	1999	61.1	1947	44.7	1909	23.1	1999	23.0	1915	19.9	1992	19.8	1996	15.5	1973
108	13.7	1984	21.8	1982	46.4	1978	53.0	2001	45.6	1983	63.4	1983	45.2	1983	27.1	1996	26.4	1926	20.4	1915	19.9	1984	16.2	1997
109	14.7	2010	22.4	2009	46.5	1929	53.9	1993	46.8	1986	65.7	1967	46.9	1904	29.2	1951	27.2	2011	21.0	2011	20.9	2010	16.8	1998
110	14.9	2011	22.5	1973	49.4	1949	54.3	2011	47.5	1920	74.6	1903	50.4	1907	32.9	1907	27.2	1951	23.5	1902	21.1	1982	17.4	2011
111	15.1	1987	23.8	1997	49.8	1983	57.6	1997	49.2	2001	78.7	1915	56.6	1902	33.6	1903	27.4	1986	25.7	1993	21.2	1993	17.5	2010
112	15.2	1974	28.2	2011	53.3	1993	61.4	1983	52.8	1993	78.7	1908	60.3	2011	42.2	2011	28.4	1905	28.7	2010	21.2	2009	18.5	1982
113	16.5	1983	28.2	1971	54.6	1973	61.9	1969	69.8	2007	91.5	2008	69.1	2010	47.0	2010	30.1	2010	30.3	1973	21.3	1909	19.6	1984
114	21.9	1973	30.6	1983	65.9	1979	74.0	1960	70.5	1995	94.3	2010	93.8	1915	54.7	1993	33.2	1903	31.1	2007	22.6	1998	20.1	1993
115	28.9	1910	31.1	1984	74.8	2010	88.0	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

Plate 36. Gavins Point to Rulo Ranking of Average Monthly Flows

Gavins Point to St. Joseph, Missouri

Ranking of Average Monthly Flows (kcfs)

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	5.4	1934	2.6	1934	2.4	1926	1.7	1911	1.9	1934	1.4	1953	2.2	1940	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	1.9	2012	2.2	1953	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	2.4	1955	2.3	1939	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	2.5	2012	2.7	1940	2.9	1936	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	1911	3.1	1956	3.0	1937	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	2.7	1955	3.2	1991	3.1	1924	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	3.5	1931	3.2	1939	3.4	1943	4.4	1933	2.0	1912
8	1.9	1968	4.6	1956	8.2	1968	7.5	1940	5.2	1939	8.3	1938	5.3	1946	3.7	1933	3.9	1954	3.4	2012	4.6	1934	2.1	1940
9	2.0	1957	4.7	1933	8.2	1899	7.7	1955	5.5	1989	8.3	1988	5.6	1974	4.5	1976	3.9	1934	3.5	1935	4.6	1938	2.2	1927
10	2.1	1977	5.3	1979	8.4	2005	7.8	1990	6.0	1941	8.8	1931	5.6	1956	4.7	1946	4.0	1947	3.6	1955	4.8	1943	2.2	1934
11	2.3	1924	5.5	1938	8.5	1956	8.0	1989	6.3	1914	8.9	1989	5.6	2006	4.9	1988	4.1	1974	3.7	1956	4.9	1956	2.6	1937
12	2.4	1913	5.6	1913	8.6	1981	8.3	1981	6.4	1968	9.0	1981	5.8	1963	4.9	1956	4.4	1971	3.8	1933	4.9	1940	2.6	1932
13	2.4	1959	5.8	1957	8.9	1964	8.4	1957	6.7	1967	9.1	1912	5.8	2002	5.0	1971	4.4	1943	3.9	1934	5.2	1953	2.7	1939
14	2.4	1935	5.9	1978	9.1	1935	8.7	1942	7.5	1943	9.3	1922	5.8	2012	5.2	1991	4.5	2003	4.3	1991	5.3	1955	2.7	1936
15	2.4	1969	6.2	1989	9.1	1931	9.0	1933	7.8	1946	9.5	1939	6.0	1931	5.4	1970	4.5	1911	4.4	1942	5.4	1945	3.1	1914
16	2.7	1955	6.7	1923	9.9	2003	9.1	1967	7.8	1928	9.8	1958	6.1	1970	5.4	1935	4.6	1976	4.5	2003	5.6	1944	3.1	1956
17	2.9	1915	6.8	1909	10.3	1940	9.4	1936	7.9	1931	9.8	1977	6.2	1966	5.6	1989	4.6	1990	5.0	1947	5.7	1910	3.2	1935
18	3.1	1948	6.8	1912	10.3	2002	9.8	1954	8.9	1937	9.9	1955	6.2	1901	5.7	1926	4.6	1937	5.6	1945	5.7	1926	3.3	1963
19	3.3	1905	7.1	1935	10.6	1911	10.1	1937	8.9	1948	9.9	1910	6.3	1955	5.8	2003	4.9	1935	5.6	1963	5.8	1907	3.6	1950
20	3.5	1941	7.2	1900	10.7	1933	10.1	1941	9.1	1901	9.9	1948	6.4	1968	6.1	2006	5.0	2002	5.6	1948	5.9	2012	3.6	1929
21	3.6	1979	7.3	1899	10.8	1967	10.2	1911	9.1	1981	10.3	2006	6.6	1954	6.2	1947	5.1	1968	5.8	1932	5.9	1942	3.6	1938
22	3.7	1972	7.4	1924	10.9	2006	10.3	1908	9.3	1924	10.8	1901	6.9	1953	6.3	1968	5.2	2000	5.9	1931	6.1	1917	3.7	1990
23	3.7	1944	7.5	1975	11.1	1917	10.4	1946	9.7	1936	11.3	1937	6.9	1939	6.3	1953	5.2	1945	6.0	1990	6.6	1935	4.4	1958
24	3.8	1970	7.6	1934	11.4	1941	10.4	1943	11.0	1923	12.7	1970	7.3	1976	6.3	1939	5.6	1988	6.0	1922	6.6	1976	4.4	1910
25	3.9	1938	7.7	1947	12.6	1991	10.4	1926	11.1	1954	13.0	2002	7.3	1977	6.3	1913	5.7	1967	6.1	1958	6.9	1954	4.5	1925
26	3.9	1982	7.8	1942	12.7	1990	10.5	1931	11.3	2000	13.3	1976	7.5	1980	6.6	1938	6.2	1901	6.2	1966	7.1	1966	4.8	1953
27	4.1	1939	8.0	1972	12.8	1927	10.7	2003	11.5	1958	13.5	1966	7.6	1988	6.7	1901	6.3	2005	6.3	1917	7.1	1950	4.9	1954
28	4.1	1963	8.1	1905	12.9	1977	11.0	2002	11.6	1933	13.8	1940	8.1	1989	6.7	1967	6.6	1933	6.3	1938	7.2	1932	5.2	1933
29	4.1	2004	8.1	1941	13.0	1898	11.5	1899	11.9	1957	13.9	1941	8.4	1930	6.7	1957	6.6	1980	6.5	1989	7.2	1963	5.3	1949
30	4.2	1967	8.2	1977	13.4	1954	11.6	1977	12.0	1932	14.4	1913	8.7	1912	6.8	1963	6.7	1966	6.7	1907	7.3	1927	5.3	1908
31	4.3	1950	8.3	1967	13.6	2000	11.6	2000	12.1	1966	15.8	1900	9.3	1975	7.0	1980	6.7	1931	6.7	1964	7.5	1964	5.3	1922
32	4.5	1956	8.3	1944	13.9	1947	11.7	1963	12.2	1938	15.9	2000	9.5	1981	7.4	1965	7.0	1912	6.8	1971	7.5	1967	5.3	1923
33	4.6	1930	8.7	1990	14.0	1955	12.0	2004	12.5	1977	16.0	1946	10.3	1935	7.5	2000	7.0	1963	6.8	2000	7.6	1911	5.6	1948
34	4.9	1909	8.7	1902	14.3	1976	12.2	1939	13.1	1963	16.2	1992	10.7	1932	7.6	1943	7.2	1970	6.9	1976	7.9	2006	5.7	1926
35	4.9	1961	8.7	1937	15.7	1958	12.5	1972	13.4	1970	16.2	1950	10.7	1991	7.7	1954	7.2	1948	7.0	1910	8.1	1898	5.8	1942
36	5.1	1991	8.7	1964	16.2	1989	13.2	1953	14.1	1910	16.7	1921	11.0	1961	7.9	2002	7.2	1950	7.0	1975	8.2	1948	5.8	1968
37	5.2	1951	8.8	1955	16.3	1904	13.5	1930	14.4	1988	17.3	1930	11.0	1898	8.0	1974	7.8	1936	7.1	1988	8.3	2003	5.9	1964
38	5.4	1908	9.0	1901	16.5	1923	13.5	1914	14.7	1947	18.1	1963	11.1	1937	8.1	1914	7.8	1922	7.2	1974	8.3	1974	6.0	1947
39	5.4	1958	9.2	2003	16.6	1942	13.6	1921	14.9	1907	18.2	1972	11.4	1959	8.1	1949	7.8	1957	7.3	1954	8.4	1913	6.0	1967
40	5.8	1914	9.3	1922	16.7	1914	13.8	1964	15.1	1935	18.3	1978	11.5	1913	8.3	1964	7.9	1913	7.4	1949	8.4	1899	6.4	2003
41	5.8	1934	9.3	2004	16.9	1970	14.0	1932	15.2	1961	18.9	1927	11.8	1948	8.4	1975	7.9	1959	7.7	1916	8.6	1990	6.4	1976
42	5.9	1949	9.5	1959	16.9	1913	14.0	1950	15.9	1900	19.1	1974	12.2	1938	8.7	1912	8.0	1929	7.7	1899	8.6	1989	6.5	1916
43	5.9	1943	9.7	1981	17.2	1996	14.2	1966	16.0	2002	19.3	1961	12.2	1910	8.9	1961	8.4	1917	7.8	1980	8.6	1958	6.5	1966
44	5.9	2003	9.7	2006	17.5	1953	14.4	1971	16.3	1990	19.3	1985	12.9	1964	8.9	1942	8.6	1981	7.9	1960	8.7	2005	6.6	1960
45	6.1	1911	9.9	1918	17.5	1920	14.5	1959	16.3	1976	19.6	1906	13.6	1971	9.2	1930	8.7	1932	8.1	1952	8.7	1968	6.8	1961
46	6.2	1947	9.9	1904	17.6	1921	15.0	1988	17.4	1953	19.6	2003	14.0	1960	9.2	2005	8.8	2006	8.1	1944	8.8	2002	6.8	1962
47	6.2	2005	9.9	1958	17.6	1944	15.2	1958	17.6	1975	19.8	1959	14.1	2007	9.2	1940	9.0	1969	8.2	1925	8.8	1957	7.0	2012
48	6.5	1953	10.0	1968	17.8	1966	15.3	1948	17.9	1964	19.9	2012	14.2	2000	9.4	2004	9.4	1925	8.5	1967	8.8	1947	7.2	1906
49	6.6	1929	10.1	1931	18.4	1988	15.8	1970	18.3	1980	20.4	1953	14.3	1957	9.4	1937	9.6	1927	8.6	1913	8.9	1949	7.3	1911
50	6.6	1946	10.3	1950	18.4	1924	16.7	1924	18.4	1949	22.0	1979	14.3	1972	9.9	1969	9.8	1899	8.7	1957	8.9	1980	7.3	1917
51	6.7	1978	10.7	1951	18.9	1938	16.8	1982	18.6	1922	23.8	1969	14.6	2005	10.1	1972	9.9	1952	8.8	2002	9.0	1916	7.4	2000
52	6.7	1952	10.9	1949	19.1	1959	16.8	1928	18.6	1992	23.9	1932	14.7	1985	11.0	1966	10.0	1975	9.1	1898	9.2	1962	7.5	1957
53	6.7	1917	11.2	2002	19.1	1975	18.0	2005	19.4	2006	25.0	2004	14.7	1943	11.2	2001	10.0	1924	9.1	1981	9.3	1925	7.7	1951
54	6.8	1931	11.4	1960	19.3	1946	18.2	1910	20.5	1921	25.1	1952	15.0	1942	11.5	1922	10.5	1964	9.5	1978	9.5	1991	7.7	1974
55	6.8	1975	11.5	1898	19.6	2009	18.4	1991	21.1	1908	25.4	1914	15.5	1918	11.6	1898	10.5	1941	9.8	2006	9.6	1988	7.7	1930
56	6.9	1942	11.6	1965	19.6	1937	18.4	1976	21.2	1994	25.5	1975	16.6	2003	11.9	1990	10.6	2004	9.9	2001	9.7	1969	7.8	1941

57	7.0	1964	11.8	1925	19.8	1939	18.5	1900	21.4	1912	26.7	1918	17.9	1967	12.0	1929	10.6	1930	10.1	1970	9.7	1960	8.1	1904
58	7.1	1966	11.8	1954	20.3	1907	18.6	1961	21.5	1902	26.8	1957	17.9	1950	12.1	1910	10.6	1960	10.3	1962	9.7	2000	8.1	2004
59	7.2	1926	12.1	1961	20.3	1999	19.3	1907	22.0	1971	26.9	1898	17.9	1949	12.3	1919	10.7	1949	10.3	1929	9.7	1912	8.1	2002
60	7.3	1919	12.2	1929	20.8	1972	20.6	1923	22.4	1917	27.2	1909	18.0	1914	12.5	1978	11.0	1944	10.3	1914	10.1	1978	8.2	1969
61	7.5	1927	12.2	1963	21.0	1922	20.9	1996	23.5	2003	27.5	1943	18.4	2004	12.8	1959	11.0	1923	10.6	1901	10.1	1952	8.3	1946
62	7.5	1918	12.7	1903	21.0	1906	21.0	1909	23.5	1991	28.2	1960	18.7	1925	13.1	2008	11.2	1998	10.6	1972	10.2	1941	8.3	1907
63	7.6	1945	12.7	1927	21.7	1992	21.9	1905	23.7	1898	28.8	1905	19.5	1990	13.1	1945	11.5	2008	10.6	1969	10.3	1975	8.4	1959
64	7.6	1965	13.3	1921	21.9	1908	22.2	1902	24.3	2004	29.1	1954	21.2	1952	13.6	1997	11.6	1898	10.8	1959	10.4	1959	8.4	2005
65	8.0	1989	14.0	1926	22.1	2004	22.4	1992	24.3	1906	30.0	1928	21.5	2001	13.8	1977	11.6	1946	11.0	1930	10.4	1930	8.5	1919
66	8.1	1962	14.0	1969	22.1	1995	23.1	1903	24.4	2012	30.1	1980	21.6	1919	13.8	1925	11.8	2001	11.2	1920	10.5	1970	8.6	1901
67	8.3	1988	14.1	1991	22.1	2012	23.6	1975	25.1	1918	30.5	1964	21.8	1997	13.9	1909	11.9	1995	11.5	1904	10.6	2001	8.7	1970
68	8.6	1922	14.1	1920	22.2	1900	23.8	2012	25.1	2005	30.8	1971	22.9	1906	14.2	1962	12.1	1942	11.6	2004	10.7	2004	8.9	1978
69	8.7	1898	14.1	1908	22.8	1980	24.0	1980	25.3	1909	31.3	1920	22.9	1945	14.2	1948	12.2	1994	11.7	1906	10.8	1904	9.0	1988
70	8.7	1981	14.2	1945	22.9	1902	24.5	1974	25.4	1950	31.4	1965	24.0	1979	14.4	1994	12.3	2009	11.8	1927	10.8	1901	9.0	2006
71	8.8	1976	14.3	1953	23.0	1950	24.7	1947	25.5	1942	31.8	1925	24.4	1928	14.9	1924	12.6	1904	11.8	1999	11.1	1931	9.2	1980
72	9.0	1923	14.5	2001	23.5	1952	25.2	1994	25.8	1927	32.1	2005	25.1	1900	15.1	1960	13.3	1919	11.9	1912	11.2	1971	9.2	1952
73	9.1	1990	14.7	1992	24.0	1930	25.6	1917	26.5	1962	32.1	1997	26.4	1987	15.1	1985	13.6	1962	12.0	1968	11.3	1999	9.8	1903
74	9.3	1933	14.8	2000	24.7	1974	26.6	1945	26.6	1965	32.3	1942	26.5	1978	15.1	1918	13.6	1906	12.1	1909	11.6	1908	9.9	1971
75	9.3	1960	15.0	1976	25.0	1960	26.6	2009	27.7	1930	32.4	1935	27.5	1973	15.3	1981	13.9	1909	12.3	1928	11.9	1922	10.0	1900
76	9.4	1907	15.4	1995	25.0	1998	26.8	1918	27.7	1969	32.8	2007	27.7	1982	15.3	1932	14.0	1961	12.3	1950	12.3	1994	10.0	1921
77	9.5	2001	15.4	1911	25.2	1963	26.9	1944	29.5	2009	33.6	1987	27.9	1947	16.8	1995	14.0	1999	12.6	1911	12.3	1921	10.1	1985
78	9.9	1921	15.5	1980	26.0	1910	27.2	1949	30.8	1952	33.8	2011	28.2	2009	16.8	1973	14.0	1997	12.7	2005	12.4	1965	10.3	1898
79	9.9	1928	15.7	1946	26.2	1932	27.4	2006	30.9	1978	34.0	1916	29.2	1994	17.2	1928	14.1	1908	12.8	1921	12.4	1946	10.4	1981
80	10.1	1901	15.8	1988	27.1	1901	28.2	1904	31.3	1974	34.1	1973	29.6	1962	17.2	1952	14.6	1910	13.0	1987	12.5	1929	10.4	1902
81	10.2	2002	15.8	2005	27.7	1982	29.6	1922	31.6	1998	34.3	1994	30.6	1965	17.5	1950	15.1	1979	13.0	1977	13.2	1906	10.7	1920
82	10.2	2007	16.0	1932	28.4	1912	30.3	1913	32.9	1972	35.3	1986	30.9	1969	17.5	1906	15.2	1907	13.1	1979	13.4	1920	10.7	1991
83	10.3	1900	16.1	2007	30.2	1915	31.8	1985	33.2	1960	36.0	1990	30.9	1944	17.6	1958	15.8	1928	13.2	1994	13.6	1981	10.8	1913
84	10.4	1916	16.2	1970	30.4	1961	31.8	1906	33.8	1979	36.4	2009	31.1	2008	17.7	1944	16.3	1958	13.6	1908	13.8	1902	10.8	1899
85	10.9	1902	16.2	1948	31.6	1919	32.7	2008	33.8	1985	37.2	1902	31.1	1929	17.8	1917	16.3	2007	13.6	1941	13.9	1985	11.4	1983
86	11.0	1992	16.2	2008	32.1	1951	33.8	1901	34.8	1959	39.0	1949	31.7	1924	18.1	1984	16.7	1984	14.1	1997	14.1	1951	11.5	1931
87	11.3	2006	16.7	1906	32.2	1936	33.9	1915	35.1	1944	39.7	1991	33.4	1903	18.3	1904	17.0	1983	14.4	1900	14.8	1915	12.2	1975
88	11.8	1995	16.9	1966	32.3	1985	34.4	1916	35.3	1929	41.4	2001	33.7	1996	18.3	1979	17.2	1916	15.2	1919	15.1	1919	12.2	1905
89	12.0	1996	17.4	1930	32.4	2008	35.1	1979	36.0	1905	42.8	1907	33.9	1995	18.5	2009	17.3	1920	15.3	1998	15.2	1997	12.3	2001
90	12.0	1904	17.8	1943	33.7	1916	41.1	1951	36.9	1919	43.8	1944	34.1	1958	18.6	1920	18.0	1938	15.4	1923	15.4	1903	12.6	1965
91	12.1	1899	18.2	2012	34.5	1945	41.8	1952	37.0	1945	44.2	1962	34.1	1922	18.8	1923	18.0	1978	15.9	1918	15.6	1987	12.6	1915
92	12.2	1906	18.2	1986	34.6	1997	41.8	1920	37.8	1913	45.7	1919	34.5	1921	19.3	1900	18.1	1900	15.9	1961	16.0	1995	12.7	1977
93	12.4	1993	18.3	1987	35.1	1905	41.9	2007	38.5	1916	45.8	1982	35.1	1917	20.0	1983	18.3	1996	16.2	1996	16.2	1900	12.8	1928
94	12.9	2009	18.4	1985	35.2	1969	42.7	1965	41.0	1899	48.3	1899	36.7	1992	20.2	1921	18.3	1914	16.5	1983	16.2	1961	12.8	2008
95	12.9	2000	18.9	1993	35.8	1971	44.0	1919	41.3	1904	48.5	1945	37.4	1916	20.7	1998	19.4	1985	16.6	1926	17.4	1905	13.6	1994
96	13.0	1932	19.0	2010	36.6	1965	46.4	1927	41.5	2010	48.5	1924	37.6	1998	21.6	1908	19.4	1972	16.8	1946	18.1	2011	14.0	1995
97	13.5	1994	19.2	1919	37.0	1948	47.0	1973	42.1	1973	49.5	1923	39.7	1999	21.7	1902	20.0	1982	16.8	2009	18.8	1983	14.9	1999
98	13.7	1980	19.4	1952	37.1	2001	47.2	1978	42.7	1903	54.8	1999	41.4	1986	22.4	1986	20.1	1921	17.0	1903	20.2	2007	15.7	2009
99	13.7	1998	19.5	1998	37.4	2007	47.5	1995	43.3	1915	54.8	1929	41.6	1951	22.5	1927	21.0	1918	17.3	1905	20.5	2008	15.7	2007
100	14.0	1984	19.6	1996	37.7	2011	49.3	1998	43.3	2008	56.2	1904	42.3	1927	22.7	1992	22.5	1989	17.6	1995	21.4	1993	16.0	1972
101	14.1	2008	20.5	1999	41.0	1984	50.5	1929	44.4	1982	58.3	1996	43.7	1899	22.9	2007	24.0	1902	18.0	1951	21.5	1918	17.5	1918
102	14.2	1920	21.3	2009	41.3	1986	50.7	1999	45.4	1951	62.5	1993	44.2	1905	23.5	1982	24.3	1987	19.4	1965	21.7	1972	17.7	1987
103	14.4	1903	21.6	1994	42.9	1962	51.7	2010	46.3	1996	63.2	1951	44.3	1908	24.0	1916	24.5	1973	20.1	2008	22.4	1973	18.2	1997
104	15.1	1997	22.7	1962	43.3	1994	52.2	1962	46.4	1997	63.9	1998	44.5	1920	24.2	1905	24.7	1992	21.5	2011	22.7	1979	19.0	1979
105	15.5	1985	24.7	1915	45.2	1909	52.5	1912	46.5	1987	64.7	1995	47.4	1923	24.8	1999	25.1	1915	21.7	1984	23.4	1928	19.4	1909
106	15.8	2012	24.8	1974	46.7	1903	52.9	2001	51.6	1999	72.4	1917	52.3	1983	25.4	1899	28.4	1977	22.3	1982	23.7	1977	19.6	1998
107	15.9	1999	25.2	1907	47.9	1987	53.2	1987	53.4	2011	73.4	1983	52.3	1909	28.7	1987	28.8	1965	22.7	1985	24.0	1984	19.8	1992
108	17.8	1986	27.6	1916	48.8	1929	54.5	1986	55.4	2001	73.8	1947	52.5	1984	31.4	1996	30.4	1951	23.4	1992	24.3	1992	20.3	2011
109	18.5	1987	28.1	1997	53.0	1949	59.2	2011	56.2	1920	76.3	1967	56.5	1904	33.4	1951	31.3	2011	24.4	1915	24.6	1996	20.5	1996
110	19.5	2010	30.4	1971	53.9	1978	62.2	1993	59.9	1986	90.1	1903	65.3	1907	37.5	1907	32.3	1926	28.1	1902	24.7	2010	20.6	1993
111	19.6	2011	33.5	1973	57.5	1993	62.6	1997	61.4	1993	91.6	1915	69.5	1902	39.7	1903	33.3	1986	30.0	1993	24.7	2009	21.2	2010
112	19.7	1974	34.0	2011	63.0	1973	66.3	1969	61.5	1983	92.2	1908	71.7	2011	47.4	2011	33.6	1905	31.3	2010	25.3	1982	22.3	1973
113	21.9	1983	34.1	1982	64.9	1983	73.0	1983	77.2	2007	101.4	2008	75.6	2010	52.7	2010	33.7	2010	35.4	2007	26.2	1909	24.6	1982
114	25.1	1973	38.8	1983	78.8	2010	76.3	1960	83.8	1984	103.0	2010	122.7	1915	62.2	1993	38.2	1903	47.8	1986	26.7	1998	25.1	1984
115	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	48.2	1973	28.0	1986	27.1	1986

Plate 37. Gavins Point to St. Joseph Ranking of Average Monthly Flows

Gavins Point to Kansas City, Missouri
Ranking of Average Monthly Flows (kcfs)

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	7.2	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	3.8	1937	3.8	1936	2.0	1927
4	1.7	1925	6.1	1956	8.9	1934	7.7	1935	5.9	1989	6.9	1956	4.4	1934	3.3	1955	3.9	2012	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	4.6	2012	3.9	1955	4.3	1953	5.1	1924	2.5	1955
6	2.1	1912	6.2	1933	10.1	1964	8.8	1989	6.9	1955	9.5	1988	6.8	1933	5.5	1988	4.1	1947	4.9	2012	5.8	1933	3.0	1937
7	2.1	1936	6.4	1989	10.3	1956	9.0	1940	7.0	1925	9.6	1989	7.3	1940	5.6	1991	4.3	1939	5.0	1924	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	6.0	1970	4.6	1971	5.5	1936	6.0	1923	3.4	1945
9	3.4	1935	6.6	1917	10.7	2003	10.4	1938	7.3	1939	12.1	1968	8.0	2012	6.3	1976	4.7	1976	5.8	1934	6.1	1938	3.5	1989
10	3.6	1979	6.9	1938	11.0	1935	11.4	1990	9.6	1967	12.2	1936	8.1	1970	6.7	1926	5.6	1911	5.8	1947	6.1	1940	3.5	1936
11	3.6	1924	7.5	1913	11.1	1943	11.9	1955	9.6	1940	13.1	2006	8.4	1980	7.0	1956	5.9	2002	5.9	1943	6.5	2012	3.6	1939
12	3.7	1913	7.5	1910	11.3	1899	12.3	1957	9.8	1901	13.4	1931	8.6	1966	7.3	1989	6.0	1954	6.1	2003	6.7	1943	3.7	1956
13	3.9	1955	7.9	1978	11.5	1967	12.4	1954	10.1	1968	13.7	1912	8.7	2006	7.4	1933	6.0	1934	6.6	1933	6.8	1955	4.1	1934
14	4.0	1970	8.1	1936	11.6	1918	12.7	1937	10.3	1941	14.2	1922	8.8	1974	7.5	1901	6.2	1990	6.6	1948	6.9	1976	4.2	1914
15	4.3	1971	8.8	1935	11.9	1931	12.7	1908	11.2	1928	15.5	1937	9.0	1953	7.6	1913	6.4	1940	6.6	1955	7.2	1953	4.3	1990
16	4.6	1938	9.0	1909	12.0	2002	13.1	2003	12.1	1937	15.5	1910	9.3	1988	7.6	1971	6.7	1943	6.9	1991	7.5	1934	4.5	1963
17	4.7	1967	9.1	1934	12.5	1926	13.1	1977	12.5	2000	16.0	1955	9.5	1954	7.7	2003	6.8	1937	7.4	2000	7.7	1907	4.6	1932
18	5.0	1939	9.2	1912	12.9	1940	13.2	1936	13.0	1946	17.9	1940	10.1	1931	8.0	1953	6.8	1988	7.6	1976	7.8	1945	4.6	1938
19	5.0	1948	9.4	1947	13.1	2005	13.3	1967	14.0	1931	18.0	1981	10.2	1989	8.1	2002	6.8	1974	7.6	1971	8.4	1954	5.6	1929
20	5.2	1905	9.5	1967	13.5	1933	13.3	1933	14.5	1924	18.4	1976	10.4	1955	8.2	1946	7.0	2000	7.8	1922	8.7	1910	6.0	1935
21	5.4	2004	9.5	1964	14.2	1941	13.6	2000	15.1	1966	18.9	1913	10.7	1912	8.4	1947	7.2	1901	7.8	1938	8.8	1917	6.4	1976
22	5.5	1915	9.6	1923	14.2	2006	14.6	2004	15.3	1981	19.3	2002	10.9	1956	8.8	1935	7.4	2003	7.9	1932	8.9	1932	6.6	1950
23	5.5	1944	9.9	1990	14.4	1977	14.9	1941	15.3	1923	19.9	1992	11.0	1976	8.9	1941	8.6	1980	8.0	1990	9.0	1980	6.6	1925
24	5.5	1963	10.1	1900	14.7	1991	15.0	1946	15.9	1948	20.2	2000	11.1	1963	8.9	2000	8.7	1945	8.0	1988	9.0	1926	6.7	1954
25	5.7	1956	10.4	1924	15.2	1954	15.0	1931	16.9	1988	20.7	1946	12.6	1930	9.1	1980	9.1	1912	8.0	1975	9.1	1948	6.7	1910
26	6.2	1961	10.4	2003	15.6	1917	15.2	1963	17.2	1907	21.0	1958	12.9	1946	9.2	1974	9.4	1966	8.0	1935	9.2	1966	6.8	1953
27	6.2	1982	10.6	1981	16.4	1911	15.4	1972	17.3	1977	21.3	1972	13.0	1941	9.3	1975	9.8	1968	8.2	1966	9.4	2006	7.2	1933
28	6.2	1959	10.7	1944	16.8	1989	15.4	2002	17.4	1954	21.5	2012	13.1	1977	9.4	1931	10.1	1929	8.3	1980	9.9	1947	7.3	1966
29	6.3	1930	11.3	1977	16.9	2000	15.8	1968	17.6	1932	21.7	1963	13.2	1939	9.5	1964	10.2	1936	8.8	1974	10.2	2002	7.3	1958
30	6.4	1991	11.4	2004	18.2	1898	16.0	1950	17.7	1943	22.5	1966	13.4	1991	9.7	1963	10.3	1963	8.9	1952	10.2	1963	7.3	1922
31	6.5	1968	11.4	1972	18.4	1976	16.2	1899	19.9	1933	22.7	2003	13.5	1968	10.4	2006	10.5	1948	8.9	1963	10.3	1990	7.3	1964
32	6.8	1950	11.5	1899	19.0	1970	16.3	1943	20.6	1992	22.8	1948	14.2	1910	11.1	1914	10.7	1913	9.0	1964	10.3	1988	7.6	1908
33	6.9	1934	12.1	1941	19.1	1996	16.3	1911	21.0	1936	23.6	1939	15.1	1898	11.4	1912	10.9	1981	9.4	1945	10.5	1949	7.9	1948
34	7.0	2003	12.1	1905	19.2	1955	16.6	1926	21.4	1963	23.7	1953	17.7	2000	12.4	1939	11.7	1975	9.6	1989	10.6	2003	8.1	2000
35	7.1	1909	12.4	2002	19.9	1927	17.5	1953	22.0	1980	25.2	1938	17.8	1913	12.8	1957	12.1	1922	10.0	2002	10.6	1950	8.5	1949
36	7.5	1941	12.5	1931	20.2	1938	17.5	1966	22.2	1910	25.2	1900	17.9	1985	12.8	1965	12.7	2006	10.1	1981	10.6	2005	8.6	2003
37	7.6	1958	12.6	2006	21.1	1988	17.8	1930	22.5	1964	26.7	1906	17.9	1972	12.9	1938	12.9	1917	10.2	1917	10.6	1991	8.7	1926
38	7.7	1951	12.7	1979	21.1	1953	18.1	1964	22.6	1957	27.6	1921	18.0	1975	12.9	1943	13.2	1994	10.8	1907	10.8	1942	8.7	1923
39	7.7	1972	12.8	1975	21.4	1966	18.4	1971	22.8	1975	27.8	1978	18.0	1937	13.0	1967	13.2	2005	10.8	1931	11.1	2001	9.1	2012
40	8.3	1914	13.2	1968	21.4	1990	18.4	1939	23.9	1958	27.9	1979	18.4	1938	13.1	1949	13.7	1957	11.5	1899	11.1	1989	9.2	1988
41	8.5	1908	13.3	1901	21.8	1923	18.9	1942	24.8	1953	30.3	1950	18.7	1932	13.5	1966	13.8	1952	11.6	1960	11.1	2000	9.5	2002
42	8.5	1953	13.6	1902	22.8	1947	19.3	1921	24.8	1970	30.5	1952	19.0	1964	13.6	1940	13.8	1997	11.8	1910	11.3	1911	9.7	1947
43	8.7	1947	13.6	1965	23.1	1972	20.6	1988	25.6	1900	31.1	1959	19.3	2003	13.8	1937	13.8	1933	12.0	1972	11.4	1964	9.8	1967
44	8.8	1964	14.1	1950	23.1	1913	21.1	1914	26.2	2006	31.4	1977	21.0	2007	14.0	1930	13.9	1932	12.1	1916	11.6	1944	10.0	1960
45	9.0	1969	14.1	1958	23.2	1914	21.6	1996	26.5	1947	31.5	1927	21.1	1918	14.2	1969	14.0	1967	12.3	1978	11.6	1899	10.1	1957
46	9.1	1989	14.2	1954	24.0	1904	21.9	1982	26.5	2003	32.6	1985	21.7	2005	15.0	1961	14.1	1969	12.4	1999	12.1	1935	10.2	1916
47	9.4	1966	14.8	1922	24.2	1921	22.3	1970	27.0	2002	33.4	1930	22.4	1971	15.3	1997	14.3	1935	12.4	1929	12.2	1898	10.3	1962
48	9.7	1975	14.9	1942	24.9	1920	22.4	1932	27.6	1922	37.3	1974	23.1	1981	15.7	1929	14.7	1927	12.5	1954	12.2	1927	10.6	1906
49	9.8	1911	15.1	1963	25.3	1924	22.8	1948	28.6	1938	37.4	1997	23.2	1961	15.9	1978	14.8	1931	12.5	1942	12.4	1913	10.7	2006
50	9.9	1978	15.1	1955	25.9	1939	23.5	1958	29.1	1912	37.7	1909	24.4	1943	16.0	2001	15.1	1924	13.2	1925	12.4	1975	11.0	2005
51	9.9	1931	15.2	1904	26.0	1946	23.6	2005	29.4	1965	38.7	1980	24.7	1935	16.4	1954	15.2	1925	13.3	2006	12.6	1999	11.1	1974
52	10.0	1917	15.2	1918	26.1	1975	23.9	1991	30.4	2004	39.8	1970	24.8	1959	16.5	1972	15.2	1995	13.7	1913	12.6	1952	11.3	2004
53	10.2	1981	16.1	1970	26.3	1950	24.9	1924	30.7	1976	39.9	1914	26.2	1997	17.5	1910	15.8	1899	13.8	1994	12.8	1960	11.3	1930
54	10.5	2001	16.3	1951	26.3	1937	26.1	1959	31.0	2012	40.0	2004	26.6	1960	17.5	2005	15.8	2004	13.8	2001	13.0	1957	11.4	1951
55	10.7	1976	16.6	1961	26.8	1942	26.6	1900	31.0	1990	40.5	1932	26.8	1952	17.6	1959	15.9	1999	14.0	1979	13.5	1967	11.4	1952
56	10.7	1965	16.6	2000	26.8	1995	26.9	1910	31.8	1921	41.5	1973	27.9	1990	17.9	1898	16.1	1923	14.2	1958	13.7	1994	11.7	1917

57	10.9	1929	16.6	1992	27.5	1930	28.4	1907	32.2	1908	42.5	1918	28.2	1942	18.3	1922	16.4	1959	14.3	1949	13.9	1969	11.8	1980
58	11.4	1933	16.8	1991	27.5	1999	28.7	1928	32.3	1991	42.9	1898	29.1	1978	18.5	1994	16.5	1964	14.5	1957	14.0	1971	11.9	1946
59	11.4	1990	17.2	1898	27.7	1959	28.9	1909	33.0	1906	43.3	1961	29.5	1925	18.6	1942	16.7	1970	14.6	1997	14.1	1916	12.0	1911
60	11.4	1926	17.4	1976	28.3	1992	31.0	1903	33.1	1902	43.3	1994	30.4	1906	19.1	1909	17.2	2009	14.8	1944	14.2	2004	12.1	1968
61	11.5	1918	17.6	1953	28.5	1906	31.3	1992	33.8	2005	43.7	1905	30.7	1957	19.1	1919	17.3	1960	15.0	2004	14.4	1962	12.2	1991
62	11.5	1943	17.6	1959	28.9	1907	31.8	1976	33.9	1927	44.0	1971	31.2	1967	19.7	1952	17.5	1930	15.1	1898	14.5	1974	12.3	1919
63	11.6	1927	17.9	1995	28.9	1900	31.9	2006	34.7	1949	44.6	1960	31.2	1914	19.9	1984	17.5	1979	15.4	1969	14.5	1978	12.4	1959
64	11.6	1919	18.2	1925	29.2	1944	32.2	1923	34.9	1994	45.0	1920	33.1	1900	19.9	2004	18.0	1898	15.8	1930	15.0	1959	12.9	1942
65	11.7	2002	18.5	1937	30.0	2012	32.3	1961	35.0	1962	45.6	1954	35.6	2001	20.6	2008	18.1	1998	15.8	1970	15.0	1930	12.9	1970
66	11.7	1952	18.6	1946	30.2	1958	32.4	1974	35.5	1898	46.0	1991	36.2	1928	20.9	1932	18.9	1983	15.8	1928	15.3	1925	13.3	1904
67	11.9	2005	19.2	1903	30.4	2009	33.6	1975	35.6	1909	46.4	1969	36.3	1994	21.7	1983	19.0	1984	16.1	1909	15.9	1968	13.4	1901
68	12.2	1945	19.4	1927	30.5	1908	34.0	1994	36.3	1917	47.0	1941	36.8	1948	22.4	1945	19.8	1904	16.8	1901	15.9	1970	13.6	1907
69	12.4	2007	19.6	1980	32.5	1922	34.1	1949	36.6	1918	47.6	1957	36.9	2004	22.6	1977	20.1	1906	17.4	1920	15.9	1958	14.0	1971
70	12.5	1992	19.6	1929	32.8	1902	34.2	1905	37.2	1971	47.9	1964	37.4	1973	22.9	1925	20.3	1909	17.9	1906	16.1	1912	14.1	1969
71	13.0	1946	19.8	1948	33.1	1980	35.0	2012	38.9	1950	48.1	1986	37.4	1919	22.9	1960	21.2	1919	17.9	1914	17.3	1929	14.2	1961
72	13.1	1922	19.8	2007	33.3	1932	35.4	1902	39.5	1935	48.7	1975	38.3	1979	23.3	1924	21.6	1938	18.0	1962	17.4	1901	14.9	2001
73	13.2	1898	20.1	1921	33.6	2004	35.4	1985	39.9	1972	49.1	2011	38.4	1949	23.3	1962	21.8	1996	18.4	1987	17.4	1904	15.0	1978
74	13.4	1923	20.9	1945	33.7	1963	42.4	1917	40.0	1998	50.6	1990	39.4	2009	23.5	1990	21.9	1950	18.6	1904	17.9	1981	15.2	1903
75	13.5	1988	20.9	1960	34.9	1910	44.4	2008	40.6	1952	51.1	1928	41.0	1929	23.9	1918	22.0	1908	19.0	1995	18.2	1997	15.5	1900
76	13.7	1996	21.0	1908	35.0	1974	44.7	2009	41.7	1979	52.8	1916	41.2	1903	24.4	1948	22.2	2007	19.0	1912	18.5	1922	15.8	1902
77	14.0	1995	21.1	2001	37.9	1901	46.1	1918	44.4	1961	55.7	1987	44.0	1962	25.3	1979	22.4	1946	20.0	1927	18.5	1995	16.3	1977
78	14.7	1928	21.4	1920	39.7	1951	46.7	1904	45.3	1929	55.8	1965	44.1	1996	25.8	1906	22.4	1910	20.3	1983	18.6	1908	16.3	1975
79	14.8	1942	21.6	1988	40.1	1952	49.0	1951	45.3	1985	56.1	1925	44.8	1987	26.6	1995	23.2	2001	20.8	1911	19.1	1965	16.4	1921
80	14.9	1949	22.0	1926	40.4	1998	49.2	1965	46.8	1942	59.2	2009	45.1	1947	26.7	1968	23.3	1949	21.4	1921	19.2	1946	16.5	1994
81	15.0	1921	22.2	1932	40.5	1936	49.9	1913	47.1	1978	59.8	2005	45.9	1944	26.9	1973	23.5	1962	21.4	1967	19.5	1987	16.6	1999
82	15.0	1901	22.4	1930	40.8	1982	51.0	1906	50.3	1960	60.5	2007	49.1	1969	27.0	1981	24.1	1907	21.4	2009	20.4	1921	16.6	1981
83	15.0	1900	22.6	2012	41.4	1912	51.5	1922	51.0	1930	63.5	1962	51.0	1998	27.9	1928	24.1	1941	21.5	1908	21.1	2011	16.7	1898
84	15.1	1907	23.0	1996	41.7	1997	51.5	1995	51.9	1974	64.2	1944	51.2	1921	28.1	2009	24.4	1978	21.9	1968	21.3	1920	16.7	1941
85	15.1	2006	23.1	1966	42.9	1985	52.7	1915	52.3	1969	65.4	1902	51.5	1995	28.7	1920	24.7	1928	22.5	1900	21.5	1906	17.0	1920
86	15.2	1962	24.0	1911	43.0	2007	53.3	2007	53.5	2009	67.4	1942	51.8	2008	29.2	1917	25.1	2008	22.6	1996	23.3	1983	17.3	1899
87	15.9	1980	24.4	1969	43.5	1915	54.6	1980	54.3	1997	69.1	1907	53.5	1924	29.3	1923	25.8	1944	24.1	1984	23.3	1902	17.3	1983
88	16.3	2000	24.9	1906	45.1	1960	55.1	1947	55.7	2008	72.7	1998	54.4	1999	29.3	1904	27.4	1916	24.2	1919	24.6	1951	17.4	1965
89	16.4	1902	25.1	2008	45.3	1971	55.4	1952	56.1	1959	73.8	1929	54.6	1945	29.6	1900	27.4	1920	24.9	2005	24.7	1915	17.9	1995
90	16.7	1916	25.5	1952	45.5	2011	55.6	1916	56.7	1913	75.1	1949	54.8	1916	30.6	1999	28.2	1900	25.0	1918	24.9	1919	18.2	1913
91	16.7	1960	26.0	2005	46.9	1961	56.1	1901	57.0	1905	75.5	1919	57.9	1922	31.7	1921	28.3	1982	26.0	1946	25.7	2007	18.8	1985
92	17.9	1899	26.6	1987	47.8	1994	62.9	1929	58.2	1916	78.8	1924	58.2	1950	33.0	2007	29.7	1914	27.0	1982	25.9	1903	19.0	1905
93	18.1	1904	26.7	1943	47.9	2008	63.2	2011	58.5	1919	78.9	1899	61.0	1982	34.4	1986	30.6	1972	27.1	1923	26.5	1900	19.0	1931
94	18.4	2009	26.7	1986	49.1	1986	63.6	1962	58.7	1996	80.6	2001	61.3	1992	34.8	1985	31.2	1992	27.6	1959	26.8	1985	19.2	1944
95	18.4	1906	27.7	2009	49.1	1919	64.6	1986	62.0	2011	81.0	1999	62.0	1917	35.0	1908	32.3	1921	27.8	1992	26.8	1941	20.3	1915
96	18.7	2012	27.7	2010	49.6	1965	65.3	2001	64.9	2001	83.3	1935	62.3	1983	35.1	1902	33.8	1942	28.0	1905	27.1	1984	21.2	2008
97	19.3	1993	28.8	1999	50.1	1916	65.9	1945	66.2	1982	84.2	1996	64.6	2011	35.7	1998	33.9	1958	28.1	2011	28.5	1905	21.6	1979
98	19.5	1997	29.6	1994	51.2	1905	69.1	1978	66.5	1899	84.6	1923	64.6	1927	36.4	1958	34.5	1918	28.5	1950	28.8	2010	21.9	1928
99	20.0	1984	29.9	1919	55.1	2001	70.5	1979	66.5	2010	85.0	1993	67.9	1905	36.6	1982	34.9	1987	28.6	1903	29.5	1982	23.4	2009
100	20.3	1999	30.8	1998	55.6	1945	70.5	1920	67.7	1904	85.3	1945	68.3	1899	37.2	1927	35.5	1985	30.0	1926	31.2	1979	23.5	1972
101	20.5	1985	33.3	1985	56.1	1969	72.1	1998	68.0	1915	85.5	1983	68.3	1965	38.0	1996	38.5	1961	30.7	1951	31.4	1972	25.3	2010
102	20.6	1998	34.3	1949	56.4	1929	72.8	2010	70.5	1944	86.4	1943	71.1	1986	38.6	1916	39.7	1902	31.3	1977	31.7	2008	25.8	1987
103	21.3	2011	34.7	1997	61.2	1948	74.3	1944	70.7	1973	91.8	1982	71.7	1958	38.9	1987	40.3	1989	31.4	1965	34.6	2009	26.2	2007
104	21.4	1994	37.2	1915	62.0	1909	76.0	1919	71.9	1903	92.9	1904	72.6	1920	38.9	1905	41.4	1915	33.5	2008	35.1	1993	28.2	1997
105	21.5	1920	38.5	1907	63.2	1984	78.0	1997	75.5	1983	116.9	1995	77.9	1908	40.9	1944	41.6	2011	33.7	2010	35.7	1996	28.4	2011
106	21.5	1903	38.9	2011	64.5	1962	80.0	1999	76.9	1951	126.6	2010	80.8	1923	41.9	1950	45.2	2010	37.7	1961	35.8	1918	28.9	1909
107	22.2	1932	39.2	1993	65.6	1903	82.2	1927	84.7	1920	127.6	1917	81.6	1984	43.0	1899	47.9	1973	38.2	1998	36.1	1931	29.5	1918
108	22.4	2008	39.3	1982	69.2	1987	89.4	1969	85.7	1945	129.4	1967	89.8	1909	46.5	1992	52.0	1965	41.8	1915	36.3	1992	30.2	1996
109	23.6	1986	40.2	1971	73.7	1983	90.8	1912	86.9	1999	130.8	1947	97.7	1907	50.0	2011	54.2	1926	48.7	1902	40.4	1928	31.1	1998
110	25.1	1987	42.2	1916	76.5	1949	93.5	1987	87.6	1986	132.4	2008	100.1	1904	59.0	1951	54.7	1986	49.7	2007	41.1	1977	31.5	1984
111	26.5	1983	42.3	1974	78.1	1978	98.0	1973	87.9	1987	139.7	1951	103.6	2010	62.1	1907	56.5	1905	50.2	1993	43.3	1909	31.8	1982
112	33.8	2010	46.3	1983	85.6	1993	103.5	1983	109.9	1993	156.9	1903	120.7	1902	65.6	1903	63.4	1903	56.3	1941	43.5	1986	32.9	1993
113	37.3	1974	50.7	1984	95.3	2010	106.4	1993	116.2	1984	157.7	1915	178.7	1951	72.3	2010	67.2	1977	65.9	1985	45.2	1961	40.3	1986
114	39.5	1973	52.0	1962	107.8	1973	112.5	1960	120.1	2007	158.8	1908	188.3	1915	113.7	1915	75.8	1951	88.6	1986	64.5	1998	42.8	1992
115	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

Plate 38. Gavins Point to Kansas City Ranking of Average Monthly Flows

Gavins Point to Waverly, Missouri

Ranking of Average Monthly Flows (kcfs)

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	5.8	1956	9.0	1925	8.4	1935	6.1	1911	7.0	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	5.4	2012	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	5.8	1988	4.5	1947	5.3	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	6.0	1991	4.6	1971	5.5	2012	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	6.1	1970	4.7	1976	5.8	1936	6.2	1940	3.5	1945
9	3.6	1935	7.1	1957	11.2	2003	10.9	1938	7.8	1989	12.5	1968	8.5	1966	6.2	1956	5.3	2012	6.0	1947	6.2	1938	3.6	1936
10	3.7	1979	7.4	1989	11.6	1918	12.0	1954	9.9	1901	12.9	1936	8.6	1980	6.3	1976	5.5	1954	6.0	1934	6.3	1923	3.7	1939
11	3.8	1924	7.4	1928	11.7	1967	12.1	1955	9.9	1940	13.6	2006	8.9	2012	6.9	1926	5.9	1911	6.0	1943	6.8	1943	4.3	1956
12	4.0	1913	7.6	1913	11.8	1935	12.2	1957	10.1	1967	14.3	1931	9.0	2002	7.5	1901	6.1	2002	6.5	2003	7.0	1976	4.4	1963
13	4.4	1938	7.9	1910	11.9	1899	13.1	1937	10.4	1941	14.4	1922	9.0	1954	7.6	1933	6.3	1934	6.6	1948	7.0	1955	4.4	1989
14	4.6	1970	9.1	1934	12.0	1943	13.4	1977	10.7	1968	14.5	1912	9.4	1974	7.6	1913	6.4	1990	6.8	1933	7.0	2012	4.5	1914
15	4.9	1955	9.3	1936	12.3	1931	13.5	2003	12.4	1928	15.7	1937	9.4	2006	7.7	1971	6.5	1940	6.8	1955	7.5	1953	4.9	1990
16	4.9	1939	9.5	1947	13.0	1940	13.6	1990	12.5	1937	16.2	1955	9.5	1953	7.9	2003	7.0	1943	7.0	1991	7.8	1945	4.9	1938
17	5.3	1905	9.6	1912	13.2	1926	13.8	1933	12.8	1946	16.9	1910	9.5	1988	7.9	1946	7.0	1937	7.7	1976	7.9	1934	4.9	1934
18	5.4	1948	9.7	1964	13.8	2005	13.9	1908	14.4	1981	17.2	1981	10.1	1956	8.3	1953	7.2	1901	7.7	1971	8.0	1907	5.4	1932
19	5.5	1956	9.7	1935	13.9	1933	14.0	1936	14.8	1931	18.3	1940	10.4	1931	8.5	1947	7.6	1988	7.9	1938	8.0	1954	5.8	1976
20	5.6	1967	9.8	1981	14.2	1941	14.8	1946	14.9	2000	18.5	1976	10.5	1955	8.9	1941	7.8	2000	8.0	1932	8.9	1910	5.9	1929
21	5.7	1944	9.8	1909	14.3	2002	15.0	1941	14.9	1966	18.9	1913	11.0	1912	9.1	1935	7.9	1974	8.1	1966	9.0	1917	6.6	1954
22	5.9	1971	9.9	1967	14.6	1977	15.3	1963	15.2	1924	20.4	1946	11.0	1976	9.2	1989	8.7	1945	8.2	1922	9.0	1932	6.9	1935
23	6.0	1915	10.0	1923	14.6	2006	15.5	1931	15.7	1923	20.8	1958	11.4	1963	9.2	2002	8.9	1980	8.2	1990	9.0	1966	6.9	1953
24	6.4	1991	10.0	1944	14.8	1954	15.7	1972	15.9	1948	21.5	1972	12.3	1989	9.3	1980	9.0	2003	8.4	1975	9.1	1980	7.0	1910
25	6.5	1930	10.2	1900	14.9	1991	15.7	1967	16.9	1954	22.0	1992	12.6	1946	9.8	1931	9.2	1912	8.5	1980	9.2	1948	7.1	1950
26	6.5	1963	10.8	2003	15.6	1917	15.7	2000	17.0	1988	22.0	1963	12.7	1930	9.9	1963	9.3	1966	8.5	1988	9.6	1926	7.3	1958
27	6.5	1959	10.8	1972	16.9	1911	16.0	1968	17.6	1977	22.0	2012	13.2	1941	9.9	1974	10.0	1968	8.7	1935	9.8	1949	7.6	1966
28	6.6	2004	11.0	1924	17.8	1989	16.1	1950	18.4	1907	22.3	2002	13.5	1939	10.1	1964	10.0	1981	8.9	1952	10.2	1947	7.6	1933
29	6.6	1972	11.1	1977	18.4	1976	16.4	2004	19.1	1932	22.4	1966	13.5	1991	10.1	1975	10.4	1929	9.0	1963	10.3	1963	7.9	1922
30	6.8	1934	11.6	1990	19.0	1970	16.5	1899	19.8	1943	23.0	1948	13.7	1968	11.2	1914	10.5	1963	9.0	1964	10.3	2006	8.0	1925
31	7.1	1961	11.7	2004	19.1	1898	16.8	1911	20.6	1933	23.0	2003	14.4	1977	11.4	1912	10.6	1948	9.3	1981	10.7	1988	8.0	1964
32	7.2	1958	11.7	1899	19.5	1955	17.4	1966	21.7	1963	24.2	1939	15.0	1910	11.5	2000	10.6	1936	9.3	2000	10.7	1950	8.4	1949
33	7.3	1950	12.3	1905	19.6	2000	17.5	1943	21.8	1936	24.9	2000	15.5	1898	11.5	2006	10.8	1913	9.5	1945	10.8	2002	8.6	1908
34	7.4	1968	12.6	2006	19.6	1996	17.9	1930	22.6	1957	25.3	1900	17.5	1985	12.4	1949	12.7	1975	9.6	1974	11.2	2005	8.7	1948
35	7.6	1953	12.6	1931	20.3	1938	18.2	1926	22.8	1980	25.6	1938	17.9	1913	12.6	1939	12.8	1922	10.0	2002	11.2	1990	9.1	2000
36	7.6	2003	13.3	1979	21.1	1927	18.4	1971	22.9	1992	26.6	1953	18.1	1972	12.7	1957	13.3	1917	10.3	1917	11.3	1991	9.6	1988
37	7.7	1909	13.4	1941	21.2	1966	19.1	1939	23.5	1975	26.7	1906	18.5	1975	13.2	1967	13.6	2006	11.0	1907	11.4	1944	9.6	1926
38	7.9	1947	13.5	1901	21.4	1953	19.3	1964	23.7	1958	27.9	1921	19.0	1937	13.3	1966	13.6	1957	11.2	1931	11.5	2003	9.7	1923
39	8.2	1951	13.7	1902	21.6	1988	19.7	1942	23.8	1910	28.3	1978	19.1	1938	13.4	1938	13.7	2005	11.4	1989	11.5	1911	10.0	2012
40	8.3	1941	14.2	1950	22.3	1923	19.9	2002	24.4	1964	29.0	1979	19.3	2003	13.6	1943	13.9	1952	11.7	1899	11.8	1899	10.3	1960
41	8.5	1914	14.2	1954	23.3	1972	20.3	1953	25.5	1970	30.5	1950	19.7	1932	13.8	1940	14.1	1933	11.8	1960	12.0	1942	10.3	1916
42	8.8	1978	14.5	1975	23.4	1914	20.5	1921	25.8	1900	30.7	1959	20.4	1964	13.9	1965	14.5	1932	12.1	1954	12.3	1964	10.4	2003
43	8.9	1969	14.7	1968	23.8	1913	20.8	1988	26.6	2003	31.5	1952	21.1	1918	14.2	1930	14.6	1967	12.2	1916	12.4	1913	10.4	1957
44	9.1	1908	14.9	1922	24.3	1990	22.0	1914	26.7	1953	32.2	1985	21.5	2005	14.5	1937	14.8	1935	12.3	1972	12.5	1898	10.5	2002
45	9.2	1964	15.0	1958	24.3	1947	22.5	1982	27.0	1947	32.6	1977	21.7	2000	15.0	1969	15.0	1927	12.5	1910	12.5	1927	10.6	1967
46	9.5	1989	15.1	1970	24.4	1904	22.9	1948	27.7	2006	33.2	1927	22.3	1981	15.9	1954	15.3	1994	12.7	1978	12.6	1952	10.8	1952
47	9.7	1931	15.3	1965	24.7	1921	23.0	1996	28.2	1922	33.7	1930	22.5	1971	16.0	1929	15.5	1931	12.8	1929	12.7	1975	11.0	1962
48	9.8	1981	15.4	1918	25.6	1920	23.0	1970	29.3	1938	38.2	1909	23.0	2007	16.3	1961	15.9	1925	13.4	1942	12.9	1989	11.1	1947
49	10.1	1917	15.5	1904	25.6	1924	23.4	1958	30.5	1912	38.7	1974	24.3	1959	16.6	1978	15.9	1924	13.5	1999	12.9	1957	11.3	2006
50	10.1	1911	15.6	1963	25.7	1946	23.4	1932	30.8	1965	39.9	1914	25.1	1943	16.7	1972	16.0	1959	13.5	1949	13.1	1935	11.3	1906
51	10.5	1975	15.7	1942	26.2	1939	24.7	1991	30.8	1976	40.2	1980	26.6	1961	17.1	1997	16.3	1899	13.7	1913	13.2	1960	11.4	1930
52	10.7	1982	16.4	2002	26.3	1975	25.2	2005	32.9	1921	41.3	1970	27.2	1935	17.1	1959	16.3	1969	13.9	1925	14.0	1969	11.6	1968
53	10.9	1966	16.6	1955	26.8	1950	25.5	1924	33.2	1906	41.7	2004	27.5	1960	17.7	1910	16.6	1923	14.0	1958	14.0	1999	11.7	2005
54	11.4	1929	16.6	1951	27.2	1959	25.7	1959	33.2	2012	42.1	1932	28.1	1952	17.9	2001	16.9	1997	14.2	1979	14.1	1971	11.7	1974
55	11.5	1933	16.7	1961	27.3	1937	26.8	1900	33.2	1902	42.6	1973	28.5	1990	18.2	1898	17.2	1964	14.4	1957	14.1	1916	12.1	1917
56	11.6	1976	16.9	1991	27.5	1942	27.4	1910	33.3	1908	42.6	1918	28.6	1942	18.6	1922	17.2	1995	14.6	1944	14.2	2000	12.2	1991

57	11.6	1945	17.0	1953	27.8	1930	28.5	1907	33.7	1991	43.3	1898	29.6	1925	18.9	1984	17.6	1930	14.8	2006	14.3	1967	12.5	1959
58	11.9	1990	17.2	1959	29.0	1944	29.7	1909	34.0	1949	43.5	1997	29.8	1997	19.0	1942	17.6	1999	14.8	1994	14.4	1962	12.6	1919
59	11.9	1918	17.4	1992	29.1	1907	30.9	1928	34.4	2004	43.9	1905	30.5	1978	19.4	1909	17.7	1960	15.5	1898	14.5	2001	12.7	1911
60	11.9	1919	17.5	2000	29.3	1906	31.9	1976	36.6	1909	44.1	1971	30.7	1957	19.4	1919	17.8	1979	15.9	1930	14.6	1959	13.0	2004
61	12.0	2001	17.6	1976	29.7	1900	31.9	1903	36.8	2005	44.8	1960	30.8	1906	19.8	2005	18.0	1984	16.3	1909	15.0	1978	13.2	1946
62	12.0	1943	17.6	1898	30.1	1958	32.5	1923	36.8	1962	45.1	1961	31.3	1914	20.0	1994	18.3	1970	16.3	1928	15.1	1930	13.2	1980
63	12.1	1927	18.7	1946	30.1	1995	32.8	1974	36.9	1918	45.1	1954	32.3	1967	20.4	1952	18.7	1898	16.9	1901	15.7	1925	13.3	1969
64	12.1	1926	18.8	1925	30.3	1992	33.2	2006	36.9	1917	45.1	1986	33.3	1900	21.6	1932	18.7	2009	17.1	2004	15.7	1958	13.4	1970
65	12.2	1965	19.8	1903	31.0	1908	33.3	1949	37.3	1971	45.1	1920	36.9	1948	21.7	1983	18.7	2004	17.2	1970	15.8	1974	13.6	1901
66	12.3	1992	20.0	1929	31.8	1999	34.6	1905	37.3	1898	45.9	1994	37.5	1928	22.4	1945	18.9	1983	17.7	1920	16.0	1970	13.6	1904
67	13.0	2007	20.0	1927	33.1	1902	35.0	1985	37.4	1927	47.3	1941	37.7	1949	22.8	2004	20.4	1906	18.1	1969	16.1	1968	14.0	1942
68	13.4	1922	20.0	2007	33.9	1922	35.3	2012	37.5	1994	47.6	1957	37.8	2001	23.1	1925	20.6	1904	18.1	1997	16.3	1912	14.0	1951
69	13.7	1898	20.3	1921	34.0	1963	35.4	1902	38.7	2002	48.1	1991	38.0	1919	23.2	1960	20.8	1909	18.2	1906	16.6	1994	14.2	1907
70	13.8	1996	20.5	1995	34.1	1932	35.6	1975	39.2	1950	49.5	1975	39.0	2004	23.4	1962	21.5	1919	18.4	2001	16.9	2004	15.6	1903
71	13.8	2002	20.6	1980	34.2	2012	36.4	1992	40.6	1972	50.7	1964	39.3	1994	23.7	1977	22.0	1950	18.6	1914	17.1	1981	15.7	1961
72	13.8	1923	20.9	1945	34.9	1910	37.1	1961	42.1	1990	50.9	1969	39.4	1979	23.8	1924	22.0	1938	18.7	1987	17.5	1901	15.8	1971
73	13.8	1946	21.0	1948	35.3	1980	41.0	1994	42.2	1979	51.6	2011	40.1	1973	23.9	1918	22.1	1946	18.8	1962	17.6	1904	15.9	1900
74	14.4	1952	21.1	1960	35.6	2009	42.5	1917	43.1	1998	53.0	1928	41.6	1903	24.0	2008	22.6	1949	19.1	1912	17.8	1929	15.9	1975
75	14.7	1988	21.6	1920	35.8	2004	46.4	1918	43.2	1935	55.0	1916	42.3	2009	24.4	1948	22.7	1908	19.7	1904	18.9	1922	16.1	1977
76	14.9	1942	21.6	1908	38.0	1974	48.3	1904	44.2	1952	55.9	1987	42.5	1929	25.0	1990	23.3	1910	19.7	1995	19.0	1946	16.5	1978
77	14.9	1980	22.2	1988	38.5	1901	50.0	2008	44.9	1985	56.2	1925	44.6	1962	25.7	1979	23.4	2007	20.3	1983	19.0	1908	16.6	2001
78	15.0	1928	22.3	1932	40.8	1951	50.8	1965	47.6	1929	58.4	1990	44.9	1987	26.1	1906	24.0	1962	21.2	1911	19.6	1965	16.7	1921
79	15.1	2005	22.9	1937	41.4	1982	50.9	1913	47.8	1942	58.4	1965	45.7	1944	26.1	1981	24.2	1941	21.7	1921	19.6	1987	17.0	1902
80	15.2	1921	23.3	1926	41.6	1936	51.6	1906	48.3	1961	63.4	2007	47.5	1947	26.9	1973	24.4	1907	21.8	1908	20.6	1921	17.1	1898
81	15.2	1900	23.4	1996	42.5	1985	51.7	2009	49.4	1978	64.0	1944	52.0	1996	27.1	1968	24.5	1996	21.9	1927	20.7	1995	17.2	1920
82	15.4	1901	23.6	1930	42.9	1912	52.2	1951	50.9	1960	64.1	2009	52.1	1921	28.5	1928	25.0	1978	22.2	1968	21.1	1997	17.3	1983
83	15.5	1949	23.9	1966	43.6	1952	52.9	1915	51.4	1930	65.0	1962	53.4	1969	29.0	1920	25.6	1944	22.9	1900	21.4	1920	17.4	1985
84	15.8	2006	24.0	2012	44.4	1915	55.8	1995	54.0	1969	65.4	2005	54.6	1945	29.4	1923	25.9	1998	23.1	1967	21.8	1906	17.4	1999
85	15.9	1995	24.5	1911	44.7	1998	55.8	1922	55.6	1959	65.6	1902	55.2	1916	29.6	1917	26.8	1928	23.1	1984	22.9	2011	17.5	1899
86	16.5	1902	24.9	1987	45.4	1971	56.1	1980	56.8	1913	68.0	1942	55.3	1924	29.7	1900	27.0	2001	23.3	2009	23.6	1983	17.8	1941
87	17.1	2000	25.4	1969	46.1	1986	56.8	1916	57.5	1905	69.6	1907	55.6	2008	29.8	1904	27.6	1916	24.8	1919	23.7	1902	18.0	1965
88	17.5	1907	25.7	1906	46.4	1960	56.8	1901	58.4	2009	74.3	1949	56.6	1998	30.3	1995	28.3	1900	25.0	1918	24.9	1915	18.2	1981
89	18.2	1962	25.8	2001	46.7	2007	57.2	2007	59.3	1916	76.0	1929	58.4	1950	30.7	2009	28.4	1920	25.6	2005	25.7	1919	18.7	1913
90	18.2	1960	26.6	1943	47.5	1997	57.7	1947	60.0	1919	76.9	1919	58.5	1922	31.4	1986	28.7	1982	25.7	1946	26.1	2007	19.5	1994
91	18.3	1899	27.9	1986	48.8	2011	61.7	1986	60.2	2008	77.3	1998	59.4	1999	32.2	1921	30.7	1972	26.4	1996	26.1	1984	19.6	1905
92	18.4	1904	28.2	1952	49.5	1919	62.3	1952	61.3	1974	79.4	1899	59.7	1995	32.6	1999	30.7	2008	27.0	1982	26.1	1951	20.5	1931
93	18.9	2009	29.3	2009	49.7	1994	63.3	1929	63.6	1997	80.3	1924	62.2	1917	33.0	2007	30.9	1914	27.1	1959	26.2	1903	20.8	1915
94	19.1	1916	29.7	2010	50.5	1916	64.3	1962	66.2	2011	85.3	1923	63.1	1982	34.4	1985	33.3	1992	27.3	1923	26.4	1985	20.9	1995
95	19.8	1906	30.0	1919	51.1	1961	66.9	1945	67.4	1899	85.3	1945	63.1	1983	35.4	1908	33.7	1958	28.7	1950	26.9	1900	21.4	1944
96	20.0	1997	30.4	2005	51.3	2008	67.0	2011	67.4	1982	86.7	1983	65.0	1927	35.6	1902	34.4	1921	29.0	1905	27.0	1941	21.6	1979
97	20.3	1984	32.3	1999	51.8	1905	71.0	2001	68.6	1915	87.6	2001	66.4	2011	36.2	1958	34.5	1942	29.1	1903	29.2	1905	22.2	2008
98	21.0	2012	32.5	1994	53.3	1965	71.5	1978	69.1	1996	88.7	1935	68.0	1992	37.4	1927	34.8	1918	29.3	2011	29.5	1982	23.3	1928
99	21.7	1920	32.6	1985	56.3	1945	71.7	1979	69.1	2001	90.5	1999	68.1	1986	38.7	1916	35.0	1987	30.2	1992	30.0	2010	25.0	2009
100	21.9	1903	32.9	1998	57.2	1969	71.9	1920	69.4	1904	90.7	1943	68.5	1905	38.9	1987	35.1	1985	31.5	1951	31.3	1979	25.3	1987
101	22.3	1999	33.0	2008	58.7	1929	74.3	1944	70.3	1944	93.6	1993	68.6	1899	39.1	1998	41.3	1902	31.8	1926	31.9	1972	26.2	1972
102	22.3	2011	36.0	1949	59.4	2001	76.2	1919	72.2	1903	94.8	1982	71.5	1958	39.2	1982	43.2	2011	32.4	1977	33.0	2008	26.5	2010
103	22.4	1986	38.3	1915	61.7	1948	77.5	2010	74.8	2010	95.0	1904	72.6	1920	39.9	1905	44.2	1915	32.7	1965	36.0	1918	28.4	2007
104	22.8	1998	38.9	1907	62.3	1984	79.2	1998	75.1	1973	96.1	1996	76.1	1965	40.7	1944	44.2	1989	35.1	2008	36.4	2009	29.7	1997
105	23.6	1932	39.6	1971	62.3	1909	85.8	1997	77.5	1983	128.4	1917	79.2	1908	41.0	1996	45.0	1961	36.3	2010	37.7	1931	29.8	1918
106	23.6	1994	41.7	2011	66.7	1962	87.8	1927	78.3	1951	134.2	1947	80.7	1984	42.4	1950	50.1	1973	39.9	1961	40.0	1996	29.8	1909
107	24.0	1985	42.3	1997	66.8	1903	91.3	1969	84.6	1986	134.3	1967	81.0	1923	43.2	1899	51.7	1986	42.1	1915	40.2	1993	30.4	2011
108	24.3	1987	43.1	1993	70.3	1987	92.3	1999	85.4	1920	137.0	1995	91.8	1909	48.0	1992	52.3	2010	49.5	1902	40.6	1986	30.6	1984
109	24.8	1993	43.7	1916	74.2	1983	92.5	1912	86.0	1945	137.4	2010	97.8	1907	53.7	2011	57.3	1965	49.5	2007	42.5	1977	34.1	1982
110	25.0	2008	44.3	1983	75.8	1949	94.8	1987	88.0	1987	140.8	2008	101.9	1904	60.9	1951	58.1	1926	50.3	1998	43.1	1992	34.7	1996
111	26.3	1983	46.5	1974	79.8	1978	104.1	1973	102.4	1999	145.1	1951	107.8	2010	62.3	1907	59.8	1905	55.2	1993	43.7	1909	36.5	1993
112	36.4	2010	48.9	1984	88.4	1993	108.8	1983	115.2	1984	158.9	1903	121.4	1902	65.7	1903	64.7	1903	56.5	1941	44.2	1928	36.6	1998
113	38.7	1974	51.4	1982	99.4	2010	113.8	1960	117.5	1993	159.9	1908	189.7	1915	75.7	2010	74.5	1977	65.5	1985	51.6	1961	39.1	1986
114	43.5	1973	56.2	1962	114.1	1973	114.6	1993	126.3	2007	160.8	1915	197.5	1951	115.2	1915	80.2	1951	85.7	1986	67.2	1973	48.4	1973
115	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

Plate 39. Gavins Point to Waverly Ranking of Average Monthly Flows

Gavins Point to Boonville, Missouri

Ranking of Average Monthly Flows (kcfs)

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	6.1	1956	9.2	1928	9.6	1934	5.6	1934	6.8	1956	5.1	1936	3.7	1936	4.0	1953	3.7	1956	5.2	1956	3.2	1937
3	3.0	1957	6.4	1914	9.7	1956	11.4	1989	6.2	1956	8.5	1933	5.4	1934	4.0	1934	5.1	1955	4.4	1937	5.2	1914	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	6.0	2012	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	6.8	1955	5.5	1976	4.9	1953	5.5	1937	4.1	1939
6	4.4	1979	7.7	1938	11.3	1981	13.9	1954	9.2	1989	12.7	1901	9.3	1940	7.1	1988	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	7.3	1976	5.9	1971	6.8	1948	7.3	1943	4.9	1936
8	5.2	1938	9.0	1917	12.6	2003	14.9	1955	11.3	1901	14.4	1936	10.1	1970	8.0	1901	6.0	1947	6.9	2012	7.3	1940	4.9	1963
9	5.7	1939	9.1	1989	12.8	1968	15.2	1977	11.8	1941	16.3	1968	10.1	1980	8.1	1913	6.2	1954	7.4	1943	7.3	1976	4.9	1940
10	5.8	1956	9.3	1913	15.1	1967	15.5	2003	12.8	1925	16.3	1922	10.5	2012	8.1	1991	6.6	2012	7.9	2003	7.3	1938	5.3	1945
11	6.1	1944	9.3	1934	15.9	1931	15.9	1936	13.3	1955	16.6	1926	10.5	1988	8.5	2003	7.6	2002	8.2	1976	7.6	1955	6.3	1938
12	6.2	1924	9.4	1978	16.1	1943	16.5	2000	14.6	1940	17.8	2006	10.6	2006	8.9	1956	7.7	1940	8.2	1991	8.3	2012	6.8	1924
13	6.2	1937	10.4	1964	16.3	1941	16.5	1957	16.4	1967	19.4	1913	10.8	1954	9.4	1953	7.7	1901	9.1	1932	8.3	1953	7.0	1954
14	6.5	1963	11.2	1947	16.3	2002	16.8	1898	17.7	2000	19.8	1937	11.6	2002	9.4	1971	8.3	1990	9.1	1975	9.2	1954	7.3	1929
15	6.7	1905	11.8	1900	16.6	1917	17.5	1963	17.7	1988	20.9	1955	11.7	1931	9.8	1947	8.3	1911	9.2	1963	9.4	1945	7.4	1914
16	7.1	1934	11.9	1967	16.7	1954	18.2	1937	18.6	1968	21.4	1940	12.1	1966	10.2	1941	8.4	1937	9.2	1988	9.9	1924	7.7	1976
17	7.1	1959	12.0	2003	16.8	2006	18.6	1938	20.0	1923	23.4	1963	12.4	1976	10.2	1964	8.4	1988	9.3	1933	10.4	1948	7.8	1953
18	7.2	1967	12.1	1981	16.9	1977	18.8	1933	20.1	1931	23.4	1931	12.8	1963	10.3	1926	9.0	2000	9.3	1971	10.7	1966	7.9	1950
19	7.3	1913	13.3	1944	17.4	1933	19.0	1925	20.9	1977	23.7	2012	13.2	1956	10.5	1963	9.1	1943	9.5	1964	10.7	1932	8.0	1989
20	7.8	1930	13.3	1910	17.9	1925	19.0	1941	21.7	1954	24.1	1976	13.3	1912	10.7	1933	9.8	1966	9.6	1934	10.7	1963	8.3	1990
21	8.0	1925	13.4	1931	18.5	2005	20.0	1899	22.2	1948	24.3	1992	13.4	1989	11.1	2002	10.2	1912	9.6	1938	11.1	1949	8.4	1933
22	8.1	1961	13.5	1977	18.8	1940	20.5	1943	22.2	1966	24.4	1912	13.4	1955	11.2	1975	10.6	1963	9.8	1966	11.3	1923	8.9	1935
23	8.2	1948	13.5	2006	20.1	1989	20.9	1930	23.1	1932	24.7	1972	13.4	1953	11.2	1935	10.6	1974	9.9	1980	11.4	1910	8.9	1948
24	8.6	1953	13.8	1954	20.2	1935	20.9	1971	24.6	1980	26.0	1946	14.7	1930	11.6	1989	10.6	1934	10.0	1952	11.5	2006	8.9	1958
25	8.9	2003	13.9	1899	20.5	2000	20.9	1990	24.9	1924	26.7	1906	15.2	1974	11.9	1931	11.6	1948	10.0	1990	11.6	1980	9.7	1966
26	9.2	1951	13.9	1905	22.0	1970	21.0	1972	25.4	1936	26.8	1900	15.4	1977	11.9	1912	11.6	1968	10.1	1935	11.9	2002	9.9	1927
27	9.6	1970	14.2	1912	22.6	1996	21.4	1950	26.0	1992	28.7	2003	16.4	1941	12.1	1974	11.7	1913	10.8	2000	12.0	1917	9.9	1910
28	9.6	1958	14.6	1972	22.7	1899	22.1	2004	26.2	1937	29.8	1953	17.4	1939	12.1	1946	13.2	1929	10.9	1974	12.2	1988	10.7	1964
29	9.7	1964	14.8	1923	23.3	1938	22.4	1946	26.4	1964	31.5	1958	18.3	1913	12.6	2006	14.4	1980	11.2	1924	12.5	1947	10.9	1960
30	9.9	1931	14.8	1902	24.7	1911	23.2	1966	27.0	1928	31.9	1921	18.3	1946	12.7	1914	14.4	2006	11.5	1989	12.5	1907	11.4	1988
31	10.0	1955	15.5	2004	25.0	1926	23.9	1911	27.4	1946	32.3	1938	18.4	1968	13.2	1970	14.6	1945	11.7	1955	12.8	1950	11.7	1916
32	10.3	1935	16.0	1922	25.2	1991	24.8	1996	27.9	1957	33.3	2002	18.6	1985	14.3	1949	14.6	2003	11.8	1936	13.4	1964	12.0	2002
33	10.3	1981	16.2	1901	25.4	1966	25.3	1931	28.1	1963	33.7	1977	19.8	1898	14.4	1980	14.9	1936	12.0	2002	13.4	1913	12.2	2012
34	10.3	1989	17.1	1990	25.7	1988	26.5	1988	28.2	1900	34.3	2000	20.3	1991	14.8	2000	15.0	1975	13.0	1981	13.6	2005	12.5	2000
35	10.4	1914	17.6	1935	26.5	1955	26.5	1948	32.3	1933	34.4	1910	20.5	1938	15.1	1930	15.5	2005	13.1	1960	13.6	2003	12.6	1962
36	10.6	1947	17.9	1936	26.8	1914	27.1	1958	32.9	1958	36.1	1966	20.5	1972	15.2	1957	15.8	1981	13.3	1917	13.6	1944	12.7	2005
37	10.7	1915	18.0	1963	27.5	1976	28.8	2002	33.3	1907	37.5	1948	21.6	1918	15.3	1938	16.1	1952	13.4	1978	13.7	1990	13.0	1949
38	11.0	1917	18.1	1918	28.0	1972	29.8	1900	33.5	2006	38.1	1978	21.7	1975	16.2	1966	16.3	1932	13.5	1972	14.0	1975	13.0	1930
39	11.0	1972	18.9	1970	29.4	1953	30.4	1908	33.9	1975	38.7	1930	22.1	2003	16.3	1967	16.8	1957	13.7	1916	14.3	1899	13.0	1952
40	11.2	2004	19.0	2000	31.1	1930	30.5	1932	34.9	1981	38.7	1939	22.5	1910	16.8	1943	16.9	1933	14.1	1922	14.4	1989	13.6	1922
41	11.2	1976	19.1	1941	31.7	1923	30.5	1968	35.1	1906	38.8	1981	22.8	1964	16.9	1937	17.0	1935	14.1	1945	14.5	1952	14.0	1932
42	11.5	1968	19.3	1924	31.8	1904	30.5	1907	35.2	1902	39.4	1952	23.4	2005	17.7	1969	17.0	1967	14.7	1913	15.2	1916	14.7	2006
43	12.1	1991	19.3	1976	32.0	1924	31.5	1942	35.3	1965	40.1	1959	23.8	1932	17.9	1939	17.1	1994	15.0	1979	15.4	1991	15.0	1901
44	12.4	1909	19.7	1904	32.3	1950	32.2	1964	35.6	1947	40.4	1914	24.6	1971	18.1	1954	17.2	1917	15.1	1899	15.6	1911	15.6	1934
45	12.4	1911	19.7	1968	32.5	1921	33.4	1910	35.9	1922	41.2	1979	24.7	1937	18.2	1965	17.3	1927	15.5	1907	15.8	1930	15.6	1968
46	12.7	1978	20.2	1953	32.5	1907	34.1	1924	36.2	2003	42.0	1985	25.8	2000	19.0	1972	17.9	1997	15.6	2006	15.8	1959	15.9	1969
47	13.0	1971	20.3	2002	33.8	1995	34.1	1939	37.9	1949	43.6	1918	26.6	1959	19.2	1997	18.9	1930	15.6	1994	16.0	2000	15.9	1917
48	13.2	1966	20.5	1909	34.3	1898	34.2	2006	39.2	1953	44.6	1980	29.3	1943	20.8	1942	19.1	1922	16.3	1942	16.0	2001	15.9	1919
49	13.3	1945	20.9	1958	35.4	1910	34.3	2005	40.3	1918	45.2	1909	30.5	1925	20.9	1929	20.4	1995	16.3	1999	16.1	1999	16.4	1967
50	14.2	1919	22.2	1961	35.6	1913	34.6	1914	41.6	1962	45.9	1905	31.2	1952	21.0	1961	20.5	1979	17.0	1930	16.4	1957	16.5	1904
51	14.5	1990	22.6	1898	37.0	1902	34.9	1982	41.9	1938	46.1	1971	31.9	1997	21.2	1910	20.6	1960	17.4	1954	16.4	1942	16.5	1959
52	14.7	1908	22.9	1928	37.1	1947	35.4	1902	42.5	1910	46.6	1920	32.3	1914	21.9	1978	20.6	1899	17.7	1944	16.5	1962	16.7	1947
53	15.1	1918	22.9	1980	37.9	1920	35.6	1953	43.2	1976	47.1	1950	32.5	2007	22.0	1940	21.0	1923	17.9	1901	16.8	1960	16.9	1974
54	15.2	1941	23.2	1946	38.8	1939	36.0	1923	43.3	1971	48.1	1961	34.1	1906	22.1	1994	21.3	1959	18.0	1929	17.0	1898	17.2	1946
55	15.3	2002	23.6	1921	39.3	1932	37.0	1921	44.1	2012	49.3	1898	34.3	1957	23.1	1898	22.2	1925	18.8	1987	17.4	1971	17.8	1991
56	15.5	1996	23.9	1979	39.3	1990	37.8	1974	44.6	1917	50.0	1986	35.2	1900	23.3	1909	22.2	1983	18.9	1949	17.6	1927	17.9	1957

57	15.7	1929	24.2	1920	39.6	1992	39.3	1949	46.1	1950	50.5	1997	39.6	1961	23.3	1919	22.6	1984	19.0	1958	18.0	1935	18.5	1906
58	15.7	2007	24.3	1965	39.7	1980	39.6	1905	46.6	2004	50.9	1932	39.6	1990	23.5	1922	22.8	1906	19.6	1912	18.2	1934	18.5	2001
59	16.1	1980	24.5	1929	39.9	1908	39.6	1959	46.9	2005	51.2	1994	40.2	1935	23.7	1945	23.1	1931	19.7	1909	18.3	1912	18.5	1908
60	16.3	1927	24.8	1991	40.6	1927	39.7	1967	47.3	1912	51.3	1957	40.8	1994	24.3	2001	23.2	1924	19.8	1957	18.4	1926	18.6	1978
61	16.3	2006	25.1	1992	41.1	1975	40.6	1926	47.3	1908	53.2	1954	42.4	1948	24.4	1983	23.4	1938	20.5	1931	18.5	1901	18.8	1911
62	16.4	1933	25.4	1950	41.7	1937	40.8	1909	47.3	1921	54.6	1991	42.9	1978	24.4	1918	23.8	1964	20.6	1995	19.7	1969	18.9	1926
63	16.6	1922	25.9	1995	42.0	1946	41.8	1985	48.3	1985	54.9	1927	44.1	1960	24.5	1984	24.0	1946	21.6	2001	20.1	1904	19.1	1920
64	16.7	1943	26.8	1925	42.5	1900	43.4	1903	49.1	1909	55.9	1960	44.2	1919	24.7	1952	24.4	1919	21.8	1898	20.6	1968	19.3	1951
65	16.8	1950	27.1	1966	43.9	1958	43.5	1917	52.1	1970	56.4	1941	44.6	1949	25.0	1948	24.5	1950	22.0	2004	22.0	1995	19.3	1903
66	16.8	1992	27.2	1955	44.1	1906	44.3	1970	53.2	1972	56.4	1973	44.8	1903	25.3	1959	24.6	2009	22.1	1997	22.1	1994	19.4	1907
67	16.9	1969	27.2	1932	44.2	1959	46.6	1991	55.2	1979	56.5	1970	45.9	1942	25.4	2005	25.0	1898	22.1	1920	22.3	1925	19.4	2003
68	17.0	1988	27.2	1960	44.4	1999	49.1	2012	55.5	1952	57.7	1925	46.9	1967	26.6	1977	25.0	1999	23.6	1906	22.6	1965	19.5	1921
69	17.0	1921	27.5	1927	45.0	1944	49.7	1976	57.3	1943	58.1	1987	47.2	1979	26.7	1960	25.2	1909	24.0	1968	23.2	1987	19.6	1923
70	17.1	1900	27.5	1996	46.3	1942	49.9	1918	57.4	1998	60.1	1975	47.5	1962	27.0	1925	25.7	1969	24.1	1928	23.5	1978	19.9	1899
71	17.2	1982	27.8	1903	46.6	1963	54.9	1915	57.8	1913	64.2	2004	48.3	1944	27.1	1962	26.1	2007	24.2	1983	23.6	1921	20.0	1999
72	17.3	2001	28.1	1951	47.8	1901	56.4	1992	57.9	1930	65.0	1964	49.1	2004	30.0	1906	26.4	1962	24.3	1910	23.6	1981	20.0	1980
73	17.5	1923	28.5	1948	49.0	2012	58.8	1975	58.2	1994	65.4	1974	50.4	1928	30.8	1923	27.3	1907	24.4	1962	23.7	1997	20.1	1900
74	17.5	1928	28.5	1987	50.3	1974	59.2	1961	59.4	1898	67.0	2011	51.0	1973	31.1	1900	27.4	1904	24.9	1925	24.0	1920	20.5	2004
75	17.7	2000	28.8	1908	51.3	1951	60.1	1906	62.7	1991	67.5	1902	51.7	2009	31.2	1979	27.5	1949	25.5	1918	24.1	1970	20.7	1979
76	17.7	1975	28.9	1975	51.6	1936	60.9	1928	63.3	1905	67.9	1965	51.9	2001	31.6	1924	27.6	1941	26.2	1908	24.1	1946	20.8	1925
77	17.9	1902	29.1	1945	53.1	2004	63.3	1980	63.3	1942	70.5	1944	56.9	1929	31.9	1920	28.2	1996	26.6	1921	24.1	1958	21.1	1975
78	18.4	1898	29.4	1959	54.0	1960	63.9	1913	66.8	1969	72.8	1969	58.9	1916	32.8	1990	28.5	1908	27.6	1911	25.0	1974	21.2	1970
79	18.5	1926	29.7	2007	56.1	1986	66.6	1994	67.0	1961	74.7	1962	59.3	1987	33.0	1973	28.9	1944	28.1	2005	25.0	1967	21.4	1981
80	18.6	1901	29.8	1911	56.4	1919	66.8	1995	67.1	1959	75.0	1907	60.6	1921	33.3	1968	29.8	1900	28.5	1984	25.5	1922	21.9	1898
81	20.5	1952	29.9	2012	56.7	2007	67.3	1901	73.2	1916	77.0	1928	61.7	1981	34.4	1917	29.8	2004	28.8	1900	25.7	1929	22.1	1965
82	20.8	1995	31.6	1988	56.9	1916	67.4	1962	75.1	1929	79.0	2007	62.1	1945	34.8	1981	30.0	1916	29.1	1946	26.1	1908	22.3	1995
83	21.0	1899	32.2	1919	57.0	1922	69.3	1929	75.3	1915	81.3	2005	63.1	1996	35.7	1932	30.6	2001	29.2	1996	26.6	2011	22.5	1961
84	21.1	1942	34.0	1952	58.6	1915	69.9	1904	75.5	1903	81.8	1916	63.2	1950	36.8	1928	31.1	1910	29.8	1950	26.8	1906	22.9	1913
85	21.2	1904	34.0	1942	58.7	1971	71.0	1951	76.8	1997	84.8	1899	64.1	1917	37.5	2007	34.0	1972	29.8	1914	28.4	2007	23.4	1977
86	21.4	1997	35.0	1943	60.8	1994	71.2	2007	78.0	1899	86.8	1990	64.1	1922	37.6	1904	34.5	1978	30.7	1923	29.5	1915	23.6	1994
87	21.9	1949	35.2	2009	62.2	1905	71.3	1986	78.6	2008	90.5	1983	65.7	1983	37.9	2004	36.2	1958	32.3	1967	30.3	1902	25.3	1905
88	22.8	2012	36.4	1906	62.3	1997	71.6	1952	78.8	1919	93.2	1923	69.1	1927	38.2	1986	36.7	1918	32.4	1992	31.4	2004	25.6	1915
89	23.5	1920	36.9	1930	66.5	1982	73.4	1916	79.3	1927	93.3	1919	70.6	2011	39.3	1985	37.1	1920	32.9	2011	32.3	1903	26.2	1942
90	24.7	2011	38.1	1986	67.1	1969	75.9	1965	79.9	1978	93.5	1949	70.9	1947	39.5	1927	37.8	1987	33.0	1970	32.4	1900	26.7	1941
91	25.2	1903	38.8	2010	67.9	1952	77.5	2009	80.1	1960	95.1	1942	71.9	1899	39.5	1921	38.0	1985	35.1	1919	34.8	2010	27.2	1983
92	25.4	1994	39.2	1926	68.0	2009	79.3	1919	81.6	1990	97.7	2009	72.2	1924	40.2	1916	39.2	1942	35.9	1982	34.9	1979	27.8	1985
93	26.1	1984	40.3	1969	68.0	1912	88.9	1979	86.1	1935	99.8	1924	73.1	1920	41.3	1908	41.1	1998	36.5	1951	35.0	1951	27.8	1944
94	27.4	1962	42.3	1994	68.2	1909	88.9	2011	87.3	2011	102.4	1929	73.8	1982	42.4	1902	42.0	1914	37.3	1904	38.5	1918	28.0	1971
95	28.0	1965	43.3	1907	69.6	2011	89.0	2008	87.7	2002	103.1	1998	74.7	1905	42.8	1999	46.0	1928	37.5	1965	38.9	1919	28.8	1902
96	28.2	2009	46.1	1998	70.3	1985	90.6	2001	88.3	1974	105.9	1999	75.8	1998	44.0	2008	47.3	1970	37.6	1969	39.1	1982	29.6	2010
97	28.8	1987	46.8	2005	73.5	1945	91.5	1920	90.0	1904	120.4	1904	77.4	1999	44.2	1995	47.6	1992	38.4	1903	40.0	1983	29.9	1972
98	29.3	1986	48.7	1999	74.8	1998	94.2	1945	90.7	1951	120.8	1993	78.9	1992	45.1	1899	47.6	1982	39.6	1959	40.3	1905	31.5	2007
99	30.8	1999	49.0	2008	74.9	1965	97.2	1947	91.9	2001	122.6	1945	81.8	1986	46.0	1996	48.6	2011	44.6	1905	41.4	1972	32.6	1918
100	31.3	2008	52.1	1915	75.5	2008	102.0	1987	93.6	1920	127.4	1943	82.2	1995	46.3	1944	51.4	1989	46.5	2008	41.7	1984	35.2	2008
101	31.6	1960	53.4	2001	80.2	1961	103.6	2010	95.0	1987	130.8	1996	83.4	1923	48.4	1987	52.8	1921	46.5	2009	42.8	1996	36.4	2009
102	31.7	1985	53.5	1949	82.3	1948	108.1	1978	95.3	1944	138.5	1982	91.9	1908	49.0	1998	55.4	1902	46.9	2010	44.0	1941	36.6	2011
103	31.8	2005	55.2	1993	86.5	1987	114.7	1969	97.6	1982	138.9	1917	92.9	1965	50.8	2009	58.7	1973	47.5	1915	44.7	2008	36.6	1931
104	31.9	1906	55.4	1971	87.0	1903	114.9	1998	103.2	1983	146.9	2001	94.2	1984	51.9	1950	68.4	1915	49.4	1977	48.5	1986	36.8	1928
105	34.8	1983	55.6	1937	88.1	1984	115.0	1922	106.7	2009	146.9	1935	99.2	1907	52.9	1982	71.8	1986	53.6	2007	49.1	1993	38.2	1996
106	35.1	1998	55.8	1984	88.9	1949	116.1	1912	110.7	1986	154.8	1995	101.2	2008	54.5	1905	76.3	1903	54.3	1927	50.3	1909	38.3	1909
107	38.4	1907	57.3	2011	90.0	2001	116.7	1997	113.2	1973	164.9	1951	105.6	1969	56.8	1958	79.9	2008	55.3	1961	57.6	1985	39.9	1997
108	39.6	1993	58.7	1983	91.8	1983	123.0	1944	113.4	1945	173.3	1908	111.4	1958	57.9	1992	82.7	1977	61.0	1926	58.8	2009	40.1	1984
109	40.0	1946	61.6	1974	93.3	1962	126.0	1999	114.5	1996	176.5	1967	111.6	1909	60.0	2011	82.7	1961	63.2	1902	63.4	1977	41.1	1987
110	40.6	1916	62.2	1916	98.7	1929	147.7	1993	135.8	2010	182.8	1903	119.3	1904	64.7	1907	86.8	1965	76.3	1993	70.8	1992	42.2	1993
111	46.4	1932	68.5	1985	113.4	1978	154.8	1960	140.3	1999	183.3	2010	129.0	1902	66.1	1903	89.0	2010	77.2	1941	74.4	1931	48.4	1998
112	53.9	2010	69.4	1997	118.6	1993	156.5	1983	142.4	1984	186.7	1984	133.7	2010	75.2	1951	89.3	1905	87.9	1998	74.7	1973	57.8	1986
113	62.4	1910	81.5	1973	132.9	2010	164.6	1927	144.3	1993	198.1	2008	203.3	1915	86.8	2010	92.9	1926	99.0	1985	100.5	1961	66.7	1973
114	63.9	1974	86.9	1962	163.8	1979	165.1	1984	173.9	2007	198.7	1915	249.7	1951	136.6	1915	93.9	1951	136.6	1986	101.2	1998	75.5	1982
115	66.7	1973	93.2	1982	168.9	1973	185.7	1973	222.6	1995	229.2	1947	378.0	1993	190.1	1993	145.7	1993	155.8	1973	106.6	1928	79.2	1992

Plate 40. Gavins Point to Boonville Ranking of Average Monthly Flows

Gavins Point to Hermann, Missouri
Ranking of Average Monthly Flows (kcfs)

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	5.2	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	5.6	1936	7.4	1976	5.7	1939	6.4	1956	5.7	1939
3	6.4	1954	11.9	1978	14.8	1918	16.9	1934	10.5	1934	12.8	1956	8.0	1934	7.8	2012	7.5	1953	6.4	1937	8.1	1937	7.4	1937
4	6.6	1957	12.0	1964	14.8	1964	19.6	1981	13.4	1956	13.9	1988	8.4	1901	8.6	1934	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	14.6	1901	15.0	1901	12.6	1940	9.1	1901	8.3	1955	8.0	1953	10.0	1940	7.7	1963
6	9.0	1963	13.7	1914	18.3	1954	21.5	2000	15.6	1911	18.0	1936	12.8	1954	9.2	1913	8.5	2012	8.7	2012	10.3	1976	8.1	1989
7	9.5	1939	13.9	1917	18.8	1917	22.6	1963	16.5	1989	18.3	1933	13.1	1988	9.4	1955	8.8	1901	9.5	1963	10.4	1933	8.5	1956
8	9.8	1956	14.8	1957	19.4	1941	23.0	1936	20.9	1955	20.6	1913	13.6	2012	9.7	1976	9.5	1991	10.7	2003	10.5	2012	8.9	1940
9	10.0	1905	15.4	1954	20.8	1957	23.8	1940	20.9	1941	20.9	1922	14.4	1933	11.1	1991	10.3	1939	10.9	1980	10.5	1955	9.3	1943
10	10.2	1912	15.5	1934	21.9	1934	23.8	2003	23.6	2000	21.6	1926	14.4	2006	11.1	1988	11.0	1963	11.2	1964	11.1	1953	10.0	1945
11	10.8	1967	15.5	1900	22.0	1931	24.4	1930	24.9	1925	23.6	2006	15.1	1970	11.3	1956	11.7	1971	11.4	1966	12.1	1966	10.1	1953
12	10.9	1979	16.1	2003	22.2	2006	28.0	1899	25.0	1940	26.7	1906	15.1	1931	12.7	2003	11.7	2002	11.9	1948	12.5	1963	10.5	1976
13	10.9	1934	16.3	1981	22.3	2003	28.7	1971	25.2	1977	27.0	1989	15.3	1980	12.8	1941	12.0	1988	11.9	1952	12.7	1980	11.1	1929
14	11.6	1938	17.3	1902	22.4	1928	29.8	1955	25.4	1932	28.1	2012	15.3	1963	12.9	1964	12.1	1947	12.1	1991	13.3	1954	11.8	1938
15	11.7	1924	17.3	2006	25.2	1977	30.0	1989	27.8	1954	28.2	1931	17.4	1930	12.9	1963	12.4	1937	12.4	1932	13.3	1943	12.7	1936
16	11.8	1951	17.6	1905	28.4	1940	30.7	1931	29.3	1936	29.1	1972	17.8	1926	13.0	1912	12.5	1912	12.7	1976	13.7	2006	13.5	1933
17	11.8	1964	17.7	1947	28.9	2002	31.0	1935	29.5	1980	29.4	1963	17.9	1953	13.7	1953	12.7	2000	12.9	1988	14.0	2002	13.6	1966
18	11.8	2003	18.5	1922	29.1	1943	34.0	1943	30.0	1923	30.3	1900	18.5	1956	14.1	1971	12.8	1943	13.1	1947	14.3	1932	13.6	1950
19	11.8	1961	18.5	1931	29.2	1996	35.1	1907	32.1	1931	31.6	1955	18.7	1989	14.2	2006	13.2	1940	13.4	2000	14.5	1938	13.8	2000
20	12.1	1931	18.7	1967	30.7	1968	35.4	1902	33.2	1939	33.1	1940	18.8	1912	15.8	1931	13.5	1966	13.5	2002	15.7	1913	14.0	1964
21	12.4	1944	18.8	1899	31.5	1933	36.2	1898	33.7	1948	33.4	1976	19.4	1913	15.8	1933	14.0	1913	13.7	1971	16.0	2005	14.0	1914
22	12.5	1981	19.2	1977	33.3	1991	36.6	1900	33.7	1900	33.6	1992	19.8	1966	16.0	1914	14.1	1911	13.7	1938	16.1	1952	14.4	2005
23	13.2	1917	20.6	1963	33.4	1970	36.7	1932	34.3	1988	34.4	1953	21.0	1976	16.5	1980	15.3	1990	14.2	1943	16.7	1964	14.4	1954
24	13.2	1953	21.5	1933	34.0	2005	36.8	1933	35.6	1992	34.5	1946	21.6	1955	16.7	1930	15.4	1929	14.7	1935	16.8	1945	14.8	2002
25	14.8	1914	21.5	1972	34.5	2000	37.4	1937	37.1	1967	36.9	1968	21.7	2002	17.0	1935	16.3	2006	15.3	1960	17.1	1910	15.0	1962
26	15.0	1913	22.3	1901	34.5	1914	37.6	2006	38.6	1964	40.6	2003	21.8	1974	17.1	1957	16.9	1980	16.2	1978	17.3	2000	15.0	1916
27	15.2	1959	22.3	1944	36.5	1910	37.8	1946	39.5	1906	41.0	1921	22.7	1918	17.3	1947	18.0	1957	16.6	1989	17.4	1916	15.1	2012
28	15.3	1958	23.4	1989	37.8	1925	39.6	1950	39.6	1902	41.6	1914	23.5	1972	17.5	1970	18.3	1968	16.7	1933	18.1	2001	15.3	1958
29	16.3	1978	23.9	1939	38.4	1972	39.9	1911	40.5	1928	43.7	2000	23.8	1941	17.9	2002	18.5	1948	16.9	1913	18.2	1990	16.4	1948
30	16.5	1970	24.2	1918	38.7	1930	40.7	1925	41.5	1965	44.2	1966	23.8	1939	19.5	1966	19.3	1952	17.0	1916	18.8	1930	16.5	1910
31	18.0	1911	24.6	1970	40.1	1926	42.4	1972	43.1	1966	45.0	1958	24.0	1946	19.7	1974	20.2	1967	17.1	1979	18.9	1944	16.8	1952
32	18.4	2006	24.8	1961	40.3	1907	43.0	1948	45.4	1968	45.9	1918	25.6	2003	19.9	1954	20.3	1932	17.6	1990	18.9	1917	17.9	1924
33	18.6	1976	24.9	1912	40.5	1966	44.0	1923	46.7	1963	46.4	1959	25.9	1968	20.1	1938	21.4	1936	17.8	1974	19.2	1949	18.3	1901
34	18.9	1990	25.5	1910	41.8	1989	44.2	1996	47.0	1924	46.7	1930	26.6	1991	21.8	1975	21.9	1981	17.8	2006	19.6	1957	19.0	1990
35	19.0	1948	25.8	1923	42.4	1911	44.3	2002	48.0	1918	46.8	1952	26.6	1938	22.4	1937	22.1	1934	17.9	1934	19.8	1999	19.7	1960
36	19.2	1947	26.1	2004	42.8	1953	45.8	1917	49.0	1958	47.2	1912	29.7	1898	23.3	1972	22.5	2003	18.4	1981	19.8	2003	20.7	1930
37	19.7	1919	26.1	1938	44.5	1938	46.5	1982	49.2	1962	49.0	1939	29.8	1975	23.3	1967	22.6	1933	18.7	1994	19.8	1962	21.0	2006
38	20.0	1968	26.3	1929	45.9	1902	46.8	2004	51.5	1971	50.0	1920	29.9	1971	23.4	1939	22.8	1935	18.9	1975	19.8	1947	22.0	1978
39	20.0	2001	27.4	1953	46.4	1924	47.1	1910	53.0	2006	50.4	1978	30.2	1964	23.5	1929	23.2	1959	19.2	1972	19.9	1989	22.1	1947
40	20.3	1945	27.4	1976	47.0	1995	47.2	2005	53.2	2005	50.5	1905	31.6	1937	23.7	1949	23.4	1960	19.7	1930	20.0	1899	22.9	1980
41	21.2	1980	28.2	1936	47.1	1899	47.8	1957	53.6	1922	53.6	1932	32.1	1959	24.4	2000	24.1	1983	19.9	1917	20.2	1924	23.1	1904
42	21.2	1902	29.1	1904	48.4	1904	48.9	1959	55.2	1975	54.1	1980	32.7	1925	24.8	1965	24.3	1930	20.1	1901	20.3	1948	23.5	1920
43	21.2	1925	30.1	1920	48.7	1932	50.5	1958	55.8	2003	54.3	1977	32.9	2005	25.1	1943	25.8	1964	20.7	1912	20.8	1901	23.7	1919
44	21.4	1921	30.1	1958	50.2	1921	50.8	1968	56.1	1946	55.6	1979	34.5	1914	25.5	1918	26.0	1999	20.8	1957	21.4	1950	24.4	1969
45	21.5	1900	30.4	2000	50.7	1976	51.0	1905	56.8	1949	56.2	1961	35.3	2000	26.0	1997	26.1	1994	20.9	1987	22.3	1960	24.5	1935
46	21.7	1915	30.9	1921	51.4	1950	51.9	1966	58.5	1953	56.9	1971	35.9	1952	26.2	1926	26.3	1917	21.2	1999	22.6	1975	24.5	1988
47	21.8	2002	31.4	1965	52.1	1992	53.1	1967	59.5	1937	59.5	1954	38.0	1985	27.3	1940	26.5	1997	21.4	1929	22.6	1988	24.7	1917
48	22.1	1930	31.7	1996	52.7	1923	53.5	1924	60.0	1913	60.9	1960	38.5	1932	27.3	1969	26.7	1984	22.2	1936	22.8	1923	25.2	1959
49	22.6	1996	32.4	1935	54.7	1935	54.7	1938	62.3	1917	61.1	1925	39.6	1900	27.6	1984	27.6	1938	22.9	1899	22.8	1907	25.3	1932
50	22.8	1918	33.3	1941	56.3	1955	55.3	1953	63.4	1981	61.2	1909	40.2	1910	27.7	1989	27.9	1946	24.2	1958	22.9	1912	25.4	1995
51	23.4	1909	33.9	1898	56.7	1947	57.9	1918	65.1	1976	63.0	1898	41.8	1906	28.3	1994	27.9	1979	24.5	1924	23.8	1971	25.4	1899
52	23.9	1955	34.5	1980	57.9	1936	58.8	1964	65.5	1947	64.8	1986	42.1	1977	28.4	1961	28.5	1906	24.9	1928	23.8	1959	26.2	1921
53	24.4	1922	35.1	1948	58.8	1939	59.5	1915	66.6	1930	66.4	1941	43.1	1997	28.9	1959	29.1	1995	25.4	1907	23.9	1991	26.3	1957
54	24.6	1989	36.4	1990	59.7	1946	59.9	1974	66.9	2012	66.9	1991	43.6	1943	28.9	1910	29.4	2005	25.6	1954	23.9	1936	26.8	1970
55	25.5	1966	37.1	1919	59.8	1963	60.6	1942	67.6	1907	68.3	1987	47.8	1960	29.1	1978	29.7	1931	25.7	1995	24.7	1911	26.8	1922
56	25.8	2007	38.2	1924	59.8	1908	61.3	1991	68.9	1952	69.4	1937	48.2	1978	29.5	1962	29.8	1974	25.7	2004	25.8	1904	27.6	1965

57	25.9	1992	38.8	1991	60.0	1980	62.6	1949	73.1	1957	72.1	1902	51.3	1962	29.8	1977	30.9	1899	26.1	1955	26.2	1965	27.7	1979
58	26.1	1972	40.1	1992	61.0	1988	63.1	1914	73.9	2004	74.0	2004	51.4	1957	29.8	1983	31.2	1923	26.3	1942	26.6	1997	28.1	2001
59	26.4	1923	40.4	1960	61.6	1959	65.9	1909	76.5	1905	74.3	1910	52.5	1903	30.1	1942	31.3	1919	26.6	1918	27.2	1978	28.2	1903
60	26.4	1901	40.8	2002	62.1	1937	66.2	1990	77.2	1933	74.4	1938	53.4	1994	30.6	1945	31.4	1975	26.9	1997	27.3	1898	28.5	1999
61	26.8	2000	42.0	1911	62.2	1913	67.0	1926	77.9	1909	74.6	2002	53.8	1961	30.9	1960	31.5	1927	27.0	1931	28.2	1934	30.1	1900
62	27.7	1899	42.2	1932	65.6	1920	68.0	1941	78.5	1985	76.5	1975	54.1	1944	32.1	1909	32.1	1962	27.3	1922	29.7	1920	30.6	1949
63	27.7	1926	42.4	2012	65.7	1942	68.2	1908	78.8	1959	78.3	1957	58.5	1919	32.2	1919	33.2	1900	27.4	1909	30.4	1995	31.5	1907
64	27.8	1904	42.5	1928	68.6	1898	69.6	1903	78.8	1972	79.3	1973	60.6	2004	32.5	1952	33.3	2007	29.3	1983	30.4	1921	31.9	1977
65	27.9	1920	43.0	1945	68.9	1901	69.8	1939	79.1	1979	79.5	1944	62.4	1973	33.9	2001	33.3	2001	30.1	2001	30.5	2011	32.7	1991
66	28.0	1908	43.5	2007	69.0	2007	71.3	1976	79.4	1908	81.4	1948	63.9	1990	34.1	1898	34.0	1922	31.7	1946	30.6	1958	32.9	1913
67	28.5	1982	45.0	1909	71.2	1916	74.7	1921	80.5	1921	82.5	1962	64.1	1979	34.2	1923	34.2	1907	31.7	1944	30.8	1942	32.9	1898
68	29.9	2012	45.2	1925	71.2	1900	75.2	1988	81.6	1998	85.9	1981	64.7	1935	34.5	1900	34.8	2009	32.1	1920	31.1	2007	33.2	1911
69	30.2	1898	45.3	1908	71.9	1919	77.6	1992	83.3	1903	86.3	1950	66.6	2009	34.5	1922	34.9	2004	33.0	1968	32.3	1929	33.5	1946
70	31.1	1927	45.4	1968	72.8	1986	79.5	1906	83.7	1950	87.6	1907	67.8	1916	34.8	2005	35.4	1909	34.1	2005	33.1	1987	34.3	1925
71	31.9	1935	46.2	1903	74.2	2012	82.3	1962	85.7	1910	93.2	1964	68.5	1917	35.5	1979	35.8	1916	34.6	1962	35.5	1969	34.4	2007
72	32.5	1942	47.2	1943	76.3	1999	82.7	2012	86.0	1912	94.7	1997	69.3	1949	35.9	1925	37.0	1925	35.8	1906	36.5	1981	34.7	1975
73	32.9	1903	47.4	1950	77.2	1960	86.1	1919	88.4	1969	95.1	2011	69.7	1987	38.5	1920	37.8	1945	36.1	2011	38.3	1906	34.7	1981
74	33.6	1941	48.1	1946	77.3	1906	86.5	1980	89.4	1991	97.4	1899	71.9	2011	38.8	1906	39.8	1898	36.1	1908	38.8	2010	35.0	2003
75	33.8	2011	48.2	1979	79.3	1971	87.6	1928	90.8	1915	97.5	1965	72.6	1942	39.4	1932	40.3	1924	36.2	1898	39.4	1979	35.1	1906
76	33.9	1929	48.2	1927	81.5	1909	90.0	1970	92.8	1938	98.6	1927	74.2	1920	40.1	1973	40.4	1996	36.4	1945	39.5	1970	35.9	2010
77	34.1	1984	48.9	1926	82.7	2009	91.3	1901	94.2	1997	99.4	1974	74.4	2001	42.0	1946	41.0	1987	37.1	1950	39.8	1915	36.1	1961
78	34.6	2004	49.3	1995	83.4	1927	92.3	1986	97.2	1942	99.7	1994	75.2	1928	42.4	1986	41.3	1918	37.6	1921	40.0	1935	36.7	1915
79	34.8	1991	50.6	1955	85.0	1990	93.6	1913	97.5	2001	99.8	1970	75.9	1983	43.5	1916	41.3	1978	38.0	1984	40.3	1922	36.8	1974
80	34.8	1971	50.8	1959	85.4	1905	95.8	1995	102.3	1899	107.5	2005	77.4	1922	43.7	1999	41.8	1972	38.5	1923	42.1	1908	37.3	1934
81	35.8	1965	50.9	1951	86.4	1944	97.0	1975	105.3	1916	109.5	2007	79.2	1927	45.0	1990	42.2	1908	39.2	1925	42.5	1927	38.3	1944
82	36.2	1933	51.4	1966	88.4	1958	98.7	1961	106.1	1987	110.9	1969	79.6	1899	45.5	1917	43.4	1904	41.4	1992	44.2	1918	38.5	1905
83	36.6	1928	52.2	2009	88.7	1994	99.1	1951	108.0	1982	111.5	1923	80.5	1921	47.9	1948	43.4	1969	41.9	1911	45.0	1968	39.2	1918
84	37.3	1997	53.1	1907	89.5	1951	100.2	2007	109.2	1970	120.3	1985	80.5	1967	48.5	1968	44.2	1944	42.1	1900	45.0	1900	39.4	1927
85	39.2	1952	56.8	1987	90.7	1915	103.7	1985	110.3	1898	128.4	1928	81.1	1996	49.3	1924	44.6	1941	42.1	1967	45.2	1902	40.0	1951
86	39.7	1937	59.1	1988	92.0	1982	106.1	1952	111.6	1951	131.0	1919	83.5	2007	49.5	1899	46.7	1949	42.4	1982	45.5	1925	41.2	1926
87	41.1	2008	59.6	1942	92.8	1969	111.1	1916	112.4	1920	132.2	1998	88.1	1950	49.8	2004	46.9	1985	44.4	1996	46.0	1903	41.7	1908
88	41.3	1962	60.9	1906	92.9	1965	111.4	2001	114.1	1974	135.8	2009	88.4	1948	53.3	1928	47.4	1950	49.6	2010	47.7	1926	42.9	1923
89	42.3	1975	63.9	1952	92.9	1975	116.7	2009	115.1	1978	136.9	1949	88.4	1945	53.6	1987	49.3	1910	50.8	1910	48.5	1982	44.4	2008
90	42.8	1960	64.4	1998	93.9	2004	118.6	2011	117.4	1935	141.4	1983	88.9	1923	54.4	1985	49.8	2011	51.3	1949	50.9	1967	44.7	1941
91	44.0	1987	65.1	1930	100.8	1983	118.7	1965	118.4	1927	143.5	1916	89.0	1905	54.5	1908	50.3	1958	52.5	1965	53.3	1994	45.2	1968
92	44.0	2009	69.6	2008	102.0	1961	119.0	1904	118.5	1960	144.3	1924	94.7	1986	55.3	2009	52.8	1928	55.3	1914	57.0	2008	45.6	1994
93	44.4	1994	70.6	1994	103.0	1952	121.4	1929	121.9	1919	145.0	1999	95.5	1929	55.3	1904	54.6	1942	57.0	1970	61.6	2004	46.4	2011
94	45.3	1986	72.3	1983	106.9	1974	123.2	1979	128.9	1986	145.6	1942	98.4	1999	56.1	1921	57.6	1920	57.1	2007	65.2	1909	47.2	1967
95	49.0	1988	76.0	1984	107.5	2001	136.0	1920	129.1	2011	151.2	1929	100.5	1998	57.9	1902	57.9	1998	58.3	1919	65.5	1905	48.0	1972
96	50.8	1995	76.2	1971	109.0	1922	138.0	1987	130.0	2008	154.8	1996	102.1	1982	57.9	1981	58.7	1992	59.5	1903	67.0	1984	52.3	2004
97	50.9	1943	76.2	2001	110.6	1948	141.0	2010	137.6	1904	157.7	1990	102.5	1907	58.1	1996	63.0	1989	59.6	1915	68.6	1919	54.3	1983
98	53.6	1999	76.5	2011	110.9	1997	147.1	1978	138.3	1994	162.9	1917	103.0	1947	58.7	2008	66.0	1982	61.6	1951	71.0	1983	54.4	1931
99	53.6	1969	76.9	1986	121.6	1929	149.6	1997	148.6	1944	163.3	1993	104.5	1992	60.3	2007	66.7	1973	61.7	2008	71.4	1974	55.6	1971
100	53.7	1983	78.4	2010	121.9	2011	154.7	1994	157.8	1990	178.6	1904	109.5	1965	61.4	2011	68.3	1914	62.3	1977	72.3	1946	56.4	1902
101	59.6	1949	82.5	1969	124.4	1912	156.4	1999	159.6	2009	183.4	1982	112.0	1924	64.0	1944	69.0	1970	65.4	1959	76.9	1951	56.8	1928
102	60.7	1906	83.5	1993	125.9	1949	157.6	1969	161.6	2002	185.1	1945	118.3	1984	66.0	1998	79.1	1986	67.8	1961	83.0	1996	57.9	1997
103	63.1	1950	84.0	1915	126.9	1998	159.2	2008	164.7	1996	186.7	2001	121.6	1981	67.2	1903	88.5	1902	77.1	1904	85.6	1931	58.2	1909
104	64.3	1998	86.1	1975	127.6	1987	162.9	1998	165.4	1945	187.8	1943	121.8	1908	70.2	1907	94.2	1977	80.0	1905	86.4	1972	59.1	2009
105	66.0	1932	87.1	1937	130.9	1945	169.8	1912	168.1	1973	195.7	1984	137.1	1995	71.4	1995	96.2	1921	94.2	1902	90.8	1977	60.8	1984
106	67.4	1946	93.1	2005	132.3	1903	175.2	1944	175.1	1961	196.3	1951	146.7	1902	72.7	1982	103.8	1903	94.2	1969	98.1	1973	61.5	1942
107	72.4	1985	95.1	1974	134.1	2008	179.5	1947	176.6	1983	204.2	1908	149.6	2008	77.7	1992	106.3	1926	96.9	2009	104.7	1941	66.1	1996
108	77.9	1910	96.1	1999	134.2	1962	181.5	1960	177.0	2010	210.6	1967	154.3	1969	82.2	1950	108.8	2010	101.3	1927	104.8	1986	72.6	1998
109	87.3	2010	103.5	1997	145.7	1993	183.5	1993	177.8	1993	213.6	2010	156.0	2010	87.7	1905	112.2	1961	123.5	1985	105.7	1993	74.5	1993
110	88.1	1907	104.8	1916	148.3	1985	192.8	1945	183.0	1984	221.1	2008	158.0	1909	91.4	2010	120.1	2008	132.4	1926	110.2	2009	79.4	1987
111	91.5	1916	105.7	1949	151.8	1984	207.7	1983	186.1	1999	237.7	1903	160.2	1904	92.5	1951	125.5	1915	140.1	1998	112.2	1992	94.7	1985
112	94.2	1993	110.4	1985	162.1	1978	238.4	1984	191.1	2007	244.6	1995	164.0	1958	94.1	1958	133.6	1965	140.9	1993	116.5	1928	97.0	1986
113	100.3	1974	111.0	1962	166.2	2010	249.8	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
114	104.8	1973	115.7	1973	185.5	1979	292.3	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
115	106.0	2005	123.3	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

Plate 41. Gavins Point to Hermann Ranking of Average Monthly Flows

Gavins Point to St. Louis, Missouri

Ranking of Average Monthly Flows (kcfs)

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	57.6	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	37.3	1940	59.4	1934	86.6	1902	78.9	1911	44.6	1988	40.4	1936	37.1	1988	35.0	1901	34.6	1939	37.0	1939	34.3	1976
3	33.8	1914	44.7	1964	66.5	1956	87.1	1934	88.5	1931	62.0	1911	43.1	1911	40.3	1934	36.0	2012	34.8	1976	40.0	1910	34.3	1989
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	39.9	1988	38.2	1940	43.0	1933	35.9	1917
5	40.7	1931	49.4	1954	71.2	1954	94.2	2000	92.3	1940	80.5	1900	59.1	1989	41.4	1964	42.1	1939	38.6	1937	43.0	1937	37.0	1914
6	41.3	1917	50.2	1956	83.0	1957	103.0	1911	92.5	1914	83.1	1956	63.3	1940	43.1	1941	42.3	1955	38.7	1963	43.2	1963	37.4	1937
7	41.8	1934	50.9	1902	83.9	1940	103.2	1930	95.1	1925	87.6	1936	66.2	2006	43.5	2012	42.4	1956	38.9	1948	43.7	1956	38.4	1963
8	42.7	1911	52.3	1914	85.0	2003	110.7	1940	96.9	1977	91.2	1977	67.9	1901	48.2	1931	42.8	1913	39.3	1953	44.7	1917	39.7	1912
9	42.9	1956	52.3	1901	88.5	1917	113.6	2003	103.8	1980	97.6	1931	68.0	1976	49.0	1901	45.2	1963	39.6	1988	44.9	1914	39.8	1939
10	44.6	1963	53.5	1931	88.8	1914	119.9	1954	103.9	1988	99.8	1992	74.1	1963	49.1	1911	45.2	1937	41.8	2012	45.4	1953	43.3	1933
11	44.9	1954	55.0	1923	90.1	1968	122.6	1956	108.6	1958	104.6	1976	74.3	1980	53.9	1914	45.9	1971	42.3	2003	47.5	2012	45.0	1955
12	46.6	1959	56.1	1913	94.6	1941	131.2	1925	109.6	1901	105.2	1989	75.2	1931	54.8	1971	49.0	1948	43.6	1917	49.0	1930	45.8	1916
13	47.0	1957	57.2	2003	98.1	1902	133.5	1963	115.8	1956	105.3	1940	76.2	1964	56.3	1913	52.3	1966	45.4	1952	50.4	1955	46.3	1936
14	48.1	1915	57.9	1963	99.3	1981	135.3	1899	116.1	1902	107.6	1963	77.9	1913	57.0	1930	53.9	1933	47.8	1964	50.9	1901	47.1	1956
15	49.6	1909	59.2	1977	101.0	1977	135.4	1958	117.1	2000	113.8	2006	78.3	1970	57.4	1955	54.8	1953	47.9	1932	51.2	1940	47.9	1904
16	49.7	1961	61.0	1978	103.9	1918	138.7	1968	123.0	1918	125.8	1913	82.8	1912	57.5	2006	55.0	1940	48.1	1989	51.6	1950	48.1	1958
17	50.5	1913	62.8	1957	112.2	1967	140.0	1914	123.4	1955	128.1	1921	84.9	1977	57.7	1933	55.4	1917	48.7	1918	52.0	1932	49.6	1950
18	52.2	1936	65.4	1899	113.9	1933	148.7	1989	123.6	1926	128.1	1948	85.0	1933	60.1	1989	58.1	1934	49.0	1913	52.6	1966	50.2	1948
19	52.4	1979	66.1	1989	114.9	1911	150.8	1981	128.2	1941	129.1	1914	85.2	1956	61.0	1910	59.8	2003	49.2	1901	54.1	1913	50.6	1964
20	53.2	2003	67.6	1900	114.9	1921	151.1	1918	132.8	1900	132.5	1955	85.2	1918	62.0	1963	59.9	1930	49.9	1947	54.2	1949	51.0	1930
21	53.8	1938	70.5	1922	115.2	2006	154.5	1990	134.0	1932	133.9	1922	86.0	2012	62.7	2003	61.1	1967	50.2	1966	54.7	1948	52.0	1929
22	53.9	1902	71.2	1972	115.6	1928	160.0	1915	134.4	1949	134.5	2012	86.0	1941	63.3	1918	62.1	1947	52.4	1933	55.6	1964	52.2	2012
23	54.5	1951	73.3	1958	116.8	1989	162.0	1910	134.7	1923	135.2	1925	86.4	1900	66.3	1937	62.3	1929	52.5	1899	56.6	1989	52.3	1901
24	54.6	1900	73.4	1944	119.4	2000	164.4	1937	148.7	1939	138.1	1926	89.9	1910	68.5	1966	63.3	1932	52.8	1916	56.8	1952	52.4	1953
25	55.4	1923	73.6	1918	127.1	1996	168.7	1964	152.3	1968	140.9	1959	90.5	1966	69.3	1947	64.8	1916	53.0	1908	58.8	1916	53.7	1903
26	55.7	1981	73.9	1936	129.5	1970	168.9	1932	152.6	1930	141.6	1961	90.6	1955	69.7	1975	65.4	1911	53.7	1935	61.3	1907	56.8	1962
27	55.8	1944	75.8	1920	130.4	1924	169.0	1955	155.4	1928	143.1	1972	93.1	1926	70.9	1949	65.5	2000	55.5	1930	61.7	1999	58.3	1922
28	56.5	1967	76.0	1981	131.3	1923	174.2	1924	157.1	1936	143.2	1987	94.9	1930	74.3	1965	67.3	1931	56.1	1971	64.3	2006	58.7	1943
29	56.7	1918	76.8	1961	133.9	2005	174.2	1936	157.6	1924	145.1	1933	101.9	1937	74.5	2005	68.7	1954	56.3	1922	65.1	1944	60.0	1899
30	57.6	1953	77.1	2000	138.3	1926	175.8	1900	157.7	1964	146.4	1930	103.9	1959	74.7	1956	68.7	2006	56.9	1958	65.6	1988	60.6	2000
31	58.0	1990	78.6	1921	142.1	1907	176.0	1957	159.3	1963	147.0	1958	107.2	1939	77.0	1954	68.7	1899	57.0	1975	66.3	1947	60.8	1940
32	58.4	1908	80.6	2006	144.2	2002	179.3	1923	160.7	1946	147.0	1939	109.9	1971	77.1	1912	69.9	1922	57.8	1910	68.3	1899	61.9	1907
33	58.5	1945	82.2	1947	144.6	1932	181.3	1996	162.8	1948	147.2	1932	110.3	1985	78.9	1967	70.3	2005	58.8	1974	69.2	1962	63.1	1898
34	60.1	1921	82.6	1948	145.8	1947	186.6	1905	166.3	1915	148.7	1953	113.7	2005	81.2	1940	70.4	1957	60.4	1943	69.6	2005	63.6	1952
35	60.1	1901	82.6	2004	147.3	1925	187.0	2012	169.4	1971	150.7	1910	115.6	1972	83.2	1959	71.8	1936	61.0	1960	71.8	1943	64.5	1988
36	61.5	1970	83.3	1970	153.2	1960	188.3	2004	172.7	1967	157.0	1968	120.8	1932	83.4	1957	72.0	1935	61.7	2000	71.9	1908	64.6	1920
37	62.8	2000	84.2	1933	153.2	1938	189.0	1908	177.7	2005	157.6	1971	121.2	1898	85.8	1922	73.3	1952	63.1	1957	72.3	1923	65.1	1960
38	63.8	1899	87.6	1980	154.1	1930	191.0	1935	181.5	1953	158.9	1923	122.7	1961	86.0	1898	75.1	1908	65.7	1909	73.0	1975	65.2	1938
39	63.9	1924	88.0	1967	159.7	1953	191.1	1907	184.7	1954	159.9	1906	124.5	1925	86.4	1923	75.4	1943	66.1	1987	74.0	1980	66.1	2005
40	64.0	1919	89.5	1904	160.2	1980	192.2	1898	184.9	1913	160.3	1964	124.8	1923	87.8	1900	75.4	1991	67.6	1979	74.0	1920	66.6	1954
41	64.8	1939	89.6	1941	161.0	1899	192.4	1921	187.7	1992	169.0	1952	128.0	1987	88.2	1960	75.6	1923	67.8	2006	75.4	1957	67.0	1908
42	66.5	1948	92.4	1905	161.4	1943	201.3	1917	189.0	1910	170.8	2003	133.1	1953	89.5	1977	76.1	1974	68.6	1934	75.8	1918	67.1	2002
43	67.0	1958	92.5	1990	162.8	1904	207.5	1943	190.4	1987	172.3	1978	134.0	1914	90.6	1939	77.0	1996	70.1	1999	76.0	1922	68.7	1913
44	69.2	1905	92.5	1919	163.6	1972	208.2	1988	192.4	1905	174.1	1946	134.5	1921	91.5	2000	77.5	1964	70.3	1898	76.1	1958	70.2	1945
45	70.1	1976	96.4	1898	166.1	1910	208.8	1946	193.5	1907	175.9	1912	136.3	1954	92.2	1948	77.9	1925	70.5	1929	76.2	1912	70.6	1999
46	70.9	1989	97.3	1939	169.5	1995	210.1	2002	200.8	1959	178.9	1941	141.8	1946	92.3	1917	79.1	1984	72.1	1950	76.7	1924	71.3	1966
47	71.5	1920	99.4	1945	170.5	1988	211.6	1959	203.1	1906	183.9	1966	145.0	2002	92.6	1991	79.7	1949	72.3	1955	77.4	1898	72.6	1900
48	76.8	1930	102.1	1929	170.6	1913	211.9	1971	207.6	2006	190.7	1898	150.1	1949	93.3	1974	80.3	1919	73.1	1912	79.8	1936	73.6	1969
49	78.7	2001	103.5	1953	170.8	1955	212.3	1942	209.6	1957	192.3	1937	152.3	1906	94.0	1980	81.5	1898	73.5	1920	80.1	1945	74.7	1935
50	79.3	2002	103.8	1924	171.4	1901	212.3	2005	216.4	1942	192.8	1979	152.5	1997	95.6	1929	81.5	1918	78.8	1991	80.7	2002	76.6	1978
51	80.6	1996	105.3	1910	174.1	1958	216.8	2006	216.7	2012	195.0	1954	153.8	1938	95.8	1961	81.7	1959	79.5	1997	82.2	1954	78.4	1944
52	84.1	2006	109.8	1979	176.4	1916	220.0	1949	218.9	1921	196.5	1918	155.4	1952	95.8	1909	83.5	1968	80.8	1944	82.2	1997	79.2	1918
53	84.7	1980	110.2	1909	178.0	1966	220.8	1941	219.3	1937	199.4	1997	157.5	1975	95.9	1925	84.4	1999	82.4	1996	83.9	2000	81.2	1919
54	86.2	1947	110.8	1935	181.1	2012	223.9	1972	221.8	2004	200.8	1994	157.7	2007	96.1	1935	85.4	1960	83.0	1936	85.6	1934	82.2	1932
55	86.6	1968	111.1	1908	182.4	1999	224.6	1953	224.0	1962	203.1	1902	160.9	1991	97.1	1938	85.7	1927	86.2	1978	86.9	1960	82.9	1924
56	87.1	1922	111.9	1912	184.7	1919	227.3	1926	229.9	1981	207.5	1920	163.5	2003	98.8	1919	86.5	1906	86.5	1931	87.3	1987	83.0	1947

57	87.4	1904	112.5	1996	187.6	1920	228.7	1933	230.4	1966	212.4	1949	163.5	1962	99.1	1962	86.5	1909	86.8	1990	87.4	1978	84.9	1905
58	87.6	1926	112.5	1965	189.7	1905	234.1	1909	230.5	1985	213.7	1980	167.6	1916	100.1	1904	87.1	1912	88.3	1906	88.2	2003	85.7	1957
59	87.6	1941	112.7	2007	190.9	1909	234.9	1938	232.5	1917	216.4	1928	167.7	1922	100.5	1926	87.3	1946	89.6	1967	89.0	1906	86.9	1995
60	88.5	1972	112.9	1976	192.0	1991	236.2	1980	232.6	1976	217.0	1957	168.4	1948	102.9	1994	88.3	1983	92.1	2011	89.0	1904	87.0	1949
61	88.9	2012	114.3	2012	197.1	1942	240.1	1966	236.3	1903	220.2	1985	169.7	1994	103.4	1984	89.3	1975	94.2	1949	90.4	2001	88.8	1906
62	89.5	1978	116.8	1911	199.0	1963	240.4	1948	237.2	1938	220.7	2005	169.8	1979	103.7	1906	89.5	1904	94.4	1904	91.4	1990	88.9	1980
63	89.7	1898	121.7	1926	201.3	1898	241.5	1950	259.2	1898	223.5	1905	172.6	1928	105.8	2001	89.8	1950	95.9	1980	93.0	1921	90.6	1959
64	91.8	1982	122.8	1955	203.5	1935	248.9	1970	262.7	1899	225.4	1907	177.6	1919	105.9	1983	90.0	1994	97.0	2004	95.0	1971	94.5	1915
65	94.4	2004	129.3	1960	206.1	1950	251.4	1901	269.1	1908	228.1	1981	178.0	1960	107.6	1978	90.3	1997	97.3	1946	95.7	1929	95.2	1925
66	94.8	1903	129.6	1903	207.1	1915	254.8	1992	272.2	2003	228.3	1975	178.2	1950	108.4	1899	90.6	1910	97.4	1923	96.1	1969	98.4	1979
67	96.6	1971	132.5	1932	210.2	1900	259.3	1976	276.3	1947	233.9	2000	178.3	1917	108.7	1945	91.6	1900	97.8	1924	97.5	2011	102.1	1974
68	100.7	1942	134.0	1995	212.7	1959	261.3	1974	276.9	1933	234.8	2007	181.3	1968	108.7	1970	91.8	2002	99.2	1995	100.3	1915	102.6	1946
69	101.7	1955	137.5	1925	218.9	1912	262.8	1928	280.3	1997	240.0	1924	184.8	1903	110.7	1921	95.1	2001	101.8	1994	103.3	1938	104.8	1923
70	102.1	1997	138.0	2002	219.5	1969	271.8	1987	283.4	1972	242.0	1962	186.5	1965	111.7	1946	95.6	1995	102.1	1962	105.1	1965	106.7	1981
71	102.2	1927	139.0	1987	220.7	1987	272.3	1939	289.0	1909	246.4	1909	188.3	1927	112.7	1916	95.8	1958	102.5	1907	106.9	1935	106.8	2007
72	102.6	1935	139.0	1907	221.6	1908	277.1	1961	289.4	1922	247.9	1986	189.2	1973	113.4	1997	98.0	1969	105.0	2001	108.1	1959	107.3	1921
73	105.7	1912	142.2	1946	223.0	1992	278.6	1967	289.7	1912	251.7	1899	189.9	1957	114.1	1920	98.6	1944	108.7	2002	114.1	1927	108.9	1911
74	109.6	1965	143.2	1968	226.9	1939	279.4	1919	290.9	1998	252.6	1969	197.6	1944	115.5	1942	111.0	2004	110.6	1921	117.1	1925	110.6	2006
75	112.2	1962	144.1	1992	227.3	1936	291.4	1995	296.7	1935	253.9	1950	198.6	1974	116.3	1953	111.4	1998	110.9	2005	118.5	1979	111.3	1968
76	114.7	1987	144.5	1959	233.0	1944	299.0	1903	298.9	1994	255.6	1965	200.6	1899	118.7	2002	112.4	1945	111.1	1981	123.4	1911	112.2	1997
77	114.9	1933	146.7	1991	236.3	2004	300.2	1975	301.5	1950	255.6	1960	205.5	1945	121.2	1969	112.8	1907	111.8	1992	125.0	2007	114.0	1975
78	116.6	1937	148.0	1906	236.7	1937	304.4	1991	304.7	1952	263.2	1938	206.8	2009	121.4	1944	113.8	1990	113.0	1925	128.5	1981	114.3	2003
79	118.7	1929	148.7	1938	238.7	1976	312.8	1982	313.0	1969	293.9	1970	209.4	2000	124.7	1985	116.2	2011	113.1	1938	129.0	2008	115.5	2010
80	119.0	1994	152.1	1950	240.0	1906	323.0	1986	314.2	1975	297.8	1929	212.8	2004	126.0	1932	116.5	1962	113.3	1983	130.4	1942	118.6	1990
81	121.3	1984	153.1	1951	241.9	1965	327.1	1913	320.1	1982	299.8	1919	213.9	1967	128.3	1987	117.6	1987	113.5	1984	131.5	1995	118.7	2001
82	121.9	1966	154.3	1928	244.5	1986	329.1	1985	323.0	1965	301.1	1983	214.9	1943	133.1	1943	117.8	2009	119.5	1968	132.8	1974	119.1	1961
83	125.5	1991	158.0	1943	244.6	1951	331.5	1994	325.3	1978	306.5	1991	217.4	1992	133.4	2004	120.6	1920	119.5	1945	135.0	1967	120.2	1970
84	125.5	1975	163.9	1994	244.6	1990	332.2	1906	333.2	1961	309.2	1944	218.3	2001	133.7	1973	120.9	1985	121.8	1914	136.3	1968	120.9	1951
85	125.8	1928	165.6	1930	245.1	1975	335.7	1999	339.1	1970	310.8	2002	224.3	1935	135.3	1908	123.6	1981	122.1	1942	137.0	1902	123.8	1977
86	126.1	2011	167.0	1988	247.5	1922	345.4	2001	346.5	1990	317.3	1998	227.8	1996	135.4	1950	128.3	1914	124.6	1919	138.5	1903	126.4	1934
87	126.2	1992	174.5	1952	249.6	1961	347.0	1952	346.9	1991	325.2	1942	230.4	1920	137.1	1952	133.4	1979	133.0	1982	139.2	1905	128.8	2011
88	128.8	1906	175.3	1971	253.2	1946	349.4	2007	350.8	1979	327.4	1904	230.4	1983	139.3	1968	133.6	1989	134.0	1900	140.7	1900	128.9	2008
89	131.5	1999	176.4	2009	256.7	2007	349.7	1916	357.0	1986	334.2	1973	234.6	1942	140.8	1996	141.2	1978	135.2	1928	140.9	1931	129.0	1927
90	131.8	2007	178.2	1966	262.2	1994	358.9	2009	358.8	1974	346.4	1951	236.9	1929	144.8	1928	143.8	1941	143.4	1954	143.0	1994	131.3	1965
91	132.5	1995	178.4	1998	263.5	1971	362.8	1997	359.5	1916	350.6	1967	237.3	1978	151.9	1979	143.9	1973	156.5	1972	143.5	1909	135.9	1994
92	134.7	1986	180.1	1937	269.0	1927	364.0	1904	360.0	1904	355.4	2009	243.9	1999	153.4	1986	144.9	1942	157.9	1905	147.1	1991	137.3	1941
93	139.3	1952	183.6	1915	280.0	1952	367.4	1962	361.2	1919	362.8	2004	251.6	1905	155.3	2009	146.6	1980	158.8	1951	156.9	1996	137.6	1996
94	139.6	1949	191.4	1986	282.1	1945	374.4	1951	365.9	2007	366.7	1999	254.6	1995	156.5	2007	148.4	1938	160.0	2008	162.1	1970	141.2	1942
95	139.9	1988	191.6	1975	285.2	1978	376.5	1944	370.4	1945	367.9	1982	259.5	1904	158.5	1999	150.7	1992	167.2	1961	166.7	2010	143.0	1967
96	145.4	1998	193.5	1983	290.0	1949	393.0	1978	374.2	1960	384.0	1916	261.8	1986	162.3	1998	155.0	2007	169.4	1915	175.5	2004	144.6	1998
97	150.2	2008	197.6	1993	295.4	2001	406.6	1969	382.1	1951	385.1	1990	265.7	1924	164.4	1972	156.7	1982	170.4	1911	183.6	1983	145.4	1971
98	156.7	1925	200.6	1927	307.8	1974	407.8	2011	391.0	1920	405.1	1974	269.0	1990	166.3	1992	158.3	1972	171.6	1959	185.2	1919	147.9	1972
99	158.7	1943	200.9	2008	315.2	1903	409.2	1965	425.3	1944	406.0	1917	277.8	1982	167.5	1995	161.2	1924	174.1	1970	191.1	1973	148.1	1902
100	160.8	1969	202.9	2010	316.9	2009	414.3	2010	427.4	1984	410.6	1993	280.3	1907	167.7	1927	161.6	1928	183.5	2007	193.2	1951	148.5	1984
101	165.2	2009	203.2	1942	322.7	1962	431.8	1947	428.1	2001	419.5	2011	299.0	2011	171.7	1982	165.3	1902	185.5	1977	193.8	1977	157.3	1909
102	171.2	1960	207.2	1997	326.6	1983	438.7	1929	429.9	2010	419.7	1996	300.7	1958	171.9	1903	176.6	1921	189.5	1969	196.2	1982	164.3	1931
103	172.1	1985	209.4	1969	329.4	1982	439.7	2008	437.9	2011	421.5	1984	305.9	1947	183.3	1905	187.3	1970	197.9	1965	203.4	1946	172.2	2004
104	177.7	1950	209.6	2011	329.6	1998	443.7	1920	438.6	1927	423.3	1927	305.9	1984	183.7	1958	187.6	1977	210.6	1902	204.0	1984	172.2	1926
105	181.0	1932	210.9	1985	330.7	1997	447.3	1998	439.7	1996	432.2	1935	312.1	1998	184.9	2008	204.4	1986	225.6	1998	204.3	1926	172.7	1928
106	194.3	1983	222.5	1949	335.9	1948	450.7	1912	442.3	1999	434.2	1945	317.2	1981	188.6	1990	214.2	1961	232.9	1927	234.5	1993	180.0	1983
107	203.2	1907	222.9	1984	339.4	2008	451.4	1945	448.0	1983	445.8	1943	343.7	1902	200.9	1924	234.3	1903	234.8	1903	246.9	1972	183.8	1993
108	237.1	2010	229.6	1962	349.4	2011	481.7	1984	450.8	2008	451.6	2001	362.5	1908	203.9	2011	244.1	1915	234.8	2009	256.5	1992	184.6	1987
109	237.1	1916	238.3	2001	364.9	1929	483.3	1960	450.9	1943	482.7	2010	401.6	1909	204.6	1951	248.2	1905	235.0	2010	258.2	1998	188.9	1991
110	238.7	1974	240.6	2005	369.2	1993	503.5	1979	452.1	2009	487.5	1995	416.0	1969	205.4	1981	253.0	1951	246.6	1985	272.4	1986	215.6	2009
111	241.2	1946	242.3	1999	370.3	1984	548.8	1993	476.3	2002	508.8	1915	439.0	1915	217.4	1902	276.0	2010	314.4	1973	278.8	1928	218.9	1986
112	246.5	1910	247.5	1982	391.7	2010	560.5	1922	481.1	1929	553.8	1908	451.2	2008	217.8	1907	281.9	1965	330.8	1993	284.7	1941	230.9	1973
113	259.9	2005	278.8	1974	419.3	1979	560.9	1983	518.2	1993	562.0	1947	491.9	2010	377.1	2010	295.9	2008	333.7	1941	298.7	1961	265.0	1985
114	263.9	1993	278.8	1973	458.1	1985	652.9	1927	559.5	1973	577.3	2008	588.9	1951	420.7	1915	327.4	1926	409.6	1926	323.8	1985	309.3	1992
115	284.5	1973	287.9	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	368.4	2009	424.5	1982

Plate 42. Gavins Point to St. Louis Ranking of Average Monthly Flows