FLOODS IN IOWA:
STAGE AND DISCHARGE

U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT 87-382

PREPARED IN COOPERATION WITH THE

IOWA DEPARTMENT OF TRANSPORTATION,

HIGHWAY DIVISION,

HIGHWAY RESEARCH BOARD

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BY OSCAR G. LARA & DAVID A. EASH

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1987

UNITED STATES DEPARTMENT OF THE INTERIOR
DONALD PAUL HODEL, SECRETARY
GEOLOGICAL SURVEY
DALLAS L. PECK, DIRECTOR

For additional information
write to:

U.S. Geological Survey
Water Resources Division
Box 1230
Iowa City, Iowa 52244
Telephone:(319) 337-4191

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Factors for converting English Units
to International System (SI) Units

The following factors may be used to convert the English units published herein to the International System of Units (SI).

Multiply English units	By	To obtain SI units
	-Length-	
inches (in)	25.4	millimeters (mm)
feet (ft)	.3048	meters (m)
miles (mi)	1.609	kilometers (km)
	-Area-	
acres	4,047	square meters (m^2)
square miles (mi^2)	2.590	square kilometers (km^2)
	-Volume-	
gallons (gal)	0.003785	cubic meters (m^3)
cubic feet (ft^3)	.02832	cubic meters (m^3)
cfs-day (ft^3/s-day)	2,447	cubic meters (m^3)
acre-feet (acre-ft)	1,233	cubic meters (m^3)
	-Flow-	
cubic feet per second (ft^3/s)	0.02832	cubic meters per second (m^3/s)
	28.32	cubic decimeters per second (dm^3/s)

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

STATIONS, IN DOWNSTREAM ORDER,
FOR WHICH RECORDS ARE PUBLISHED

MISSISSIPPI RIVER BASIN

NORTHEAST IOWA STREAMS TRIBUTARY TO MISSISSIPPI RIVER

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5389000	Yellow River at Ion	26
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5412000	Turkey River at Elkader	41
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5414450	N Fk Little Maquoketa River nr Rickardsville	52
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MAQUOKETA RIVER BASIN

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5417500	Maquoketa River near Delhi	65
5417530	Plum Creek near Earlville	66
5417590	Kitty Creek near Langworthy	68
5417700	Bear Creek near Monmouth	70
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5420650	Little Wapsipinicon River near New Hampton	96
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5420855	Buck Creek near Oran	102
5420960	Harter Creek near Independence	104
5421000	Wapsipinicon River at Independence	105
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IOWA RIVER BASIN

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5451200	South Fork Iowa River near New Providence	151
5451250	Beaver Creek near Eldora	152
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5481300	Des Moines River near Stratford	440
5481510	Bluff Creek at Pilot Mound	446
5481650	Des Moines River near Saylorville	448
5481690	West Beaver Creek at Grand Junction	450
5481950	Beaver Creek near Grimes	452
5482000	Des Moines River at Des Moines	455
5482170	Big Cedar Creek near Varina	459
5482300	North Raccoon River near Sac City	462
5482500	North Raccoon River near Jefferson	465
5482600	Hardin Creek at Farnhamville	469
5482800	Happy Run at Churdan	471
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5484000	South Raccoon River at Redfield	486
5484500	Raccoon River at Van Meter	490
5484800	Walnut Creek at Des Moines	496
5485500	Des Moines River below Raccoon R at Des Moines	499
5485640	Fourmile Creek at Des Moines	504
5486000	North River near Norwalk	507
5486490	Middle River near Indianola	512
5487470	South River near Ackworth	516
5487600	South White Breast Creek near Osceola	521
5487800	White Breast Creek at Lucas	523
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5488500	Des Moines River near Tracy	530
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5489150	Little Muchakinock Creek at Oskaloosa	543
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6484000	Dry Creek at Hawarden	590
6485500	Big Sioux River at Akron	592
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6605600	Little Sioux River at Gillett Grove	637
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6605850	Little Sioux River at Linn Grove	641
6605890	Waterman Creek at Hartley	643
6606600	Little Sioux River at Correctionville	645
6606700	Little Sioux River near Kennebec	650
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6607000	Odebolt Creek near Arthur	655
6607200	Maple River at Mapleton	657
6607300	Maple River at Turin	661
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BOYER RIVER BASIN

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SOUTHWEST IOWA STREAMS TRIBUTARY TO THE MISSOURI RIVER

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6610520	Mosquito Creek near Earling	682
6610600	Mosquito Creek at Neola	684
6806000	Waubonsie Creek near Bartlett	686
6807000	Missouri River at Nebraska City, Nebraska	688

NISHNABOTNA RIVER BASIN

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6807410	West Nishnabotna River at Hancock	692
6807470	Indian Creek near Emerson	695
6807720	Middle Silver Creek near Avoca	697
6807760	Middle Silver Creek near Oakland	699
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6808000	Mule Creek near Malvern	703

STATIONS, IN DOWNSTREAM ORDER--CONTINUED

NISHNABOTNA RIVER BASIN (CONTINUED)

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6808500	West Nishnabotna River at Randolph	706
6809000	Davids Creek near Hamlin	710
6809210	East Nishnabotna River near Atlantic	712
6809500	East Nishnabotna River at Red Oak	715
6810000	Nishnabotna River at Hamburg	721

TARKIO RIVER BASIN

6811760	Tarkio River near Elliot	727
6811800	East Tarkio Creek near Stanton	729
6811820	Tarkio River tributary near Stanton	731
6811840	Tarkio River at Stanton	733
6811875	Snake Creek near Yorktown	736
6812000	Tarkio River at Blanchard	738
6813500	Missouri River at Rulo, Nebraska	739

NODAWAY RIVER BASIN

6817000	Nodaway River at Clarinda	742
6818598	Platte River near Stringtown	748
6818750	Platte River near Diagonal	750
6819110	Middle Branch 102 River near Gravity	753
6819190	East Fork 102 River near Bedford	755

GRAND RIVER BASIN

6897950	Elk Creek near Decatur City	758
6898000	Thompson River at Davis City	762
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6903400	Chariton River near Chariton	769
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6903700	South Fork Chariton River near Promise City	774
6903900	Chariton River near Rathbun	777
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6903990	Cooper Creek at Centerville	780
6904000	Chariton River near Centerville	782
6904010	Chariton River near Moulton	785
6904040	Chariton River at Coal City	786

FLOODS IN IOWA:

Stage and Discharge

By Oscar G. Lara & David A. Eash

ABSTRACT

This report presents station descriptions and tables of peak stages and discharges for 280 continuous- and partial-record gaging stations in Iowa. Data for the annual flood series for each gaging station and the partial-duration series, at stations where available, are contained in the report.

INTRODUCTION

This report presents a summary of the stage and discharge data for floods in Iowa. Generally, the tables of peak stages and discharges contained in this report have been compiled from the files of the U.S. Geological Survey; when other sources were used, acknowledgement is given in the "Remarks" paragraph of the the station description.

This report has been prepared in accordance with a cooperative agreement between the Highway Research Board, Highway Division, Iowa Department of Transportation, and the U.S. Geological

Survey. It supersedes an earlier report (Lara, 1976).

Annual flood series for each station, and partial-duration series where available, are contained in the report. To ensure consistency in the compilation of these data, guidelines for preparing the tables of peak stages and discharges were developed.

The significant guidelines are as follows:

1. The maximum momentary discharge must be listed, regardless of the magnitude, for each water year.
   (a) In most cases, the maximum gage height will occur simultaneously with the maximum discharge.
   (b) The values are footnoted when the maximum gage height occurs as a result of an ice jam or other restricted flow conditions, and is presumed to be unrelated to the maximum discharge.

2. A base discharge that is expected to be equalled or exceeded on an average of about three to four times a year is determined for partial-duration series stations. The magnitude of this base for peaks is stated in the "Remarks" paragraph of the station description. For each complete water year of station record, the peaks of independent floods which exceed the base are recorded. Two flood peaks are considered independent if base flow (see glossary) is reached between them, or if they are more than 48 hours apart and the discharge of the trough between them is 25 percent or more less than that of the lower peak.

Explanation of methods used in the computation of streamflow data is given in the U.S. Geological Survey reports (1961-1984).

Arrangement of Station Data

This report contains station descriptions and tables of peak stages and discharges for 280 continuous- and partial-record gaging stations, all of which are in Iowa.

These stations are listed in downstream order by station number. For an explanation of downstream order and the meaning of the station number, the reader is referred to the U.S. Geological Survey reports (1961-1984).

Of the data presented for the gaging stations, the station descriptions are self-explanatory. The data contained in the tables has been explained in the preceding section. Statements are required, however, concerning datum of gage, bankfull and flood stage, and the arrangement of data by years.

Flood stage (see glossary) is listed for all stations where available. Bankfull stage (see glossary) is published for stations not having a flood stage available. There are a few stations for which neither of these data are available. Flood stages were compiled from data supplied by the National Weather Service.

The annual flood series is composed of the highest discharge for each water year of record. Each flood is designated by its

calendar date, but are grouped into water-year units by inserting a blank line between the last flood in one water year and the initial flood in the following water year. Thus the annual flood series is compiled by selecting the highest discharge from each group rather than the highest discharge for each of the designated calendar years.

The significance of the underlining in the tables is as follows:

1. A line under the "water year" column signifies a break or gap in the record of peaks.
2. A line beginning at the "date" column and continuing through the "discharge" column indicates a change in site and datum.
3. A line in the "date" and "discharge" columns indicates a change in site without a change in datum.
4. A line in the "gage height" column indicates a change in datum only.

No underlines are used for changes in site or datum if peaks have been adjusted to present (1984) conditions.

GLOSSARY OF TECHNICAL TERMS

Base flow is the sustained or fair weather runoff. In most streams base runoff is composed largely of groundwater effluent. (Not to be confused with base for peaks).

Bank refers to the margins of a channel. Banks are called right or left as viewed facing downstream or in the direction of flow.

Bankfull stage is the stage at which a stream first overflows the natural banks (see also flood stage). Bankfull stage is a hydraulic term, whereas flood stage implies damage.

Cubic foot per second (ft^3/s) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to approximately 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Crest-stage gage is a device which will register the peak stage occurring between inspections of a gage.

Discharge is the volume of water (or more broadly, total fluids) that passes a given point within a given period of time.

Instantaneous discharge is the discharge at a given time.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Flood stage is the stage at which overflow of the natural banks of the stream begins to cause damage in the reach in which the elevation is measured (National Weather Service).

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the general term "stage", although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height and/or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is computed.

Partial-record station is a particular site where limited streamflow data are collected systematically over a period of years for use in hydrologic analyses.

Stage-discharge relation is the relation between gage height and the volume of water per unit of time, flowing in a channel.

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

REFERENCES

Lara, O. G., 1976, Floods in Iowa: stage and discharge: Iowa Highway Research Board, Open-file Report 76-757, 693 p.

U.S. Geological Survey, 1961-64, Surface Water Records of Iowa, 1961-64, U.S. Geological Survey surface-water-data reports (published annually).

_____, 1965-75, Water resources data for Iowa, 1965-74--part 1, Surface-water records: U.S. Geological Survey water-data reports (published annually).

_____, 1976-84, Water resources data for Iowa, Water Years 1975-1984: U.S. Geological Survey Water-Data Reports, IA-75-1 to IA-84-1 (published annually).

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05387500 Upper Iowa River at Decorah, Iowa

Location.--Lat 43°18'19", long, 91°47'48", in NE1/4 SW1/4 sec.16, T.98 N., R.8 W., Winneshiek County, on right bank 1,200 ft upstream from bridge on U.S. Highway 52 (city route) in Decorah, 1,500 ft downstream from Dry Run cutoff, and 3.0 miles upstream from Trout Run.
Drainage area.--511 mi².
Gage.--Water-stage recorder. Datum of gage is 850.00 ft National Geodetic Vertical Datum of 1929. Nonrecording prior to Aug. 28, 1920 (at datum 24.2 feet lower) and from July 1, 1933 to Sept. 30, 1936 at site 8.2 miles downstream at different datum. Oct. 1, 1936 to Sept. 30, 1952 at site 4.2 miles downstream at datum 20.2 ft lower.
Stage-discharge relation.--Defined by current-meter and slope-area measurements.
Flood stage.--12 feet.
Remarks.--Base for partial-duration series, 4,000 ft³/s. Record prior to 1952 is from station near Decorah adjusted on the basis of the square root of the ratio of the drainage areas, base 4,500 ft³/s. Continuous record discontinued Sept. 1983, continued as a partial-record station Oct. 1983.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1914	May 24, 1914	11.60	6,730
1919	Sept.10, 1919	11.05	5,900
1920	May 22, 1920	10.00	4,710
1921	May 27, 1921	10.21	9,350
	May 30, 1921	9.2	7,590
	June 20, 1921	9.0	7,210
	Sept.17, 1921	7.8	5,390
1922	Feb. 22, 1922	10.42	9,960
	Mar. 6, 1922	7.9	5,540
1923	Apr. 3, 1923	9.0	6,770
1924	Mar. 27, 1924	8.0	5,690
	Aug. 8, 1924	8.1	5,840
	Aug. 19, 1924	8.98	6,770
1925	Feb. 9, 1925	8.3	6,150
	June 12, 1925	9.7	8,160
1926	Mar. 18, 1926	6.63	3,670
1927	May 29, 1927	5.30	2,450

05387500 Upper Iowa River at Decorah, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1933	July 1, 1933	97.2	11,600
1934	Jan. 22,		
	Apr. 3-5, 1934	92.0	3,410
1935	Mar. 16, 1935	94.4	7,210
1936	Mar. 10, 1936	98.00	8,930
1937	Mar. 6, 1937	8.80 a	6,730 b
1938	June 25, 1938	8.80	6,340
	Aug. 5, 1938	7.3	4,670
	Aug. 16, 1938	7.1	4,400
1939	Mar. 13, 1939	8.10 a	4,840 b
1940	Aug. 25, 1940	6.38	3,570
1941	May 29, 1941	15.2	27,000
1942	Oct. 7, 1941	7.9	5,540
	June 30, 1942	11.1	11,900
	Aug. 1, 1942	9.8	8,270
	Aug. 8, 1942	8.2	5,520
	Sept.18, 1942	8.7	6,220
1943	Oct. 3, 1942	8.5	6,240
	Mar. 15, 1943	9.8	8,900
	Mar. 26, 1943	8.8	6,800
	Aug. 13, 1943	8.3	5,920
1944	June 15, 1944	8.6	6,080
	June 17, 1944	9.3	7,300
1945	Mar. 14, 1945	8.8	6,410
	Mar. 17, 1945	12.2	15,600
	May 21, 1945	8.0	5,260
	May 26, 1945	7.4	4,490
	June 1, 1945	8.9	6,640
	Aug. 5, 1945	11.2	12,000
	Aug. 14, 1945	9.0	6,850
1946	Jan. 5, 1946	12.1	15,400
	Mar. 6, 1946	10.9	11,300
	Mar. 12, 1946	9.8	8,490
	Sept. 6, 1946	12.0	15,000

a Affected by ice. b About.

05387500 Upper Iowa River at Decorah, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1947	Apr. 5, 1947	8.6	6,870
	Apr. 10, 1947	8.0	5,980
	June 13, 1947	9.9	9,150
1948	Feb. 28, 1948	11.85 a	11,500 b
	Mar. 16, 1948	8.6	7,000
	Mar. 19, 1948	8.4	6,580
1949	Mar. 5, 1949	8.6	6,080
1950	Mar. 7, 1950	10.63 a	9,010 b
	Mar. 26, 1950	11.37	12,700
	June 13, 1950	8.5	6,070
	July 16, 1950	10.1	9,090
1951	Apr. 7, 1951	9.96	9,390
	June 26, 1951	8.12	5,720
	June 27, 1951	6.67	4,270
1952	Mar. 31, 1952	9.17	8,850
1953	July 26, 1953	9.32	9,600
	Aug. 3, 1953	9.58	11,100
1954	June 21, 1954	10.12	11,600
1955	Aug. 1, 1955	6.64	1,700
1956	Mar. 28, 1956	8.28	5,500
	Apr. 2, 1956	8.07	4,910
1957	July 16, 1957	8.98	8,000
1958	Feb. 26, 1958	7.40 a	1,200 b
1959	Apr. 1, 1959	8.32	5,400
1960	Mar. 30, 1960	8.43	5,880
	July 22, 1960	8.46	5,880
1961	Mar. 27, 1961	13.08	20,200
1962	Mar. 30, 1962	11.32	14,800
	July 2, 1962	8.68	5,320
	Aug. 31, 1962	10.18	10,300
1963	Mar. 17, 1963	8.68 a	3,600 b
1964	Apr. 3, 1964	7.97	3,870

a Affected by ice. b About.

05387500 Upper Iowa River at Decorah, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	Mar. 2, 1965	9.89	9,800
	Apr. 8, 1965	9.68	9,100
	Sept.21, 1965	8.41	5,500
	Sept.30, 1965	9.98	10,100
1966	Feb. 8, 1966	9.65	9,330
	Mar. 5, 1966	8.23	5,320
1967	Mar. 26, 1967	8.51	5,760
	June 10, 1967	10.46	11,800
1968	May 16, 1968	7.69	3,950
1969	Mar. 24, 1969	8.26	5,180
	June 27, 1969	10.36	11,400
	June 30, 1969	11.35	14,900
	July 17, 1969	9.37	8,130
1970	July 29, 1970	6.84	2,460
1971	Apr. 1, 1971	9.47	8,440
1972	Mar. 13, 1972	8.99 a	5,700 b
	Sept.25, 1972	10.47	8,340
	Sept.30, 1972	8.90	5,370
1973	Dec. 30, 1972	9.57 a	5,700 b
	Jan. 18, 1973	--	4,900 b
	Mar. 11, 1973	8.42	4,630
	Apr. 17, 1973	9.42	6,290
	May 2, 1973	9.23	5,940
1974	Mar. 4, 1974	8.69	5,040
	Apr. 5, 1974	8.18	4,280
	June 4, 1974	8.16	4,320
	June 10, 1974	9.82	7,120
	June 21, 1974	9.73	6,920
1975	Apr. 29, 1975	9.21	6,090
1976	Mar. 12, 1976	10.75	9,500
1977	Feb. 24, 1977	6.31	2,010
1978	June 17, 1978	9.83	7,060
	July 6, 1978	9.20	5,890

a Affected by ice. b About.

05387500 Upper Iowa River at Decorah, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1979	Mar. 19, 1979	8.77	5,240
	Mar. 31, 1979	8.63	5,040
	Aug. 23, 1979	8.83	5,260
1980	Jan. 16, 1980	--	4,300
	Mar. 16, 1980	8.46	4,690
	May 30, 1980	8.35	4,520
	June 1, 1980	9.33	6,120
	June 6, 1980	8.15	4,220
	Sept.22, 1980	8.47	4,700
1981	Aug. 31, 1981	7.26	3,190
1982	Mar. 20, 1982	7.39	3,290
1983	Nov. 13, 1982	8.49	4,740
	Mar. 7, 1983	8.36	4,540
	July 3, 1983	8.42	4,630
	Sept.21, 1983	9.11	5,730
******	See remarks - partial-record station Oct. 1983		******
1984	June 22, 1984	8.68	5,020

05388250 Upper Iowa River near Dorchester, Iowa

Location.--Lat 43°25'16", long 91°30'31", in SW1/4 NW1/4 sec.1, T.99 N., R.6 W., Allamakee County, on right bank at upstream side of bridge on State Hihgway 76, 650 ft upstream from Mineral Creek, 0.5 mile upstream from Bear Creek, 3.5 miles south of Dorchester, and 18.1 miles upstream from mouth.
Drainage area.--770 mi².
Gage.--Water-stage recorder. Datum of gage is 660.00 ft National Geodetic Vertical Datum of 1929. 1941, nonrecording gage at datum 60.00 ft lower.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 4,000 ft³/s. Prior to 1976 only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1941	May 30, 1941	21.8 a	30,400 b

1976	Mar. 12, 1976	17.67	14,000
1977	Feb. 24, 1977	12.35	4,110
1978	June 17, 1978	15.54	8,680
	July 6, 1978	13.42	5,170
1979	Mar. 19, 1979	15.27	9,140
	Mar. 24, 1979	13.37	5,870
	Apr. 1, 1979	13.23	5,670
	Aug. 23, 1979	13.08	5,460
1980	Mar. 16, 1980	13.70	6,610
	June 1, 1980	13.53	6,100
	June 6, 1980	11.98	4,030
	Sept.22, 1980	12.62	5,240
1981	Apr. 4, 1981	11.88	4,090
	Aug. 31, 1981	11.91	4,120
1982	Mar. 17, 1982	12.15	4,350
1983	Nov. 12, 1982	13.64	6,270
	Dec. 28, 1982	12.26	4,610
	Mar. 8, 1983	12.52	4,670
	July 1, 1983	13.16	5,780
	Sept.22, 1983	13.04	5,690

a From flood profile.
b On basis of slope-area determination of peak flow.

05388250 Upper Iowa River near Dorchester, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	Feb. 15, 1984	14.00	c
	June 9, 1984	12.81	5,110
	June 18, 1984	13.09	5,520

c Backwater from ice.

05388310 Waterloo Creek near Dorchester, Iowa

Location.--Lat43°27', long 91°30', in NW 1/4 sec. 25, T.100 N., R.6 W., Allamakee County, on State Highway 76, 1.4 miles south of Dorchester.
Drainage area.--43.6 mi².
Gage.--Crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by contracted-opening measurement of peak discharge and step-backwater rating.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1970	June 16, 1970	698.41	680
1971	--	a	<700
1972	Sept.25, 1972	698.08	520
1973	--	a	<700
1974	June 9, 1974	700.85	2,500
1975	--	a	<700
1976	Apr. 18, 1976	699.34	1,150
1977	--	a	<700
1978	July 1, 1978	704.80	9,380
1979	--	a	<700
1980	Aug. 17, 1980	699.92	1,600
1981	--	a	<700
1982	Mar. 13, 1982	699.02	1,000
1983	--	a	b
1984	--	a	<720

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05388400 Wexford Creek near Harpers Ferry, Iowa

Loction.--Lat 43°16', long 91°08', in SE1/4 sec.25, T.98 N., R.3 W., Allamakee County, at bridge, 5 miles north of Harpers Ferry.
Drainage area.--11.9 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements and step-backwater computations.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	July 26, 1953	4.91	659
1954	June 20, 1954	4.90	655
1955	July 8, 1955	6.29	1,490
1956	May 6, 1956	5.00	695
1957	June 17, 1957	5.11	740
1958	--	a	<450
1959	May 31, 1959	4.50	525
1960	Mar. 27, 1960	6.40	1,590
1961	Sept.30, 1961	6.82	2,030
1962	July 2, 1962	7.03	2,290
1963	--	a	<450
1964	--	a	<450
1965	Sept. 7, 1965	5.88	1,170
1966	Feb. 9, 1966	6.10	1,330
1967	--	a	<450
1968	June 25, 1968	7.88	3,700
1969	--	a	<480
1970	July 29, 1970	6.61	1,350

a Peak stage did not reach bottom of gage.

05388400 Wexford Creek near Harpers Ferry, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	--	a	<480
1972	Mar. 14, 1972	5.09	<520
1973	Sept. 2, 1973	6.96	1,680
1974	--	a	<480
1975	--	a	<480
1976	--	a	<480
1977	--	a	<480
1978	July 1, 1978	9.78	8,100
1979	--	a	<480
1980	Feb. 22, 1980	6.33 c	b
1981	Aug. 5, 1981	6.10	900
1982	Feb. 22, 1982	5.66	650
1983	Sept.22, 1983	8.56	4,500
1984	--	a	<480

a Peak stage did not reach bottom of gage.
b Discharge not determined.
c Affected by ice.

05388500 Paint Creek at Waterville, Iowa
(Discontinued September 1973)

Location.--Lat 43°12'37", long 91°18'21", in NW1/4 NW1/4 sec.22, T.97N., R.4 W., Alamakee County, on right bank 100 ft downstream from bridge on county highway X 32, 0.5 mile northwest of Waterville and 10 miles upstream from mouth.
Drainage area.--42.8 mi².
Gage.--Water-stage recorder.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--11 feet.
Remarks.--Base for partial-duration series, 500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	Aug. 5, 1951	17.35 a	9,100
1953	July 26, 1953	8.53	2,840
1954	Apr. 15, 1954	5.67	608
	May 1, 1954	6.79	1,300
	June 20, 1954	5.72	630
1955	Oct. 14, 1954	6.20	930
	Mar. 3, 1955	5.92	785
	June 3, 1955	5.36	536
	July 3, 1955	6.15	900
	July 4, 1955	6.20	930
1956	Mar. 27, 1956	6.03	855
	May 6, 1956	6.68	1,210
	Aug. 5, 1956	5.37	544
1957	Mar. 23, 1957	5.32	523
	June 10, 1957	6.02	830
	June 16, 1957	6.82	1,280
	June 17, 1957	8.33	2,650
	July 12, 1957	6.37	1,000
	July 31, 1957	5.95	808

a From information by local resident on floodmarks near gage. A higher stage may have occurred during the spring of 1949.

05388500 Paint Creek at Waterville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1958	Feb. 24, 1958	6.40	1,030
1959	Mar. 24, 1959	6.38	1,030
	Mar. 31, 1959	6.62	1,150
	May 20, 1959	5.58	650
	May 31, 1959	5.77	718
	June 28, 1959	8.40	2,710
	Aug. 3, 1959	5.29	523
	Sept.26, 1959	7.48	1,790
1960	Mar. 27, 1960	8.39	2,710
	July 2, 1960	5.35	544
1961	Feb. 22, 1961	8.07 b	1,800 c
	Mar. 4, 1961	6.24	930
	Mar. 24, 1961	6.88	1,340
	Mar. 25, 1961	8.96	3,420
	Sept. 1, 1961	6.67	1,180
	Sept.30, 1961	7.60	1,870
1962	Mar. 28, 1962	8.46	3,250
	July 2, 1962	5.42	755
	Aug. 30, 1962	7.32	1,900
1963	Mar. 16, 1963	7.00	1,600
	Mar. 25, 1963	5.86	832
1964	Apr. 2, 1964	6.94	1,550
	May 16, 1964	8.32	3,010
1965	Feb. 7, 1965	5.95	845
	Mar. 1, 1965	7.60 b	1,900 c
	Mar. 31, 1965	5.86	964
	Apr. 3, 1965	7.32	1,920
	Apr. 8, 1965	5.40	744
	May 26, 1965	6.79	1,440
	June 20, 1965	5.53	835
	Sept. 7, 1965	7.18	1,790

b Affected by ice.
c About.

05388500 Paint Creek at Waterville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1966	Feb. 9, 1966	8.19	2,880
	Mar. 23, 1966	5.25	660
	July 13, 1966	6.83	1,440
1967	Jan. 24, 1967	7.99	2,640
	Mar. 10, 1967	7.49	2,090
	Mar. 24, 1967	7.93	2,570
1968	Jan. 29, 1968	7.46	2,060
	May 15, 1968	6.88	1,580
	June 24, 1968	8.03	2,690
	July 23, 1968	5.35	690
1969	Mar. 19, 1969	5.05	498
1970	June 15, 1970	5.97	1,010
	July 29, 1970	10.31	5,010
1971	Mar. 31, 1971	5.76	924
	May 18, 1971	5.22	594
	June 20, 1971	5.03	528
	June 24, 1971	6.27	1,130
	JUly 12, 1971	5.36	726
1972	Jan 18, 1972	5.36	732
	Mar. 14, 1972	7.66	2,320
	Mar. 17, 1972	6.91	1,530
	July 12, 1972	7.50	2,100
	Sept.13, 1972	5.49	815
1973	Dec. 30, 1972	7.30	1,900
	Jan. 17, 1973	5.80	775
	Feb. 1, 1973	7.00	1,330
	Mar. 10, 1973	5.88	845
	Apr. 16, 1973	5.83	865
	Apr. 30, 1973	6.47	1,120
	May 2, 1973	5.33	570
	May 7, 1973	5.44	654
	June 16, 1973	5.71	815

Discontinued September 1973

05388600 Paint Creek near Waterville, Iowa

Location.--Lat 43°11', long 91°16', near center sec. 36, T.97 N., R.4 W., Allamakee County, at bridge, 3 miles southeast of Waterville.
Drainage area.--56.0 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	Aug. 5, 1951	17.00	10,800
1953	July 26, 1953	12.89	3,900
1954	Apr. 30, 1954	9.83	1,920
1955	July 4, 1955	11.25	2,720
1956	May 6, 1956	11.06	2,590
1957	July 31, 1957	9.33	1,850
1958	Feb. 24, 1958	7.25	760
1959	Mar. 24, 1959	8.71	1,470
1960	Mar. 27, 1960	13.81	4,870
1961	Mar. 25, 1961	13.53	4,540
1962	Mar. 28, 1962	12.68	3,710
1963	--	a	<425
1964	May 15, 1964	11.98	3,040
1965	Apr. 3, 1965	10.35	2,190
1966	Feb. 9, 1966	12.57	3,620
1967	Mar. 10, 1967	14.14	5,250
1968	June 24, 1968	10.68	2,370

a Peak stage did not reach bottom of gage.

05388600 Paint Creek near Waterville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	Mar. 19, 1969	7.70	940
1970	July 29, 1970	13.17	4,400
1971	June 24, 1971	8.15	1,070
1972	Mar. 14, 1972	9.12	1,500
1973	Apr. 30, 1973	9.62	1,700
1974	June 20, 1974	19.24	19,000
1975	Mar. 21, 1975	9.15	1,500
1976	Apr. 18, 1976	11.22	2,700
1977	Mar. 28, 1977	8.52	1,350
1978	July 1, 1978	10.82	2,400
1979	--	a	<425
1980	May 30, 1980	10.42	2,200
1981	Aug. 5, 1981	9.48	1,700
1982	Feb. 22, 1982	7.19	700
1983	Sept.22, 1983	11.34	2,800
1984	--	a	<425

a Peak stage did not reach bottom of gage.

05388700 Little Paint Creek tributary near Waterville, Iowa

Location.--Lat 43°14', long 91°15', in SE1/4 sec.1, T.97 N., R.4 W., Allamakee County, at culvert, 3.5 miles northeast of Waterville.
Drainage area.--1.09 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements and step-backwater computations.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
DISCHARGES REVISED FROM THOSE PREVIOUSLY PUBLISHED			
1953	July 26, 1953	2.79	137
1954	Apr. 30, 1954	3.89	340
1955	July 4, 1955	4.25	455
1956	May 6, 1956	4.02	380
1957	--	a	<118
1958	Feb. 24, 1958	2.85	144
1959	June 28, 1959	4.34	480
1960	Mar. 27, 1960	4.10	410
1961	--	a	<172
1962	Mar. 28, 1962	1.99	129
1963	--	a	<172
1964	May 15, 1964	2.73	180
1965	--	a	<172
1966	--	a	<172
1967	--	a	<172
1968	June 25, 1968	3.47	275
1969	--	a	<172

a Peak stage did not reach bottom of gage.

05388700 Little Paint Creek tributary near Waterville, Iowa--
(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	--	a	<172
1971	--	a	<172
1972	--	a	<172
1973	Sept. 2, 1973	2.69	188
1974	June 20, 1974	3.06	215
1975	Mar. 21, 1975	2.84	195
1976	Apr. 18, 1976	2.30	147
1977	Mar. 28, 1977	1.87	122
1978	July 1, 1978	2.77	185
1979	Mar. 20, 1979	1.96	126
1980	--	1.99	127
1981	Feb. 22, 1981	1.71	110
1982	Aug. 29, 1982	2.46	157
1983	Sept.22, 1983	2.46	157
1984	--	a	<74

a Peak stage did not reach bottom of gage.

05389000 Yellow River at Ion, Iowa
(Discontinued Sept. 30, 1951)

Location.--Lat 43°06'35", long 91°15'45", in SE1/4 SW1/4 sec.24, T.96 N., R.4 W., Allamakee County, on downstream side of county highway bridge X 36 at Ion, 7.5 miles northwest of McGregor, and 8 miles upstream from mouth.
Drainage area.--221 mi^2.
Gage.--Nonrecording. Datum of gage is 664.65 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter and indirect measurements and the relation is subject to large shifts.
Remarks.--Base for partial-duration series, 3,000 ft^3/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1935	Mar. 4, 1935	11.0	5,440
1936	Mar. 10, 1936	10.2	4,560
1937	Mar. 4, 1937	10.5	4,950
	June 13, 1937	9.1	3,500
1938	Feb. 6, 1938	10.4	4,840
	June 30, 1938	9.8	4,200
	July 10, 1938	8.9	3,310
1939	Feb. 19, 1939	8.2	2,730
1940	Mar. 29, 1940	9.6	4,000
	July 26, 1940	9.7	4,100
	Aug. 3, 1940	9.7	4,100
1941	May 29, 1941	15.2	21,200
1942	June 13, 1942	8.7	3,250
	June 29, 1942	10.3	4,910
	Aug. 1, 1942	12.0	7,320
1943	Mar. 15, 1943	9.8	4,360
	Aug. 13, 1943	12.2	8,320
1944	June 16, 1944	13.5	12,200
	June 17, 1944	10.8	5,530
	June 26, 1944	10.4	5,000
1945	June 1, 1945	13.1	11,600
	June 28, 1945	8.4	3,210

05389000 Yellow River at Ion, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1946	Jan. 5, 1946	13.0	13,000
	Feb. 5, 1946	8.9	5,120
	Mar. 6, 1946	11.0	7,760
	Mar. 12, 1946	11.0	7,760
	Aug. 17, 1946	9.6	5,830
	Sept. 6, 1946	11.7	9,750
1947	Apr. 10, 1947	8.8	4,980
	June 13, 1947	10.4	6,900
1948	Feb. 28, 1948	12.0 a	8,000 b
	Mar. 16, 1948	8.6	4,760
	Mar. 19, 1948	12.5	13,000
1949	Mar. 4, 1949	10.0	6,520
1950	Mar. 6, 1950	9.6	5,920
	Mar. 26, 1950	12.8	15,700
	June 13, 1950	8.8	4,980
	July 16, 1950	10.1	6,550
1951	Feb. 25, 1951	8.05 a	4,500 b
	Mar. 29, 1951	9.90	9,580
	Apr. 7, 1951	10.34	10,500
	July 8, 1951	7.57	4,840
	July 16, 1951	7.62	4,840
	Aug. 6, 1951	8.26	6,100
Discontinued Sept. 30, 1951			

a Affeced by ice. b About.

05389500 Mississippi River at McGregor, Iowa

Location.--Lat 43°01'29", long 91°10'21", in SE1/4 SE1/4 sec.22, T.95 N., R.3 W., Clayton County, on right bank in city park at east end of Main Street in McGregor, 2.6 mi upstream from Wisconsin River, 4.3 mi downstream from Yellow River, and at mile 633.4 upstream from Ohio River.
Drainage area.--67,500 mi², approximately.
Gage.--Water-stage recorder. Datum of gage is 604.84 ft National Geodetic Vertical Datum of 1929. Prior to June 1, 1937, and since June 2, 1939, auxiliary water-stage recorder; June 1, 1937, to June 1, 1939, auxiliary nonrecording gage 14.1 mi upstream in tailwater of dam 9, at datum 5.30 ft lower.
Stage-discharge relation.--Defined by current-meter measurements below 276,000 ft³/s and is affected by backwater from Wisconsin River and Dam 10. Fall is used as a factor.
Flood stage.--18 ft.
Remarks.--Beginning in 1937 only instantaneous gage heights are listed. Flow regulated by reservoirs and navigation dams since about 1935.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1826	May ??, 1826	26.00 a	--
1880	June 22, 1880	21.50 a	196,000
1881	Oct. 21, 1881	19.00 a	--
1888	May 13, 1888	20.10 a	--
1916	May 1, 1916	18.93 a	--
1920	Apr. 4,5, 1920	19.60 a	--
1922	Apr. 19, 1922	19.4a a	--
1937	May 4, 1937	16.68	--
	May 6,9, 1937	--	54,700
1938	May 27, 1938	--	101,400
	Sept.18, 1938	23.75	--
1939	Apr. 4, 1939	15.76	--
	Apr. 6, 1939	--	96,900

a At Prairie du Chien, Wisconsin. Zero of gage at elevation 604.9 feet National Geodetic Vertical Datum of 1929.

05389500 Mississippi River at McGregor, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1940	Apr. 19, 1940	--	52,100
	June 17, 1940	10.50	--
1941	Apr. 20, 1941	14.66	102,800
1942	June 7, 1942	17.38	113,800
1943	June 28, 1943	16.89	124,600
1944	June 24, 1944	16.17	122,500
1945	Mar. 29, 1945	16.80	127,700
1946	Mar. 29, 1946	15.84	101,200
1947	Apr. 21, 1947	13.70	85,500
1948	Apr. 11, 1948	12.81	84,000
1949	Apr.4,13,1949	11.42	73,100
1950	May 17, 1950	15.26	123,300
1951	Apr. 22, 1951	20.83	185,700
1952	Apr. 22, 1952	20.89	197,500
1953	Mar. 31, 1953	12.90	--
	July 3, 1953	--	86,200
1954	May 9, 1954	18.69	165,500
1955	Apr. 14, 1955	12.20	73,700
1956	Apr.15,16,1956	14.88	105,000
1957	July 8, 1957	12.80	95,800
1958	Apr. 14, 1958	8.98	55,800
1959	Apr. 3, 1959	12.32	72,300
1960	May 14,15,1960	16.08	--
	June 4,5,1960	--	83,100
1961	Mar.29,30,1961	15.47	114,000
1962	Apr. 17, 1962	15.12	--
	Apr.18-20,1962	--	104,000

05389500 Mississippi River at McGregor, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1963	Apr. 1, 1963	--	72,000
	Apr. 2, 1963	11.84	--
1964	May 19, 1964	11.56	75,600
1965	Apr. 24, 1965	25.38 b	276,000
1966	Mar. 28, 1966	15.81	--
	Mar. 29, 1966	--	112,000
1967	Apr. 9, 1967	--	170,000
	Apr. 10, 1967	20.72	--
1968	July 4, 1968	15.17	97,900
1969	Apr. 22, 1969	21.58	215,000
1970	June 4, 1970	12.08	72,100
1971	Apr. 19, 1971	17.67	--
	Apr. 20, 1971	--	138,000
1972	Apr. 27, 1972	16.32	--
	Apr. 29, 1972	--	116,000
1973	Mar. 22,23,1973	20.15	151,000
1974	June 21, 1974	14.53	--
	June 22-24,1974	--	104,000
1975	May 4, 1975	--	183,000
	May 5, 1975	21.15	--
1976	Apr. 8, 1976	17.21	--
	Apr.8,9, 1976	--	125,000
1977	Sept.30, 1977	8.61	42,000
1978	July9,10, 1978	14.79	104,000
1979	Apr. 30, 1979	16.26	133,000
1980	Sept.26, 1980	--	87,400
	Sept.29, 1980	14.05	--
1981	May 12, 1981	--	80,700
	May 11,12, 1981	12.58	--
1982	Apr. 26, 1982	17.96	139,000

b Maximum stage known since at least 1828.

05389500 Mississippi River at McGregor, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Mar. 15, 1983	19.02	145,000
1984	May 8, 1984	15.59	117,000

05411530 North Branch Turkey River near Cresco, Iowa

Location.--Lat 43°22', long 92°13', in NW1/4 sec.25, T.99 N., R.12 W., Howard County, at bridge on State Highway 9, about 5 miles west of Cresco.
Drainage area.--19.5 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
DISCHARGES REVISED FROM THOSE PREVIOUSLY PUBLISHED			
1966	Mar. 4, 1966	89.85	470
1967	--	a	<199
1968	--	a	<189
1969	June 29, 1969	92.72	4,440
1970	Aug. 8, 1970	88.25	150
1971	Oct. 9, 1970	89.86	470
1972	July 12, 1972	91.47	1,600
1973	Apr. 17, 1973	88.95	240
1974	--	a	<25
1975	Apr. 28, 1975	87.73	105
1976	--	a	<25
1977	--	a	<25
1978	--	a	<25
1979	Aug. 22, 1979	90.70	880
1980	Sept.22, 1980	88.04	130
1981	Apr. 4, 1981	88.41	165

a Peak stage did not reach bottom of gage.

05411530 North Branch Turkey River near Cresco, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	Mar. 31, 1982	89.28	150
1983	Nov. 12, 1982	92.19	2,800
1984	June 17, 1984	91.83	1,850

05411600 Turkey River at Spillville, Iowa
(Discontinued September 1973)

Location.--Lat 43°12'28", long 91°56'56", in SW1/4 NE1/4 sec.19, T.97 N., R.9 W., Winneshiek County, on right bank 60 ft downstream from bridge on county highway W14 at north edge of Spillville, 150 ft downstream from old mill dam, 0.6 mile upstream from Wonder Creek and at mile 98.5.
Drainage area.--177 mi².
Gage.--Water-stage recorder. Datum of gage is 1,034.77 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by indirect and current meter measurements and step-backwater rating.
Bankfull stage.--12 feet.
Remarks.--Base for partial-duration series, 1,700 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1947	June 1947	18.4 a	10,000 b

1956	July 31, 1956	4.13	398 c
1957	July 16, 1957	6.73	1,230
1958	Feb. 24, 1958	5.17 d	500 b
1959	Mar. 29, 1959	11.48	--
	Mar. 30, 1959	9.12	2,100
1960	Mar. 30, 1960	10.70	3,220
	May 7, 1960	9.18	2,360
	June 24, 1960	10.12	2,860
1961	Mar. 27, 1961	14.37	6,420
1962	Mar. 29, 1962	15.32	7,380
	Apr. 6, 1962	7.57	1,740
	Aug. 31, 1962	14.34	5,950
1963	Mar. 17, 1963	8.41	2,000
1964	Apr. 2, 1964	7.25	1,430
1965	Mar. 1, 1965	16.11 d	3,900 b
	Apr. 1, 1965	12.58 d	2,800 b

1965 CONTINUED ON NEXT PAGE

a From floodmark. b About
c Maximum July-September 1956. d Affected by ice.

05411600 Turkey River at Spillville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965 cont.	Apr. 5, 1965	11.56	2,740
	Apr. 8, 1965	11.68	2,810
	Sept.29, 1965	11.68	3,490
1966	Feb. 8, 1966	12.36 d	--
	Feb. 9, 1966	12.24	3,120
	July 14, 1966	11.88	2,960
1967	Mar. 10, 1967	9.73 d	--
	Mar. 27, 1967	9.53	1,810
1968	July 24, 1968	9.29	1,720
1969	Apr. 5, 1969	9.34	1,740
	June 26, 1969	15.59	6,990
	June 29, 1969	14.80	6,220
1970	Aug. 9, 1970	6.78	1,130
1971	Oct. 10, 1970	12.20	4,130
	Apr. 1, 1971	11.66	3,760
1972	Mar. 13, 1972	--	1,800 b
	July 12, 1972	16.73	8,600
	Sept.25, 1972	15.92	7,470
	Sept.29, 1972	9.21	1,920
1973	Oct. 24, 1972	8.73	1,780
----	Dec. 30, 1972	--	2,300 b
	Jan. 18, 1973	--	1,900 b
	Feb. 1, 1973	--	1,500 b
	Mar. 11, 1973	8.92	1,780
	Mar. 14, 1973	8.56	1,620
	Apr. 16, 1973	11.92	3,500
	May 2, 1973	12.64	4,070
	May 8, 1973	10.56	2,640
1978	May 11, 1978	13.77	5,140
	June 18, 1978	8.20	1,250
	July 6, 1978	10.20	2,340
1979	Mar. 19, 1979	11.55	3,540
	Mar. 24, 1979	9.87	2,260
	Mar. 31, 1979	10.92	2,870
	May 19, 1979	8.36	1,300
	Aug. 22, 1979	8.86	1,550

b About. d Affected by ice.

05411600 Turkey River at Spillville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1980	Jan. 16, 1980	--	2,200
	Mar. 16, 1980	12.55	3,940
	Sept.23, 1980	9.82	1,900
1981	Apr. 4, 1981	8.33	1,290
	Apr. 29, 1981	8.30	1,250
	Apr. 30, 1981	8.31	1,260
	Aug. 31, 1981	10.73	2,690
1982	Mar. 16, 1982	9.81 d	--
	Mar. 24, 1982	7.95	1,210
	May 28, 1982	8.11	1,240
	Aug. 30, 1982	9.14	1,700
1983	Nov. 12, 1982	11.88	3,720
	Dec. 6, 1982	7.99	1,250
	Dec. 28, 1982	10.26	2,550
	Feb. 21, 1983	8.25	1,350
	Mar. 7, 1983	9.73	2,160
	Apr. 15, 1983	9.69	2,070
	May 8, 1983	8.32	1,330
	May 14, 1983	9.19	1,500
	May 19, 1983	10.00	1,940
	May 22, 1983	10.17	2,040
1984	Feb. 16, 1984	9.77 d	--
	June 18, 1984	9.02	1,160

d Affected by ice.

05411650 Crane Creek tributary near Saratoga, Iowa

Location.--Lat 43°22', long 92°23', near SE corner of sec.21, T.99 N., R.13 W., Howard County, at bridge on State Highway 9, 1 mile east of Saratoga.
Drainage area.--4.06 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 13, 1953	5.77	1,050
1954	June 21, 1954	5.41	777
1955	Mar. 15, 1955	3.79	157
1956	Apr. 1, 1956	4.43	316
1957	July 16, 1957	4.44	320
1958	Apr. 7, 1958	2.38	22
1959	Mar. 26, 1959	5.34	734
1960	June 23, 1960	5.97	1,210
1961	Mar. 26, 1961	6.02	700
1962	Aug. 31, 1962	6.56	1,830
1963	May 13, 1963	4.31	270
1964	May 24, 1964	3.84	167
1965	Sept.30, 1965	5.86	1,120
1966	July 14, 1966	4.79	456
1967	June 9, 1967	5.70	990
1968	May 17, 1968	5.82	1,090
1969	June 29, 1969	6.29	1,530
1970	Aug. 8, 1970	4.34	250
1971	Oct. 9, 1970	5.80	1,030

05411650 Crane Creek tributary near Saratoga, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	July 12, 1972	6.01	1,220
1973	May 27, 1973	5.67	560
1974	June 4, 1974	6.21	1,500
1975	Apr. 28, 1975	4.29	238
1976	--	a	b
1977	--	a	b
1978	--	a	b
Discontinued Sept. 30, 1978			

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05411700 Crane Creek near Lourdes, Iowa

Location.--Lat 43°15', long 92°19', in NW1/4 sec.6, T.97 N., R.12 W., Howard County, at bridge on State Highway 272, 1 mile southwest of Lourdes.
Drainage area.--75.8 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 13, 1953	12.00	3,200
1954	June 21, 1954	10.61	2,620
1955	Mar. 15, 1955	9.35	1,430
1956	Apr. 1, 1956	9.23	1,330
1957	Mar. 24, 1957	7.60	580
1958	Apr. 7, 1958	6.39	336
1959	Mar. 31, 1959	9.28	1,370
1960	June 23, 1960	12.13	5,960
1961	Mar. 26, 1961	11.12	3,890
1962	Aug. 31, 1962	15.70	11,900
1963	May 13, 1963	9.20	1,310
1964	Apr. 3, 1964	8.00	710
1965	Sept.30, 1965	11.69	4,360
1966	July 14, 1966	9.19	1,300
1967	June 10, 1967	11.38	3,850
1968	July 23, 1968	10.87	3,060
1969	June 29, 1969	14.10	8,840
1970	May 14, 1970	7.32	530

05411700 Crane Creek near Lourdes, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Oct. 9, 1970	11.46	3,700
1972	July 12, 1972	11.36	3,500
1973	Apr. 17, 1973	10.67	2,750
1974	June 4, 1974	13.71	7,700
1975	--	a	b
1976	--	a	b
1977	--	a	b
1978	--	a	b
1979	Mar. 20, 1979	10.33	2,200
1980	Sept.22, 1980	11.48	3,750
1981	Aug. 31, 1981	10.60	2,600
1982	Aug. 30, 1982	9.29	1,450
1983	Nov. 12, 1982	10.60	2,650
1984	June 17, 1984	11.12	3,020

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05412000 Turkey River at Elkader, Iowa
(Discontinued September 1942)

Location.--Lat 42°51'05", long 91°24'15", in NW1/4 SE1/4 sec.23, T.93 N., R.5 W., Clayton County, in tailrace of Central States Power and Light Corporation's hydroelectric plant in Elkader, 2.7 miles upstream from Roberts Creek and at mile 39.0.
Drainage area.--891 mi².
Gage.--Nonrecording. Datum of gage is 701.61 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1916	June 1, 1916	34.30	30,000 a

1929	Mar. 16, 1929	---	25,200 b
1933	Apr. 1, 1933	---	23,800

1934	Jan. 22, 1934	12.8	6,860
1935	Mar. 6, 1935	14.0	11,400
1936	Mar. 11, 1936	26.4	9,000
1937	Mar. 7, 1937	27.5	12,300
1938	Feb. 5, 1938	14.50	13,000
1939	Mar. 14, 1939	11.50	4,970
1940	July 27, 1940	29.1	19,000
1941	May 31, 1941	29.1	19,300
1942	June 30, 1942	13.0	9,200
Discontinued September 1942			

a About.
b Daily mean discharge, from records by Central States Power and Light Corporation.

05412500 Turkey River at Garber, Iowa

Location.--Lat 42°44'24", long 91°15'42", in SE1/4 NW1/4 sec.36, T.92 N., R.4 W., Clayton County, on left bank 10 feet downstream from bridge on county highway C43, 800 ft upstream from Wayman Creek, 1,000 ft southeast of Garber, 2,000 ft downstream from Elk Creek, 1 mile downstream from Volga River, and at mile 19.8.
Drainage area.--1,545 mi².
Gage.--Water-stage recorder. Datum of gage is 634.46 ft National Geodetic Vertical Datum of 1929. Prior to Feb. 7, 1935, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--17 feet.
Remarks.--Base for partial-duration series, 8,000 ft³/s. Prior to 1974, peak base was 10,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1902	May 18, 1902	23.70	25,000 a

1914	June 15, 1914	13.2	8,960
1915	Aug. 4, 1915	14.7	10,900
1916	Mar. 25, 1916	20.60	18,000
----	June 2, 1916	22.0	20,300
1919	June 4, 1919	16.8	13,100 b
1920	Mar. 12, 1920	15.1	11,000
1921	May 31, 1921	14.5	10,400
1922	Feb. 23, 1922	28.06 c	32,300 c
	July 22, 1922	23.0	23,000
1923	Mar. 4, 1923	17.2	13,800
	Apr. 3, 1923	24.2	25,200
1924	Mar. 4, 1924	15.0	11,000
	July 21, 1924	17.4	14,600
	Aug. 19, 1924	15.5	11,700

a About.
b Maximum observed May-September 1919.
c Maximum known since 1890, from floodmark.

05412500 Turkey River at Garber, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1925	June 15, 1925	24.7	26,200
	June 17, 1925	15.5	11,700
	June 24, 1925	15.5	11,700
1926	Aug. 20, 1926	12.0	7,130
1927	Oct. 3, 1927	16.80	13,700
----	May 28, 1927	14.6	10,300
1929	July 13, 1929	--	7,630 d
1930	June 13, 1930	--	14,500

1933	Dec. 24, 1933	14.9	10,700
	Mar. 30, 1933	22.5	20,600
	Apr. 1, 1933	20.9	18,500
	Apr. 10, 1933	14.4	10,200
	May 20, 1933	14.7	10,600
	July 2, 1933	22.4	20,400
1934	Jan. 22, 1934	11.5	6,230
1935	Mar. 4, 1935	19.9	17,100
1936	Mar. 11, 1936	20.7 e	15,000 a
1937	Mar. 6, 1937	20.8	18,900
	June 13, 1937	17.1	13,500
1938	Sept.13, 1938	21.1	19,600
1939	Mar. 14, 1939	19.13 e	9,200 a
1940	July 27, 1940	25.3	26,100
	Aug. 27, 1940	16.4	10,400
1941	Mar. 21, 1941	17.6	12,300
	May 28, 1941	20.0	16,200
	May 31, 1941	20.0	16,200
	June 12, 1941	23.3	22,100
1942	June 30, 1942	17.5	12,000
1943	Mar. 16, 1943	21.0	17,600
	Aug. 13, 1943	20.0	15,900
1944	May 23, 1944	16.6	10,800
	June 16, 1944	20.6	16,900

a About. d Maximum observed April-September 1929.
e Affected by ice.

05412500 Turkey River at Garber, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1945	Mar. 18, 1945	17.2	11,600
	June 2, 1945	18.2	13,000
	June 28, 1945	17.3	11,700
	Aug. 14, 1945	17.0	11,300
1946	Jan. 5, 1946	24.3	24,100
	Mar. 6, 1946	22.1	19,600
	Mar. 13, 1946	17.9	12,600
1947	Mar. 13, 1947	17.2	11,600
	Apr. 10, 1947	17.3	11,700
	June 13, 1947	26.6	29,000
	June 29, 1947	22.9	21,200
1948	Feb. 28, 1948	23.62 e	18,000 a
	Mar. 15, 1948	17.1	11,400
	Mar. 17, 1948	19.8	15,600
	Mar. 19, 1948	21.7	19,000
	May 10, 1948	17.3	11,700
1949	Mar. 4, 1949	20.5	16,800
1950	Mar. 7, 1950	23.7	23,700
	Mar. 27, 1950	23.3	22,900
	June 13, 1950	16.9	11,900
	June 25, 1950	17.0	12,000
	July 16, 1950	17.2	12,300
	Aug. 1, 1950	17.3	12,400
	Sept.22, 1950	17.9	13,200
1951	Feb. 26, 1951	18.72	14,600
	Mar. 28, 1951	22.79	21,900
	Apr. 7, 1951	20.90	18,300
	Apr. 26, 1951	15.94	10,500
	Apr. 30, 1951	20.44	17,400
	June 27, 1951	16.71	11,600
	July 8, 1951	21.44	19,200
1952	Apr. 1, 1952	15.88	9,840
1953	July 27, 1953	20.62	16,900
	Aug. 4, 1953	19.71	15,300
	Aug. 6, 1953	19.85	15,700
1954	June 21, 1954	19.94	16,400
1955	June 3, 1955	15.32	9,840

a About. e Affected by ice.

05412500 Turkey River at Garber, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1956	Mar. 28, 1956	17.00	12,300
1957	June 18, 1957	14.20	7,320
1958	May 31, 1958	17.61	12,100
1959	Mar. 26, 1959	21.06	17,000
	Apr. 1, 1959	19.93	15,000
	June 26, 1959	17.35	11,400
1960	Jan. 12, 1960	20.02	15,200
	Mar. 30, 1960	22.96	20,000
	May 6, 1960	21.07	17,000
1961	Feb. 23, 1961	17.31	11,200
	Mar. 6, 1961	16.48	10,100
	Mar. 26, 1961	22.84	19,700
	Aug. 1, 1961	17.55	11,600
	Sept.30, 1916	17.79	11,900
1962	Nov. 2, 1962	16.80	10,500
	Mar. 29, 1962	24.70	24,500
	May 6, 1962	17.47	11,500
1963	Mar. 17, 1963	20.69	16,300
	Mar. 19, 1963	16.79	10,500
1964	Apr. 3, 1964	17.00	10,800
1965	Mar. 1, 1965	22.10 b	13,000 a
	Apr. 1, 1965	19.15	13,800
1966	Feb. 9, 1966	24.80	24,800
	July 14, 1966	20.98	16,100
1967	Jan. 24, 1967	22.18	18,900
1968	July 17, 1968	16.83	10,300
	Aug. 8, 1968	17.02	10,500
	Sept.22, 1968	16.91	10,400
1969	June 29, 1969	22.50	19,600
1970	Aug. 8, 1970	17.32	11,200

a About. b Affected by ice.

05412500 Turkey River at Garber, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Mar. 15, 1971	19.02	13,600
	Apr. 1, 1971	18.39	12,700
	June 20, 1971	20.81	16,500
	July 13, 1971	19.05	13,700
1972	Sept.11, 1972	17.64	10,300
	Sept.13, 1972	17.42	10,000
	Sept.28, 1972	21.41	16,300
1973	Jan. 18, 1973	--	15,000 a
	Feb. 2, 1973	19.00	12,300
	Apr. 16, 1973	22.88	19,600
	May 8, 1973	19.17	12,500
	PEAK BASE REVISED TO 8,000 ft^3/s		
1974	Mar. 3, 1974	16.40	8,680
	June 10, 1974	16.80	9,160
	June 21, 1974	21.08	15,700
1975	Mar. 22, 1975	21.72	16,500
	Mar. 24, 1975	20.93	16,700
	Apr. 29, 1975	16.45	9,740
1976	Mar. 12, 1976	22.18	18,300
	Apr. 22, 1976	15.68	8,220
1977	Aug. 16, 1977	15.52	8,320
1978	Apr. 6, 1978	15.43	8,220
	May 13, 1978	15.46	8,250
1979	Mar. 19, 1979	25.59	26,000
	Mar. 24, 1979	17.00	10,300
	Mar. 30, 1979	20.70	16,300
	May 3, 1979	15.40	8,180
	Aug. 18, 1979	21.17	17,100
	Aug. 24, 1979	15.99	8,890
1980	Jan. 16, 1980	--	11,000
	Mar. 16, 1980	18.79 b	10,800
	Aug. 21, 1980	15.86	8,730
1981	Aug. 2, 1981	23.29	20,500
	Sept. 1, 1981	20.28	14,400
1982	Mar. 14, 1982	16.25	8,800
	Mar. 16, 1982	20.65	15,500
	Mar. 20, 1982	17.15	9,920

a About.

05412500 Turkey River at Garber, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Nov. 12, 1982	19.37	13,300
	Dec. 6, 1982	15.88	8,190
	Dec. 29, 1982	16.37	8,600
	Feb. 22, 1983	18.33	11,300
	Apr. 15, 1983	16.72	9,290
	May 20, 1983	16.06	8,430
	May 23, 1983	16.63	9,140
	July 2, 1983	17.25	10,100
1984	Feb. 19, 1984	17.62	10,100
	Apr. 30, 1984	18.50	11,400

05414350 Little Maquoketa River near Graf, Iowa

Location.--Lat 42°30', long 90°52', in SE1/4 sec.20, T.89 N., R.1 E., Dubuque County, at bridge about 300 ft downstream from Illinois Central Railroad bridge, 0.5 mile northeast of Graf.
Drainage area.--39.6 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	July 8, 1951	15.78	7,220
1952	Aug. 20, 1952	9.30	1,850
1953	Feb. 20, 1953	13.41	4,500
1954	May 31, 1954	11.79	3,250
1955	Feb. 19, 1955	9.26	1,830
1956	Aug. 30, 1956	10.90	2,690
1957	Jan. 21, 1957	8.57	1,520
1958	--	a	<1,100
1959	Apr. 1, 1959	13.10	4,590
1960	Jan. 12, 1960	13.93	5,280
1961	Sept.13, 1961	8.36	1,560
1962	Nov. 2, 1961	13.18	4,660
1963	Mar. 18, 1963	11.43	3,300
1964	Apr. 2, 1964	10.69	2,810
1965	Feb. 28, 1965	8.16 c	1,300
1966	Feb. 8, 1966	8.17	1,490
1967	Jan. 24, 1967	10.88 c	1,140

a Peak stage did not reach bottom of gage.
c Affected by ice.

05414350 Little Maquoketa River near Graf, Iowa--Continued

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	--	a	<1,100
1969	June 25, 1969	13.63	5,070
1970	July 30, 1970	9.18	1,950
1971	Feb. 26, 1971	10.09	2,500
1972	Aug. 2, 1972	14.59	6,100
1973	Jan. 31, 1973	8.56	1,700
1974	May 21, 1974	9.85	2,350
1975	Mar. 21, 1975	8.85	1,800
1976	Mar. 4, 1976	9.31	2,000
1977	--	a	b
1978	June 16, 1978	10.22	2,600
1979	June 18, 1979	8.54	1,700
1980	--	a	<1,100
1981	June 15, 1981	13.15	4,700
1982	Feb. 22, 1982	8.00	1,400
1983	--	a	b
1984	July 17, 1984	9.31	2,000

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05414400 Middle Fork Little Maquoketa River near Rickardsville, Iowa

Location.--Lat 42°33'38", long 90°51'35", in SE1/4 sec.32, T.90 N., R.1 E., Dubuque County, at bridge, 2 miles southeast of Rickardsville.
Drainage area.--30.2 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown. No record 1974-75, bridge construction.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	July 8, 1951	22.46	8,160
1952	Oct. 7, 1951	18.16	2,150
1953	Feb. 20, 1953	17.75	1,900
1954	May 31, 1954	17.87	2,000
1955	Feb. 20, 1955	15.36	760
1956	Aug. 30, 1956	14.80	610
1957	Nov. 13, 1956	14.94	640
1958	Aug. 20, 1958	14.56	540
1959	Apr. 1, 1959	16.89	1,400
1960	Jan. 12, 1960	19.04	2,900
1961	Feb. 18, 1961	16.07	1,020
1962	Oct. 30, 1961	19.13	3,000
1963	Mar. 18, 1963	16.64	1,300
1964	May 24, 1964	14.23	480
1965	Sept.21, 1965	15.46	820
1966	Feb. 8, 1966	15.53	820
1967	Sept.14, 1967	14.26	480

05414400 Middle Fork Little Maquoketa River near Rickardsville, Iowa--Continued

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	Aug. 8, 1968	16.30	1,120
1969	July 18, 1969	21.02	5,400
1970	Mar. 3, 1970	15.12	690
1971	Feb. 26, 1971	15.76	890
1972	Aug. 2, 1972	27.7	23,000
1973	--	a	b

1976	--	a	<180
1977	Feb. 25, 1977	13.61	350
1978	June 16, 1978	16.59	1,230
1979	Mar. 29, 1979	14.37	470
1980	Aug. 17, 1980	16.78	1,350
1981	June 15, 1981	16.07	1,000
1982	Feb. 22, 1982	15.33	700
1983	--	a	<180
1984	June 22, 1984	13.13	280

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05414450 North Fork Little Maquoketa River near Rickardsville, Iowa

Location.--Lat 42°35'09", long 90°51'20", near NW corner sec.28, T.90 N., R.1 E., Dubuque County, at bridge, 1 mile northeast of Rickardsville.
Drainage area.--21.6 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	July 8, 1951	10.84	3,510
1952	Aug. 20, 1952	10.63	3,040
1953	Feb. 19, 1953	9.70	2,190
1954	May 31, 1954	8.34	1,460
1955	Feb. 20, 1955	7.07	964
1956	--	a	<395 e
1957	July 31, 1957	8.90	1,720
1958	Aug. 20, 1958	7.96	1,300
1959	Mar. 19, 1959	10.39	2,790
1960	Mar. 30, 1960	10.84	3,330
1961	Feb. 18, 1961	7.36	1,010
1962	Oct. 30, 1961	11.43	4,320
1963	Mar. 18, 1963	7.52	1,070
1964	May 24, 1964	5.71	551
1965	Sept.21, 1965	6.90	865
1966	Feb. 8, 1966	7.05	910

a Peak stage did not reach bottom of gage.
e Discharge revised from that previously published.

05414450 North Fork Little Maquoketa River near Rickardsville, Iowa--Continued

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967	Jan. 24, 1967	10.77 c	960 d
1968	--	a	<290 e
1969	June 26, 1969	10.87	3,560
1970	July 30, 1970	6.46	760
1971	Feb. 26, 1971	7.35	1,040
1972	Aug. 2, 1972	14.02	7,180
1973	Jan. 31, 1973	7.64	1,150
1974	May 21, 1974	8.84	1,750
1975	Mar. 21, 1975	6.79	950
1976	Mar. 4, 1976	6.72	820
1977	July 17, 1977	6.23	700
1978	June 16, 1978	8.66	1,600
1979	Aug. 20, 1979	7.32	1,020
1980	--	6.67 c	b
1981	June 15, 1981	6.03	640
1982	Feb. 22, 1982	7.97	1,250
1983	--	a	<290 e
1984	June 22, 1984	7.71	1,150

a Peak stage did not reach bottom of gage. d About.
b Discharge not determined. c Affected by ice.
e Discharges revised from those previously published.

05414500 Little Maquoketa River near Durango, Iowa
(Continuous recording discontinued January 1982)

Location.--Lat 42°33'18", long 90 °44'46", in NW1/4 NE1/4 sec.5, T.89 N., R.2 E., Dubuque County, on left bank 10 ft upstream from bridge on county highway, 1.7 mi east of Durango, and 6.4 mi upstream from mouth.
Drainage area.--130 mi².
Gage.--Water-stage recorder. Datum of gage is 612.03 ft National Geodetic Vertical Datum of 1929. Prior to Jan. 5, 1939, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Flood stage.--15 ft.
Remarks.--Base for partial-duration series, 5,100 cfs. Only annual peaks listed after 1981.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1925	June 15, 1925	22.10	29,000 a

1935	Mar. 4, 1935	13.63	5,430
1936	Mar. 10, 1936	6.11	791
1937	Feb. 20, 1937	18.20	13,000
	Mar. 6, 1937	14.20	6,000
	June 21, 1937	20.75	21,000
1938	Feb. 5, 1938	15.73	7,850
	Aug. 5, 1938	14.10	5,950
	Sept. 7, 1938	15.60	7,800
1939	July 7, 1939	13.20	5,000
1940	Aug. 15, 1940	13.33	5,130
1941	Mar. 22, 1941	11.90	3,840
1942	June 29, 1942	11.60	3,640
1943	Aug. 13, 1943	14.95	6,820
1944	Feb. 26, 1944	13.70	5,800
	Mar. 14, 1944	13.30	5,300
	June 13, 1944	19.82	18,000
	June 16, 1944	15.40	7,100
	June 26, 1944	19.70	17,600

a About, computed by Corps of Engineers.

05414500 Little Maquoketa River near Durango, Iowa--Continued

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1945	July 21, 1945	12.60	4,720
1946	Jan. 5, 1946	16.30	9,000
	Mar. 6, 1946	17.05	10,400
1947	Apr. 10, 1947	13.40	5,100
	June 5, 1947	16.20	8,620
	June 13, 1947	21.23	23,000
	June 17, 1947	13.10	5,120
	July 5, 1947	14.00	5,900
	July 13, 1947	14.60	6,200
1948	Feb. 27, 1948	17.40	11,300
	Mar. 15, 1948	13.80	5,740
	Mar. 19, 1948	13.50	5,420
	May 10, 1948	14.60	6,400
1949	Mar. 4, 1949	13.94	5,790
1950	Mar. 5, 1950	14.80	6,550
1951	Feb. 25, 1951	14.76 b	5,500 c
	July 8, 1951	19.98	14,800
1952	Aug. 20, 1952	14.22	6,180
1953	Feb. 20, 1953	18.40	11,100
1954	June 1, 1954	14.35	6,460
	June 21, 1954	13.49	5,750
1955	Feb. 20, 1955	12.93	5,120
1956	July 8, 1956	10.67	3,490
1957	July 31, 1957	11.93	4,330
1958	Feb. 24, 1958	9.12	2,190
1959	Mar. 19, 1959	14.44 b	5,400 c
	Apr. 1, 1959	15.95	8,200
1960	Jan. 12, 1960	18.76	13,400
	Mar. 30, 1960	16.48	9,000
	May 6, 1960	17.48	10,700
1961	Sept.13, 1961	12.70	4,110

b Affected by ice. c About.

05414500 Little Maquoketa River near Durango, Iowa--Continued

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1962	Oct. 29, 1961	17.94	11,400
	Nov. 2, 1961	18.70	13,100
	Nov. 16, 1961	16.60	8,980
	May 29, 1962	14.38	5,680
1963	Mar. 16, 1963	14.73	6,040
1964	Apr. 2, 1964	10.84	2,800
1965	Feb. 20, 1965	14.03	5,830
	Feb. 28, 1965	16.41	8,860
1966	Feb. 8, 1966	15.35	7,360
1967	Jan. 24, 1967	17.13	10,000
1968	Aug. 8, 1968	10.21	2,660
1969	Jan. 23, 1969	16.36	8,780
	June 25, 1969	16.49	7,030
	June 27, 1969	19.24 d	10,900
	June 29, 1969	15.26	5,920
	July 18, 1969	19.50	11,400
1970	June 15, 1970	11.80	3,740
1971	Feb. 26, 1971	15.71	7,840
	Sept. 9, 1971	14.03	5,830
1972	Aug. 2, 1972	23.13 e	40,000
	Sept.13, 1972	21.71 f	23,900
1973	Dec. 30, 1972	13.91 b	5,200 c
1974	Jan. 27, 1974	10.79	3,000
	May 22, 1974	10.87	3,060
	June 9, 1974	13.25	5,020
	June 21, 1974	16.66	9,250
1975	Mar. 20, 1975	11.13	3,240
	Mar. 24, 1975	13.97	5,770
1976	Mar. 4, 1976	14.94	6,900
1977	Feb. 23, 1977	10.29	2,700

b Affected by ice. c About. d From floodmark.
e From gage well. Gage height from floodmarks (23.8 ft).
f From gage well. Gage height from floodmarks (22.3 ft).

05414500 Little Maquoketa River near Durango, Iowa--Continued

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1978	May 13, 1978	16.15	8,470
1979	Mar. 19, 1979	11.60	3,580
	June 18, 1979	10.83	3,030
	July 13, 1979	16.42	8,870
1980	Jan. 16, 1980	13.20 c	4,900
1981	June 15, 1981	15.49	7,540
1982	Mar. 13, 1982	14.38	6,220
** continued as a partial-record station after Jan. 1983 **			
1983	July 8, 1983	10.38	2,760
1984	--	-	g

b Affected by ice. g Discharge not determined.

05414600 Little Maquoketa River tributary at Dubuque, Iowa

Location.--Lat 42°32'33", long 90°41'38", near NW corner sec.11, T.89 N., R.2 E., Dubuque County, at bridge on State Highway 386 near north city limits of Dubuque.
Drainage area.--1.54 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter, indirect measurement and step-backwater computation.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	July 8, 1951	7.90	1,070
1952	Aug. 20, 1952	6.82	520 c
1953	July 26, 1953	6.87	540 c
1954	June 21, 1954	6.10	245 c
1955	June 2, 1955	5.48	125 c
1956	Aug. 30, 1956	6.92	570 c
1957	July 31, 1957	7.98	1,650 c
1958	Aug. 20, 1958	7.26	820 c
1959	Oct. 9, 1958	5.91	195 c
1960	Jan. 12, 1960	6.51	375 c
1961	--	a	<37 c
1962	Nov. 2, 1961	5.03	76 c
1963	Oct. 8, 1962	6.07	240 c
1964	Apr. 2, 1964	4.77	57 c
1965	Feb. 28, 1965	4.07	29 c
1966	--	a	b

a Peak stage did not reach bottom of gage.
b Discharge not determined.
c Discharges revised from those previously published.

05414600 Little Maquoketa River tributary at Dubuque, Iowa--Continued

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967	Jan. 24, 1967	11.05	150
1968	Aug. 8, 1968	11.49	215
1969	June 25, 1969	12.80	445
1970	July 30, 1970	12.48	375
1971	--	a	<90
1972	Nov. 1, 1971	15.31	1,250
1973	Apr. 16, 1973	10.92	140
1974	June 22, 1974	12.26	340
1975	--	a	<90
1976	--	a	<90
1977	--	a	<90
1978	June 16, 1978	12.05	290
1979	--	a	<90
1980	Aug. 17, 1980	12.62	400
1981	June 15, 1981	12.47	370
1982	--	a	<90
1983	--	a	<90
1984	June 22, 1984	11.03	150

a Peak stage did not reach bottom of gage.

05417000 Maquoketa River near Manchester, Iowa
(Discontinued September 1973)
(Partial-record station discontinued 1984)

Location.--Lat 42°27'22", long 91°25'56", in NW1/4 NE1/4 sec.9, T.88 N., R.5 W., Delaware County, on left bank 0.6 miles downstream from Sand Creek, 1.5 miles upstream from Spring Branch, 2.3 miles southeast from dam on Maquoketa River in Manchester, and at mile 100.5.
Drainage area.--305 MI#.
Gage.--Water-stage recorder. Concrete control since June 1, 1935. Datum of gage is 894.50 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements below 10,000 ft³/s and extended above by velocity-area studies.
Bankfull stage.--Banks not subject to overflow.
Remarks.--Base for partial-duration series, 2,200 ft³/s. Data for 1928-30 from Iowa Electric Company dam in Manchester, discharge estimated by Corps of Engineers. Equivalent gage heights on present gage computed for 1933-35 peaks. Base was 2,600 prior to 1966. Only annual peaks listed beginning 1976.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1925	June 15, 1925	--	25,400 a
1928	Nov. 18, 1927	--	2,640
1929	Mar. 13, 1929	--	5,600
	Apr. 7, 1929	--	3,320
1930	Feb. 19, 1930	--	3,180
1933	May 20, 1933	9.2	2,850
1934	Jan. 22, 1934	6.2	695
1935	Mar. 5, 1935	10.45	4,880
1936	Mar. 10, 1936	10.5	4,280
1937	Feb. 20, 1937	11.78 b	3,500 c
	Mar. 4, 1937	14.20	8,150
	June 21, 1937	8.8	2,730

a Computed by Prof. F. A. Nagler, State University of Iowa. Maximum flood known.
b Affected by ice. c About.

05417000 Maquoketa River near Manchester, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1938	Feb. 6, 1938	12.1	5,860
	Sept.14, 1938	11.2	4,980
1939	May 27, 1939	7.7	1,790
1940	June 23, 1940	8.9	2,770
	July 27, 1940	8.7	2,320
1941	Oct. 7, 1940	10.8	4,330
	Nov. 1, 1940	12.4	6,140
	Mar. 23, 1941	8.6	2,420
	Apr. 4, 1941	11.3	4,850
	Sept. 8, 1941	14.6	8,880
	Sept.17, 1941	8.7	2,480
1942	May 31, 1942	8.5	2,340
	June 4, 1942	11.0	4,520
	June 6, 1942	8.8	2,570
	June 12, 1942	10.3	3,840
	July 14, 1942	8.4	2,270
	Sept.14, 1942	9.9	3,460
1943	Feb. 23, 1943	9.3	3,000
	Mar. 16, 1943	11.7	5,320
1944	May 20, 1944	8.4	2,250
	June 16, 1944	14.0	8,010
1945	Mar. 26, 1945	8.4	2,300
	Apr. 4, 1945	9.0	2,740
	Apr. 16, 1945	10.2	2,900
	Aug. 14, 1945	9.91	3,060
1946	Jan. 6, 1946	14.9	9,130
	Mar. 6, 1946	10.2	3,790
	Mar. 13, 1946	9.5	3,170
1947	Apr. 5, 1947	9.6	3,190
	Apr. 11, 1947	11.3	5,000
	May 29, 1947	9.0	2,590
	June 1, 1947	14.3	8,380
	June 5, 1947	14.2	8,260
	June 13, 1947	21.4	20,000
	July 5, 1947	10.5	4,060
	July 13, 1947	11.0	4,600
1948	Feb. 28, 1948	13.4	7,340
	Mar. 16, 1948	10.9	4,250
	Mar. 19, 1948	10.8	4,200
	May 10, 1948	11.8	5,370
	June 6, 1948	8.4	2,230

05417000 Maquoketa River near Manchester, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1949	Mar. 5, 1949	12.29	6,020
1950	Mar. 7, 1950	14.72	8,920
	Mar. 24, 1950	9.4	2,960
	Mar. 27, 1950	9.9	3,460
	Sept. 21, 1950	12.0	5,660
1951	Feb. 26, 1951	14.03	8,060
	Mar. 6, 1951	8.41	2,300
	Mar. 29, 1951	13.90	7,940
	Apr. 7, 1951	11.77	5,440
	Apr. 26, 1951	8.90	2,620
	Apr. 29, 1951	13.37	7,340
	June 2, 1951	13.94	7,940
	July 9, 1951	19.65	16,800
	Aug. 26, 1951	8.59	2,380
1952	Mar. 11, 1952	9.12	2,780
1953	Feb. 20, 1953	10.66	4,260
	July 26, 1953	8.40	2,260
	Aug. 4, 1953	8.46	2,300
1954	May 1, 1954	9.60	3,230
1955	Feb. 20, 1955	9.32 b	2,500 c
1956	May 28, 1956	8.21	2,060
1957	May 30, 1957	8.80	2,540
	June 16, 1957	10.62	4,160
1958	June 1, 1958	8.87	2,620
1959	Mar. 20, 1959	9.38	3,050
	Mar. 25, 1959	11.42	5,000
	Mar. 27, 1959	12.27	5,990
	June 25, 1959	9.57	3,230
	July 1, 1959	10.73	4,260
	Mar. 30, 1960	16.48	11,600
	Apr. 18, 1960	10.16	3,650
	May 1, 1960	8.85	2,390
	May 7, 1960	13.85	7,740
	May 17, 1960	12.50	6,100
1961	Mar. 7, 1961	8.95	2,550
	Mar. 26, 1961	10.28	3,750
	Sept. 13, 1961	9.36	2,910

b Affected by ice. c About.

05417000 Maquoketa River near Manchester, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1962	Oct. 1, 1961	10.04	3,480
	Oct. 30, 1961	10.45	3,850
	Nov. 3, 1961	12.53	6,100
	Nov. 17, 1961	10.20	3,660
	Mar. 28, 1962	11.25	4,670
	May 6, 1962	9.86	3,390
	May 8, 1962	12.76	6,460
	May 13, 1962	9.61	3,120
	July 21, 1962	10.44	3,855
1963	Mar. 16, 1963	9.48	3,030
1964	Apr. 3, 1964	8.04	1,840
1965	Mar. 1, 1965	12.77 b	4,200 c
	Apr. 1, 1965	11.64	5,150
1966	Feb. 9, 1966	11.90	5,440
	June 12, 1966	11.02	4,470
	July 14, 1966	10.08	3,550
1967	Jan. 25, 1967	11.47	4,970
1968	July 17, 1968	13.32	7,120
	Aug. 5, 1968	10.48	3,930
	Aug. 9, 1968	13.27	7,050
1969	July 14, 1969	10.58	4,030
	July 18, 1969	16.28	11,200
1970	Mar. 3, 1970	11.19	4,660
	May 15, 1970	9.32	2,870
1971	Feb. 20, 1971	13.16 b	5,500 c
	Mar. 15, 1971	11.82	5,350
	June 25, 1971	9.22	2,790
	July 13, 1971	9.73	3,240
1972	May 7, 1972	9.82	3,320
	Aug. 2, 1972	13.92	7,900
	Sept. 13, 1972	12.09	5,650
1973	Oct. 24, 1972	9.23	2,790
----	Dec. 30, 1972	--	3,000 c
	Feb. 1, 1973	9.85	3,340
	Apr. 16, 1973	13.08	6,800
	Apr. 21, 1973	9.14	2,720
	May 8, 1973	9.40	2,940
	May 28, 1973	9.71	3,220

b Affected by ice. c About.

05417000 Maquoketa River near Manchester, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1976	Mar. 12, 1976	8.72	2,390
1977	Aug. 25, 1977	5.83	335
1978	Apr. 6, 1978	8.64	2,320
1979	Mar. 19, 1979	16.07	10,900
1980	--	9.02	2,630
1981	Aug. 30, 1981	14.59	8,830
1982	Mar. 13, 1982	8.29	2,040
1983	Nov. 12, 1982	9.34	2,890
1984	--	-	d
******	Partial-record station discontinued 1984	******	

d Discharge not determined.

05417500 Maquoketa River near Delhi, Iowa
(Discontinued September 1940)

Location.--Lat 42°24'30", long 91°20'45", in SW1/4 NW1/4 sec.29, T.88 N., R.4 W., Delaware County, in tailrace of Interstate Power Company's hydroelectric plant, 1.5 miles south of Delhi, and 6 miles upstream from Plum Creek.
Drainage area.--347 mi².
Gage.--Recording. Datum of gage is 773.76 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Flow regulated by reservoir just above station. Records furnished by Interstate Power Company and reviewed by the Geological Survey. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1929	Mar. 14, 1929	89.82	7,360 a

1933	Mar. 30, 1933	88.5	5,350
1934	Aug. 11, 23, & Sept.14, 22, 1934	82.9	531
1935	Mar. 5, 1935	88.0	4,700
1936	Mar. 11, 1936	86.4	2,990
1937	Mar. 4, 1937	89.2	6,740
1938	Feb. 6, 1938	88.0	5,300
1939	May 27, 1939	84.6	1,640
1940	June 23, 1940	86.1	3,330
Discontinued September 1940			

a Discharge measurement.

Note.--Maxima are mean discharges for period of several hours during the day except that for Mar. 30, 1933, which is momentary maximum discharge.

05417530 Plum Creek at Earlville, Iowa

Location.--Lat 42°28'13", long 91°14'53", in NE1/4 sec. 1,T.88 N., R.4 W., Delaware County, at bridge on U.S. Highway 20, about 1.5 miles southeast of Earlville.
Drainage area.--41.1 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	Mar. 24, 1966	85.92	1,630
1967	--	a	<700
1968	--	a	<700
1969	July 18, 1969	84.71	1,200
1970	Mar. 2, 1970	83.82	940
1971	June 24, 1971	84.90	1,270
1972	Sept.13, 1972	88.34	3,200
1973	Apr. 16, 1973	84.50	1,130
1974	June 21, 1974	88.75	2,800
1975	Mar. 21, 1975	87.18	2,400
1976	--	a	b
1977	--	a	b
1978	Sept.13, 1978	84.00	1,200
1979	June 18, 1979	87.29	2,900
1980	July 26, 1980	83.99	920
1981	Sept.26, 1981	88.22	4,000
1982	June 15, 1982	85.65	1,500

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05417530 Plum Creek at Earville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Nov. 12, 1982	83.01	750
1984	June 21, 1984	85.69	1,500

05417590 Kitty Creek near Langworthy, Iowa

Location.--Lat 42°12', long 91°12', in NW1/4 sec.4, T.85 N., R.3 W., Jones County, at bridge on U.S. Highway 151, about 1 mile northeast of Langworthy.
Drainage area.--14.4 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	Feb. 8, 1966	86.49	780
1967	Sept.14, 1967	86.18	660
1968	Aug. 5, 1968	87.27	1,150
1969	July 19, 1969	90.24	3,700
1970	Mar. 2, 1970	87.65	1,340
1971	June 24, 1971	87.33	1,160
1972	Apr. 16, 1972	86.90	960
1973	Feb. 1, 1973	86.00	600
1974	May 29, 1974	87.85	1,500
1975	Mar. 21, 1975	85.65	520
1976	--	a	<430 b
1977	--	a	<430 b
1978	Apr. 18, 1978	85.34	440 b
1979	--	a	<430 b
1980	--	a	<430 b
1981	Aug. 2, 1981	87.88	5,000

a Peak stage did not reach bottom of gage.
b Discharges revised from those previously published.

05417590 Kitty Creek near Langworthy, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	June 15, 1982	87.12	1,100
1983	--	a	<430
1984	June 22, 1984	86.53	760

05417700 Bear Creek near Monmouth, Iowa
(Discontinued September 1976)

Location.--Lat 42°02'18", long 90°52'59", in NE1/4 SE1/4 sec.31, T.84 N., R.1 E., Jackson County, on right bank 15 ft downstream from bridge on county highway, 1.6 miles upstream from Rat Run, 2.8 miles south of Monmouth, and 8.2 miles upstream from mouth.
Drainage area.--61.3 mi².
Gage.--Water-stage recorder and concrete control. Datum of gage is 728.80 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 1,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1944	June 1944	21.5 a	b
1958	Feb. 24, 1958	8.82 c	700 d
1959	Feb. 28, 1959	--	1,200 d
	Mar. 20, 1959	11.5	2,120
1960	Jan. 12, 1960	11.56	2,880
	Mar. 30, 1960	10.95	2,380
	May 7, 1960	10.27	1,930
	June 5, 1960	10.07	1,810
	June 19, 1960	9.19	1,320
1961	Mar. 4, 1961	9.67	1,590
	June 7, 1961	8.82	1,130
	June 13, 1961	8.98	1,230
	July 2, 1961	9.28	1,380
	Sept.13, 1961	9.20	1,330
1962	Nov. 2, 1961	9.36	1,430
	Nov. 16, 1961	10.10	1,830
	Mar. 19, 1962	10.38	2,010
	May 29, 1962	8.68	1,080
1963	Mar. 4, 1963	--	1,300
	Mar. 12, 1963	--	1,400
	Mar. 19, 1963	9.19	1,330
	July 19, 1963	10.27	1,950

a Maximum flood known, from floodmark, from information by local residents.
b Discharge not determined. c Affected by ice. d About.

05417700 Bear Creek near Monmouth, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	July 3, 1964	6.76	318
1965	Jan. 22, 1965	9.35	1,410
	Sept.21, 1965	13.76	7,340
1966	Feb. 9, 1966	9.85	1,670
1967	Sept.14, 1967	7.72	648
1968	Aug. 5, 1968	8.85	1,160
	Sept.23, 1968	9.02	1,240
1969	June 27, 1969	8.68	1,190
	July 9, 1969	8.36	1,040
	July 17, 1969	8.38	1,050
	July 18, 1969	11.58	3,180
	July 20, 1969	8.42	1,070
1970	Mar. 3, 1970	9.75 c	1,540 d
	June 2, 1970	9.00	1,350
1971	Feb. 20, 1971	12.73 c	2,640 d
	Feb. 26, 1971	--	1,020 d
	June 25, 1971	8.95	1,320
1972	Dec. 15, 1971	8.84	1,270
	Feb. 29, 1972	--	1,050 d
	Aug. 2, 1972	9.56	1,640
	Aug. 26, 1972	9.81	1,790
1973	Dec. 30, 1972	9.07 c	1,000 d
	Apr. 22, 1973	8.49	1,070
	May 2, 1973	8.47	1,080
1974	May 16, 1974	11.80	3,410
	May 29, 1974	8.41	1,060
	June 9, 1974	9.52	1,610
	June 22, 1974	10.60	2,320
1975	Mar. 22, 1975	9.60	1,650
1976	Mar. 5, 1976	8.21	972
(Discontinued September 1976)			

c Affected by ice. d About.

05418450 North Fork Maquoketa River at Fulton, Iowa

Location.--Lat 42°08'48", 90°40'33", in NE1/4 NW1/4 sec. 25, T.85 N., R.2 E., Jackson County, on right downstream bank at bridge on U. S. Highway 61, 7.8 miles upstream from mouth and 0.5 mile south of Fulton.
Drainage area.--516 mi².
Gage.--Water-stage recorder. Datum of gage is 666.19 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial duration series 2,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1974	May 18, 1974	16.0 a	10,000
1978	Mar. 22, 1978	9.35	3,650
	May 13, 1978	13.95	8,200
1979	Mar. 20, 1979	16.50	10,100
	Mar. 31, 1979	8.97	3,320
	June 18, 1979	12.21	6,190
	Aug. 20, 1979	9.13	3,420
	Aug. 29, 1979	13.78	7,600
1980	Jan. 16, 1980	14.76 b	3,300
	Feb. 22, 1980	b	2,800
	Mar. 16, 1980	b	5,600
	June 7, 1980	9.43	3,690
	June 15, 1980	9.98	4,180
	Sept.13, 1980	10.62	4,850
1981	Feb. 22, 1981	10.97	5,100
	June 13, 1981	9.32	3,590
	June 16, 1981	14.50	8,250
	Aug. 15, 1981	8.93	3,240
	Aug. 28, 1981	8.85	3,210
	Aug. 31, 1981	17.26	10,700
1982	Feb. 23, 1982	b	3,530
	Mar. 13, 1982	14.67	8,490
	Mar. 16, 1982	10.78	4,900
	Mar. 19, 1982	12.53	6,570
1983	Dec. 2, 1982	10.83	5,040
	July 8, 1983	10.91	5,020

a From floodmark. b Affected by ice.

05418450 North Fork Maquoketa River near Fulton, Ia -(continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	Feb. 13, 1984	10.09	3,330
	June 18, 1984	13.77	7,590
	July 17, 1984	11.73	5,750

05418500 Maquoketa River near Maquoketa, Iowa
(Published as "below North Fork Maquoketa River near Maquoketa" prior to 1940)

Location.--Lat 42°05'05", long 90°38'04", in SW1/4 NE1/4 sec.17, T.84 N., R.3 E., Jackson County, on right bank 500 ft upstream from bridge on State Highway 62, 1,200 ft upstream from Prairie Creek, 2.0 miles northeast of Maquoketa, 2.2 miles downstream from North Fork, and 26.7 miles upstream from mouth.
Drainage area.--1,553 mi².
Gage.--Water-stage recorder. Datum of gage is 625.96 ft National Geodetic Vertical Datum of 1929. Prior to July 14, 1924, nonrecording gage, and July 15, 1924, to Sept. 30, 1972, recording gage at same site at datum 10.00 ft higher.
Stage-discharge relation.--Defined by current-meter measurements below 45,000 ft³/s.
Flood stage.--23 feet.
Remarks.--Base for partial-duration series, 9,000 ft³/s. Diurnal fluctuation caused by powerplant 4 miles above station.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1903	--	23.5 a	43,200

1914	Sept.15, 1914	17.0	13,700
1915	Sept.28, 1915	19.6	18,400
1916	Jan. 22, 1916	15.6	12,500
	Jan. 27, 1916	14.9	11,000
	Mar. 27, 1916	22.6	39,100
1917	Mar. 14, 1917	13.8	9,270
	June 13, 1917	16.9	16,300
1918	Feb. 15, 1918	15.8	13,000
1919	Mar. 17, 1919	16.8	16,000
	May 4, 1919	15.6	12,500
	July 10, 1919	15.0	11,200
1920	Nov. 11, 1919	15.3	11,800
	Mar. 13, 1920	15.0	11,200
	May 23, 1920	15.5	12,300

a At datum in use July 15, 1924 to Oct. 1, 1972.

05418500 Maquoketa River near Maquoketa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1921	Sept.17, 1921	15.2	11,000
1922	Feb. 24, 1922	18.9	23,400
	July 23, 1922	14.7	10,200
1923	Apr. 4, 1923	20.6	30,300

1924	Aug. 20, 1924	19.8	19,300
1925	June 17, 1925	19.67	26,600
1926	Mar. 1, 1926	12.9	8,320
1927	Feb. 5, 1927	13.9	9,700
	May 10, 1927	14.9	11,200
	May 24, 1927	16.0	12,900
	June 21, 1927	14.9	11,200
1928	Feb. 7, 1928	17.64 b	13,600 c
	Mar. 13, 1928	15.4	12,100
1929	Mar. 14, 1929	20.6	30,300
1930	Feb. 20, 1930	12.9	8,320
1931	Sept.25, 1931	11.0	6,090
1932	Oct. 11, 1931	14.2	10,200
	Mar. 26, 1932	15.0	11,400
1933	May 21, 1933	13.5	9,130
1934	July 6, 1934	13.85	7,680
1935	Mar. 5, 1935	15.5	12,200
	Mar. 11, 1935	13.6	9,270
1936	Mar. 11, 1936	14.1	10,000
1937	Feb. 21, 1937	22.18 b	25,100 c
	Mar. 6, 1937	20.08	27,500
	Apr. 5, 1937	13.6	9,190
	June 13, 1937	15.6	12,800
	June 21, 1937	17.7	18,500
1938	Jan. 24, 1938	16.33 b	9,800 c
	Feb. 6, 1938	18.48 b	13,600 c
1939	July 17, 1939	13.21	8,610

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b Affected by ice. c About.

05418500 Maquoketa River near Maquoketa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1940	June 23, 1940	18.30	17,600
1941	Mar. 21, 1941	15.4	11,800
	June 1, 1941	14.3	9,430
	June 12, 1941	17.2	17,300
	Sept. 9, 1941	22.08	25,600
1942	Aug. 2, 1942	11.94	7,060
1943	Mar. 16, 1943	18.30	21,200
	June 2, 1943	15.2	10,800
1944	Mar. 15, 1944	14.0	9,540
	June 27, 1944	24.70 d	48,000
1945	Mar. 26, 1945	13.9	9,460
	Aug. 15, 1945	15.92	12,600
1946	Jan. 6, 1946	22.17	37,100
	Mar. 6, 1946	14.6	10,600
1947	Apr. 6, 1947	14.4	10,400
	Apr. 11, 1947	13.8	9,590
	June 2, 1947	16.7	16,100
	June 6, 1947	15.5	12,800
	June 14, 1947	19.96	28,000
	July 6, 1947	14.8	11,100
1948	Feb. 28, 1948	20.02	28,200
	Mar. 16, 1948	15.5	12,700
	Mar. 20, 1948	17.0	16,900
1949	Mar. 5, 1949	18.29	21,600
1950	Mar. 7, 1950	18.14	21,000
	Sept.21, 1950	17.1	13,800
1951	Feb. 26, 1951	18.20	21,200
	Mar. 30, 1951	14.72	12,500
	July 9, 1951	18.43	19,100
1952	Jan. 19, 1952	12.26	9,080
	Mar. 11, 1952	15.57	14,000
1953	Feb. 20, 1953	21.61	33,900
1954	Aug. 18, 1954	8.52	4,980
1955	Feb. 20, 1955	15.04	13,000

d Datum then in use.

05418500 Maquoketa River near Maquoketa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1956	Aug. 30, 1956	11.70	8,170
1957	May 31, 1957	8.73	5,140
1958	Feb. 24, 1958	10.8 b	5,000 c
1959	Mar. 21, 1959	17.58	19,200
	Mar. 27, 1959	14.88	12,800
1960	Jan. 13, 1960	18.91	23,700
	Mar. 30, 1960	18.91	23,700
	May 7, 1960	17.12	18,600
1961	Sept.14, 1961	14.24	10,400
1962	Nov. 4, 1961	17.47	19,600
	Nov. 17, 1961	15.96	15,900
	Mar. 20, 1962	17.21	19,100
	May 30, 1962	14.26	13,000
1963	Mar. 17, 1963	14.81	13,500
	Mar. 20, 1963	13.28	11,000
	July 19, 1963	14.83	13,500
1964	June 20, 1964	11.25	8,340
1965	Apr. 1, 1965	12.45	9,880
	Sept.10, 1965	12.15	9,500
	Sept.22, 1965	20.98	23,300
1966	Feb. 9, 1966	16.82	17,900
1967	Jan. 25, 1967	11.80	9,060
	Sept.15, 1967	12.55	10,000
1968	Sept.24, 1968	14.00	12,100
1969	Jan. 24, 1969	--	13,500 c
	June 28, 1969	16.67	17,500
	July 9, 1969	13.19	10,900
	July 20, 1969	18.46	22,400
1970	Mar. 3, 1970	17.58	19,800
1971	Feb. 20, 1971	21.30	32,700
	Feb. 27, 1971	16.88	18,000
	Mar. 15, 1971	13.20	10,900
	June 25, 1971	14.89	13,700

b Affected by ice. c About.

05418500 Maquoketa River near Maquoketa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)	
1972	Dec. 15, 1971	12.09	9,420	
	Apr. 16, 1972	15.61	15,100	
	May 8, 1972	12.48	9,920	
	Aug. 3, 1972	13.15	10,800	
	Sept.14, 1972	13.70	12,000	
1973	Dec. 31, 1972	28.01	21,000	
	Jan. 19, 1973	--	9,500	c
	Mar. 7, 1973	22.19	9,550	
	Apr. 17, 1973	26.34	16,700	
	Apr. 22, 1973	25.29	14,500	
	May 2, 1973	23.63	11,500	
	May 8, 1973	21.81	9,070	
	June 17, 1973	24.01	12,100	
1974	Jan. 27, 1974	23.07	10,700	
	May 17, 1974	27.21	19,300	
	May 20, 1974	21.95	9,420	
	May 22, 1974	25.58	15,300	
	June 9, 1974	26.27	16,600	
	June 23, 1974	27.51	19,600	
1975	Mar. 22, 1975	30.63	30,000	
1976	Mar. 5, 1976	24.54	13,000	
1977	Sept.18, 1977	17.73	4,870	
1978	May 13, 1978	21.96	8,920	
1979	Mar. 20, 1979	29.18	24,600	
	Mar. 31, 1979	20.51	7,560	
	Aug. 29, 1979	20.87	7,860	
1980	Jan. 17, 1980	25.00	13,900	
	Mar. 17. 1980	20.84	7.920	
	Sept.13, 1980	21.50	8,700	
1981	June 13, 1981	24.3	12,000	
	June 16, 1981	26.50	14,500	
	Aug. 15, 1981	23.22	10,600	
	Aug. 31, 1981	29.60	24,000	
1982	Mar. 13, 1982	26.13	15,900	
	Mar. 17, 1982	21.91	8,860	
	Mar. 20, 1982	23.11	10,300	
1983	Feb. 20, 1983	20.50	7,550	

c About.

05418500 Maquoketa River near Maquoketa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	June 18,1984	23.36	11,100

05420500 Mississippi River at Clinton, Iowa

Location.--Lat 41°46'53", long 90°15'04", in NW1/4 sec.34, T.81 N., R.6 W., Clinton County, on right bank at foot of Seventh Avenue in Camanche, 5.0 mi upstream from Wapsipinicon River, 6.4 mi downstream from Clinton, 10.6 mi downstream from Dam 13, and at mile 511.8 upstream from Ohio River. Prior to June 6, 1969, at site 400 ft downstream.

Drainage area.--85,600 mi², approximately, at Fulton-Lyons Bridge where discharge measurements are made.

Gage.--Water-stage recorder. Datum of gage is 562.68 ft National Geodetic Vertical Datum of 1929. June 1873 to May 31, 1934, staff gage in stone well and June 1, 1934, to Sept. 30, 1939, water-stage recorder 14.8 miles downstream at Le Claire, at datum 6.07 ft lower (revised). Oct. 1, 1939, to Sept. 30, 1955, water-stage recorder 10.6 miles upstream at dam 13, at datum 5.48 ft higher. Auxiliary water-stage recorder at dam 13 since Oct. 1, 1958. Present gage used as auxiliary gage Oct. 1, 1939, to Sept. 30, 1955. Oct. 1, 1955, to June 5, 1969, water-stage recorder at site 400 ft downstream at same datum.

Stage-discharge relation.--Defined by current-meter measurements.

Flood stage.--16 ft.

Remarks.--Flow regulated by reservoirs and navigation dams since about 1935. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1874	May 17, 1874	--	98,400
1875	Apr.29,30,1875	--	167,000
1876	May 7-10,30,31, June 1,2,1876	--	165,000
1877	Apr. 3, 1877	--	104,000
1878	June 5, 1878	--	80,800
1879	June 1, 1879	--	96,800
1880	June 25, 1880	--	250,000
1881	May 12, 1881	--	174,000
1882	Oct.26,27,1881	--	237,000
1883	May 1, 1883	--	174,000

05420500 Mississippi River at Clinton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1884	Mar. 27, 28, Sept.27,28,1884	--	144,000
1885	Oct. 18, 1884	--	146,000
1886	May 1,2, 1886	--	157,000
1887	Apr. 28, 1887	--	149,000
1888	May 14-16,1888	--	248,000
1889	May 30-June 1,1889	--	64,300
1890	June 28,29,1890	--	142,000
1891	May 2,3, 1891	--	130,000
1892	June 26, 1892	--	238,000
1893	May 12-15,1893	--	174,000
1894	May 30,31,1894	--	157,000
1895	Mar. 2, 1895	--	70,000
1896	May 28,29,1896	--	148,000
1897	Apr.17,18,1897	--	198,000
1898	June 24-27,1898	--	88,800
1899	June 24-26,1899	--	149,000
1900	May 3,4, 1900	--	100,000
1901	Oct. 20, 1900	--	142,000
1902	May 26,27,1902	--	123,000
1903	Sept.29,30,1903	--	176,000
1904	Oct. 1, 1903	--	174,000
1905	June 21,22,1905	--	172,000
1906	Apr.22-25,1906	--	169,000
1907	Apr.11-13,1907	--	171,000
1908	July 20, 1908	--	134,000

05420500 Mississippi River at Clinton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1909	Apr. 22, 1909	--	123,000
1910	Mar. 25, 1910	--	73,100
1911	Feb. 18, 1911	--	84,000
1912	Oct.21,22,1911	--	120,000
1913	Mar. 27, 1913	--	123,000
1914	July 13-15,1914	--	111,000
1915	Apr.23,24,1915	--	92,000
1916	May 5, 1916	--	195,000
1917	Apr. 21, 1917	--	142,000
1918	June 13,14,1918	--	123,000
1919	Apr. 25, 1919	--	166,000
1920	Apr. 9, 1920	--	222,000
1921	May 11-13,1921	--	85,300
1922	Apr. 23, 1922	--	212,000
1923	Apr.7,8, 1923	--	106,000
1924	Aug. 23, 1924	--	106,000
1925	June 19,20,1925	--	93,900
1926	Sept.26,27,1926	--	83,600
1927	Mar.31,Apr.1,1927	--	133,000
1928	Apr.9,10,1928	--	116,000
1929	Apr.2,3,19-20,1929	--	146,000
1930	June 28, 1930	--	83,600
1931	July 6-11,1931	--	40,700
1932	Apr.22,23,1932	--	97,500
1933	Apr.8-13,1933	--	92,100

05420500 Mississippi River at Clinton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1934	Apr. 19,20, 1934	--	81,400
1935	Apr. 7, 1935	--	123,000
1936	Apr. 7, 1936	--	133,000
1937	Mar.8,9, 1937	--	95,800
1938	Sept.23, 1938	--	167,400
1939	Apr. 19, 1939	--	144,900
1940	June 19, 1940	10.36	74,100
1941	Apr. 25, 1941	15.11	128,200
1942	June 13, 1942	18.04	169,600
1943	June 30, 1943	17.30	158,700
1944	June 28, 1944	18.60	168,500
1945	Mar. 31, 1945	17.69	164,400
1946	Mar. 28, 1946	--	144,800
	Mar. 29, 1946	16.48	--
1947	June 15, 1947		125,500
	June 16, 1947	15.18	--
1948	Mar. 21, 1948	13.66	108,300
1949	Apr. 7, 1949	11.08	85,300
1950	May 22, 1950	15.24	129,900
1951	Apr. 26, 1951	21.0	221,500
1952	Apr. 27, 1952	21.24	225,400
1953	Apr. 5, 1953	14.00	104,100
1954	May 14, 1954	18.55	175,900
1955	Apr. 25, 1955	13.69	96,900
1956	Apr. 20, 1956	15.3	127,000
1957	July 14, 1957	13.87	103,000

05420500 Mississippi River at Clinton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1958	Apr.15-17,1958	--	64,500
	Apr. 17, 1958	10.78	--
1959	Apr. 3, 1959	14.97	112,000
1960	May 18, 1960	17.04	151,000
1961	Apr. 2, 1961	16.13	143,000
1962	Apr. 21, 1962	15.98	138,000
1963	Apr. 2, 1963	13.06	90,900
1964	May 19,20,1964	--	84,000
	May 24, 1964	12.63	--
1965	Apr. 28, 1965	24.65 a	307,000
1966	Apr. 1, 1966	16.43	143,000
1967	Apr. 14, 1967	--	207,000
	Apr. 15, 1967	20.16	--
1968	July 7, 1968	15.70	131,000
1969	Apr.25,26,1969	21.52 b	231,000
1970	June 7, 1970	13.41	--
	June 8, 1970	--	93,000
1971	Apr. 23, 1971	--	168,000
	Apr. 24, 1971	18.03	--
1972	May 2, 1972	17.20	153,000
1973	Mar. 25, 1973	20.65	207,000
1974	June 24, 1974	17.68	158,000
1975	May 7,8, 1975	20.78	214,000
1976	Apr. 11, 1976	17.20	154,000
1977	July 19, 1977	10.66	50,800
1978	Apr. 28, 1978	15.70	128,000

a Maximum stage known since at least 1828.
b Occurred Apr. 26, 1969.

05420500 Mississippi River at Clinton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1979	May 5,6, 1979	--	153,000
1980	Sept.30, 1980	14.48	108,000
1981	Oct. 1, 1980	--	113,000
	Oct. 2, 1980	14.61	--
1982	Apr. 29, 1982	17.87	163,000
1983	Mar. 18, 1983	18.97	179,000
1984	May 11, 1984	16.21	134,000

05420560 Wapsipinicon River near Elma, Iowa

Location.--Lat 43°14'34", long 92°31'48", in NW1/4 NW1/4 sec.8, T.97 N., R.14 W., Howard County, on right bank 10 ft downstream from bridge on county highway B17, 0.2 mile downstream from small left-bank tributary, 4.8 miles west of Elma, and at mile 217.9.
Drainage area.--95.2 mi².
Gage.--Water-stage recorder. Datum of gage is 1,130.05 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 600 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1959	Mar. 26, 1959	11.58 a	--
	Mar. 30, 1959	11.54	902
1960	June 24, 1960	13.44	2,980
1961	Mar. 27, 1961	14.19	4,970
	Aug. 1, 1961	12.92	1,560
1962	Mar. 29, 1962	14.84 a	5,700 b
	Apr. 6, 1962	11.74	940
	Aug. 31, 1962	14.72	5,500
1963	Oct. 9, 1962	11.61	960
	Mar. 18, 1963	12.29 a	650 b
	Mar. 26, 1963	10.39	620
1964	May 24, 1964	9.90	540
1965	Mar. 1, 1965	--	740 b
	Apr. 6, 1965	13.66 a	2,300 b
	Apr. 8, 1965	13.19	2,430
	Apr. 11, 1965	12.54	1,460
	July 10, 1965	11.53	844
	Sept.20, 1965	13.16	2,100
	Sept.29, 1965	14.26	4,730
1966	Feb. 9, 1966	--	1,000 b
	Mar. 4, 1966	12.16	1,190
	Mar. 23, 1966	11.14	775
	Mar. 30, 1966	10.47	664
	July 14, 1966	12.31	1,280
1967	Mar. 27, 1967	12.42	1,360
	June 10, 1967	13.87	4,020

a Affected by ice. b About.

05420560 Wapsipinicon River near Elma, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	May 17, 1968	10.69	662
	June 25, 1968	11.58	913
	July 23, 1968	12.31	1,280
	Aug. 5, 1968	10.50	622
	Sept.23, 1968	11.65	910
1969	Oct. 10, 1968	10.98	712
	Mar. 31, 1969	12.67 a	720 b
	Apr. 5, 1969	11.30	829
	June 26, 1969	14.02	4,160
	June 29, 1969	14.53	5,500
	July 18, 1969	10.45	624
1970	Aug. 8, 1970	8.94	381
1971	Oct. 10, 1970	11.16	780
	Mar. 16, 1971	13.27 a	1,000 b
	Mar. 31, 1971	12.50	1,420
	June 20, 1971	12.27	1,290
1972	Mar. 13, 1972	11.84	1,020
	July 12, 1972	12.41	1,250
	Sept.26, 1972	13.44	2,640
	Sept.29, 1972	14.48	5,420
1973	Oct. 24, 1972	12.69	1,460
	Nov. 2, 1972	10.99	708
	Nov. 8, 1972	10.53	616
	Dec. 31, 1972	--	680 b
	Mar. 8, 1973	--	610 b
	Mar. 11, 1973	12.73	1,490
	Mar. 14, 1973	11.70	878
	Apr. 16, 1973	13.54	3,190
	May 2, 1973	12.78	1,710
	May 8, 1973	12.52	1,440
	Sept.29, 1973	10.89	698
1974	Oct. 5, 1973	10.67	654
	Nov. 22, 1973	10.47	618
	Mar. 4, 1974	--	680 b
	Mar. 10, 1974	10.44	606
	Apr. 4, 1974	12.66	1,530
	May 14, 1974	11.27	841
	May 23, 1974	11.76	1,030

1974 CONTINUED ON NEXT PAGE

a Affected by ice. b About.

05420560 Wapsipinicon River near Elma, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974 cont.	June 4, 1974	14.94 c	10,100
	June 11, 1974	--	800 b
	June 21, 1974	12.20	1,080
1975	Apr. 28, 1975	13.84	3,940
1976	Apr. 18, 1976	10.96	726
	Mar. 13, 1976	14.49 a	--
1977	May 30, 1977	5.12	68
1978	Apr. 19, 1978	11.00	823
	June 18, 1978	11.41	948
	July 7, 1978	10.44	704
1979	Mar. 20, 1979	a	939
	Mar. 31, 1979	13.41	2.890
	Apr. 20, 1979	10.82	670
	July 5, 1979	12.38	992
	Aug. 9, 1979	11.16	650
	Aug. 22, 1979	15.38	6,420
1980	Mar. 17, 1980	a	1,200
	May 31, 1980	14.90	5,420
	June 28, 1980	13.22	1,470
	Aug. 10, 1980	13.73	2,340
	Aug. 13, 1980	12.67	1,150
	Aug. 17, 1980	12.42	1,140
	Sept.22, 1980	14.62	6,180
1981	June 13, 1981	10.66	638
1982	Mar. 18, 1982	12.96	1,900
	Mar. 25, 1982	12.42	1,300
	Mar. 31, 1982	10.62	632
	May 23, 1982	11.44	805
	June 7, 1982	12.11	1,060
	July 15, 1982	11.03	707
	Aug. 30, 1982	10.84	667
1983	Oct. 1, 1982	10.94	700
	Oct. 21, 1982	11.96	1,000
	Nov. 12, 1982	13.58	2,840

1983 CONTINUED ON NEXT PAGE

a Affected by ice. b About. c From highwater mark in well.

05420560 Wapsipinicon River near Elma, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	Dec. 28, 1982	12.10	1,070
	Mar. 7, 1983	13.11	2,000
	Apr. 15, 1983	12.93	1,740
	May 19, 1983	12.43	1,280
	May 22, 1983	11.64	889
	May 29, 1983	10.45	610
	July 3, 1983	11.70	918
	Sept.20, 1983	13.94	3,730
1984	Feb. 18, 1984	a	860
	Mar. 25, 1984	11.01	725
	June 8, 1984	14.66	5,990
	June 12, 1984	10.65	653
	June 17, 1984	14.81	6,580

a Affected by ice.

05420600 Little Wapsipinicon River tributary near Riceville, Iowa

Location.--Lat 43°21', long 92°29', near S1/4 corner sec.27, T.99 N., R.14 W., Howard County, at culvert, 3.5 miles east of Riceville.
Drainage area.--0.90 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
DISCHARGES REVISED FROM THOSE PREVIOUSLY PUBLISHED			
1953	June 13, 1953	4.21	190
1954	Aug. 24, 1954	4.60	380
1955	Aug. 1, 1955	4.59	380
1956	Apr. 1, 1956	4.14	165
1957	May 30, 1957	4.17	175
1958	Apr. 7, 1958	3.29	33
1959	Mar. 26, 1959	4.57	365
1960	June 23, 1960	4.22	190
1961	July 31, 1961	4.49	315
1962	Aug. 31, 1962	4.94	703
1963	Oct. 8, 1962	3.69	70
1964	May 24, 1964	4.00	125
1965	Sept.30, 1965	4.72	480
1966	July 14, 1966	4.38	260
1967	June 9, 1967	4.87	630
1968	May 17, 1968	4.82	580
1969	June 26, 1969	4.88	640

05420600 Little Wapsipinicon River tributary near Riceville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	Aug. 8, 1970	4.04	135
1971	Oct. 9, 1970	3.97	120
1972	Sept.12, 1972	4.64	420
1973	Apr. 17, 1973	3.28	33
1974	June -- 1974	4.96	705
1975	Apr. 28, 1975	4.28	215
1976	--	a	<5.0
1977	--	a	<5.0
1978	July 7, 1978	3.30	33
1979	Aug. 22, 1979	4.79	540
1980	Aug. 16, 1980	5.03	820
1981	May 24, 1981	4.86	610
1982	Aug. 29, 1982	3.89	100
1983	Nov. 12, 1982	4.46	300
1984	June 17, 1984	5.08	920

a Peak stage did not reach bottom of gage.

05420620 Little Wapsipinicon River near Acme, Iowa

Location.--Lat 43°20', long 92°29', at N1/4 corner sec.10, T.98 N., R.14 W., Howard County, at bridge on county road 1 mile north of Acme.
Drainage area.--7.76 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 13, 1953	6.74	668
1954	June 21, 1954	7.19	822
1955	Aug. 1, 1955	6.63	635
1956	Apr. 1, 1956	5.60	420
1957	Mar. 24, 1957	3.77	167
1958	Apr. 7, 1958	3.66	155
1959	Mar. 26, 1959	5.75	250
1960	Mar. 29, 1960	6.04	302
1961	Mar. 27, 1961	7.19	700
1962	Aug. 31, 1962	9.02	2,380
1963	Oct. 10, 1962	4.68	285
1964	May 24, 1964	4.80	302
1965	Sept.30, 1965	7.53	965
1966	July 14, 1966	5.84	458
1967	June 9, 1967	8.54	1,670
1968	May 17, 1968	6.98	749
1969	June 26, 1969	8.58	1,720
1970	Aug. 8, 1970	5.45	396

05420620 Little Wapsipinicon River near Acme, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Oct. 9, 1970	5.05	322
1972	Sept.12, 1972	3.44	395
1973	May 27, 1973	4.57	275
1974	June 4, 1974	8.83	1,900
1975	Apr. 28, 1975	5.80	460
1976	--	a	<92
1977	--	a	<92
1978	Apr. 19, 1978	4.65	265
1979	Aug. 22, 1979	5.31	380
1980	Aug. 16, 1980	6.39	620
1981	July 12, 1981	4.88	300
1982	May 22, 1982	4.25	225
1983	Nov. 12, 1982	4.95	315
1984	June 17, 1984	8.91	2,100

a Peak stage did not reach bottom of gage.

05420640 Little Wapsipinicon River at Elma, Iowa

Location.--Lat 43°14', long 92°27', in NW1/4 sec.12, T.97 N., R.14 W., Howard County, at bridge on county road B 17, near west city limits of Elma.
Drainage area.--37.3 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 13, 1953	10.60	3,010
1954	June 21, 1954	10.59	3,000
1955	Mar. 15, 1955	7.00	450
1956	Apr. 1, 1956	5.91	259
1957	Mar. 24, 1957	4.21	88
1958	Apr. 7, 1958	5.02	154
1959	Mar. 26, 1959	7.43	559
1960	June 23, 1960	9.09	1,380
1961	July 31, 1961	10.10	2,400
1962	Aug. 31, 1962	12.53	5,740
1963	May 13, 1963	8.30	890
1964	May 24, 1964	5.59	217
1965	Sept.30, 1965	9.46	1,720
1966	July 14, 1966	9.49	1,750
1967	June 9, 1967	10.27	2,600
1968	July 23, 1968	11.02	3,570
1969	June 26, 1969	12.48	5,700
1970	May 14, 1970	7.37	530

05420640 Little Wapsipinicon River at Elma, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Oct. 9, 1970	9.27	1,380
1972	July 12, 1972	9.23	1,350
1973	May 27, 1973	9.25	1,260
1974	June 4, 1974	11.21	2,600
1975	Apr. 28, 1975	9.65	1,350
1976	--	a	<430
1977	--	a	<430
1978	--	a	<430
1979	Aug. 22, 1979	9.43	1,250
1980	Aug. 16, 1980	10.59	2,100
1981	--	a	<430
1982	Mar. 18, 1982	8.64	910
1983	Apr. 15, 1983	9.13	1,080
1984	June 17, 1984	9.56	1,280

a Peak stage did not reach bottom of gage.
c Affected by ice.

05420650 Little Wapsipinicon River near New Hampton, Iowa

Location.--Lat 43°04', long 92°24', in NW1/4 sec.9, T.95 N., R.13 W., Chickasaw County, at bridge on U.S. Highway 18, 4 miles west of New Hampton.
Drainage area.--95.0mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	July 14, 1966	87.12	2,250
1967	June 10, 1967	86.92	2,000
1968	July 25, 1968	86.92	2,000
1969	June 27, 1969	88.72	9,200
1970	Aug. 8, 1970	87.89	4,100
1971	Oct. 9, 1970	87.26	2,600
1972	July 12, 1972	86.81	1,800
1973	Apr. 17, 1973	86.74	2,000
1974	June 4, 1974	88.15	4,800
1975	Apr. 28, 1975	87.12	2,280
1976	--	a	<420
1977	Apr. 3, 1977	86.17	1,210
1978	Apr. 19, 1978	85.53	765
1979	Aug. 22, 1979	86.84	1,900
1980	Aug. 13, 1980	87.79	3,800
1981	--	a	<420
1982	Mar. 18, 1982	86.88	1,940

a Peak stage did not reach bottom of gage.

05420650 Little Wapsipinicon River near New Hampton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	May 19, 1983	86.74	1,800
1984	June 17, 1984	85.89	1,080

05420690 East Fork Wapsipinicon River near New Hampton, Iowa

Location.--Lat 43°05', long 92°18', in SE1/4 sec.31, T.96 N., R.12 W., Chickasaw County, at bridge on U.S. Highway 63, about 2 miles north of New Hampton.
Drainage area.--30.3 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	July 14, 1966	86.04	4,350
1967	June 10, 1967	84.41	542
1968	June 24, 1968	85.41	1,700
1969	June 26, 1969	89.61	11,000
1970	Aug. 8, 1970	86.12	4,400
1971	Oct. 9, 1970	86.01	4,000
1972	July 12, 1972	85.76	3,700
1973	Apr. 17, 1973	85.00	2,800
1974	June 9, 1974	85.16	2,600
1975	Apr. 28, 1975	84.79	2,020
1976	--	a	<530
1977	Apr. 3, 1977	84.62	1,810
1978	--	a	<530
1979	May 19, 1979	83.89	1,000
1980	Aug. 10, 1980	85.12	2,520
1981	--	a	<530
1982	Mar. 18, 1982	85.42 c	b

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

05420690 East Fork Wapsipinicon River near New Hampton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	May 19, 1983	83.87	1,000
1984	--	a	<480

a Peak stage did not reach bottom of gage.

05420850 Little Wapsipinicon River near Oran, Iowa

Location.--Lat 42°43', long 92°02', in NE1/4 sec.8, T.91 N., R.10 W., Fayette County, at bridge on State Highway 3, about 2 miles northeast of Oran.
Drainage area.--94.1 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	July 14, 1966	87.75	1,450
1967	Jan. 25, 1967	84.14	470
1968	July 17, 1968	90.00	5,000
1969	June 27, 1969	88.61	2,350
1970	Mar. 3, 1970	87.24	1,150
1971	June 24, 1971	88.35	2,100
1972	--	a	<60
1973	June 18, 1973	88.86	2,800
1974	June 9, 1974	88.07	1,800
1975	Mar. 21, 1975	88.10	1,800
1976	Apr. 17, 1976	88.64	2,500
1977	Feb. 25, 1977	83.32	240
1978	Apr. 6, 1978	87.64	1,050
1979	Aug. 30, 1979	91.81	6,200
1980	July 26, 1980	87.69	1,200
1981	June 23, 1981	88.07	1,350
1982	May 22, 1982	85.45	720

a Peak stage did not reach bottom of gage.

05420850 Little Wapsipinicon River near Oran, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	July 1, 1983	89.37	2,000
1984	June 22, 1984	88.30	1,550

05420855 Buck Creek near Oran, Iowa

Location.--Lat 42°43', long 92°08', in NE1/4 sec.10, T.91 N., R.11 W., Bremer County, at bridge on State Highway 3, 2.5 miles northwest of Oran. State Highway 3, 2.5 miles northwest of Oran.
Drainage area.--37.9 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)	
1966	July 14, 1966	88.94	800	
1967	June 15, 1967	86.13	158	
1968	July 17, 1968	88.73	740	
1969	June 27, 1969	89.05	850	
1970	Mar. 3, 1970	87.68	455	
1971	June 24, 1971	87.59	435	
1972	--	a	<150	c
1973	Apr. 16, 1973	88.09	560	
1974	June 9, 1974	87.98	530	
1975	Mar. 21, 1975	87.89	510	
1976	Apr. 17, 1976	88.35	630	
1977	--	a	<150	
1978	Apr. 6, 1978	87.73	620	
1979	Aug. 29, 1979	90.00	1,460	
1980	Aug. 13, 1980	89.67	1,200	
1981	Sept.26, 1981	89.19	900	
1982	May 22, 1982	87.58	400	

a Peak stage did not reach bottom of gage.
c Affected by ice.

05420855 Buck Creek near Oran, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	July 1, 1983	88.96	820
1984	June 22, 1984	88.10	500

05420960 Harter Creek near Independence, Iowa
(Discontinued Sept. 30, 1963)

Location.--Lat 42°29'50", long 91°53'30", near SW1/4 corner sec.27, T.89 N., R.9 W., Buchanan County, at bridge 0.2 mile west of State Highway 150 and 2 miles north of Independence.
Drainage area.--6.17 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Mar. 10, 1952	6.31	162
1953	Feb. 20, 1953	7.43	420
1954	Apr. 30, 1954	6.74	238
1955	Feb. 20, 1955	5.67	90
1956	--	a	<72
1957	June 17, 1957	8.18	750
1958	Feb. 28, 1958	5.51	77
1959	Mar. 26, 1959	9.17	1,450
1960	May 7, 1960	8.35	842
1961	Aug. 7, 1961	8.07	695
1962	May 5, 1962	9.96	2,280
1963	Mar. 18, 1963	6.92	275
Discontinued	Sept. 30, 1963		

a Peak stage did not reach bottom of gage.

05421000 Wapsipinicon River at Independence, Iowa

Location.--Lat 42°27'49", long 91°53'42", in SE1/4 sec.4, T.88 N., R.9 W., Buchanan County, on right bank at Sixth Street in Independence, 1,800 ft downstream from dam at abandoned hydroelectric plant, 4.9 miles downstream from Otter Creek, 9.7 miles upstream from Pine Creek, and at mile 142.5.
Drainage area.--1,048 mi².
Gage.--Water-stage recorder and concrete control. Datum of gage is 882.85 ft National Geodetic Vertical Datum of 1929. Prior to May 24, 1941, nonrecording gage in tailrace of powerplant, 1,800 ft upstream at datum 80.00 ft lower.
Stage-discharge relation.--Defined by current-meter measurements. Large shift in relation occurred in June 1947.
Flood stage.--12 feet.
Remarks.--Base for partial-duration series, 3,000 ft³/s. Base revised to 4,000 ft³/s in 1966.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1933	July 3, 1933	--	1,080 a
1934	Apr. 11, 1934	5.9	1,010
1935	Mar. 5, 6, 1935	11.4	7,220
	Mar. 24, 1935	8.4	4,040
	May 5, 1935	7.5	3,000
1936	Mar. 12, 1936	11.1	6,900
	Mar. 26, 1936	9.7	5,170
1937	Feb. 20, 1937	7.9	3,480
	Mar. 8, 1937	12.0	7,900
	June 15, 1937	7.6	3,180
	June 21, 1937	8.0	3,600
1938	Feb. 7, 1938	7.7	3,240
	Sept.19, 1938	8.4	3,990
1939	Nov. 9, 10, 1938	7.4	2,790
1940	Sept. 1, 1940	7.3	2,540
1941	Mar. 24, 1941	8.6	4,120
	Apr. 4, 1941	8.3	3,870
	Apr. 19, 1941	7.7	3,280

1941 CONTINUED ON NEXT PAGE

a Maximum for period July to September 1933.

05421000 Wapsipinicon River at Independence, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1941 cont.	June 2, 1941	9.9	5,100
	Sept. 8, 1941	10.13	5,250
	Sept.16, 1941	8.6	4,060
1942	Oct. 7, 1941	8.6	4,060
	Nov. 1, 1941	10.9	6,580
	Mar. 22, 1942	8.2	3,750
	June 3, 1942	8.5	4,000
	June 12, 1942	13.46	9,060
1943	Oct. 6, 1942	8.0	3,560
	Feb. 24, 1943	7.6	3,110
	Mar. 16, 1943	8.59	4,090
	Mar. 20, 1943	7.3	3,000
	Mar. 31, 1943	7.7	3,160
1944	Mar. 15, 1944	8.4	3,900
	May 22, 1944	9.4	4,740
	June 17, 1944	15.64	13,800
	June 22, 1944	7.9	3,440
1945	Mar. 14, 1945	8.8	4,220
	Mar. 18, 1945	13.95	10,900
	Apr. 17, 1945	8.0	3,550
	June 3, 1945	10.0	5,150
1946	Jan. 6, 1946	13.36	9,910
	Jan. 9, 1946	9.0	4,460
	Mar. 7, 1946	8.9	4,380
	Mar. 14, 1946	10.0	5,190
1947	Apr. 11, 1947	11.5	7,220
	June 2, 1947	10.7	6,270
	June 5, 1947	10.6	6,160
	June 14, 1947	18.74	21,500
	June 18, 1947	12.7	10,000
	July 1, 1947	9.0	4,770
1948	Feb. 28, 1948	9.4	5,480
	Mar. 3, 1948	8.2	3,940
	Mar. 20, 1948	13.33	11,100
	May 12, 1948	7.6	3,140
1949	Mar. 6, 1949	10.78	7,420
	Apr. 1, 1949	7.6	3,140
1950	Mar. 7, 1950	12.82	10,300
	Mar. 27, 1950	8.5	4,300
	June 19, 1950	7.5	3,020
	June 24, 1950	9.8	6,020
	Sept.21, 1950	10.3	6,720

05421000 Wapsipinicon River at Independence, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1951	Apr. 30, 1951	18.20	20,800
1952	Apr. 3, 1952	9.76	6,460
1953	Aug. 8, 1953	9.72	6,350
1954	May 3, 1954	7.30	2,780
1955	Feb. 21, 1955	6.35	1,560
1956	Apr. 2, 1956	6.77	2,100
1957	June 19, 1957	7.79	3,270
1958	June 1, 1958	6.07	1,210
1959	Mar. 27, 1959	13.67	11,800
	July 1, 1959	11.57	8,460
1960	Mar. 30, 1960	15.63	15,200
	Apr. 19, 1960	10.14	6,300
	May 1, 1960	7.84	3,270
	May 7, 1960	12.07	9,210
1961	Mar. 7, 1961	8.24	3,690
	Mar. 29, 1961	16.11	15,700
	Apr. 25, 1961	7.94	3,330
	Aug. 6, 1961	8.16	3,690
1962	Oct. 1, 1961	7.63	3,030
	Nov. 3, 1961	9.85	5,640
	Mar. 31, 1962	15.43	14,400
	May 6, 1962	12.32	9,050
	May 13, 1962	9.18	4,890
	July 21, 1962	11.65	8,040
1963	Mar. 19, 1963	7.82	3,210
	Mar. 22, 1963	7.68	3,090
	May 15, 1963	7.84	3,210
	June 10, 1963	8.05	3,450
	July 20, 1963	7.82	3,210
1964	Apr. 3, 1964	6.67	1,830
1965	Mar. 2, 1965	8.20	3,980
	Mar. 5, 1965	9.67	5,680
	Apr. 2, 1965	10.57	6,690
	Apr. 7, 1965	12.19	8,880
	Sept. 24, 1965	9.30	5,010

BASE REVISED TO 4,000 CFS

05421000 Wapsipinicon River at Independence, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1966	Feb. 10, 1966	10.27	6,250
	Feb. 13, 1966	8.84	4,460
	July 15, 1966	8.51	4,060
	July 18, 1966	8.92	4,550
1967	June 16, 1967	7.88	3,340
1968	July 18, 1968	21.11	26,800
	July 25, 1968	11.32	7,650
	Aug. 8, 1968	10.86	7,020
1969	Mar. 26, 1969	9.16	5,110
	Apr. 18, 1969	8.37	4,130
	July 2, 1969	15.76	14,900
	July 9, 1969	11.49	8,190
	July 19, 1969	9.14	5,080
1970	May 15, 1970	8.76	4,610
	June 15, 1970	9.01	4,910
1971	Oct. 14, 1970	8.39	4,160
	Mar. 16, 1971	10.10	6,330
	Apr. 4, 1971	10.29	6,580
1972	May 7, 1972	9.31	5,280
	Sept.30, 1972	11.50	8,200
1973	Feb. 2, 1973	8.49	4,290
	Mar. 15, 1973	11.65	8,410
	Apr. 17, 1973	12.57	9,760
	May 8, 1973	12.46	9,590
	May 28, 1973	8.50	4,300
1974	June 10, 1974	9.86	6,020
	June 14, 1974	9.66	5,760
1975	Mar. 22, 1975	11.06	7,580
	May 3, 1975	8.35	4,100
1976	Apr. 22, 1976	11.07	7,600
1977	Sept.27, 1977	5.94	1,100
1978	Apr. 7, 1978	9.54	5,630
1979	Mar. 20, 1979	14.55	12,900
	Mar. 23, 1979	12.29	9,340
	Mar. 31, 1979	11.86	8,700
	Apr. 21, 1979	10.06	6,280

1979 CONTINUED ON NEXT PAGE

05421000 Wapsipinicon River at Independence, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1979 cont.	May 3, 1979	9.00	4,900
	July 31, 1979	10.48	6,820
	Aug. 24, 1979	15.37	13,200
	Aug. 30, 1979	17.31	16,300
1980	Aug. 16, 1980	10.76	7,380
1981	June 25, 1981	8.27	4,000
	Sept. 2, 1981	11.37	8,020
1982	Mar. 17, 1982	10.03	6,240
	Mar. 20, 1982	11.54	8,260
1983	Feb. 22, 1983	8.22	4,180
	Mar. 10, 1983	9.48	5,780
	Apr. 18, 1983	9.85	6,080
	May 26, 1983	9.77	5,900
	July 4, 1983	11.11	7,650
1984	Feb. 21, 1984	9.33	5,330
	May 29, 1984	8.49	4,290
	June 24, 1984	9.45	5,490

05421100 Pine Creek tributary near Winthrop, Iowa

Location.--Lat 42°29', long 91°47', in swl/4 sec.27, T.89 N., R.8 w., Buchanan County, at culvert, 1.4 miles north of U.S. Highway 20 and 2.5 miles northwest of Winthrop.
Drainage area.--0.334 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	--	a	<10 b
1953	July 26, 1953	6.30	137
1954	Aug. 30, 1954	4.41	50
1955	Feb. 20, 1955	3.73	29
1956	--	a	<10 b
1957	June 17, 1957	6.92	173
1958	Aug. 20, 1958	6.61	154
1959	June 24, 1959	8.67	304
1960	May 7, 1960	4.78	64
1961	--	a	<10
1962	May 5, 1962	6.24	140
1963	July 19, 1963	4.09	40
1964	Apr. 3, 1964	4.41	49
1965	Apr. 2, 1965	4.40	49
1966	June 12, 1966	5.45	92
1967	June 7, 1967	3.54	24
1968	July 17, 1968	8.97	334
1969	July 18, 1969	6.06	123

a Peak stage did not reach bottom of gage.
b Discharges revised from those previously published.

05421100 Pine Creek tributary near Winthrop, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	June 14, 1970	8.42	290
1971	June 24, 1971	5.36	87
1972	--	a	<10
1973	May 8, 1973	4.86	66
1974	June 22, 1974	8.17	270
1975	Mar. 21, 1975	4.33	47
1976	--	a	<10
1977	Feb. 25, 1977	3.80	30
1978	June 17, 1978	5.95	115
1979	Aug. 30, 1979	5.34	88
1980	June 2, 1980	7.02	180
1981	Sept.26, 1981	8.07	260
1982	May 22, 1982	5.41	90
1983	July 1, 1983	5.65	102
1984	July 9, 1984	6.57	150

a Peak stage did not reach bottom of gage.

05421200 Pine Creek near Winthrop, Iowa

Location.--Lat 42°28',long 91°47', in SW1/4 sec.34, T.89 N.,R. 8 W., Buchanan County at railroad bridge 500 ft upstream from U.S. Highway 20 and 2.5 miles northwest of Winthrop.
Drainage area.--28.3 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1950	Sept.21, 1950	21.70	14,500
1951	June 2, 1951	18.74	10,600
1952	Mar. 10, 1952	13.47	1,090
1953	Feb. 20, 1953	13.43	1,070
1954	Apr. 30, 1954	12.35	650
1955	Feb. 20, 1955	12.19	590
1956	--	a	<490
1957	June 17, 1957	13.27	990
1958	--	a	<490
1959	June 25, 1959	13.94	1,360
1960	Mar. 30, 1960	15.17	2,450
1961	Mar. 5, 1961	12.82	800
1962	May 5, 1962	16.68	5,030
1963	Mar. 18, 1963	13.17	962
1964	Apr. 3, 1964	12.78	803
1965	Apr. 2, 1965	14.69	1,940
1966	June 12, 1966	15.61	3,050
1967	June 7, 1967	11.95	532

a Peak stage did not reach bottom of gage.

05421200 Pine Creek near Winthrop, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	July 17, 1968	22.98	24,200
1969	July 18, 1969	15.45	2,500
1970	Mar. 2, 1970	15.47	2,500
1971	Mar. 13, 1971	13.34	1,000
1972	--	a	<360
1973	May 8, 1973	13.94	1,320
1974	Mar. 3, 1974	12.83	800
1975	Mar. 21, 1975	14.32	1,600
1976	Mar. 13, 1976	12.25	600
1977	--	a	<360
1978	June 17, 1978	12.49	1,000
1979	June 18, 1979	13.52	1,050
1980	Mar. 16, 1980	13.57	1,100
1981	Sept.26, 1981	13.83	1,250
1982	May 22, 1982	13.25	950
1983	Nov. 12, 1982	12.09	560
1984	July 9, 1984	13.04	870

a Peak stage did not reach bottom of gage.

05421300 Pine Creek tributary No. 2 at Winthrop, Iowa

Location.--Lat 42°28', long 91°44', at N1/4 corner sec.2, T.88 N., R.8 W., Buchanan County, at culvert on U.S. Highway 20 near west city limits of Winthrop.
Drainage area.--0.704 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defines by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	July 26, 1953	5.78	27
1954	Aug. 30, 1954	5.90	36
1955	--	a	<1.0 b
1956	May 29, 1956	6.28	87
1957	June 17, 1957	6.50	135
1958	Aug. 20, 1958	6.04	51
1959	June 24, 1959	7.12	443
1960	Mar. 30, 1960	7.05	390
1961	Mar. 5, 1961	5.30	7.1
1962	May 29, 1962	6.37	104
1963	--	a	<1.0 b
1964	Apr. 3, 1964	5.89	35
1965	Mar. 5, 1965	5.50	13
1966	June 12, 1966	6.61	168
1967	Jan. 25, 1967	5.50	13
1968	July 17, 1968	7.26	570
1969	July 18, 1969	7.15	470

a Peak stage did not reach bottom of gage.
b Discharges revised from those previously published.

05421300 Pine Creek tributary No. 2 at Winthrop, Iowa --(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	June 14, 1970	7.17	470
1971	June 24, 1971	6.61	100
1972	--	a	<7.0
1973	May 8, 1973	5.78	420
1974	June 22, 1974	6.64	140
1975	Mar. 21, 1975	5.55	16
1976	--	a	<7.0
1977	Feb. 25, 1977	5.25	16
1978	June 17, 1978	6.40	115
1979	Aug. 30, 1979	6.41	120
1980	June 2, 1980	6.78	220
1981	Sept.26, 1981	6.67	180
1982	Feb. 22, 1982	5.52	14
1983	Nov. 12, 1982	5.15	13
1984	June 22, 1984	6.85	270

a Peak stage did not reach bottom of gage.

05421400 Wapsipinicon River at Central City, Iowa
(Discontinued Aug. 31, 1950)

Location.--Lat 42°12'20", long 91°31'55", in sec.3, T.85 N., R.6 W., Linn County, on State Highway 13 in Central City, 4.3 miles downstream from Walton Creek.
Drainage area.--1,263 mi².
Gage.--Nonrecording. Datum of gage 812.24 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 3,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1929	Mar. 7, 1929	17.00	13,000
1941	Apr. 7, 1941	13.6	4,300
	Apr. 21, 1941	13.1	3,200
	June 5, 1941	13.9	4,800
	Sept. 9, 1941	15.8	9,280
	Sept.18, 1941	13.2	3,500
1942	Oct. 8, 1941	13.6	4,200
	Nov. 3, 1941	14.6	6,320
	Mar. 24, 1942	13.5	4,000
	June 14, 1942	15.8	9,280
	July 31, 1942	13.4	3,700
	Aug. 3, 1942	14.8	6,760
1943	Oct. 8, 1942	13.0	3,000
	Mar. 17, 1943	13.8	4,600
	Mar. 22, 1943	13.3	3,600
	Apr. 2, 1943	13.3	3,600
1944	Mar. 17, 1944	13.4	3,900
	May 24, 1944	14.0	5,110
	June 19, 1944	16.8	12,400
	June 23, 1944	14.4	5,880
1945	Mar. 20, 1945	16.3	10,800
	Apr. 19, 1945	13.2	3,400
	June 5, 1945	14.3	5,660

05421400 Wapsipinicon River at Central City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1946	Jan. 8, 1946	15.6	8,760
	Mar. 9, 1946	14.1	5,220
	Mar. 18, 1946	14.9	6,980
	Sept. 23, 1946	13.1	3,200
1947	Apr. 13, 1947	15.0	7,200
	June 2, 1947	16.0	9,800
	June 6, 1947	17.0	12,000
	June 15, 1947	19.3	22,500
	July 4, 1947	14.0	5,000
1948	Mar. 1, 1948	13.7	4,400
	Mar. 4, 1948	13.2	3,300
	Mar. 22, 1948	16.3	10,800
	May 13, 1948	13.1	3,200
1949	Mar. 8, 1949	14.9	6,980
	Apr. 1, 1949	13.2	3,500
1950	Mar. 9, 1950	15.4	8,240
	Mar. 28, 1950	13.6	4,100
	June 25, 1950	14.1	5,220
	Sept. 22, 1950	--	6,600
1968	July 19, 1968	17.29	23,000

05421500 Wapsipinicon River at Stone City, Iowa
(Discontinued Sept. 30, 1914)

Location.--Lat 42°07'00", long 91°21'10", in SW1/4 NE1/4 sec.6, T.84 N., R.4 W., Jones County, at highway bridge at Stone City, about 180 ft usptream from Chicago, Milwaukee, St. Paul & Pacific Railroad bridge, 3.1 miles upstream from Buffalo Creek and at mile 92.5.
Drainage area.--1,324 mi².
Gage.--Nonrecording. Datum of gage is 770.91 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 1,900 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1892	July ??, 1892	28.00	32,000
1903	July 13, 1903	15.2	10,500 a
1904	Mar. 21, 1904	11.3	5,820
	Mar. 27, 1904	12.8	7,510
	May 30, 1904	6.8	2,370
1905	Mar. 15, 1905	8.4	3,400
	Mar. 22, 1905	13.1	7,900
	May 18, 1905	8.2	3,270
	June 2, 1905	6.5	2,140
	July 7, 1905	6.9	2,370
	July 23, 1905	6.2	1,930
1906	Mar. 4, 1906	12.2	6,780
	Mar. 31, 1906	14.2	9,440
	Apr. 11, 1906	8.4	3,400
1907	Feb. 22, 1907	9.2	4,000
	Mar. 4, 1907	9.6	4,320
	June 13, 1907	6.6	2,160
	July 20, 1907	10.1	4,720
	Aug. 17, 1907	10.3	4,890
	Aug. 31, 1907	8.7	3,620

a Result of discharge measurement.

05421500 Wapsipinicon River at Stone City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1908	Oct. 5, 1907	6.6	2,190
	Feb. 26, 1908	8.4	3,400
	Mar. 7, 1908	8.8	3,700
	May 30, 1908	9.7	4,400
	July 3, 1908	7.4	2,680
	July 21, 1908	8.3	3,330
1909	Feb. 24, 1909	7.2	2,600
	Mar. 7, 1909	8.5	3,490
	Mar. 27, 1909	9.2	4,000
	Apr. 22, 1909	14.0	9,160
	May 1, 1909	9.7	4,400
	May 17, 1909	10.1	4,720
	June 8, 1909	7.3	2,650
1910	Dec. 7, 1909	7.2	2,560
	Mar. 12, 1910	9.5	4,240
	Mar. 16, 1910	11.7	6,230
1911	Feb. 17, 1911	14.3	9,580
	Aug. 16, 1911	6.4	2,070
1912	Oct. 1, 1911	7.3	2,650
	Dec. 20, 1911	6.8	2,330
	Mar. 24, 1912	8.7	3,620
	Mar. 30, 1912	14.8	10,300
	Apr. 1, 1912	15.6	11,500
	Apr. 14, 1912	8.6	3,560
	Aug. 19, 1912	7.6	2,860
1913	Mar. 19, 1913	10.6	5,200
	Mar. 24, 1913	10.8	5,340
	Apr. 13, 1913	6.8	2,310
	May 24, 1913	9.8	4,450
	May 29, 1913	9.9	4,570
1968	July 19, 1968	--	20,100

05421550 Buffalo Creek above Winthrop, Iowa

Location.--Lat 42°30', long 91°44', near NE corner sec.25, T.89 N., R.8 W., Buchanan County, at bridge, 1.5 miles northeast of Winthrop.
Drainage area.--68.2 mi².
Gage.--Crest-stage gage. Datum is arbitrary.
Stage-discharge relation.--Defined by discharge measurements below and extended above 2,000 ft³/s by logarithmic plotting.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1957	June 17, 1957	16.10	710
1958	May 31, 1958	16.92	960
1959	July 1, 1959	17.45	1,600
1960	Mar. 30, 1960	18.59	5,350
1961	Mar. 26, 1961	17.48	2,090
1962	May 6, 1962	18.33	4,260
1963	Mar. 17, 1963	17.25	1,760
1964	Apr. 4, 1964	15.55	612
1965	Apr. 2, 1965	17.95	3,080
1966	June 12, 1966	17.00	1,460
1967	June 15, 1967	15.08	465
1968	July 17, 1968	19.36	14,100
1969	July 18, 1969	18.74	8,800
1970	June 14, 1970	16.98	2,200
1971	Mar. 22, 1971	17.60	1,900
1972	--	a	<230
1973	Apr. 16, 1973	17.20	1,330

a Peak did not reach bottom of gage.

05421550 Buffalo Creek above Winthrop, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	Mar. 3, 1974	16.63	900
1975	Mar. 21, 1975	17.52	1,700
1976	--	a	<230
1977	Sept.18, 1977	15.83	600
1978	Aug. 27, 1978	16.29	740
1979	Aug. 30, 1979	19.11	11,000
1980	--	16.03 c	b
	June 2, 1980	15.99	650
1981	Sept.26, 1981	18.94	8,000
1982	Feb. 22, 1982	16.69	1,200
1983	July 1, 1983	15.78	590
1984	May 25, 1984	17.08	1,200

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

05421600 Buffalo Creek near Winthrop, Iowa

Location.--Lat 42°23', long 91°43', in NE1/4 sec.1, T.88 N., R.8 W., Buchanan County, at bridge on U.S. Highway 20, 1 mile east of Winthrop.
Drainage area.--71.4 mi².
Gage.--Crest-stage gage. Datum is arbitrary. 1953 to 1955 at different datum.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	Feb. 20, 1953	9.19	743
1954	May 1, 1954	8.68	676
1955	Feb. 20, 1955	6.90	445
1966	June 12, 1966	88.64	1,500 b
1967	--	a	<540 b
1968	July 17, 1968	91.38	14,800
1969	July 18, 1969	90.36	8,800
1970	June 14, 1970	87.61	2,200
1971	Mar. 22, 1971	88.19	1,600
1972	--	a	<540 b
1973	Apr. 16, 1973	88.24	1,700
1974	June 22, 1974	88.45	1,900
1975	Mar. 21, 1975	88.86	2,600
1976	Mar. 16, 1976	87.75	1,050
1977	--	a	<540
1978	June 17, 1978	87.16	860

a Peak stage did not reach bottom of gage.
b Discharges revised from those previously published.

05421600 Buffalo Creek near Winthrop, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1979	Aug. 30, 1979	90.95	11,100
1980	--	86.69 c	650
1981	Sept.26, 1981	90.30	8,200
1982	Feb. 22, 1982	88.22	1,400
1983	--	a	<540
1984	May 25, 1984	89.00	2,900

a Peak stage did not reach bottom of gage.
c Affected by ice.

05422000 Wapsipinicon River near DeWitt, Iowa

Location.--Lat 41°46'01", long 90°32'05", in SW1/4 NE1/4 sec.6, T.80 N., R.4 E., Clinton County, on left bank 5 ft upstream from bridge on U.S. Highway 61, 0.9 mi downstream from Silver Creek, 4.0 mi south of water tower in De Witt, 6.2 mi upstream from Brophy Creek, and 18.2 miles upstream from mouth.
Drainage area.--2,330 mi².
Gage.--Water-stage recorder. Datum of gage is 598.81 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--10 feet.
Remarks.--Base for partial-duration series, 6,000 ft³/s. Base was 4,500 prior to 1970.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1935	Mar. 12, 1935	9.7	8,070
	Mar. 27, 1935	8.0	5,440
1936	Mar. 18, 1936	9.1	6,880
	Apr. 1, 1936	8.4	5,440
1937	Feb. 21, 1937	11.65 a	7,200 b
	Mar. 6, 1937	10.8	14,900
	Apr. 6, 1937	8.2	5,320
1938	Feb. 8, 1938	9.48 a	7,810 b
	May 20, 1938	8.2	5,260
	June 12, 1938	8.1	5,170
	June 15, 1938	8.9	6,550
1939	Mar. 13, 1939	9.7	8,500
1940	June 27, 1940	6.8	3,520
1941	Mar. 23, 1941	8.1	4,840
	Apr. 10, 1941	8.3	5,280
	Apr. 21, 1941	8.3	5,160
	June 1, 1941	8.6	5,590
	June 15, 1941	7.9	4,650
	Sept.14, 1941	10.2	8,130
1942	Oct. 13, 1941	8.4	4,760
	Oct. 23, 1941	8.6	5,000
	Nov. 8, 1941	9.6	6,800
	June 19, 1942	10.3	8,390
	Aug. 8, 1942	9.6	7,280

a Affected by ice. b About.

05422000 Wapsipinicon River near DeWitt, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1943	Dec. 28, 1942	10.26 a	5,500 b
	Feb. 23, 1943	8.7	5,220
	Mar. 19, 1943	9.4	6,610
	Mar. 26, 1943	8.5	4,870
1944	Mar. 16, 1944	9.3	6,520
	Apr. 24, 1944	9.4	6,550
	May 21, 1944	10.5	10,400
	June 24, 1944	10.3	9,440
	June 27, 1944	12.07	26,000
1945	Mar. 25, 1945	10.2	9,000
	Apr. 22, 1945	8.2	4,580
	May 18, 1945	8.4	4,970
	June 11, 1945	8.8	5,490
	June 30, 1945	8.4	4,900
1946	Jan. 6, 1946	11.1	14,600
	Jan. 10, 1946	10.7	11,600
	Mar. 21, 1946	10.0	8,240
	Sept. 6, 1946	8.7	5,320
1947	Apr. 6, 1947	9.3	6,420
	Apr. 21, 1947	10.3	9,440
	June 9, 1947	11.3	16,600
	June 19, 1947	11.8	21,600
	July 7, 1947	9.8	7,610
	July 13, 1947	8.5	5,000
1948	Feb. 28, 1948	10.6 a	6,500 b
	Mar. 9, 1948	10.9 a	8,500 b
	Mar. 20, 1948	11.1	17,200
1949	Mar. 10, 1949	10.0	8,240
	July 21, 1949	9.9	7,910
1950	Mar. 13, 1950	10.1	9,700
	Apr. 1, 1950	8.3	4,580
	Apr. 26, 1950	9.8	8,480
	June 19, 1950	9.0	5,500
1951	Feb. 20, 1951	10.81 a	9,800 b
	Feb. 26, 1951	11.20	14,700
	Apr. 3, 1951	11.07	13,600
	Apr. 14, 1951	10.87	12,300
	May 6, 1951	11.30	15,600
	June 8, 1951	8.70	5,450
	July 15, 1951	10.67	11,100

a Affected by ice. b About.

05422000 Wapsipinicon River near DeWitt, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1952	Nov. 14, 1951	10.27	8,000
	Mar. 13, 1952	10.88	10,800
	Apr. 10, 1952	9.39	5,620
	May 23, 1952	9.03	5,280
	June 14, 1952	9.34	5,800
1953	Feb. 8, 1953	9.16	5,620
	Feb. 21, 1953	10.73	9,350
1954	Aug. 19, 1954	8.15	3,940
1955	Oct. 11, 1954	9.33	5,620
	Feb. 21, 1955	10.22 a	5,100 b
	Apr. 20, 1955	8.76	4,780
	Apr. 25, 1955	8.68	4,630
1956	May 30, 1956	8.09	3,720
1957	June 21, 23, 1957	7.31	2,770
1958	June 14, 1958	9.27	5,620
1959	Feb. 27, 1959	8.9 a	5,400 b
	Mar. 21, 1959	10.23	6,950
	Apr. 4, 1959	11.17	10,600
	Apr. 28, 1959	9.27	5,250
	July 7, 1959	10.56	8,200
1960	Jan. 16, 1960	10.88	10,800
	Apr. 4, 1960	11.71	18,300
	Apr. 24, 1960	10.24	7,600
	May 10, 1960	11.16	12,600
	June 6, 1960	10.02	6,800
1961	Mar. 12, 1961	9.86	6,420
	Apr. 4, 1961	11.36	14,200
	June 9, 1961	10.00	6,800
	Sept.14, 1961	10.07	6,950
1962	Nov. 8, 1961	10.86	10,500
	Nov. 17, 1961	10.95	11,200
	Mar. 20, 1962	11.24	13,400
	Apr. 6, 1962	11.67	17,600
	May 13, 1962	10.82	10,200
	June 1, 1962	9.43	5,350
	July 30, 1962	9.87	6,420
1963	Mar. 20, 1963	9.93	6,680

a Affected by ice. b About.

05422000 Wapsipinicon River near DeWitt, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	June 22, 1964	7.73	3,030
1965	Mar. 14, 1965	10.38 a	7,000 b
	Apr. 14, 1965	11.05	10,200
	Sept.24, 1965	11.44	11,100
1966	Oct. 1, 1965	9.86	6,200
	Feb. 10, 1966	11.17 a	9,450 b
	Feb. 18, 1966	11.88 a	--
	May 25, 1966	10.58	7,040
1967	Mar. 24, 1967	8.65	3,770
1968	July 25, 1968	11.91	13,800
1969	June 9, 1969	10.37	6,090
	July 9, 1969	12.30	16,200
	July 23, 1969	12.02	14,000
	BASE REVISED TO 6,000 CFS		
1970	Mar. 6, 1970	10.53	6,480
	May 15, 1970	10.72	6,960
	May 25, 1970	11.04	7,960
	June 20, 1970	10.54	6,500
1971	Mar. 22, 1971	11.02	7,880
	Apr. 10, 1971	10.57	6,580
	June 25, 1971	10.55	6,520
1972	Apr. 18, 1972	10.56	6,350
	Apr. 23, 1972	10.50	6,200
	May 13, 1972	11.06	8,040
	Aug. 7, 1973	10.36	6,070
1973	Oct. 8, 1972	10.51	6,420
	Mar. 21, 1973	11.35	9,350
	Apr. 22, 1973	12.76	27,000
	May 3, 1973	11.50	10,200
	May 14, 1973	11.34	9,300
	June 4, 1973	10.74	7,020
	June 18, 1973	11.52	10,300
1974	May 17, 1974	13.07	29,900
	June 12, 1974	10.61	6,380
	June 17, 1974	10.52	6,150
	June 23, 1974	11.62	10,200
1975	Mar. 23, 1975	11.65	11,200

a Affected by ice. b About.

05422000 Wapsipinicon River near DeWitt, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1976	Apr. 30, 1976	11.18	8,520
1977	Sept.19, 1977	10.90	5,540
1978	Apr. 11, 1978	11.55	8,320
	May 14, 1978	10.52	6,400
1979	Mar. 23, 1979	12.32	16,400
	Apr. 28, 1979	11.08	6,860
	Aug. 21, 1979	11.15	6,900
	Aug. 31, 1979	12.14	14,700
	Sept. 5, 1979	12.45	20,400
1980	Aug. 22, 1980	11.17	8,480
	Sept.15, 1980	10.90	7,470
1981	Aug. 15, 1981	11.92	13,400
	Sept. 8, 1981	11.61	7,170
	Sept.28, 1981	10.55	6,480
1982	Oct. 1, 1981	10.56	6,500
	Oct. 19, 1981	11.00	7,800
	Mar. 24, 1982	11.78	10,200
	May 31, 1982	11.14	7,350
	June 16, 1982	12.02	10,800
	July 11, 1982	10.82	6.400
	Aug. 9, 1982	11.40	9,600
1983	Nov. 20, 1982	10.48	6,160
	Dec. 7, 1982	11.67	11,300
	Mar. 16, 1983	11.07	6,960
	Apr. 4, 1983	11.63	8,840
	Apr. 24, 1983	11.37	8,480
	June 1, 1983	11.14	8,350
	July 12, 1983	11.34	7,680
1984	Feb. 23, 1984	11.44	9,550
	May 7, 1984	11.31	7,710
	June 23, 1984	11.51	8,600
	July 14, 1984	10.68	6,000

05422420 Crow Creek at Eldridge, Iowa
(Discontinued September 1982)

Location.--Lat 41°38'24", long 90°33'07", in SE 1/4SE 1/4 sec. 13, T.79 N., R.3 E., Scott County, on left bank 10 ft upstream from culvert on county road 2.0 mi southeast of Eldridge.
Drainage area.--2.20 mi².
Gage.--Water-stage recorder. Datum of gage is 741.22 ft National Geodetic Verical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial duration series 100 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1978	Oct. 7, 1977	8.16	57
1979	July 14, 1979	9.26	126
	Aug. 18, 1979	8.99	108
	Aug. 20, 1979	12.63	531
	Aug. 27, 1979	9.74	174
1980	June 28, 1980	8.29	56
1981	Sept.26, 1981	9.57	153
1982	June 15, 1982	12.62	522
Discontinued Sept. 30, 1982			

05422450 Crow Creek at Mt. Joy, Iowa
(Discontinued September 1982)

Location.--41°36'54", long 90°32'57", in NW 1/4 SW 1/4 sec. 30, T.79 N., R.4 E., Scott County, on left bank 10 ft downstream from bridge on county road, 1.0 mi east of Mt. Joy.
Drainage area.--6.90 mi^2.
Gage.--Water-stage recorder. Datum of gage is 695.57 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial duration series 200 ft^3/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1978	May 13, 1978	9.08	129
1979	Mar. 19, 1979	10.22	239
	June 18, 1979	9.98	212
	July 14, 1979	10.49	278
	July 27, 1979	10.42	272
	Aug. 20, 1979	16.47	2,150
	Aug. 27, 1979	12.91	697
1980	May 17, 1980	10.76	311
	June 28, 1980	10.53	286
	Aug. 4, 1980	10.54	292
	Aug. 16, 1980	9.87	214
1981	June 24, 1981	10.57	282
	June 29, 1981	10.06	221
	July 26, 1981	10.25	242
	Aug. 5, 1981	12.86	686
	Aug. 5, 1981	10.81	314
	Aug. 14, 1981	10.90	326
	Aug. 14, 1981	12.07	520
	Aug. 28, 1981	--	280
	Sept.26, 1981	--	490
1982	Oct. 14, 1982	10.20	236
	Oct. 17, 1982	12.71	300
	June 15, 1982	15.58	1,750
Discontined Sept. 30, 1982			

05422470 Crow Creek at Bettendorf, Iowa

Location.--Lat 41°33'03", long 90°27'15", in NW 1/4 sec. 24, T.78 N., R4 E., Scott County, on left bank 200 ft upstream from bridge on old U.S. Highway 67, and 0.7 mi upstream from mouth.
Drainage area.--17.8 mi².
Gage.--Water-stage recorder. Datum of gage is 576.23 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial duration series 250 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1978	May 13, 1978	5.22	284
1979	Mar. 18, 1979	5.57	371
	June 18, 1979	5.17	272
	Aug. 18, 1979	7.40	999
	Aug. 20, 1979	10.20	2,460
	Aug. 27, 1979	5.71	412
1980	Aug. 16, 1980	5.16	269
1981	June 29, 1981	5.12	255
	Aug. 5, 1981	5.25	293
	Aug. 15, 1981	5.19	281
	Aug. 26, 1981	5.47	354
	Aug. 28, 1981	5.28	306
	Sept.26, 1981	6.15	534
1982	Oct. 17, 1981	5.58	354
	Mar. 12, 1982	5.37	293
	June 15, 1982	10.24	2,490
	July 6, 1982	6.48	622
	July 10, 1982	5.28	281
	July 19, 1982	5.65	387
	July 27, 1982	5.83	449
1983	Oct. 6, 1982	5.38	323
	Oct. 9, 1982	5.19	276
	Dec. 2, 1982	5.70	401
	Apr. 2, 1983	5.86	479
	May 13, 1983	5.22	286
	June 29, 1983	9.36	1,960
	July 2, 1983	--	--
1984	May 25, 1984	5.10	233

05448150 Pine Creek near Muscatine, Iowa
(Discontinued September 1982)

Location.--Lat 41°28'03",long 90°52'04",in SE1/4 SE1/4 sec. 17, T.77 N., R.1 E., Muscatine County, on right bank 4 ft downstream from Old Pine Creek Mill at Wildcat Den State Park, 1.5 mi upstream from mouth and 9.8 mi northeast of Muscatine.
Drainage area.--38.9 mi².
Gage.--Water-stage recorder.--Datum of gage is 551.84 ft National Geodetic Vertical Datum of 1929. Prior to July 28, 1978 at site 20 ft upstream in pool of mill dam.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial duration series 700 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1976	Nov. 29, 1975	12.07	1,110
	Mar. 4, 1976	15.80	3,670
	Apr. 24, 1976	12.09	1,120
	July 20, 1976	16.22	4,550
1977	Feb. 11, 1977	13.33	1,800
	June 30, 1977	14.77	2,750
	July 18, 1977	8.47	1,170
	Aug. 8, 1977	10.68	4,500
	Sept.18, 1977	8.55	1,290
1978	July 10, 1978	9.69	3,010
1979	Mar. 6, 1979	10.61 a	2,300
	Mar. 8, 1979	-- a	920
	Mar. 10, 1979	-- a	2,200
	aug. 20, 1979	8.1	990
1980	Aug. 4, 1980	4.85	101
1981	June 29, 1981	10.30	3,440
1982	Oct. 17, 1981	10.81	4,820
	Feb. 28, 1982	a	5,670
	June 15, 1982	11.86	8,480
	July 6, 1982	11.97	8,890
	July 18, 1982	11.76	8,110
Discontinued Sept. 30, 1982			

a Affected by ice.

05448400 Westmain Drainage ditch 1 and 2 nr Britt, Iowa

Location.--Lat 43°06', long. 93°47', in SW 1/4 sec. 27, T.96 N., R.25 W., Hancock County, at bridge on U. S. Highway 18 near east city limits of Britt.
Drainage area.--21.2 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	--	a	<60
1967	--	a	<60
1968	--	a	<60
1969	June 29, 1969	82.99	316
1970	--	a	<60
1971	Mar. 16, 1971	81.77	208
1972	June 9, 1972	83.05	318
1973	Mar. 10, 1973	81.71	204
1974	--	a	<60
1975	Apr. 28, 1975	83.59	372
1976	--	a	<60
1977	--	a	<60
1978	--	a	<60
1979	Aug. 21, 1979	84.01	265
1980	--	a	<60
1981	June 24, 1981	82.28	145
1982	June 7, 1982	82.37	145

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05448400 Westmain Drainage ditch 1 and 2 nr Britt, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	--	a	<60
1984	June 7, 1984	82.09	130

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05448500 West Branch Iowa River near Klemme, Iowa
(Discontinued Sept. 30, 1958)

Location.--Lat 42°57'50", long 93°42'20", in NE1/4 NW1/4 sec.17, T.94 N., R.24 W., Hancock County, on downstream side of bridge 6 mi SW of Klemme and 12.4 mi upstream from Iowa River, and 338.9 miles upstream from mouth of Iowa River.
Drainage area.--112 mi².
Gage.--Nonrecording. Datum of gage is 1,180.83 ft National Geodetic Vertical Datum of 1929. Prior to July 13, 1948, at datum 1.0 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--High banks; not subject to overflow.
Remarks.--Base for partial-duration series, 500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1948	May 15, 1948	6.16	110 a
1949	Mar. 27, 1949	7.08	538
1950	Mar. 27, 1950	7.09	522
1951	Feb. 26, 1951	9.63 b	550 c
	Mar. 28, 1951	10.68 b	740 c
	Apr. 7, 1951	11.84	1,420
	May 2, 1951	8.33	565
	June 26, 1951	12.38	1,340
	July 9, 1951	8.38	580
1952	Mar. 30, 1952	9.12	860
	June 14, 1952	7.36	568
	July 7, 1952	7.93	653
1953	June 8, 1953	6.16	391
1954	June 21, 1954	14.97	1,920
1955	July 6, 1955	5.9	349
1956	Mar. 27, 1956	4.40 b	130 c
1957	May 30, 1957	5.15	272
1958	June 4, 1958	5.35	256
Discontinued Sept. 30, 1958			

a Maximum for period April to September.
b Affected by ice. c About.

05448600 East Branch Iowa River above Hayfield, Iowa

Location.--Lat 43°09', long 93°41', near S1/4 corner sec.4, T.96 N., R.24 W., Hancock County, at bridge, 1.5 miles southeast of Hayfield.
Drainage area.--2.23 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements below and extended above 150 ft³/s by logarithmic plotting.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 4, 1953	3.02	24.2
1954	June 18, 1954	7.15	209
1955	July 6, 1955	2.25	10.6
1956	July 2, 1956	2.05	8.0
1957	--	a	<7.0 d
1958	June 4, 1958	2.65	17.0
1959	May 21, 1959	6.77	186
1960	Mar. 29, 1960	4.67	75
1961	Mar. 26, 1961	6.94	196
1962	Aug. 31, 1962	3.32	31.1
1963	May 13, 1963	4.24	59
1964	Sept. 7, 1964	4.25	58
1965	Apr. 6, 1965	7.31	250
1966	Feb. 9, 1966	3.33 c	22
1967	June 10, 1967	3.81	40
1968	July 23, 1968	3.28	26

a Peak stage did not reach bottom of gage.
c Affected by ice.
d Discharge revised from that previously published.

05448600 East Branch Iowa River above Hayfield, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	June 29, 1969	6.70	200
1970	--	a	<7
1971	June 10, 1971	2.08	b
1972	June 9, 1972	5.90	b
1973	Mar. 10, 1973	9.49	200
1974	--	a	<7
1975	Apr. 28, 1975	2.84	20
1976	--	a	<7
1977	--	a	<7
1978	June 15, 1978	3.96	48
1979	Aug. 21, 1979	6.21	b
1980	Aug. 13, 1980	3.87	23
1981	June 24, 1981	5.55	60
1982	June 7, 1982	1.91	7.0 d
1983	Feb. 20, 1983	6.72 c	b
	Sep. 19, 1983	3.32	25
1984	June 7, 1984	6.26	b

a Peak stage did not reach bottom of gage.
b Discharge not determined.
c Ice affected.
d Discharge revised from that previously published.

05448700 East Branch Iowa River near Hayfield, Iowa

Location.--Lat 43°11', long 93°39', in NW1/4 sec.35, T.97 N., R.2 W., Hancock County, at bridge, 2 miles east of Hayfield.
Drainage area.--7.94 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft³/s)
1952	Mar. 29, 1952	6.45		122
1953	Aug. 4, 1953	7.26		172
1954	June 18, 1954	13.01		457
1955	July 6, 1955	6.50		51
1956	July 31, 1956	6.80		60
1957	June 23, 1957	7.11		69
1958	June 4, 1958	9.52		187
1959	May 21, 1959	11.89		357
1960	Mar. 29, 1960	6.33		34
1961	Mar. 26, 1961	12.16		260
1962	July 5, 1962	9.17		166
1963	July 19, 1963	9.28		173
1964	Sept. 7, 1964	10.73		220
1965	Apr. 6, 1965	13.67	c	370
1966	Feb. 9, 1966	7.95	c	50
1967	June 10, 1967	6.67		56
1968	July 23, 1968	9.23		124
1969	June 29, 1969	11.67		350

c Affected by ice.

05448700 East Branch Iowa River near Hayfield, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	--	a	<17
1971	Mar. 30, 1971	11.27 c	200
1972	June 9, 1972	10.97	280
1973	Mar. 10, 1973	9.49	200
1974	--	a	<17
1975	Apr. 28, 1975	10.00	240
1976	--	a	<17
1977	--	a	<17
1978	June 15, 1978	9.14	74
1979	Aug. 21, 1979	12.19	230
1980	Aug. 10, 1980	8.79	66
1981	June 24, 1981	10.10	100
1982	June 7, 1982	9.83	87
1983	June 28, 1983	8.02	345
1984	June 7, 1984	8.89	130

a Peak did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

05448800 East Branch Iowa River near Garner, Iowa

Location.--Lat 43°06', long 93°37', near center sec.25, T.96 N., R.24 W., Hancock County, at bridge on U.S. Highway 18, 1.2 miles west of Garner.
Drainage area.--45.1 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Mar. 29, 1952	7.38	352
1953	Mar. 13, 1953	5.55	189
1954	June 18, 1954	12.42	1,040
1955	July 6, 1955	5.14	155
1956	--	a	<260
1957	May 30, 1957	7.06	322
1958	--	a	<260
1959	May 21, 1959	10.36	709
1960	Mar. 29, 1960	9.69	650
1961	Mar. 26, 1961	12.81	1,120
1962	Aug. 31, 1962	9.37	440
1963	July 19, 1963	9.61	507
1964	Sept. 7, 1964	9.38	491
1965	Apr. 6, 1965	12.89 c	1,000
1966	Feb. 9, 1966	9.46 c	300
1967	--	a	<260
1968	--	a	<260

a Peak stage did not reach bottom of gage.
c Affected by ice.

05448800 East Branch Iowa River near Garner, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	June 29, 1969	11.67	950
1970	--	a	<260
1971	Mar. 31, 1971	9.93 c	330
1972	June 9, 1972	10.94	730
1973	Mar. 10, 1973	9.20	575
1974	--	a	<200
1975	Apr. 28, 1975	10.12	550
1976	--	a	<200
1977	--	a	<200
1978	June 15, 1978	9.75	400
1979	Aug. 21, 1979	11.81	830
1980	Aug. 17, 1980	7.22	120
1981	June 24, 1981	9.46	410
1982	June 7, 1982	8.68	315
1983	June 28, 1983	10.11	390
1984	June 7, 1984	11.94	660

a Peak stage did not reach bottom of gage.
c Affected by ice.

05448900 East Branch Iowa River tributary near Garner, Iowa

Location.--Lat 43°06', long 93°40', near center sec.27, T.96 N., R.24 W., Hancock County, at culvert on U.S. Highway 18, 2.1 miles west of Garner.
Drainage area.--5.98 mi².
Gage.--Crest-stage gage. Gage removed July 21, 1958 and re-established May 21, 1959.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Mar. 29, 1952	4.92	83
1953	Mar. 13, 1953	4.36	62
1954	June 17, 1954	6.71	206
1955	--	a	<57
1956	--	a	<57
1957	--	a	<57
1958	--	a	<57
1959	May 21, 1959	5.22	167
1960	Mar. 29, 1960	5.18	160
1961	Mar. 26, 1961	7.05	155
1962	Aug. 31, 1962	5.25	78
1963	June 9, 1963	4.51	39
1964	Sept. 7, 1964	5.88	104
1965	Apr. 6, 1965	9.85	170
1966	Feb. 9, 1966	5.29 c	40
1967	--	a	<20
1968	--	a	<20

a Peak stage did not reach bottom of gage.
c Affected by ice.

05448900 East Branch Iowa River tributary near Garner, Iowa--
(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	June 29, 1969	5.33	58
1970	--	a	<20
1971	Mar. 30, 1971	6.66 c	100
1972	June 9, 1972	6.26	105
1973	--	--	<20
1974	--	a	<20
1975	--	a	<20
1976	--	a	<20
1977	--	a	<20
1978	June 15, 1978	4.32	27
1979	Aug. 21, 1979	6.32	145
1980	--	a	<20
1981	June 24, 1981	4.94	74
1982	Mar. 20, 1982	7.47 c	b
1983	Apr. 13, 1983	4.51	71
1984	May 7, 1984	10.46	660

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

05449000 East Branch Iowa River near Klemme, Iowa
(Published as "East Fork Iowa River near Klemme" 1948-58)

Location.--Lat 43°00'31", long 93°37'42", in NE1/4 NW1/4 sec.36, T.95 N., R.24 W., Hancock County, on left bank 15 ft downstream from bridge on county highway B55, 1.2 miles west of Chicago, Rock Island and Pacific Railroad crossing in Klemme, 1.5 miles upstream from Drainage ditch 9, 18.2 miles upstream from confluence with West Branch Iowa River, and at mile 341.0.
Drainage area.--133 mi².
Gage.--Water-stage recorder. Datum of gage is 1,179.33 ft National Geodetic Vertical Datum of 1929. Apr. 1, 1948, to Sept. 30, 1955, nonrecording gage at site 0.6 mile upstream at datum 0.80 ft higher. Oct. 1, 1955, to Sept. 30, 1969, at present site at datum 0.31 ft lower.
Stage-discharge relation.--Defined by current-meter measurements. Shifts in relation occur frequently.
Bankfull stage.--8 ft.
Remarks.--Base for partial-duration series, 700 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1944	June ??, 1944	10.00 a	2,550
1949	Mar. 27, 1949	7.3 b	685 c
1950	Mar. 26, 1950	7.02 b	500 c
1951	Mar. 29, 1951	8.59 b	1,000 c
	Apr. 7, 1951	8.61	1,940
	June 26, 1951	10.80	3,440
1952	Mar. 30, 1952	7.60	900
1953	June 8, 1953	5.70	385
1954	June 19, 1954	11.2	5,960
	June 21, 1954	10.74	4,820
1955	July 5, 1955	5.47	348
1956	Mar. 26, 1956	4.91 b	150 c
1957	June 23, 1957	4.75	176

a From information by local resident.
b Affected by ice. c About.

05449000 East Branch Iowa River near Klemme, Iowa--(continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1958	June 4, 1958	6.08	355
1959	May 21, 1959	8.25	1,100
	May 31, 1959	8.12	1,020
1960	Mar. 28, 1960	8.25	1,100
1961	Mar. 26, 1961	9.40	3,250
1962	Mar. 30, 1962	9.05 b	1,600 c
	July 5, 1962	8.53	1,420
	July 20, 1962	8.20	1,090
	Aug. 31, 1962	8.84	1,830
1963	July 6, 1963	8.48	950
	July 20, 1963	8.44	922
1964	Sept. 9, 1964	8.09	972
1965	Apr. 6, 1965	10.67 b	--
	Apr. 8, 1965	9.94	4,090
	June 6, 1965	7.63	728
	Sept.19, 1965	9.39	2,080
	Sept.29, 1965	8.48	1,090
1966	Oct. 1, 1965	8.02 d	812
	Feb. 9, 1966	8.11 b	700 c
1967	June 11, 1967	7.25	582
1968	June 27, 1968	6.03	351
1969	Apr. 4, 1969	7.86	806
	June 27, 1969	8.29	765
	June 29, 1969	9.87	2,770
	July 9, 1969	8.92	1,170

1970	May 14, 1970	7.83	759
1971	Mar. 31, 1971	8.22	1,030
1972	June 8, 1972	8.90	1,350
1973	Mar. 4, 1973	--	843 c
	Mar. 11, 1973	8.38	1,040
	Apr. 16, 1973	7.69	747
	May 8, 1973	7.49	687
	May 28, 1973	8.05	878
	June 17, 1973	7.81	784

b Affected by ice. c About. d Stage falling.

05449000 East Branch Iowa River near Klemme, Iowa--(continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	Mar. 3-4, 1974	7.20 b	--
	May 11, 1974	6.67	490
1975	Apr. 28, 1975	8.57	1,530
1976	Mar. 13, 1976	7.55	--
---	Mar. 31, 1976	6.37	436
1978	June 16, 1978	8.21	753
	Sept.14, 1978	8.11	882
1979	Mar. 30, 1979	8.20	839
	Aug. 10, 1979	8.54	990
	Aug. 22, 1979	9.98	2,690
1980	May 31, 1980	7.91	765
1981	June 25, 1981	8.85	918
	July 24, 1981	8.20	720
1982	June 7, 1982	8.37	976
1983	Dec. 29, 1982	7.66	708
	Feb. 20, 1983	8.14	873
	Mar. 7, 1983	8.21	904
	Mar. 17, 1983	7.68	714
	June 30, 1983	10.09	1,960
	Sep. 20, 1983	8.52	936
1984	Feb. 20, 1984	b	850
	Feb. 23, 1984	8.04	845
	May 1, 1984	8.46	1,060
	June 8, 1984	10.23	2,610
	June 13, 1984	9.13	1,330
	June 18, 1984	8.91	1,170
	June 23, 1984	9.22	1,390

b Affected by ice.

05449500 Iowa River near Rowan, Iowa

Location.--Lat 42°45'36", long 93°37'23", in NW1/4 NE1/4 sec.25, T.92 N., R.24 W., Wright County, on left bank 10 ft downstream from bridge on county highway C38, 0.9 mile downstream from Drainage ditch 123, 3.8 miles northwest of Rowan, 10.7 miles downstream from confluence of East and West Branches, and at mile 316.4.
Drainage area.--429 mi².
Gage.--Water-stage recorder. Datum of gage is 1,143.35 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 14, 1948, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--10 feet.
Remarks.--Base for partial-duration series, 1,200 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1941	June 5, 1941	9.4	1,450
	June 14, 1941	8.8	1,250
1942	Nov. 4, 1941	9.0	1,320
1943	Mar. 27, 1943	8.9	1,280
1944	May 22, 1944	10.3	2,160
	June 14, 1944	12.0	3,840
1945	Mar. 13, 1945	11.8 a	2,200 b
	Apr. 14, 1945	8.9	1,360
	Apr. 25, 1945	9.6	1,670
	June 3, 1945	9.5	1,620
	Aug. 15, 1945	11.5	3,120
1946	Jan. 6, 1946	9.26 a	1,360 b
	Mar. 14, 1946	9.0	1,400
	May 27, 1946	9.6	1,660
1947	Apr. 13, 1947	9.4	1,580
	June 14, 1947	8.5	1,200
	June 26, 1947	10.0	1,860
	July 2, 1947	10.5	2,170
	July 7, 1947	10.6	2,240
1948	Feb. 29, 1948	10.9 a	1,940 b
	Mar. 18, 1948	10.6	2,240

a Affected by ice. b About.

05449500 Iowa River near Rowan, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1949	Mar. 7, 1949	12.02 a	1,230 b
	Mar. 28, 1949	9.4	1,580
1950	Mar. 28, 1950	11.06 a	1,800 b
1951	Feb. 26, 1951	11.09 a	2,200 b
	Mar. 29, 1951	12.78 a	3,300 b
	Apr. 7, 1951	12.38	4,230
	May 3, 1951	10.10	1,860
	June 28, 1951	13.18	5,610
	July 10, 1951	9.85	1,700
	July 22, 1951	9.17	1,400
1952	Feb. 14, 1952	9.17 a	1,250 b
	Mar. 21, 1952	9.32	1,450
	Mar. 31, 1952	10.61	2,200
	June 16, 1952	8.75	1,220
	July 9, 1952	9.30	1,400
1953	May 2, 1953	6.87	645
1954	June 21, 1954	14.88	8,460
	Aug. 27, 1954	8.78	1,220
1955	July 7, 1955	6.54	551
1956	Mar. 28, 1956	5.7 a	300 b
1957	May 31, 1957	6.43	492
1958	May 27, 1958	6.77	530
1959	May 24, 1959	9.87	1,420
	June 2, 1959	10.07	1,540
1960	Mar. 30, 1960	12.11 a	2,900 b
1961	Mar. 28, 1961	12.81	5,580
1962	Mar. 29, 1962	12.60 a	4,050 b
	July 7, 1962	9.46	1,530
	July 22, 1962	9.35	1,530
	Sept. 2, 1962	11.21	3,090
1963	Mar. 20, 1963	9.29	1,260
	July 8, 1963	10.22	1,820
	July 22, 1963	9.55	1,390
1964	Sept.11, 1964	9.82	1,520

a Affected by ice. b About.

05449500 Iowa River near Rowan, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	Apr. 6, 1965	14.62	--
	Apr. 7, 1965	--	6,700 b
	Sept.21, 1965	11.86	4,100
	Sept.30, 1965	10.98	2,750
1966	Feb. 11, 1966	10.21	1,910
	Apr. 2, 1966	9.19	1,320
	June 13, 1966	9.03	1,260
1967	June 10, 1967	10.13	1,640
1968	July 18, 1968	9.88	1,640
1969	Mar. 25, 1969	10.58	2,170
	Apr. 6, 1969	10.27	1,940
	July 1, 1969	12.36	4,250
	July 10, 1969	11.26	2,770
1970	May 14, 1970	10.98	2,560
1971	Mar. 16, 1971	11.05 a	1,530 b
	Apr. 1, 1971	10.67	2,410
	June 9, 1971	9.50	1,510
1972	June 10, 1972	11.25	2,790
1973	Mar. 4, 1973	--	2,230 b
	Mar. 12, 1973	10.96	2,740
	Apr. 17, 1973	10.64	2,480
	May 9, 1973	9.77	1,770
	May 30, 1973	10.33	2,210
	June 19, 1973	9.58	1,680
1974	June 10, 1974	9.04	1,400
1975	Apr. 30, 1975	11.10	3,270
	June 13, 1975	9.05	1,410
1976	Mar. 14, 1976	8.06 a	--
----	Apr. 1, 1976	7.97	826
1978	June 18, 1978	10.10	1,930
1979	Mar. 20, 1979	--	2,410
	Mar. 24, 1979	10.66	2,430
	Mar. 31, 1979	10.59	2,360
	Aug. 12, 1979	10.51	2,250
	Aug. 24, 1979	11.88	3,920

a Affected by ice. b About.

05449500 Iowa River near Rowan, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1980	June 2, 1980	9.24	1,370
1981	June 27, 1981	11.17	2,270
	July 26, 1981	10.59	1,910
1982	Feb. 24, 1982	10.35 a	--
	Mar. 20, 1982	9.94	1,790
	May 16, 1982	9.72	1,280
	June 10, 1982	9.85	1,530
1983	Dec. 29, 1982	9.64	1,610
	Feb. 22, 1983	11.03	2,610
	Mar. 8, 1983	11.05	2,630
	Mar. 19, 1983	10.31	1,960
	Apr. 3, 1983	9.50	1,400
	Apr. 15, 1983	10.42	2,030
	May 20, 1983	9.38	1,240
	June 22, 1983	10.07	1,390
	July 2, 1983	13.15	4,310
	Sep. 22, 1983	10.72	1,920
1984	Feb. 18, 1984	a	2,200
	Apr. 15, 1984	9.91	1,580
	May 2, 1984	11.64	3,220
	June 10, 1984	12.68	4,840
	June 14, 1984	12.63	3,760
	June 17, 1984	15.00	8,450
	June 24, 1984	11.82	2,800

a Affected by ice.

05451200 South Fork Iowa River near New Providence, Iowa
(Discontinued 1956)

Location.--Lat 42°19', long 93°10', near north quarter corner of sec.27, T.87 N., R.20 W., Hardin County, 3 miles north of New Providence.
Drainage area.--233 mi².
Gage.--Nonrecording.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Records collected by Corps of Engineers. Station is inflow forecasting station for Coralville Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1950	Sept.20, 1950	--	3,750
1951	Mar. 29, 1951	8.64	3,380
1952	July 9, 1952	6.27	1,400
1953	Mar. 11, 1953	5.60	1,060
1954	Aug. 27, 1954	7.75	2,550
1955	Feb. 20, 1955	6.06	1,310
1956	Sept. 5, 1956	4.02	406

05451250 Beaver Creek near Eldora, Iowa
(Discontinued 1956)

Location.--Lat 42°21', long 93°08', near the center of sec.13, T.87 N., R.20 W., Hardin County, about a quarter of a mile south of Eldora, Iowa.
Drainage area.--69.8 mi².
Gage.--Nonrecording.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Records collected by Corps of Engineers. Station is inflow forecasting station for Coralville Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1950	Sept.21. 1950	9.09	3,280
1951	Mar. 28, 1951	7.63	1,720
1952	June 14, 1952	6.12	685
1953	June 25, 1953	5.32	386
1954	Aug. 26, 1954	8.73	3,010
1955	July 10, 1955	6.90	1,200
1956	Sept. 5, 1956	5.69	436

05451350 Honey Creek at Bangor, Iowa
(Discontinued 1956)

Location.--Lat 42°10', long 93°05', near west quarter corner sec.16, T.85 N., R.19 W., at county road "L" bridge over Honey Creek, about 1.0 miles east of Bangor, Iowa.
Drainage area.--95.6 mi².
Gage.--Nonrecording.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Records collected by Corps of Engineers. Station is inflow forecasting station for Coralville Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1950	Mar. 7, 1950	8.25	1,480
1951	Mar. 28, 1951	9.01	2,230
1952	Mar. 11, 1952	6.53	1,400
1953	Feb. 21, 1953	6.92	1,640
1954	June 11, 1954	9.60	3,350
1955	Feb. 19, 1955	5.54	744
1956	Sept. 5, 1956	5.58	757

05451450 Minerva Creek near Clemons, Iowa
(Discontinued 1956)

Location.--Lat 42°07', long 93°05', near center of sec.5, T.84 N., R.19 W., Marshall County, at county road bridge about 3.5 miles east of Clemons, Iowa.
Drainage area.--148 mi².
Gage.--Nonrecording.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Records collected by Corps of Engineers. Station is inflow forecasting station for Coralville Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1950	Mar. 6, 1950	7.95	1,900
1951	June 2, 1951	9.50	2,840
1952	Mar. 14, 1952	7.21	1,670
1953	Feb. 21, 1953	8.10	2,240
1954	June 10, 1954	9.3	5,700
1955	July 10, 1955	7.11	1,660
1956	Aug. 13, 1956	2.35	142

05451500 Iowa River at Marshalltown, Iowa

Location.--Lat 42°03'57", long 92°54'27", in SE1/4 SE1/4 sec.23, T.84 N., R.18 W., Marshall County, on right bank 10 ft downstream from State Highway 14 bridge, 1,500 ft upstream from Burnett Creek, 2.2 miles upstream from Linn Creek, and at mile 222.8.
Drainage area.--1,564 mi², including that of Burnett Creek.
Gage.--Water-stage recorder. Datum of gage is 853.10 ft National Geodetic Vertical Datum of 1929. Oct. 25, 1902, to Aug. 8, 1903, staff gage at site 1 mile upstream at different datum. May 21, 1915, to Sept. 30, 1927, and Feb. 1, 1933, to May 8, 1934, chain gage, and May 9 to Sept. 1, 1934, staff gage, at site 1,000 ft upstream at present datum. Sept. 2-20, 1934, staff gage at site 1,000 ft downstream at different datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--13 feet.
Remarks.--Base for partial-duration series, 5,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)	
1903	May 29, 1903	6.80	7,760	
1915	June 1, 1915	13.8	9,440	a
1916	Mar. 29, 1916	9.5	3,620	
1917	Mar. 27, 1917	14.6	13,000	
	June 10, 1917	13.5	9,300	
1918	May 25, 1918	12.9	7,750	
	June 4, 1918	17.74	42,000	b
	June 22, 1918	11.2	5,060	
1919	Mar. 17, 1919	13.0	7,480	
	Apr. 14, 1919	12.2	6,300	
1920	Oct. 6, 1919	12.4	6,520	
1921	Sept.17, 1921	13.4	8,500	
1922	Feb. 24, 1922	11.7	5,710	
1923	Apr. 4, 1923	10.5	4,350	
1924	June 29, 1924	13.6	9,060	
	Aug. 23, 1924	11.4	5,200	

a Maximum for period May to September 1915. b From floodmark.

05451500 Iowa River at Marshalltown, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1925	June 19, 1925	7.6	2,480
1926	Sept.19, 1926	13.9	10,000
1927	Feb. 12, 1927	12.20	6,300

	June 9, 1927	13.0	7,610
1929	Mar. 26, 1929	18.0 c	14,500 d
	Aug. 3, 1929	15.0	15,500
1930	Apr. 1, 1930	10.60	4,800

1933	Apr. 4, 1933	15.5	17,100
1934	Jan. 24, 1934	6.3	1,400
1935	Mar. 5, 1935	15.7	12,500
	June 26, 1935	13.0	6,960
1936	Mar. 9, 1936	13.6	8,450
1937	Mar. 6, 1937	13.8	9,130
	June 15, 1937	12.7	6,280
1938	May 6, 1938	11.3	4,540
1939	Mar. 13, 1939	13.8	9,080
1940	June 23, 1940	7.9	2,200
1941	Sept. 8, 1941	9.6	2,900
1942	June 3, 1942	15.8	18,100
	June 13, 1942	12.8	5,870
1943	Feb. 27, 1943	12.1	4,960
1944	May 3, 1944	12.9	6,090
	May 20, 1944	15.9	18,900
	June 13, 1944	13.5	6,340
	June 17, 1944	13.4	6,290
1945	Mar. 16, 1945	14.1	8,340
	Apr. 17, 1945	12.4	5,150
	June 2, 1945	13.9	7,880
1946	Jan. 6, 1946	15.6 c	14,300 d
	Mar. 13, 1946	13.6	7,050

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c Affected by ice. d About.

05451500 Iowa River at Marshalltown, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1947	June 2, 1947	15.7	14,400
	June 5, 1947	15.0	11,000
	June 13, 1947	16.8	20,500
	June 18, 1947	14.8	10,100
	June 22, 1947	15.3	11,900
	July 1, 1947	14.4	8,760
1948	Feb. 28, 1948	15.8	15,000
	Mar. 17, 1948	15.0	10,600
	Mar. 19, 1948	15.2	11,400
	Mar. 28, 1948	13.8	7,240
1949	Mar. 5, 1949	14.8	10,000
1950	Mar. 7, 1950	15.8	14,800
	June 10, 1950	13.1	5,950
	June 19, 1950	15.1	11,200
	June 24, 1950	12.5	5,120
	July 9, 1951	13.15	5,150
	Aug. 27, 1951	14.10	6,750
1951	Feb. 26, 1951	16.05 c	10,000 d
	Mar. 29, 1951	16.13	15,200
	Apr. 8, 1951	14.20	7,000
	May 3, 1951	13.60	5,760
	June 2, 1951	15.95	14,500
	July 4, 1951	13.93	6,300
1952	Mar. 11, 1952	13.99	6,500
	Mar. 13, 1952	13.30	5,290
1953	Feb. 21, 1953	16.70 c	7,000 d
1954	June 2, 1954	14.21	6,520
	June 11, 1954	15.21	8,850
	June 16, 1954	16.02	11,200
	June 25, 1954	15.51	9,700
	Aug. 28, 1954	16.09	11,500
1955	Feb. 20, 1955	11.75	3,290
1956	May 13, 1956	9.89	2,160
1957	May 30, 1957	13.93	5,220
	June 16, 1957	15.24	7,800
	July 4, 1957	14.42	6,300
1958	June 13, 1958	14.11	5,550

c Affected by ice. d About.

05451500 Iowa River at Marshalltown, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1959	Mar. 20, 1959	15.48	9,700
	Mar. 27, 1959	15.57	10,000
1960	Mar. 31, 1960	17.51	21,500
	Apr. 18, 1960	14.12	6,340
	May 7, 1960	15.66	10,300
	May 26, 1960	13.77	5,070
1961	Feb. 18, 1961	13.63 c	5,100 d
	Feb. 23, 1961	13.95	6,170
	Mar. 7, 1961	13.32	5,070
	Mar. 15, 1961	13.31	5,070
	Mar. 31, 1961	14.81	7,850
	Sept.30, 1961	13.47	5,370
1962	Mar. 29, 1962	15.90	9,400
	July 15, 1962	16.17	8,560
	July 20, 1962	14.10	5,420
1963	Mar. 16, 1963	12.64	3,890
1964	May 8, 1964	10.40	2,320
1965	Mar. 2, 1965	16.53 c	9,100 d
	Apr. 6, 1965	17.63	17,400
	July 9, 1965	13.72	5,490
	Sept.23, 1965	15.21	6,640
1966	Oct. 1, 1965	14.75	5,880
	May 24, 1966	14.43	5,680
	June 13, 1966	16.25	8,800
1967	June 13, 1967	15.49	6,900
1968	July 20, 1968	11.84	3,330
	Apr. 4, 1969	14.18	5,480
1969	Mar. 20, 1969	17.66	13,000
	July 9, 1969	19.10 e	31,900
	July 27, 1969	15.35	6,620
1970	May 14, 1970	14.99	6,580
1971	Feb. 20, 1971	c	7,000 d
	Mar. 15, 1971	17.22	11,700
	Mar. 19, 1971	15.11	6,780

c Affected by ice. d About.
e Maximum gage height, 19.37 ft, at 1400, July 9, 1969 (before levee break).

05451500 Iowa River at Marshalltown, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	June 9, 1972	15.65	6,840
	June 14, 1972	17.55	10,900
	Aug. 2, 1972	14.69	5,530
	Aug. 6, 1972	15.26	5,850
1973	Dec. 31, 1972	--	7,500 d
	Feb. 2, 1973	--	7,000 d
	Feb. 25, 1973	--	5,000 d
	Mar. 7, 1973	14.76	5,560
	Mar. 12, 1973	15.46	6,540
	Mar. 15, 1973	15.68	6,890
	Apr. 17, 1973	16.52	8,340
	May 9, 1973	15.31	6,330
	May 29, 1973	14.35	5,040
1974	May 19, 1974	15.52	5,430
	June 10, 1974	19.07	13,800
	June 23, 1974	19.38	15,600
	Aug. 12, 1974	15.98	6,120
1975	Mar. 21, 1975	18.42	11,500
	June 19, 1975	15.78	5,940
	June 23, 1975	15.30	5,360
1976	Mar. 13, 1976	16.09	6,380
	Apr. 19, 1976	17.27	8,840
	June 15, 1976	16.17	6,580
1977	Aug. 17, 1977	16.35	6,330
1978	Apr. 18, 1978	15.30	5,840
	Sept. 21, 1978	16.05	6,320
1979	Mar. 19, 1979	19.77	20,900
	Mar. 24, 1979	16.55	7,740
	Mar. 31, 1979	17.19	9,060
	Aug. 22, 1979	15.25	5,300
1980	June 14, 1980	15.85	6,040
1981	June 25, 1981	14.15	4,150
1982	Feb. 24, 1982	15.84	6,180
	Mar. 16, 1982	16.41	7,040
	Mar. 20, 1982	17.50	9,130
	May 22, 1982	15.50	5,700
	May 27, 1982	16.29	6,860
	June 15, 1982	16.93	7,880
	July 19, 1982	16.94	7,900

d About.

05451500 Iowa River at Marshalltown, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Nov. 12, 1982	16.28	6,100
	Dec. 28, 1982	15.83	5,470
	Feb. 20, 1983	16.65	6,730
	Mar. 8, 1983	15.62	5,390
	Apr. 3, 1983	16.06	5,950
	Apr. 15, 1983	16.78	6,930
	May 20, 1983	18.47	10,400
	July 4, 1983	18.65	10,900
1984	Feb. 20, 1984	16.85	7,330
	May 1, 1984	17.11	7,680
	May 29, 1984	16.22	6,300
	June 14, 1984	18.29	11,100
	June 21, 1984	17.46	8,260

05451700 Timber Creek near Marshalltown, Iowa

Location.--Lat 42°00'25", long 92°51'15", in SE1/4 SW1/4 sec.8, T.83 N., R.17 W., Marshall County, on left bank 20 feet downstream from bridge on U.S. Highway 30, 3.5 miles upstream from mouth, and 4.1 miles southeast of court house in Marshalltown.
Drainage area.--118 mi².
Gage.--Water-stage recorder. Datum of gage is 849.44 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--12 feet.
Remarks.--Base for partial-duration series, 1,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1947	June 1947	16.8	5,700

1950	Feb. 9, 1950	11.92	1,520
	Feb. 10, 1950	12.30	1,690
	Mar. 5, 1950	15.10	4,030
	June 18, 1950	15.77	4,940
1951	Mar. 28, 1951	10.70	1,160
	June 1, 1951	11.52	1,390
1952	Mar. 10, 1952	13.87	2,770
1953	Feb. 20, 1953	15.09	4,030
1954	June 10, 1954	13.47	2,450
1955	Feb. 19, 1955	13.45	1,500
1956	May 13, 1956	4.35	150
1957	June 18, 1957	14.23	3,030
	July 3, 1957	15.38	4,420
1958	Feb. 24, 1958	10.56 a	800 b
1959	Feb. 28, 1959	10.83	1,190
	Mar. 14, 1959	10.22	1,040
	Mar. 20, 1959	14.59	3,420
	Mar. 26, 1959	10.71	1,200
	May 19, 1959	14.32	3,120

a Affected by ice. b About.

05451700 Timber Creek near Marshalltown, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1960	Jan. 13, 1960	14.0	2,850
	Mar. 30, 1960	14.57	3,420
	Apr. 17, 1960	10.47	1,120
	May 6, 1960	14.40	3,220
	May 26, 1960	12.36	1,740
1961	Feb. 18, 1961	15.67	4,810
	Feb. 23, 1961	13.37	2,370
	Mar. 6, 1961	12.86	2,020
	Mar. 13, 1961	12.3	1,690
1962	Mar. 20, 1962	10.99	1,240
	Mar. 22, 1962	11.43	1,360
	Mar. 24, 1962	10.94	1,220
	May 29, 1962	12.67	1,900
	July 14, 1962	13.53	2,450
	July 20, 1962	12.71	1,900
1963	Mar. 13, 1963	13.24 a	1,100 b
1964	June 23, 1964	12.86	2,020
1965	Feb. 7, 1965	12.50 a	1,400 b
	Feb. 10, 1965	12.55 a	1,500 b
	Mar. 1, 1965	12.32 a	1,250 b
	Mar. 17, 1965	12.99 a	1,550 b
	Apr. 1, 1965	15.07 a	2,100 b
	Apr. 5, 1965	14.57	2,530
	Apr. 24, 1965	14.31	3,130
	July 9, 1965	11.89	1,520
	Sept.21, 1965	10.82	1,200
1966	Feb. 8, 1966	10.22	1,040
	June 9, 1966	11.60	1,420
	June 12, 1966	16.31 c	5,200
1967	June 10, 1967	9.65	915
1968	Mar. 8, 1968	7.49	546
1969	Mar. 20, 1969	14.34 a	2,300 b
	June 7, 1969	10.93	1,220
	June 12, 1969	13.37	2,350
	June 30, 1969	13.94	2,800
	July 8, 1969	10.94	1,230
1970	Mar. 3, 1970	13.16	2,190
	May 14, 1970	16.66	5,940
	Aug. 5, 1970	14.51	3,360

a Affected by ice. b About. c From floodmark.

05451700 Timber Creek near Marshalltown, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Oct. 9, 1970	12.33	1,700
	Feb. 20, 1971	15.17 a	2,200 b
	Feb. 27, 1971	13.89 a	2,100 b
	Mar. 13, 1971	12.30 a	1,300 b
	June 13, 1971	10.21	1,050
1972	Mar. 1, 1972	14.29 a	1,300 b
	June 13, 1972	15.08	3,760 b
	Aug. 8, 1972	11.28	1,320
1973	Dec. 30, 1972	--	4,000 b
	Jan. 17, 1973	--	1,900 b
	Feb. 1, 1973	16.47 a	4,200 b
	Apr. 16, 9173	12.11	1,600
	June 5, 1973	11.59	1,460
1974	Jan. 21, 1974	10.70	1,160
	May 18, 1974	15.10	3,880
	May 28, 1974	16.03	5,110
	June 9, 1974	17.57	8,090
	June 22, 1974	11.62	1,470
1975	Mar, 20, 1975	14.83	3,610
	June 18, 1975	10.75	1,620
	June 27, 1975	12.02	1,760
1976	Feb. 27, 1976	10.57	1,130
	May 29, 1976	12.90 d	2,150
	June 14, 1976	13.00 d	2,230
1977	Aug. 16, 1977	17.69	12,000
	Aug. 28, 1977	13.10	2,150
1978	Mar. 21, 1978	13.30	2,000
	Apr. 18, 1978	12.02	1,680
1979	Mar. 14, 1979	-- a	1,600
	Mar. 19, 1979	15.63	4,760
	Mar. 23, 1979	9.70	1,000
	Mar. 30, 1979	10.06	1,080
	Aug. 19, 1979	13.10	2,200
	Aug. 22, 1979	10.74	1,260
	Aug. 27, 1979	11.06	1,360
1980	June 14, 1980	12.31	1,820
1981	Feb. 26, 1981	6.85	510

a Affected by ice. b About.
d From graph based on gage readings.

05451700 Timber Creek near Marshalltown, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	Feb. 21, 1982	14.90	3,680
	Mar. 13, 1982	11.75	1,600
	Mar. 16, 1982	11.50	1,510
	June 15, 1982	17.30	9,940
	July 18, 1982	13.97	2,580
1983	Feb. 19, 1983	10.79	1,280
	Apr. 14, 1983	10.61	1,240
	May 19, 1983	14.79	3,570
	July 3, 1983	12.66	1,980
1984	Nov. 19, 1983	11.84	1,640
	Nov. 28, 1983	11.65	1,570
	Feb. 12, 1984	12.83	2,060
	Apr. 30, 1984	11.36	1,520
	May 3, 1984	11.48	1,570
	June 8, 1984	12.65	1,980
	June 10, 1984	14.80	3,580
	June 13, 1984	10.92	1,290
	June 15, 1984	14.70	3,290
	June 27, 1984	12.95	1,840
	July 15, 1984	15.12	3,440

05451800 Deer Creek at Toledo, Iowa
(Discontinued 1955)

Location.--Lat 42°00', long 92°36', near west quarter corner of sec.15, T.83 N., R.15 W., Tama County, on county road bridge west of Toledo, Iowa.
Drainage area.--76.4 mi².
Gage.--Nonrecording.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Records collected by Corps of Engineers. Station is inflow forecasting station for Coralville Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1950	Mar. 6, 1950	9.12	1,600
1951	June 2, 1951	9.03	3,250
1952	Mar. 10, 1952	7.82	1,580
1953	Feb. 20, 1953	9.51	2,800
1954	Aug. 26, 1954	6.08	1,030
1955	Feb. 19, 1955	5.77	911

05451900 Richland Creek near Haven, Iowa

Location.--Lat 41°53'58", long 92°28'27", in SE1/4 NE1/4 sec.21, T.82 N., R.14 W., Tama County, on right bank 5 ft upstream from bridge on county highway, 0.6 mile northeast of Haven, and 2.8 miles upstream from mouth.
Drainage area.--56.1 mi².
Gage.--Water-stage recorder. Datum of gage is 788.69 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1971, at datum 10 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--19 feet.
Remarks.--Base for partial-duration series, 1,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1918	June ??, 1918	10.24	2,100

1950	Mar. 5, 1950	10.24	2,100
	Mar. 6, 1950	10.10	2,090
	June 18, 1950	10.92	2,560
1951	July 8, 1951	7.68	935
1952	Mar. 10, 1952	7.50	870
1953	Feb. 20, 1953	10.22	2,100
1954	Aug. 26, 1954	8.32	1,170
1955	Feb. 19, 1955	8.56	1,290
1956	Aug. 1, 1956	4.88	364
1957	May 31, 1957	5.87	509
1958	July 14, 1958	9.10	1,530
	Sept. 3, 1958	9.18	1,580
1959	Nov. 18, 1958	8.50	1,250
	Mar. 20, 1959	8.98	1,480
	Mar. 26, 1959	7.93	1,010
	Apr. 28, 1959	9.54	1,730
1960	Jan. 12, 1960	10.37	2,220
	Mar. 30, 1960	12.39	3,650

05451900 Richland Creek near Haven, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1961	Feb. 18, 1961	9.60	1,960
	Mar. 6, 1961	10.33	2,240
	Mar. 8, 1961	7.5	1,220
	June 6, 1961	8.13	1,420
1962	Mar. 20, 1962	6.76	1,010
	July 14, 1962	9.19	1,810
1963	Mar. 12, 1963	5.86	785
1964	June 23, 1964	6.75	1,010
1965	Jan. 22, 1965	6.78	1,030
	Feb. 7, 1965	8.37	1,530
	Feb. 19, 1965	7.70	1,310
	Mar. 1, 1965	7.35	1,200
	Apr. 1, 1965	8.05	1,420
	Apr. 5, 1965	8.02	1,410
	Apr. 24, 1965	9.98	2,090
	June 5, 1965	7.98	1,390
	Sept. 21, 1965	7.62	1,200
1966	Feb. 8, 1966	8.15 a	1,300 b
	June 12, 1966	10.70	2,450
1967	June 10, 1967	7.54	1,090
1968	Apr. 3, 1968	4.87	535
1969	Mar. 18, 1969	9.64	1,760
	Mar. 19, 1969	8.54	1,330
	June 8, 1969	8.82	1,430
	June 12, 1969	10.05	1,920
	June 30, 1969	9.15	1,560
1970	Mar. 2, 1970	11.24	2,490
	May 14, 1970	7.77	1,100
	Aug. 5, 1970	8.23	1,130
1971	Oct. 9, 1970	7.71	1,080
	Feb. 19, 1971	10.21 a	--
	Feb. 20, 1971	--	1,200 b
	Feb. 27, 1971	9.42	1,400 b
1972	Feb. 29, 1972	18.91 a	--
	June 13, 1972	18.63	1,330

a Affected by ice. b About.

05451900 Richland Creek near Haven, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973	Dec. 30, 1972	--	1,400 b
	Feb. 1, 1973	20.54	2,180
	Apr. 16, 1973	17.36	1,000
1974	Jan. 27, 1974	17.26	1,180
	May 14, 1974	17.50	1,270
	May 16, 1974	22.56	4,680
	May 18, 1974	21.32	3,360
	May 28, 1974	24.00	7,000
	June 9, 1974	20.32	2,470
	June 15, 1974	17.41	1,240
	Aug. 10, 1974	19.65	2,320
1975	Mar. 20, 1975	19.21	2,000
	June 24, 1975	19.67	2,250
1976	Feb. 26, 1976	16.75	1,040
	Apr. 24, 1976	17.83	1,380
	June 14, 1976	17.22	1,150
1977	Aug. 16, 1977	23.03	5,350
	Aug. 28, 1977	19.50	2,150
1978	Mar. 21, 1978	17.98	1,440
	Apr. 18, 1978	18.28	1,590
	July 9, 1978	19.10	1,950
	July 19, 1978	18.34	1,590
1979	Mar. 19, 1979	20.52	2,710
	Mar. 29, 1979	17.75	1,350
	Apr. 20, 1979	16.61	1,010
	July 14, 1979	19.65	2,280
	Aug. 20, 1979	18.34	1,590
	Aug. 27, 1979	16.73	1,040
1980	June 14, 1980	18.94	1,870
1981	Aug. 27, 1981	16.52	983
1982	Feb. 21, 1982	a	1,000
	Mar. 13, 1982	17.86	1,390
	Mar. 16, 1982	18.82	1,810
	Mar. 19, 1982	19.64	2,220
	May 21, 1982	16.58	1,010
	June 15, 1982	21.77	2,560

a Affected by ice. b About.

05451900 Richland Creek near Haven, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Nov. 1, 1982	17.43	1,250
	Nov. 12, 1982	17.04	1,140
	May 28, 1983	20.46	2,690
	July 2, 1983	21.38	3,400
1984	Nov. 19, 1983	17.32	1,220
	Feb. 18, 1984	18.06	1,500
	Apr. 29, 1984	16.88	1,030
	June 10, 1984	16.66	1,020
	June 18, 1984	17.04	1,130

05451955 Stein Creek near Clutier, Iowa

Location.--Lat 42°04'46", long 92°18'00", in NE1/4 sec.24, T.84 N., R.13 W., Tama County, at bridge on State Highway 318, 5 miles east of Clutier.
Drainage area.--23.4 mi².
Gage.--Crest-stage gage.
Stage discharge.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1972	Mar. 1, 1972	71.99	720
1973	Mar. 11, 1973	72.98	1,020
1974	May 28, 1974	74.48	2,200
1975	Mar. 19, 1975	73.27	1,180
1976	Apr. 18, 1976	71.90	670
1977	--	a	<160
1978	June 29, 1978	74.10	1,750
1979	Mar. 19, 1979	74.73	2,500
1980	Aug. 13, 1980	74.18	1,800
1981	Aug. 25, 1981	70.16	310
1982	June 15, 1982	77.92	11,400
1983	Nov. 2, 1982	72.41	700
1984	June 10, 1984	75.04	1,700

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05452000 Salt Creek near Elberon, Iowa

Location.--Lat 41°57'51", long 92°18'47", in NW1/4 NW1/4 sec.36, T.83 N., R.13 W., Tama County, near center of span on downstream side of bridge on U.S. Highway 30, 2.0 miles upstream from Hog Run, 3.0 miles south of Elberon, and 9.0 miles upstream from mouth.
Drainage area.--201 mi².
Gage.--Water-stage recorder. Datum of gage is 781.58 ft National Geodetic Vertical Datum of 1929 (Iowa Highway Commission bench mark). Prior to Oct. 15, 1945, and June 14, 1947 to Feb. 10, 1949, nonrecording gage on upstream side of bridge at present datum.
Stage-discharge relation.--Defined by current-meter measurements below 17,000 ft³/s and extended above by logarithmic plotting.
Bankfull stage.--9.5 feet.
Remarks.--Basic for partial-duration series, 1,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1944	June 16, 1944	19.90 a	30,000 b
1946	Jan. 6, 1946	15.84	8,690
	Mar. 6, 1946	11.92	1,570
	Mar. 13, 1946	12.30	1,690
	Sept. 23, 1946	14.70	5,030
1947	Apr. 10, 1947	12.85	2,250
	June 1, 1947	16.10	16,700
	June 13, 1947	17.60	35,000
	June 22, 1947	13.60	4,000
	July 11, 1947	11.70	1,650
1948	Feb. 28, 1948	14.91 c	2,400 b
	Mar. 17, 1948	14.00	4,670
	Mar. 19, 1948	14.40	5,820
1949	Mar. 5, 1949	14.85 c	3,500 b
	Mar. 22, 1949	11.32	1,630
1950	Mar. 7, 1950	15.50	10,500
	June 24, 1950	14.82	6,310

a From floodmark at downstream side of bridge.
b About. c Affected by ice.

05452000 Salt Creek near Elberon, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1951	Feb. 25, 1951	14.12	3,860
	Mar. 29, 1951	13.40	3,680
	June 2, 1951	13.67	4,250
	June 16, 1951	12.34	2,340
	June 20, 1951	11.34	1,630
	July 8, 1951	12.56	2,600
	Aug. 27, 1951	12.78	2,810
1952	Mar. 11, 1952	14.26	4,050
	Mar. 13, 1952	12.85	2,600
	May 23, 1952	11.50	1,750
1953	Feb. 20, 1953	15.40 c	7,000 b
	June 8, 1953	11.48	1,750
	June 12, 1953	13.70	4,250
	June 27, 1953	11.17	1,570
1954	Aug. 26, 1954	15.21	5,410
1955	Oct. 10, 1954	11.83	1,360
1956	May 13, 1956	12.50	1,640
	Aug. 1, 1956	13.82	3,610
1957	May 31, 1957	13.93	2,810
	June 17, 1957	12.77	1,790
	June 18, 1957	12.94	1,860
1958	July 15, 1958	16.12	6,600
	Aug. 16, 1958	13.75	2,020
	Sept. 6, 1958	13.44	1,770
1959	Mar. 20, 1959	15.60	6,580
	Mar. 27, 1959	14.75	4,470
1960	Jan. 13, 1960	16.16 c	6,400 b
	Mar. 30, 1960	16.18 c	5,700 b
	Apr. 17, 1960	14.00 c	2,250 b
	May 7, 1960	15.60	5,200
1961	Feb. 19, 1961	16.23 c	7,200 b
	Feb. 23, 1961	13.85	2,900
	Mar. 6, 1961	15.15	5,750
	Mar. 8, 1961	12.60	1,510
	Mar. 14, 1961	14.20	3,520
	Mar. 15, 1961	13.40	2,240
	June 7, 1961	16.18	9,400
	Aug. 1, 1961	12.84	1,680

b About. c Affected by ice.

05452000 Salt Creek near Elberon, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1962	Oct. 1, 1961	13.04	1,800
	Mar. 26, 1962	14.16	2,740
	July 14, 1962	14.39	2,980
1963	Mar. 13, 1963	14.42 c	1,900 b
1964	June 23, 1964	11.78	1,190
1965	Feb. 7, 1965	14.65 c	2,000 b
	Feb. 10, 1965	14.33 c	1,800 b
	Mar. 2, 1965	14.89 c	2,500 b
	Apr. 1, 1965	15.75	4,680
	Apr. 5, 1965	15.15	3,900
	May 27, 1965	13.82	2,300
	May 31, 1965	13.82	2,300
	June 5, 1965	14.60	3,220
	July 9, 1965	13.36	1,840
	Sept.21, 1965	13.84	2,320
1966	Feb. 9, 1966	14.04	2,550
	June 12, 1966	13.68	1,710
1967	Jan. 24, 1967	13.31 c	--
	Aug. 8, 1967	12.62	1,460
1968	Aug. 5, 1968	13.43	1,370
1969	Mar. 18, 1969	15.23	4,000
	Apr. 4, 1969	15.29	4,080
	June 8, 1969	13.43	1,960
	June 13, 1969	14.47	3,060
	June 30, 1969	13.42	1,960
	July 9, 1969	16.05	5,650
	July 18, 1969	17.78	12,500
	July 27, 1969	16.24	6,240
1970	Mar. 2, 1970	17.21	9,940
	May 14, 1970	15.50	4,990
1971	Oct. 9, 1970	13.63	1,940
	Feb. 20, 1971	16.43 c	2,400 b
	Feb. 27, 1971	15.06 c	2,250 b
	Mar. 14, 1971	14.55 c	2,500 b
1972	Feb. 29, 1972	14.65 c	1,700 b
	Aug. 6, 1972	--	1,600 b
	Sept.29, 1972	12.88	1,500

b About. c Affected by ice.

05452000 Salt Creek near Elberon, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973	Dec. 31, 1972	--	3,400 b
	Jan. 17, 1973	--	2,500 b
	Feb. 1, 1973	15.88 c	2,200 b
	Apr. 16, 1973	15.18	4,060
	May 28, 1973	14.04	2,570
1974	Jan. 31, 1974	15.45 c	1,800 b
	Feb. 28, 1974	13.43	1,840
	May 14, 1974	13.67	1,600
	May 16, 1974	16.23	4,610
	May 22, 1974	13.55	1,540
	June 9, 1974	15.74	3,730
	Aug. 12, 1974	15.10	2,850
1975	Mar. 21, 1975	15.96	5,400
	Apr. 10, 1975	14.50	2,570
	June 18, 1975	13.63	1,870
	June 24, 1975	13.33	1,700
1976	Feb. 28, 1976	13.27	1,760
	Apr. 21, 1976	13.69	2,060
	Apr. 24, 1976	13.82	2,170
1977	Aug. 16, 1977	14.63	3,010
	Aug. 26, 1977	13.84	2,190
	Aug. 28, 1977	14.71	3,110
	Sept.18, 1977	13.71	2,080
1978	Oct. 24, 1977	13.86	2,200
	Mar. 20, 1978	14.67	3,060
	Apr. 18, 1978	14.80	2,890
	June 29, 1978	13.47	1,860
1979	Mar. 19, 1979	17.14	4,980
	Mar. 30, 1979	15.32	2,300
	Apr. 21, 1979	15.00	2,030
	June 27, 1979	14.24	1,560
	July 4, 1979	14.53	1,710
	July 15, 1979	16.79	4,260
	Aug. 20, 1979	14.92	1,970
1980	Jan. 17, 1980	15.58 c	2,200
	Feb. 22, 1980	c	1,900
	Mar. 16, 1980	13.86	2,230
	May 29, 1980	12.72	1,530
	Sept.13, 1980	14.12	2,480

b About. c Affected by ice.

05452000 Salt Creek near Elberon, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1981	July 25, 1981	12.91	1,510
1982	Feb. 22, 1982	15.96	5,960
	Mar. 13, 1982	15.17	3,600
	Mar. 16, 1982	15.68	4,850
	Mar. 20, 1982	15.67	5,100
	May 7, 1982	14.63	3,040
	May 22, 1982	14.44	2,810
	June 1, 1982	20.00	33,200
	July 18, 1982	17.58	7,540
1983	Nov. 2, 1982	15.04	2,330
	Nov. 12, 1982	15.33	2,660
	Dec. 28, 1982	14.52	1,940
	Feb. 19, 1983	14.50	2,010
	Apr. 3, 1983	14.74	2,130
	Apr. 14, 1983	14.59	2,010
	July 3, 1983	16.34	4,180
1984	Nov. 28, 1983	14.25	1,830
	May 29, 1984	14.42	2,580
	June 8, 1984	14.52	2,690
	June 10, 1984	17.05	9,030
	June 18, 1984	14.80	3,030
	July 15, 1984	13.19	1,520
	July 20, 1984	13.86	1,890

05452200 Walnut Creek near Hartwick, Iowa

Location.--Lat 41°50'06", long 92°23'10", in SE1/4 SW1/4 sec.8, T.81 N., R.13 W., Poweshiek County, on left bank 5 ft upstream from bridge on county highway V21, 1.2 miles downstream from North Walnut Creek, 4.0 miles northwest of Hartwick, and 6.5 miles upstream from mouth.
Drainage area.--70.9 mi².
Gage.--Water-stage recorder. Datum of gage is 786.59 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements below 2,600 ft³/s and extended above on basis of contracted opening and flow over-embankment measurement at peak flow.
Bankfull stage.--12 feet.
Remarks.--Base for partial-duration series, 1,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1947	June 1947	17.70 a	b
1950	Mar. 5, 1950	14.68 c	1,700 d
	Mar. 6, 1950	15.07 c	2,000 d
	June 18, 1950	--	3,500
	June 24, 1950	15.12	3,600
1951	June 3, 1951	13.27	1,450
	July 9, 1951	13.27	1,450
1952	Mar. 10, 1952	13.90	1,820
	Mar. 13, 1952	12.08	1,060
1953	Feb. 20, 1953	14.50 c	2,000 d
1954	Aug. 26, 1954	13.31	1,450
	Aug. 27, 1954	13.31	1,450
	Sept.29, 1954	11.94	1,020
1955	Apr. 23, 1955	11.57	952
1956	July 31, 1956	12.27	895
1957	May 31, 1957	10.97	694
1958	July 14, 1958	13.45	1,290
	Sept. 3, 1958	15.67	4,930
	Sept. 6, 1958	13.41	1,270

a From information by local residents.
b Discharge not determined.
c Affected by ice.
d About.

05452200 Walnut Creek near Hartwick, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1959	Mar. 20, 1959	14.88	3,230
	Mar. 26, 1959	12.27	1,120
	Apr. 1, 1959	11.91	1,020
	Apr. 27, 1959	14.07	1,950
	May 21, 1959	13.74	1,680
	June 30, 1959	14.24	2,180
1960	Nov. 4, 1959	13.21	1,410
	Jan. 12, 1960	15.04	3,500
	Jan. 14, 1960	13.01	1,450
	Mar. 29, 1960	15.44 c	3,000 d
	Mar. 31, 1960	12.73	1,360
	May 6, 1960	14.56	2,640
1961	Feb. 18, 1961	14.75	2.980
	Mar. 6, 1961	15.17	3,700
	Mar. 8, 1961	14.80	3,060
	Mar. 13, 1961	12.10	1,350
1962	Mar. 19, 1962	13.85	1,780
	Mar. 23, 1962	11.57	1,050
	July 14, 1962	14.30	2,250
	July 19, 1962	13.24	1,530
1963	Mar. 4, 1963	13.34 c	--
	Mar. 12, 1963	11.57 c	850 d
1964	June 23, 1964	14.19	2,120
1965	Jan. 22, 1965	13.00 c	1,100 d
	Feb. 9, 1965	13.68 c	1,100 d
	Mar. 17, 1965	12.62	1,340
	Mar. 30, 1965	14.59	2,700
	Apr. 5, 1965	13.75	1,760
	Apr. 24, 1965	14.17	2,080
	June 5, 1965	13.86	1,750
	July 2, 1965	12.63	1,340
	Sept. 21, 1965	12.39	1,270
1966	Feb. 8, 1966	13.33 c	1,300 d
	May 17, 1966	12.09	1,150
	June 13, 1966	14.10	2,000
	July 26, 1966	12.50	1,270
1967	Jan. 24, 1967	12.55	1,280
	June 10, 1967	15.27 e	3,960
	June 12, 1967	12.97	1,440
1968	Apr. 3, 1968	10.36	761

c Affected by ice. d About. e From floodmark.

05452200 Walnut Creek near Hartwick, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	Mar. 17, 1969	15.07 c	1,730 d
	Mar. 18, 1969	14.45 c	1,900 d
	June 7, 1969	13.65	1,810
	June 8, 1969	15.03	3,880
	June 12, 1969	13.78	1,890
	June 26, 1969	13.20	1,620
	June 30, 1969	14.83	3,560
	July 26, 1969	13.35	1,570
1970	Mar. 2, 1970	15.22	3,850
	Aug. 5, 1970	14.85	2,080
	Sept.15, 1970	14.55	2,640
1971	Oct. 9, 1970	14.72	2,860
	Feb. 19, 1971	14.86 c	1,200 d
	July 10, 1971	11.92	1,110
1972	Feb. 28, 1972	14.78 c	1,400 d
	June 13, 1972	12.84	1,560
	Aug. 6, 1972	13.79	2,050
	Aug. 31, 1972	13.34	1,790
1973	Dec. 30, 1972	14.94 c	2,200 d
	Jan. 17, 1973	--	1,300 d
	Feb. 1, 1973	14.85 c	2,400 d
	May 27, 1973	13.73	2,010
1974	Jan. 30, 1974	11.87	1,200
	May 13, 1974	13.25	1,740
	May 16, 1974	15.45	5,140
	May 18, 1974	15.15	3,700
	May 28, 1974	15.90	5,650
	June 9, 1974	15.29	4,010
	June 14, 1974	11.34	1,080
	June 22, 1974	13.05	1,660
	Aug. 10, 1974	15.29	4,480
	Aug. 12, 1974	13.51	2,000
1975	Mar. 19, 1975	15.29	4,010
	Mar. 22, 1975	15.02	3,440
	Mar. 23, 1975	13.10	1,670
	June 24, 1975	14.64	2,850
	Aug. 20, 1975	12.93	1,610
1976	Feb. 26, 1976	11.21	1,020
	Apr. 24, 1976	13.50 f	1,870

c Affected by ice. d About.
f From graph based on gage readings.

05452200 Walnut Creek near Hartwick, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1977	Aug. 16, 1977	16.30	6,800
	Aug. 28, 1977	12.18	1,290
	Sept.18, 1977	14.20	2,310
1978	Mar. 21, 1978	11.62	1,130
	June 26, 1978	14.03	2,340
	July 9, 1978	14.80	3,460
	JUly 19, 1978	15.82	6,060
	July 20, 1978	11.36	1,120
	Sept.17, 1978	11.60	1,240
	Sept.20, 1978	12.07	1,410
1979	Mar. 19, 1979	16.00	5,850
	Mar. 29, 1979	12.03	1,470
	Apr. 20, 1979	15.34	4,050
	June 27, 1979	12.40	1,620
	July 14, 1979	13.70	2,240
	Aug. 20, 1979	11.18	1,180
	Aug. 22, 1979	14.60	3,000
	Aug. 26, 1979	15.04	3,460
1980	June 14, 1980	14.40	2,800
1981	June 24, 1981	10.08	895
1982	Feb. 21, 1982	c	1,570
	Mar. 12, 1982	10.80	1,080
	Mar. 16, 1982	14.20	2,600
	Mar. 19, 1982	11.60	1,310
	June 15, 1982	14.58	2,980
	June 18, 1982	14.71	3,110
1983	Oct. 9, 1982	11.60	1,310
	May 28, 1983	11.88	1,410
	June 29, 1983	15.37	4,120
	July 2, 1983	16.65	7,100
1984	Feb. 20, 1984	12.41	1,620
	Apr. 30, 1984	14.90	3,300
	May 27, 1984	15.30	3,950
	June 17, 1984	13.55	2,150

c Affected by ice.

05452500 Iowa River near Belle Plaine, Iowa
(Discontinued Sept. 30, 1959)

Location.--Lat 41°51'20", long 92°14'20", in NW1/4 sec.5, T.81 N., R.12 W., Iowa County, on right bank 5 ft downstream from State Highway 212 bridge, 0.5 mile downstream from Walnut Creek, 2.7 miles south of Belle Plaine and at mile 159.0.
Drainage area.--2,455 mi².
Gage.--Nonrecording prior to Mar. 13, 1940; recording thereafter. Datum is 749.82 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--13 ft.
Remarks.--Base for partial-duration series, 5,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1918	June 5, 1918	17.86 a	43,000
1940	Mar. 19, 1940	9.46 b	2,430 c
1941	Mar. 22, 1941	12.40 b	4,280 c
1942	Nov. 2, 1941	13.0	5,620
	June 6, 1942	14.4	9,450
	June 11, 1942	13.2	6,200
	June 16, 1942	12.5	5,100
1943	Feb. 24, 1943	12.8	5,580
	Mar. 16, 1943	13.7	6,890
	May 16, 1943	12.8	5,680
	Aug. 4, 1943	12.7	5,540
1944	May 7, 1944	13.0	5,990
	May 21, 1944	16.9	31,800
	June 16, 1944	16.8	31,600

a From information by Corps of Engineers.
b Affected by ice. c About.

05452500 Iowa River near Belle Plaine, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)	
1945	Mar. 19, 1945	14.1		8,770	
	Mar. 28, 1945	12.7		5,390	
	Apr. 19, 1945	13.3		6,380	
	May 17, 1945	12.5		5,100	
	June 6, 1945	13.4		6,560	
	June 10, 1945	13.6		7,290	
1946	Jan. 6, 1946	16.2		25,000	
	Feb. 6, 1946	13.6	b	5,100	c
	Mar. 17, 1946	13.7		7,390	
	Sept.23, 1946	13.6		7,190	
1947	Apr. 11, 1947	13.8		7,590	
	Apr. 20, 1947	13.2		6,200	
	May 29, 1947	12.6		5,160	
	June 2, 1947	16.5		27,600	
	June 5, 1947	16.9		32,000	
	June 14, 1947	17.1		34,000	
	June 24, 1947	15.5		17,900	
1948	Feb. 28, 1948	15.1	b	12,000	c
	Mar. 17, 1948	14.4		10,400	
	Mar. 19, 1948	15.5		18,100	
	Mar. 30, 1948	13.1		5,890	
1949	Mar. 7, 1949	15.58	b	--	
	Mar. 8, 1949	--		14,000	
1950	Mar. 7, 1950	15.8	b	18,300	c
	June 22, 1950	14.1		8,730	
	June 25, 1950	14.8		12,600	
1951	Feb. 26, 1951	14.33	b	7,000	c
	Mar. 2, 1951	13.15		6,200	
	Mar. 31, 1951	15.72		20,100	
	Apr. 12, 1951	14.06		8,730	
	Apr. 28, 1951	12.87		5,650	
	May 6, 1951	13.25		6,200	
	June 5, 1951	15.24		15,700	
	June 22, 1951	12.46		5,060	
	July 9, 1951	14.36		10,100	

b Affected by ice. c About.

05452500 Iowa River near Belle Plaine, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1952	Mar. 12, 1952	14.30	9,620
	Mar. 14, 1952	14.58	11,300
	Apr. 5, 1952	12.65	5,650
1953	Feb. 21, 1953	13.82 b	6,500 c
	Feb. 24, 1953	13.24	6,200
1954	June 15, 1954	12.86	6,000
	June 20, 1954	13.90	8,010
	June 28, 1954	14.50	10,700
	Aug. 27, 1954	13.79	7,160
	Aug. 31, 1954	14.27	8,350
1955	Oct. 11, 1954	11.02	3,600
1956	May 14, 1956	10.37	2,590
1957	May 31, 1956	13.38	5,240
	June 20, 1957	14.21	6,950
	July 7, 1957	13.49	5,400
1958	July 16, 1958	14.45	7,200
	Sept. 4, 1958	13.94	6,080
	Sept. 6, 1958	13.54	5,370
1959	Mar. 3, 1959	13.15	5,210
	Mar. 14, 1959	13.16	5,210
	Mar. 23, 1959	15.37	14,100
	Mar. 27, 1959	15.02	11,300
	Apr. 28, 1959	13.28	5,370
	May 21, 1959	13.48	5,400
	June 3, 1959	11.86	5,620
	July 1, 1959	12.72	4,370
1969	July 1969	17.66 d	30,000

b Affected by ice. c About. d From floodmark.

05453000 Big Bear Creek at Ladora, Iowa
(Prior to October 1966, published as Bear Creek at Ladora)

Location.--Lat 41°44'58", long 92°10'55", in SW1/4 SW1/4 sec.7, T.80 N., R.11 W., Iowa County, on left bank 10 ft. downstream from bridge on county highway V52, 0.4 mile south of Ladora, 1.2 miles downstream from Coats Creek, 2.8 miles upstream from Little Bear Creek, and 8.1 miles upstream from mouth.
Drainage area.--189 mi².
Gage.--Water-stage recorder. Datum of gage is 754.94 ft National Geodetic Vertical Datum of 1929. Prior to June 26, 1946 nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--10 ft.
Remarks.--Base for partial-duration series, 2,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1946	Jan. 5, 1946	13.1	9,050
	Mar. 6, 1946	9.4	3,830
	Mar. 26, 1946	7.8	2,260
	May 3, 1946	8.2	2,590
	June 19, 1946	7.9	2,340
	Sept.22, 1946	7.73	2,200
1947	Apr. 5, 1947	7.42	2,260
	Apr. 10, 1947	7.68	2,570
	Apr. 20, 1947	7.36	2,200
	June 1, 1947	9.45	5,360
	June 5, 1947	10.90	7,610
	June 13, 1947	10.00	6,650
	June 21, 1947	8.67	3,830
	June 30, 1947	11.35	7,060
1948	Feb. 28, 1948	11.48	7,220
	Mar. 16, 1948	9.60	5,630
	Mar. 19, 1948	7.70	3,250
	July 21, 1948	7.72	3,270
1949	Feb. 24, 1949	9.86 a	2,500 b
	Mar. 4, 1949	8.74	3,930
	Mar. 22, 1949	6.61	2,000
1950	Mar. 4, 1950	12.14 a	6,500 b
	June 18, 1950	11.64	7,320
	June 24, 1950	11.15	6,840

a Affected by ice. b About.

05453000 Big Bear Creek at Ladora, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1951	Feb. 17, 1951	9.12 a	2,500 b
	May 26, 1951	8.44	2,860
	July 8, 1951	9.47	3,950
1952	Jan. 19, 1952	10.74 a	2,500 b
	Mar. 10, 1952	8.62	3,050
	May 23, 1952	7.56	2,180
1953	Feb. 20, 1953	10.81 a	4,800 b
	May 24, 1953	9.95	5,800
	June 8, 1953	8.71	4,170
	June 27, 1953	8.64	3,950
1954	Aug. 26, 1954	10.74	4,010
1955	Oct. 10, 1955	6.62	1,360
1956	July 7, 1956	9.60	2,950
1957	May 30, 1957	11.43	4,600
	July 28, 1957	8.93	2,440
1958	June 13, 1958	9.22	2,130
	Sept. 4, 1958	13.78	5,290
	Sept. 5, 1958	11.08	3,230
1959	Mar. 20, 1959	13.06	4,670
	Apr. 1, 1959	9.15	2,200
	Apr. 28, 1959	8.82	2,150
	May 21, 1959	11.39	3,480
	July 1, 1959	11.08	3,270
1960	Jan. 12, 1960	13.50	4,950
	Jan. 15, 1960	--	2,000 b
	Mar. 30, 1960	14.60	10,500
	May 6, 1960	12.10	5,940
	May 26, 1960	7.95	2,160
1961	Feb. 18, 1961	11.55	3,800
	Mar. 6, 1961	12.69	4,400
	Mar. 8, 1961	11.33	3,560
	Mar. 13, 1961	11.65	3,740
1962	Mar. 20, 1962	12.11	4,040
	July 14, 1962	10.60	3,160
	July 19, 1962	10.02	2,830
1963	Mar. 4, 1963	10.78 a	1,900 b

a Affected by ice. b About.

05453000 Big Bear Creek at Ladora, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	June 23, 1964	10.93	3,320
1965	Mar. 17, 1965	10.39	2,200
	Mar. 30, 1965	11.77 a	3,500 b
	Apr. 1, 1965	11.34	3,580
	Apr. 6, 1965	10.45	3,050
	Sept.21, 1965	11.12	3,240
1966	Feb. 8, 1966	10.90	3,260
	May 17, 1966	9.52	2,530
	May 23, 1966	8.76	2,150
	June 12, 1966	12.69	4,420
1967	Jan. 24, 1967	10.05	2,810
	June 10, 1967	11.97	4,170
1968	Apr. 4, 1968	4.59	668
1969	Mar. 18, 1969	12.32 a	2,650 b
	June 7, 1969	12.09	3,810
	June 8, 1969	12.88	4,290
	June 12, 1969	12.72	4,190
	June 27, 1969	9.97	2,440
	June 30, 1969	12.88	3,930
	July 8, 1969	10.30	2,580
	July 9, 1969	10.38	2,620
	July 26, 1969	9.83	2,370
	Aug. 9, 1969	10.26	2,570
1970	Mar. 3, 1970	13.99	4,590
	Aug. 5, 1970	12.22	3,660
	Sept.15, 1970	9.12	2,460
1971	Oct. 9, 1970	11.71	3,920
	Feb. 10, 1971	8.35	2,090
	Feb. 20, 1971	--	3,700 b
	Feb. 26, 1971	12.45	4,360
1972	Feb. 29, 1972	--	2,500 b
	June 13, 1972	10.00	2,920 b
	Aug. 6, 1972	12.60	4,330
1973	Dec. 30, 1972	13.20 a	4,200 b
	Jan. 17, 1973	--	2,800 b
	Feb. 1, 1973	--	3,500 b
	Apr. 16, 1973	11.60	3,850
	May 27, 1973	11.64	3,870

a Affected by ice. b About.

05453000 Big Bear Creek at Ladora, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	Jan. 27, 1974	--	2,500 b
	Jan. 30, 1974	9.17	2,480
	Apr. 29, 1974	12.60	4,850
	May 14, 1974	13.35	5,900
	May 16, 1974	13.22	5,640
	May 18, 1974	13.51	6,330
	May 28, 1974	14.10	8,400
	June 9, 1974	13.14	5,510
	June 22, 1974	9.72	2,730
	Aug. 10, 1974	11.83	4,160
1975	Mar. 22, 1975	11.64	4,010
1976	Apr. 24, 1976	12.18	4,460
1977	Aug. 16, 1977	12.39	4,650
	Sept.18, 1977	15.32	8,280
1978	Mar. 21, 1978	10.77	2,620
	Apr. 18, 1978	11.28	2,920
	July 19, 1978	13.51	5,400
	July 21, 1978	14.72	6,440
	Sept.17, 1978	9.63	2,060
	Sept.20, 1978	11.08	3,290
1979	Mar. 14, 1979	a	2,900
	Mar. 19, 1979	13.95	5,600
	Mar. 29, 1979	11.67	3,480
	Apr. 20, 1979	8.92	2,040
	Aug. 20, 1979	10.77	2,950
	Aug. 22, 1979	11.83	3,600
1980	Jan. 16, 1980	9.80 a	1,400
1981	June 24, 1981	21.50	3,390
1982	Feb. 21, 1982	a	2,380
	Feb. 22, 1982	a	2,070
	Mar. 13, 1982	20.15	2,610
	Mar. 16, 1982	20.27	2,680
	Mar. 19, 1982	21.37	3,310
	June 15, 1982	23.91	5,450
	July 19, 1982	23.23	4,770
1983	Oct. 9, 1982	20.01	2,540
	Nov. 12, 1982	20.87	3,020

1983 CONTINUED ON NEXT PAGE

a Affected by ice. b About.

05453000 Big Bear Creek at Ladora, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	Dec. 5, 1982	19.03	2,080
	Apr. 2, 1983	20.74	2,940
	June 30, 1983	21.47	3,370
	July 1, 1983	21.10	3,150
	July 3, 1983	23.76	5,260
	July 4, 1983	19.80	2,430
1984	Nov. 28, 1983	19.15	2,140
	Feb. 12, 1984	23.24	4,780
	Feb. 19, 1984	19.82	2,440
	Apr. 30, 1984	21.40	3,390
	June 18, 1984	20.94	3,010

05453100 Iowa River at Marengo, Iowa

Location.--Lat 41°48'41", long 92°03'42", in SW1/4 NE1/4 sec.24, T.81 N., R.11 W., Iowa County, on right bank 10 ft downstream from abandoned highway bridge, 0.7 mile downstream from Big Bear Creek, 0.8 mile north of Marengo, 4.9 miles upstream from Hilton Creek, and at mile 139.4.
Drainage area.--2,794 mi².
Gage.--Water-stage recorder. Datum of gage is 720.52 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--14 feet.
Remarks.--Base for partial-duration series, 6,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1957	June 22, 1957	14.82	7,060
1958	July 17, 1958	14.77	7,060
	Sept. 4, 1958	16.34	11,000
1959	Mar. 21, 1959	16.62	14,000
	Mar. 24, 1959	16.92	15,400
	May 21, 1959	14.58	7,390
	July 1, 1959	14.18	6,490
1960	Jan. 14, 1960	16.89	14,000
	Mar. 31, 1960	19.21	30,800
	Apr. 21, 1960	14.44	6,960
	May 10, 1960	16.03	13,500
1961	Feb. 18, 1961	16.80 a	6,200 b
	Mar. 8, 1961	16.32	11,500
	Apr. 4, 1961	14.13	6,460
1962	Mar. 20, 1962	16.59	12,700
	Mar. 25, 1962	16.83	15,000
	July 15, 1962	15.58	9,900
	July 20, 1962	16.46	12,300
1963	Mar. 13, 1963	--	6,000 b
	Mar. 15, 1963	15.10 a	7,700 b
	Mar. 19, 1963	13.95	6,600
1964	June 23, 1964	14.08	6,040

a Affected by ice. b About.

05453100 Iowa River at Marengo, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	Mar. 18, 1965	16.75 a	7,000
	Apr. 7, 1965	17.84	19,900
	Apr. 25, 1965	15.03	7,770
	Sept. 21, 1965	15.19	8,830
1966	Feb. 9, 1966	16.75 a	8,600 b
	May 7, 1966	13.77	6,280
	June 13, 1966	16.20	10,800
	June 17, 1966	16.48	11,600
1967	June 10, 1967	14.62	7,720
1968	Aug. 5, 1968	11.41	3,730
1969	Mar. 23, 1969	17.12	14,100
	Apr. 6, 1969	15.08	7,610
	June 8, 1969	16.24	10,700
	June 12, 1969	16.20	10,600
	June 27, 1969	14.19	6,030
	June 30, 1969	16.24	10,700
	July 12, 1969	19.79	28,300
	July 19, 1969	17.91	16,600
	July 27, 1969	16.21	9,460
	Aug. 9, 1969	14.63	6,050
1970	Mar. 2, 1970	16.87 a	--
	Mar. 4, 1970	--	10,000 b
	May 17, 1970	16.23	10,700
	Aug. 6, 1970	14.42	6,370
1971	Oct. 9, 1970	14.52	6,530
	Feb. 20, 1971	18.15 a	14,000 b
	Feb. 27, 1971	18.27 a	8,500 b
	Mar. 18, 1971	16.37	11,100
	July 10, 1971	14.47	6,440
1972	June 18, 1972	17.49	12,600
	Aug. 6, 1972	16.40	9,760
1973	Dec. 30, 1972	--	6,200 b
	Jan. 18, 1973	--	6,300 b
	Feb. 5, 1973	17.21	11,700
	Mar. 15, 1973	15.85	8,630
	Apr. 16, 1973	17.73	16,600
	May 12, 1973	15.48	8,550
	May 28, 1973	15.97	9,910

a Affected by ice. b About.

05453100 Iowa River at Marengo, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	Jan. 28, 1974	--	6,300 b
	Jan. 31, 1974	--	7,000 b
	Feb. 23, 1974	--	6,100 b
	Apr. 29, 1974	15.30	7,980
	May 14, 1974	16.92	12,600
	May 19, 1974	18.82	21,200
	May 29, 1974	18.73	20,800
	June 13, 1974	17.48	14,800
	June 23, 1974	15.19	7,470
	June 27, 1974	16.79	12,000
	Aug. 13, 1974	16.66	12,200
1975	Mar. 20, 1975	--	16,000 b
	Mar. 24, 1975	18.82	22,200
	June 25, 1975	16.72	13,100
1976	Apr. 24, 1976	17.91	17,700
1977	Aug. 16, 1977	15.49	8,080
	Sept.19, 1977	17.39	15,100
1978	Mar. 21, 1978	--	12,000
	Apr. 20, 1978	15.23	8,550
	June 29, 1978	14.41	6,350
	July 21, 1978	17.99	13,500
	Sept.21, 1978	15.72	7,420
1979	Mar. 19, 1979	19.40	22,300
	Apr. 21, 1979	15.58	7,550
	Aug. 22, 1979	16.39	11,200
1980	Feb. 24, 1980	a	6,400
	Mar. 13, 1980	18.74 a	--
	Mar. 16, 1980	a	7,200
1981	June 24, 1981	12.91	5,030
1982	Mar. 21, 1982	16.77	13,800
	Apr. 17, 1982	14.03	6,350
	May 27, 1982	14.75	7,700
	June 3, 1982	14.84	7,880
	June 16, 1982	18.12	21,100
	July 20, 1982	16.60	13,100
1983	Nov. 12, 1982	14.98	8,160
	Feb. 24, 1983	15.86	10,400

1983 CONTINUED ON NEXT PAGE

a Affected by ice. b About.

05453100 Iowa River at Marengo, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	Mar. 13, 1983	14.22	6,690
	Apr. 18, 1983	16.63	13,200
	May 26, 1983	16.64	13,200
	July 3, 1983	18.19	21,600
1984	Nov. 28, 1983	15.41	7,880
	Feb. 16, 1984	17.38	12,900
	Feb. 19, 1984	16.76	11,400
	Mar. 28, 1984	14.35	6,690
	May 5, 1984	17.21	14,000
	June 2, 1984	15.26	7,700
	June 12, 1984	15.89	8,780
	June 18, 1984	18.17	17,200

05453600 Rapid Creek below Morse, Iowa

Location.--Lat 41°44', long 91°26', near NE corner sec.21, T.80 N., R.5 W., Johnson County, at bridge, 1.5 miles southeast of Morse.
Drainage area.--8.12 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	July 8, 1951	17.22	223
1952	June 8, 1952	18.06	316
1953	Feb. 20, 1953	22.38	1,210
1954	Aug. 26, 1954	15.71	109
1955	Apr. 23, 1955	17.44	244
1956	Aug. 30, 1956	19.86	642
1957	Jan. 21, 1957	16.53	166
1958	Feb. 24, 1958	16.75	183
1959	Mar. 19, 1959	20.81	983
1960	June 4, 1960	21.38	1,160
1961	Mar. 4, 1961	21.78	1,300
1962	Nov. 16, 1961	19.59	650
1963	July 19, 1963	16.99	233
1964	--	a	<60
1965	May 23, 1965	25.48	2,750
1966	May 23, 1966	20.32	844
1967	June 7, 1967	22.29	1,190

a Peak stage did not reach bottom of gage.

05453600 Rapid Creek below Morse, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	June 24, 1968	16.02	132
1969	July 8, 1969	21.30	946
1970	Sept.17, 1970	17.96	360
1971	Feb. 19, 1971	21.29 c	490
1972	July 17, 1972	25.66	2,800
1973	Apr. 20, 1973	20.33	640
1974	May 16, 1974	22.74	1,400
1975	Mar. 19, 1975	22.12	1,300
1976	Mar. 4, 1976	18.12	390
1977	Aug. 16, 1977	22.91	1,450
1978	July 21, 1978	16.38	170
1979	Aug. 20, 1979	19.09	500
1980	Feb. 21, 1980	16.73	220
1981	June 29, 1981	19.03	490
1982	July 18, 1982	22.99	1,700
1983	June 28, 1983	20.56	790
1984	Feb. 18, 1984	17.01	240

c Affected by ice.

05453700 Rapid Creek tributary No. 4 near Oasis, Iowa
(Discontinued 1974)

Location.--Lat 41°43', long 91°25', near S1/4 corner sec.22, T.80 N., R.5 W., Johnson County, at culvert, 2 miles northwest of Oasis.
Drainage area.--1.95 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	July 8, 1951	15.23	78
1952	May 23, 1952	15.47	97
1953	July 20, 1953	18.23	956
1954	--	a	<7.0
1955	Apr. 23, 1955	14.91	58
1956	Aug. 30, 1956	17.22	376
1957	Aug. 28, 1957	14.40	33
1958	Feb. 24, 1958	15.18	75
1959	Oct. 8, 1958	16.70	260
1960	July 12, 1960	16.85	290
1961	Nov. 15, 1960	15.75	124
1962	July 14, 1962	16.73	266
1963	July 19, 1963	15.13	71
1964	--	a	<8
1965	Sept.21, 1965	17.19	368
1966	May 23, 1966	16.43	211
1967	June 7, 1967	17.12	350

a Peak stage did not reach bottom of gage.

05453700 Rapid Creek tributary No. 4 near Oasis, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	June 24, 1968	14.62	42
1969	July 8, 1969	17.63	525
1970	Sept.17, 1970	16.63	300
1971	Feb. 19, 1971	16.34 c	120
1972	July 17, 1972	18.45	950
1973	Apr. 20, 1973	16.67	310
1974	Apr. 28, 1974	16.76	330
Discontinued 1974			

c Affected by ice.

05453750 Rapid Creek southwest of Morse, Iowa

Location.--Lat 41°43', long 91°26', in W1/2 sec.21, T.80 N., R.5 W., Johnson County, at bridge, 2 miles southwest of Morse.
Drainage area.--15.2 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	July 8, 1951	20.64	307
1952	May 22, 1952	21.93	540
1953	Feb. 20, 1953	27.34	2,190
1954	Aug. 26, 1954	19.30	141
1955	Apr. 23, 1955	22.34	624
1956	Aug. 30, 1956	23.97	1,030
1957	Jan. 21, 1957	20.97	360
1958	Feb. 24, 1958	22.36	629
1959	Mar. 19, 1959	26.41	1,460
1960	June 4, 1960	26.13	1,400
1961	Mar. 4, 1961	24.47	940
1962	Nov. 16, 1961	24.41	920
1963	July 19, 1963	22.23	470
1964	--	a	<138
1965	May 23, 1965	29.42	4,260
1966	May 23, 1966	26.92	1,640
1967	June 7, 1967	27.49	2,900
1968	Mar. 26, 1968	21.85	405

a Peak stage did not reach bottom of gage.

05453750 Rapid Creek southwest of Morse, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	July 8, 1969	27.59	2,220
1970	June 7, 1970	25.45	1,470
1971	Feb. 19, 1971	25.15 c	780
1972	July 17, 1972	29.74	4,300
1973	Apr. 20, 1973	25.11	1,350
1974	May 29, 1974	27.32	2,200
1975	Mar. 19, 1975	23.90	970
1976	Mar. 4, 1976	25.79	1,580
1977	Aug. 16, 1977	28.49	2,700
1978	--	a	<160
1979	Aug. 20, 1979	27.47	2,000
1980	Feb. 21, 1980	22.71	520
1981	June 29, 1981	24.80	1,050
1982	July 18, 1982	27.48	2,300
1983	June 28, 1983	25.32	1,100
1984	Feb. 18, 1984	21.87	390

a Peak stage did not reach bottom of gage.
c Affected by ice.

05453850 Rapid Creek tributary No. 3 near Oasis, Iowa

Location.--Lat 41°42;, long 91°27', near center of sec.29, T.80 N., R.5 W., Johnson County, at bridge, 3.5 miles west of Oasis.
Drainage area.--1.62 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	July 8, 1951	20.79	281
1952	May 22, 1952	20.89	290
1953	Feb. 19, 1953	21.42	378
1954	Apr. 30, 1954	17.28	48
1955	Apr. 23, 1955	20.37	243
1956	Aug. 30, 1956	22.99	1,270
1957	Aug. 28, 1957	20.75	278
1958	June 13, 1958	20.69	272
1959	Oct. 8, 1958	23.14	2,360
1960	July 12, 1960	22.74	1,180
1961	Nov. 15, 1961	22.65	1,030
1962	July 14, 1962	23.29	3,050
1963	Mar. 19, 1963	22.49	830
1964	Mar. 7, 1964	18.59	20
1965	Sept. 21, 1965	24.16	1,200
1966	May 23, 1966	23.52	850
1967	June 10, 1967	20.09	213
1968	June 24, 1968	19.34	152

05453850 Rapid Creek tributary No. 3 near Oasis, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	July 8, 1969	23.83	1,600
1970	Sept.17, 1970	22.68	470
1971	June 1, 1971	20.64	225
1972	July 17, 1972	24.11	950
1973	Apr. 20, 1973	20.63	225
1974	Apr. 28, 1974	22.05	370
1975	--	a	<20
1976	--	a	<20
1977	Aug. 16, 1977	19.56	170
1978	July 21, 1978	19.57	170
1979	Aug. 20, 1979	20.91	250
1980	June 2, 1980	19.76	150
1981	June 29, 1981	22.14	380
1982	--	a	<20
1983	June 28, 1983	19.71	145
1984	--	a	<20

a Peak stage did not reach bottom of gage.
c About, from basin runoff comparison.

05453900 Rapid Creek tributary near Oasis, Iowa

Location.--Lat 41°41', long 91°27', near SW corner sec.33, T.80 N., R.5 W., Johnson County, at bridge, 3 miles southwest of Oasis.
Drainage area.--0.97 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	July 8, 1951	13.58	223
1952	May 22, 1952	13.82	247
1953	May 24, 1953	15.00	373
1954	--	a	<78
1955	Oct. 10, 1954	12.35	112
1956	July 18, 1956	18.32	809
1957	--	a	<62 b
1958	June 13, 1958	13.62	227
1959	Oct. 8, 1958	16.83	598
1960	July 12, 1960	17.03	626
1961	Nov. 15, 1960	14.96	369
1962	July 14, 1962	16.95	615
1963	--	a	<62 b
1964	--	a	<62 b
1965	Sept.21, 1965	15.42	422
1966	June 9, 1966	15.66	451

a Peak stage did not reach bottom of gage.
b Discharges revised from those previously published.

05453900 Rapid Creek tributary near Oasis, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967	--	a	<62 b
1968	--	a	<62 b
1969	--	a	<62 b
1970	Sept. 17, 1970	15.99	530
1971	--	a	<62
1972	July 17, 1972	19.59	610
1973	Apr. 20, 1973	15.47	480
1974	Apr. 28, 1974	15.28	460
1975	--	a	<62 b
1976	--	a	<62 b
1977	Aug. 16, 1977	14.75	400
1978	--	a	<62 b
1979	Aug. 20, 1979	15.40	330
1980	June 2, 1980	14.77	270
1981	June 29, 1981	14.03	200
1982	July 18, 1982	16.15	420
1983	Dec. 2, 1982	12.88	105
1984	--	a	<62

a Peak stage did not reach bottom of gage.
b Discharges revised from those previously published.

05453950 Rapid Creek tributary near Iowa City, Iowa

Location.--Lat 41°42', long 91°28', in NW1/4 sec.31, T.80 N., R.5 W., Johnson County, at bridge, 4 miles northeast of Iowa City.
Drainage area.--3.43 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	July 8, 1951	22.39	427
1952	May 23, 1952	22.26	408
1953	Feb. 19, 1953	23.09	578
1954	Apr. 30, 1954	18.48	52
1955	Apr. 23, 1955	19.88	142
1956	July 18, 1956	24.35	1,850
1957	Aug. 28, 1957	19.82	138
1958	June 13, 1958	21.09	263
1959	Oct. 8, 1958	23.70	840
1960	July 12, 1960	23.58	771
1961	Aug. 1, 1961	23.72	856
1962	July 14, 1962	24.19	1,480
1963	July 19, 1963	20.97	249
1964	--	a	<19 b
1965	Sept.21, 1965	26.40	1,500
1966	May 23, 1966	23.99	525
1967	June 10, 1967	24.11	520

a Peak stage did not reach bottom of gage.
b Discharge revised from that previously published.

05453950 Rapid Creek tributary near Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	--	a	<76 b
1969	July 8, 1969	25.83	1,080
1970	Sept.17, 1970	25.49	930
1971	--	a	<76 b
1972	July 17, 1972	26.57	2,300
1973	Apr. 20, 1973	24.60	680
1974	Apr. 28, 1974	24.69	690
1975	--	a	<76 b
1976	--	a	<76 b
1977	Aug. 16, 1977	26.04	1,300
1978	July 21, 1978	22.21	290
1979	Aug. 20, 1979	24.05	320
1980	June 2, 1980	21.04	170
1981	Apr. 10, 1981	24.24	580
1982	July 18, 1982	25.50	900
1983	June 28, 1983	23.44	450
1984	--	a	<76

a Peak stage did not reach bottom of gage.
b Discharges revised from those previously published.

05454000 Rapid Creek near Iowa City, Iowa

Location.--Lat 41°41'19", long 91°29'15", in NE1/4 NE1/4 sec.36, T.80 N., R.6 W., Johnson County, on left bank 80 ft upstream from bridge on State Highway 1, 3.5 miles northeast of Iowa City, and 4.7 miles upstream from mouth.
Drainage area.--25.3 mi².
Gage.--Water-stage recorder and concrete control with sharp-crested weir. Datum of gage is 673.72 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Bankfull stage.--9 feet.
Remarks.--Base for partial-duration series, 600 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1938	Jan. 24, 1938	10.30	868
	Feb. 5, 1938	10.20	831
1939	Mar. 12, 1939	12.05 a	1,800 b
	Aug. 8, 1939	9.56	623
1940	Mar. 17, 1940	8.52	372
1941	June 27, 1941	12.54	3,710
	June 30, 1941	11.28	1,980
	Sept. 8, 1941	10.53	1,210
1942	Oct. 22, 1941	11.32	2,090
	Oct. 31, 1941	9.78	697
	June 11, 1942	10.15	930
	Sept. 8, 1942	10.15	850
1943	Apr. 27, 1943	11.00	1,670
	Apr. 29, 1943	9.75	780
	June 1, 1943	11.48	2,200
1944	Jan. 27, 1944	10.80	1,370
	Feb. 22, 1944	10.61	1,350
	Apr. 23, 1944	9.34	635
	May 20, 1944	12.66	3,890
	May 21, 1944	9.87	785
1945	June 1, 1945	7.66	398

a Affected by ice. b About.

05454000 Rapid Creek near Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1946	Jan. 5, 1946	11.24 a	2,530 b
1947	June 30, 1947	10.72	1,390
	July 5, 1947	10.62	1,290
	July 12, 1947	10.46	1,140
1948	Feb. 27, 1948	10.89	1,830
	Mar. 15, 1948	10.25 a	1,100 b
	Mar. 19, 1948	10.70	1,580
	July 21, 1948	11.17	2,180
1949	Feb. 24, 1949	11.10 a	1,200 b
	Mar. 4, 1949	10.35 a	750 b
1950	Jan. 13, 1950	10.08	770
	Feb. 28, 1950	10.64	1,030
	Mar. 5, 1950	10.45	865
	May 21, 1950	9.50	625
	July 1, 1950	12.45	2,780
	July 12, 1950	10.88	1,200
1951	Feb. 19, 1951	11.07	1,380
	Feb. 25, 1951	11.25	1,460
	July 8, 1951	10.35	900
1952	May 23, 1952	10.94	1,220
	June 8, 1952	9.36	607
1953	Feb. 5, 1953	10.97	1,200
	Feb. 20, 1953	13.05	3,800
	May 24, 1953	11.07	1,280
	July 6, 1953	9.66	680
	July 20, 1953	9.75	700
1954	Aug. 26, 1954	6.17	216
1955	Feb. 19, 1955	10.50 a	650 b
	Apr. 24, 1955	9.95	750
1956	July 18, 1956	12.27	2,620
	July 31, 1956	10.68	1,080
	Aug. 12, 1956	10.07	815
	Aug. 30, 1956	12.48	3,000
1957	Aug. 28, 1957	7.60	326
1958	June 13, 1958	9.15	509

a Affected by ice. b About.

05454000 Rapid Creek near Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1959	Oct. 9, 1958	11.74	1,980
	Mar. 19, 1959	12.51 a	2,300 b
	Apr. 27, 1959	10.15	850
	May 30, 1959	9.50	655
	July 18, 1959	10.08	815
1960	Jan. 12, 1960	10.97 a	950 b
	Mar. 29, 1960	12.04	2,340
	May 6, 1960	11.70	1,730
	June 4, 1960	11.87	2,090
	July 12, 1960	11.22	1,450
1961	Oct. 31, 1960	10.47	952
	Nov. 15, 1960	11.26	1,450
	Mar. 4, 1961	11.17	1,410
	Aug. 1, 1961	11.19	1,450
	Sept.13, 1961	9.63	675
1962	Nov. 2, 1961	9.75	725
	Nov. 16, 1961	11.61	1,830
	Mar. 19, 1962	11.19	1,450
	May 11, 1962	11.42	1,630
	May 29, 1962	10.93	1,260
	June 3, 1962	9.80	725
	July 14, 1962	13.64	5,200
	July 28, 1962	9.34	600
1963	Mar. 4, 1963	10.23 a	800 b
	July 19, 1963	10.05	785
1964	June 22, 1964	5.82	176
1965	Jan. 22, 1965	10.96 a	1,080 b
	Apr. 5, 1965	9.80	725
	May 23, 1965	14.10	6,100
	Sept.20, 1965	10.81	1,140
	Sept.21, 1965	13.24	4,380
1966	Feb. 8, 1966	11.08	1,350
	May 23, 1966	11.93	2,190
	June 9, 1966	10.71	1,090
1967	June 7, 1967	14.42 c	4,200
	June 10, 1967	10.58	803
1968	Nov. 2, 1967	7.36	404

a Affected by ice. b About.
c Backwater from bridge construction.

05454000 Rapid Creek near Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	June 27, 1969	9.47	639
	June 29, 1969	11.20	1,450
	July 8, 1969	13.10	4,100
1970	Mar. 2, 1970	12.14	2,460
	May 13, 1970	11.04	1,530
	June 2, 1970	10.42	1,010
	Sept.17, 1970	11.98	2,120
1971	Feb. 20, 1971	11.44 a	1,000 b
1972	Nov. 1, 1971	9.56	750
	Dec. 15, 1971	10.43	1,010
	Feb. 8, 1972	--	2,150 b
	Feb. 29, 1972	--	1,420
	July 17, 1972	14.93	5,590
	Aug. 6, 1972	12.36	2,270
1973	Dec. 30, 1972	12.29 a	1,200 b
	Apr. 20, 1973	11.34	1,610
	Apr. 21, 1973	9.30	730
1974	Apr. 28, 1974	11.60	1,670
	May 14, 1974	9.97	921
	May 16, 1974	11.66	1,930
	May 17, 1974	11.72	1,980
	May 18, 1974	11.46	1,780
	May 29, 1974	12.00	2,220
	June 7, 1974	9.92	855
	June 9, 1974	9.43	725
	June 22, 1974	9.69	790
1975	Mar. 19, 1975	12.19 a	900 b
	Mar. 22, 1975	8.95	658
1976	Apr. 24, 1976	5.68	184
1977	Aug. 8, 1977	10.31	1,230
	Aug. 16, 1977	13.85	4,000
	Sept.18, 1977	11.56	1,940
1978	July 21, 1978	8.70	679
	Sept.18, 1978	8.48	636
1979	Mar. 18, 1979	10.20	1,180
	Aug. 20, 1979	12.04	2,270
1980	June 3, 1980	8.84	741

a Affected by ice. b About.

05454000 Rapid Creek near Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1981	June 15, 1981	9.89	1,060
	June 29, 1981	11.86	2,140
	Sept.26, 1981	9.84	1,040
1982	Feb. 20, 1982	9.36	878
	Mar. 12, 1982	8.49	638
	June 15, 1982	11.92	2,180
	July 18, 1982	12.84	2,920
1983	Dec. 2, 1982	11.38	1,830
	Dec. 5, 1982	9.02	776
	June 28, 1983	12.07	2,290
1984	June 22, 1984	7.37	419

05454300 Clear Creek near Coralville, Iowa

Location.--Lat 41°40'36", long 91°35'55", in NE1/4 SE1/4 sec.1, T.79 N., R.7 W., Johnson County, on left bank about 50 ft upstream from bridge on county highway, 1.1 miles west of Post Office in Coralville, 1.5 miles downstream from Deer Creek and 2.7 miles upstream from mouth.
Drainage area.--98.1 mi².
Gage.--Water-stage recorder. Datum of gage is 648.43 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Jan. 7, 1957, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--11 ft.
Remarks.--Base for partial-duration series, 1,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	Feb. 20, 1953	11.18 a	1,800 b
	May 25, 1953	9.3	1,010
1954	Aug. 26, 1954	8.10	730
1955	Feb. 21, 1955	9.70 a	850 b
1956	Aug. 30, 1956	9.52	900
1957	Jan. 22, 1957	6.28 a	300 b
1958	Sept. 5, 1958	9.69	1,020
1959	Feb. 27, 1959	11.34 a	1,500 b
	Mar. 20, 1959	11.68	2,880
	Mar. 26, 1959	10.22	1,040
	Apr. 28, 1959	10.25	1,040
1960	Jan. 13, 1960	11.79	3,060
	Mar. 31, 1960	11.63	2,740
	June 2, 1960	10.08	1,150
	June 4, 1960	10.06	1,120
	July 9, 1960	10.27	1,240
	July 14, 1960	10.90	1,840
1961	Mar. 5, 1961	11.84	3,020
	Mar. 14, 1961	10.5 b	1,180

a Affected by ice. b About.

05454300 Clear Creek near Coralville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1962	Nov. 16, 1961	10.99	1,410
	Mar. 20, 1962	12.03	2,740
	May 29, 1962	13.31	5,390
	July 14, 1962	13.10	4,160
1963	Mar. 4, 1963	10.83 a	700 b
1964	June 24, 1964	10.47	1,280
1965	Jan. 22, 1965	10.98	1,190
	Apr. 6, 1965	11.12	1,600
	Apr. 24, 1965	12.50	4,060
	July 10, 1965	10.67	1,360
	Sept.21, 1965	13.47	4,000
1966	Feb. 9, 1966	11.90	2,460
	May 24, 1966	11.91	2,480
1967	June 10, 1967	7.74	648
	Sept.15, 1967	7.79	--
1968	Apr. 30, 1968	7.83	686
1969	Apr. 4, 1969	9.28	1,050
	June 28, 1969	11.65	1,990
	June 30, 1969	12.85	3,180
	July 9, 1969	12.84	3,160
	July 27, 1969	12.14	2,350
1970	Mar. 3, 1970	13.49	4,900
	May 14, 1970	9.81	1,230
	Sept.17, 1970	10.31	1,410
1971	Feb. 20, 1971	13.00 a	1,650 b
1972	Dec. 15, 1971	9.39	1,170
	Feb. 29, 1972	--	1,200 b
	Apr. 16, 1972	9.00	1,070
	Apr. 21, 1972	8.85	1,020
	July 17, 1972	10.87	1,670
	Aug. 6, 1972	12.29	2,470
1973	Dec. 30, 1972	--	1,600 b
	Apr. 16, 1973	9.87	1,260
	Apr. 21, 1973	12.23	2,430
	May 2, 1973	10.69	1,570
	May 7, 1973	9.27	1,090
	May 27, 1973	11.53	1,920
	June 4, 1973	9.44	1,140

a Affected by ice. b About.

05454300 Clear Creek near Coralville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	Apr. 29, 1974	9.66	1,230
	May 14, 1974	12.00	2,270
	May 17, 1974	13.93	6,630
	May 29, 1974	11.19	1,770
	June 9, 1974	9.49	1,150
	June 23, 1974	10.02	1,320
	Aug. 13, 1974	11.02	1,700
1975	Mar. 19, 1975	10.71	1,940
	Mar. 22, 1975	9.97	1,620
1976	Apr. 24, 1976	9.06	1,030
1977	Aug. 16, 1977	13.02	3,540
	Sept. 18, 1977	10.82	1,620
1978	June 29, 1978	12.94	3,360
	July 9, 1978	10.28	1,400
	July 19, 1978	9.77	1,230
	July 22, 1978	11.65	1,990
1979	Mar. 19, 1979	12.41	2,590
	Aug. 20, 1979	10.71	1,570
1980	July 14, 1980	7.23	632
1981	June 24, 1981	9.06	1,040
	June 29, 1981	9.11	1,050
	Aug. 5, 1981	9.06	1,040
1982	Feb. 22, 1982	a	1,270
	June 15, 1982	14.61	9,900
	July 13, 1982	--	1,500
	July 19, 1982	13.23	4,710
	Aug. 8, 1982	12.73	4,050
1983	Dec. 5, 1982	9.17	1,080
	Apr. 2, 1983	9.15	1,130
	June 28, 1983	11.87	1,940
	June 29, 1983	9.10	1,050
	July 2, 1983	9.37	1,120
1984	Feb. 12, 1984	8.80	1,010

a Affected by ice.

05454500 Iowa River at Iowa City, Iowa

Location.--Lat 41°39'24", long 91°32'27", in SE1/4 SE1/4 sec.9, T.79 N., R.6 W., Johnson County, on right bank 25 ft downstream from Hydraulics Laboratory of University of Iowa in Iowa City, 175 ft downstream from University Dam, 0.8 mile upstream from Ralston Creek, 3.6 miles downstream from Clear Creek, and at mile 74.2.

Drainage area.--3,271 mi².

Gage.--Water-stage recorder. Datum of gage is 29.00 ft above Iowa City datum, and 617.27 ft National Geodetic Vertical Datum of 1929. June 1, 1903, to July 21, 1906, nonrecording gage 1,200 ft usptream at datum 3.05 ft higher. Nov. 29, 1907, to Oct. 29, 1913, staff gage 200 ft upstream at different datum. Oct. 30, 1913, to Nov. 18, 1921, chain gage at site 2,600 ft downstream at datum 0.2 ft higher. Nov. 19, 1921 to Sept. 30, 1922, water-stage recorder gage at present site at datum 1.0 ft higher. Oct. 1, 1930, to Sept. 30, 1934, at present site at Iowa City datum. Oct. 1, 1934, to Sept. 30, 1972, at datum 10.00 ft higher.

Stage-discharge relation.--Defined by current-meter measurements.

Flood stage.--19 feet.

Remarks.--Base for partial-duration series, 6,000 ft³/s. Peak discharge 1907-13 estimated by Prof. F. A. Nagler from University Power Plant records. Peak discharge base discontinued upon beginning of storage in Coralville Lake Sept. 17, 1958.

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft³/s)	
1851	June 1851	24.1	a	70,000	b
1881	July 17, 1881	21.1	c	51,000	
1903	June 2, 1903	15.0		22,500	
1904	Mar. 25, 1904	8.3		9,880	
1905	Mar. 24, 1905	6.7		6,830	
	May 24, 1905	8.0		8,490	
	June 10, 1905	8.8		9,740	

a About; maximum known since at least 1850. b Estimated.
c From floodmark (site and datum in use 1913-1931); from information by local resident.

05454500 Iowa River at Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1906	Mar. 2, 1906	10.2	11,900
	Apr. 5, 1906	7.6	7,960
1907	July 15, 1907	--	13,000 d
1908	June 3, 1908	--	6,000 d
1909	July 7, 1909	--	12,500 d
1910	Mar. 9, 1910	--	12,600 d
1911	Feb. 17, 1911	--	17,200 d
1912	Apr. 4, 1912	--	20,000 d
1913	Mar. 24, 1913	--	7,030
1914	Sept.15, 1914	10.6	9,620
1915	Feb. 18, 1915	--	20,000 d
	Feb. 25, 1915	--	20,000 d
	June 4, 1915	10.9	9,470
	July 28, 1915	11.0	9,600
	Aug. 2, 1915	10.8	9,340
	Sept.29, 1915	12.5	10,600
1916	Mar. 26, 1916	13.5	16,100
1917	Mar. 29, 1917	--	17,500 d
	June 16, 1917	--	17,500 d
1918	May 27, 1918	12.7	14,200
	June 8, 1918	19.6	42,500
	July 7, 1918	8.7	7,220
1919	Mar. 20, 1919	10.0	9,370
	Apr. 28, 1919	9.2	7,970
	May 7, 1919	12.0	13,800
	June 9, 1919	8.6	7,080
1920	Nov. 13, 1919	8.2	6,570
	Mar. 18, 1920	9.4	8,300
	Mar. 26, 1920	9.3	8,130
	Apr. 23, 1920	8.3	6,690
	May 16, 1920	8.2	6,570

d About.

05454500 Iowa River at Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1921	Sept 21, 1921	12.70	15,600
1922	Apr. 11, 1922	6.60	5,880
1923	Apr. 7, 1923	9.7	8,590
1924	Mar. 10, 1924	8.9	7,670
	June 8, 1924	9.8	8,900
	July 1, 1924	15.3	19,900
	July 24, 1924	9.2	8,060
	July 27, 1924	10.4	9,660
	Aug. 6, 1924	7.6	6,290
	Aug. 22, 1924	7.4	6,000
1925	Mar. 21, 1925	3.44	1,590
1926	Sept.23, 1926	14.5	17,800
1927	May 13, 1927	8.2	6,900
	May 24, 1927	11.1	10,900
	June 21, 1927	9.2	8,110
1928	Oct. 6, 1927	10.6	10,000
	Feb. 14, 1928	9.9	9,120
	Mar. 13, 1928	8.2	6,900
1929	Mar. 16, 1929	16.1	21,900
	Aug. 2, 1929	11.5	11,600
	Aug. 7, 1929	9.3	8,160
1930	Feb. 22, 1930	9.6	8,380
	Feb. 24, 1930	9.2	7,900
	June 15, 1930	13.3	13,600
1931	Sept.28, 1931	4.1	2,790
1932	Dec. 1, 1931	9.2	7,880
1933	Apr. 10, 1933	10.0	8,700
	May 26, 1933	8.8	7,240
1934	July 17, 1934	--	2,140
1935	Mar. 11, 1935	9.8	8,710
	June 19, 1935	7.7	6,350
	June 26, 1935	9.3	8,110
	July 4, 1935	9.3	8,110
1936	Mar. 15, 1936	12.0	12,900

05454500 Iowa River at Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1937	Feb. 23, 1937	13.7	7,380
	Mar. 7, 1937	14.6	17,100
1938	Jan. 24, 1938	6.78 e	5,000 d
1939	Mar. 12, 1939	10.4	9,870
	Mar. 16, 1939	9.8	9,090
1940	Mar. 21, 1940	4.2	3,020
1941	Mar. 21, 1941	8.5	7,490
	Sept. 8, 1941	8.5	7,310
1942	Nov. 6, 1941	7.6	6,350
	June 13, 1942	8.9	7,800
1943	Mar. 16, 1943	7.8	6,580
	May 20, 1943	7.8	6,580
	June 2, 1943	11.1	10,600
	Aug. 7, 1943	8.2	7,040
1944	Apr. 23, 1944	7.8	6,570
	May 24, 1944	18.0	31,100
	June 19, 1944	16.1	23,500
1945	Mar. 26, 1945	10.3	9,560
	Apr. 23, 1945	7.9	6,690
	May 21, 1945	7.4	6,210
	June 10, 1945	10.3	9,530
1946	Jan. 5, 1946	13.0 e	10,800 d
	Jan. 9, 1946	13.3	14,800
	Mar. 20, 1946	9.9	9,040
1947	Apr. 20, 1947	10.4	9,690
	June 8, 1947	17.3	28,100
	June 17, 1947	18.6	33,800
1948	Feb. 28, 1948	10.1	8,200 d
	Mar. 1, 1948	13.4	11,000
	Mar. 19, 1948	14.5	18,000
1949	Mar. 5, 1949	8.9 e	6,500 d
	Mar. 10, 1949	13.0	14,100
1950	Mar. 6, 1950	8.4	7,480
	Mar. 11, 1950	12.8	13,700
	June 27, 1950	10.8	10,500
	July 2, 1950	11.4	11,400

d About. e Affected by ice.

05454500 Iowa River at Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1951	Mar. 2, 1951	--	6,200 d
	Mar. 5, 1951	9.45 e	8,000 d
	Apr. 3, 1951	13.70	15,700
	Apr. 15, 1951	10.53	10,200
	May 11, 1951	9.19	8,460
	June 8, 1951	11.98	12,300
	July 12, 1951	10.01	9,500
1952	Mar. 17, 1952	10.70	10,400
1953	Feb. 20, 1953	11.85	11,900
1954	July 3, 1954	8.31	7,690
	Sept. 5, 1954	7.17	6,340
1955	Apr. 24, 1955	5.65	4,600
1956	Aug. 31, 1956	3.95	3,100
1957	June 25, 1957	5.70	4,700
1958	Sept. 7, 1958	5.95	5,000
1959	Apr. 14, 1959	10.40	9,380
1960	Apr. 16, 1960	11.28	10,700
1961	Mar. 13, 1961	10.73	9,940
1962	July 14, 1962	12.35	12,300
1963	Mar. 20, 1963	9.18	8,220
1964	June 27, 1964	3.74	3,000
1965	Apr. 24, 1965	11.74	11,100
1966	Feb. 10, 1966	10.80	10,100
1967	June 7, 1967	5.16	4,420
1968	Nov. 2, 1967	3.85	3,310
1969	July 27, 1969	13.93	15,000
1970	Mar. 10, 1970	9.94	8,540
1971	Feb. 26, 1971	11.90	11,100

d About. e Affected by ice.

05454500 Iowa River at Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	July 17, 1972	11.54	10,600

1973	May 1, 1973	22.04	11,300
1974	June 9, 1974	22.44	11,900
1975	Apr. 9, 1975	21.50	10,500
1976	Apr. 24, 1976	18.72	7,350
1977	Sept.18, 1977	16.38	5,240
1978	Mar. 26, 1978	20.34	9,510
1979	Mar. 29, 1979	21.64	10,700
1980	Mar. 19, 1980	16.67	5,650
1981	June 29, 1981	17.31	6,230
1982	June 15, 1982	21.44	10,400
1983	Apr. 26, 1983	20.72	9,490
1984	Mar. 1, 1984	20.68	9,430

05455000 Ralston Creek at Iowa City, Iowa

Location.--Lat 41°39'50", long 91°30'48", in SE1/4 NW1/4 sec.11, T.79 N., R.6 W., Johnson County, on left bank 10 ft upstream from bridge on Rochester Avenue, 1.2 miles northeast of post office in Iowa City and 2.2 miles upstream from mouth.
Drainage area.--3.01 mi².
Gage.--Water-stage recorder and v-notch sharp-crested weir. Datum of gage is 663.27 ft National Geodetic Vertical Datum of 1929 (University of Iowa bench mark).
Stage-discharge realtion.--Defined by current-meter measurements.
Bankfull stage.--Banks are not overtopped at gage.
Remarks.--Base for partial-duration series, 200 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1925	Sept. 8, 1925	4.15	266
1926	June 12, 1926	4.21	271
	Sept. 1, 1926	4.98	370
	Sept.22, 1926	5.03	370
1927	May 8, 1927	4.40	295
	May 18, 1927	4.92	357
	June 20, 1927	7.18	800
1928	Oct. 2, 1927	5.11	383
	June 24, 1928	3.72	216
	Aug. 3, 1928	4.58	319
	Aug. 23, 1928	4.88	357
1929	Oct. 17, 1928	3.88	238
	June 11, 1929	5.20	396
	June 30, 1929	4.10	260
	Aug. 2, 1929	5.00	370
1930	June 14, 1930	7.50	905
	Sept.25, 1930	7.53	905
1931	Sept.25, 1931	4.03	254
1932	Nov. 23, 1931	4.75	344
	June 17, 1932	4.77	344
	July 10, 1932	4.19	271
	Aug. 1, 1932	8.18	1,200
1933	Dec. 24, 1932	3.30	174

05455000 Ralston Creek at Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1934	July 12, 1934	4.00	249
1935	June 1, 1935	4.11	260
	June 15, 1935	4.22	271
	June 26, 1935	6.37	570
	Aug. 20, 1935	5.00	370
1936	Sept. 1, 1936	3.59	193
1937	Jan. 30, 1937	4.25	266
	Feb. 20, 1937	6.28	533
	Mar. 2, 1937	4.22	262
	May 26, 1937	3.93	230
	July 14, 1937	4.45	290
1938	Jan. 24, 1938	4.61	310
	Feb. 5, 1938	4.16	257
	May 17, 1938	4.30	274
	July 6, 1938	5.81	466
	Aug. 5, 1938	4.51	265
1939	Mar. 12, 1939	4.71	322
	July 16, 1939	4.34	275
	Aug. 8, 1939	3.96	231
1940	Aug. 13, 1940	3.00	87
1941	June 27, 1941	8.25	1,230
	June 28, 1941	6.65	615
	June 30, 1941	7.14	736
	July 29, 1941	5.04	260
	Sept. 8, 1941	--	220
1942	Oct. 22, 1941	7.39	816
	Sept. 8, 1942	7.41	824
1943	Dec. 26, 1942	5.21 a	287 b
	Mar. 15, 1943	4.53	206
	Apr. 27, 1943	5.99	421
	June 1, 1943	7.72	960
1944	Jan. 27, 1944	6.48	554
1945	June 10, 1945	4.00	155
1946	Jan. 5, 1946	6.58 a	449 b
	Aug. 2, 1946	6.46	547

a Affected by ice. b About.

05455000 Ralston Creek at Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1947	June 30, 1947	6.61	465
	July 12, 1947	6.03	339
1948	Feb. 27, 1948	5.46 a	385 b
	July 21, 1948	6.73	662
1949	June 23, 1949	3.37	125
1950	Mar. 4, 1950	3.59	225
	Mar. 5, 1950	3.51	210
	May 21, 1950	3.73	220
	July 1, 1950	8.32	1,250
	July 12, 1950	3.90	235
	July 30, 1950	3.62	225
1951	Feb. 18, 1951	3.74 a	232 b
	Feb. 25, 1951	4.07	250
	July 8, 1951	4.81	328
1952	May 23, 1952	3.73	220
	June 14, 1952	3.56	202
1953	Nov. 17, 1952	3.93	240
	Feb. 5, 1953	3.65	291
	Feb. 19, 1953	4.65	312
	May 24, 1953	3.71	215
1954	Aug. 25, 1954	2.72	107
1955	Apr. 23, 1955	3.41	166
1956	July 18, 1956	9.06	1,690
	July 31, 1956	5.55	416
	Aug. 30, 1956	7.11	770
1957	Jan. 21, 1957	2.16	40
1958	June 13, 1958	3.79	226
	July 14, 1958	4.60	296
1959	Oct. 8, 1959	7.03	755
	Mar. 19, 1959	5.06	362
	Apr. 27, 1959	3.60	206
	May 19, 1959	4.82	328
	May 30, 1959	4.30	276
	July 18, 1959	3.61	206

a Affected by ice. b About.

05455000 Ralston Creek at Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1960	Jan. 12, 1960	3.54	201
	June 1, 1960	3.77	221
	June 4, 1960	6.30	558
	July 12, 1960	3.93	241
1961	Nov. 15, 1960	5.70	448
	July 31, 1961	4.23	266
1962	Nov. 16, 1961	4.07	251
	May 29, 1962	3.94	241
	July 14, 1962	7.92	1,060
1963	May 12, 1963	3.14	158
1964	June 22, 1964	2.40	60
1965	Apr. 24, 1965	4.25	330
	Sept.21, 1965	6.90	1,940
1966	Feb. 8, 1966	4.21	314
	May 23, 1966	4.69	408
	June 9, 1966	4.32	354
	June 28, 1966	4.09	261
1967	June 7, 1967	6.17	1,040
1968	May 26, 1968	3.53	187
1969	June 29, 1969	4.26	334
	July 8, 1969	6.76	984
	July 19, 1969	4.16	292
1970	Sept.17, 1970	6.17	764
1971	Feb. 19, 1971	4.15 a	220 b
1972	Feb. 28, 1972	4.28 a	322 b
	July 17, 1972	9.01	1,760
	Aug. 6, 1972	6.53	618
1973	Apr. 20, 1973	4.31	252
1974	Apr. 28, 1974	5.12	373
	May 16, 1974	5.04	361
	May 18, 1974	5.05	362
	June 7, 1974	4.12	223
	Aug. 12, 1974	4.12	223

a Affected by ice. b About.

05455000 Ralston Creek at Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1975	Mar. 19, 1975	3.67	160
1976	Apr. 24, 1976	3.67	122
1977	Aug. 16, 1977	6.13	522
1978	June 28, 1978	5.31	379
	Sept.17, 1978	4.47	253
	Sept.18, 1978	4.17	208
1979	Mar. 3, 1979	4.30	225
	July 11, 1979	4.23	207
	Aug. 20, 1979	4.52	268
1980	June 2, 1980	3.79	113
1981	Apr. 10, 1981	5.00	337
	June 15, 1981	4.18	201
	June 29, 1981	4.64	282
1982	June 15, 1982	5.63	436
	July 18, 1982	6.25	550
1983	Dec. 2, 1982	4.02	167
1984	June 22, 1984	3.54	79.1

05455010 South Branch Ralston Creek at Iowa City, Iowa

Location.--Lat 41°39'05", long 92°30'27", in SW1/4 NE1/4 sec.14, T.79 N., R.6 W., Johnson County, on right bank 60 ft downstream from bridge on Muscatine Avenue in Iowa City, and 1.2 miles upstream from mouth.
Drainage area.--2.94 mi².
Gage.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 678.03 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements below 220 ft³/s and by flow-through-culvert measurement at 780 ft³/s.
Remarks.--Base for partial-duration series, 200 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1962	July 14, 1962	10.50 a	b
1964	June 22, 1964	3.47	126
1965	Apr. 5, 1965	4.76	312
	Apr. 24, 1965	6.57	652
	May 26, 1965	4.28	209
	Sept.21, 1965	8.15	780
1966	May 23, 1966	6.86	400
	June 9, 1966	7.59	492
	July 5, 1966	6.62	373
	July 26, 1966	5.22	222
1967	June 7, 1967	8.78	859
1968	May 26, 1968	4.67	184
1969	June 7, 1969	4.92	203
	June 8, 1969	5.06	213
	June 29, 1969	6.79	341
	July 7, 1969	5.68	255
	July 8, 1969	8.52	677
	July 18, 1969	5.15	216
	July 19, 1969	5.97	272
1970	Mar. 2, 1970	5.99	276
	May 29, 1970	5.99	276
	June 20, 1970	5.55	246
	July 3, 1970	5.50	242
	Sept.17, 1970	7.40	510

a From flood profile. b Discharge not determined.

05455010 South Branch Ralston Creek at Iowa City--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)	
1971	July 10, 1971	6.20	292	
	July 18, 1971	5.69	255	
	July 25, 1971	5.15	218	
	Sept. 4, 1971	5.48	241	
1972	Dec. 15, 1972	5.43	224	
	May 29, 1972	5.30	236	
	July 17, 1972	9.47	1,070	
	Aug. 6, 1972	7.71	578	
1973	Dec. 30, 1973	--	220	c
	Apr. 20, 1973	7.65	564	
	Apr. 30, 1973	5.16	226	
	May 1, 1973	5.73	281	
	May 27, 1963	5.62	270	
	June 4, 1973	5.16	226	
	Sept.21, 1973	5.60	268	
1974	Apr. 28, 1974	7.58	548	
	May 13, 1974	5.83	298	
	May 16, 1974	6.29	373	
	May 29, 1974	5.95	306	
	June 7, 1974	6.33	355	
	June 22, 1974	6.18	336	
	July 22, 1974	6.91	442	
	Aug. 12, 1974	6.40	368	
	Aug. 16, 1974	5.79	286	
	Aug. 21, 1974	5.66	270	
1975	Mar. 19, 1975	4.07	136	
1976	Apr. 24, 1976	4.13	140	
1977	Apr. 20, 1977	6.07	316	
	Aug. 15, 1977	7.51	534	
1978	Apr. 9, 1978	5.89	299	
	June 28, 1978	7.89	680	
	July 7, 1978	4.75	211	
	July 9, 1978	7.28	540	
	July 19, 1978	6.31	373	
	Sept.16, 1978	7.38	510	
	Sept.18, 1978	6.35	355	
1979	July 11, 1979	7.49	530	
1980	June 14, 1980	4.28	152	

c About.

05455010 South Branch Ralston Creek at Iowa City--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1981	Apr. 10, 1981	6.32	351
	June 15, 1981	6.58	385
	June 24, 1981	6.25	343
	June 29, 1981	5.36	250
	Sept.26, 1981	4.95	212
1982	June 15, 1982	7.25	490
	July 18, 1982	8.10	666
1983	Dec. 2, 1982	7.00	441
1984	June 22, 1984	4.06	142

05455100 Old Mans Creek near Iowa City, Iowa

Location.--Lat 41°36'23", long 91°36'56", in NW1/4 sec.36, T.79 N., R.7 W., Johnson County, at bridge, 3 miles southwest of Iowa City.
Drainage area.--201 mi².
Gage.--Nonrecording. Altitude of gage is 645 ft (from topographic map).
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	Aug. 28, 1951	10.6	1,530
1952	Mar. 12, 1952	13.2	5,230
1953	Feb. 20, 1953	12.6	3,510
1954	May 1, 1954	5.47	460
1955	Apr. 24, 1955	9.06	1,120
1956	Aug. 19, 1956	10.46	1,430
1957	Aug. 1, 1957	4.92	380
1958	Sept. 5, 1958	8.64	1,040
1959	Mar. 21, 1959	12.93	4,180
1960	Mar. 31, 1960	13.58	6,840
1961	Mar. 13, 1961	10.80	1,640
1962	May 29, 1962	14.52	12,000
1963	Mar. 4, 1963	12.20 c	1,400 d
1964	June 20, 1964	10.42	1,480
1965	Sept.21, 1965	15.55	7,750
1966	May 24, 1966	13.00	3,400
1967	July 8, 1967	9.33	1,200

c Affected by ice. d About.

05455100 Old Mans Creek near Iowa City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	--	a	<1,180
1969	July 8, 1969	12.73	2,570
1970	Mar. 3, 1970	14.38	7,400
1971	Feb. 19, 1971	11.33 c	3,000 d
1972	Aug. 6, 1972	12.98	3,200
1973	Jan. 18, 1973	11.47	2,260
1974	May 17, 1974	13.95	4,700
1975	Mar. 20, 1975	10.94 e	2,230
1976	Apr. 24, 1976	11.28	2,250
1977	May 16, 1977	13.00	3,300
1978	--	a	<1,400
1979	Mar. 18, 1979	13.16	<3,500
1980	--	a	<1,400
1981	June 29, 1981	12.74	3,100
1982	June 15, 1982	15.25	13,500
1983	June 28, 1983	10.96	1,900
1984	Feb. 18, 1984	10.31	1,700

a Peak stage did not reach bottom of gage.
c Affected by ice. d About. e Maximum observed.

05455140 North English River near Montezuma, Iowa

Location.--Lat 41°38'45", long 92°34'20", in SW1/4 sec.14, T.79 N., R.15 W., Poweshiek County, at bridge 5.0 miles northwest of Montezuma.
Drainage area.--31.0 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
Discharges are revised from those previously published.			
1973	May 26, 1973	22.51	1,100
1974	May 28, 1974	26.97	3,800
1975	Mar. 18, 1975	22.45	580
1976	Apr. 24, 1976	21.66	870
1977	Aug. 16, 1977	26.70	2,800
1978	July 20, 1978	28.18	b
1979	Mar. 18, 1979	23.75	1,400
1980	--	a	<540
1981	June 24, 1981	23.24	1,300
1982	July 18, 1982	26.44	2,600
1983	Nov. 11, 1982	26.00	2,400
1984	June 9, 1984	22.91	1,180

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05455150 North English River near Montezuma, Iowa
(Prior to 1970 published as "North Fork English River near Montezuma, Iowa, Discontinued 1973)

Location.--Lat 41°39', long 92°33', in SW1/4 sec.13, T.79 N., R.15 W., Poweshiek County, at bridge on U.S. Highway 63, 5 miles northwest of Montezuma.
Drainage area.--34.0 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	Mar. 24, 1953	13.25	4,240
1954	Aug. 26, 1954	7.47	1,270
1955	--	a	<450
1956	June 20, 1956	7.08	1,120
1957	July 28, 1957	12.22	3,700
1958	May 31, 1958	9.13	1,940
1959	Mar. 20, 1959	13.18	4,190
1960	Mar. 30, 1960	11.60	2,000
1961	Mar. 13, 1961	12.95	3,400
1962	--	a	b
1963	Apr. 28, 1963	8.03	990
1964	--	a	b

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05455150 North English River near Montezuma, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	July 9, 1965	12.23	2,370
1966	June 12, 1966	12.81	3,650
1967	June 9, 1967	8.79	1,130
1968	Aug. 20, 1968	6.18	640
1969	July 8, 1969	10.27	1,650
1970	Mar. 2, 1970	11.12	2,100
1971	Mar. -- 1971	11.09 c	700 d
1972	Apr. 16, 1972	11.90	2,700
1973	May 26, 1973	9.10	1,200
Discontinued 1973			
1974	May 28, 1974	13.00	4,200
1975	June 18, 1975	7.66	870
1976	--	a	<420
1977	Aug. 16, 1977	12.30	3,200

a Peak stage did not reach bottom of gage.
c Affected by ice. d About.

05455200 North English River near Guernsey, Iowa
(Prior to 1970 published as "North Fork English River near Guernsey")

Location.--Lat 41°38', long 92°24', near SW corner sec.17, T.79 N., R.13 W., Poweshiek County, at bridge, 2.2 miles west of Guernsey.
Drainage area.--68.7 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	May 24, 1953	11.70	7,000
1954	Aug. 26, 1954	11.35	6,300
1955	Feb. 20, 1955	9.86	4,280
1956	June 20, 1956	5.72	700
1957	July 3, 1957	11.39	2,200
1958	Sept.10, 1958	11.21	2,130
1959	Mar. 20, 1959	12.65	b
1960	Mar. 30, 1960	13.63	b
1961	Mar. 6, 1961	11.98	b
1962	May 29, 1962	10.08	2,950 e
1963	Apr. 28, 1963	8.48	2,000
1964	June 22, 1964	6.64	1,300
1965	Sept.21, 1965	8.65	2,100
1966	June 12, 1966	13.47	4,450
1967	June 9, 1967	8.17	1,780
1968	Aug. 20, 1968	5.88	970

b Discharge not determined.
e Discharge revised from that previously published.

05455200 North English River near Guernsey, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	--	a	<600
1970	Aug. 5, 1970	13.18	4,500
1971	Feb. 19, 1971	11.60 c	1,200 d
1972	Aug. 6, 1972	8.53	1,930
1973	Mar. 10, 1973	11.46	3,400
1974	May 28, 1974	13.72	4,400
1975	Aug. 18, 1975	9.15	2,200
1976	Apr. 24, 1976	9.68	2,500
1977	Sept.18, 1977	14.49	5,200
1978	July 20, 1978	14.25	4,000
1979	Mar. 18, 1979	12.60	2,800
1980	Feb. 22, 1980	18.55 c	b
1981	June 24, 1981	11.65	2,300
1982	June 15, 1982	14.28	3,800
1983	July 3, 1983	12.37	2,700
1984	Apr. 29, 1984	11.38	2,100

a Peak discharge did not reach bottom of gage.
b Discharge not determined. c Affected by ice. d About.

05455210 North English River at Guernsey, Iowa

Location.--Lat 41°38', long 92°21', in NW1/4 sec.22, T.79 N., R.13 W., Poweshiek County, at bridge on State Highway 21, 1 mile southwest of Guernsey.
Drainage area.--81.5 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1960	Jan. 12, 1960	85.25	3,970

1966	June 12, 1966	85.73	5,300
1967	Apr. 13, 1967	85.21	4,400
1968	--	a	<1,860
1969	July 8, 1969	84.35	3,500
1970	Mar. 2, 1970	86.15	6,600
1971	Feb. 19, 1971	83.86 c	1,400 d
1972	Aug. 6, 1972	85.25	4,400
1973	Mar. 1, 1973	85.05	4,200
1974	May 28, 1974	85.66	5,000
1975	Mar. 18, 1975	83.39	2,800
1976	Apr. 24, 1976	85.03	4,200
1977	Sept.18, 1977	87.36	7,000 e
1978	July 20, 1978	86.62	5,500
1979	Mar. 18, 1979	85.44	3,600
1980	--	a	<1,860
1981	June 24, 1981	84.68	3,150

a Peak stage did not reach bottom of gage.
c Affected by ice. d About.
e Discharge revised from that previously published.

05455210 North English River at Guernsey, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	June 15, 1982	87.43	4,400 e
1983	July 3, 1983	84.84	2,900
1984	Apr. 29, 1984	84.10	2,700

e Discharge revised from that previously published.

05455230 Deep River at Deep River, Iowa

Location.--Lat 41°35', long 92°21', in SW1/4 sec.3, T.78 N., R.13 W., Poweshiek County, at bridge on State Highway 21, 1 miles northeast of Deep River.
Drainage area.--30.5 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1960	Jan. 12, 1960	81.22	1,790

1966	June 12, 1966	82.03	2,400
1967	--	a	<660
1968	--	a	<660
1969	July 8, 1969	80.88	1,240
1970	May 20, 1970	83.85	6,200
1971	Feb. 19, 1971	80.06 c	600
1972	Aug. 6, 1972	80.78	1,220
1973	--	a	<660 b
1974	Apr. 29, 1974	83.28	5,000
1975	Mar. 18, 1975	80.83	1,250
1976	Apr. 24, 1976	80.52	1,100
1977	Aug. 16, 1977	80.55	1,100
1978	Apr. 18, 1978	80.19	910
1979	Mar. 29, 1979	79.70	720
1980	--	a	<420 b
1981	June 24, 1981	80.18	900
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a Peak stage did not reach bottom of gage.
b Discharges revised from those previously published.
c Affected by ice.

05455230 Deep River at Deep River, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	July 18, 1982	81.79	2,000
1983	Nov. 11, 1982	80.46	1,050
1984	--	a	<420

a Peak did not reach bottom of gage.

05455280 South English River tributary near Barnes City, Iowa
(Prior to 1967 published as "South Fork English River")
(Discontinued September 1976)

Location.--Lat 41°33', long 92°38', near NE corner sec.21, T.78 N., R.14, W., Poweshiek County, at bridge, 3 miles north of Barnes City.
Drainage area.--2.51 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 28, 1953	7.38	400
1954	Aug. 26, 1954	8.21	650
1955	Oct. 10, 1954	6.19	170
1956	Aug. 12, 1956	6.77	263
1957	July 3, 1957	7.38	400
1958	Aug. 15, 1958	6.72	255
1959	July 18, 1959	8.55	793
1960	June 19, 1960	8.57	690
1961	July 27, 1961	8.81	784
1962	Nov. 16, 1961	4.85	123
1963	Mar. 4, 1963	5.21	145
1964	June 22, 1964	5.34	152
1965	July 9, 1965	8.56	686
1966	June 12, 1966	8.33	606
1967	Apr. 13, 1967	7.93	480
1968	Aug. 20, 1968	7.58	385
1969	--	6.13	b

b Discharge not determined.

05455280 South English River tributary near Barnes City, Iowa--(continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	Mar. 2, 1970	9.04	900
1971	Feb. 19, 1971	4.95	80
1972	Apr. 16, 1972	8.87	810
1973	May 26, 1973	6.44	220
1974	May 1, 1974	8.98	620
1975	Mar. 18, 1975	5.18	125
1976	Mar. 5, 1976	8.72	580
Discontinued	1976		

05455300 South English River near Barnes City, Iowa
(Prior to 1967 published as "South Fork English River")

Location.--Lat 41°31', long 92°28', near NW corner sec.34, T.78 N., R.14 W., Poweshiek County, at bridge, 1 mile north of Barnes City.
Drainage area.--11.5 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 28, 1953	11.40	478
1954	Aug. 26, 1954	10.88	352
1955	Apr. 24, 1955	9.20	157
1956	Aug. 12, 1956	8.43	121
1957	July 3, 1957	9.50	172
1958	July 31, 1958	10.87	318
1959	July 18, 1959	11.73	611
1960	July 12, 1960	12.14	865
1961	July 27, 1961	13.43	1,790
1962	Mar. 19, 1962	11.49	666
1963	Mar. 4, 1963	10.80	298
1964	June 22. 1964	11.42	484
1965	July 9, 1965	12.07	812
1966	June 12, 1966	12.25	1,130
1967	Apr. 13, 1967	11.62	650
1968	Aug. 20, 1968	9.87	300
1969	July 8, 1969	12.95	1,600
1970	Aug. 5, 1970	13.16	1,850

05455300 South English River near Barnes City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Feb. 19, 1971	11.35 c	260
1972	Aug. 6, 1972	11.76	610
1973	May 26, 1973	11.77	550
1974	Apr. 29, 1974	12.84	1,100
1975	Mar. 18, 1975	10.46	360
1976	Mar. 5, 1976	11.70	480
1977	Aug. 16, 1977	11.00	310
1978	July 20, 1978	12.37	850
1979	Mar. 18, 1979	11.32	370
1980	--	a	<45
1981	June 24, 1981	10.66	260
1982	July 18, 1982	13.77	2,200
1983	July 3, 1983	12.97	1,200
1984	Apr. 29, 1984	10.93	420

a Peak stage did not reach bottom of gage.
c Affected by ice.

05455350 South English River tributary No. 2 near Montezuma, Iowa
(Prior to 1967 published as South Fork English River tributary No. 2 near Montezuma, Iowa)

Location.--Lat 41°34', long 92°27', near SW corner sec.11, T.78 N., R.14 W., Poweshiek County, at box culvert, 4 miles southeast of Montezuma.
Drainage area.--0.523 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 28, 1953	8.53	31
1954	Aug. 26, 1954	8.44	28
1955	Apr. 24, 1955	8.27	23
1956	Aug. 12, 1956	8.52	31
1957	July 3, 1957	8.29	24
1958	Sept.10, 1958	8.39	27
1959	May 19, 1959	9.43	58
1960	June 19, 1960	11.18	134
1961	July 27, 1961	13.65	344
1962	Mar. 19, 1962	8.68	35
1963	--	a	<19
1964	--	a	<19
1965	July 9, 1965	9.99	80
1966	June 12, 1966	9.87	75
1967	--	a	<19
1968	--	a	<19

a Peak stage did not reach bottom of gage.

05455350 South English River trib. No. 2 nr Montezuma, Iowa--
(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	--	a	<19
1970	May 20, 1970	9.98	77
1971	Feb. 19, 1971	8.37 c	20
1972	May 8, 1972	10.74	210
1973	--	a	<19
1974	May 28, 1974	13.53	340
1975	June 18, 1975	8.23	22
1976	Apr. 24, 1976	9.19	50
1977	Aug. 16, 1977	8.65	33
1978	July 20, 1978	9.40	60
1979	June 27, 1979	10.59	100
1980	Feb. 22, 1980	8.50	30
1981	June 24, 1981	10.20	b
1982	July 18, 1982	13.31	b
1983	July 3, 1983	12.60	b
1984	Feb. 18, 1984	10.63	b

a Peak stage did not reach bottom of gage.
b Conservation dam just downstream of gage, causing backwater even during no flow.
c Affected by ice.

05455500 English River at Kalona, Iowa

Location.--Lat 41°27'59", long 91°42'56", in SE1/4 SE1/4 sec.13, T.77 N., R.8 W., Washington County, on right bank 30 ft upstream from bridge on State Highway 1, 0.8 mile south of Kalona, 1.1 mile upstream from Camp Creek, 4.5 miles downstream from Smith Creek, and 14.5 miles upstream from mouth.
Drainage area.--573 mi².
Gage.--Water-stage recorder. Datum of gage is 633.45 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Dec. 27, 1939, nonrecording gage 30 ft downstream at same datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--14 ft.
Remarks.--Base for partial-duration series, 4,000 ft³/s. Base was 2,800 prior to 1966.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1930	June 30, 1930	19.90 a	18,500

1940	Mar. 19, 1940	7.35	1,400
1941	July 2, 1941	10.0	2,490
1942	Nov. 2, 1941	11.8	3,340
1943	Feb. 5, 1943	13.8 b	3,960 c
	May 1, 1943	11.1	3,000
	May 17, 1943	12.8	4,030
	Aug. 5, 1943	18.11	10,700
1944	Apr. 16, 1944	11.9	3,660
	Apr. 23, 1944	15.3	6,070
	May 22, 1944	15.9	6,810
	May 27, 1944	13.8	4,730
	June 17, 1944	13.2	4,290
1945	Apr. 17, 1945	11.7	3,720
	May 16, 1945	12.8	4,300
	May 18, 1945	11.9	3,790
	June 1, 1945	11.5	3,530
	June 12, 1945	12.7	4,280

a From floodmark, from information by local resident.
b Affected by ice. c About.

05455500 English River at Kalona, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1946	Jan. 7, 1946	19.74	16,400
	Mar. 18, 1946	11.3	3,530
	May 5, 1946	13.2	4,860
	June 20, 1946	15.3	6,400
1947	Mar. 13, 1947	10.4	2,860
	Apr. 6, 1947	16.6	7,900
	Apr. 11, 1947	12.3	3,950
	Apr. 21, 1947	14.6	5,620
	May 30, 1947	10.8	3,230
	June 3, 1947	13.3	4,830
	June 7, 1947	14.6	5,880
	June 15, 1947	13.4	4,940
	June 23, 1947	11.7	3,790
	July 2, 1947	14.1	5,470
1948	Feb. 29, 1948	15.7	6,680
	Mar. 17, 1948	15.6	6,630
	Mar. 20, 1948	13.9	5,040
	July 22, 1948	12.8	4,290
1949	Jan. 17, 1949	10.2	2,870
	Feb. 26, 1949	15.7 b	4,000 c
	Mar. 6, 1949	14.3	5,770
1950	Mar. 7, 1950	16.1	8,550
	June 19, 1950	17.33	9,450
	June 25, 1950	10.6	3,110
1951	Feb. 19, 1951	12.26 b	3,700 c
	Mar. 30, 1951	11.84	3,860
	Apr. 8, 1951	11.61	3,740
	May 11, 1951	10.46	3,080
	May 27, 1951	12.70	4,490
	June 26, 1951	11.24	3,500
	July 4, 1951	10.82	3,260
	July 10, 1951	11.06	3,440
	Aug. 26, 1951	14.74	6,130
1952	Nov. 13, 1951	12.09	3,930
	Mar. 12, 1952	15.47	6,840
	Mar. 19, 1952	10.12	2,870
	May 24, 1952	11.02	3,380
	June 21, 1952	10.18	2,920
1953	Feb. 21, 1953	14.43	5,860
	Mar. 31, 1953	10.27	2,970

b Affected by ice. c About.

05455500 English River at Kalona, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1954	Aug. 27, 1954	8.90	2,270
1955	Oct. 10, 1954	11.35	3,620
	Apr. 20, 1955	10.83	3,260
	Apr. 25, 1955	13.4	5,020
1956	Aug. 31, 1956	10.78	2,730
1957	July 15, 1957	9.17	2,000
1958	May 31, 1958	9.75	2,200
1959	Feb. 23, 1959	12.80 b	3,300 c
	Feb. 25, 1959	12.23	3,590
	Mar. 21, 1959	17.12	8,960
	Apr. 29, 1959	11.19	3,170
	May 30, 1959	12.54	4,000
1960	Dec. 27, 1959	11.32	3,030
	Jan. 14, 1960	17.59	9,700
	Mar. 31, 1960	19.89	18,500
	May 8, 1960	15.14	6,010
	June 21, 1960	11.94	3,390
	July 10, 1960	11.53	3,150
	July 14, 1960	15.01	5,900
1961	Feb. 23, 1961	11.10	2,910
	Mar. 5, 1961	11.22	2,970
	Mar. 7, 1961	13.69	4,680
	Mar. 14, 1961	15.20	6,120
	Sept.15, 1961	13.28	4,340
1962	Nov. 4, 1961	15.63	6,560
	Nov. 17, 1961	17.07	8,700
	Nov. 23, 1961	11.24	2,970
	Mar. 21, 1962	18.53	12,000
	May 29, 1962	18.80	13,200
1963	Mar. 8, 1963	12.76 b	3,000 c
1964	June 24, 1964	10.73	3,030
1965	Mar. 18, 1965	14.97	5,620
	Apr. 7, 1965	13.30	4,300
	Apr. 25, 1965	17.65	9,300
	July 2, 1965	11.27	3,190
	July 7, 1965	11.40	3,240

b Affected by ice. c About.

05455500 English River at Kalona, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965 cont.	July 10, 1965	16.31	7,020
	Aug. 31, 1965	16.31	6,900
	Sept. 9, 1965	13.60	4,500
	Sept.21, 1965	21.45	20,000
	BASE REVISED TO 4,000 ft^3/s		
1966	Feb. 10, 1966	14.55	5,080
	May 19, 1966	15.18	6,100
	May 24, 1966	15.22	6,140
	June 14, 1966	17.65	7,820
	July 27, 1966	14.69	5,590
1967	June 10, 1967	14.47	5,370
1968	Nov. 29, 1967	7.93	1,590
1969	June 10, 1969	12.73	4,010
	June 27, 1969	13.24	4,340
	June 30, 1969	12.93	4,150
	July 10, 1969	15.91	6,900
	July 20, 1969	14.33	5,250
	Aug. 11, 1969	16.04	7,060
1970	Mar. 4, 1970	18.79	13,200
	Aug. 7, 1970	18.77	13,100
	Sept.17, 1970	16.77	8,160
1971	Feb. 20, 1971	18.44 b	5,300 c
	July 11, 1971	13.57	4,560
1972	Dec. 15, 1971	14.23	5,160
	Mar. 1, 1972	--	4,100 c
	Apr. 22, 1972	14.55	5,450
	May 9, 1972	13.94	4,900
	Aug. 8, 1972	15.81	6,790
1973	Jan. 1, 1973	--	4,200 c
	Jan. 19, 1973	--	4,600 c
	Feb. 2, 1973	12.80	4,100
	Apr. 17, 1973	16.17	7,260
	Apr. 21, 1973	16.62	7,930
	May 6, 1973	15.17	6,030
	May 30, 1973	17.74	9,980
	June 6, 1973	12.98	4,190

b Affected by ice. c About.

05455500 English River at Kalona, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	Jan. 28, 1974	13.71	4,680
	Jan. 31, 1974	13.58	4,570
	Apr. 30, 1974	19.97	17,000
	May 18, 1974	20.17	18,400
	May 29, 1974	17.80	8,600
	June 7, 1974	13.73	4,060
	June 21, 1974	14.13	4,340
	June 23, 1974	14.42	4,540
	July 11, 1974	14.23	4,410
1975	Mar. 20, 1975	16.04	6,850
1976	Apr. 25, 1976	18.05	10,100
1977	Aug. 16, 1977	11.98	3,520
1978	Mar. 22, 1978	13.90	4,950
	Apr. 10, 1978	13.68	4,690
	Apr. 19, 1978	13.23	4,360
	May 14, 1978	14.86	5,760
	July 23, 1978	15.70	6,340
1979	Mar. 19, 1979	18.59	12,100
	Mar. 30, 1979	15.49	5,930
	Apr. 22, 1979	13.81	4,570
1980	Sept.13, 1980	9.45	2,270
1981	June 25, 1981	12.12	3,550
1982	Feb. 23, 1982	a	4,220
	Mar. 13, 1982	13.62	4,650
	Mar. 21, 1982	15.28	6,210
	Apr. 17, 1982	12.89	4,020
	June 17, 1982	17.18	8,170
	July 20, 1982	18.45	11,200
1983	Dec. 7, 1982	13.80	4,790
	Apr. 2, 1983	15.71	6,590
	Apr. 10, 1983	12.86	4,000
1984	Nov. 28, 1983	12.83	4,080
	Feb. 14, 1984	14.28	b
	May 28, 1984	13.95	4,450

b Affected by ice.

05455550 Bulgers Run near Riverside, Iowa

Location.--Lat 41°29', long 91°38', in SE1/4 sec.11, T.77 N., R.7 W., Washington County, at bridge on State Highway 22, 2.5 miles west of Riverside.
Drainage area.--6.31 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1965	Sept.21, 1965	89.04	3,080
1966	May 23, 1966	86.86	1,600
1967	Apr. 13, 1967	86.19	1,330
1968	June 24, 1968	85.51	1,090
1969	July 13, 1969	86.79	1,570
1970	Sept.22, 1970	87.08	1,750
1971	Feb. 19, 1971	86.05 c	500 d
1972	Sept.11, 1972	88.13	2,350
1973	Apr. 22, 1973	87.54	2,000
1974	May 7, 1974	88.13	2,350
1975	Mar. 19, 1975	85.65	950
1976	Apr. 24, 1976	86.47	1,370
1977	--	a	<520
1978	Apr. 12, 1978	88.07	2,300
1979	Apr. 20, 1979	87.20	1,800
1980	Sept. 13, 1980	86.06	1,150
1981	June 24, 1981	86.81	1,550
1982	June 15, 1982	88.53	2,600

a Peak stage did not reach bottom of gage.
c Affected by ice. d About.

05455550 Bulgers Run near Riverside, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Dec. 5, 1982	87.43	1,900
1984	May 28, 1984	85.26	800

05455700 Iowa River near Lone Tree, Iowa

Location.--Lat 41°25'15", long 91°28'25", in NW1/4 NE1/4 sec.6, T.76 N., R.5 W., Louisa County, on left bank 10 ft downstream from bridge on county highway W66, 5 miles southwest of Lone Tree, 6.2 miles downstream from English River, and at mile 47.2.
Drainage area.--4,293 mi².
Gage.--Water-stage recorder. Datum of gage is 588.16 ft National Geodtic Vertical Datum of 1929. Prior to Dec. 28, 1956, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--14 feet.
Remarks.--Flow regulated by Coralville Lake (capacity 492,000 acre-ft) since Sept. 17, 1958. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1944	May 25, 1944	19.94 a	b
1957	June 25, 1957	9.14	4,550
1958	Feb. 26, 1958	11.47 c	--
	Sept. 7, 1958	10.63	6,610
1959	Mar. 21, 1959	15.97	16,600
1960	Apr. 1, 1960	17.90	28,100
1961	Mar. 15, 1961	16.06	17,000
1962	Mar. 21, 1962	17.68	26,600
1963	Mar. 20, 1963	13.18	10,700
1964	June 24, 1964	9.69	5,770
1965	Sept.22, 1965	20.27	31,200
1966	Feb. 11, 1966	15.52	16,200
1967	Jan. 27, 1967	13.45 c	--
	June 11, 1967	10.38	6,760

a From information by Corps of Engineers.
b Discharge not determined. c Affectec by ice.

05455700 Iowa River near Lone Tree, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)	
1968	Nov. 3, 1967	10.00	6,300	
1969	July 20, 1969	16.92	21,700	
1970	Mar. 5, 1970	16.52	19,900	
1971	Feb. 27, 1971	15.26	15,400	
1972	Aug. 7, 1972	14.79	14,000	
1973	Apr. 22, 1973	16.62	20,300	
1974	May 19, 1974	18.97	35,700	
1975	Mar. 21, 1975	15.37	15,700	
1976	Apr. 26, 1976	15.21	15,200	
1977	Aug. 16, 1977	11.91	8,910	
1978	July 23, 1978	13.86	11,800	
1979	Mar. 20, 1979	17.01	22,200	
1980	June 15, 1980	9.44	5,640	
1981	June 30, 1981	10.26	6,640	
1982	June 16, 1982	16.34	18,400	
1983	Apr. 3, 1983	15.92	17,500	
1984	Feb. 15, 1984	16.61	13,700	c

c Affected by ice.
b Discharges revised from those previously published.

05457440 Deer Creek near Carpenter, Iowa

Location.--Lat 43°25', long 92°59', in NE1/4 sec.8, T.99 N., R.18 W., Mitchell County, at bridge on State Highway 105, 1.5 miles east of Carpenter.
Drainage area.--91.6 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)	
1973	May 27, 1973	81.30	2,100	
1974	--	a	<1,200	
1975	Apr. 28, 1975	81.31	2,100	
1976	--	a	<1,200	c
1977	--	a	<1,200	c
1978	June 15, 1978	82.06	b	
1979	Mar. 21, 1979	83.40	b	
1980	May 30, 1980	82.31	b	
1981	Apr. 28, 1981	81.84	2,400	
1982	--	a	<1,200	
1983	Mar. 6, 1983	80.44	1,250	
1984	June 18, 1984	81.76	2,400	

a Peak stage did not reach bottom of gage.
b Discharge not determined.
c Discharges revised from those previously published.

05457500 Cedar River at Mitchell, Iowa
(Discontinued 1942)

Location.--Lat 43°18'55", long 92°52'45", in NE1/4 SW1/4 sec.8, T.98 N., R.17 W., Mitchell County, in tailrace of hydroelectric plant of Central States Power and Light Corporation at Mitchell, 7.1 miles downstream from Deer Creek, 11.3 miles upstream from Rock Creek, and 282.0 miles upstream from mouth of Iowa River.
Drainage area.--826 mi².
Gage.--Nonrecording. Datum of gage is 1,000 ft National Geodetic Vertical Datum of 1929 (levels by Central States Power and Light Corporation).
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1933	July 2, 1933	84.0	1,520 a
1934	Apr. 4, 1934	89.7	13,000
1935	Mar. 16, 1935	88.3	9,400
1936	Mar. 17, 1936	88.0	8,680
1937	Mar. 7, 1937	--	9,000
1938	Sept.14, 1938	88.6	10,200
1939	Mar. 14, 1939	87.7	7,990
1940	Mar. 30, 1940	85.7	4,130
1941	Apr. 18, 1941	89.1	11,300
1942	June 29, 1942	89.1	11,400

1961	Mar. 26, 1961	98.5	20,500
1962	Mar. 30, 1962	91.9	19,000

a Maximum for period July 1 to Sept. 30, 1933.

05457700 Cedar River at Charles City, Iowa

Location.--Lat 43°03'45", long 92°40'23", in SE1/4 NE1/4, sec.12, T.95 N., R.16 W., Floyd County, on right bank 800 ft downstream from bridge on U.S. Highway 18 (Brantingham Street) in Charles City, 10.6 miles upstream from Gizzard Creek, and 252.9 miles upstream from mouth of Iowa River.
Drainage area.--1,054 mi².
Gage.--Water-stage recorder. Datum of gage is 973.02 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1964, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--12 ft.
Remarks.--Only annual peaks are shown prior to 1965. Base for partial duration series, 2,500 ft³/s. Occasional minor regulation by dam 0.2 mi upstream from gage. Daily wire-weight gage readings available in district office for period Sept. 13, 1945, to June 30, 1954, at same site and datum. Discharge not published for this period because of extreme regulation of streamflow by power dam 0.2 mi upstream.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1946	Sept. 7, 1946	16.05	15,100
1947	Apr. 11, 1947	10.44	7,470
1948	Feb. 28, 1948	17.00	16,500
1949	Mar. 6, 1949	13.00	10,800
1950	Mar. 28, 1950	18.3	20,000
1951	Apr. 8, 1951	18.9	21,400
1952	Apr. 1, 1952	14.6	12,600
1953	Aug. 4, 1953	14.35	12,300

1961	Mar. 27, 1961	21.53 a	29,200

1965	Mar. 2, 1965	21.64 b	14,700 c
	Apr. 2, 1965	10.35 b	4,000 c
	Apr. 7, 1965	19.14	21,000
	Apr. 12, 1965	14.51	12,800
	July 10, 1965	6.88	3,790
	Sept.21, 1965	9.0	5,820
	Sept.30, 1965	14.95	13,400

a From floodmarks. b Affected by ice. c About.

05457700 Cedar River at Charles City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1966	Oct. 1, 1965	12.73 d	10,200
	Feb. 10, 1966	10.15	7,180
	Mar. 5, 1966	7.76	4,660
	Apr. 2, 1966	8.76	5,660
	June 26, 1966	5.42	2,550
	July 14, 1966	9.38	6,280
1967	Mar. 12, 1967	7.12 b	3,300 c
	Mar. 28, 1967	7.78	4,600
	Apr. 4, 1967	6.93	3,840
	June 10, 1967	8.49	5,310
	June 17, 1967	6.82	3,740
1968	May 16, 1968	9.24	6,080
	June 27, 1968	7.71	4,500
	July 25, 1968	7.87	4,590
	Sept.23 ,1968	6.89	3,760
1969	Mar. 21, 1969	7.02	3,920
	Mar. 25, 1969	10.06	6,990
	Apr. 5, 1969	9.61	6,490
	Apr. 18, 1969	5.52	2,570
	June 27, 1969	15.92	13,700
	June 30, 1969	17.96	16,700
	July 9, 1969	6.15	3,070
1970	May 30, 1970	4.85	2,070
1971	Mar. 16, 1971	9.05	5,820
	Apr. 1, 1971	12.11	9,090
	June 20, 1971	5.70	2,730
1972	Mar. 15, 1972	6.46	2,600
	Sept.29, 1972	8.99	5,750
1973	Oct. 25, 1972	6.02	2,980
	Nov. 4, 1972	6.41	3,280
	Jan. 19, 1973	--	3,900 c
	Mar. 4, 1973	--	3,400 c
	Mar. 12, 1973	14.77	12,200
	Mar. 15, 1973	10.24	7,000
	Apr. 17, 1973	14.96	12,500
	May 3, 1973	11.19	8,050
	May 9, 1973	8.61	5,350

1973 CONTINUED ON NEXT PAGE

b Affected by ice. c About. d Stage falling.

05457700 Cedar River at Charles City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973 cont.	June 20, 1973	5.58	2,610
	July 26, 1973	6.17	3,090
	Sept. 28, 1973	6.41	3,400
1974	Oct. 1, 1973	7.49	4,480
	Oct. 6, 1973	8.47	5,460
	Oct. 13, 1973	8.40	5,240
	Nov. 22, 1973	7.27	4,070
	Mar. 4, 1974	8.79	5,530
	Mar. 10, 1974	7.35	4,120
	Mar. 13, 1974	5.80	2,790
	Apr. 5, 1974	11.34	8,220
	Apr. 14, 1974	5.54	2,600
	May 14, 1974	6.26	3,170
	May 22, 1974	8.17	4,940
	June 9, 1974	9.24	6,020
1975	Mar. 25, 1975	--	2,600 c
	Apr. 9, 1975	6.37	3,290
	Apr. 15, 1975	6.15	3,110
	Apr. 20, 1975	5.87	2,890
	Apr. 24, 1975	5.98	2,970
	Apr. 29, 1975	12.04	9,260
	June 20, 1975	6.88	3,740
	June 28, 1975	6.12	3,090
	July 1, 1975	8.18	4,950
	Aug. 26, 1975	5.65	2,690
1976	Mar. 13, 1976	10.62	7,640
	Apr. 1, 1976	5.98	2,980
1977	Mar. 13, 1977	2.73	584
1978	June 16, 1978	5.61	2,650
	June 18, 1978	7.60	4,440
	July 8, 1978	12.45	9,880
	July 19, 1978	13.15	10,800
	July 24, 1978	10.39	7,370
	Aug. 3, 1978	6.27	3,240
1979	Mar. 24, 1979	9.01	5,830
	Mar. 31, 1979	14.93	13,400
	Aug. 23, 1979	9.91	6,820
	Aug. 29, 1979	6.94	3,850

c About.

05457700 Cedar River at Charles City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1980	Mar. 17, 1980	8.57	5,390
	Mar. 19, 1980	7.59	4,430
	May 31, 1980	12.38	9,790
	June 28, 1980	10.43	7,420
	Aug. 10, 1980	13.86	11,800
	Aug. 14, 1980	8.76	5,580
	Aug. 17, 1980	9.40	6,260
	Sept. 22, 1980	9.86	6,760
1981	Apr. 29, 1981	7.95	4,770
	June 24, 1981	6.90	3,810
	July 18, 1981	10.86	7,930
	Aug. 29, 1981	6.81	3,730
1982	Mar. 19, 1982	9.44 b	5,740
	Apr. 18, 1982	7.54	4,390
	May 6, 1982	8.71	5,530
	May 23, 1982	8.06	4,880
	June 7, 1982	7.16	4,040
	July 16, 1982	8.73	5,550
1983	Oct. 22, 1982	6.76	3,680
	Nov. 12, 1982	8.89	5,700
	Feb. 23, 1983	6.84	3,800
	Mar. 7, 1983	12.11	9,440
	Mar. 18, 1983	6.81	3,760
	Apr. 2, 1983	8.55	5,390
	Apr. 15, 1983	10.06	6,990
	May 20, 1983	6.89	3,860
	July 3, 1983	12.03	9,340
	Sep. 22, 1983	7.80	4,620
1984	Feb. 19, 1984	b	4,500
	Mar. 28, 1984	8.67	5,500
	Apr. 15, 1984	7.40	4,230
	May 2, 1984	9.35	6,220
	June 8, 1984	11.42	8,600
	June 17, 1984	11.25	8,400

b Affected by ice.

05458000 Little Cedar River near Ionia, Iowa

Location.--Lat 43°02'05", long 92°30'05", in SW1/4 NE1/4 sec.21, T.95 N., R.14 W., Chickasaw Co., on left bank 12 ft downstream from bridge on county road B57, 2.4 mi west of Ionia, 6.4 mi upstream from mouth, and 7.6 mi downstream from Beaver Creek.
Drainage area.--306 mi².
Gage.--Water-stage recorder. Datum of gage is 973.35 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--10.0 ft.
Remarks.--Base for partial-duration series, 1,200 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1954	June 22, 1954	11.37	4,600 a
1955	June 3, 1955	7.54	1,500
1956	Apr. 2, 1956	6.78	1,160
1957	July 23, 1957	6.19	890
1958	July 15, 1958	5.53	632
1959	Mar. 26, 1959	7.63	1,710
	May 20, 1959	7.30	1,830
	May 31, 1959	7.30	1,830
1960	Mar. 30, 1960	8.42	2,650
	May 7, 1960	6.89	1,530
	June 25, 1960	9.19	2,790
	Aug. 30, 1960	6.95	1,340
1961	Mar. 4, 1961	6.52	1,370
	Mar. 27, 1961	15.58	10,800
	Aug. 2, 1961	11.43	5,310
1962	Mar. 29, 1962	14.27	8,720
	Apr. 7, 1962	7.61	1,940
	Sept. 1, 1962	15.14	9,000
1963	Oct. 10, 1962	7.65	1,940
	Mar. 18, 1963	7.93 b	2,000 c
	Mar. 26, 1963	6.89	1,510
	May 10, 1963	8.37	2,520
	May 13, 1963	9.65	3,510
1964	Sept.10, 1964	5.15	572

a Maximum for period June to September 1954.
b Affected by ice. c About.

05458000 Little Cedar River near Ionia, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	Mar. 2, 1965	11.37	5,100
	Apr. 6, 1965	12.11	6,250
	Apr. 11, 1965	9.79	3,860
	July 10, 1965	7.70	1,820
	Sept.21, 1965	10.28	3,850
	Sept.30, 1965	13.55	7,380
1966	Oct. 1, 1965	11.53 d	5,050
	Feb. 9, 1966	9.71	3,610
	Mar. 5, 1966	8.01	2,330
	Mar. 23, 1966	7.33	1,860
	Apr. 1, 1966	6.57	1,400
	June 26, 1966	9.47	3,390
	July 15, 1966	8.71	2,530
1967	Mar. 27, 1967	8.02	2,120
	June 9, 1967	6.83	1,270
	June 11, 1967	9.82	3,370
	June 17, 1967	7.10	1,430
1968	June 25, 1968	8.68	2,310
	July 23, 1968	8.86	2,440
	Aug. 6, 1968	7.13	1,360
	Sept.23, 1968	7.72	1,680
1969	Mar. 21, 1969	8.87	2,410
	Mar. 24, 1969	8.77	2,340
	Apr. 5, 1969	7.34	1,450
	June 27, 1969	14.06	7,450
	June 30, 1969	14.33	7,770
	July 8, 1969	7.54	1,580
	July 18, 1969	8.32	2,050
	July 24, 1969	6.89	1,240
1970	May 14, 1970	6.81	1,200
	July 29, 1970	6.93	1,270
1971	Oct. 10, 1970	7.40	1,640
	Oct. 28, 1970	6.81	1,300
	Mar. 17, 1971	--	2,300 c
	Mar. 31, 1971	8.79	2,580
	June 20, 1971	8.37	2,280
1972	Mar. 15, 1972	7.19	1,510
	July 12, 1972	8.01	2,030
	Sept.25, 1972	10.09	3,500
	Sept.30, 1972	11.99	5,260

c About. d Stage falling.

05458000 Little Cedar River near Ionia, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973	Oct. 24, 1972	8.29	2,010
	Nov. 2, 1972	7.34	1,430
	Dec. 30, 1972	--	1,880 c
	Mar. 5, 1973	--	1,420 c
	Mar. 8, 1973	7.35	1,610
	Mar. 12, 1973	9.62	3,260
	Mar. 14, 1973	8.17	2,140
	Apr. 17, 1973	11.59	5,150
	May 2, 1973	8.59	2,430
	May 9, 1973	8.76	2,560
	June 19, 1973	7.87	1,930
1974	Oct. 5, 1973	6.61	1,220
	Oct. 12, 1973	6.75	1,270
	Mar. 5, 1974	8.11	2,100
	Mar. 10, 1974	7.55	1,730
	Apr. 5, 1974	8.44	2,370
	May 15, 1974	7.65	1,830
	May 23, 1974	9.45	3,140
	June 5, 1974	15.04	9,520
	June 10, 1974	13.30	7,070
1975	Mar. 22, 1975	--	2,500 c
	Mar. 24, 1975	--	1,600 c
	Apr. 29, 1975	10.63	4,180
1976	Mar. 12, 1976	b	1,300
	Mar. 14, 1976	9.79 b	e
	Apr. 18, 1976	7.63	1,750
1977	Aug. 16, 1977	4.69	350
1978	Mar. 23, 1978	8.57	1,720
	July 7, 1978	7.21	1,500
	July 19, 1978	6.79	1,250
	July 23, 1978	7.07	1,410
1979	Mar. 21, 1979	10.02	3,480
	Mar. 31, 1979	10.30	3,730
	Aug. 19, 1979	7.05	1,350
	Aug. 23, 1979	10.60	3,830
	Aug. 29, 1979	8.48	2,200

b Affected by ice. c About. e Discharge not determined.

05458000 Little Cedar River near Ionia, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1980	Mar. 17, 1980	8.98	2,580
	June 1, 1980	12.73	6,250
	June 7, 1980	8.03	1,960
	June 29, 1980	9.04	2,630
	Aug. 11, 1980	12.39	5,840
	Aug. 13, 1980	9.23	2,730
	Aug. 18, 1980	8.96	2,540
	Aug. 21, 1980	7.68	1,700
	Aug. 28, 1980	7.40	1,530
	Sept.23, 1980	10.84	4,120
1981	July 13, 1981	6.84	1,250
	July 18, 1981	7.96	1,920
	July 19, 1981	7.67	1,740
	July 20, 1981	7.86	1,860
	Aug. 28, 1981	8.65	2,350
1982	Mar. 19, 1982	8.86	2,510
	Mar. 25, 1982	7.86	1,870
	May 23, 1982	7.71	1,750
	May 27, 1982	7.53	1,650
	June 7, 1982	7.61	1,690
	June 25, 1982	7.30	1,510
	July 16, 1982	7.79	1,800
1983	Oct. 21, 1982	7.44	1,590
	Nov. 13, 1982	10.11	3,470
	Dec. 6, 1982	7.04	1,340
	Dec. 28, 1982	8.11	2,000
	Feb. 21, 1983	7.22	1,400
	Mar. 7, 1983	10.44	3,770
	Mar. 18, 1983	7.43	1,540
	Apr. 15, 1983	9.51	2,980
	May 7, 1983	7.64	1,670
	May 19, 1983	8.49	2,220
	May 22, 1983	8.55	2,260
	June 30, 1983	7.64	1,720
	July 3, 1983	7.78	1,800
	Sep. 22, 1983	8.75	2,420
1984	Feb. 19, 1984	8.47	2,250
	Mar. 25, 1984	8.06	1,990
	May 1, 1984	7.19	1,450
	June 9, 1984	11.36	4,650
	June 18, 1984	13.94	7,880

05458500 Cedar River at Janesville, Iowa

Location.--Lat 42°38'54", long 92°27'54", in NE1/4 SW1/4 sec.35, T.91 N., R.14 W., Bremer County, on left bank 300 ft downstream from bridge on county highway at Janesville, 3.6 miles upstream from West Fork Cedar River, and 207.7 miles upstream from mouth of Iowa River.
Drainage area.--1,661 mi².
Gage.--Water-stage recorder. Datum of gage is 868.26 ft National Geodetic Vertical Datum of 1929. Prior to July 26, 1919, nonrecording gage at site 1,000 ft downstream at datum 4.0 ft lower. July 26, 1919, to Sept. 30, 1927, Nov. 14, 1932, to Sept. 30, 1942, and Apr. 26, 1946, to Nov. 10, 1949, nonrecording gage at county bridge 300 ft upstream at same datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--11 ft.
Remarks.--Base for partial-duration series, 4,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1905	May 17, 1905	7.1	5,840
1906	Mar. 27, 1906	14.2	27,100

1915	May 31, 1915	8.9	7,220
1916	Mar. 16, 1916	8.9	7,220
	Mar. 27, 1916	10.4	10,400
	Apr. 22, 1916	10.4	10,400
	June 2, 1916	11.0	12,100
1917	Mar. 24, 1917	13.8	21,900
	June 25, 1917	12.6	17,300
1918	Mar. 20, 1918	9.0	7,400
1919	Apr. 10, 1919	8.7	6,870
	Apr. 18, 1919	7.5	5,130
1920	Mar. 19, 1920	6.8	5,410
	Mar. 28, 1920	7.3	6,190
1921	May 29, 1921	11.5	15,300

1923	Apr. 4, 1923	6.2	4,630
1924	Aug. 22, 1924	6.0	4,410
1925	June 15, 1925	7.7	6,860

05458500 Cedar River at Janesville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1926	Mar. 22, 1926	5.6	4,010
1927	May 28, 1927	6.2	4,630
1929	Mar. 16, 1929	16.0 b	c
1933	Feb. 27, 1933	7.1	5,500
	Apr. 1, 1933	16.0	33,300
1934	Apr. 6, 1934	9.9	11,200
1935	Mar. 5, 1935	9.1	9,580
	Mar. 8, 1935	8.6	8,530
	Mar. 18, 1935	7.9	7,200
1936	Mar. 15, 1936	7.7	6,840
	Mar. 24, 1936	9.8	11,200
1937	Mar. 8, 1937	11.0 a	12,000 b
1938	May 29, 1938	6.7	5,310
	Sept.17, 1938	8.8	8,910
1939	Mar. 17, 1939	9.4 a	7,500 b
1940	Apr. 1, 1940	6.0	4,410
1941	Mar. 12, 1941	11.1 a	8,740 b
	Apr. 20, 1941	8.7	8,890
1942	Mar. 23, 1942	7.7	6,860
	June 3, 1942	8.3	7,950
	June 7, 1942	7.6	6,690
	July 2, 1942	8.4	8,140
	July 16, 1942	9.3	10,100
1945	Mar. 17, 1945	16.2	34,000
1946	Sept. 9, 1946	11.3	14,700
1947	Apr. 8, 1947	8.1	7,650
	Apr. 13, 1947	9.3	9,820
	June 13, 1947	10.14	12,200
	June 18, 1947	7.5	6,520
1948	Mar. 1, 1948	14.1	25,100
	Mar. 19, 1948	8.7	9,330

a Affected by ice. b About. c Discharge not determined.

05458500 Cedar River at Janesville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1949	Mar. 7, 1949	11.4 a	14,000 b
	Mar. 27, 1949	--	7,570
	Mar. 29, 1949	8.5	8,850
	Apr. 2, 1949	8.0	10,100
1950	Mar. 9, 1950	--	11,600 b
	Mar. 28, 1950	12.7	20,200
1951	Mar. 1, 1951	6.67	6,440
	Mar. 30, 1951	6.37	5,200 b
	Apr. 9, 1951	14.05	25,000
	Apr. 29, 1951	12.43	19,300
	June 5, 1951	6.16	5,650
	June 27, 1951	7.77	8,360
1952	Mar. 21, 1952	6.30	5,800
	Apr. 2, 1952	10.74	14,700
1953	Feb. 21, 1953	--	4,000 b
	June 16, 1953	8.36	9,500
	Aug. 6, 1953	10.80	15,000
1954	June 22, 1954	12.08	18,400
1955	Mar. 14, 1955	5.16	4,430
1956	Apr. 5, 1956	4.46	3,530
1957	May 31, 1957	3.10	1,890
1958	Feb. 25, 1958	2.73	1,100 b
1959	Mar. 27, 1959	6.78	6,620
	June 25, 1959	5.83	5,210
1960	Mar. 30, 1960	10.46	13,200
	May 24, 1960	6.38	6,040
	June 26, 1960	5.71	5,080
1961	Mar. 6, 1961	5.54	4,770
	Mar. 28, 1961	16.33	37,000
	Aug. 3, 1961	6.66	6,210
1962	Mar. 31, 1962	13.86	24,000
	Apr. 9, 1962	8.35	8,200
	Apr. 21, 1962	5.10	4,060
	Sept. 2, 1962	11.94	16,200

a Affected by ice. b About.

05458500 Cedar River at Janesville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1963	Oct. 12, 1962	5.49	4,500
	Mar. 19, 1963	9.65 a	6,200 b
	Mar. 27, 1963	5.81	4,830
	May 11, 1963	6.30	5,830
	May 14, 1963	6.07	5,160
1964	Feb. 25, 1964	2.73 a	--
	June 23, 1964	2.53	1,240
1965	Mar. 3, 1965	16.33	15,000 b
	Apr. 7, 1965	14.33	29,200
	Apr. 13, 1965	10.66	13,900
	Sept.22, 1965	8.80	9,290
1966	Oct. 1, 1965	12.05	18,800
	Feb. 11, 1966	8.88	9,060
	Mar. 6, 1966	6.13	5,260
	Apr. 3, 1966	6.35	5,500
	July 16, 1966	6.84	6,060
1967	Mar. 14, 1967	5.06	4,450
	Mar. 29, 1967	6.15	5,740
	June 12, 1967	7.57	7,690
	June 18, 1967	4.94	4,310
1968	May 18, 1968	4.67	4,150
	June 29, 1968	5.44	4,970
	July 17, 1968	12.79	21,700
	July 23, 1968	6.41	6,130
	July 26, 1968	5.79	5,390
	Aug. 8, 1968	4.68	4,080
1969	Mar. 25, 1969	8.58	9,260
	Apr. 7, 1969	7.32	7,310
	July 1, 1969	13.74	23,500
	July 9, 1969	7.15	7,140
1970	Mar. 4, 1970	4.85 a	3,400 b
1971	Mar. 18, 1971	7.97	8,270
	Apr. 2, 1971	9.59	11,400
1972	Mar. 16, 1972	--	4,300 b
	Sept.27, 1972	5.42	5,060
1973	Oct. 1, 1972	8.22	8,830
	Oct. 26, 1972	5.35	4,980

1973 CONTINUED ON NEXT PAGE

a Affected by ice. b About.

05458500 Cedar River at Janesville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973 cont.	Nov. 5, 1972	5.11	4,690
	Mar. 6, 1973	6.93	6,820
	Mar. 14, 1973	11.08	14,700
	Apr. 18, 1973	11.67	16,500
	May 4, 1973	8.63	9,360
	May 10, 1973	8.02	8,350
1974	Oct. 3, 1973	5.10	4,500
	Oct. 7, 1973	5.76	5,290
	Oct. 15, 1973	6.01	5,650
	Nov. 17, 1973	5.09	4,550
	Mar. 7, 1974	7.20	7,140
	Apr. 6, 1974	8.69	9,480
	May 16, 1974	5.28	4,780
	May 23, 1974	5.43	4,960
	June 6, 1974	6.43	6,160
	June 11, 1974	9.33	10,800
1975	Mar. 26, 1975	5.43	4,960
	Apr. 16, 1975	4.69	4,070
	Apr. 30, 1975	9.90	12,000
	June 22, 1975	4.64	4,010
	July 2, 1975	4.80	4,210
1976	Mar. 14, 1976	8.58	9,260
	Apr. 19, 1976	4.71	4,090
1977	Sept. 18, 1977	3.30	2,460
1978	June 19, 1978	5.94	5,570
	July 10, 1978	8.90	9,740
	July 21, 1978	8.37	8,750
	July 25, 1978	7.59	7,550
1979	Mar. 18, 1979	6.35	6,140
	Mar. 22, 1979	7.55	7,790
	Apr. 2, 1979	11.24	15,700
	Aug. 10, 1979	5.69	5,270
	Aug. 18, 1979	7.28	7,250
	Aug. 24, 1979	9.94	12,100
	Aug. 29, 1979	9.78	11,700

05458500 Cedar River at Janesville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1980	Mar. 19, 1980	6.74	6,530
	June 2, 1980	9.29	10,700
	June 8, 1980	4.65	4,020
	June 30, 1980	7.53	7,600
	Aug. 12, 1980	11.14	14,900
	Aug. 15, 1980	8.34	8,860
	Aug. 19, 1980	8.35	8,880
	Aug. 30, 1980	5.03	4,450
	Sept.24, 1980	7.53	7,600
1981	Apr. 30, 1981	5.00	4,440
	June 25, 1981	5.69	5,270
	July 19, 1981	7.13	7,050
	Aug. 30, 1981	5.50	5,080
1982	Mar. 21, 1982	8.69	9,640
	Mar. 26, 1982	6.85	6,790
	Apr. 1, 1982	4.85	4,360
	Apr. 19, 1982	5.94	5,660
	May 8, 1982	6.23	5,940
	May 25, 1982	6.94	6,800
	May 29, 1982	5.68	5,290
	June 9, 1982	5.45	5,020
	July 17, 1982	5.30	4,840
1983	Oct. 23, 1982	4.96	4,440
	Nov. 14, 1982	7.86	8,140
	Dec. 8, 1982	4.80	4,280
	Dec. 30, 1982	5.70	5,350
	Feb. 22, 1983	5.96	5,590
	Mar. 8, 1983	10.28	12,800
	Mar. 20, 1983	5.99	5,630
	Apr. 4, 1983	7.12	7,040
	Apr. 16, 1983	9.18	10,500
	May 23, 1983	7.29	7,320
	May 29, 1983	4.74	4,210
	July 5, 1983	9.26	10,700
	Sep. 23, 1983	6.67	6,500
1984	Feb. 20, 1984	9.00	10,200
	Mar. 29, 1984	6.64	6,420
	Apr. 16, 1984	5.89	5,500
	May 3, 1984	7.61	7,770
	June 10, 1984	7.02	6,950
	June 20, 1984	9.96	12,100

05458560 Beaverdam Creek near Sheffield, Iowa

Location.--Lat 42°56', long 93°12', in NW1/4 sec.27, T.94 N., R.20 W., Cerro Gordo County, at bridge on U.S. Highway 65, 3 miles north of Sheffield.
Drainage area.--123 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
DISCHARGES REVISED FROM THOSE PREVIOUSLY PUBLISHED			
1966	Feb. 9, 1966	56.06	2,000
1967	June 10, 1967	55.12	1,360
1968	--	a	<350
1969	June 25, 1969	59.82	b
1970	May 13, 1970	55.40	1,400
1971	June 7, 1971	55.32	1,340
1972	--	a	<610
1973	May 27, 1973	56.04	1,850
1974	--	a	<610
1975	Apr. 28, 1975	57.02	3,150
1976	--	a	<610
1977	May 5, 1977	55.73	1,600
1978	June 15, 1978	56.77	3,000
1979	Aug. 22, 1979	57.51	4,400
1980	Aug. 17, 1980	55.81	1,670
1981	June 24, 1981	56.35	1,950
1982	Mar. 20, 1982	55.73	1,450

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05458560 Beaverdam Creek near Sheffield, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	June 29, 1983	56.53	2,150
1984	June 17, 1984	58.90	b

b Discharge not determined.

05458900 West Fork Cedar River at Finchford, Iowa

Location.--Lat 42°37'50", long 92°32'24", in SW1/4 SE1/4 sec.6, T.90 N., R.14 W., Black Hawk County, on left bank 100 ft downstream from bridge on county highway C55 at Finchford, 3.2 miles upstream from Shell Rock River, 5.0 miles upstream from mouth and 209.1 miles upstream from mouth of Iowa River.
Drainage area.--846 mi².
Gage.--Water-stage recorder. Datum of gage is 867.54 ft National Geodetic Vertical Datum of 1929 . Prior to June 10, 1955, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--12 feet.
Remarks.--Base for partial-duration series, 2,500 ft³/s. An authorized diversion is made into Big Marsh, 16 miles upstream from gage, of about 2,100 acre-ft each year between Sept. 1 and Nov. 15. Net effect on daily flows at gage is unknown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1929	Mar. ??, 1929	14.00 a	12,800 b
1946	Mar. 8, 1946	11.51	5,220
1947	June 13, 1947	13.7	11,600
	June 15, 1947	12.6	7,800
	June 21, 1947	10.3	3,200
	June 24, 1947	10.5	3,440
	July 2, 1974	11.2	4,630
	July 7, 1947	11.0	4,300
1948	Mar. 1, 1948	12.3 c	7,000 a
	Mar. 19, 1948	12.87	9,580
1949	Mar. 7, 1949	12.25	6,330
1950	Mar. 8, 1950	14.80 c	11,000 a
	Mar. 28, 1950	--	3,120
	May 11, 1950	--	3,480
1951	Feb. 28, 1951	13.5	10,500
	Mar. 30, 1951	14.5	14,500
	Apr. 8, 1951	13.0	8,800
	Apr. 30, 1951	13.42	10,100
	June 4, 1951	9.6	2,540
	June 27, 1951	17.28 d	31,900
	July 11, 1951	10.89	4,100

a About. b Estimated. c Affected by ice.
d From floodmarks.

05458900 West Fork Cedar River at Finchford, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1952	Apr. 1, 1952	11.91	5,800
1953	Aug. 7, 1953	8.97	2,250
1954	June 20, 1954	14.18	11,400
	June 23, 1954	14.9	14,200
1955	Oct. 16, 1954	6.32	850
1956	Mar. 29, 1956	5.61	642
1957	June 19, 1957	6.82	1,040
1958	July 17, 1958	5.95	712
1959	Mar. 28, 1959	12.07	4,740
1960	Mar. 30, 1960	14.00	10,600
	Apr. 28, 1960	10.19	2,660
	May 8, 1960	10.97	3,400
1961	Mar. 7, 1961	10.34	2,770
	Mar. 27, 1961	15.40	17,400
1962	Mar. 30, 1962	14.98	14,000
	Sept. 4, 1962	11.03	3,060
1963	Mar. 19, 1963	11.79	4,280
	May 15, 1963	10.92	3,370
	June 12, 1963	10.76	3,260
1964	Sept.12, 1964	7.90	1,330
1965	Mar. 3, 1965	--	3,900
	Apr. 2, 1965	--	3,200
	Apr. 7, 1965	15.91	16,700
	May 29, 1965	10.37	2,830
	Sept.21, 1965	14.44	10,300
1966	Oct. 1, 1965	11.97	4,150
	Feb. 11, 1966	12.20	4,800
	June 15, 1966	11.96	4,400
1967	June 12, 1967	13.44	7,560
1968	July 19, 1968	14.51	10,600
	July 24, 1968	11.35	3,370
	Aug. 9, 1968	10.56	2,740

05458900 West Fork Cedar River at Finchford, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	Mar. 25, 1969	13.68	8,840
	Apr. 6, 1969	11.28	3,600
	June 28, 1969	15.20	11,300
	July 1, 1969	15.72	13,900
	July 10, 1969	16.50	17,800
1970	May 17, 1970	10.33	2,590
1971	Mar. 18, 1971	12.69	6,140
	Apr. 2, 1971	12.10	4,860
1972	May 18, 1972	8.77	1,590
	Sept.30, 1972	--	1,990 e
1973	Oct. 2, 1972	10.43	2,510
	Oct. 26, 1972	10.62	2,670
	Nov. 4, 1972	10.43	2,510
	Nov. 10, 1972	10.72	2,750
	Mar. 14, 1973	12.30	4,550
	Apr. 18, 1973	13.17	6,090
	May 10, 1973	11.86	3,930
	May 31, 1973	11.28	3,750
1974	Oct. 2, 1973	10.18	2,590
	Oct. 14, 1973	10.52	2,880
	Mar. 5, 1974	11.41	3,860
	June 11, 1974	14.05	10,200
	June 25, 1974	11.09	3,420
1975	Mar. 22, 1975	13.03	6,990
	Apr. 9, 1975	10.13	2,670
	May 1, 1975	11.34	3,770
1976	Mar. 15, 1976	10.88	3,150
	Apr. 20, 1976	10.42	2,710
1977	Sept.24, 1977	5.72	387
1978	Apr. 21, 1978	10.16	2,500
	June 20, 1978	13.57	7,860
	July 8, 1978	13.50	7,650
1979	Mar. 21, 1979	14.29	10,600
	Mar. 30, 1979	12.62	5,610
	Aug. 26, 1979	12.96	6,800
	Sept. 9, 1979	11.66	4,210
1980	June 15, 1980	10.60	2,860

e Stage rising, peak occurred Oct. 2, 1972.

05458900 West Fork Cedar River at Finchford, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1981	June 29, 1981	11.04	3,350
	Aug. 5, 1981	10.33	2,610
1982	Mar. 20, 1982	13.56	8,310
	Apr. 29, 1982	10.99	3,220
	May 30, 1982	11.92	4,510
1983	Feb. 22, 1983	13.28	7,320
	Mar. 9, 1983	12.21	4,800
	Mar. 18, 1983	10.69	2,730
	Apr. 4, 1983	11.16	3,280
	Apr. 16, 1983	12.45	5,280
	May 10, 1983	11.14	3,090
	May 23, 1983	13.44	7,680
	July 5, 1983	12.64	5,970
	Sep. 22, 1983	13.65	8,730
1984	Feb. 19, 1984	c	6,900
	Mar. 28, 1984	10.68	3,020
	Apr. 16, 1984	10.76	3,160
	May 3, 1984	12.97	6,990
	May 30, 1984	10.21	2,570
	June 16, 1984	11.45	4,000
	June 21, 1984	12.97	6,930
	June 25, 1984	13.77	9,300

c Affected by ice.

05459000 Shell Rock River near Northwood, Iowa

Location.--Lat 43°24'51", long 93°13'14", in NW1/4 NW1/4 sec.9, T.99 N., R.20 W., Worth County, on right bank 50 ft downstream from bridge on county highway A27, 1.3 miles downstream from Drainage ditch 2, 2.0 miles south of Northwood, 3.7 miles upstream from Elk Creek, 84.5 miles upstream from mouth and 291.7 miles upstream from mouth of Iowa River.
Drainage area.--300 mi².
Gage.--Water-stage recorder. Datum of gage is 1,176.48 ft National Geodetic Vertical datum of 1929. Prior to May 17, 1956, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--10 feet.
Remarks.--Base for partial-duration series, 1,000 ft³/s. Only annual peaks are shown prior to 1961.

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft³/s)	
1946	Mar. 13, 1946	9.7	a	1,400	b
1947	Apr. 11, 1947	6.9		926	
1948	Mar. 20, 1948	10.3	a	1,600	b
1949	Mar. 31, 1949	7.6		1,230	
1950	Mar. 28, 1950	9.72	a	1,800	b
1951	Apr. 10, 1951	9.55		2,430	
	May 3, 1951	7.19		1,010	
1952	Apr. 2, 1952	8.26		1,470	
1953	Aug. 4, 1953	7.54		1,060	
1954	June 22, 1954	7.96		1,360	
1955	June 4, 1955	6.00		502	
1956	Apr. 1, 1956	7.37	a	800	b
1957	May 29, 1957	6.44		655	
1958	Apr. 6, 1958	5.54		348	

a Affected by ice. b About.

05459000 Shell Rock River near Northwood, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1959	May 31, 1959	6.58	655
1960	Mar. 30, 1960	7.76 a	800 b
1961	Mar. 26, 1961	11.68 a	3,000 b
1962	Apr. 3, 1962	9.53 a	2,000 b
1963	Mar. 23, 1963	9.78 a	1,600 b
1964	Apr. 22, 1964	5.43	353
1965	Apr. 8, 1965	12.07 a	3,400 b
	Sept. 30, 1965	7.92	1,170
1966	Oct. 1, 1966	7.89 c	1,160
	Apr. 1, 1966	6.55	731
1967	June 18, 1967	7.39	1,030
1968	July 27, 1968	7.84	1,190
	Aug. 9, 1968	8.45	1,480
1969	Mar. 26, 1969	10.55 a	1,650 b
	Apr. 4, 1969	7.40	1,080
	June 30, 1969	8.12	1,340
	July 9, 1969	8.21	1,380
1970	Mar. 6, 1970	5.76 a	--
	May 14, 1970	5.42	377
1971	Mar. 29, 1971	9.11 a	--
	Apr. 1, 1971	8.08	1,400
1972	Mar. 16, 1972	6.89 a	680 b
1973	Mar. 7, 1973	8.87 a	1,700 b
	Mar. 14, 1973	8.72	1,730
	Apr. 16, 1973	7.68	1,210
	May 8, 1973	7.51	1,130
1974	Oct. 5, 1973	7.14	921
	Mar. 9, 1974	7.18	1,000
	Apr. 4, 1974	6.85	845
	June 10, 1974 b	8.58 d	1,650 b

a Affected by ice. b About.
c Stage falling. d From high-water mark in well.

05459000 Shell Rock River near Northwood, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1975	Apr. 11, 1975	--	780 b
	Apr. 16, 1975	7.02	913
	Apr. 19, 1975	7.11	950
	Apr. 24, 1975	7.11	950
	Apr. 28, 1975	8.17	1,440
	June 19, 1975	6.97	893
	June 22, 1975	6.82	833
	July 1, 1975	6.94	881
	Mar. 12, 1976	6.98 a	--
1976	Mar. 31, 1976	6.46	696
1977	Mar. 11, 1977	a	327
1978	June 15, 1978	7.95	1,140
	June 17, 1978	8.25	1,290
	June 25, 1978	7.16	809
	July 6, 1978	8.21	1,270
	July 27, 1978	6.51	703
1979	Mar. 30, 1979	9.63 c	--
	Apr. 2, 1979	9.19	1,990
	Aug. 26, 1979	7.45	976
1980	Mar. 21, 1980	7.00	793
	May 31, 1980	7.43	958
	Aug. 10, 1980	7.29	905
	Aug. 14, 1980	6.85	738
	Aug. 17, 1980	7.59	1,030
	Aug. 28, 1980	6.83	731
1981	Apr. 28, 1981	8.24	1,290
	June 24, 1981	7.06	821
	July 15, 1981	8.09	1,230
	Aug. 27, 1981	7.84	1,130
1982	Mar. 19, 1982 d	9.60 a	1,600
	Apr. 17, 1982	6.77	742
	May 7, 1982	7.41	986
	May 22, 1982	7.54	1,040
1983	Oct. 21, 1982	6.69	731
	Nov. 13, 1982	7.00	849
	Feb. 21, 1983	7.38	1,080

1983 CONTINUED ON NEXT PAGE

a Affected by ice. b About.
c Probably higher sometime during Mar. 25-30.
d Date approximate. Occurred in period Mar. 16-25.

05459000 Shell Rock River near Northwood, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	Feb. 22, 1983	7.30	1,050
	Mar. 7, 1983	8.99	1,890
	Apr. 16, 1983	8.22	1,420
	July 2, 1983	7.27	893
1984	Feb. 21, 1984	a	1,680
	Feb. 25, 1984	a	1,630
	Mar. 29, 1984	7.53	1,170
	Apr. 14, 1984	7.46	1,170
	May 1, 1984	8.77	1,800
	June 18, 1984	6.97	914
	June 23, 1984	6.80	845

a Affected by ice.

05459010 Elk Creek at Kensett, Iowa

Location.--Lat 43°22', long 93°13', in NE1/4 sec.28, T.99 N., R.20 W., Worth County, at bridge on U.S. Highway 65, about 1 mile north of Kensett.
Drainage area.--58.1 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)	
1966	--	a	<800	
1967	--	a	<800	
1968	--	a	<800	
1969	June 26, 1969	90.60	450	
1970	--	a	<260	
1971	Mar. 30, 1971	91.35	1,000	
1972	--	a	<260	
1973	Apr. 17, 1973	90.87	580	
1974	--	a	<260	
1975	Apr. 28, 1975	90.40	454	
1976	--	a	<260	
1977	--	a	<260	
1978	July 6, 1978	90.39	452	
1979	Aug. 23, 1979	90.15	265	c
1980	May 30, 1980	90.63	370	
1981	Apr. 28, 1981	91.40	720	
1982	Mar. 20, 1982	90.32	320	

a Peak stage did not reach bottom of gage.
b Discharge not determined.
c Discharge revised from that previously published.

05459010 Elk Creek at Kensett, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Feb. 20, 1983	90.81	540
1984	June 16, 1984	91.48	790

05459490 Spring Creek near Mason City, Iowa

Location.--Lat 43°12'48", long 93°12'38", in SE1/4 sec.16, T.97 N., R.20 W., Cerro Gordo County, at bridge on U.S. Highway 65, about 4 miles north of Mason City.
Drainage area.--29.3 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	July 14, 1966	85.59	720
1967	--	a	<480
1968	--	a	<480
1969	July 8, 1969	88.41	3,200
1970	May 29, 1970	86.66	1,280
1971	Mar. 31, 1971	84.89	495
1972	--	a	<200
1973	Oct. 23, 1972	85.44	705
1974	--	a	<200
1975	Apr. 28, 1975	88.19	2,820
1976	--	a	<115
1977	--	a	<115
1978	June 15, 1978	86.16	940
1979	Aug. 23, 1979	86.93	1,000
1980	May 30, 1980	90.32	4,500
1981	May 28, 1981	88.34	1,950
1982	June 24, 1982	84.46	233
1983	June 28, 1983	86.81	960

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05459490 Spring Creek near Mason City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	June 16, 1984	86.81	960

05459500 Winnebago River at Mason City, Iowa

Location.--Lat 43°09'54", long 93°11'33", in NE1/4 NW1/4 sec.3, T.96 N., R.20 W., Cerro Gordo County, on right bank 650 ft upstream from Thirteenth Street Bridge in Mason City, 0.1 mile downstream from Calmus Creek, 1.0 mile upstream from Willow Creek and 275.8 miles upstream from mouth of Iowa River.
Drainage area.--526 mi².
Gage.--Water-stage recorder and concrete control. Datum of gage is 1,069.59 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 15, 1934, nonrecording gage at datum 6.47 ft lower. Oct. 15 to Nov. 6, 1934, nonrecording gage at different datum, and Nov. 7, 1934, to Mar. 22, 1935, nonrecording gage at present datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--7 feet.
Remarks.--Base for partial-duration series, 2,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1933	Mar. 30, 1933	15.70 a	10,800
1934	Apr. 3, 1934	4.10	1,470
1935	Mar. 5, 1935	5.80	2,340
1936	Mar. 16, 1936	6.10 ab	2,520
	Mar. 17, 1936	5.97 a	2,440
1937	Mar. 5, 1937	9.68	5,260
1938	June 23, 1938	8.7	4,340
	June 25, 1938	10.29	5,850
	Sept.15, 1938	8.2	3,970
1939	Mar. 13, 1939	7.9	3,730
	Mar. 22, 1939	5.8	2,360
1940	Mar. 29, 1940	3.4	980
1941	June 2, 1941	4.4	1,500
1942	Nov. 1, 1941	5.8	2,290
1943	Mar. 16, 1943	7.93	3,760

a Present datum. b Affected by ice.

05459500 Winnebago River at Mason City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1944	May 21, 1944	6.7	2,840
	June 12, 1944	12.2	7,020
	June 17, 1944	8.1	3,820
1945	Mar. 11, 1945	10.22 b	4,600 c
	Mar. 13, 1945	9.17 b	4,000 c
	Mar. 15, 1945	8.0	3,750
	Apr. 23, 1945	6.4	2,630
	May 25, 1945	6.4	2,630
	June 1, 1945	6.6	2,770
	June 10, 1945	8.6	4,160
	Aug. 14, 1945	6.0	2,350
1946	Mar. 14, 1946	6.9	2,970
	May 24, 1946	5.8	2,260
1947	Apr. 10, 1947	6.4	2,680
	June 17, 1947	8.1	3,850
	June 29, 1947	7.9	3,690
	June 30, 1947	8.8	4,360
	July 6, 1947	6.4	2,700
1948	Feb. 28, 1948	11.22 b	5,000 c
1949	Mar. 4, 1949	7.4	3,310
	Mar. 24, 1949	6.4	2,630
	Mar. 27, 1949	6.8	2,820
	June 25, 1949	5.9	2,310
1950	Mar. 7, 1950	7.3	3,310
	Mar. 27, 1950	6.4	2,690
1951	Feb. 26, 1951	8.75 b	3,000 c
	Apr. 7, 1951	12.44	7,560
	Apr. 29, 1951	8.11	3,880
	May 2, 1951	9.12	4,680
	June 28, 1951	9.05	4,600
1952	Mar. 18, 1952	5.97	2,450
	Mar. 21, 1952	5.42	2,090
	Mar. 30, 1952	8.70	4,360
1953	Aug. 3, 1953	4.73	1,730
1954	June 18, 1954	10.67	4,900
	June 21, 1954	11.85	7,060
	Aug. 23, 1954	5.65	2,210

b Affected by ice. c About.

05459500 Winnebago River at Mason City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1955	June 3, 1955	5.75	2,330
1956	Apr. 1, 1956	4.15	1,360
1957	May 30, 1957	3.58	1,090
1958	June 4, 1958	3.83	955
1959	May 21, 1959	7.33	3,040
	May 31, 1959	6.40	2,560
1960	Mar. 28, 1960	5.98	2,320
1961	Mar. 27, 1961	14.80	10,500
1962	Mar. 29, 1962	11.80	7,200
	Aug. 31, 1962	13.06	8,510
1963	Mar. 17, 1963	7.23 b	2,100 c
	Mar. 23, 1963	7.03 b	2,300 c
	May 10, 1963	8.39	3,800
	July 19, 1963	8.86	4,120
1964	Sept. 9, 1964	4.85	1,620
1965	Mar. 1, 1965	11.27	5,920
	Apr. 6, 1965	13.70	9,000
	Apr. 11, 1965	14.27	9,700
	May 5, 1965	6.71	2,360
	Sept.19, 1965	9.41	4,290
	Sept.29, 1965	9.61	4,450
1966	Feb. 9, 1966	8.52 b	2,300 c
	July 14, 1966	6.46	2,120
1967	June 10, 1967	6.00	1,400
1968	June 27, 1968	7.30	2,370
1969	Mar. 25, 1969	7.88	2,860
	Apr. 5, 1969	7.01	2,160
	June 25, 1969	9.71	4,440
	June 29, 1969	11.44	6,040
	July 8, 1969	12.25	6,850
1970	May 30, 1970	6.84	2,030
1971	Mar. 18, 1971	7.37	2,450
	Apr. 1, 1971	8.24	3,150

b Affected by ice. c About.

05459500 Winnebago River at Mason City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	Sept.28, 1972	6.65	1,890
1973	Mar. 6, 1973	7.59	2,640
	Mar. 11, 1973	9.37 b	3,700 c
	Mar. 14, 1973	8.36	3,260
	Apr. 16, 1973	8.06	3,020
1974	Mar. 3, 1974	7.26 b	2,100 c
1975	Apr. 28, 1975	10.48 d	5,130
1976	Mar. 12, 1976	9.00 b	3,100 c
1977	May 5, 1977	4.26	360
1978	June 15, 1978	7.36	2,430
	June 17, 1978	7.01	2,150
1979	Mar. 23, 1979	7.76	2,750
	Mar. 30, 1979	8.02	2,960
	Aug. 23, 1979	11.33	5,930
	Aug. 29, 1979	10.45	5,100
1980	May 30, 1980	11.66	6,250
	Aug. 10, 1980	9.75	4,470
	Aug. 13, 1980	7.80	2,780
	Aug. 17, 1980	7.63	2,630
1981	May 24, 1981	7.07	2,180
	May 29, 1981	8.33	3,220
	June 24, 1981	10.90	5,510
1982	Mar. 16, 1982	8.11	3,020
	Mar. 20, 1982	8.15	3,070
	June 7, 1982	9.16	3,940
1983	Feb. 23, 1983	7.07	2,240
	Mar. 7, 1983	8.88	3,690
	Apr. 14, 1983	7.35	2,460
	July 1, 1983	7.91	2,890
	Sep. 20, 1983	7.13	2,250
1984	Feb. 18, 1984	b	2,550
	Feb. 23, 1984	8.33	3,230
	May 1, 1984	8.28	3,190
	June 8, 1984	11.94	6,540
	June 13, 1984	6.82	2,030
	June 17, 1984	9.87	4,580
	June 23, 1984	8.41	3,290

b Affected by ice. c About. d From floodmark.

05460100 Willow Creek near Mason City, Iowa

Location.--Lat 43°09', long 93°16', in NE1/4 sec.12, T.96 N., R.21 W., Cerro Gordo County, at bridge on U.S. Highway 18, about 3.5 miles west of Mason City.
Drainage area.--78.6 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	Feb. 9, 1966	89.14	530
1967	--	a	<325
1968	--	a	<325
1969	July 8, 1969	91.30	1,100
1970	May 14, 1970	88.11	325
1971	Mar. 17, 1971	90.75	880
1972	--	a	<340
1973	Apr. 17, 1973	89.00	520
1974	--	a	<340
1975	Apr. 28, 1975	90.23	770
1976	--	a	<340
1977	--	a	<340
1978	June 15, 1978	90.75	790
1979	Aug. 21, 1979	91.83	1,080
1980	May 30, 1980	91.17	950
1981	June 24, 1981	90.62	720
1982	Mar. 16, 1982	89.94	635
1983	Sep. 20, 1983	90.19	630

a Peak stage did not reach bottom of gage.

05460100 Willow Creek near Mason City, Iowa

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	June 17, 1984	91.97	1,050

05460500 Shell Rock River at Marble Rock, Iowa
(Published as "at Greene", 1933-42)
(Discontinued September 1953)

Location.--Lat 42°58'00", long 92°52'15", in SE1/4 SE1/4 sec.8, T.94 N., R.17 W., Floyd County, on left bank 20 ft above dam at Marble Rock, 1.1 mile upstream from Ackley Creek, 9.5 miles downstream from Winnebago River, and 247.1 miles upstream from mouth of Iowa River.

Drainage area.--1,318 mi² at site used 1933-42; 1,357 mi².

Gage.--Nonrecording prior to Oct. 1, 1942, Mar. 13, 1945, to June 5, 1946 and since June 20, 1950. Recording Oct. 1, 1942, to Mar. 12, 1945, and June 6, 1946, to June 19, 1950. Prior to Oct. 1, 1942, in tailrace of powerplant at Greene, 5.7 miles downstream at different datum. Datum of gage is 960.39 ft National Geodetic Vertical Datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements at Marble Rock; extended by logarithmic plotting above 23,000 ft³/s at Greene.

Flood stage.--4 feet.

Remarks.--Records at two sites not corrected for 29 mi² difference in drainage area. Base for partial-duration series, 4,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1933	Mar. 27, 1933	107.6	36,400
1934	Apr. 4, 1934	94.2	3,760
1935	Mar. 5, 1935	97.5	6,910
1936	Mar. 12, 1936	97.1	6,470
	Mar. 17, 1936	97.2	6,580
	Sept.15, 1936	96.0	5,340
1937	Mar. 6, 1937	105.9	10,000
1938	June 1, 1938	95.2	4,590
	June 25, 1938	101.7	13,400
	Sept.15, 1938	97.7	7,130
1939	Mar. 14, 1939	98.8	8,390

05460500 Shell Rock River at Marble Rock, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1940	Aug. 25, 1940	93.5	3,070
1941	Mar. 9, 1941	94.6	4,110
	Apr. 20, 1941	95.0	4,430
	May 30, 1941	96.7	6,040
	June 3, 1941	98.9	8,510
	June 12, 1941	98.5	8,030
1942	Nov. 2, 1941	96.0	5,340
	June 1, 1942	97.4	6,800
	June 3, 1942	95.4	4,770
	June 28, 1942	95.7	5,040
	July 30, 1942	95.00	4,430
1943	Mar. 16, 1943	5.97	9,340
	Mar. 26, 1943	4.1	5,150
1944	May 3, 1944	4.2	5,440
	May 22, 1944	4.1	5,130
	June 12, 1944	8.28	15,900
	June 18, 1944	5.1	7,180
1945	May 13, 1945	6.6	11,000
	Mar. 15, 1945	7.78	14,400
	Apr. 23, 1945	4.8	6,540
	May 22, 1945	3.9	4,730
	May 25, 1945	4.8	6,680
	June 1, 1945	5.6	8,380
	June 10, 1945	6.1	9,660
	Aug. 14, 1945	4.5	5,900
1946	Mar. 6, 1946	4.39	5,730
	Mar. 13, 1946	4.0	4,930
1947	Apr. 10, 1947	5.1	7,270
	June 13, 1947	5.2	7,500
	June 17, 1947	6.36	10,300
	June 29, 1947	5.6	8,430
	July 1, 1947	5.8	8,910
	July 6, 1947	3.7	4,340
1948	Feb. 28, 1948	8.56 a	14,000 b

a Affected by ice. b About.

05460500 Shell Rock River at Marble Rock, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1949	Mar. 5, 1949	5.46	8,190
	Mar. 22, 1949	3.9	4,630
	Mar. 25, 1949	4.8	6,610
	Mar. 27, 1949	4.8	6,610
	June 25, 1949	4.2	5,330
1950	Mar. 7, 1950	7.75	14,400
	Mar. 27, 1950	7.4	13,200
1951	Feb. 26, 1951	6.05	9,410
	Mar. 30, 1951	4.12	5,130
	Apr. 7, 1951	9.35	22,700
	Apr. 29, 1951	4.04	11,900
	June 2, 1951	3.47	11,500
	June 28, 1951	2.21	8,980
1952	Mar. 19, 1952	4.18	5,330
	Mar. 30, 1952	5.51	8,190
1953	Aug. 4, 1953	3.83	4,630
Discontinued September 1953			
1961	Mar. 28, 1961	12.7	32,000 c
1962	Mar. 30, 1962	7.9	14,200 c

c From flood profiles.

05461500 Shell Rock River near Clarksville, Iowa
(Discontinued September 1934)

Location.--Lat 42°47'25", long 92°41'15", on line between sec.12 and 13, T.92 N., R.16 W., Butler County, at highway bridge 1.25 miles northwest of Clarksville, 5.4 miles downstream from Flood Creek, 20.9 miles upstream from mouth, and 226.8 miles upstream from mouth of Iowa River.
Drainage area.--1,626 mi².
Gage.--Nonrecording. Altitude of gage is 916 ft National Geodetic Vertical Datum of 1929, from river profiles.
Stage-discharge relation.--Defined by current-meter measurements below 10,000 ft³/s and by logarithmic plotting above.
Remarks.--Base for partial-duration series, 3,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1915	May 30, 1915	11.5	11,800 a
1916	Mar. 16, 1916	8.4	6,570
	Mar. 26, 1916	11.9	12,500
	Apr. 21, 1916	8.4	6,570
	May 14, 1916	7.7	5,640
	June 2, 1916	12.8	14,400
1917	Mar. 22, 1917	--	17,600
	Mar. 28, 1917	5.8	3,680
	June 7, 1917	8.5	6,920
1918	Mar. 20, 1918	--	3,890
	May 10, 1918	7.0	5,020
	May 30, 1918	7.6	5,760
	June 4, 1918	6.2	4,110
	Aug. 17, 1918	10.4	9,380
1919	Oct. 28, 1918	6.1	4,000
	Feb. 14, 1919	--	4,400
	Mar. 16, 1919	10.8	10,400
	Apr. 11, 1919	9.2	7,680
	Apr. 16, 1919	8.7	7,020
	May 7, 1919	6.4	4,200
	June 11, 1919	9.6	8,230

a Maximum for period May to September 1915.

05461500 Shell Rock River near Clarksville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1920	Mar. 26, 1920	--	4,090
	May 23, 1920	6.8	4,660
	Sept.11, 1920	6.0	3,760
1921	Feb. 16, 1921	--	3,760
	May 28, 1921	9.3	7,860
1922	Feb. 23, 1922	13.2 b	14,200 c
	Mar. 6, 1922	6.2	3,980
	Apr. 11, 1922	7.1	5,140
1923	Apr. 4, 1923	6.1	3,870
1924	Oct. 2, 1923	6.9	4,780
	June 29, 1924	6.2	3,980
1925	June 13, 1925	9.6	8,240
1926	Aug. 19, 1926	6.8	4,660
1927	May 28, 1927	6.60	4,420

1933	Mar. 31, 1933	16.7	23,800
	May 20, 1933	6.4	4,330
1934	Apr. 4, 1934	5.5	3,360
Discontinued September 1934			
1961	Mar. 28, 1961	--	33,400 d
1962	Mar. 30, 1962	--	15,800 d

b Affected by ice. c About. d From floodmark.

05462000 Shell Rock River at Shell Rock, Iowa

Location.--Lat 42°39'10", long 92°35'46", in NE1/4 NW1/4 sec.11, T.91 N., R.15 W., Butler County, on right bank 400 ft upstream from bridge on county highway C45 in Shell Rock, 2.2 miles downstream from Curry Creek, 10.4 miles upstream from mouth and 216.4 miles upstream from mouth of Iowa River.
Drainage area.--1,746 mi².
Gage.--Water-stage recorder. Rockfill dam since Oct. 19, 1957. Datum of gage is 885.34 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--12 feet.
Remarks.--Base for partial-duration series, 4,000 ft³/s. Diurnal fluctuation at low stages caused by powerplant at Greene.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1856	--	17.70 a	45,000 b

1953	Aug. 4, 1953	8.79	4,720 c
1954	June 22, 1954	14.00	21,300
	Aug. 24, 1954	9.56	5,840
1955	June 5, 1955	6.27	2,640
1956	Apr. 2, 1956	6.50	2,800
1957	May 31, 1957	5.74	2,200
1958	June 4, 1958	7.99	1,650
1959	Mar. 27, 1959	11.03	7,630
	June 1, 1959	10.19	5,480
1960	Mar. 30, 1960	11.54	10,100
	May 7, 1960	9.17	4,040
1961	Mar. 5, 1961	9.51	4,740
	Mar. 28, 1961	16.26	33,500
1962	Mar. 30, 1962	13.64	16,400
	Sept. 2, 1962	13.39	14,600

a At bridge 400 feet downstream; from information furnished by Corps of Engineers.
b About. c Maximum for period June to September 1953.

05462000 Shell Rock River at Shell Rock, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1963	Mar. 18, 1963	10.43	6,080
	Mar. 26, 1963	9.98	5,060
	May 11, 1963	12.70	13,600
	May 14, 1963	10.67	6,820
	June 10, 1963	10.65	6,820
	July 20, 1963	10.92	7,500
1964	Sept.10, 1964	9.70	2,500
1965	Mar. 2, 1965	14.50 d	16,000 b
	Apr. 2, 1965	12.21	10,100
	Apr. 7, 1965	15.09	24,400
	Apr. 13, 1965	14.18	18,500
	Sept.21, 1965	11.57	8,330
	Sept.30, 1965	12.05	9,850
1966	Feb. 10, 1966	11.66 e	9,300
	Apr. 1, 1966	9.81	4,470
	June 13, 1966	--	6,400 b
	June 28, 1966	9.95	4,100 b
	July 10, 1966	10.16	4,430
	July 15, 1966	--	6,100 b
1967	June 11, 1967	10.12	3,880
1968	June 27, 1968	11.08	4,920
	July 17, 1968	10.68	4,040
	Aug. 8, 1968	10.76	4,210
1969	Mar. 21, 1969	11.46	6,620
	Mar. 25, 1969	11.87	7,850
	Apr. 5, 1969	11.14	5,700
	Apr. 18, 1969	10.55	4,280
	June 27, 1969	14.85	21,000
	June 30, 1969	15.49	24,500
	July 10, 1969	14.22	17,900
1970	May 15, 1970	10.95 e	5,440
1971	Mar. 19, 1971	11.44	6,580
	Apr. 1, 1971	13.02	11,900
1972	Sept.29, 1972	11.36	7,060
1973	Oct. 24, 1972	10.49	4,910
	Nov. 3, 1972	10.26	4,380
	Nov. 8, 1972	10.21	4,260

1973 CONTINUED ON NEXT PAGE

b About. d Affected by ice. e From floodmarks.

05462000 Shell Rock River at Shell Rock, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973 cont.	Mar. 8, 1973	10.91	6,040
	Mar. 12, 1973	12.37	10,600
	Mar. 26, 1973	10.12	6,380
	Apr. 17, 1973	12.36	10,200
	May 9, 1973	11.68	7,840
	May 29, 1973	10.58	4,910
1974	Mar. 5, 1974	11.08	6,170
	Apr. 5, 1974	10.61	5,600
	May 14, 1974	10.85	6,220
	May 29, 1974	11.46	7,930
	June 10, 1974	12.92	13,600
1975	Apr. 29, 1975	12.36	12,100
1976	Mar. 13, 1976	11.52	6,790
1977	Sept.18, 1977	8.49	1,220
1978	June 18, 1978	12.31	9,320
	July 7, 1978	12.24	9,060
1979	Mar. 21, 1979	11.11	6,060
	Mar. 24, 1979	11.17	6,580
	Mar. 31, 1979	12.08	10,100
	Aug. 10, 1979	11.56	8.560
	Aug. 24, 1979	15.01	21,100
	Aug. 30, 1979	12.68	11,200
1980	June 1, 1980	12.13	9,280
	Aug. 12, 1980	13.29	12,900
	Aug. 15, 1980	12.36	9,690
	Aug. 18, 1980	11.63	7,620
	Aug. 28, 1980	10.10	4,330
	Sept.23, 1980	10.60	5,270
1981	May 30, 1981	10.23	4,560
	June 14, 1981	10.14	4,510
	June 25, 1981	12.22	9,810
	July 16, 1981	10.34	5,000
	July 21, 1981	10.13	4,600
	Aug. 30, 1981	10.30	4,690
1982	Mar. 18, 1982	11.92	9,020
	Mar. 25, 1982	10.75	5,900
	Apr. 18, 1982	9.96	4,180
	May 23, 1982	10.36	5,100
	May 28, 1982	10.84	6,190
	June 8, 1982	11.34	7,440

05462000 Shell Rock River at Shell Rock, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Nov. 13, 1982	10.38	5,370
	Dec. 7, 1982	9.87	4,320
	Dec. 29, 1982	9.99	4,560
	Feb. 21, 1983	11.16	7,250
	Mar. 8, 1983	12.02	9,620
	Mar. 19, 1983	10.60	5,870
	Apr. 15, 1983	11.50	8,150
	May 8, 1983	9.80	4,200
	May 20, 1983	11.52	8,240
	June 22, 1983	10.00	4,630
	June 25, 1983	9.91	4,440
	July 2, 1983	11.11	7,150
	Sep. 21, 1983	12.24	10,100
1984	Feb. 19, 1984	10.96	6,480
	Feb. 24, 1984	10.98	6,530
	Mar. 26, 1984	10.48	5,390
	Apr. 15, 1984	10.37	5,340
	May 2, 1984	11.60	8,410
	June 9, 1984	12.05	9,680
	June 14, 1984	10.39	5,390
	June 19, 1984	12.41	10,800
	June 24, 1984	12.43	10,900

05462750 Beaver Creek tributary near Aplington, Iowa

Location.--Lat 42°35', long 92°51', in NW1/4 sec.27, T.90 N., R.17 W., Butler County, at bridge on U.S. Highway 20, 2 miles east of Aplington.
Drainage area.--11.6 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)	
Remarks.--Only annual peaks are shown.				
1966	July 13, 1966	93.52	1,100	
1967	Mar. 26, 1967	92.02	196	
1968	Aug. 8, 1968	94.21	2,800	
1969	July 8, 1969	93.80	1,600	
1970	May 13, 1970	92.46	320	
1971	May 24, 1971	93.60	1,300	
1972	May 6, 1972	92.60	360	
1973	Apr. 16, 1973	93.32	810	
1974	June 22, 1974	94.00	2,100	c
1975	Apr. 28, 1975	93.89	1,900	c
1976	Mar. 13, 1976	92.88	500	
1977	--	a	<100	c
1978	July 19, 1978	93.37	850	
1979	July 14, 1979	94.05	2,300	c
1980	June 16, 1980	94.13	2,400	
1981	June 24, 1981	94.24	2,800	
1982	Mar. 20, 1982	93.33	860	

a Peak stage did not reach bottom of gage.
b Discharge not determined.
c Discharges revised from those previously published.

05462750 Beaver Creek tributary near Aplington, Iowa

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	May 19, 1983	94.27	3,000 c
1984	June 14, 1984	92.99	450

c Discharge revised from that previously published.

05463000 Beaver Creek at New Hartford, Iowa

Location.--Lat 42°30'50", long 92°37'55", in SE1/4 SE1/4 sec.28, T.90 N., R.15 W., Butler County, on downstream side of center bridge pier of bridge on county highway T55, 0.2 mile north of New Hartford, 8 miles upstream from mouthand 207.0 miles upstream from mouth of Iowa River.
Drainage area.--347 mi².
Gage.--Water-stage recorder. Datum of gage is 882.44 ft National Geodetic Vertical Datum of 1929. Prior to July 14, 1959, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements below 7,300 ft³/s and extended above by logarithmic plotting.
Flood stage.--8.0 ft.
Remarks.--Base for partial-duration series, 1,400 ft³/s. Only annual peaks are shown prior to 1950.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1946	Mar. 7, 1946	10.2	6,900
1947	June 13, 1947	13.5	18,000
1948	Feb. 28, 1948	10.9	9,240
1949	Mar. 5, 1949	10.18	6,900
1950	Mar. 7, 1950	11.52 a	5,000 b
	Mar. 27, 1950	--	2,000 b
	May 6, 1950	7.66	1,850
	May 10, 1950	9.10	4,050
	June 10, 1950	8.82	3,410
	June 19, 1950	8.16	2,400
1951	Feb. 26, 1951	10.8	8,300
	Mar. 7, 1951	8.4	2,760
	Mar. 29, 1951	11.7	11,600
	Apr. 8, 1951	8.3	2,610
	Apr. 30, 1951	8.9	3,600
	June 3, 1951	9.5	5,050
	June 27, 1951	8.7	3,230
	July 9, 1951	8.5	2,910
	Aug. 27, 1951	10.9	8,550
1952	Mar. 14, 1952	7.20	1,430
	Apr. 1, 1952	7.30	1,510

a Affected by ice. b About.

05463000 Beaver Creek at New Hartford, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1953	Aug. 5, 1953	7.60	1,720
1954	June 11, 1954	7.64	1,410
	June 17, 1954	8.55	1,990
	June 22, 1954	7.86	1,530
1955	July 11, 1955	5.02	510
1956	Mar. 21, 1956	3.80 a	200 b
1957	May 31, 1957	7.65	1,160
1958	July 16, 1958	8.68	1,560
1959	Mar. 15, 1959	--	1,500 b
	Mar. 21, 1959	11.32	6,250
	Mar. 27, 1959	10.5	4,400
1960	Mar. 30, 1960	12.40	11,200
	Apr. 18, 1960	8.89	2,060
	May 7, 1960	10.10	3,670
1961	Feb. 24, 1961	--	1,700 b
	Mar. 5, 1961	8.49	2,010
	Mar. 26, 1961	9.52	3,440
	Apr. 24, 1961	8.65	2,190
1962	Mar. 28, 1962	11.98	9,610
	May 12, 1962	8.38	1,900
1963	Mar. 17, 1963	9.77 a	3,400 b
	July 20, 1963	8.26	1,460
1964	Sept. 9, 1964	6.12	655
1965	Mar. 2, 1965	11.66 a	2,400 b
	Apr. 2, 1965	11.79 a	5,300 b
	Apr. 6, 1965	11.80	9,610
	May 27, 1965	10.28	4,830
	July 10, 1965	8.29	1,780
	Sept. 9, 1965	9.91	3,430
	Sept.21, 1965	9.67	3,060
	Sept.29, 1965	8.76	2,020
1966	Feb. 9, 1966	9.94	3,960
	May 24, 1966	8.47	1,920
	June 13, 1966	10.40	4,870
	July 15, 1966	8.50	1,960
	Aug. 22, 1966	7.79	1,460

a Affected by ice. b About.

05463000 Beaver Creek at New Hartford, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967	June 30, 1967	8.26	1,800
1968	Aug. 6, 1968	9.39	2,510
	Aug. 8, 1968	10.07	3,520
1969	Oct. 10, 1968	8.68	1,990
	Mar. 20, 1969	11.28	6,660
	Mar. 23, 1969	9.95	3,750
	Apr. 5, 1969	8.50	1,790
	June 28, 1969	10.13	4,070
	June 30, 1969	9.29	2,700
	July 9, 1969	13.48	14,900
	July 13, 1969	8.24	1,550
	July 18, 1969	9.05	2,390
1970	May 28, 1970	8.17	1,540
1971	Feb. 21, 1971	--	2,400 b
	Mar. 14, 1971	11.08	6,290
	June 1, 1971	8.12	1,500
1972	May 7, 1972	9.51	3,020
1973	Oct. 24, 1972	7.75	1,400
	Nov. 8, 1972	8.06	1,650
	Mar. 12, 1973	8.99	2,320
	Mar. 14, 1973	8.76	2,110
	Apr. 17, 1973	10.50	4,750
	May 2, 1973	8.47	1,760
	May 8, 1973	9.28	2,680
	May 29, 1973	9.15	2,520
	June 13, 1973	8.31	1,700
1974	Mar. 4, 1974	8.84	2,110
	June 10, 1974	12.49	10,500
	June 19, 1974	9.10	2,450
	June 23, 1974	9.97	3,790
1975	Mar. 21, 1975	10.61	4,970
	Apr. 10, 1975	8.24	1,610
1976	Mar. 13, 1976	10.44	4,750
	Apr. 19, 1976	10.59	4,930
1977	Aug. 29, 1977	3.19	172

b About.

05463000 Beaver Creek at New Hartford, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1978	Mar. 21, 1978	8.48	1,770
	Apr. 19, 1978	8.59	1,880
	June 18, 1978	9.04	2,380
	June 21, 1978	9.15	2,520
1979	Mar. 19, 1979	12.23	8,860
	Mar. 24, 1979	8.62	1,880
	Mar. 30, 1979	12.10	9,450
	June 20, 1979	8.09	1,510
	July 4, 1979	8.01	1,410
	July 15, 1979	9.76	3,410
	July 31, 1979	9.00	2,330
	Aug. 21, 1979	8.97	2,290
1980	Oct. 24, 1979	8.19	1,510
	Mar. 17, 1980	8.84	2,140
	June 17, 1980	9.94	3,460
1981	June 25, 1981	8.39	1,680
1982	Mar. 15, 1982	--	3,310
	Mar. 17, 1982	9.53	3,120
	Mar. 20, 1982	10.19	4,270
	July 8, 1982	8.82	2,190
	July 11, 1982	8.98	2,340
	July 19, 1982	8.82	2,120
1983	Nov. 13, 1982	8.65	1,940
	Dec. 6, 1982	4.14	1,470
	Dec. 29, 1982	8.50	1,790
	Feb. 20, 1983	10.05	3,930
	Mar. 7, 1983	9.12	2,480
	Apr. 3, 1983	9.02	2,410
	Apr. 15 1983	9.59	3,170
	May 20 1983	11.56	7,430
	May 23 1983	10.71	5,190
	May 29, 1983	9.08	2,490
	July 2, 1983	8.68	2.040
	July 5, 1983	8.91	2,280
1984	Feb. 16, 1984	a	2,400
	Apr. 30, 1984	--	1,700
	May 28, 1984	--	2,150
	June 14, 1984	8.56	1,920

a Affected by ice.

05463090 Black Hawk Creek at Grundy Center, Iowa

Location.--Lat 42°22', long 92°46', in NW1/4 sec.7, T.87 N., R.16 W., Grundy County, at bridge on State Highway 14, at north edge of Grundy Center.
Drainage area.--56.9 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
Discharges are revised from those previously published.			
1966	Feb. 9, 1966	87.46	1,900
1967	June 12, 1967	83.18	225
1968	--	a	<220
1969	July 8, 1969	89.6	7,300
1970	--	a	<220
1971	May 24, 1971	85.74	700
1972	Aug. 6, 1972	86.71	1,150
1973	Apr. 17, 1973	87.84	2,300
1974	June 22, 1974	87.72	2,200
1975	Apr. 28, 1975	85.82	730
1976	Mar. 13, 1976	87.59	2,050
1977	--	a	<110
1978	Mar. 20, 1978	85.76 c	510
1979	Apr. 19, 1979	87.92	2,400
1980	June 1, 1980	86.46	1,000
1981	June 24, 1981	85.56	650
1982	June 15, 1982	85.90	740
1983	May 19, 1983	87.94	2,400

a Peak stage did not reach bottom of gage. c Affected by ice.

05463090 Black Hawk Creek at Grundy Center, Iowa
--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	July 10, 1984	86.44	1,000

05463500 Black Hawk Creek at Hudson, Iowa

Location.--Lat 42°24'28", long 92°27'47", in SW1/4 NE1/4 sec.27, T.88 N., R.14 W., Black Hawk County, on left bank 35 ft downstream from bridge on State Highway 58, 0.2 mile northwest of Chicago Great Western Railway tracks at the west edge of Hudson, 9.6 miles upstream from mouth and 198.6 miles upstream from mouth of Iowa River.
Drainage area.--303 mi².
Gage.--Water-stage recorder. Datum of gage is 865.03 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--12 ft.
Remarks.--Base for partial-duration series, 1,200 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Apr. 1, 1952	10.63	900 a
1953	Feb. 21, 1953	15.46 b	1,300 c
	June 13, 1953	12.57	1,550
	July 7, 1953	13.71	2,100
1954	June 2, 1954	12.73	1,590
	June 11, 1954	13.58	2,040
	Aug. 28, 1954	11.98	1,310
1955	Mar. 3, 1955	11.86 b	830 c
1956	Sept. 6, 1956	9.03	421
1957	May 30, 1957	14.57	2,490
	June 18, 1957	13.92	2,100
1958	June 15, 1958	12.58	1,330
	July 16, 1958	14.57	2,450
1959	Mar. 20, 1959	16.56 b	7,250 c
	Mar. 24, 1959	14.69	2,580
	Mar. 27, 1959	16.48	8,750
1960	Jan. 14, 1960	12.77	1,520
	Mar. 31, 1960	16.93 b	9,000 c
	Apr. 18, 1960	14.97	2,960
	May 8, 1960	14.75	2,710

a April to September 1952. b Affected by ice. c About.

05463500 Black Hawk Creek at Hudson, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1961	Feb. 20, 1961	13.52 b	1,400 c
	Feb. 23, 1961	14.93	2,950
	Mar. 7, 1961	14.09	2,310
	Mar. 15, 1961	12.35	1,480
	Mar. 26, 1961	11.88	1,320
1962	Mar. 28, 1962	15.70	5,400
	May 12, 1962	11.99	1,360
1963	Mar. 16, 1963	13.79 b	--
	Mar. 17, 1963	13.69	2,080
	July 20, 1963	12.00	1,360
1964	May 8, 1964	9.61	825
1965	Mar. 1, 1965	--	2,000
	Apr. 1, 1965	16.01	5,640
	Apr. 6, 1965	16.35	7,500
	July 10, 1965	14.01	2,140
	Sept.10, 1965	14.32	2,440
	Sept.22, 1965	13.84	2,150
1966	Oct. 1, 1965	12.67	1,580
	Feb. 9, 1966	14.82	3,080
	June 13, 1966	14.68	3,030
	Aug. 22, 1966	13.98	2,240
1967	Mar. 27, 1967	10.11	852
1968	Aug. 6, 1968	15.26	3,470
	Aug. 8, 1968	13.88	2,180
1969	Mar. 19, 1969	15.19	3,340
	Mar. 25, 1969	13.08	1,760
	Apr. 5, 1969	13.05	1,630
	May 3, 1969	13.80	2,000
	June 13, 1969	12.93	1,690
	June 23, 1969	11.99	1,360
	June 28, 1969	14.84	2,890
	July 9, 1969	18.23	19,300
	July 14, 1969	12.36	1,470
	July 18, 1969	16.42	8,100
1970	Mar. 3, 1970	14.63	2,750
1971	Feb. 20, 1971	--	3,600 c
	Mar. 14, 1971	16.35 b	5,200 c
	May 25, 1971	11.68	1,260

b Affected by ice. c About.

05463500 Black Hawk Creek at Hudson, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	June 15, 1972	11.66	1,320
	Aug. 7, 1972	11.65	1,320
1973	Feb. 2, 1973	16.33 b	5,700 c
	Mar. 12, 1973	12.24	1,420
	Mar. 15, 1973	12.66	1,550
	Apr. 17, 1973	15.39	3,650
	May 9, 1973	13.57	2,000
	May 29, 1973	13.36	1,900
	June 13, 1973	11.41	1,200
1974	June 10, 1974	15.50	4,100
	June 22, 1974	16.84	10,500
1975	Mar. 21, 1975	16.22 b	4,300 c
	Apr. 2, 1975	12.94	1,610
	Apr. 7, 1975	13.42	1,830
	Apr. 10, 1975	14.29	2,300
	Apr. 28, 1975	12.17	1,370
1976	Mar. 13, 1976	14.43	2,520
	Apr. 19, 1976	11.72	1,280
	Apr. 22, 1976	11.73	1,280
1977	Sept. 18, 1977	6.60	196
1978	Mar. 22, 1978	14.66	2,720
	Apr. 19, 1978	13.02	1,730
	Sept. 21, 1978	12.25	1,500
1979	Mar. 19, 1979	16.59	7,950
	Mar. 24, 1979	12.28	1,400
	Mar. 30, 1979	16.07	5,520
	Apr. 21, 1979	13.85	2,070
	July 4, 1979	14.40	2,500
	July 11, 1979	15.00	3,050
	July 15, 1979	15.28	3,510
1980	Mar. 16, 1980	b	2,300
	May 30, 1980	14.12	2,360
	June 3, 1980	14.70	2,820
	June 16, 1980	11.65	1,280
1981	Feb. 28, 1981	12.90	1,680
1982	Mar. 17, 1982	14.89	2,940
	Mar. 20, 1982	15.32	3,600
	May 22, 1982	14.71	2,780
	June 16, 1982	12.90	1,720

b Affected by ice. c About

05463500 Black Hawk Creek at Hudson, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Nov. 13, 1982	11.98	1,370
	Dec. 29, 1982	11.69	1,290
	Feb. 20, 1983	14.55	2,630
	Mar. 7, 1983	12.56	1,550
	Apr. 3, 1983	12.85	1,680
	Apr. 15, 1983	13.25	1,860
	May 20, 1983	15.58	4,340
	May 23, 1983	14.37	2,490
	May 29, 1983	12.85	1,690
	July 2, 1983	12.24	1,460
	July 4, 1983	11.37	1,210
1984	Feb. 14, 1984	b	1,700
	Feb. 20, 1984	14.55	2,640
	May 1, 1984	13.10	1,770
	May 29, 1984	13.19	1,920
	June 13, 1984	12.62	1,580
	June 18, 1984	12.66	1,590
	June 24, 1984	12.45	1,500
	July 11, 1984	13.27	1,820
	July 16, 1984	13.24	1,800

b Affected by ice.

054640000 Cedar River at Waterloo, Iowa

Location.--Lat 42°29'44", long 92°20'03", in NW1/4 NW1/4 sec.25, T.89 N., R.13 W., Black Hawk County, on left bank at foot of East Seventh Street, 0.3 mile upstream from Eleventh Avenue Bridge in Waterloo, 1.1 mile downstream from Black Hawk Creek, and 188.0 miles upstream from mouth of Iowa River.
Drainage area.--5,146 mi².
Gage.--Water-stage recorder. Datum of gage is 824.14 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--15 ft.
Remarks.--Base for partial-duration series, 13,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft³/s)
1929	Mar. 16, 1929	20.	a	65,000
1933	Apr. 2, 1933	19.5	b	61,000
1941	Apr. 21, 1941	9.23		11,700
1942	June 4, 1942	12.22		23,000
	July 13, 1942	9.13		13,000
	Aug. 1, 1942	12.1		22,600
1943	Mar. 18, 1943	9.90		14,700
	Mar. 28, 1943	10.75		17,700
1944	May 22, 1944	10.36		16,200
	June 17, 1944	13.25		26,400
1945	Mar. 17, 1945	18.38		53,300
	Apr. 26, 1945	9.4		13,100
	May 25, 1945	11.2		19,400
	May 28, 1945	11.8		21,100
	June 2, 1945	12.8		24,700
	Aug. 17, 1945	9.6		14,000
1946	Jan. 6, 1946	12.95		25,200
	Mar. 8, 1946	12.66		24,200
	Mar. 14, 1946	12.00		21,900

a About, determined by Corps of Engineers, from information by City of Waterloo.
b About, from information by City of Waterloo.

05464000 Cedar River at Waterloo, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1947	Apr. 13, 1947	10.73	18,100
	June 2, 1947	12.70	24,800
	June 13, 1947	18.70	55,600
	June 19, 1947	11.57	20,900
	July 3, 1947	10.77	18,200
1948	Mar. 1, 1948	15.85	38,200
	Mar. 20, 1948	14.33	30,900
1949	Mar. 8, 1949	12.21	23,100
	Mar. 29, 1949	10.30	16,600
1950	Mar. 8, 1950	15.90	38,400
	Mar. 29, 1950	13.70	28,400
1951	Feb. 28, 1951	11.83	21,600
	Mar. 30, 1951	15.05	33,900
	Apr. 9, 1951	18.83	56,400
	Apr. 30, 1951	16.97	44,400
	June 4, 1951	9.95	15,400
	June 27, 1951	17.01	44,400
	July 10, 1951	9.73	14,400
	Aug. 27, 1951	10.50	17,100
1952	Mar. 22, 1952	9.62	14,100
	Apr. 2, 1952	13.57	28,000
1953	Aug. 7, 1953	11.29	19,800
1954	June 23, 1954	18.40	49,400
1955	Mar. 14, 1955	7.40	6,590
1956	Apr. 4, 1956	7.09	5,920
1957	May 31, 1957	7.65	7,680
1958	July 17, 1958	6.67	4,320
1959	Mar. 28, 1959	13.15	24,700
1960	Mar. 31, 1960	18.10	48,100
	May 8, 1960	10.82	17,000
1961	Mar. 6, 1961	9.49	13,100
	Mar. 29, 1961	21.86	76,700
1962	Mar. 31, 1962	19.26	51,200
	Sept. 3, 1962	13.66	27,500

05464000 Cedar River at Waterloo, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)	
1963	Mar. 20, 1963	10.05	14,600	
	May 12, 1963	10.50	16,200	
1964	Sept.12, 1964	6.66	4,210	
1965	Mar. 4, 1965	14.72	31,500	
	Apr. 8, 1965	21.67	69,500	
	Sept.23, 1965	13.91	28,300	
1966	Oct. 2, 1965	15.13	33,400	
	Feb. 10, 1966	12.26	22,900	
	June 14, 1966	9.71	14,300	
	July 16, 1966	9.55	13,800	
1967	June 13, 1967	10.77	18,400	
1968	July 18, 1968	12.35	22,800	
	Aug. 5, 1968	9.64	13,800	
	Aug. 9, 1968	10.13	15,300	
1969	Mar. 26, 1969	14.15	28,600	
	Apr. 7, 1969	10.53	17,100	
	Apr. 19, 1969	9.22	13,100	
	June 29, 1969	20.15	58,600	
	July 2, 1969	20.09	58,200	
	July 10, 1969	19.68	55,400	
	July 19, 1969	11.05	18,600	
1970	May 16, 1970	8.11	9,340	
1971	Mar. 18, 1971	11.89	21,000	
	Apr. 3, 1971	13.69	26,700	
1972	Sept.30, 1972	9.59	14,100	c
1973	Oct. 1, 1972	10.10	15,600	
	Feb. 2, 1973	10.82	17,800	
	Mar. 9, 1973	10.28	16,300	
	Mar. 14, 1973	14.48	29,900	
	Apr. 18, 1973	16.18	37,300	
	May 5, 1973	10.54	17,100	
	May 10, 1973	12.39	22,700	
	May 30, 1973	9.41	13,700	
1974	Mar. 7, 1974	9.92	15,300	
	Apr. 7, 1974	10.05	15,600	
	June 11, 1974	15.78	35,500	
	June 23, 1974	10.19	16,100	

c Stage rising, peak occurred Oct. 1, 1972.

05464000 Cedar River at Waterloo, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1975	Mar. 22, 1975	10.77	17,800
	Apr. 11, 1975	9.19	13,000
	May 1, 1975	12.86	24,100
1976	Mar. 14, 1976	10.58	17,200
	Apr. 19, 1976	9.36	13,500
1977	Sept.19, 1977	6.19	3,120
1978	June 20, 1978	10.73	17,700
	July 10, 1978	10.82	18,000
1979	Mar. 20, 1979	12.76	24,400
	Mar. 31, 1979	14.16	29,400
	Apr. 21, 1979	9.29	13,400
	Aug. 25, 1979	15.12	32,500
	Aug. 30, 1979	12.19	22,100
1980	June 2, 1980	11.22	20,000
	Aug. 13, 1980	12.98	25,900
	Aug. 20, 1980	10.63	18,100
1981	June 27, 1981	10.09	16,300
1982	Mar. 21, 1982	13.41	27,500
	May 24, 1982	9.98	15,700
1983	Nov. 14, 1982	10.01	15,500
	Feb. 22, 1983	11.32	20,300
	Mar. 9, 1983	13.40	27,200
	Mar. 20, 1983	9.65	14,500
	Apr. 4, 1983	10.91	18,800
	Apr. 16, 1983	12.90	25,700
	May 21, 1983	13.17	26,500
	July 5, 1983	12.02	22,700
	Sep. 23, 1983	10.41	17,200
1984	Feb. 20, 1984	13.11	26,300
	Mar. 28, 1984	9.88	15,500
	Apr. 16, 1984	9.63	14,600
	May 3, 1984	12.07	22,800
	June 11, 1984	9.98	15,600
	June 15, 1984	9.69	14,600
	June 20, 1984	12.72	25,000
	June 24, 1984	11.20	19,800

05464130 Fourmile Creek near Lincoln, Iowa
(Discontinued Sept. 30, 1980)

Location.--Lat 42°13'32", long 92°36'39", in SW1/4 SW1/4 sec.28, T.86 N., R.15 W., Tama County, on left bank 10 ft downstream from bridge on county highway, 1 mile upstream from Half Mile Creek and 4.7 miles southeast of Lincoln.
Drainage area.--13.78 mi².
Gage.--Water-stage recorder and concrete control with V-notch sharp-crested weir. Datum of gage is 931.26 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 400 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1963	July 18, 1963	11.61	342
1964	Sept. 8, 1964	8.79	110
1965	Mar. 1, 1965	12.01	402
	Apr. 5, 1965	12.14	421
	July 9, 1965	--	400
1966	Feb. 8, 1966	12.41	400
	July 26, 1966	12.62	514
1967	Jan. 24, 1967	12.34 a	240

1970	Mar. 2, 1970	12.59	508
	May 23, 1970	11.75	362
1971	Mar. 13, 1971	12.60	510
	July 8, 1971	11.72	362
1972	Feb. 29, 1972	12.88 a	--
	Mar. 6, 1972	--	370
	June 13, 1972	11.86	379
1973	Dec. 30, 1972	--	550
	Feb. 1, 1973	--	380
	Apr. 16, 1973	12.07	410
	July 4, 1973	12.96	590

a Affected by ice.

05464130 Fourmile Creek near Lincoln, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	June 9, 1974	13.59	767
	June 22, 1974	13.98	893
	July 4, 1974	11.77	366
	July 10, 1974	11.93	390
1977	Sept.17, 1977	8.59	83
1978	Mar. 19, 1978	12.62 b	--
	Apr. 18, 1978	12.38	424
1979	Mar. 18, 1979	12.99	825
	Mar. 29, 1979	12.27	551
	June 12, 1979	13.03	844
	June 27, 1979	12.37	579
	July 3, 1979	13.51	1,100
	July 14, 1979	13.48	1,080
	Aug. 21, 1979	12.01	482
1980	Feb. 21, 1980	12.27	551
	Mar. 15, 1980	12.23	540
	May 29, 1980	13.10	877
	June 2, 1980	13.20	928

Discontinued September 1980

b About.

05464133 Half Mile Creek near Gladbrook, Iowa
(Discontinued September 30, 1980)

Location.--Lat 42°12'40", long 92°36'39", in SW1/4 SW1/4 sec.33, T.86 N., R.15 W., Tama County, on right bank 10 ft downstream from bridge on county highway, 0.8 mile upstream from mouth, and 5.3 miles northeast of Gladbrook.
Drainage area.--1.33 mi².
Gage.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 948.16 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 90 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1963	July 18, 1963	6.84	126
1964	Apr. 2, 1964	5.61	56
1965	July 9, 1965	9.24	307
1966	July 26, 1966	9.15	290
1967	Jan. 24, 1967	9.13	--

	Aug. 8, 1967	6.06	72
1970	Mar. 2, 1970	6.14	84
1971	July 8, 1971	6.47	99
1972	Aug. 2, 1972	7.41	158
1973	Apr. 15, 1973	--	90 a
	July 4, 1973	6.46	104
1974	June 9, 1974	6.46	99
----	June 22, 1974	6.45	98
1977	Aug. 15, 1977	6.72	114
	Sept.17, 1977	7.52	151
1978	Mar. 19, 1978	9.98	--
	Apr. 18, 1978	6.57	97
	May 27, 1978	6.78	114
	Aug. 26, 1978	7.85	180
	Sept.19, 1978	6.90	122

a About.

05464133 Half Mile Creek near Gladbrook, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1979	June 12, 1979	9.57	611
	June 27, 1979	7.72	216
	July 3, 1979	9.56	608
	Aug. 21, 1979	8.57	364
1980	May 29, 1980	--	170
	June 2, 1980	7.50	186

Discontinued September 1980

05464137 Fourmile Creek near Traer, Iowa
(Discontinued December 31, 1980)

Location.--Lat 42°12'07", long 92°33'44", near center of sec.2, T.85 N., R.15 W., Tama County, on left bank 10 ft downstream from bridge on county highway T69, 2.0 miles upstream from mouth, and 5.0 miles northwest of Traer.
Drainage area.--19.51 mi².
Gage.--Water-stage recorder and V-notch sharp-crested weir. Datum of gage is 905.87 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--11 ft.
Remarks.--Base for partial-duration series, 400 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1963	Mar. 13, 1963	11.50 a	--
	July 18, 1963	11.24	338
1964	Apr. 2, 1964	9.48	157
	Sept. 8, 1964	9.49	--
1965	Mar. 1, 1965	11.91	493
	Mar. 31, 1965	12.30 a	--
	Apr. 5, 1965	11.82	466
	July 9, 1965	11.59	408
1966	July 26, 1966	12.00	520
1967	Jan. 24, 1967	12.50 a	340 b
1968	Jan. 29, 1968	11.65 a	--
	Mar. 8, 1968	10.40	233
1969	Mar. 17, 1969	12.39	685
	July 8, 1969	12.12	568
	July 18, 1969	12.32	650
1970	Mar. 2, 1970	11.98	514
1971	Mar. 13, 1971	12.16	584
1972	June 14, 1972	12.00	520
1973	Feb. 1, 1973	12.19	596
	Feb. 29, 1973	13.1 a	--

a Affected by ice. b About.

05464137 Fourmile Creek near Traer, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	June 9, 1974	12.42	700
	June 22, 1974	12.91	1,040

1976	Mar. 12, 1976	9.92	586
1977	Sept.17, 1977	8.83	249
1978	Mar. 19, 1978	10.50	--
	Apr. 18, 1978	9.44	430
1979	Mar. 18, 1979	11.93	1,450
	Mar. 29, 1979	9.71	516
	June 12, 1979	10.26	696
	June 27, 1979	9.39	414
	July 3, 1979	11.14	996
	July 14, 1979	11.02	954
	Aug. 21, 1979	9.61	484
1980	Feb. 21, 1980	9.51	453
	Mar. 15, 1980	9.97	602
	May 29, 1980	--	1,200
	June 2, 1980	--	1,300
	Aug. 6, 1980	10.51	783
Discontinued December 1980			

a Affected by ice.

05464145 Twelve Mile Creek near Traer, Iowa

Location.--Lat 42°13'50",long 92°27'56", in SE 1/4 sec. 27, T.86 N., R.14 W., Tama County, at bridge on U.S. Highway 63, 2.5 miles north of Traer.
Drainage area.--43.8 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	Aug. 21, 1966	86.19	760
1967	Mar. 26, 1967	85.57	640
1968	--	a	<460
1969	June 8, 1969	86.04	740
1970	--	a	<460
1971	Mar. 14, 1971	86.00	740
1972	Feb. 29, 1972	86.40 c	b
1973	--	a	<460
1974	June 21, 1974	86.71	920
1975	Mar. 19, 1975	86.03	740
1976	Apr. 18, 1976	85.82	700
1977	--	a	<450
1978	June 28, 1978	86.16	760
1979	July 3, 1979	88.36	3,800
1980	Aug. 6, 1980	86.41	1,000
1981	June 24, 1981	85.54	650
1982	Feb. 22, 1982	87.24	1,500
1983	Apr. 14, 1983	86.70	1,100

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

05464145 Twelve Mile Creek near Traer, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	Feb. 18, 1984	87.62	1,900

05464310 Pratt Creek near Garrison, Iowa

Location.--Lat 42°10'53", long 92°11'10", in SE 1/4 sec. 12, T.85 N., R.12 W., Benton County, at bridge on U.S. Highway 218, 3.5 miles northwest of Garrison.
Drainage area.--23.4 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)	
1966	--	89.37	1,200	
1967	Mar. 20, 1967	87.09	600	
1968	Aug. 5, 1968	88.14	860	
1969	July 18, 1969	92.03	2,500	
1970	Mar. 3, 1970	91.46	2,200	
1971	--	a	b	
1972	--	a	<740	
1973	Feb. 1, 1973	89.79	1,400	c
1974	May 28, 1974	90.70	1,800	
1975	Mar. 19, 1975	90.08	1,600	c
1976	--	a	<740	
1977	Sept.18, 1977	91.23	2,100	c
1978	Mar. 18, 1978	88.10	850	
1979	July 14, 1979	91.93	2,100	
1980	--	a	<740	
1981	--	a	<740	

a Peak stage did not reach bottom of gage.
b Discharge not determined.
c Discharges revised from those previously published.

05464310 Pratt Creek near Garrison, Iowa--(Contined)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	June 15, 1982	96.17	10,800
1983	Nov. 2, 1982	88.69	1,050
1984	Apr. 29, 1984	90.44	1,700

05464318 East Blue Creek at Center Point, Iowa

Location.--Lat 42°12'44", long 91°47'21", in SW1/4 sec.33, T.86 N., R.8 W., Linn County, at bridge on State Highway 150, 1.5 miles north of Center Point.
Drainage area.--17.6 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	--	a	<1,540
1967	--	a	<1,540
1968	Aug. 5, 1968	83.09	3,100
1969	July 18, 1969	83.73	4,000
1970	June 14, 1970	83.34	3,400
1971	--	a	<1,540
1972	--	a	<1,540
1973	May 8, 1973	80.58	980
1974	--	a	<480
1975	--	a	<480
1976	--	a	<480
1977	--	a	<480
1978	--	a	<480
1979	--	a	<480
1980	--	a	<480
1981	--	a	<480

a Peak stage did not reach bottom of gage.

05464318 East Blue Creek at Center Point, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	June 15, 1982	83.79	2,100
1983	--	a	<480
1984	June 22, 1984	81.44	1,550

a Peak stage did not reach bottom of gage.

05464500 Cedar River at Cedar Rapids, Iowa

Location.--Lat 41°58'14", long 91°40'01", in SE1/4 NW1/4 sec.28, T.83 N., R.7 W., Linn County, on right bank 400 ft upstream from bridge on Eighth Avenue in Cedar Rapids, 2.7 miles upstream from Prairie Creek, and 112.7 miles upstream from mouth of Iowa River.
Drainage area.--6,510 mi².
Gage.--Water-stage recorder. Datum of gage is 700.47 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 20, 1920, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--13 ft.
Remarks.--Base for partial-duration series, 12,000 ft³/s. Base was 15,000 prior to 1962.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1851	June 1851	20. a	65,000 b

1903	May 31, 1903	16.85	53,600
1904	Mar. 26, 1904	6.45	11,800
1905	Mar. 23, 1905	9.05	23,000
	May 20, 1905	8.1	19,000
1906	Feb. 28, 1906	8.4	19,400
	Mar. 30, 1906	17.6	55,700
1907	July 20, 1907	8.5	19,800
	Aug. 17, 1907	8.2	18,600
1908	May 30, 1908	8.8	21,000
	June 26, 1908	8.0	17,800
1909	Mar. 30, 1909	9.1	22,100
	Apr. 22, 1909	7.4	15,400
1910	Nov. 19, 1909	8.0	17,800
	Dec. 2, 1909	7.4	15,400
	Dec. 11, 1909	8.4	19,400
	Mar. 14, 1910	9.6	24,100
1911	Feb. 16, 1911	7.1	14,300
1912	Apr. 1, 1912	17.2	54,000

a About. b Estimated.

05464500 Cedar River at Cedar Rapids, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1913	Mar. 18, 1913	9.2	22,500
1914	June 19, 1914	7.8	17,000
1915	Feb. 25, 1915	10.3	26,800
	Mar. 28, 1915	12.0	33,600
	June 2, 1915	11.5	31,600
	Sept.28, 1915	9.4	23,300
1916	Mar. 30, 1916	10.0	25,700
	Apr. 25, 1916	7.4	15,400
	June 6, 1916	8.1	18,200
1917	Mar. 26, 1917	17.4	54,900
	June 13, 1917	8.3	19,000
1918	June 7, 1918	11.0	28,200
1919	Mar. 20, 1919	11.4	29,700
	Apr. 15, 1919	9.4	21,800
1920	Mar. 30, 1920	7.6	14,800
1921	June 1, 1921	8.40	17,900
1922	Feb. 27, 1922	9.1	21,000
1923	Apr. 4, 1923	7.80	16,000
1924	Aug. 22, 1924	10.54	26,300
1925	June 18, 1925	7.00	12,800
1926	Sept.21, 1926	6.70	11,500
1927	May 25, 1927	6.77	11,800
1928	Feb. 12, 1928	9.5	22,200
	Aug. 29, 1928	11.05	29,200
1929	Mar. 18, 1929	20.00	64,000
	Apr. 30, 1929	9.3	21,400
1930	Feb. 24, 1930	6.90	12,200
1931	Sept.26, 1931	4.10	3,270
1932	Nov. 28, 1931	8.4	17,900
	Apr. 2, 1932	8.73	19,100
	June 23, 1932	8.4	17,900

05464500 Cedar River at Cedar Rapids, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1933	Apr. 4, 1933	18.6	58,400
1934	Apr. 9, 1934	5.55	8,620
1935	Mar. 8, 1935	10.38	26,900
1936	Mar. 15, 1936	9.45	22,700
	Mar. 27, 1936	8.9	20,600
1937	Feb. 21, 1937	9.3	22,300
	Mar. 9, 1937	13.61	40,700
	June 17, 1937	9.6	23,500
1938	Sept.21, 1938	6.93	12,900
1939	Mar. 18, 1939	8.67	19,700
1940	Apr. 4, 1940	4.86	5,540
1941	Mar. 21, 1941	8.02	17,100
1942	June 7, 1942	8.9	19,100
	Aug. 3, 1942	12.6	33,900
1943	Mar. 31, 1943	7.91	15,800
1944	May 25, 1944	8.5	17,900
	June 18, 1944	11.43	29,100
	June 23, 1944	9.2	20,300
1945	Mar. 19, 1945	17.09	52,300
	May 31, 1945	8.8	19,700
	June 5, 1945	9.2	21,200
1946	Jan. 9, 1946	10.8	27,100
	Mar. 11, 1946	9.2	21,200
	Mar. 17, 1946	9.9	23,700
	Sept.24, 1946	7.8	16,200
1947	Apr. 16, 1947	8.3	18,000
	June 6, 1947	13.5	37,000
	June 16, 1947	18.23	56,200
	July 6, 1947	8.6	19,100
1948	Mar. 3, 1948	12.82	34,500
	Mar. 20, 1948	12.6	33,900
1949	Mar. 7, 1949	11.75	30,800
	Mar. 31, 1949	8.3	18,000

05464500 Cedar River at Cedar Rapids, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1950	Mar. 7, 1950	--	25,000 a
	Mar. 11, 1950	12.45	33,000
	Apr. 1, 1950	9.8	23,400
	June 26, 1950	7.9	16,600
1951	Feb. 27, 1951	12.51 c	30,000 a
	Mar. 31, 1951	13.54	39,300
	Apr. 11, 1951	17.22	54,100
	May 2, 1951	13.45	38,900
	June 3, 1951	8.42	19,400
	June 30, 1951	12.00	33,300
	July 10, 1951	8.35	19,400
	Aug. 30, 1951	7.56	16,300
1952	Apr. 5, 1952	10.40	27,000
1953	Aug. 10, 1953	7.29	15,200
1954	June 26, 1954	14.02	41,400
1955	Mar. 5, 1955	5.67 c	8,100 a
1956	Apr. 6, 1956	4.69	5,400
1957	June 20, 1957	6.00	9,900
1958	June 13, 1958	4.58	5,240
1959	Mar. 21, 1959	8.75	21,000
	Mar. 30, 1959	9.77	25,800
1960	Jan. 13, 1960	8.60	20,400
	Apr. 2, 1960	16.75	55,100
	May 7, 1960	11.59	32,400
1961	Mar. 8, 1961	7.62	17,600
	Mar. 31, 1961	19.66	73,000
	PEAK BASE REVISED TO 12,000		
1962	Apr. 2, 1962	15.15	50,000
	Sept. 7, 1962	8.11	18,900
1963	Mar. 19, 1963	7.26	15,600
	May 15, 1963	6.68	13,100
1964	May 8, 1964	4.43	4,270

a About. c Affected by ice.

05464500 Cedar River at Cedar Rapids, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	Mar. 6, 1965	11.19	32,100
	Apr. 10, 1965	18.51	66,800
	Sept. 26, 1965	10.04	27,200
1966	Oct. 5, 1965	10.51	29,200
	Feb. 12, 1966	--	24,000 a
	June 16, 1966	7.09	14,700
	July 19, 1966	6.47	12,100
1967	June 16, 1967	7.41	16,000
1968	July 20, 1968	7.27	15,400
	Aug. 7, 1968	8.79	22,200
1969	Mar. 28, 1969	10.25	28,100
	Apr. 9, 1969	7.70	17,200
	July 4, 1969	15.90	51,400
	July 12, 1969	16.58	54,500
	July 19, 1969	12.76	37,700
1970	Mar. 3, 1970	9.50 c	--
	Mar. 4, 1970	7.00	14,300
1971	Nov. 25, 1970	9.86 c	--
	Feb. 22, 1971	--	16,300 a
	Mar. 21, 1971	8.63	22,800
	Apr. 5, 1971	9.64	27,400
1972	May 8, 1972	6.36	12,400
1973	Oct. 4, 1972	7.09	14,700
	Oct. 29, 1972	6.58	12,500
	Nov. 6, 1972	6.82	13,600
	Jan. 23, 1973	--	12,700 a
	Feb. 5, 1973	--	21,000 a
	Mar. 16, 1973	11.32	32,700
	Apr. 21, 1973	14.21	45,500
	May 12, 1973	9.65	25,500
	June 1, 1973	7.48	16,300
1974	Mar. 10, 1974	8.04	18,000
	Apr. 9, 1974	7.76	16,600
	May 17, 1974	9.33	22,600
	June 1, 1974	7.04	13,400
	June 14, 1974	12.56	38,200
	June 26, 1974	9.10	22,300

a About. c Affected by ice.

05464500 Cedar River at Cedar Rapids, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1975	Mar. 21, 1975	10.43	30,900
	Mar. 24, 1975	10.84	32,800
	Apr. 12, 1975	7.27	16,400
	May 3, 1975	9.26	25,600
	June 25, 1975	7.03	15,600
1976	Mar. 17, 1976	7.22	15,100
	Apr. 22, 1976	7.42	16,100
1977	Sept.18, 1977	7.06	14,600
1978	Mar. 23, 1978	8.34	19,700
	Apr. 21, 1978	6.68	12,700
	June 23, 1978	7.88	18,000
	July 13, 1978	7.70	17,200
	July 21, 1978	6.86	13,700
1979	Mar. 20, 1979	12.17	37,600
	Apr. 2, 1979	11.58	35,000
	Apr. 22, 1979	8.92	21,200
	May 6, 1979	6.92	13,300
	Aug. 13, 1979	6.50	12,200
	Aug. 28, 1979	11.70	34,400
1980	Mar. 18, 1980	8.50	20,600
	June 5, 1980	8.76	21,800
	June 17, 1980	6.57	12,500
	Aug. 16, 1980	8.90	21,800
1981	June 29, 1981	7.25	15,400
	Aug. 6, 1981	6.68	13,000
1982	Mar. 15, 1982	8.73	21,600
	Mar. 23, 1982	11.21	32,200
	Apr. 22, 1982	7.14	14,300
	May 10, 1982	6.88	13,500
	May 26, 1982	8.60	21,000
	June 16, 1982	10.67	30,100
	July 19, 1982	7.96	18,400
1983	Nov. 17, 1982	7.80	17,700
	Dec. 6, 1982	6.96	14,100
	Jan. 1, 1983	7.10	14,700
	Feb. 20, 1983	9.59	25,200
	Feb. 24, 1983	8.96	22,500
	Mar. 11, 1983	10.79	30,400
	Mar. 22, 1983	7.49	16,400

1983 CONTINUED ON NEXT PAGE

05464500 Cedar River at Cedar Rapids, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	Apr. 6, 1983	9.02	22,800
	Apr. 19, 1983	11.09	31,700
	May 13, 1983	6.88	13,800
	May 23, 1983	10.92	31,000
	July 8, 1983	9.65	25,500
	Sep. 26, 1983	7.56	16,600
1984	Feb. 16, 1984	7.33	15,700
	Feb. 21, 1984	11.84	35,000
	Mar. 31, 1984	8.19	19,300
	Apr. 18, 1984	7.61	16,900
	May 5, 1984	10.70	30,000
	May 31, 1984	7.45	16,000
	June 18, 1984	10.17	27,000
	June 23, 1984	11.31	31,800
	July 12, 1984	7.13	14,400
	July 21, 1984	6.69	12,900

05464560 Prairie Creek at Blairstown, Iowa

Location.--Lat 41°54'42", long 92°05'03". in SW 1/4 sec. 13, T.82 N., R.11 W., Benton County, at bridge on State Highway 82, at north edge of Blairstown.
Drainage area.--87.0 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 9, 1966	82.41	2,050 c
1967	Mar. 21, 1967	81.32	1,450 c
1968	Aug. 5, 1968	83.97	3,100 c
1969	July 18, 1969	84.62	3,900
1970	Mar. 3, 1970	85.05	4,600
1971	May 19, 1971	82.87	2,300
1972	Feb. 29, 1972	82.67 d	650
1973	Apr. 16, 1973	82.38	2,200
1974	May 16, 1974	84.63	2,900
1975	--	a	<160
1976	Apr. 18, 1976	80.98	1,300
1977	Aug. 16, 1977	82.74	2,000
1978	July 20, 1978	83.92	3,500
1979	Aug. 22, 1979	81.84	1,900
1980	--	a	<160
1981	--	a	<160
1982	June 15, 1982	84.48	4,400

a Peak stage did not reach bottom of gage. c About.
d Affected by ice.

05464560 Prairie Creek at Blairstown, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	July 3, 1983	82.57	2,300
1984	Apr. 29, 1984	81.49	1,700

05464640 Prairie Creek at Fairfax, Iowa
(Discontinued December 31, 1982)

Location.--Lat 41°55'22", long 91°46'02", in SE 1/4 sec. 9, T.82 N., R.8 W., Linn County, on right bank 20 ft upstream from bridge on State Highway 149 at west side of Fairfax, and 10.7 miles upstream from mouth.
Drainage area.--178 mi².
Gage.--Water-stage recorder. Datum of gage is 737.00 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 1,200 ft³/s. An outstanding flood occurred in June 1944, stage and discharge unknown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1967	Mar. 21, 1967	7.34	1,340
1968	Aug. 6, 1968	11.42	3,250
1969	Mar. 18, 1969	8.31	1,860
	Apr. 5, 1969	9.23	2,380
	June 9, 1969	8.47	1,940
	June 13, 1969	9.27	2,400
	June 27, 1969	7.26	1,230
	June 30, 1969	7.53	1,360
	JUly 10, 1969	11.23	3,800
	July 20, 1969	8.58	1,900
	July 27, 1969	11.06	3,670
1970	Mar. 3, 1970	13.14	5,640
	May 15, 1970	10.21	3,110
1971	Feb. 20, 1971	12.25 a	2,600 b
	Feb. 27, 1971	8.97 a	1,900 b
	May 19, 1971	7.72	1,620
1972	Feb. 29, 1972	8.63 a	1,800 b
1973	Dec. 30, 1972	10.96 a	3,300 b
	Jan. 17, 1973	9.23	2,430
	Jan. 19, 1973	9.52	2,620
	Feb. 2, 1973	8.97	2,270
	Apr. 16, 1973	10.75	3,480
	Apr. 21, 1973	8.05	1,780
	May 8, 1973	7.26	1,390
	May 28, 1973	8.92	2,240

a Affected by ice. b About.

05464640 Prairie Creek at Fairfax, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	Jan. 21, 1974	8.88 a	1,300 b
	Jan. 31, 1974	8.55 a	1,400 b
	Apr. 4, 1974	7.00	1,240
	Apr. 29, 1974	7.53	1,450
	May 14, 1974	9.89	2.880
	May 16, 1974	13.66	6,160
	May 19, 1974	10.56	3,420
	May 31, 1974	8.44	2,060
	June 10, 1974	8.31	1,990
	Aug. 13, 1974	10.98	3,790
1975	Mar. 20, 1975	11.81	4,350
	Apr. 10, 1975	7.34	1,500
1976	Apr. 25, 1976	9.01	2,350
1977	Aug. 17, 1977	8.89	2,220
1978	Mar. 20, 1978	7.33	1,420
	May 13, 1978	7.75	1,620
	June 26, 1978	6.99	1,270
	June 29, 1978	10.46	3,280
	July 20, 1978	9.94	2,920
	July 21, 1978	12.58	5,080
	Sept.21, 1978	6.98	1,260
1979	Mar. 19, 1979	14.63	8,140
	Mar. 30, 1979	10.25	3,130
	Apr. 24, 1979	10.30	3,170
	Aug. 21, 1979	7.35	1,500
	Aug. 22, 1979	8.97	2,270
1980	Sept.13, 1980	6.31	1,110
1981	Sept.26, 1981	6.32	1,110
1982	Feb. 23, 1982	a	1,450
	Mar. 13, 1982	7.26	1,400
	Mar. 17, 1982	8.29	1,830
	Mar. 20, 1982	9.09	2,230
	May 6, 1982	--	1,200
	May 20, 1982	7.65	1,510
	June 16, 1982	12.10	4,600
	July 19, 1982	9.04	2,330

Discontinued December 1982

a Affected by ice. b About.

05464880 Otter Creek at Wilton, Iowa

Location.--Lat 41°36'17", long 91°02'08", in NE1/4 sec.35, T.79 N., R.2 W., Cedar County, at bridge on State Highway 38, about 1.5 miles northwest of Wilton.
Drainage area.--10.7 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	May 23, 1966	86.71	1,650
1967	Mar. 1967	87.00	2,200
1968	--	a	<200
1969	July 9, 1969	86.78	1,700
1970	May 14, 1970	86.47	1,250
1971	June 20, 1971	86.46	1,240
1972	July 18, 1972	84.57	520
1973	Apr. 16, 1973	85.37	690
1974	May 5, 1974	87.22	1,900
1975	Mar. 21, 1975	84.55	520
1976	--	a	<200
1977	June 30, 1977	87.64	2,000
1978	Apr. 10, 1978	86.70	1,400
1979	--	a	<200
1980	--	84.98	b
1981	Sep. 26, 1981	85.65	780
1982	Aug. 7, 1982	88.08	3,450

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05464880 Otter Creek at Wilton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Apr. 2, 1983	83.15	340
1984	--	a	<200

a Peak stage did not reach bottom of gage.

05465000 Cedar River near Conesville, Iowa

Location.--Lat 41°24'36", long 91°17'06", in SW1/4 SW1/4 sec.2, T.76 N., R.4 W., Muscatine County, on right bank 10 ft downstream from bridge on county highway G28, 3.4 miles northeast of Conesville, 5.2 miles downstream from Wapsinonoc Creek, 10.7 miles upstream from mouth, and 39.8 miles upstream from mouth of Iowa River.
Drainage area.--7,785 mi².
Gage.--Water-stage recorder. Datum of gage is 581.95 ft National Geodetic Vertical Datum of 1929. Prior to Feb. 2, 1940, and Apr. 11, 1952, to July 1, 1954, nonrecording gage.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--9 ft.
Remarks.--Base for partial duration series, 12,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1929	Mar. ??, 1929	15.8 a	--
1940	Mar. 19, 1940	7.11	5,490
	Apr. 5, 1940	7.11	5,490
1941	Mar. 24, 1941	10.68	13,200
	Apr. 21, 1941	10.2	12,100
	Sept.11, 1941	10.3	12,400
1942	Nov. 9, 1941	11.3	15,600
	Mar. 24, 1942	10.4	12,400
	June 10, 1942	11.8	18,000
	July 7, 1942	10.3	12,000
	Aug. 6, 1942	13.37	31,300
1943	Feb. 28, 1943	11.4	17,200
	Mar. 18, 1943	11.3	16,600
	Mar. 23, 1943	11.2	16,100
	Apr. 2, 1943	11.45	17,400
1944	Apr. 24, 1944	10.3	12,400
	May 12, 1944	10.6	13,300
	May 27, 1944	12.5	23,500
	June 20, 1944	13.1	29,600
	June 27, 1944	13.93	44,500
1945	Mar. 21, 1945	14.45	50,900
	Apr. 20, 1945	11.1	14,600

1945 CONTINUED ON NEXT PAGE

a From information by local resident to Corps of Engineers.

05465000 Cedar River near Conesville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1945 cont.	May 1, 1945	10.4	12,400
	June 2, 1945	12.3	22,200
	June 8, 1945	12.4	23,000
	June 17, 1945	10.4	12,400
1946	Jan. 10, 1946	14.62 b	32,000 c
	Mar. 13, 1946	12.2	21,500
	Mar. 19, 1946	12.8	25,900
	July 3, 1946	10.1	12,200
	Sept. 26, 1946	10.7	13,300
1947	Apr. 7, 1947	10.8	13,500
	Apr. 18, 1947	12.2	19,200
1947	June 8, 1947	14.2	37,200
	June 18, 1947	15.35	60,000
	July 7, 1947	12.4	20,300
1948	Mar. 5, 1948	14.0	42,600
	Mar. 22, 1948	13.65	37,000
1949	Mar. 10, 1949	13.69	28,700
	Apr. 3, 1949	12.1	17,700
1950	Mar. 13, 1950	14.10	34,100
	Apr. 3, 1950	12.8	21,000
	June 28, 1950	11.5	14,100
1951	Mar. 2, 1951	13.35	25,700
	Apr. 3, 1951	14.27	41,300
	Apr. 13, 1951	15.10	54,100
	May 5, 1951	13.86	32,600
	June 9, 1951	12.27	18,300
	July 3, 1951	13.50	26,600
	July 13, 1951	13.58	27,600
	Sept. 1, 1951	11.20	13,200
1952	Mar. 13, 1952	12.54	20,000
	Mar. 26, 1952	11.64	15,900
	Apr. 7, 1952	13.14	23,700
1953	Feb. 21, 1953	12.87	22,400
1954	June 28, 1954	14.80	36,600
1955	Oct. 11, 1954	10.26	10,700
1956	Apr. 3, 1956	7.90	5,580
1957	June 21, 1957	9.89	9,950

b Affected by ice. c About.

05465000 Cedar River near Conesville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1958	June 14, 1958	9.04	7,800
	Mar. 1, 1959	10.43	11,200
1959	Apr. 1, 1959	13.45	26,100
	July 2, 1959	10.95	13,000
1960	Jan. 16, 1960	13.22	24,400
	Apr. 4, 1960	15.60	58,800
	Apr. 22, 1960	12.23	17,000
	May 9, 1960	13.90	29,000
	May 29, 1960	11.14	13,000
	June 6, 1960	12.45	18,500
	Mar. 11, 1961	12.64	18,900
1961	Apr. 2, 1961	16.62	70,800
	June 9, 1961	11.62	14,800
	Sept.15, 1961	11.49	14,400
1962	Nov. 4, 1961	12.30	17,500
	Nov. 17, 1961	12.96	21,500
	Mar. 21, 1962	13.30	24,100
	Apr. 5, 1962	15.34	47,700
	July 15, 1962	12.98	21,500
	Sept. 9, 1962	12.26	17,500
1963	Mar. 24, 1963	11.82	15,500
	May 19, 1963	11.07	13,100
1964	June 24, 1964	8.42	6,440
1965	Mar. 8, 1965	14.67	37,000
	Apr. 12, 1965	16.85	68,100
	Apr. 24, 1965	12.80	19,100
	Sept.22, 1965	14.10	29,000
	Sept.28, 1965	13.82	26,200
1966	Oct. 7, 1965	13.95	27,000
	Feb. 16, 1966	14.10 b	27,000 c
	Mar. 23, 1966	10.77	12,100
	Apr. 7, 1966	11.03	12,900
	May 24, 1966	12.66	19,200
	June 18, 1966	12.18	16,500
	June 30, 1966	11.56	14,300
	July 20, 1966	10.83	12,300
1967	June 7, 1967	13.92	29,200
	June 18, 1967	12.46	17,600

b Affected by ice. c About.

05465000 Cedar River near Conesville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	July 23, 1968	11.72	14,200
	Aug. 10, 1968	13.21	21,000
1969	Mar. 31, 1969	13.80	28,000
	Apr. 11, 1969	12.72	19,500
	June 9, 1969	11.77	16,100
	June 14, 1969	11.75	16,000
	July 6, 1969	15.93	55,000
	July 15, 1969	16.05	55,200
1970	Mar. 5, 1970	12.83	20,200
	May 15, 1970	12.42	17,900
	June 2, 1970	10.98	12,600
1971	Feb. 22, 1971	--	20,000 c
	Mar. 23, 1971	13.17	21,600
	Apr. 7, 1971	13.56	25,100
1972	Dec. 16, 1971	10.80	12,200
	Mar. 1, 1972	10.84	12,300
	May 9, 1972	12.14	16,800
	July 18, 1972	12.87	20,400
	Aug. 8, 1972	10.95	12,600
1973	Oct. 6, 1972	11.61	14,700
	Oct. 30, 1972	11.05	12,400
	Nov. 9, 1972	11.61	14,000
	Jan. 4, 1973	--	16,000 c
	Jan. 26, 1973	--	18,000 c
	Feb. 7, 1973	12.97	21,000
	Mar. 19, 1973	14.04	30,400
	Apr. 1, 1973	11.61	14,700
	Apr. 10, 1973	11.34	13,800
	Apr. 22, 1973	16.02	54,800
	May 3, 1973	13.39	24,000
	May 14, 1973	13.74	26,900
	June 5, 1973	12.78	18,400
1974	Jan. 28, 1974	--	13,000 c
	Mar. 12, 1974	12.59	18,800
	Apr. 11, 1974	12.14	16,800
	Apr. 30, 1974	11.52	14,400
	May 18, 1974	15.21	43,500
	May 30, 1974	12.71	18,900
	June 16, 1974	14.26	30,300
	June 28, 1974	13.18	20,600

c About.

05465000 Cedar River near Conesville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1975	Mar. 26, 1975	13.88	31,600
	Apr. 14, 1975	12.16	15,900
	May 5, 1975	13.11	22,100
	June 27, 1975	11.65	14,900
1976	Mar. 19, 1976	11.66	14,900
	Apr. 26, 1976	12.63	20,700
1977	Aug. 9, 1977	11.26	12,900
	Aug. 17, 1977	11.22	12,700
	Sept.20, 1977	12.47	17,200
1978	Mar. 24, 1978	11.40	14,000
	Apr. 11, 1978	11.04	12,900
	Apr. 23, 1978	11.67	14,900
	June 26, 1978	12.64	19,000
	July 15, 1978	12.21	17,000
	July 23, 1978	11.88	15,700
1979	Mar. 22, 1979	14.74	37,900
	Apr. 25, 1979	13.32	23,400
	May 7, 1979	12.13	16,700
	July 18, 1979	10.77	12,100
	Aug. 31, 1979	14.51	35,100
1980	Mar. 20, 1980	11.84	15,600
	June 7, 1980	12.71	19,500
	June 19, 1980	10.79	12,200
	Aug. 19, 1980	12.78	19,900
1981	June 30, 1981	12.04	16,400
	Aug. 6, 1981	11.20	13,400
	Sept.27, 1981	10.88	12,400
1982	Feb. 25, 1982	b	14,400
	Mar. 23, 1982	14.02	30,200
	Apr. 24, 1982	12.15	16,000
	May 13, 1982	11.99	15,400
	May 28, 1982	13.29	21,800
	June 18, 1982	14.23	30,300
	July 7, 1982	11.14	12,000
	July 11, 1982	11.72	14,400
	July 19, 1982	13.72	25,200
	Aug. 8, 1982	11.82	15,500

b Affected by ice.

05465000 Cedar River near Conesville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Jan. 3, 1983	11.87	15,700
	Feb. 27, 1983	13.16	20,600
	Mar. 14, 1983	13.83	25,600
	Apr. 21, 1983	13.87	28,700
	May 26, 1983	13.81	28,100
	July 10, 1983	13.42	24,200
	Sep. 27, 1983	11.63	15,000
1984	Feb. 18, 1984	15.33	b
	Apr. 2, 1984	12.63	19,000
	May 8, 1984	13.95	29,500
	June 1, 1984	12.30	16,600
	June 26, 1984	14.03	28,300
	July 13, 1984	11.46	14,200

b Affected by ice.

05465150 North Fork Long Creek at Ainsworth, Iowa

Location.--Lat 41°17', long 91°32', in SW1/4 sec.22, T.75 N., R.6 W., Washington County, at bridge on U.S. Highway 218, 1 mile southeast of Ainsworth.
Drainage area.--30.2 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1965	Sept.21, 1965	89.78	2,560
1966	May 23, 1966	88.55	1,880
1967	June 13, 1967	88.77	770
1968	--	a	<160
1969	July 8, 1969	87.30	450
1970	Mar. 3, 1970	87.43	560
1971	Mar. 3, 1971	87.05	430
1972	May 8, 1972	87.57	600
1973	May 29, 1973	88.43	1,550
1974	Apr. 30, 1974	88.31	650
1975	Mar. 19, 1975	87.70	490
1976	Mar. 4, 1976	87.42	530
1977	Aug. 8, 1977	88.29	600
1978	July 22, 1978	87.92	770
1979	Mar. 18, 1979	88.60	2,000
1980	Sept.13, 1980	88.20	600
1981	Apr. 14, 1981	88.80	1,000
1982	July 19, 1982	90.40	2,300

a Peak stage did not reach bottom of gage.

05465150 North Fork Long Creek at Ainsworth, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Apr. 2, 1983	88.68	960
1984	May 3, 1984	87.60	470

05465500 Iowa River at Wapello, Iowa

Location.--Lat 41°10'48", long 91°10'57", in NW1/4 SE1/4 sec.27, T.74 N., R.3 W., Louisa County, on right bank 30 ft downstream from bridge on State Highway 99 at east edge of Wapello, 13.0 miles downstream from Cedar River, and at mile 16.0.
Drainage area.--12,499 mi².
Gage.--Water-stage recorder. Datum of gage is 538.98 ft National Geodetic Vertical Datum of 1929, adjustment of 1912; Oct. 1, 1914, to Apr. 15, 1934, nonrecording gage and Apr. 16, 1934, to Sept. 30, 1972, water-stage recorder at datum 10 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--20 feet. Levees protect lowland.
Remarks.--Peak daily discharge for 1903-1914 was estimated by Corps of Engineers from Mississippi River records. Since peak discharge at this station rarely exceeds the peak daily discharge by more than five percent, these estimates are listed as annual flood peaks. Peak discharge base of 20,000 ft³/s discontinued upon beginning of storage in Coralville Lake Sept. 17, 1958.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1903	June 3, 1903	--	88,700 a
1904	Mar. 27, 1904	--	20,600 a
1905	Mar. 26, 1905	--	37,800 a
1906	Apr. 2, 1906	--	73,800 a
1907	July 23, 1907	--	37,300 a
1908	June 2, 1908	--	32,400 a
1909	Apr. 2, 1909	--	31,800 a
1910	Mar. 17, 1910	--	37,600 a
1911	Feb. 19, 1911	--	29,400 a
1912	Apr. 3, 1912	14.3	58,000 a
1913	Mar. 21, 1913	--	35,000 a
1914	June 22, 1914	--	27,000 a

a About.

05465500 Iowa River at Wapello, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)

1915	Feb. 26, 1915	11.5	41,800
	Apr. 1, 1915	10.3	35,300
	June 6, 1915	10.6	36,800
	July 31, 1915	7.7	22,600
1916	Oct. 2, 1915	10.6	36,800
	Jan. 28, 1916	8.4	25,800
	Mar. 28, 1916	12.7	48,900
	June 10, 1916	7.5	22,100
1917	Mar. 29, 1917	13.2	52,000
	June 15, 1917	11.9	44,100
1918	Feb. 14, 1918	7.6	22,500
	May 29, 1918	9.8	32,700
	June 8, 1918	15.0	77,000
1919	Mar. 23, 1919	10.8	38,100
	Apr. 19, 1919	9.7	32,200
	May 7, 1919	10.3	35,200
	June 8, 1919	7.4	21,600
	June 27, 1919	7.4	21,600
1920	Nov. 13, 1919	7.8	23,400
	Mar. 18, 1920	7.2	20,900
	Mar. 29, 1920	9.7	32,200
	Apr. 20, 1920	7.9	23,800
	May 15, 1920	7.3	21,300
1921	Sept.24, 1921	9.6	32,400
1922	Mar. 2, 1922	8.6	26,500
	Apr. 13, 1922	7.6	22,500
1923	Apr. 7, 1923	9.6	31,700
1924	June 28, 1924	11.3	40,700
	July 24, 1924	8.6	26,900
	Aug. 23, 1924	10.4	35,500
1925	June 21, 1925	5.2	12,900
1926	Sept.25, 1926	11.8	43,500
1927	Feb. 5, 1927	7.6	22,500
	Apr. 20, 1927	9.7	32,200
	May 26, 1927	10.1	34,200
	June 22, 1927	8.3	25,600

05465500 Iowa River at Wapello, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1928	Oct. 9, 1927	9.1	29,200
	Feb. 16, 1928	9.2	28,800
	Mar. 15, 1928	8.0	24,200
	Sept. 3, 1928	9.0	28,800
1929	Nov. 20, 1928	8.8	27,800
	Mar. 21, 1929	14.6	72,200
	Apr. 13, 1929	8.1	24,600
	Apr. 21, 1929	8.8	27,800
	Apr. 26, 1929	8.6	26,900
	May 4, 1929	9.4	30,700
1930	Feb. 27, 1930	8.5	26,500
	June 17, 1930	13.5	52,200
1931	Sept.27, 1931	3.1	6,740
1932	Dec. 2, 1931	8.8	27,800
	Apr. 5, 1932	8.3	25,600
	June 27, 1932	8.0	24,200
1933	Apr. 7, 1933	15.4	62,000
	May 24, 1933	9.2	28,600

1934	Apr. 11, 1934	3.3	7,230
1935	Mar. 12, 1935	11.0	35,500
	June 21, 1935	8.0	21,600
	June 29, 1935	8.1	22,100
1936	Mar. 18, 1936	11.6	36,500
1937	Feb. 23, 1937	12.24 b	37,600 a
	Mar. 7, 1937	14.6	53,800
	June 21, 1937	8.9	25,600
1938	June 15, 1938	8.2	21,200
1939	Mar. 14, 1939	11.3	37,000
1940	Mar. 21, 1940	3.7	7,780
1941	Mar. 25, 1941	7.1	16,600
1942	Nov. 6, 1941	8.5	24,100
	June 15, 1942	9.3	27,200
	Aug. 7, 1942	11.1	36,300

a About. b Affected by ice.

05465500 Iowa River at Wapello, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1943	Mar. 1, 1943	8.0	21,700
	Mar. 25, 1943	8.3	22,800
	Apr. 3, 1943	7.8	20,600
	May 19, 1943	8.0	21,500
	Aug. 4, 1943	8.7	24,400
1944	Mar. 17, 1944	7.7	21,000
	Apr. 25, 1944	9.7	29,000
	May 12, 1944	7.7	20,100
	May 25, 1944	14.7	54,100
	June 21, 1944	14.2	51,800
	June 28, 1944	13.0	45,400
1945	Mar. 22, 1945	14.8	56,400
	Apr. 20, 1945	8.4	23,800
	May 18, 1945	8.5	24,000
	June 3, 1945	9.8	30,100
1946	Jan. 8, 1946	14.0	51,400
	Mar. 14, 1946	9.5	28,700
	Mar. 20, 1946	11.4	37,700
	June 21, 1946	8.0	22,200
1947	Apr. 8, 1947	10.2	31,800
	Apr. 22, 1947	11.0	35,800
	June 9, 1947	16.5	71,000
	June 18, 1947	16.14	94,000
1948	Mar. 1, 1948	11.1	36,200
	Mar. 7, 1948	12.0	40,800
	Mar. 21, 1948	14.7	60,000
1949	Mar. 11, 1949	12.7	44,300
	Apr. 3, 1949	8.8	25,800
1950	Mar. 14, 1950	12.8	44,800
	Apr. 4, 1950	8.5	23,800
	June 21, 1950	8.6	25,000
	June 28, 1950	8.2	23,400
1951	Feb. 20, 1951	10.12 b	27,000 a
	Feb. 27, 1951	8.46	24,600
	Mar. 3, 1951	10.30	32,300
	Apr. 4, 1951	13.75	50,300
	Apr. 14, 1951	16.14	67,000
	May 5, 1951	11.95	40,800

1951 CONTINUED ON NEXT PAGE

a About. b Affected by ice.

05465500 Iowa River at Wapello, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1951 cont.	May 11, 1951	10.28	32,300
	June 10, 1951	9.77	29,800
	July 4, 1951	11.06	36,300
	July 14, 1951	9.86	30,300
1952	Nov. 14, 1951	7.43	20,200
	Jan. 20, 1952	11.76 b	21,000 a
	May 14, 1952	12.10	41,300
	Apr. 8, 1952	10.46	33,300
1953	Feb. 23, 1953	10.42	32,800
1954	June 29, 1954	11.98	40,800
1955	Apr. 25, 1955	8.26	23,000
1956	Sept. 1, 1956	4.18	9,340
1957	June 22, 1957	5.89	14,200
1958	Feb. 27, 1958	6.48 b	13,000 a
1959	Mar. 22, 1959	11.52	37,200
1960	Apr. 5, 1960	17.02	69,000
1961	Apr. 3, 1961	16.85	68,000
1962	Apr. 6, 1962	15.38	53,700
1963	Mar. 21, 1963	9.16	25,100
1964	June 25, 1964	5.25	11,800
1965	Apr. 13, 1965	17.25	70,800
1966	May 25, 1966	10.36	30,300
1967	June 9, 1967	9.43	26,700
1968	Aug. 10, 1968	8.70	21,500
1969	July 15, 1969	17.40	69,200
1970	Mar. 6, 1970	11.81	34,600
1971	Feb. 28, 1971	13.23	38,000

a About. b Affected by ice.

05465500 Iowa River at Wapello, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	Aug. 8, 1972	9.37	24,500
1973	Apr. 22, 1973	28.63	92,000
1974	May 19, 1974	28.12	82,200
1975	Mar. 25, 1975	21.78	38,700
1976	Apr. 27, 1976	21.41	36,600
1977	Sept.20, 1977	18.23	21,100
1978	Mar. 22, 1978	20.14	30,300
1979	Mar. 22, 1979	25.30	63,700
1980	June 8, 1980	18.17	21,300
1981	July 1, 1981	18.15	19,900
1982	July 20, 1982	23.61	48,900
1983	Apr. 4, 1983	22.48	38,900
1984	Feb. 15, 1984	22.18	b
	Feb. 24, 1984	21.78	35,300

b Affected by ice.

05469860 Mud Lake Drainage ditch 71 in Jewell, Iowa

Location.--Lat 42°19', long 93°38', in SW1/4 sec.27, T.87 N., R.24 W., Hamilton County, at bridge on U.S. Highway 69 in Jewell.
Drainage area.--65.4 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 12, 1966	84.67	320
1967	June 10, 1967	87.91	1,120
1968	--	a	<270
1969	July 9, 1969	89.76	1,950
1970	Aug. 6, 1970	84.45	285
1971	Feb. 18, 1971	90.13 c	780
1972	Aug. 7, 1972	89.02	1,600
1973	Nov. 8, 1972	86.96	820
1974	June 9, 1974	85.64	490
1975	June 27, 1975	90.04	2,300
1976	--	a	<270
1977	Aug. 8, 1977	89.05	1,670
1978	Apr. 18, 1978	85.38	640
1979	Mar. 19, 1979	89.50	1,850
1980	--	a	<270
1981	--	a	<270
1982	July 18, 1982	86.78	860

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

05469860 Mud Lake Drainage ditch 71 in Jewell, Iowa
--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	July 2, 1983	89.33	1,760
1984	July 20, 1984	88.10	1,250

05469990 Keigley Branch near Story City, Iowa

Location.--Lat 42°09', long 93°37', in NW1/4 sec.26, T.85 N., R.24 W., Story County, at bridge on U.S. Highway 69, about 3 miles south of Story City.
Drainage area.--31.0 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 12, 1966	86.78	197
1967	June 8, 1967	88.97	600
1968	June 25, 1968	88.66	470
1969	July 9, 1969	88.51	420
1970	Aug. 6, 1970	87.81	295
1971	Feb. 18, 1971	90.05 c	555
1972	June 6, 1972	84.75	66
1973	Mar. 11, 1973	89.27	550
1974	Aug. 8, 1974	89.06	610
1975	June 27, 1975	91.38	b
1976	June 14, 1976	91.47	1,550
1977	Aug. 16, 1977	88.69	510
1978	--	a	<245
1979	Mar. 19, 1979	89.91	940
1980	June 14, 1980	88.35	430
1981	--	a	<245
1982	July 18, 1982	89.92	940

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

05469990 Keigley Branch near Story City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	May 18, 1983	88.13	340
1984	July 20, 1984	91.05	1,510

05470000 South Skunk River near Ames, Iowa
(Published as Skunk River near Ames prior to October 1966)

Location.--Lat 42°04'05", long 93°37'02", in NW1/4 SW1/4 sec.23, T.84 N., R.24 W., Story Co., left bank 2.5 mi north of Ames, 3.5 mi downstream from Keigley Branch, 5.2 mi upstream from Squaw Creek, and 228.1 mi upstream from mouth of Skunk River.
Drainage area.--315 mi².
Gage.--Water-stage recorder. Concrete control since July 21, 1934. Datum of gage is 998.61 ft National Geodetic Vertical Datum of 1929 (Iowa Highway Commission bench mark). Prior to Aug. 25, 1921, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--10 feet.
Remarks.--Base for partial-duration series, 1,500 ft³/s. Several diversions for irrigation above station.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1921	Sept.17, 1921	9.2	3,540
1922	Feb. 23, 1922	9.0	3,370
1923	Mar. 28, 1923	6.22	1,670
	Sept.28, 1923	6.0	1,530
1924	Mar. 30, 1924	6.3	1,680
	June 28, 1924	8.21	3,010
	Aug. 9, 1924	6.0	1,500
1925	Aug. 7, 1925	5.0	905
1926	Sept. 8, 1926	6.5	1,900
	Sept.19, 1926	8.26	3,120
1927	Feb. 5, 1927	7.40	2,460
1930	Nov. 24, 1930	11.20	5,230
1933	Apr. 1, 1933	6.47	1,990
1934	Jan. 22, 1934	5.39 a	600 b
1935	Feb. 15, 1935	7.8 a	2,490 b
	Mar. 5, 1935	9.0	3,490
	June 19, 1935	6.5	1,900
	June 25, 1935	8.4	2,960
	July 24, 1935	7.0	2,190

a Affected by ice. b About.

05470000 South Skunk River near Ames, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)	
1936	Mar. 10, 1936	7.7		2,580	
1937	Mar. 6, 1937	8.4	a	3,000	b
1938	May 4, 1938	8.3		2,890	
	May 17, 1938	6.5		1,880	
	June 29, 1938	5.8		1,540	
1939	Mar. 14, 1939	10.5	a	3,230	b
1940	Aug. 13, 1940	7.3		2,320	
1941	Sept. 8, 1941	8.6		3,050	
1942	Nov. 1, 1941	5.9		1,630	
	Sept.14, 1942	8.1		2,530	
1943	June 16, 1943	6.5		1,910	
	July 31, 1943	10.3		4,500	
1944	May 20, 1944	13.9		8,060	
	June 12, 1944	8.0		2,840	
1945	Mar. 16, 1945	6.3		1,800	
	May 22, 1945	7.7		2,620	
	June 2, 1945	9.7		4,010	
1946	Feb. 5, 1946	7.1		2,270	
	Mar. 6, 1946	5.9		1,600	
	Mar. 13, 1946	5.9		1,610	
1947	June 1, 1947	8.63		3,740	
	June 4, 1947	8.18		3,400	
	June 13, 1947	11.95		6,550	
	June 23, 1947	10.80		5,400	
	June 30, 1947	6.4		2,200	
1948	Feb. 28, 1948	5.8		1,630	
	Mar. 19, 1948	7.35		2,620	
	Mar. 27, 1948	7.3		2,600	
1949	Mar. 4, 1949	10.52	a	3,000	b
1950	Mar. 7, 1950	8.86		3,820	
	May 5, 1950	6.0		1,810	
	May 9, 1950	7.0		2,410	
	June 9, 1950	5.8		1,690	
	June 18, 1950	6.6		2,170	

a Affected by ice. b About.

05470000 South Skunk River near Ames, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1951	Feb. 26, 1951	5.75	1,690
	Mar. 29, 1951	10.90	5,320
	May 2, 1951	6.75	2,290
	June 2, 1951	10.35	4,920
	June 20, 1951	6.25	1,930
	July 4, 1951	7.07	2,470
1952	July 9, 1952	5.73	1,630
1953	May 1, 1953	4.71	980
1954	June 1, 1954	7.84	3,180
	June 10, 1954	13.66	8,630
	June 16, 1954	6.37	2,110
	June 22, 1954	5.88	1,770
	Aug. 27, 1954	8.27	3,520
1955	Oct. 15, 1954	5.22	1,340
1956	Sept. 4, 1956	3.49	376
1957	June 16, 1957	8.28	3,540
	July 4, 1957	6.52	2,200
1958	July 2, 1958	6.55	2,270
	July 4, 1958	7.85	3,150
	July 11, 1958	5.78	1,720
1959	Mar. 20, 1959	5.60	1,590
	May 31, 1959	5.83	1,720
1960	Mar. 30, 1960	10.33	6,210
	May 7, 1960	5.59	1,590
1961	Feb. 23, 1961	5.71	1,990
	Mar. 15, 1961	5.51	1,770
	Aug. 2, 1961	5.51	1,770
1962	Mar. 26, 1962	6.91	3,010
	May 7, 1962	7.53	3,510
	May 30, 1962	5.72	1,970
	July 14, 1962	9.02	4,300
	July 22, 1962	5.72	1,970
1963	Apr. 30, 1963	5.65	1,820
1964	May 8, 1964	5.31	1,570
	June 22, 1964	5.91	2,170

05470000 South Skunk River near Ames, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	Mar. 1, 1965	7.49 a	3,500 b
	Apr. 2, 1965	7.25 a	3,300 b
	Apr. 6, 1965	9.43	5,260
	May 27, 1965	6.55	2,730
	June 6, 1965	5.75	2,020
	Sept.20, 1965	6.92	3,030
	Sept.28, 1965	5.34	1,610
1966	Feb. 9, 1966	6.92 a	2,900 b
	May 23, 1966	5.87	1,960
	June 12, 1966	6.26	2,510
1967	June 8, 1967	6.63	2,790
	June 13, 1967	5.87	2,140
	June 18, 1967	6.06	2,320
1968	June 25, 1968	8.74	4,890
1969	Mar. 20, 1969	7.97	3,910
	Mar. 25, 1969	6.27	2,510
	June 7, 1969	6.19	2,440
	June 13, 1969	5.28	1,550
	June 30, 1969	6.88	2,910
	July 10, 1969	8.49	4,380
	July 18, 1969	6.13	2,390
	July 28, 1969	7.32	3,360
1970	May 13, 1970	5.10	1,330
1971	Feb. 19, 1971	9.10 a	--
	Feb. 20, 1971	7.67	3,660
	Mar. 13, 1971	6.03	2,300
1972	Mar. 7, 1972	8.93 a	--
	June 6, 1972	5.34	1,610
	Aug. 3, 1972	5.40	1,670
	Aug. 7, 1972	6.92	3,030
1973	Oct. 24, 1972	5.66	1,930
	Nov. 2, 1972	5.33	1,600
	Nov. 8, 1972	5.67	1,940
	Dec. 30, 1972	7.13 a	2,790 b
	Jan. 18, 1973	6.19 a	2,210 b
	Feb. 2, 1973	7.94 a	2,470 b
	Mar. 1, 1973	5.29	1,560
	Mar. 11, 1973	5.77	2,040
	Mar. 14, 1973	5.53	1,800

1973 CONTINUED ON NEXT PAGE

a Affected by ice. b About.

05470000 South Skunk River near Ames, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973 cont.	Apr. 16, 1973	7.30	3,340
	May 8, 1973	6.12	2,380
	May 28, 1973	5.38	1,650
	Sept.27, 1973	5.83	2,100
1974	Oct. 12, 1973	6.70	2,850
	Apr. 22, 1974	5.10	1,730
	May 14, 1974	5.17	1,800
	May 16, 1974	5.37	2,000
	May 19, 1974	5.50	2,130
	May 22, 1974	5.37	2,000
	June 9, 1974	6.35	2,860
	June 19, 1974	8.90	5,100
	June 20, 1974	6.69	3,130
	June 23, 1974	9.61	5,780
1975	Mar. 20, 1975	5.94	2,170
	June 19, 1975	5.09	1,570
	June 22, 1975	6.12	2,290
	June 25, 1975	6.19	2,340
	June 28, 1975	9.98	5,230
1976	June 14, 1976	7.54	3,580
1977	Aug. 9, 1977	5.92	2,080
	Aug. 10, 1977	6.03	2,140
	Aug. 16, 1977	9.46	5,300
1978	Apr. 18, 1978	5.83	2,100
	Sept.14, 1978	5.93	2,240
	Sept.21, 1978	5.34	1,650
1979	Mar. 19, 1979	9.13	4,980
	Mar. 23, 1979	6.82	2,950
	Mar. 30, 1979	7.48	3,490
	June 13, 1979	5.62	1,880
	July 11, 1979	6.16	2,410
	July 30, 1979	5.39	1,660
	Aug. 21, 1979	5.53	1,800
1980	June 14, 1980	6.54	2,720
	June 19, 1980	5.29	1,560
1981	June 25, 1981	5.61	1,880
1982	Feb. 22, 1982	7.05	3,140
	Mar. 16, 1982	5.35	1,630
	Mar. 20, 1982	6.39	2,600
	June 15, 1982	5.46	1,730
	July 19, 1982	7.53	3,490

05470000 South Skunk River near Ames, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Nov. 12, 1982	unknown	unknown
	Dec. 6, 1982	unknown	unknown
	Dec. 28, 1982	5.62	1,790
	Feb. 20, 1983	5.99	2,160
	Mar. 7, 1983	5.59	1,760
	Apr. 2, 1983	5.75	1,970
	Apr. 15, 1983	6.25	2,470
	May 20, 1983	6.59	2,680
	July, 3, 1983	9.43	5,150
1984	Feb. 17, 1984	unknown	2,600
	May 1, 1984	5.52	1,790
	May 28, 1984	6.44	2,590
	June 13, 1984	9.19	5,020
	June 17, 1984	7.71	3,680
	June 22, 1984	5.42	1,680

05470500 Squaw Creek at Ames, Iowa

Location.--Lat 42°01'21", long 93°37'45", in NE1/4 NW1/4 sec.10, T.83 N., R.24 W., Story County, on left bank 65 ft downstream from Lincoln Way Bridge in Ames, 0.1 mile downstream from College Creek, and 1.8 miles upstream from mouth.
Drainage area.--204 mi².
Gage.--Water-stage recorder and concrete control. Datum of gage is 881.00 ft National Geodetic Vertical Datum of 1929 (levels by Iowa State University). Prior to Mar. 11, 1925, nonrecording gage at site 0.6 mile upstream at different datum. Mar. 11, 1925, to Apr. 30, 1927, nonrecording gage at site 65 ft upstream at datum about 4 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--7 feet.
Remarks.--Base for partial-duration series 1,000 ft³/s. Prior to 1965 only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1918	June 4, 1918	14.5	6,900
1919	Sept.30, 1919	7.96	1,900 a
1920	Oct. 4, 1919	8.6	2,260
1921	Sept.17, 1921	7.4	1,900
1922	July 17, 1922	10.7	4,130
1923	Sept.28, 1923	6.1	1,340
1924	July 28, 1924	8.80	3,170
1925	Aug. 7, 1925	4.9	791
1926	Sept.19, 1926	10.2	3,610
1927	Oct. 4, 1927	5.80	1,060
1965	Mar. 1, 1965	10.7 b	4,200
	May 26, 1965	6.06	1,700
	June 4, 1965	8.85	2,680 c
1966	May 23, 1966	5.70	1,580
	June 12, 1966	10.15	3,160

a Maximum for period May to September 1919.
b From graph based on gage readings, at present site and datum.
c Maximum for period May to September 1965.

05470500 Squaw Creek at Ames, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967	June 8, 1967	6.69	1,950
	June 12, 1967	6.92	2,020
	June 16, 1967	5.47	1,510
1968	June 25, 1968	8.27	2,500
	June 29, 1968	4.75	1,270
1969	Mar. 20, 1969	9.59	2,970
	Mar. 24, 1969	7.16	2,120
	May 3, 1969	4.78	1,170
	June 7, 1969	8.34	2,240
	June 13, 1969	4.83	1,190
	June 27, 1969	5.45	1,380
	June 30, 1969	9.45	2,580
	July 4, 1969	--	1,800 d
	July 9, 1969	7.84	2,090
	July 27, 1969	4.30	1,030
1970	May 13, 1970	10.74	3,540
	May 25, 1970	4.26	1,010
1971	Feb. 19, 1971	10.09	3,650
	Mar. 14, 1971	5.52	1,560
1972	Mar. 7, 1972	5.03 e	1,300 d
	Aug. 2, 1972	5.84	1,680
	Aug. 6, 1972	--	1,340 d
1973	Oct. 23, 1972	4.11	1,040
	Nov. 2, 1972	4.34	1,130
	Nov. 7, 1972	4.55	1,220
	Dec. 30, 1972	8.55 e	1,590 d
	Jan. 18, 1973	10.80 e	2,310 d
	Feb. 2, 1973	9.40 e	2,540 d
	Feb. 24, 1973	5.01	1,380
	Mar. 11, 1973	4.72	1,300
	Mar. 14, 1973	4.50	1,220
	Apr. 16, 1973	8.69	2,800
	May 7, 1973	6.65	1,950
	June 5, 1973	4.17	1,070
	Sept. 27, 1973	5.60	1,610
	Sept. 29, 1973	6.57	1,930

d About. e Affected by ice.

05470500 Squaw Creek at Ames, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	Oct. 12, 1973	8.64	2,750
	Apr. 21, 1974	5.10	1,390
	May 16, 1974	7.21	2,080
	May 18, 1974	8.14	2,450
	May 22, 1974	5.75	1,620
	May 28, 1974	4.64	1,220
	June 9, 1974	7.93	2,400
	June 19, 1974	8.02	2,440
	June 22, 1974	8.95	2,900
1975	Mar. 20, 1975	--	1,700 d
	June 12, 1975	4.49	1,200
	June 18, 1975	5.96	1,720
	June 22, 1975	4.80	1,320
	June 24, 1975	4.84	1,330
	June 26, 1975	9.79	3,430
	June 27, 1975	14.00	11,300
1976	Mar. 12, 1976	4.75	1,300
	Apr. 18, 1976	4.36	1,110
	Apr. 23, 1976	4.40	1,110
	May 23, 1976	4.02	1,010
	June 14, 1976	8.55	2,680
1977	Aug. 8, 1977	7.09	2,070
	Aug. 16, 1977	8.01	2,430
1978	Apr. 18, 1978	7.11	2,060
	June 24, 1978	6.33	1,840
	Sept.14, 1978	7.51	2,230
	Sept.20, 1978	5.97	1,720
1979	Mar. 19, 1979	11.81	5,300
	Mar. 23, 1979	6.28	1,800
	Mar. 30, 1979	6.11	1,740
	July 11, 1979	6.05	1,710
	Aug. 10, 1979	7.88	2,320
	Aug. 20, 1979	6.64	1,890
1980	May 30, 1980	4.69	1,250
1981	June 24, 1981	4.26	1,060
1982	Mar. 19, 1982	6.61	1,900
	May 21, 1982	5.85	1,680
	May 26, 1982	6.56	1,910
	June 16, 1982	6.78	1,970
	June 18, 1982	10.30	3,820

d About.

05470500 Squaw Creek at Ames, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Dec. 28, 1982	5.88 f	1,690
	Feb. 19, 1983	5.81	1,650
	Feb. 20, 1983	6.22	1,790
	Apr. 1, 1983	5.76	1,620
	Apr. 13, 1983	7.19	2,070
	May 19, 1983	7.63	2,260
	June 29, 1983	7.20	2,070
	July 2, 1983	7.55	2,210
	July 4, 1983	7.52	2,190
1984	Apr. 30, 1984	3.40	2,590
	May 29, 1984	8.21	2,500
	June 13, 1984	12.97	7,180
	June 17, 1984	12.77	6,820

f Peak stage did not reach bottom of gage.

05471000 South Skunk River below Squaw Creek near Ames, Iowa
(Prior to October 1966, published as Skunk River below Squaw Creek near Ames, discontinued September, 1979)

Location.--Lat 42°00'31", long 93°35'37", in NE1/4 NW1/4 sec.13, T.83 N., R.24 W., Story County, on right bank 15 ft downstream from bridge on county highway, 0.2 mi downstream from Squaw Creek, 0.2 mi upstream from bridge on U.S. Highway 30, 2 mi southeast of Ames, and 222.6 mi upstream from mouth of Skunk River.
Drainage area.--556 mi².
Gage.--Water-stage recorder and concrete control. Datum of gage is 867.10 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1973, at datum 10.00 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--20 feet.
Remarks.--Base for partial-duration series, 2,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1944	May 19, 1944	13.00 a	10,000

1953	May 1, 1953	5.47	1,620
1954	June 1, 1954	10.92	6,500
	June 11, 1954	11.92	7,980
	June 16, 1954	7.63	3,200
	June 22, 1954	8.36	3,820
	Aug. 22, 1954	8.53	3,950
	Aug. 26, 1954	9.26	4,700
	Aug. 28, 1954	12.36	8,700
1955	Oct. 14, 1954	6.81	2,680
	July 10, 1955	6.73	2,540
1956	May 13, 1956	3.05	638
1957	June 16, 1957	11.58	6,360
	July 4, 1957	8.54	3,950
1958	June 8, 1958	6.95	2,610
	June 13, 1958	6.93	2,610
	July 2, 1958	11.13	6,120
	July 4, 1958	12.82	8,550

a From floodmark.

05471000 South Skunk River below Squaw Creek near Ames, Iowa --(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1959	Mar. 20, 1959	8.69	3,860
	May 31, 1959	10.57	5,520
1960	Mar. 30, 1960	13.20	9,260
	May 7, 1960	9.47	4,600
1961	Feb. 23, 1961	7.98	3,450
	Mar. 15, 1961	8.05	3,380
	June 7, 1961	7.11	2,680
	Aug. 1, 1961	7.97	3,310
	Sept.30, 1961	8.27	3,520
1962	Mar. 26, 1962	10.70	5,900
	May 8, 1962	10.47	5,140
	May 29, 1962	9.32	4,280
	June 9, 1962	7.32	2,820
	July 15, 1962	11.87	6,330
	July 20, 1962	7.96	3,310
1963	Apr. 29, 1963	8.56	3,520
	May 12, 1963	10.20	4,780
1964	May 8, 1964	8.84	3,600
	June 23, 1964	9.80	4,440
1965	Mar. 1, 1965	11.87	6,410
	Apr. 1, 1965	11.82	6,350
	Apr. 6, 1965	12.59	7,340
	June 5 or 6, 1965	--	3,800 b
	Sept.20, 1965	8.36	3,720
1966	May 23, 1966	8.23	3,400
	June 12, 1966	11.45	6,380
1967	June 8, 1967	9.90	4,960
	June 12, 1967	8.57	3,880
	June 18, 1967	6.78	2,600
1968	June 25, 1968	12.07	7,310
	June 29, 1968	6.71	2,550

b About.

05471000 South Skunk River below Squaw Creek near Ames, Iowa --(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	Mar. 20, 1969	12.15	6,620
	Mar. 25, 1969	--	4,400 b
	June 7, 1969	9.22	3,920
	June 13, 1969	--	2,600 b
	June 27, 1969	--	3,600 b
	June 30, 1969	11.30	5,700
	July 3, 1969	7.80	2,890
	July 10, 1969	11.84	6,260
	July 19, 1969	--	3,600 b
	July 28, 1969	9.50	4,120
1970	May 13, 1970	10.35	4,950
1971	Feb. 20, 1971	12.67	8,610
	Mar. 14, 1971	9.21	4,270
1972	Aug. 2, 1972	8.05	3,340
	Aug. 8, 1972	--	3,300 b
1973	Oct. 24, 1972	7.50	2,930
	Nov. 2, 1972	7.27	2,770
	Nov. 7, 1972	7.73	3,090
	Dec. 30, 1972	8.97 c	3,720 b
	Jan. 18, 1973	9.91 c	3,800 b
	Feb. 2, 1973	12.43 c	5,120 b
	Mar. 11, 1973	8.12	3,400
	Mar. 14, 1973	7.72	3,080
	Apr. 16, 1973	11.94	6,860
	May 8, 1973	10.09	5,390
	May 28, 1973	6.92	2,730
	Sept. 27, 1973	8.89	3,530
	Sept. 30, 1973	9.60	3,780

1974	Oct. 10, 1973	21.69	5,880
	Apr. 22, 1974	18.15	2,900 b
	May 16, 1974	19.83	4,000 b
	May 18, 1974	21.13	5,100 b
	May 22, 1974	18.67	3,200 b
	June 9, 1974	21.21	5,210
	June 19, 1974	22.58	6,900 b
	June 23, 1974	23.19	7,800

b About. c Affected aby ice.

05471000 South Skunk River below Squaw Creek near Ames, Iowa --(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1975	Mar. 20, 1975	--	3,990 b
	June 18, 1975	18.23	2,950
	June 22, 1975	18.76	3,240
	June 27, 1975	25.57	14,700
1976	Apr. 18, 1976	17.75	3,170
	Apr. 21, 1976	16.66	2,520
	May 24, 1976	16.80	2,600
	June 14, 1976	22.14	6,410
1977	Aug. 16, 1977	22.43	6,400
1978	Apr. 18, 1978	20.08	4,430
	Sept.14, 1978	19.97	4,700
	Sept.30, 1978	18.39	3,590
1979	Mar. 19, 1979	23.68	9,430
	Mar. 23, 1979	20.17	5,160
	Mar. 30, 1979	20.55	5,470
	June 13, 1979	16.86	2,760
	June 27, 1979	16.63	2,620
	July 11, 1979	19.48	4,500
	July 30, 1979	17.22	2,980
	Aug. 10, 1979	17.63	3,220
	Aug. 20, 1979	19.24	4,330
Discontinued September 1979			

b About.

05471200 Indian Creek near Mingo, Iowa--(Discontinued Sept. 1975)

Location.--Lat 41°48'17", long 93°18'26", in NW1/4 NW1/4 sec.28, T.81 N., R.21 W., Jasper Co., on right bank 30 ft downstream from bridge on State Hwy 117, 2.9 mi northwest of Mingo, and 3.3 mi upstream from Clear Creek.
Drainage area.--276 mi².
Gage.--Water-stage recorder. Datum is 810.47 ft NGVD of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 1,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1944	May 20, 1944	21.40	a
1958	June 13, 1958	11.50	1,700
	July 3, 1958	12.03	1,920
	July 5, 1958	13.03	2,800 b
1959	Mar. 20, 1959	13.50	3,400
	Mar. 27, 1959	11.17	1,560
	May 31, 1959	12.85	2,420
1960	Mar. 30, 1960	15.05	5,700
	Apr. 18, 1960	11.56	1,820
	May 7, 1960	15.07	5,860
	July 12, 1960	13.74	3,680
1961	Feb. 18, 1961	12.66	2,520
	Feb. 23, 1961	12.34	2,210
	Aug. 1, 1961	13.20	3,040
1962	Oct. 1, 1961	12.34	2,210
	Mar. 26, 1962	12.75	2,600
	May 8, 1962	13.91	3,960
	May 29, 1962	13.28	3,160
	July 15, 1962	11.79	1,920
1963	May 12, 1963	13.45	3,280
1964	June 23, 1964	14.32	3,680
	July 11, 1964	12.30	2,080
1965	Feb. 20, 1965	13.00 c	2,000 d
	Mar. 17, 1965	13.42	3,000
	Apr. 1, 1965	13.80	3,820
	Apr. 6, 1965	14.32	4,610
	Apr. 24, 1965	10.97	1,550

a Discharge not determined.
b Maximum for period May to September 1958.
c Affected by ice.
d About.

05471200 Indian Creek near Mingo, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1966	May 24, 1966	14.30	4,260
	June 12, 1966	16.41	7,380
1967	June 10, 1967	12.79	2,550
	June 12, 1967	11.94	1,940
	June 17, 1967	10.92	1,510
1968	June 26, 1968	11.05	1,690
1969	Mar. 18, 1969	13.59	3,570
	Mar. 24, 1969	11.12	1,720
	June 7, 1969	11.35	1,800
	June 12, 1969	12.30	2,430
	June 30, 1969	12.41	2,380
	July 4, 1969	12.03	2,170
	July 8, 1969	13.32	3,120
1970	May 14, 1970	15.87	7,360
	Aug. 5, 1970	10.99	1,670
	Aug. 18, 1970	12.27	2,350
1971	Feb. 20, 1971	15.65 c	4,300 d
1972	June 14, 1972	13.78	4,150
	June 20, 1972	12.83	2,980
	July 26, 1972	11.54	1,980
1973	Dec. 30, 1971	--	3,500 d
	Jan. 18, 1973	--	1,800 d
	Feb. 2, 1973	14.53	4,950
	Apr. 16, 1973	13.11	2,790
	May 8, 1973	11.54	1,820
1974	Oct. 11, 1973	13.17	2,970
	May 13, 1974	11.85	1,980
	May 16, 1974	12.97	2,720
	May 18, 1974	14.50	4,740
	May 28, 1974	12.74	2,770
	June 10, 1974	14.94	5,600
	June 20, 1974	13.70	3,700
	June 22, 1974	13.56	3,530
	July 4, 1974	10.69	1,600
1975	Mar. 20, 1975	13.44	3,390
	Apr. 28, 1975	11.86	2,080
	June 15, 1975	12.80	2,740
	June 19, 1975	13.88	3,930
	June 28, 1975	15.52	6,660

Discontinued September 1975

c Affected by ice. d About.

05471500 South Skunk River near Oskaloosa, Iowa
(Prior to October 1966 published as "Skunk River near Oskaloosa")

Location.--Lat 41°21'19", long 92°39'31", in NW1/4 SW1/4 sec.25, T.76 N., R.16 W., Mahaska County, on right bank 400 ft upstream from bridge on U.S. Highway 63, 0.3 mile downstream from Painter Creek, 4.0 miles north of Oskaloosa, 53.7 miles upstream from confluence with North Skunk River, and 147.3 miles upstream from mouth of Skunk River.
Drainage area.--1,635 mi².
Gage.--Water-stage recorder. Datum of gage is 685.50 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 21, 1947, nonrecording gage at site 400 ft downstream at same datum.
Stage-discharge relation.--Defined by current-meter measurements below 18,000 ft³/s and above 18,000 ft³/s on velocity-area study.
Flood stage.--15 feet.
Remarks.--Base for partial-duration series, 6,600.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1944	May ??, 1944	25.80	37,000 a
1946	Jan. 9, 1946	18.57 b	9,600 c
	June 27, 1946	11.04	7,500
1947	June 6, 1947	19.47	14,300
	June 15, 1947	21.26	20,000
1948	Feb. 29, 1948	16.50 b	7,120 c
	Mar. 22, 1948	17.50	9,050
1949	Mar. 9, 1949	18.27	10,800
1950	Mar. 8, 1950	18.09	9,320
1951	Mar. 31, 1951	16.61	6,700
	June 7, 1951	17.26	7,810
1952	Mar. 12, 1952	16.58	6,700
1953	Feb. 22, 1953	18.46	9,980
1954	June 24, 1954	15.89	5,420

a From rating curve extended above 18,000 ft³/s on basis of velocity-area study.
b Affected by ice. c About.

05471500 South Skunk River near Oskaloosa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1955	Feb. 20, 1955	15.55 b	3,700 c
1956	Aug. 13, 1956	7.90	782
1957	June 18, 1957	15.06	4,860
1958	July 7, 1958	15.76	5,680
1959	Mar. 21, 1959	16.87	8,500
1960	Jan. 14, 1960	16.84	7,340
	Apr. 3, 1960	20.56	14,800
	May 11, 1960	17.94	8,900
	June 28, 1960	16.64	6,800
1961	Sept.13, 1961	16.17	6,280
1962	Mar. 20, 1962	17.32	6,730
	Mar. 29, 1962	18.80	8,460
1963	Aug. 6, 1963	16.38	5,720
1964	June 25, 1964	16.92	6,000
1965	Apr. 9, 1965	19.87	11,200
1966	May 26, 1966	17.80	7,920
	June 16, 1966	21.10	12,400
1967	June 13, 1967	18.09	7,600
1968	June 27, 1968	14.32	4,120
1969	Mar. 22, 1969	18.22	8,000
	July 13, 1969	19.02	8,760
	July 18, 1969	20.04	10,300
1970	Mar. 3, 1970	17.97	7,470
	May 17, 1970	18.54	8,160
1971	Feb. 27, 1971	20.34 b	6,700 c
1972	June 16, 1972	17.38	7,180
	Aug. 8, 1972	15.69	5,150
1973	Dec. 31, 1972	--	8,000 c
	Feb. 3, 1973	22.52 b	15,000 c
	Apr. 19, 1973	19.91	10,200

b Affected by ice. c About.

05471500 South Skunk River near Oskaloosa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	Oct. 15, 1973	17.32	6,750
	Jan. 21, 1974	18.37 b	6,200 c
	Jan. 27, 1974	19.00 b	6,500 c
	Apr. 30, 1974	19.04	8,860
	May 22, 1974	21.22	12,700
	June 13, 1974	20.15	10,600
	June 26, 1974	19.32	9,280
1975	Mar. 22, 1975	18.70	8,380
	June 21, 1975	17.68	7,150
	July 2, 1975	19.62	9,740
1976	Apr. 25, 1976	21.04	12,300
	June 16, 1976	16.87	6,270
1977	Aug. 18, 1977	16.43	5,830
1978	Mar. 22, 1978	19.40	8,760
	Apr. 20, 1978	18.19	7,710
	July 20, 1978	17.42	6,860
	Sept.22, 1978	17.09	6,500
1979	Mar. 14, 1979	b	5,300
	Mar. 21, 1979	20.38	11,000
	Apr. 1, 1979	18.37	7,760
	Apr. 21, 1979	16.46	5,770
1980	June 16, 1980	14.34	4,070
1981	June 24, 1981	14.41	4,120
1982	Mar. 17, 1982	16.50	5,890
	Mar. 20, 1982	18.20	7,750
	Apr. 16, 1982	15.76	5,200
	May 17, 1982	16.04	5,440
	May 23, 1982	17.20	6,610
	May 29, 1982	17.52	6.960
	June 17, 1982	18.10	7,620
	July 20, 1982	20.92	12,000
1983	Nov. 13, 1982	16.00	5,400
	Dec. 7, 1982	15.57	5,050
	Dec. 29, 1982	16.50	5,890
	Feb. 21, 1983	17.79	7,260

1983 CONTINUED ON NEXT PAGE

b Affected by ice. c About.

05471500 South Skunk River near Oskaloosa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	Apr. 4, 1983	18.90	8,660
	Apr. 16, 1983	19.27	9,200
	May 21, 1983	18.37	7,970
	July 7, 1983	20.33	10,900
1984	Nov. 2, 1983	15.51	5,000
	Nov. 21, 1983	16.99	6,290
	Nov. 29, 1983	17.75	6,990
	Feb. 20, 1984	18.60	7,940
	May 3, 1984	19.44	9,460
	May 31, 1984	19.46	9,080
	June 11, 1984	18.36	7,570
	June 19, 1984	21.76	12,300
	July 16, 1984	17.46	6,150

05472090 North Skunk River near Baxter, Iowa

Location.--Lat 41°49',long 93°04',in NE1/4 Sec. 21,T.81 N., R.19 W., Jasper County, at bridge on State Highway 223, 4.5 mi east of Baxter.
Drainage area.--52.2 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks,--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 12, 1966	84.42	b
1967	June 10, 1967	79.45	b
1968	--	a	<700
1969	Mar. ?, 1969	80.55	b
1970	Mar. 2, 1970	78.51	b
1971	Feb. 19, 1971	79.14	b
1972	June 13, 1972	79.79	b
1973	Feb. ?, 1973	82.05	b
1974	June 9, 1974	83.60	b
1975	July 11, 1975	81.93	b
1976	Mar. 5, 1976	79.32	2,550
1977	--	a	<700
1978	--	a	<700
1979	Mar. 19, 1979	77.39	1,900
1980	--	a	<700
1981	--	a	<700
1982	July 4, 1982	83.32	b

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05472090 North Skunk River near Baxter, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	--	a	<700
1984	July 8, 1984	80.12	b

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05472290 Sugar Creek near Searsboro, Iowa

Location.--Lat 41°34', long 92°44', in SE1/4 sec.7, T.78 N., R.16 W., Poweshiek County, at bridge on State Highway 225, 1.8 miles west of Searsboro.
Drainage area.--52.7 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 12, 1966	92.82	4,500 b
1967	June 9, 1967	91.09	1,300 b
1968	--	a	<475 b
1969	July 8, 1969	91.25	1,350 b
1970	Mar. 2, 1970	91.75	1,900 b
1971	Feb. 19, 1971	90.87 c	700
1972	Aug. 6, 1972	91.28	1,400
1973	Feb. 2, 1973	91.50	1,500
1974	May 18, 1974	92.85	4,600 b
1975	June 18, 1975	89.91	940
1976	Apr. 24, 1976	91.43	1,450
1977	Sept.18, 1977	90.36	1,020
1978	Sept.13, 1978	91.60	1,700
1979	Mar. 18, 1979	91.13	1,300
1980	Feb. 22, 1980	88.52	680 b
1981	June 24, 1981	88.74	710
1982	July 18, 1982	92.32	3,000

a Peak stage did not reach bottom of gage.
b Discharges revised from those previously published.
c Affected by ice.

05472290 Sugar Creek near Searsboro, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	July 3, 1983	90.70	1,150
1984	June 8, 1984	90.66	1,140

05472390 Middle Creek near Lacey, Iowa

Location.--Lat 41°25', long 92°39', in NE1/4 sec.1, T.76 N., R.16 W., Mahaska County, at bridge on U.S. highway 63, about 1.5 miles northwest of Lacey.
Drainage area.--23.0 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 28, 1966	86.63	1,200
1967	July 31, 1967	86.20	1,010
1968	--	a	<320
1969	July 8, 1969	87.15	1,180
1970	Aug. 5, 1970	87.62	1,370
1971	Feb. 19, 1971	86.32 c	350
1972	Aug. 6, 1972	86.78	1,130
1973	Apr. 22, 1973	87.32	1,350
1974	May 1974	86.89	1,200
1975	--	a	<320
1976	Apr. 24, 1976	90.06	9,650
1977	--	a	<320
1978	July 7, 1978	86.13	900
1979	Mar. 18, 1979	86.34	1,000
1980	--	84.26	400
1981	July 4, 1981	87.99	1,700
1982	July 16, 1982	87.37	1,350
1983	Nov. 11, 1982	85.44	710

a Peak stage did not reach bottom of gage.
c Affected by ice.

05472390 Middle Creek near Lacey, Iowa-- (Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	Apr. 29, 1984	86.96	1,200

05472445 Rock Creek at Sigourney, Iowa

Location.--Lat 41°20'12", long 92°13'20', in NE1/4 sec.3, T.75 N., R.12 W., Keokuk County, at bridge on State Highway 92, near west edge of Sigourney.
Drainage area.--26.3 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
DISCHARGES REVISED FROM THOSE PREVIOUSLY PUBLISHED			
1966	May 17, 1966	90.14	2,550
1967	June 10, 1967	87.96	680
1968	--	a	<71
1969	July 18, 1969	90.38	2,400
1970	Sept.17, 1970	91.29	4,100
1971	May 19, 1971	88.47	560
1972	May 7, 1972	88.91	740
1973	May 27, 1973	89.59	1,130
1974	Apr. 28, 1974	90.03	1,600
1975	Apr. 28, 1975	88.13	455
1976	Apr. 24, 1976	90.13	1,550
1977	Aug. 16, 1977	86.36	105
1978	July 7, 1978	90.24	1,600
1979	Mar. 19, 1979	89.00	680
1980	--	a	<28
1981	June 24, 1981	89.49	980
1982	July 19, 1982	90.40	1,800

a Peak stage did not reach bottom of gage.

05472445 Rock Creek at Sigourney, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Dec. 5, 1982	88.81	600
1984	June 22, 1984	88.36	440

05472500 North Skunk River near Sigourney, Iowa

Location.--Lat 41°18'03", long 92°12'16", in NE1/4 SE1/4 sec.14, T.75 N., R.12 W., Keokuk County, on right bank 20 ft downstream from bridge on State Highway 149, 1.2 miles downstream from Cedar Creek, 2.2 miles south of Sigourney, 4.0 miles upstream from Bridge Creek, and 16.2 miles upstream from mouth.
Drainage area.--730 mi².
Gage.--Water-stage recorder. Datum of gage is 651.53 ft National Geodetic Vertical Datum of 1929. Prior to June 10, 1953, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--16 feet.
Remarks.--Base for partial-duration series, 3,800 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1944	May ??, 1944	22.80 a	14,500
1946	Jan. 7, 1946	22.57	14,000
1947	June 15, 1947	21.8	12,000
1948	Mar. 1, 1948	19.4 b	6,610 c
	Mar. 19, 1948	19.5	7,660
1949	Mar. 8, 1949	19.65	6,920
	Mar. 24, 1949	19.53 b	6,760 c
1950	Mar. 8, 1950	18.84	5,810
1951	May 29, 1951	16.4	3,820
	July 3, 1951	19.92	7,460
1952	Mar. 13, 1952	20.16	7,660
1953	Feb. 24, 1953	16.43	3,820
1954	Apr. 30, 1954	11.65	1,830
1955	Apr. 24, 1955	18.18	5,180
1956	June 20, 1956	7.98	880
1957	July 8, 1957	15.81	3,490
1958	Feb. 27, 1958	12.26 d	2,040

a From floodmark. b Affected by ice. c About.
d Maximum gage height, 13.60.

05472500 North Skunk River near Sigourney, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1959	Mar. 22, 1959	19.83	7,270
	May 30, 1959	17.37	4,500
1960	Jan. 15, 1960	21.56	11,500
	Mar. 31, 1960	25.33	27,500
	May 9, 1960	18.76	5,810
	July 13, 1960	17.29	4,420
1961	Feb. 22, 1961	17.80	4,820
	Mar. 8, 1961	18.73	5,700
	Mar. 16, 1961	17.50	4,580
	Sept.16, 1961	18.79	5,810
1962	Nov. 3, 1961	18.84	5,810
	Nov. 16, 1961	19.33	6,460
	Mar. 22, 1962	20.43	8,520
	May 29, 1962	18.94	5,930
1963	Mar. 7, 1963	17.15 b	3,000 c
	Mar. 13, 1963	14.88	3,040
	Aug. 7, 1963	16.36	3,820
1964	June 23, 1964	15.40	3,290
1965	Apr. 8, 1965	17.55	4,620
	Apr. 27, 1965	17.05	4,240
	July 7, 1965	17.95	4,960
	Sept.21, 1965	22.57	11,200
1966	May 17, 1966	19.40	5,810
	May 24, 1966	17.70	4,280
	June 14, 1966	23.85	15,600
1967	June 15, 1967	13.80	2,450
1968	Apr. 25, 1968	9.87	1,230
1969	July 4, 1969	16.84	4,100
	July 11, 1969	19.61	6,940
	July 19, 1969	20.09	7,840
1970	Mar. 5, 1970	20.15	7,070
	Aug. 6, 1970	21.30	8,420
	Sept.17, 1970	19.77	6,480
1971	Oct. 13, 1970	18.32	4,720
	Feb. 23, 1971	20.07 b	4,100 c

b Affected by ice. c About.

05472500 North Skunk River near Sigourney, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	May 8, 1972	16.03	3,360
1973	Jan. 3, 1973	--	3,800 c
	Feb. 4, 1973	20.33	7,490
	Apr. 18, 1973	20.17	7,210
	May 2, 1973	17.13	4,270
	May 29, 1973	19.33	6,030
1974	Jan. 31, 1974	17.57	4,460
	Apr. 30, 1974	22.04	12,100
	May 19, 1974	22.51	14,000
	May 31, 1974	19.63	6,380
	June 12, 1974	20.41	7,640
1975	Mar. 22, 1975	17.40	4,430
1976	Apr. 25, 1976	22.80	16,800
1977	Sept.19, 1977	11.47	1,800
1978	Mar. 24, 1978	19.30	6,100
	Apr. 24, 1978	17.11	4,230
	July 24, 1978	19.75	6,830
1979	Mar. 20, 1979	21.50	11,300
	Apr. 1, 1979	17.19	4,460
1980	June 23, 1980	8.34	1,000
1981	Apr. 12, 1981	19.47	6,290
1982	Feb. 24, 1982	b	3,850
	Mar. 20, 1982	18.00	4,920
	July 21, 1982	21.18	8,650
1983	Apr. 5, 1983	17.04	4,190
1984	May 3, 1984	17.42	4,470

b Affected by ice. c About.

05473000 Skunk River at Coppock, Iowa
(Station operation discontinued Sept. 30, 1944)
(Peak data collected by observer until 1951)

Location.--Lat 41°09'50", long 91°43'05", in NE1/4 NE1/4 sec.1, T.73 N., R.8 W., Jefferson County, at bridge on State Highway 78, 0.5 mile west of Coppock, 3/4 mile upstream from Crooked Creek, and at mile 66.1.
Drainage area.--2,916 mi².
Gage.--Nonrecording. Datum of gage is 585.02 ft National Geodetic Vertical Datum of 1929. At site one-eighth mile upstream prior to Sept. 29, 1937.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 6,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1903	May 31, 1903	22.00	40,000

1914	Sept.21, 1914	11.7	6,980
1915	May 26, 1915	11.7	6,980
	June 8, 1915	11.2	6,350
	July 11, 1915	13.4	9,300
	Aug. 4, 1915	16.5	15,200
	Sept.16, 1915	11.3	6,450
1916	Oct.. 2, 1916	14.7	11,200
	Jan. 27, 1916	12.8	8,400
	Feb. 22, 1916	12.4	7,870
	Mar. 27, 1916	17.1	16,800
	May 15, 1916	12.2	7,600
	Sept. 6, 1916	11.6	6,900
1917	Mar. 14, 1917	12.0	7,350
	May 1, 1917	12.1	7,450
	May 22, 1917	11.7	6,980
	June 7, 1917	16.7	15,600
	June 14, 1917	17.6	18,300
1918	May 29, 1918	12.2	7,800
	June 9, 1918	19.8	28,200
1919	Mar. 17, 1919	15.2	12,200
	May 5, 1919	14.1	10,200
	June 9, 1919	12.7	8,260

05473000 Skunk River at Coppock, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1920	Mar. 27, 1920	15.5	12,800
	Apr. 20, 1920	13.3	9,090
	May 13, 1920	12.4	7,870
1921	June 19, 1921	13.2	8,950
	Sept.26, 1921	14.6	11,600
1922	Feb. 23, 1922	11.6	6,860
1923	Apr. 2, 1923	10.3	5,360
1924	Mar. 4, 1924	12.6	6,860
	June 29, 1924	19.1	23,900
	July 26, 1924	13.2	8,950
1925	June 4, 1925	10.2	5,040
1926	June 15, 1926	14.0	10,100
	Sept.10, 1926	14.4	10,700
	Sept.16, 1926	17.8	18,900
	Sept.26, 1926	19.4	25,100
1927	Feb. 5, 1927	16.5 a	15,200 b
	Apr. 19, 1927	15.5	12,800
	May 25, 1927	11.3	6,450
	June 4, 1927	11.7	6,980
1928	June 30, 1928	14.0	10,100
	July 4, 1928	14.5	10,800
	Aug. 6, 1928	14.3	10,600
1929	Nov. 19, 1928	14.2	10,400
	Mar. 19, 1929	17.7	18,600
	Apr. 1, 1929	11.5	6,700
	Apr. 20, 1929	13.6	9,500
	Apr. 26, 1929	14.6	11,000
1930	June 15, 1930	22.1	40,700
1931	Sept.27, 1931	8.2	3,360
1932	Nov. 29, 1931	15.4	12,600
	Jan. 1, 1932	12.9	8,600
	June 26, 1932	12.3	7,740
	July 11, 1932	11.3	6,450
	Aug. 13, 1932	11.2	6,380

a Affected by ice. b About.

05473000 Skunk River at Coppock, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1933	May 13, 1933	12.8	8,400
	May 26, 1933	14.2	10,400
1934	Jan. 26, 1934	6.5	1,840
1935	June 3, 1935	12.2	6,400
	June 20, 1935	13.8	7,870
	July 4, 1935	12.4	6,640
1936	Mar. 13, 1936	15.0	11,400
1937	Feb. 23, 1937	17.4 a	8,510 b
	Mar. 10, 1937	17.70	19,600
1938	Feb. 6, 1938	14.6 a	9,600 b
	May 19, 1938	12.3	7,500
1939	Mar. 13, 1939	17.4	15,700
1940	Aug. 29, 1940	7.9	3,260
1941	Feb. 15, 1941	11.9	5,500
1942	Nov. 7, 1941	12.4	7,390
1943	Feb. 9, 1943	12.8 a	6,520 b
	May 21, 1943	15.0	10,900
	June 17, 1943	12.1	6,300
	June 22, 1943	13.0	7,390
	Aug. 4, 1943	21.6	37,400
1944	Apr. 24, 1944	17.6	18,700
	May 10, 1944	12.9	7,260
	May 24, 1944	22.3 c	41,500
	June 16, 1944	17.0	16,500
1945	Mar. 26, 1945	12.5	6,760
	Apr. 22, 1945	13.5	8,110
	May 19, 1945	15.5	12,100
	June 4, 1945	12.9	7,260
	June 16, 1945	14.0	8,910

a Affected by ice. b About.
c Maximum stage known since 1881.

05473000 Skunk River at Coppock, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1946	Jan. 9, 1946	17.7	19,100
	Mar. 19, 1946	14.3	9,440
	Mar. 26, 1946	12.2	6,410
	June 13, 1946	12.5	6,760
	June 20, 1946	18.9	24,200
1947	Apr. 8, 1947	15.7	12,600
	Arp. 16, 1947	13.8	8,580
	Apr. 22, 1947	15.4	11,800
	June 9, 1947	18.8	23,700
	June 18, 1947	19.3	26,000
1948	Feb. 19, 1948	13.0 a	6,640 b
	Mar. 3, 1948	14.5	9,820
	Mar. 20, 1948	18.1	20,700
1949	Mar. 4, 1949	15.7 a	10,200 b
	June 25, 1949	11.9	6,080
1950	Mar. 12, 1950	13.8	8,580
	June 21, 1950	15.0	10,900
	June 26, 1950	14.4	9,630
Discontinued 1951			

a Affected by ice. b About.

05473300 Cedar Creek near Batavia, Iowa

Location.--Lat 41°01', long 92°07', in SW1/4 sec.27, T.72 N., R.11 W., Jefferson County, at bridge on U.S. Highway 34, 2.5 miles northeast of Batavia.
Drainage area.--252 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1965	Sept. 21, 1965	92.80	26,000
1966	May 17, 1966	78.69	3,600
1967	June 10, 1967	79.86	4,200
1968	--	a	<1,060
1969	June 8, 1969	78.06	3,200
1970	Aug. 5, 1970	92.41	25,000
1971	Feb. 18, 1971	89.83 c	4,700
1972	--	a	1,100
1973	Apr. 22, 1973	84.24	7,800
1974	May 19, 1974	82.34	6,100
1975	Mar. 28, 1975	77.14	2,400
1976	Apr. 24, 1976	85.96	15,200
1977	Aug. 8, 1977	77.92	3,200
1978	Apr. 12, 1978	82.21	5,400
1979	Mar. 20, 1979	80.67	4,300
1980	June 2, 1980	80.46	4,100

a Peak stage did not reach bottom of gage.
c Affected by ice.

05473300 Cedar Creek near Batavia, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1981	Apr. 14, 1981	88.64	5,050 b
1982	July 3, 1982	81.45	5,400 b
1983	Apr. 2, 1983	83.22	6,700
1984	May 3, 1984	82.40	5,300

b Discharges revised from those previously published.

05473400 Cedar Creek near Oakland Mills, Iowa

Location.--Lat 40°55'20", long. 91°40'10", in SE 1/4 NW 1/4 sec. 28, T.71 N., R.7 W., Henry County, on left bank 30 ft upstream from bridge on county highway H46, 3.0 mi west of Oakland Mills, 2.9 miles upstream from Wolf Creek, and 4.3 miles upstream from mouth.
Drainage area.--530 mi².
Gage.--Water-stage recorder. Datum of gage is 565.07 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial duration series, 3,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1978	Nov. 2, 1977	16.78	5,670
	Mar. 21, 1978	15.29	4,650
	Mar. 28, 1978	14.15	3,970
	Apr. 11, 1978	15.95	5,070
	Apr. 19, 1978	13.75	3,740
	May 8, 1978	13.12	3,400
	May 14, 1978	18.15	6,900
	July 8, 1978	16.65	5,080
	Sept.19, 1978	15.97	5,570
1979	Mar. 14, 1979	16.55	5,490
	Mar. 19, 1979	16.97 a	3,600
	Mar. 30, 1979	16.20 a	3,500
	Apr. 21, 1979	12.78	3,190
	May 4, 1979	12.80	3,180
1980	June 3, 1980	18.26	7,010
	June 15, 1980	15.77	4,950
	Aug. 18, 1980	17.76	6,510
	Sept. 1, 1980	16.37	5,360
	Sept. 4, 1980	16.86	5,740
1981	Dec. 9, 1981	16.55	5,460
	Apr. 14, 1981	17.84	6,610
	June 25, 1981	13.57	3,680
	July 4, 1981	14.17	4,020

a Backwater from Skunk River.

05473400 Cedar Creek near Oakland Mills, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	Oct. 15, 1981	14.19	4,030
	Nov. 4, 1981	15.28	4,690
	Feb. 22, 1982	b	4,340
	Mar. 14, 1982	13.86	3,840
	Mar. 17, 1982	13.33	3,550
	Mar. 20, 1982	17.89	6,650
	Apr. 17, 1982	16.44	5,490
	May 30, 1982	12.56	3,130
	July 3, 1982	15.08	4,510
	July 19, 1982	15.05	4,490
	Sept.15, 1982	12.61	3,160
1983	Dec. 3, 1982	16.75	5,660
	Dec. 7, 1982	16.63	5,570
	Mar. 28, 1983	13.16	3,410
	Apr. 3, 1983	19.68	8,560
	Apr. 10, 1983	14.26	4,020
1984	Nov. 11, 1983	13.12	3,410
	May 4, 1984	16.68	5,660
	June 10, 1984	15.88	5,100

b Affected by ice.

05473500 Big Creek near Mount Pleasant, Iowa
(Discontinued September, 1979)

Location.--Lat 41°00'52", long 91°34'49", in NW1/4 NW1/4 sec.29, T.72 N., R.6 W., Henry County, on left bank 12 ft downstream from bridge on county highway, 100 ft downstream from Lynn Creek, 0.7 mile downstream from Brandywine Creek, and 3.7 miles northwest of Court House at Mount Pleasant
Drainage area.--106 mi².
Gage.--Water-stage recorder and concrete control. Datum of gage is 630.53 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--14 ft.
Remarks.--Base for partial-duration series, 900 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1948	Aug. 3, 1948	27. ab	c
1956	Feb. 24, 1956	6.52 d	500 a
1957	Apr. 3, 1957	4.33	264
1958	Feb. 24, 1958	9.38	1,600
	June 9, 1958	9.24	1,540
	June 13, 1958	8.49	1,320
	July 19, 1958	7.30	1,000
	Aug. 1, 1958	8.32	1,250
1959	Feb. 23, 1959	10.67 d	1,150 a
1960	Oct. 5, 1959	11.37	2,310
	Oct. 6, 1959	10.83	2,080
	Mar. 29, 1960	15.30	4,460
	Apr. 17, 1960	11.12	2,190
	June 12, 1960	12.89	2,950
1961	Sept.13, 1961	11.24	2,230

a About. b From floodmarks established by local residents.
c Discharge not determined. d Affected by ice.

05473500 Big Creek near Mount Pleasant, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1962	Oct. 30, 1961	8.64	1,350
	Nov. 2, 1961	9.12	1,500
	Nov. 16, 1961	13.03	3,000
	Mar. 11, 1962	11.90 d	2,400 a
	Mar. 19, 1962	9.42	1,600
	May 8, 1962	9.62	1,670
	May 11, 1962	9.68	1,700
	July 5, 1962	13.92	3,540
1963	Mar. 4, 1963	11.18 d	1,500 a
1964	Apr. 20, 1964	8.08	1,100
	June 20, 1964	8.57	1,250
1965	Jan. 2, 1965	9.00	1,470
	Jan. 23, 1965	7.15	929
	Mar. 17, 1965	12.07	2,580
	Apr. 6, 1965	7.79	1,100
	Aug. 26, 1965	14.29	3,940
	Aug. 30, 1965	9.99	1,960
	Sept. 7, 1965	13.53	3,560
	Sept.14, 1965	10.55	2,180
	Sept.21, 1965	18.22	6,150
1966	Dec. 24, 1965	7.06	915
	May 17, 1965	8.22	1,250
	May 23, 1966	10.92	2,170
	June 12, 1966	10.55	2,020
1967	Apr. 1, 1967	6.95	888
1968	Nov. 2, 1967	8.90	1,420
	July 24, 1968	7.52	968
1969	Jan. 16, 1969	--	1,600
	Jan. 23, 1969	--	1,500
	July 8, 1969	8.92	1,430
	July 18, 1969	13.73	3,460
1970	June 14, 1970	7.29	972
	Aug. 5, 1970	16.01	4,590
	Sept.17, 1970	7.85	1,080
	Sept.22, 1970	14.46	3,630
1971	Feb. 18, 1971	13.04 d	2,000 a

a About. d Affected by ice.

05473500 Big Creek near Mount Pleasant, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	Dec. 15, 1971	7.84	1,110
	June 14, 1972	7.41	1,000
1973	Mar. 7, 1973	8.42	1,230
	Mar. 14, 1973	7.78	1,040
	Mar. 31, 1973	10.55	2,150
	Apr. 9, 1973	11.38	2,480
	Apr. 22, 1973	25.58	10,500
	May 2, 1973	14.36	3,820
	May 7, 1973	6.83	902
	May 27, 1973	16.35	4,820
	July 4, 1973	9.79	1,850
	July 22, 1973	12.79	3,050
	Sept.27, 1973	19.00	6,350
	Sept.29, 1973	8.98	1,530
1974	Oct. 2, 1973	8.34	1,340
	Jan. 27, 1974	11.61	2,570
	May 13, 1974	7.06	989
	May 28, 1974	7.43	1,100
1975	Mar. 17, 1975	9.09	1,570
	Aug. 29, 1975	9.43	1,700
1976	Mar. 5, 1976	10.49	2,110
	Apr. 24, 1976	16.29	4,780
1977	Aug. 8, 1977	6.12	719
1978	Nov. 2, 1977	8.99	1,550
	Apr. 10, 1978	7.69	1,160
	May 13, 1978	10.39	2,110
	July 7, 1978	8.60	1,420
1979	Mar. 3, 1979	d	1,300
	Mar. 13, 1979	10.37	2,080
	Mar. 18, 1979	9.11	1,570
	Mar. 29, 1979	10.18	2,000
Discontinued September, 1979			

05474000 Skunk River at Augusta, Iowa

Location.--Lat 40°45'13", long 91°16'40", in NE1/4 NE1/4 sec.26, T.69 N., R.4 W., Des Moines County, on left bank 300 ft upstream from bridge on State Highway 394 at Augusta, 2.0 miles upstream from Long Creek, and at mile 12.5.
Drainage area.--4,303 mi².
Gage.--Water-stage recorder. Datum of gage is 521.24 ft National Geodetic Vertical Datum of 1929. Prior to Nov. 15, 1913, nonrecording gage at site 400 ft upstream at datum about 0.7 ft higher. May 27, 1915, to Jan. 14, 1935, nonrecording gage at site 400 ft upstream at present datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--15 feet.
Remarks.--Base for partial-duration series, 15,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1903	June 1, 1903	21.00 a	45,000 a
1915	July 11, 1915	15.7	22,800
1916	Jan. 24, 1916	16.5 b	18,400 a
	Jan. 27, 1916	15.7 b	17,100 a
	Mar. 28, 1916	18.7	33,600
	June 7, 1916	14.5	19,700
1917	June 7, 1917	17.2	27,700
	June 13, 1917	14.0	18,400
	June 16, 1917	14.8	20,400
1918	May 30, 1918	12.8	15,600
	June 11, 1918	17.2	27,700
1919	Mar. 17, 1919	14.5	19,600
	May 4, 1919	15.3	21,700
1920	Mar. 26, 1920	16.5	25,000
	Apr. 20, 1920	17.6	24,500
	May 13, 1920	14.9	20,600
1921	June 19, 1921	11.8	13,700
1922	Feb. 23, 1922	10.3	11,200
1923	Mar. 26, 1923	8.5	8,600

a About. b Affected by ice.

05474000 Skunk River at Augusta, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1924	June 25, 1924	14.4	18,200
	June 28, 1924	19.4	27,800
	June 30, 1924	19.2	27,200
	July 25, 1924	15.4	20,100
1925	Feb. 24, 1925	14.4 b	14,300 a
1926	June 13, 1926	16.2	20,300
	June 17, 1926	15.5	19,000
	Sept. 9, 1926	19.0	26,600
	Sept.16, 1926	20.5	31,500
1927	Oct. 1, 1926	18.9	26,400
	Feb. 6, 1927	14.8	18,700
	Apr. 16, 1927	13.2	15,500
	Apr. 20, 1927	18.3	25,000
	May 19, 1927	14.8	18,000
	June 4, 1927	14.4	17,300
1928	June 29, 1928	13.0	16,100
	July 5, 1928	14.6	18,600
	Aug. 4, 1928	16.0	21,200
	Aug. 7, 1928	13.9	17,500
1929	Nov. 18, 1928	17.9	25,000
	Mar. 13, 1929	15.5	20,400
	Mar. 20, 1929	16.0	21,200
	Apr. 21, 1929	18.4	26,600
	Apr. 25, 1929	18.0	25,500
1930	June 17, 1930	22.6	44,500
1931	July 4, 1931	11.9	14,000
1932	Nov. 23, 1931	14.6	18,600
	Jan. 1, 1932	15.8	20,900
	Aug. 14, 1932	13.0	16,000
1933	Dec. 25, 1932	14.4	18,400
	May 13, 1933	15.2	19,800
1934	Apr. 5, 1934	4.00	2,220
1935	June 2, 1935	15.2	16,400
	June 19, 1935	14.3	15,400
1936	Feb. 26, 1936	17.4 b	16,000 a

a About. b Affected by ice.

05474000 Skunk River at Augusta, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1937	Feb. 22, 1937	17.3	21,800
	Mar. 6, 1937	15.3	17,000
	Mar. 12, 1937	15.5	17,400
1938	Feb. 8, 1938	19.3 b	18,300 a
	June 16, 1938	17.9	23,300
1939	Mar. 13, 1939	19.5	28,000
1940	Aug. 17, 1940	11.9	11,800
1941	June 12, 1941	9.2	8,280
1942	Feb. 3, 1942	14.3 c	13,600
1943	May 20, 1943	16.6	19,600
	Aug. 6, 1943	20.5	29,800
1944	Mar. 15, 1944	14.9	16,200
	Apr. 24, 1944	19.8	29,600
	May 26, 1944	23.0	44,800
	June 19, 1944	15.3	17,000
1945	Mar. 26, 1945	14.7	16,000
	May 18, 1945	16.7	20,200
1946	Jan. 6, 1946	19.2	27,500
	Jan. 9, 1946	19.2	27,600
	Mar. 17, 1946	14.6	16,000
	June 22, 1946	20.1	30,900
1947	Apr. 5, 1947	16.7	20,500
	Apr. 20, 1947	15.8	18,700
	June 9, 1947	19.6	29,000
	June 20, 1947	19.1	27,400
	July 1, 1947	19.1	27,000
1948	Feb. 28, 1948	16.6	20,200
	Mar. 20, 1948	18.7	25,800
1949	Mar. 4, 1949	15.4 b	16,000 a
1950	Apr. 25, 1950	18.5	25,900
	June 19, 1950	19.9	30,100
1951	Feb. 19, 1951	22.2 b	18,000 a
	Mar. 29, 1951	13.95	15,400
	May 11, 1951	18.00	23,700
	Aug. 28, 1951	16.02	19,100

a About. b Affected by ice. c Backwater from debris.

05474000 Skunk River at Augusta, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1952	Mar. 13, 1952	15.92	18,900
	June 21, 1952	14.60	16,500
1953	Apr. 1, 1953	14.39	16,100
1954	Aug. 27, 1954	10.2	9,780
1955	Feb. 27, 1955	--	15,000 a
	Apr. 25, 1955	15.62	18,300
1956	June 20, 1956	5.47	4,050
1957	July 31, 1957	7.05	5,850
1958	Aug. 1, 1958	13.12	12,800
1959	Feb. 25, 1959	17.87 b	--
	Feb. 26, 1959	--	15,000 a
1960	Oct. 7, 1960	15.80	16,200
	Jan. 16, 1960	17.29	20,900
	Apr. 3, 1960	25.00	51,000
	Apr. 15, 1960	15.49	17,500
	May 10, 1960	15.11	16,800
	June 15, 1960	14.92	16,400
	July 13, 1960	14.17	15,200
1961	Mar. 8, 1961	14.49	15,800
	Mar. 14, 1961	14.55	15,900
	Sept.14, 1961	15.38	17,300
1962	Nov. 3, 1961	14.45	15,600
	Nov. 20, 1961	18.89	25,200
	Mar. 23, 1962	18.20	23,100
	June 1, 1962	15.15	17,000
1963	Mar. 6, 1963	18.54 b	18,000 a
1964	Apr. 21, 1964	13.83	14,600
1965	Mar. 18, 1965	16.99	20,300
	Apr. 12, 1965	16.45	19,300
	Sept. 1, 1965	16.13	18,600
	Sept. 8, 1965	14.53	15,800
	Sept.24, 1965	24.90	45,500
1966	May 24, 1966	14.03	15,000
	June 13, 1966	16.28	18,900
	June 18, 1966	16.37	19,100

a About. b Affected by ice.

05474000 Skunk River at Augusta, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967	June 14, 1967	11.11	11,100
1968	July 24, 1968	11.36	11,500
1969	Jan. 23, 1969	--	20,900 a
	July 10, 1969	15.00	16,600
	July 21, 1969	19.29	26,500
1970	Aug. 10, 1970	18.17	23,900
	Sept.23, 1970	18.86	25,100
1971	Feb. 19, 1971	18.16 b	--
	Feb. 28, 1971	15.02 b	15,200 a
1972	Apr. 23, 1973	13.50	14,400
1973	Mar. 12, 1973	13.97	15,100
	Apr. 1, 1973	15.71	17,900
	Apr. 10, 1973	15.53	17,600
	Apr. 23, 1973	27.05	66,800 d
	May 3, 1973	18.58	26,300
	May 9, 1973	14.82	17,500
	May 29, 1973	18.93	27,400
	July 22, 1973	14.03	16,100
	Sept.28, 1973	16.50	21,000
1974	Jan. 23, 1974	--	18,000 a
	May 22, 1974	18.83	27,300
	May 30, 1974	18.55	26,300
1975	Mar. 29, 1975	12.86	14,200
1976	Mar. 6, 1976	14.75	17,400
	Apr. 27, 1976	22.34	40,900
1977	Aug. 9, 1977	9.23	9,020
1978	Nov. 2, 1977	14.43	16,800
	Mar. 21, 1978	20.70	34,500
	Mar. 28, 1978	13.73	17,400
	Apr. 11, 1978	13.70	17,300
	May 14, 1978	16.63	21,600
	July 7, 1978	13.45	15,100
	Sept.19, 1978	13.58	15,300

a About. b Affected by ice.
d Stage and discharge for April 1973 flood believed to be greatest known since 1851.

05474000 Skunk River at Augusta, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1979	Mar. 13, 1979	b	18,000
	Mar. 21, 1979	18.57	29,500
	Mar. 30, 1979	16.79	24,100
1980	June 2, 1980	14.13	18,000
	June 15, 1980	13.79	17,300
	Aug. 17, 1980	14.97	19,800
	Sept. 5, 1980	14.91	19,600
1981	Dec. 9, 1981	12.95	15,600
	Apr. 15, 1981	17.50	28,300
1982	Nov. 4, 1981	12.87	15,600
	Feb. 22, 1982	19.51	--
	Feb. 24, 1982	b	23,800
	Mar. 17, 1982	12.95	15,000
	Mar. 21, 1982	17.04	23,900
	Apr. 17, 1982	13.71	16,400
	July 3, 1982	14.77	18,300
	July 20, 1982	17.44	24,900
1983	Dec. 3, 1982	15.83	21,700
	Dec. 6, 1982	15.47	20,800
	Apr. 3, 1983	19.15	29,300
1984	Nov. 29, 1983	12.89	15,300
	Feb. 14, 1984	18.27	b
	Feb. 20, 1984	13.30	16,000
	May 6, 1984	16.49	23,100
	June 10, 1984	14.42	18,300
	June 26, 1984	12.80	15,100

b Affected by ice.

05474500 Mississippi River at Keokuk, Iowa

Location.--Lat 40°23'37", long 91°22'27", in SE1/4 SW1/4 sec.30, T.65 N., R.4 W., Lee County, near right bank in tailwater of dam and powerplant of Union Electric Co. at Keokuk, 0.2 mi upstream from bridge on U.S. Highway 136, 2.7 mi upstream from Des Moines River, and at mile 364.2 upstream from Ohio River.

Drainage area.--119,000 mi², approximately.

Gage.--Water-stage recorder. Datum of gage is 477.41 ft National Geodetic Vertical Datum of 1929, (levels by Corps of Engineers); 477.83 ft National Geodetic Vertical Datum, adjustment of 1912; 477.34 ft above mean gulf level; and 484.65 ft above Memphis datum. Jan. 1, 1878, to May 1913, nonrecording gage at Galland (formerly Nashville), 8 mi upstream; zero of gage was set to low-water mark of 1864, or 496.52 ft National Geodetic Vertical Datum of 1929.

Stage-discharge relation.--Since 1913, discharge computed from records of operation of turbines in powerplant and spillway gates in dam. Flow regulated by powerplant above station since 1913 and reservoirs and navigation dams above station since 1935.

Flood stage.--16 ft.

Remarks.--Keokuk Dam completed in 1913. Records January 1878 to September 1932 from Report of Iowa State Planning; since October 1932, furnished by Union Electric Company. Records for May 1913 to September 1937 adjusted for change in contents in Keokuk Reservoir, those after September 1973 unadjusted. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1851	June 6, 1851	13.50 a	360,000
1868	May 8, 1868	14.6	--
1869	July 16, 1869	14.7	--
1870	Apr. 27, 1870	16.4	--
1871	May 1871	12.2	--
1872	June 7, 1872	12.1	--
1873	June 14-15,1873	12.5	--
1874	Mar. 12, 1874	8.8	--

a Estimated; stage at present site and datum, 21 feet.

05474500 Mississippi River at Keokuk, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1875	July 9, 1875	12.9	--
1876	Apr. 17, 1876	16.5	--
1877	Apr.9-10,1877	11.6	--
1878	June 11, 1878	--	150,000
1879	June 2,3,1879	8.45	110,000
1880	June 29, 1880	17.5	271,000
1881	Apr.23,24,1881	--	241,000
1882	Oct. 31, 1881	18.9	293,000
1883	May 18, 1883	15.4	201,000
1884	Apr. 1, 1884	16.7	236,000
1885	Oct.9,10,1884	--	170,000
1886	May 6, 1886	15.95	212,000
1887	May 4, 1887	--	156,000
1888	May 18, 1888	12.0 b	314,000
1889	Apr. 20, June 8,18,1889	--	84,200
1890	July 1, 1890	--	178,000
1891	May 3, 1891	--	141,000
1892	June 29, 1892	19.25	306,000
1893	May 15-17,1893	14.85	203,000
1894	June 4, 1894	11.3	158,000
1895	Mar. 11, 1895	--	59,200
1896	June 3, 1896	11.9	161,000
1897	Apr.28,29,1897	18.4	230,000
1898	Mar. 20, 1898	--	108,000

b Stage at present site and datum, 19.6 feet.

05474500 Mississippi River at Keokuk, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1899	June 29, 1899	--	159,000
1900	Apr.5,6, 1900	--	124,000
1901	Mar.24-26,1901	11.3	150,000
1902	July 21,22,1902	15.5	181,000
1903	June 6, 1903	19.6	270,000
1904	Oct. 7, 1903	--	186,000
1905	June 10, 1905	18.5	212,000
1906	Apr.26-28,1906	14.0	192,000
1907	Apr.17-18,1907	--	178,000
1908	June 9, 1908	--	178,000
1909	May 5-7, 1909	13.9	181,000
1910	Mar.20-23,1910	10.1	124,000
1911	Feb. 21, 1911	12.3	156,000
1912	Apr.6,7, 1912	17.7	220,000
1913	Mar. 29, 1913	13.50	169,000
1914	June 24, 1914	11.2	122,000
1915	Feb. 28, 1915	--	142,000
1916	May 9, 1916	--	213,000
1917	June 17, 1917	--	163,000
1918	June 12, 1918	16.7	192,000
1919	May 8, 1919	17.15	205,000
1920	Apr.10-11,1920	--	230,000
1921	May 12-13,1921	--	108,000
1922	Apr.24,25,1922	17.45	240,000
1923	Apr.9,10,1923	12.0	148,000
1924	Aug.24,25,1924	--	160,000

05474500 Mississippi River at Keokuk, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1925	June 23, 1925	10.3	112,000
1926	Sept.28, 1926	--	146,000
1927	Apr. 3, 1927	--	175,000
1928	Apr. 12, 1928	--	150,000
1929	Mar. 23, 1929	19.3	247,000
1930	June 18, 1930	13.9	163,000
1931	July 4, 1931	--	52,500
1932	Apr.24,25,1932	10.2	106,000
1933	Apr. 9, 1933	14.5	160,000
1934	Apr. 22, 1934	--	83,500
1935	Apr.11,12,1935	--	138,000
1936	Apr.9,10,1936	12.3	148,000
1937	Mar. 10, 1937	16.1	190,000
1938	Sept.26, 1938	16.4	193,800
1939	Oct. 1, 1938	--	159,100
1940	Apr. 19, 1940	6.4	81,700
1941	Apr. 27, 1941	12.3	154,400
1942	June 16, 1942	15.80	200,900
1943	Apr. 18, 1943	--	174,000
1944	May 27,28,1944	20.85	256,000
1945	Mar. 26, 1945	16.80	203,300
1946	Jan. 11, 1946	16.95	223,300
1947	June 21, 1947	20.2	245,700
1948	Mar. 23, 1948	18.9	233,600
1949	Mar. 12, 1949	13.3	150,700
1950	Apr.25,26,1950	--	175,900

05474500 Mississippi River at Keokuk, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1951	Apr. 29, 1951	--	265,100
1952	Apr. 27, 1952	--	253,800
1953	Apr.1,2, 1953	12.5	137,200
1954	May 17, 1954	--	181,400
1955	Apr. 25, 1955	12.7	156,600
1956	Apr. 22, 1956	10.2	131,500
1957	July 15, 1957	8.70	106,000
1958	June 13, 1958	8.29	99,000
1959	Apr. 5, 1959	14.17	182,000
1960	Apr. 4, 1960	21.83	289,500
1961	Apr. 5, 1961	17.11	208,400
1962	Apr. 7, 1962	18.58	224,100
1963	Mar. 22, 1963	10.76	128,700
1964	May 21, 1964	7.96	96,400
1965	May 1, 1965	22.04	327,000
1966	Apr. 3, 1966	--	166,200
1967	Apr. 17, 1967	--	221,200
1968	July 9, 1968	--	143,100
1969	Apr. 26, 1969	--	253,000
1970	May 17, 1970	--	140,000
1971	Apr. 27, 1971	--	185,000
1972	May 11, 1972	--	192,000
1973	Apr. 24, 1973	--	344,000
	Apr. 24, 1973	23.35	--
1974	May 21-22,1974	19.15	--
	May 22, 1974	--	260,000
1975	May 9,10,1975	--	252,000

05474500 Mississippi River at Keokuk, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1976	Apr. 28, 1976	--	214,000
1977	Aug. 9, 1977	--	79,800
1978	Apr. 24, 1978	--	178,000
1979	Apr. 6, 1979	--	257,000
1980	June 16, 1980	--	141,000
1981	Apr. 16, 1981	--	162,000
1982	Apr. 17, 1982	--	225,000
1983	Apr. 6, 1983	--	224,000
1984	June 29, 1984	--	192,000

05476500 Des Moines River at Estherville, Iowa
(Prior to 1971 published as West Fork Des Moines River)

Location.--Lat 43°23'51", long 94°50'38", in SW1/4 SE1/4 sec.10, T.99 N., R.34 W., Emmet County, on right bank in city park, 1,200 ft downstream from bridge on State Highway 9 at Estherville, 0.1 mi upstream from School Creek, 2.3 mi upstream from Brown Creek, and at mi 404.
Drainage area.--1,372 mi².
Gage.--Water-stage recorder and concrete control. Datum of gage is 1,247.55 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--7 ft.
Remarks.--Base for partial-duration series, 1,500 ft³/s. Prior to 1961 base was 2,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Mar. 31, 1952	10.63	3,900
	Apr. 6, 1952	11.82	4,880
1953	May 28, 1953	9.12	2,860
	June 8, 1953	15.53	10,800
1954	Mar. 19, 1954	5.67	1,380
1955	Mar. 12, 1955	4.37	752
1956	Apr. 4, 1956	3.42	370
1957	June 24, 1957	5.33	1,200
1958	Apr. 7, 1958	3.51	404
1959	June 1, 1959	10.04	3,040
1960	Apr. 5, 1960	10.79	4,040
	May 22, 1960	7.80	2,250
	BASE REVISED TO 1,500 ft³/s		
1961	Mar. 25, 1961	12.03	5,350
	June 13, 1961	6.17	1,660
1962	Apr. 6, 1962	12.22	5,610
	July 5, 1962	11.21	4,420
1963	July 19, 1963	7.35	2,090
	Aug. 3, 1963	6.20	1,660

05476500 Des Moines River at Estherville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	May 7, 1964	6.24	1,660
1965	Apr. 10, 1965	15.61	10,200
	May 7, 1965	7.69	2,210
	May 11, 1965	7.56	2,130
	May 26, 1965	7.70	2,210
1966	Feb. 10, 1966	6.18 a	1,400 b
1967	Apr. 4, 1967	5.69	1,320
1968	July 28, 1968	4.09	676
1969	Oct. 24, 1968	9.58	2,980
	Apr. 12, 1969	17.68 c	16,000
	June 29, 1969	14.27	7,660
	July 8, 1969	11.50	4,500
1970	Apr. 8, 1970	6.08	1,500
1971	Mar. 14, 1971	9.37	2,100
	Apr. 1, 1971	10.54	3,780
1972	Mar. 19, 1972	6.22	1,520
1973	Mar. 14, 1973	7.06 a	1,800 b
1974	June 10, 1974	5.87	1,390
1975	Apr. 26, 1975	8.01	2,320
	Apr. 28, 1975	7.73	2,200
	June 22, 1975	6.25	1,540
1976	Mar. 13, 1976	5.43 a	1,060 b
1977	Mar. 19, 1977	3.35	380
1978	Mar. 21, 1978	--	1,890
	Mar. 25, 1978	7.58	2,140
1979	Mar. 26, 1979	8.78	2,700
	Apr. 5, 1979	10.83	3,980
	Apr. 19, 1979	9.84	3,320
	May 12, 1979	8.55	2,620
	Aug. 10, 1979	9.62	3,070
	Aug. 22, 1979	9.10	2,790
	Aug. 27, 1979	10.99	4,000
	Sept. 13, 1979	7.59	2,120

a Affected by ice. b About c From floodmark.

05476500 Des Moines River at Estherville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1980	Nov. 9, 1979	9.21	2,920
	Apr. 6, 1980	6.39	1,640
	June 1, 1980	7.33	2,060
	June 14, 1980	6.82	1,860
1981	June 15, 1981	6.23	1,530
1982	Mar. 23, 1982	5.86	1,410
1983	Feb. 23, 1983	6.81	1,970
	Mar. 7, 1983	10.23	3,750
	Mar. 15, 1983	10.14	3,690
	Apr. 13, 1983	12.39	5,670
	July 6, 1983	12.66	5,970
1984	Apr. 14, 1984	14.30	8,570
	May 7, 1984	10.61	4,120
	May 28, 1984	6.40	1,780
	June 23, 1984	14.23	8,450
	July 15, 1984	6.18	1,690

05476750 Des Moines River at Humboldt, Iowa
(Prior to October 1970 published as West Fork Des Moines River)

Location.--Lat 42°43'12", long 94°13'06:, in SE1/4 SW1/4 sec.1, T.91 N., R.29 W., Humboldt County, on left bank 5 ft downstream from First Avenue bridge in city of Humboldt, about 700 ft below dam, 3.2 mi upstream from Indian Creek, 3.9 mi upstream from East Fork Des Moines River, and at mi 334.3.
Drainage area.--2,256 mi².
Gage.--Water-stage recorder. Datum of gage is 1,053.54 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 3, 1966, nonrecording gage at same site and datum.
Flood stage.--8 ft.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 2,800 ft³/s. Only annual peaks are shown prior to 1961.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1940	Apr. 1, 1940	4.4	815
1941	June 15, 1941	6.73	2,730
1942	June 4, 1942	7.32	3,550
1943	June 30, 1943	7.95	4,520
1944	May 20, 1944	10.33	7,300
1945	June 15, 1945	8.35	4,670
1946	May 25, 1946	7.70	3,890
1947	June 23, 1947	12.2	11,000
1948	Feb. 29, 1948	9.59 a	5,540 b
1949	Apr. 3, 1949	7.72	3,890
1950	June 19, 1950	6.88	2,990
1951	Apr. 5, 1951	11.30	8,980
1952	Apr. 11, 1952	9.28	5,870
1953	June 13, 1953	9.64	6,280
1954	June 22, 1954	11.33	9,490

a Affected by ice. b About.

05476750 Des Moines River at Humboldt, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1955	Apr. 26, 1955	6.40	2,450
1956	May 17, 1956	3.91	505
1957	May 31, 1957	4.62	945
1958	July 15, 1958	4.36	770
1959	May 23, 1959	6.67	2,770
1960	Mar. 31, 1960	9.52	6,400
1961	Mar. 29, 1961	11.56	9,280
1962	Apr. 1, 1962	11.12	8,500
	July 10, 1962	7.78	4,040
	Sept. 2, 1962	8.90	5,420
1963	July 23, 1963	6.18	2,320
1964	July 31, 1964	9.42	6,110
	Sept.12, 1964	8.53	4,900
	Sept.23, 1964	7.13	3,240
1965	Apr. 8, 1965	13.90	14,400
	Apr. 13, 1965	13.43	13,600
	May 28, 1965	7.42	3,590
1966	Apr. 2, 1966	6.47	2,590
1967	June 16, 1967	7.44	3,790
1968	Sept.25, 1968	4.33	800
1969	Oct. 29, 1968	7.20	3,500
	Mar. 28, 1969	7.23	3,540
	Apr. 14, 1969	15.40	18,000
	May 23, 1969	6.72	2,870
	July 12, 1969	9.93	6,920
	July 29, 1969	9.62	6,830
1970	May 13, 1970	8.22	4,850
1971	Mar. 17, 1971	8.20	4,770
	Mar. 21, 1971	8.75	5,520
	Apr. 4, 1971	8.25	4,840
	June 9, 1971	8.02	4,410
	July 5, 1971	7.20	3,380
1972	May 3, 1972	6.67	2,840

05476750 Des Moines River at Humboldt, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973	Mar. 5, 1973	7.15	3,350
	Mar. 16, 1973	8.12	4,560
	Mar. 26, 1973	7.61	3,900
	Apr. 3, 1973	6.70	2,850
	Apr. 18, 1973	8.26	4,740
	May 4, 1973	7.34	3,570
	May 9, 1973	6.94	3,120
	May 30, 1973	7.78	4,120
1974	Nov. 23, 1973	7.22	3,340
	June 24, 1974	6.71	2,840
1975	Apr. 18, 1975	--	2,900 b
	Apr. 26, 1975	6.74	2,880
	Apr. 30, 1975	9.10	6,020
	May 13, 1975	6.83	3,140
	June 6, 1975	6.65	2,940
	June 20, 1975	6.91	3,240
	June 25, 1975	6.86	3,180
1976	Mar. 15, 1976	5.92	2,070
1977	Mar. 12, 1977	4.17	636
1978	July 8, 1978	7.53	3,590
1979	Mar. 31, 1979	10.05	7,400
	May 16, 1979	6.82	3,160
	Aug. 14, 1979	6.81	3,000
	Aug. 26, 1979	10.26	7,640
	Sept.16, 1979	6.76	3,040
1980	Nov. 13, 1979	7.12	3,350
	Nov. 24, 1979	6.79	2,990
	Nov. 30, 1979	6.67	2,870
	June 7, 1980	7.02	3,230
	June 15, 1980	8.16	4,550
1981	June 17, 1981	6.45	2,590
1982	Mar. 22, 1982	6.96	3,100
	May 28, 1982	6.94	3,150
	June 9, 1982	6.79	3,000
	July 11, 1982	7.53	3,770

b About.

05476750 Des Moines River at Humboldt, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Oct. 4, 1982	7.09	3,320
	Nov. 13, 1982	6.87	3,110
	Mar. 8, 1983	9.91	7,040
	Apr. 16, 1983	unknown	unknown
	July 3, 1983	11.02	8,820
1984	Mar. 29, 1984	7.35	3,390
	Apr. 17, 1984	11.84	10,400
	May 4, 1984	10.12	7,070
	June 8, 1984	9.60	6,200
	June 14, 1984	10.45	7,630
	June 18, 1984	12.50	11,400
	June 27, 1984	11.34	9,280

05478000 East Fork Des Moines River near Burt, Iowa
(Discontinued September 1974)

Location.--Lat 43°12'38", long 94°10'35", NE1/4 sec.20, T.97 N., R.28 W., Kossuth Co. 30 ft downstream from co. road, 0.8 mi upstream from Buffalo Creek, 2.2 mi northeast of Burt and at mi 389.7 upstream from mouth of Des Moines River.
Drainage area.--462 mi².
Gage.--Water-stage recorder. Datum is 1,114.42 ft NGVD of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--10 ft.
Remarks.--Partial-duration series base before 1962 800 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Mar. 22, 1952	10.88	1,260
	Mar. 31, 1952	11.42	1,680
1953	June 13, 1953	10.36	1,060
1954	June 21, 1954	12.67	3,870
1955	Apr. 26, 1955	9.58	670
1956	Aug. 3, 1956	6.71	244
1957	June 1, 1957	7.97	392
1958	June 4, 1958	9.52	365
1959	May 23, 1959	10.13	675
1960	Apr. 1, 1960	10.29	880
	May 22, 1960	11.72	2,120
1961	Mar. 27, 1961	12.05	2,800
	BASE REVISED TO 500 ft³/s		
1962	Mar. 29, 1962	12.51 a	--
	Apr. 1, 1962	11.86	2,600
	July 21, 1962	11.02	1,050
	Sept. 1, 1962	11.27	1,310
1963	May 12, 1963	9.30	560
	June 11, 1963	10.17	765
	July 6, 1963	11.72 a	1,270 b
	July 22, 1963	11.67	1,720

a Backwater from ice and/or Buffalo Creek. b About.

05478000 East Fork Des Moines River near Burt, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	May 8, 1964	9.86	670
	Sept. 9, 1964	11.75	1,650
	Sept.20 or 21, 1964	--	940
1965	Apr. 6, 1965	14.21	5,000
	Apr. 9, 1965	13.46	4,930
	May 8, 1965	10.95	1,270
	May 27, 1965	10.33	892
	June 7, 1965	10.27	848
1966	Apr. 2, 1966	10.39	866
	June 29, 1966	9.99	610
1967	June 16, 1967	10.14	697
	Aug. 24, 1967	9.37	568
1968	June 28, 1968	9.96 a	572 b
1969	Oct. 19, 1968	11.00	1,050
	Mar. 28, 1969	--	740 b
	Apr. 8, 1969	12.09	3,280
	May 23, 1969	10.26	828
	July 1, 1969	12.91	3,730
	July 10, 1969	12.55	3,000
1970	May 14, 1970	9.64 a	635 b
1971	Feb. 22, 1971	10.69	540 b
	Mar. 17, 1971	11.95 a	1,500 b
	Mar. 31, 1971	11.31	1,740
	June 9, 1971	10.24	856
1972	May 4, 1972	8.68	481
1973	Mar. 5, 1973	10.95 a	1,100 b
	Mar. 26, 1973	9.98	774
	Apr. 17, 1973	10.74	1,150
	May 3, 1973	10.44	996
	May 24, 1973	9.29	582
	May 31, 1973	10.55	980
1974	Nov. 22, 1973	10.52	928
	Mar. 13, 1974	9.61	663
	Apr. 6, 1974	-- a	530 b
	Apr. 15, 1974	-- a	810 b
	May 13, 1974	-- a	600 b
	May 23, 1974	-- a	530 b
	June 11, 1974	-- a	760 b
	June 23, 1974	9.16	552

Discontinued September 1974

a Backwater from ice and/or Buffalo Creek. b About.

05479000 East Fork Des Moines River at Dakota City, Iowa
(Published as "near Hardy", 1940-54)

Location.--Lat 42°43'26", long 94°11'30", in NW1/4 SE1/4 sec.6, T.91 N., R.28 W., Humboldt County, on right bank 50 ft upstream from old mill dam, in city park at east edge of Dakota City, 500 ft upstream from bridge on county highway P56, 3.4 mi upstream from confluence with Des Moines River, and 333.8 mi upstream from mouth of Des Moines River.
Drainage area.--1,308 mi².
Gage.--Water-stage recorder. Datum of gage is 1,038.71 ft National Geodetic Vertical Datum of 1929. Before Oct. 1, 1954, nonrecording gage at site 8 mi upstream at different datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--20 ft.
Remarks.--Flood of June 21, 1954 reached a stage of 24.02 ft (discharge 17,400 ft³/s) at present site. Base for partial-duration series, 1,500 ft³/s, 2,200 ft³/s prior to 1961.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1938	Sept ??, 1938	17.4 a	22,000 b
1940	Aug. 30, 1940	4.8	608
1941	June 15, 1941	9.7	2,300
1942	Nov. 7, 1941	11.39	3,580
1943	July 7, 1943	9.72	2,360
1944	May 23, 1944	12.6	4,680
	June 14, 1944	14.6	9,200
1945	Mar. 11, 1945	10.3	2,720
	Mar. 17, 1945	10.9	3,140
	Apr. 17, 1945	9.6	2,300
	Apr. 23, 1945	10.0	2,520
	May 22, 1945	10.7	3,000
	June 16, 1945	10.7	3,000
	Aug. 15, 1945	13.7	6,820
1946	May 24, 1946	13.36	6,160
1947	Apr. 12, 1947	10.0	2,520
	May 17, 1947	9.4	2,200
	June 23, 1947	15.4	11,800

a Maximum stage known, from information by local residents.
b About.

05479000 East Fork Des Moines River at Dakota City, Iowa --(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1948	Feb. 28, 1948	--	3,860 b
	Mar. 18, 1948	--	3,000 b
1949	Mar. 6, 1949	12.6 c	3,000
	Apr. 1, 1949	11.1	3,290
1950	July 19, 1950	9.6	2,300
1951	Mar. 29, 1951	12.36	4,700
	Apr. 9, 1951	14.95	10,800
	July 1, 1951	12.96	5,600
1952	Apr. 2, 1952	13.00	5,600
	July 8, 1952	10.04	2,540
1953	Aug. 5, 1953	8.96	2,000
1954	June 21, 1954	24.02 d	17,400 d
	BASE REVISED TO 1,500 ft^3/s		
1955	June 9, 1955	11.23	1,640
1956	Mar. 27, 1956	9.60	640 b
1957	May 30, 1957	10.31	1,060
1958	July 14, 1958	10.78	1,360
1959	May 22, 1959	16.97	6,860
1960	Mar. 29, 1960	17.49 c	4,300 b
	May 26, 1960	14.28	4,130
1961	Mar. 4, 1961	--	1,800 b
	Mar. 28, 1961	19.12	9,440
1962	Apr. 1, 1962	20.48	11,400
	July 5, 1962	11.58	1,980
	July 27, 1962	11.32	1,770
	Sept. 2, 1962	15.54	5,260
1963	May 16, 1963	10.90	1,580
	June 2, 1963	11.39	1,890
	June 15, 1963	11.02	1,640
	July 9, 1963	14.83	4,580
	July 25, 1963	12.57	2,740

b About. c Affected by ice. d At present site and datum.

05479000 East Fork Des Moines River at Dakota City, Iowa
--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	July 31, 1964	11.48	1,890
	Sept.13, 1964	14.03	3,780
	Sept.26, 1964	12.43	2,520
1965	Mar. 2, 1965	--	1,600 b
	Apr. 9, 1965	23.13	15,700
	May 26, 1965	12.09	2,370
	Sept.21, 1965	11.70	2,100
1966	Oct. 1, 1965	12.49	2,650
	Feb. 10, 1966	12.67 c	--
	Feb. 14, 1966	12.00	2,310
	Apr. 5, 1966	11.78	2,160
	June 13, 1966	11.78	2,250
1967	June 15, 1967	13.02	3,080
1968	July 1, 1968	10.83	1,570
1969	Oct. 24, 1968	12.58	2,730
	Mar. 27, 1969	16.19	5,970
	Apr. 9, 1969	16.21	5,990
	May 26, 1969	11.07	1,750
	July 4, 1969	15.28	5,040
	July 12, 1969	15.81	5,570
	July 28, 1969	12.83	2,940
1970	May 14, 1970	13.78	3,680
1971	Feb. 21, 1971	--	1,600 b
	Mar. 17, 1971	16.67 c	--
	Mar. 18, 1971	14.94	4,600 b
	Apr. 1, 1971	14.27	4,070
	June 9, 1971	12.27	2,480
	July 4, 1971	11.36	1,870
1972	June 13, 1972	11.28	1,880
	July 18, 1972	10.72	1,530
1973	Mar. 4, 1973	--	3,450 b
	Mar. 8, 1973	--	3,580 b
	Mar. 15, 1973	15.69	5,450
	Mar. 26, 1973	12.39	2,650
	Apr. 19, 1973	14.52	4,370

1973 CONTINUED ON NEXT PAGE

b About. c Affected by ice.

05479000 East Fork Des Moines River at Dakota City, Iowa --(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973 cont.	May 9, 1973	12.84	3,000
	June 2, 1973	12.14	2,460
	July 4, 1973	11.71	2,160
	Sept.30, 1973	10.97	1,680
1974	Nov. 23, 1973	11.99	2,330
	Nov. 26, 1973	12.71	2,840
	Dec. 31, 1973	--	1,500 b
	Apr. 8, 1974	10.72	1,530
	Apr. 18, 1974	11.49	2,020
	May 14, 1974	10.81	1,590
	May 18, 1974	11.10	1,760
	June 4, 1974	12.10	2,540
	June 10, 1974	11.54	2,150
	June 24, 1974	12.02	2,480
1975	Apr. 19, 1975	11.78	2,210
	May 1, 1975	13.98	3,840
	May 12, 1975	11.03	1,720
	June 13, 1975	11.83	2,240
	June 20, 1975	11.80	2,220
	June 25, 1975	11.85	2,260
1976	Mar. 13, 1976	10.02 c	900 b
1977	May 29, 1977	8.96	520 b
1978	June 28, 1978	12.49	2,620
	July 8, 1978	12.47	2,600
	Sept.15, 1978	10.72	1,530
1979	Mar. 22, 1979	--	4,600
	Mar. 31, 1979	17.58	7,810
	July 24, 1979	13.26	3,270
	Aug. 16, 1979	12.86	2,960
	Aug. 25, 1979	21.71	13,300
1980	Apr. 10, 1980	10.63	1,550
	June 7, 1980	--	2,000
	June 15, 1980	12.80	3,060
1981	June 21, 1981	10.76	1,600
	June 24, 1981	18.68	9,270
	July 30, 1981	11.85	2,350
	Sept. 3, 1981	10.86	1,660

b About. c Affected by ice.

05479000 East Fork Des Moines River at Dakota City, Iowa --(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	Mar. 21, 1982	11.38	2,050
	May 20, 1982	12.60	3,220
	May 28, 1982	12.62	3,240
	June 11, 1982	12.39	3,050
	July 11, 1982	12.94	3,330
1983	Oct. 7, 1982	11.47	2,030
	Nov. 16, 1982	12.29	2,560
	Dec. 28, 1982	11.29	1,890
	Mar. 8, 1983	16.63	7,000
	Mar. 17, 1983	14.25	4,510
	Apr. 6, 1983	16.87	7,270
	July 3, 1983	15.64	5,750
1984	Feb. 22, 1984	c	4,600
	Mar. 30, 1984	12.60	2,990
	Apr. 17, 1984	13.17	3,430
	May 4, 1984	16.64	6,800
	June 2, 1984	11.52	2,130
	June 8, 1984	16.58	6,730
	June 18, 1984	19.19	9,740

c Affected by ice.

05480000 Lizard Creek near Clare, Iowa
(Published as "North Lizard Creek near Clare", 1940-54)
(Discontinued December 1981)

Location.--Lat 42°32'35", long 94°20'45", in NE1/4 NE1/4 sec.11, T.89 N., R.30 W., Webster County, on right bank 20 ft downstream from bridge on county highway, 2.3 mi downstream from Drainage ditch 3, 3.0 mi south of Clare, and 8.2 mi upstream from South Lizard Creek.
Drainage area.--257 mi².
Gage.--Water-stage recorder and concrete control. Datum of gage is 1,079.30 ft National Geodetic Vertical Datum of 1929. Before May 6, 1953, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements below 4,500 ft³/s and logarithmic plotting above 4,500 ft³/s.
Flood stage.--9 feet.
Remarks.--Base for partial-duration series, 800 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1940	Aug. 26, 1940	4.8	374
1941	June 14, 1941	5.1	442
1942	June 5, 1942	6.65	1,060
1943	Feb. 22, 1943	7.4	1,440
1944	May 20, 1944	11.11	4,410
	June 13, 1944	9.2	2,640
1945	Mar. 11, 1945	7.42	1,570
	Apr. 24, 1945	6.7	1,270
	May 22, 1945	6.7	1,310
	June 1, 1945	6.8	1,310
1946	May 25, 1946	9.18	2,750
1947	June 19, 1947	6.1	1,030
	June 23, 1947	16.0 a	10,000
	June 30, 1947	8.5	2,170
1948	Feb. 28 1948	7.2	1,370
	Mar. 18, 1948	7.5	1,550
1949	Mar. 5, 1949	--	1,700

a From floodmark.

05480000 Lizard Creek near Clare, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)	
1950	June 25, 1950	5.7	870	
1951	Mar. 28, 1951	10.42	3,620	
	May 2, 1951	8.79	2,390	
	June 18, 1951	7.1	1,430	
	June 26, 1951	5.8	910	
	Aug. 15, 1951	5.9	950	
1952	Mar. 30, 1952	7.15	1,470	
	July 8, 1952	7.11	1,430	
1953	June 28, 1953	6.54	1,190	
	Aug. 4, 1953	5.83	930	
1954	June 11, 1954	11.06	4,150	
	June 20, 1954	13.21	6,210	
	Aug. 27, 1954	7.29	1,530	
1955	Apr. 25, 1955	5.29	660	
1956	May 31, 1956	3.74	147	
1957	May 21, 1957	4.75	399	
1958	June 3, 1958	7.71	1,740	
	July 14, 1958	5.97	860	
1959	June 1, 1959	7.67	1,740	
1960	Mar. 29, 1960	10.01	3,650	
	June 18, 1960	5.86	820	
1961	Mar. 3, 1961	--	800	b
	Mar. 26, 1961	9.08	2,900	
1962	Mar. 28, 1962	9.55	3,360	
	July 3, 1962	6.27	1,080	
	July 5, 1962	7.22	1,630	
	Sept. 1, 1962	11.90	5,400	
1963	May 27, 1963	5.91	870	
	June 3, 1963	5.96	895	
	June 6, 1963	6.15	995	
1964	May 24, 1964	5.29	560	

b About.

05480000 Lizard Creek near Clare, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	Mar. 1, 1965	--	800
	Mar. 17, 1965	--	800
	Apr. 4, 1965	11.61	--
	Apr. 7, 1965	11.10	4,670
	May 26, 1965	5.95	920
	June 5, 1965	5.80	845
	Sept.29, 1965	6.19	1,020
1966	June 12, 1966	--	870 b
1967	June 10, 1967	5.81	850
	June 16, 1967	9.59	3,350
1968	July 29, 1968	3.84	120
1969	Mar. 24, 1969	8.40 c	1,600 b
	Apr. 5, 1969	7.11	1,580
	June 26, 1969	7.13	1,560
	July 28, 1969	6.86	1,370
1970	May 14, 1970	9.47	3,260
1971	Feb. 20, 1971	--	1,300 b
	Mar. 14, 1971	7.64	1,880
	Mar. 28, 1971	6.70	1,330
	June 8, 1971	6.19	1,030
1972	July 18, 1972	6.05	970
	Aug. 7, 1972	7.06	1,460
	Sept.27, 1972	5.72	805
1973	Nov. 3, 1972	5.75	815
	Mar. 2, 1973	10.10 c	2,400 b
	Mar. 11, 1973	--	1,180 b
	Mar. 14, 1973	6.94	1,470
	Mar. 26, 1973	6.10	995
	Apr. 12, 1973	5.77	830
	Apr. 16, 1973	6.68	1,320
	May 8, 1973	5.83	860
	May 29, 1973	6.95	1,480
	Sept.27, 1973	7.97	2,060
1974	Oct. 12, 1973	6.73	1,340
	Nov. 21, 1973	6.57	1,250
	June 23, 1974	6.66	1,280

b About. c Affected by ice.

05480000 Lizard Creek near Clare, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1975	Apr. 29, 1975	8.26	2,300
1976	June 30, 1976	4.15	208
1977	May 5, 1977	6.08	975
1978	June 18, 1978	6.02	815
	July 7, 1978	8.12	1,950
	Sept.15, 1978	7.29	1,650
1979	Mar. 19, 1979	--	876
	Mar. 23, 1979	8.46	2,580
	Mar. 30, 1979	9.51	3,400
	June 27, 1979	8.23	2,070
	July 23, 1979	7.39	1,620
	July 30, 1979	7.21	1,520
	Aug. 23, 1979	8.17	2,030
1980	June 16, 1980	6.52	1,230
1981	May 23, 1981	7.50	1,820

Discontinued December 1981

05480500 Des Moines River at Fort Dodge, Iowa

Location.--Lat 42°30'22", long 94°12'04", in NW1/4 SW1/4 sec.19, T.89 N., R.28 W., Webster County, on right bank 400 ft upstream from Soldier Creek, 1,800 ft downstream from Illinois Central Railraod bridge in Fort Dodge, 2,000 ft downstream from Lizard Creek, and at mi 314.6.
Drainage area.--4,190 mi².
Gage.--Water-stage recorder. Datum of gage is 969.38 ft National Geodetic Vertical Datum of 1929. Apr. 22, 1905, to July 19, 1906, nonrecording at bridge 3,000 ft downstream at different datum. Oct. 18, 1913, to Oct. 20, 1921, June 20 to Sept. 30, 1927, nonrecording, and Oct. 21, 1921, to June 19, 1927, recording, at site 7 mi downstream at Kalo, at different datum. Oct. 1, 1946, to Dec. 7, 1949, nonrecording at bridge 1,800 ft upstream from present site, at present datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--10 ft.
Remarks.--Base for partial-duration series, 6,000 ft³/s. Occasional minor regulation caused by dam 0.8 mi upstream from gage. Base was 8,000 ft³/s prior to 1961.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1905	May 17, 18, 1905	7.0	6,460 a
1906	Mar. 26, 1906	9.9	12,000 b
1914	June 20, 1914	7.4	6,530
1915	Mar. 22, 1915	8.6	9,120
	Mar. 26, 1915	9.1	9,970
	May 30, 1915	14.0	18,500
1916	Mar. 29, 1916	10.2	11,900
1917	Mar. 22, 1917	12.9	17,100
	June 8, 1917	9.8	11,200
1918	June 4, 1918	10.1	11,400
	June 7, 1918	8.8	9,460
1919	Apr. 18, 1919	8.2	8,440
	June 24, 1919	9.2	10,200

a Maximum for period May to September 1905.
b Maximum for period Oct., Nov. 1905 and April to June 1906.

05480500 Des Moines River at Fort Dodge, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1920	July 9, 1920	11.38	14,200
1921	May 28, 1921	7.2	6,600
1922	Apr. 13, 1922	7.5	7,500
1923	Mar. 25, 1923	6.38	4,160
1924	Apr. 5, 1924	4.52	3,320
1925	Mar. 9, 1925	7.6 c	4,200 d
1926	Sept.21, 1926	5.03	3,990
1927	Apr. 22, 1927	8.45	8,870
1947	June 23, 1947	19.62	34,000
1948	Feb. 27, 1948	9.89	13,000
1949	Mar. 6, 1949	8.42	9,250
1950	Mar. 8, 1950	6.70 c	6,850 d
1951	Mar. 28, 1951	10.42	17,200
	Apr. 8, 1951	12.13	22,300
	May 2, 1951	11.28	19,900
	July 1, 1951	7.88	10,800
1952	Apr. 2, 1952	8.75	13,100
	July 8, 1952	7.15	9,100
1953	June 13, 1953	7.14	8,850
1954	June 11, 1954	7.15	9,150
	June 21, 1954	19.28	35,400
1955	Apr. 26, 1955	6.30	6,840
1956	Mar. 28, 1956	4.97	3,400
1957	May 30, 1957	5.42	4,400
1958	July 14, 1958	7.97	7,450
1959	May 22, 1959	9.17	9,680
	May 31, 1959	8.67	8,730

c Affected by ice. d About.

05480500 Des Moines River at Fort Dodge, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1960	Mar. 29, 1960	11.28	16,200
	May 26, 1960	8.81	10,700
	BASE REVISED TO 6,000 ft^3/s		
1961	Mar. 4, 1961	7.20	7,460
	Mar. 28, 1961	12.83	20,500
1962	Apr. 1, 1962	13.34	21,800
	July 6, 1962	7.25	7,690
	Sept. 1, 1962	11.47	17,400
1963	June 3, 1963	6.67	6,310
	July 9, 1963	7.00	7,000
1964	July 31, 1964	8.67	10,700
	Sept.13, 1964	7.66	8,610
1965	Apr. 8, 1965	17.79	35,600
	May 18, 1965	6.76	6,450
	May 26, 1965	8.64	10,800
	June 5, 1965	7.84	8,930
	Sept.28, 1965	7.82	8,770
1966	Oct. 1, 1965	7.02 e	6,930
	Apr. 1, 1966	6.33	5,490
1967	June 16, 1967	9.47	12,600
1968	June 29, 1968	5.16	2,640
1969	Oct. 21, 1968	7.33	7,220
	Mar. 28, 1969	9.54	13,300
	Apr. 15, 1969	12.83	23,000
	July 11, 1969	9.38	12,900
	July 29, 1969	8.75	11,100
1970	May 14, 1970	8.77	11,400
1971	Feb. 19, 1971	10.89 c	10,000 d
	Mar. 15, 1971	9.24	12,700
	Mar. 18, 1971	8.56	11,000
	Mar. 29, 1971	8.25	10,200
	June 9, 1971	7.18	7,600
	July 5, 1971	7.15	7,530

c Affected by ice. d About. e Stage falling.

05480500 Des Moines River at Fort Dodge, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	Aug. 6, 1972	7.46	8,270
1973	Mar. 2, 1973	--	11,100 d
	Mar. 14, 1973	9.33	13,000
	Mar. 26, 1973	7.30	7,890
	Apr. 2, 1973	6.60	6,210
	Apr. 17, 1973	8.26	10,200
	May 4, 1973	6.56	6,210
	May 8, 1973	7.44	8,420
	May 29, 1973	7.51	8,590
	Sept.27, 1973	6.97	7,240
	Sept.30, 1973	6.68	6,550
1974	Nov. 23, 1973	7.28	7,910
	June 23, 1974	7.50	8,490
1975	Apr. 29, 1975	9.05	12,200
	June 25, 1975	8.17	10,000
1976	Mar. 15, 1976	4.97	2,640
1977	May 4, 1977	5.41	3,520
1978	June 28, 1978	6.87	6,520
	July 8, 1978	7.97	9,160
	Sept.15, 1978	6.60	6,210
1979	Mar. 19, 1979	9.07	12,300
	Mar. 30, 1979	11.92	20,000
	July 24, 1979	7.27	7,820
	July 30, 1979	6.61	6,230
	Aug. 25,	12.69	22,200
1980	June 7, 1980	6.62	6,230
	June 15, 1980	9.32	12,920
1981	June 24, 1981	9.32	13,200
	Aug. 3, 1981	6.56	6,380
1982	Feb. 23, 1982	10.51 c	--
	Mar. 20, 1982	7.50	8,490
	Mar. 20, 1982	7.50	8,490
	Apr. 16, 1982	6.62	6,520
	May 20, 1982	7.24	7,770
	May 26, 1982	7.67	9.040
	June 9, 1982	6.56	6,380
	July 10, 1982	8.03	9,920

c Affected by ice. d About.

05480500 Des Moines River at Fort Dodge, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Oct. 4, 1982	7.07	7,600
	Nov. 13, 1982	6.85	7,290
	Dec. 28, 1982	6.41	6,230
	Mar. 7, 1983	11.22	18,900
	Mar. 17, 1983	9.35	13,800
	Apr. 17, 1983	11.45	19,500
	June 22, 1983	8.86	11,800
	July 3, 1983	11.76	19,600
1984	Feb. 18, 1984	12.79	c
	Feb. 23, 1984	8.42	11,300
	Mar. 28, 1984	7.18	8,110
	Apr. 5, 1984	7.49	8,870
	Apr. 10, 1984	9.20	13,400
	Apr. 17, 1984	9.89	15,300
	Apr. 24, 1984	9.41	14,000
	Apr. 28, 1984	9.25	13,600
	May 2, 1984	11.32	19,400
	May 4, 1984	11.36	19,300
	May 23, 1984	6.65	6,330
	May 30, 1984	6.89	6,910
	June 8, 1984	12.13	20,600
	June 14, 1984	12.83	22,600
	June 19, 1984	14.94	27,700
	June 27, 1984	11.16	17,900

c Affected by ice.

05480930 White Fox Creek at Clarion, Iowa

Location.--Lat 42°44'. long 93°42' in NW1/4 sec. 5, T.91 N., R.24 W., Wright County, at bridge on State Highway 3, 1.5 mi east of Clarion.
Drainage area.--13.3 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	--	a	<81
1967	June 9, 1967	93.01	b
1968	--	a	<81
1969	--	a	<81
1970	--	a	<81
1971	Mar. 16, 1971	89.57	b
1972	--	a	<81
1973	Mar. 10, 1973	86.82	110
1974	--	a	<81
1975	--	a	<81
1976	--	a	<81
1977	--	a	<81
1978	--	a	<81
1979	July 14, 1979	90.23	480
1980	June 15, 1980	90.55	370
1981	June 24, 1981	91.81	b
1982	Mar. 20, 1982	86.89	108

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05480930 White Fox Creek at Clarion, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Sep. 20, 1983	90.53	380
1984	June 16, 1984	93.11	b

b Discharge not determined.

05481000 Boone River near Webster City, Iowa

Location.--Lat 42°26'01", long 93°48'12", in NW1/4 SE1/4 sec.18, T.88 N., R.25 W., Hamilton County, on right bank 100 ft upstream from bridge on State Highway 17, 1.0 mi southeast of junction of U.S. Highway 20 and State Highway 17 in Webster City, and 3.2 mi downstream from Brewers Creek.
Drainage area.--844 mi².
Gage.--Water-stage recorder and concrete control. Datum of gage is 989.57 ft National Geodetic Vertical Datum of 1929. Prior to June 26, 1940, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--10 ft.
Remarks.--Base for partial-duration series, 2,200 ft³/s. Base was 2,500 ft³/s prior to 1961.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1918	June 10, 1918	19.1 a	21,500 b
1932	June 18, 1932	16.0	15,000
1940	Aug. 15, 1940	4.40	740 c
1941	June 3, 1941	5.4	1,500
1942	June 7, 1942	6.7	2,620
	June 30, 1942	7.52	3,060
1943	Mar. 16, 1943	6.71	2,410
1944	May 20, 1944	11.4	7,090
	June 14, 1944	13.70	10,200
1945	Mar. 13, 1945	9.26	4,820
	Apr. 17, 1945	7.42	3,130
	Apr. 24, 1945	9.18	4,730
	May 24, 1945	7.44	3,220
	June 2, 1945	9.21	4,810
	June 10, 1945	7.02	2,810
	Aug. 16, 1945	11.51	7,200
1946	Feb. 1946	10.1 d	5,340 b
	Mar. 13, 1946	7.47	3,150
	May 26, 1946	10.67	6,730

a Maximum stage known since 1896, from floodmarks, from information by local resident. b About.
c Maximum for period March to September 1940.
d Affected by ice.

05481000 Boone River near Webster City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1947	June 13, 1947	8.02	3,780
	June 18, 1947	8.05	3,800
	June 25, 1947	12.75	9,340
	July 1, 1947	9.52	5,250
1948	Feb. 28, 1948	8.4 d	2,600 b
	Mar. 19, 1948	8.40	4,160
1949	Mar. 7, 1949	8.24	3,980
	Mar. 28, 1949	6.90	2,820
1950	Mar. 7, 1950	9.25	5,000
	June 18, 1950	8.10	3,890
	June 24, 1950	7.10	2,990
1951	Feb. 27, 1951	9.2	4,950
	Mar. 6, 1951	6.60	2,580
	Mar. 29, 1951	13.00	9,800
	Apr. 7, 1951	11.00	7,070
	Apr. 25, 1951	6.70	2,510
	May 2, 1951	9.85	5,630
	June 3, 1951	7.30	3,030
	June 15, 1951	8.08	3,830
	June 28, 1951	13.37	10,400
1952	Apr. 1, 1952	7.65	3,330
	July 9, 1952	8.10	3,830
	July 15, 1952	7.10	2,840
1953	May 1, 1953	5.72	1,760
1954	June 10, 1954	7.72	3,450
	June 22, 1954	18.55	20,300
	Aug. 27, 1954	7.04	2,790
1955	July 6, 1955	11.14	7,190
1956	May 30, 1956	4.32	890
1957	June 16, 1957	7.52	3,230
1958	July 15, 1958	9.47	5,300
1959	May 24, 1959	7.50	3,300
	June 1, 1959	7.40	3,210
1960	Mar. 29, 1960	12.10	8,960

b About. d Affected by ice.

05481000 Boone River near Webster City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
	BASE REVISED TO 2,200 ft^3/s		
1961	Mar. 4, 1961	--	2,300
	Mar. 28, 1961	9.80	5,860
1962	Mar. 31, 1962	13.15	10,600
	Sept. 3, 1962	9.56	5,620
1963	Apr. 29, 1963	7.52	3,520
	June 7, 1963	6.06	2,220
	July 6, 1963	6.19	2,300
1964	Aug. 1, 1964	7.77	3,820
1965	Mar. 1, 1965	--	6,600
	Apr. 6, 1965	15.91	15,200
	May 27, 1965	7.91	4,010
	June 3, 1965	8.02	4,100
	June 6, 1965	8.12	4,060
	Sept.22, 1965	11.48	8,060
	Sept.29, 1965	10.11	6,240
1966	Oct. 1, 1965	9.59 e	5,610
	June 15, 1966	5.71	2,140
1967	June 10, 1967	12.64	9,840
	June 16, 1967	7.90	4,040
	June 29, 1967	6.03	2,380
1968	July 17, 1968	6.83 f	3,040
1969	Oct. 19, 1968	6.35	2,600
	Mar. 20, 1969	8.21	4,280
	Mar. 25, 1969	11.55	8,170
	Apr. 6, 1969	7.30	3,460
	Apr. 18, 1969	6.12	2,400
	June 29, 1969	11.14 f	7,430
	July 10, 1969	9.09	4,970
	July 26, 1969	6.45	2,590
1970	May 16, 1970	9.83	5,950
1971	Feb. 22, 1971	--	2,700 b
	Mar. 16, 1971	8.48	4,660
	Apr. 1, 1971	6.99	3,090
	July 6, 1971	7.64	3,680
1972	May 6, 1972	6.11	2,350
	June 6, 1972	6.85	2,960
	Aug. 6, 1972	7.70	3,730

b About. e Falling stage. f From floodmark.

05481000 Boone River near Webster City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973	Nov. 8, 1972	5.93	2,200
	Dec. 30, 1972	--	2,300 b
	Mar. 7, 1973	8.39	3,900
	Mar. 14, 1973	9.68	5,270
	Mar. 26, 1973	6.63	2,460
	Apr. 16, 1973	8.82	4,700
	May 3, 1973	6.45	2,460
	May 8, 1973	7.97	3,800
	May 29, 1973	6.70	2,680
	Sept.30, 1973	7.13	3,220
1974	Oct. 12, 1974	6.48	2,640
	Feb. 17, 1974	--	2,800 b
	Mar. 3, 1974	7.56	3,640
	June 22, 1974	8.79	4,860
1975	Mar. 19, 1975	6.03	2,280
	Apr. 29, 1975	9.45	5,810
	June 12, 1975	6.73	3,080
	June 18, 1975	5.97	2,440
1976	May 23, 1976	5.19 f	1,730
1977	Aug. 16, 1977	5.46	1,760
1978	June 18, 1978	7.43	3,490
1979	Mar. 19, 1979	10.07	6,710
	Mar. 23, 1979	9.63	6,180
	Mar. 30, 1979	10.38	7,110
	July 26, 1979	--	3,300 b
	Aug 12, 1979	6.89	3,270
	Aug. 25, 1979	11.57	8,760
1980	June 16, 1980	8.14	4,530
1981	June 26, 1981	13.71	10,300
1982	Mar. 20, 1982	7.27	3,570
	Apr. 17, 1982	5.96	2,410
	May 15, 1982	8.57	4,880
	May 22, 1982	6.71	3,060
	May 27, 1982	8.19	4,520
	July 11, 1982	9.79	6,470
	July 18, 1982	5.89	2,360

b About. f From floodmark.

05481000 Boone River near Webster City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Dec. 28, 1982	6.97	3,290
	Feb. 20, 1983	9.08	5,600
	Mar. 8, 1983	8.98	5,480
	Mar. 19, 1983	7.03	3,380
	Apr. 2, 1983	6.24	2,650
	Apr. 12, 1983	6.56	2,930
	May 7, 1983	6.15	2,560
	May 20, 1983	6.07	2,470
	June 22, 1983	6.57	2,920
	July 2, 1983	13.98	12,500
	Sep. 21, 1983	5.89	2,310
1984	Feb. 18, 1984	9.91	6,160
	Feb. 23, 1984	7.93	4,260
	Apr. 14, 1984	6.09	2,530
	May 1, 1984	11.07	8,200
	June 10, 1984	12.17	8,850
	June 15, 1984	12.21	8,910
	June 18, 1984	13.95	11,300

05481300 Des Moines River near Stratford, Iowa
(Published as 05481500 Des Moines River nr Boone, Iowa, 1920-67)

Location.--Lat 42°15'04", long 93°59'52", in NW1/4 NE1/4 sec.21, T.86 N., R.27 W., Webster County, on right bank 6 ft downstream from bridge on State Highway 175, 0.1 mi downstream from Skillet Creek, 4.0 mi southwest of Stratford, 7.3 mi downstream from Boone River and at mi 276.7.
Drainage area.--5,452 mi².
Gage.--Water-stage recorder. Datum of gage is 894.00 ft National Geodetic Vertical Datum of 1929. Prior to May 1, 1920, nonrecording gage 16.6 mi downstream at datum 23.49 ft lower. Oct. 9, 1924, to Jan. 10, 1933, nonrecording gage 17.6 mi downstream at datum 28.53 ft lower. Jan. 11, 1933, to Sept. 30, 1934, nonrecording gage 17.9 mi downstream at datum 22.25 ft lower. Oct. 1, 1934, to Feb. 6, 1935, nonrecording gage and Feb. 7, 1935, to Sept. 30, 1967, water-stage recorder 17.9 mi downstream at datum 21.84 ft lower.
Flood stage.--14 ft.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 7,000 ft³/s. Peak base prior to 1968 was 11,000 ft³/s. Only annual peaks are shown prior to 1935. Occasional minor regulation caused by dam at Fort Dodge.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1903	May 30, 1903	25.4	43,600
1905	May 17, 1905	13.3	13,100
1906	Mar. 29, 1906	15.1	16,200
1907	July 13, 1907	17.2	19,800
1908	June 23, 1908	20.2	26,200
1909	June 29, 1909	17.6	20,400
1910	Mar. 9, 1910	13.4	12,400
1911	Feb. 17, 1911	7.6 a	4,200 b
1912	Mar. 30, 1912	20.9	27,000
1913	May 23, 1913	13.8	12,600
1914	June 18, 1914	10.1	6,880

a Affected by ice. b About.

05481300 Des Moines River near Stratford, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1915	May 31, 1915	22.8	31,400
1916	Mar. 27, 1916	15.6	15,300
1917	Mar. 24, 1917	20.2	24,000
1918	June 6, 1918	20.5	31,400
1919	June 22, 1919	14.9	13,300
1920	July 11, 1920	13.5	16,900
1921	May 30, 1921	9.4	10,400
1922	Apr. 14, 1922	9.9	11,200
1923	Mar. 28, 1923	6.6	6,520
1924	Mar. 30, 1924	7.0	7,350
1925	June 18, 1925	8.8	4,280
1926	Oct. 4, 1925	10.2	6,180
1927	Apr. 18, 1927	13.0	10,100
1928	Aug. 28, 1928	9.9	5,560
1929	Mar. 17, 1929	21.0	24,200
1931	Sept 30, 1931	7.8	2,930
1933	Apr. 2, 1933	17.4	29,100
1934	Apr. 6, 1934	2.9	4,420
1935	Mar. 6, 1935	8.0	11,300
	June 26, 1935	11.3	17,000
1936	Mar. 12, 1936	8.8	12,600
1937	Mar. 7, 1937	9.6	14,000
	June 16, 1937	11.9	18,100
1938	Sept.13, 1938	8.8	12,600
	Sept.18, 1938	16.0	24,500
1939	Mar. 15, 1939	9.0	13,100
1940	Aug. 27, 1940	3.4	5,410

05481300 Des Moines River near Stratford, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1941	June 16, 1941	4.8	7,040
1942	Nov. 8, 1941	6.0	9,200
1943	Feb. 25, 1943	5.6	8,710
1944	May 22, 1944	17.3	30,000
	June 15, 1944	16.3	27,300
1945	Mar. 13, 1945	9.8	14,700
	Apr. 25, 1945	10.0	15,100
	May 24, 1945	9.2	13,300
	June 2, 1945	11.2	16,500
	Aug. 18, 1945	9.6	13,800
1946	May 27, 1946	11.4	16,800
1947	June 14, 1947	8.3	11,800
	June 20, 1947	8.0	11,400
	June 24, 1947	19.8	37,100
	July 1, 1947	12.6	19,000
1948	Feb. 28, 1948	8.5	12,200
	Mar. 20, 1948	9.4	13,500
1949	Mar. 7, 1949	9.5	14,500
	Mar. 28, 1949	7.9	11,900
1950	Mar. 7, 1950	7.5 a	9,800 b
1951	Mar. 30, 1951	16.82	28,200
	Apr. 9, 1951	16.44	27,200
	May 3, 1951	13.82	21,800
	June 4, 1951	7.52	11,300
	June 29, 1951	11.00	16,900
1952	Apr. 2, 1952	10.78	16,600
	Apr. 15, 1952	7.44	11,100
	July 10, 1952	8.68	13,200
1953	June 15, 1953	6.03	9,080
1954	June 11, 1954	10.50	16,200
	June 22, 1954	25.35	57,400
	Aug. 27, 1954	8.97	13,800
1955	July 10, 1955	4.10	6,390
1956	May 31, 1956	1.11	1,550

a Affected by ice. b About.

05481300 Des Moines River near Stratford, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1957	June 16, 1957	5.35	8,300
1958	July 16, 1958	6.22	9,500
1959	June 1, 1959	8.91	13,200
1960	Mar. 31, 1960	17.08	29,800
	May 27, 1960	8.00	11,800
1961	Mar. 29, 1961	15.47	26,200
1962	Apr. 2, 1962	17.04	30,000
	Sept. 3, 1962	13.52	21,600
1963	Apr. 30, 1963	5.12	7,530
1964	Aug. 2, 1964	6.18	8,980
1965	Apr. 9, 1965	22.89	51,600
	May 27, 1965	10.14	15,500
	June 6, 1965	8.52	12,400
	Sept.22, 1965	9.41	14,100
	Sept.30, 1965	10.32	15,800
1966	Oct. 1, 1965	10.25 c	15,700
	June 14, 1966	4.79	7,150
1967	June 12, 1967	11.11	16,900
	June 17, 1967	11.40	17,400
	PEAK BASE REVISED TO 7,000 ft^3/s		
1968	July 19, 1968	8.51	3,910
1969	Oct. 21, 1968	12.18	8,470
	Mar. 24, 1969	18.80	21,000
	Apr. 16, 1969	20.22	24,600
	June 7, 1969	11.11	7,220
	June 30, 1969	19.31	22,200
	July 9, 1969	19.00	21,500
	July 29, 1969	15.88	14,700
1970	May 16, 1970	16.39	15,500
1971	Feb. 20, 1971	--	8,700 b
	Mar. 18, 1971	15.98	14,800
	Apr. 1, 1971	15.42	13,800
	June 9, 1971	12.65	9,420
	July 6, 1971	13.72	11,000

b About. c Stage falling.

05481300 Des Moines River near Stratford, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	May 6, 1972	12.72	9,020
	June 6, 1972	11.50	7,340
	July 18, 1972	12.10	8,280
	Aug. 2, 1972	12.34	8,630
	Aug. 7, 1972	16.30	15,000
1973	Nov. 8, 1972	11.50	7,340
	Mar. 1, 1973	--	8,560 b
	Mar. 7, 1973	--	13,900 b
	Mar. 15, 1973	18.76	20,200
	Mar. 27, 1973	14.12	11,600
	Apr. 2, 1973	12.27	8,530
	Apr. 18, 1973	17.31	17,600
	May 4, 1973	12.92	9,680
	May 9, 1973	16.13	15,000
	May 30, 1973	14.77	12,400
	June 5, 1973	11.70	7,800
	Sept.30, 1973	14.41	11,600
1974	Oct. 12, 1973	13.19	10,000
	Nov. 23, 1973	13.25	10,100
	Apr. 21, 1974	11.88	8,020
	May 14, 1974	11.26	7,160
	May 19, 1974	12.03	8,240
	June 10, 1974	11.75	7,830
	June 23, 1974	15.38	13,800
1975	Apr. 20, 1975	11.60	7,410
	Apr. 24, 1975	11.50	7,280
	Apr. 30, 1975	18.28	19,400
	May 13, 1975	11.62	7,440
	June 12, 1975	13.70	10,600
	June 20, 1975	12.59	8,860
	June 25, 1975	19.36	22,400
1976	May 24, 1976	10.22	5,810
1977	May 6, 1977	9.02	4,240
1978	June 19, 1978	11.55	7,250
	July 9, 1978	13.86	10,700
1979	Mar. 31, 1979	21.59	28,000
	May 20, 1979	11.53	7,220
	July 24, 1979	13.18	9,640
	July 31, 1979	12.64	8,830
	Aug. 26, 1979	23.22	29,600

b About.

05481300 Des Moines River near Stratford, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)
1980	June 8, 1980	12.04		7,630
	June 16, 1980	16.36		14,500
1981	June 27, 1981	18.32		19,000
1982	Mar. 21, 1982	14.65		12,000
	Apr. 17, 1982	12.35		8,400
	May 16, 1982	14.95		12,100
	May 27, 1982	16.89		15,500
	June 10, 1982	12.09		7,730
	July 12, 1982	16.79		15,300
	July 18, 1982	13.51		9,800
1983	Nov. 14, 1982	12.68		8,830
	Dec. 7, 1982	11.46		7,030
	Dec. 28, 1983	14.28	d	11,300
	Mar. 8, 1983	20.33		24,300
	Mar. 18, 1983	17.06		16,600
	Apr. 17, 1983	20.35		24,300
	May 8, 1983	15.35		13,300
	May 20, 1983	14.31		11,500
	June 22, 1983	16.13		14,800
	July 3, 1983	22.22		29,200
1984	Feb. 17, 1984	a		18,000
	Feb. 24, 1984	16.21		15,200
	Mar. 29, 1984	13.07		9,700
	Apr. 5, 1984	unknown		11,800
	Apr. 15, 1984	17.65		18,100
	May 1, 1984	21.10		27,200
	May 28, 1984	13.36		10,300
	June 9, 1984	19.18		21,900
	June 15, 1984	22.33		30,800
	June 19, 1984	24.08		36,300
	July 10, 1984	11.87		7,760
	July 20, 1984	11.54		7,540

a Affected by ice.
d Peak stage did not reach bottom of gage.

05481510 Bluff Creek at Pilot Mound, Iowa

Location.--Lat 42°10', long 94°01', in NW1/4 sec.20, T.85 N., R.27 W., Boone County, at bridge on State Highway 329, at northwest edge of Pilot Mound.
Drainage area.--23.5 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	--	a	<250
1967	--	a	<250
1968	--	a	<250
1969	Mar. 19, 1969	84.55	325
1970	--	a	<250
1971	Feb. 18, 1971	85.55 c	195
1972	--	a	<250
1973	Sept.26, 1973	85.46	610
1974	--	a	<250
1975	Apr. 8, 1975	84.26	<250
1976	--	a	<250
1977	Aug. 16, 1977	84.97	410
1978	--	a	<250
1979	Mar. 10, 1979	86.77	b
1980	May 30, 1980	84.23	275
1981	--	a	<250
1982	June 13, 1982	85.05	430

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

05481510 Bluff Creek at Pilot Mound, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Feb. 19, 1983	84.52	335
1984	June 13, 1984	88.49	980

05481650 Des Moines River near Saylorville, Iowa

Location.--Lat 41°40'50", long 93°40'07", near center of sec.5, T.79 N., R.24 W., Polk County, on downstream side of county highway F42 bridge, 2.0 mi west of Saylorville, 2.4 mi upstream from Beaver Creek, and at mi 211.6.
Drainage area.--5,841 mi².
Gage.--Water-stage recorder. Datum is 787.42 ft National Geodetic Vertical Datum of 1929 (by Corps of Engineers). Prior to Aug. 6, 1970, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--13 ft.
Remarks.--Base for partial-duration series, 8,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1954	June 24, 1954	24.5 a	60,000
1962	Apr. 3, 1962	21.10	31,000
	July 8, 1962	14.25	9,690
	July 15, 1962	13.56	8,720
	Sept. 5, 1962	19.10	21,800
1963	May 1, 1963	13.20	8,100
1964	Sept.15, 1965	13.31	8,250
1965	Apr. 10, 1965	24.02	47,400
	May 29, 1965	18.00	19,100
	June 5, 1965	16.66	15,200
	Sept.24, 1965	16.48	14,800
1966	Oct. 2, 1965	17.35	17,200
	June 12, 1966	16.79	15,900
1967	June 13, 1967	18.70	21,000
	June 19, 1967	18.50	19,600
1968	June 30, 1968	10.04	4,550
1969	Mar. 27, 1969	19.25	21,800
	Apr. 10, 1969	17.87	16,600
	Apr. 18, 1969	20.15	23,800
	July 2, 1969	19.41	20,700
	July 11, 1969	19.48	21,000
	July 31, 1969	16.85	14,100
1970	May 18, 1970	17.30	14,000

a Maximum stage known since at least 1893, from floodmarks.

05481650 Des Moines River near Saylorville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Feb. 23, 1971	--	8,500 c
	Mar. 17, 1971	16.75 b	13,900 c
	Apr. 2, 1971	16.42	13,700
	June 11, 1971	13.46	8,870
	July 7, 1971	14.17	9,880
1972	May 7, 1972	13.81	8,960
	Aug. 3, 1962	13.40	8,460
	Aug. 8, 1972	16.00	12,300
1973	Mar. 16, 1973	19.10	21,400
	Mar. 28, 1973	15.77	12,300
	Apr. 18, 1973	18.87	19,700
	May 10, 1973	17.79	16,500
	May 31, 1973	16.23	12,900
1974	Oct. 1, 1973	15.91	12,500
	Oct. 13, 1973	15.52	11,800
	Nov. 24, 1973	14.51	9,940
	Mar. 4, 1974	14.55	9,680
	Apr. 22, 1974	14.22	9,210
	May 14, 1974	14.15	9,120
	May 17, 1974	14.35	9,390
	May 19, 1974	17.43	15,600
	June 10, 1974	15.91	12,100
	June 25, 1974	16.66	13,600
1975	May 1, 1975	18.53	19,100
	June 14, 1975	15.40	11,500
	June 27, 1975	18.44	18,800
1976	May 26, 1976	10.53	4,820
1977	Sept.14, 1977	6.67	1,070
1978	Mar. 20, 1978	12.96	7,850
1979	Apr. 6, 1979	18.45	18,800
1980	June 19, 1980	15.56	12,000
1981	June 30, 1981	15.36	12,500
1982	May 20, 1982	15.27	12,200
1983	Apr. 28, 1983	17.06	16,900
1984	June 22, 1984	20.72	30,100

b Affected by ice. c About.

05481690 West Beaver Creek at Grand Junction, Iowa

Location.--Lat 42°02', long 94°13', in NE1/4 sec.3, T.83 N., R.29 W., Greene County, at bridge on U.S. Highway 30, near east edge of Grand Junction.
Drainage area.--12.6 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 12, 1966	87.50	b
1967	June 13, 1967	87.50	b
1968	June 25, 1968	87.35	270
1969	--	a	<250
1970	--	a	<250
1971	Feb. 19, 1971	87.47 c	105
1972	Aug. 1, 1972	86.85	220
1973	May 7, 1973	86.90	234
1974	May 28, 1974	87.57	b
1975	--	a	<71
1976	--	a	<71
1977	--	a	<71
1978	Sept.12, 1978	86.39	183
1979	June 27, 1979	89.51	b
1980	--	a	<71
1981	--	a	<71
1982	May 27, 1982	87.01	b

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

05481690 West Beaver Creek at Grand Junction, Iowa
--(Continued)--

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	June 29, 1983	87.27	250 d
1984	Apr. 25, 1984	86.21	168

d Discharge revised from that previously published.

05481950 Beaver Creek near Grimes, Iowa

Location.--Lat 41°41'18", long 93°44'08", in SW1/4 SW1/4 sec.35, T.80 N., R.25 W., Polk County, on right bank 6 ft upstream from Northwest 70th Avenue Bridge, 0.5 mi downstream from Little Beaver Creek, 2.5 mi east of Grimes and 6 mi upstream from the mouth.
Drainage area.--358 mi².
Gage.--Water-stage recorder and concrete and steel sheeting broad-crested control. Datum of gage is 806.98 ft National Geodetic Vertical Datum of 1929. Prior to Aug. 31, 1966, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial duration series, 1,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1960	May 7, 1960	11.90	2,640
	May 26, 1960	14.05	5,480
1961	June 8, 1961	11.02	1,870
1962	Oct. 1, 1961	11.25	2,010
	Mar. 25, 1962	11.76	2,500
	May 30, 1962	12.90	3,780
1963	May 14, 1963	10.35	1,540
	Aug. 7, 1963	11.80	2,540
1964	May 10, 1964	11.25	2,010
	June 23, 1964	11.70	1,940
1965	Mar. 6, 1965	13.10	2,800 b
	Mar. 18, 1965	12.82	3,000 b
	Apr. 2, 1965	13.25	4,230
1966	June 10, 1966	11.56	2,300
	June 13, 1966	14.04	5,470
1967	June 10, 1967	13.11	4,000
	June 18, 1967	11.87	2,530
	June 30, 1967	10.43	1,570
1968	June 28, 1968	11.24	2,000
1969	Mar. 19, 1969	13.04	4,050
	Mar. 26, 1969	11.15	2,060

b About.

05481950 Beaver Creek near Grimes, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	May 15, 1970	12.97	3,810
1971	Feb. 20, 1971	13.35 a	1,900 b
1972	Aug. 4, 1972	8.70	1,080
1973	Feb. 2, 1973	--	2,500 b
	Mar. 12, 1973	10.06	1,670
	Apr. 2, 1973	9.63	1,700
	Apr. 17, 1973	12.94	4,130
	May 8, 1973	11.16	2,530
	July 3, 1973	10.79	2,420
	Sept.29, 1973	10.47	1,990
1974	Oct. 12, 1973	11.79	2,950
	May 19, 1974	14.69	7,340
	May 30, 1974	8.84	1,500
	June 9, 1974	12.45	3,940
1975	Mar. 18, 1975	11.61 a	2,500 b
	June 19, 1975	10.07	2,060
1976	Apr. 18, 1976	9.62	1,960
	Apr. 24, 1976	9.21	1,760
	June 16, 1976	8.78	1,520
1977	Aug. 28, 1977	7.81	852
1978	Mar. 21, 1978	11.38	2,980
	Apr. 19, 1978	11.27	2,910
	Sept.21, 1978	9.47	1,880
1979	Mar. 20, 1979	13.88	4,700
	July 12, 1979	8.40	1,520
1980	June 4, 1980	9.02	1,730
	June 5, 1980	8.87	1,660
1981	Aug. 14, 1981	7.71	1,140
1982	Feb. 24, 1982	a	1,720
	Mar. 21, 1982	9.46	1,980
	May 18, 1982	9.88	1,990
	May 22, 1982	10.28	2,200
	May 28, 1982	11.32	2,780
	June 16, 1982	10.97	2,580
	June 18, 1982	8.98	1,550

a Affected by ice. b About.

05481950 Beaver Creek near Grimes, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Mar. 8, 1983	10.98	2,590
	Mar. 29, 1983	10.87	2,640
	Apr. 14, 1983	10.30	2,320
	May 7, 1983	8.79	1,550
	May 20, 1983	9.98	2,150
	June 28, 1983	11.86	2,880
	June 29, 1983	12.41	3,130
	July 2, 1983	11.47	2,580
1984	May 2, 1984	11.76	3,220
	May 30, 1984	10.24	2,290
	June 9, 1984	9.95	2,040
	June 15, 1984	11.76	3,040
	June 17, 1984	11.05	2,630

05482000 Des Moines River at Des Moines, Iowa
(Discontinued Sept. 30, 1961)

Location.--Lat 41°36'45", long 93°37'15", in NE1/4 NE1/4 sec.34, T.79 N., R.24 W., Polk Co. on right bank 5 ft upstream from 2nd Ave bridge in Des Moines, 1.8 mi upstream from center St dam, 2.8 mi upstream from Raccoon River, and at mi 204.3.
Drainage area.--6,245 mi².
Gage.--Water-stage recorder and multiple-arch dam. Datum of gage is 773.68 ft NGVD of 1929 and city datum. Prior to Aug. 21, 1941, nonrecording or recording gages at several sites within 3 mi of present site at various datums.
Stage-discharge relation.--Defined by current-meter measurements for present gage location. Discharge for certain peaks prior to 1933 computed from study of backwater effects available for those peaks only; other peak discharges could not be computed.
Flood stage.--23 ft.
Remarks.--Base for partial-duration series, 10,000 ft³/s. Gage heights before 1934 are at locations below Center St Dam, at about same datum. Gage heights 1936-41 computed for present gage from readings at Center St Dam. Only annual peaks are shown prior to 1944.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1893	May 12, 1893	9.8	--
1894	Mar. 6, 1894	3.6	--

1897	Mar. 23, 1897	16.0	--
1898	June 11, 1898	7.9	--
1899	Apr. 11, 1899	9.1	--
1900	Mar. 13, 1900	6.3	--
1901	Mar. 20, 1901	9.4	--
1902	July 10, 1902	20.10	32,900
1903	May 31, 1903	27.3	42,000
1904	June 4, 1904	7.9	--
1905	May 19, 1905	9.6	--
1906	Mar. 30, 1906	10.80	13,700
1907	July 15, 1907	11.6	--

05482000 Des Moines River at Des Moines, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1908	June 25, 1908	14.9	--
1909	July 9, 1909	14.6	--
1910	Mar. 8, 1910	11.5	--
1911	Nov. 18, 1910	11.9	--
1912	Apr. 1, 1912	17.1	--
1913	May 16, 1913	10.8	--
1914	Sept.17, 1914	8.3	--
1915	June 1, 1915	16.0	29,000
1916	Mar. 28, 1916	10.1	17,200
1917	June 10, 1917	16.2	26,800
1918	June 7, 1918	16.5	27,300
1919	Apr. 25, 1919	11.2	16,900
1920	July 12, 1920	10.1	18,700
1921	Feb. 18, 1921	8.5 a	10,700 b
1922	Apr. 13, 1922	9.6	12,000
1923	Mar. 28, 1923	8.2	8,000
1924	Mar. 31, 1924	8.3	7,570
1925	June 18, 1925	5.1	4,920
1926	Sept.20, 1926	13.1	12,000
1927	Feb. 7, 1927	8.4	12,800
1928	Aug. 27, 1928	5.7	5,700
1929	Mar. 18, 1929	16.10	23,300
1930	June 16, 1930	5.9	6,140
1931	Sept.28, 1931	3.5	2,290
1932	Mar. 5, 1932	14.62	28,500

a Affected by ice. b About.

05482000 Des Moines River at Des Moines, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1933	Apr. 4, 1933	16.10	30,600
1934	Apr. 7, 1934	4.40	5,370
1935	July 3, 1935	13.3	17,600
1936	Mar. 13, 1936	11.23	--
	Mar. 14, 1936	--	13,600
1937	Mar. 7, 1937	13.2	14,400
	June 18, 1937	--	15,800
1938	Sept.20, 1938	14.70	24,800
1939	Mar. 16, 1939	4.00	13,400
1940	Aug. 28, 1940	3.00	6,810
1941	June 16, 1941	3.33	8,100
1942	Nov. 10, 1941	17.1	9,330
1943	Feb. 24, 1943	19.02 a	9,500 b
1944	May 23, 1944	24.4	34,000
	June 17, 1944	23.4	29,100
1945	Mar. 18, 1945	19.5	15,500
	Apr. 19, 1945	18.5	12,500
	Apr. 27, 1945	19.5	15,400
	May 25, 1945	19.6	15,800
	June 4, 1945	20.4	18,700
	Aug. 20, 1945	18.3	12,100
1946	Mar. 16, 1946	18.0	10,900
	Mar. 29, 1946	19.78	16,900
	June 21, 1946	17.8	11,000
1947	June 6, 1947	18.1	11,700
	June 13, 1947	21.3	20,200
	June 26, 1947	26.5	39,500
	July 3, 1947	21.2	21,300
1948	Mar. 2, 1948	20.5 a	12,000 b
	Mar. 19, 1948	21.21	20,300

a Affected by ice. b About.

05482000 Des Moines River at Des Moines, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1949	Mar. 8, 1949	19.43	15,300
	Mar. 30, 1949	18.4	12,400
1950	Mar. 9, 1950	17.73	10,600
	June 22, 1950	17.67	10,600
1951	Mar. 1, 1951	19.0 a	12,000 b
	Mar. 31, 1951	23.80	32,400
	Apr. 10, 1951	22.68	31,900
	Apr. 27, 1951	19.25	14,700
	May 4, 1951	22.54	26,600
	June 5, 1951	19.02	14,100
	July 4, 1951	20.40	18,500
	July 14, 1951	17.59	10,600
	Mar. 23, 1951	17.47	10,400
1952	Apr. 3, 1952	20.20	17,800
	Apr. 17, 1952	18.30	12,400
	July 12, 1952	18.87	13,900
1953	June 12, 1953	17.90	11,400
1954	June 13, 1954	19.06	14,300
	June 24, 1954	30.16	60,200 d
	Aug. 29, 1954	19.92	16,800
1955	Oct. 15, 1954	16.02	6,840
1956	May 30, 1956	13.44	1,420
1957	June 17, 1957	17.15	9,680
1958	July 17, 1958	16.83	8,480
1959	May 26, 1959	17.42	10,300
	June 3, 1959	19.72	16,100
1960	Apr. 1, 1960	25.25	36,200
	May 7, 1960	18.61	13,100
	May 27, 1960	19.25	14,600
1961	Mar. 31, 1961	22.55	26,700
Discontinued Sept. 30, 1961			

a Affected by ice. b About
d Greatest flood since flood of May 1893 (magnitude unknown) and may have been the greatest since 1851.

05482170 Big Cedar Creek near Varina, Iowa

Location.--Lat 42°41'16", long 94°47'52", in NE1/4 NE1/4 sec.24, T.91 N., R.34 W., Pochahontas County, on left bank 5 ft downstream from bridge on county highway N33, 2.0 mi downstream from Drainage ditch 21, and 5.5 mi northeast of Varina.
Drainage area.--80.0 mi².
Gage.--Water-stage recorder. Datum is 1,225.12 ft NGVD of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 400 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1960	Mar. 27, 1960	11.42	1,020
	June 16, 1960	8.27	466
1961	Mar. 2, 1961	--	400
	Mar. 25, 1961	11.88	1,460
1962	Mar. 29, 1962	14.49 a	--
	Mar. 31, 1962	--	1,000 b
	July 2, 1962	8.91	665
	July 4, 1962	10.15	960
	July 28, 1962	7.89	452
	Aug. 31, 1962	13.68	2,080
1963	Mar. 15, 1963	7.51 a	--
	June 2, 1963	6.57	333
1964	May 6, 1964	6.23	291
1965	Apr. 6, 1965	15.05 a	--
	Apr. 8, 1965	10.17	1,060
	June 6, 1965	7.00	404
1966	Oct. 1, 1965	6.31 c	257
	Mar. 31, 1966	5.84	237
1967	June 10, 1967	7.82	548
	June 15, 1967	9.28	852
1968	July 19, 1968	3.99	45
1969	Mar. 24, 1969	10.44 a	700 b
	Apr. 4, 1969	8.89	744
	June 23, 1969	8.04	506
	June 25, 1969	10.76	992
	June 29, 1969	7.37	412
	July 27, 1969	10.49	938

a Affected by ice. b About. c Stage falling.

05482170 Big Cedar Creek near Varina, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	May 13, 1970	8.02	554
1971	Feb. 19, 1971	11.18 a	800 b
	Mar. 13, 1971	--	880 b
	Mar. 28, 1971	8.25	595
	June 7, 1971	10.66	1,010
1972	Aug. 6, 1972	7.37	400
1973	Mar. 11, 1973	7.43	485
	Mar. 14, 1973	7.25	459
	Apr. 16, 1973	6.84	404
	May 28, 1973	7.78	530
	Aug. 23, 1973	9.82	904
	Sept.26, 1973	9.25	850
1974	Oct. 11, 1973	7.75	573
	Nov. 21, 1973	8.11	642
1975	Apr. 9, 1975	--	800 b
	Apr. 12, 1975	--	600 b
	Apr. 28, 1975	10.88	1,250
	May 11, 1975	6.78	413
	June 18, 1975	7.04	452
1976	June 29, 1976	4.71	157
1977	Mar. 9, 1977	3.91 a	64 b
1978	July 6, 1978	10.39	818
	Sept.14, 1978	10.02	788
1979	Mar. 24, 1979	16.29 a	2,050
	June 27, 1979	8.06	509
	July 30, 1979	8.49	573
	Aug. 20, 1979	7.46	424
	Aug. 21, 1979	12.29	1,220
1980	Apr. 3, 1980	6.59	385
1981	June 13, 1981	6.87	372
1982	July 6, 1982	7.48	459
	July 10, 1982	7.71	488

a Affected by ice. b About.

05482170 Big Cedar Creek near Varina, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Oct. 1, 1982	8.15	551
	Oct. 9, 1982	7.97	553
	Dec. 25, 1982	7.02	449
	Dec. 29, 1982	7.14	468
	Feb. 23, 1983	7.54	535
	Feb. 27, 1983	7.05	454
	Mar. 6, 1983	9.53	937
	Mar. 16, 1983	6.72	404
	Apr. 1, 1983	7.91	603
	Apr. 13, 1983	8.29	678
	Apr. 16, 1983	7.47	523
	May 3, 1983	6.91	432
	June 20, 1983	11.03	1,180
	June 30, 1983	9.52	868
1984	Feb. 16, 1984	a	750
	Feb. 23, 1984	a	860
	Apr. 9, 1984	7.27	457
	Apr. 23, 1984	7.37	472
	May 1, 1984	9.29	834
	June 7, 1984	9.32	841
	June 13, 1984	9.62	910
	June 16, 1984	12.77	1,710
	June 23, 1984	8.15	610

a Affected by ice.

05482300 North Raccoon River near Sac City, Iowa

Location.--Lat 42°20'28", long 94°59'05", in NE1/4 NW1/4 sec.24, T.87 N., R.36 W., Sac County, on right bank 15 ft downstream from bridge on county highway, 0.5 mi upstream from Indian Creek, and 5.6 mi south of Sac City.
Drainage area.--713 mi².
Gage.--Water-stage recorder. Datum of gage is 1,144.60 ft National Geodetic Vertical Datum of 1929 (levels by Iowa Natural Resources Council).
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 2,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1954	June 21, 1954	15.61 a	7,000

1958	June 4, 1953	13.44	4,560 b
1959	May 31, 1959	14.51	5,200
1960	Mar. 30, 1960	16.73	9,020
	May 22, 1960	9.68	2,100
	May 26, 1960	10.94	2,840
	June 19, 1960	10.47	2,640
1961	Mar. 28, 1961	13.16	4,420
1962	Mar. 29, 1962	15.83	7,730
	June 9, 1962	9.96	2,010
	July 5, 1962	10.32	2,160
	Sept. 1, 1962	18.12	10,800
1963	June 3, 1963	9.32	1,910
1964	May 7, 1964	7.47	1,100
1965	Apr. 6, 1965	15.59	6,960
	Sept.28, 1965	9.82	2,020
1966	June 12, 1966	9.49	1,860
1967	June 9, 1967	12.06	3,230
	June 16, 1967	15.73	7,150
1968	June 25, 1968	4.89	354
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a From floodmark.
b Maximum for period June to September 1958.

05482300 North Raccoon River near Sac City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	Oct. 18, 1968	10.57	2,110
	Mar. 26, 1969	12.94	3,790
	Apr. 5, 1969	14.65	5,370
	June 7, 1969	10.69	2,430
	June 27, 1969	13.93	4,850
	July 28, 1969	12.72	3,780
1970	May 14, 1970	12.75	3,630
1971	Feb. 19, 1971	14.25 c	4,000 d
	Mar. 14, 1971	13.40	4,200
	Mar. 29, 1971	10.62	2,490
	June 10, 1971	11.82	3,070
1972	July 17, 1972	13.43	4,140
1973	Nov. 3, 1972	9.73	2,010
	Mar. 4, 1973	12.18 c	2,680 d
	Mar. 14, 1973	11.54	2,890
	Mar. 26, 1973	10.46	2,360
	Apr. 16, 1973	10.22	2,240
	May 28, 1973	--	2,790 d
	July 2, 1973	13.16	3,930
	July 9, 1973	--	3,190 d
	Aug. 24, 1973	12.62	3,550
	Sept.27, 1973	13.90	4,520
1974	Oct. 12, 1973	13.33	4,060
	Nov. 21, 1973	12.11	3,250
	May 19, 1974	11.21	2,400
1975	Apr. 28, 1975	14.35	4,570
	May 12, 1975	10.37	2,160
	June 19, 1975	11.12	2,590
1976	May 25, 1976	5.73	557
1977	Aug. 9, 1977	5.43	479
1978	June 18, 1978	11.53	2,890
	July 7, 1978	13.47	4,180
	Sept.14, 1978	15.23	5,880
1979	Mar. 23, 1979	18.02	13,100
	Mar. 30, 1979	16.64	7,750
	June 28, 1979	15.43	5,930
	Aug. 24, 1979	13.22	3,980

c Affected by ice. d About.

05482300 North Raccoon River near Sac City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1980	Apr. 4, 1980	8.90	1,720
1981	June 14, 1981	7.96	1,290
1982	Mar. 20, 1982	10.92	2,610
	May 27, 1982	11.52	2,980
	July 7, 1982	13.64	4,410
	July 11, 1982	12.50	3,560
	July 18, 1982	13.25	4,100
	Sept.14, 1982	9.66	2,110
1983	Oct. 3, 1982	12.25	3,360
	Oct. 9, 1982	12.95	3,840
	Feb. 23, 1983	12.22 e	3,380
	Mar. 7, 1983	16.16 g	7,200
	Mar. 16, 1983	11.98 f	3,250
	Apr. 2, 1983	13.72	4,510
	Apr. 14, 1983	13.54	4,370
	May 3, 1983	12.50	3,590
	June 15, 1983	10.27	2,400
	June 21, 1983	17.31 f	9,390
	June 30, 1983	16.31	7,230
1984	Feb. 17, 1984	10.64	2,580
	Feb. 23, 1984	9.82	2,210
	Apr. 4, 1984	10.25	2,410
	Apr. 9, 1984	12.27	3,460
	Apr. 14, 1984	12.20	3,410
	Apr. 23, 1984	11.87	3,210
	Apr. 27, 1984	11.27	2,890
	May 1, 1984	13.78	4,540
	May 28, 1984	11.94	3,250
	June 8, 1984	16.47	7,790
	June 13, 1984	14.62	5,270
	June 18, 1984	15.70	6,460

e From floodmark. f From outside gage.
g From graph based on outside gage reading.

05482500 North Raccoon River near Jefferson, Iowa
(Published as "Raccoon River near Jefferson", 1940-55)

Location.--Lat 41°59'17", long 94°22'36", in SW1/4 NW1/4 sec.20, T.83 N., R.30 W., Greene County, on right bank 5 ft downstream from bridge on State Highway 4, 0.1 mi downstream from Drainage ditches 33, and 40, 1.9 mi south of Jefferson, 4.9 mi upstream from Hardin Creek and 292.5 mi upstream from mouth of Des Moines River.
Drainage area.--1,619 mi².
Gage.--Water-stage recorder. Datum of gage is 967.09 ft National Geodetic Vertical Datum of 1929. Prior to Apr. 22, 1946, nonrecording gage at site 4 mi upstream at different datum. Apr. 22 to June 25, 1946, nonrecording gage, June 26, 1946 to Sept. 30, 1955, water-stage recorder, Oct. 1, 1955 to Apr. 30, 1958, nonrecording gage, at present site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--10 feet.
Remarks.--Base for partial-duration series, 4,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1940	Aug. 28, 1940	10.9	4,030
1941	June 14, 1941	9.1	2,420
1942	July 15, 1942	10.5	3,590
1943	Aug. 13, 1943	15.5	9,480
1944	May 22, 1944	15.4	9,860
	June 14, 1944	16.2	11,900
1945	Mar. 12, 1945	12.9	6,880
	Apr. 18, 1945	10.6	4,130
	Apr. 25, 1945	14.2	8,700
	May 24, 1945	13.1	7,120
	June 3, 1945	14.3	8,780
	June 10, 1945	13.5	7,630
	Aug. 8, 1945	10.7	4,230
1946	Mar. 16, 1946	11.50	5,160
	May 28, 1946	13.4	7,310
1947	June 14, 1947	12.4	5,780
	June 23, 1947	22.3	29,100
	July 8, 1947	11.6	5,420

05482500 North Raccoon River near Jefferson, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1948	Mar. 20, 1948	13.8	8,630
1949	Mar. 7, 1949	14.8	10,100
1950	June 19, 1950	12.0	6,050
	June 23, 1950	11.1	4,710
1951	Mar. 29, 1951	17.39	16,000
	May 3, 1951	15.62	11,800
	June 3, 1951	12.88	6,720
	June 21, 1951	12.25	5,800
	July 4, 1951	12.58	6,320
	Aug. 18, 1951	12.41	6,060
	Aug. 30, 1951	12.97	6,860
1952	Apr. 1, 1952	12.80	6,580
	July 11, 1952	12.51	6,190
1953	July 1, 1953	10.10	3,490
1954	June 13, 1954	11.09	4,670
	June 22, 1954	19.52	21,300
	Aug. 29, 1954	14.19	9,360
1955	Apr. 26, 1955	9.78	3,580
1956	May 13, 1956	5.4	650
1957	June 16, 1957	13.49	7,800
1958	June 7, 1958	11.70	4,720
1959	June 3, 1959	15.06	9,800
1960	Mar. 31, 1960	19.43	18,600
	May 28, 1960	13.45	6,960
1961	Mar. 29, 1961	13.19	6,680
1962	Mar. 30, 1962	17.60	14,300
	June 10, 1962	11.90	5,050
	Sept. 4, 1962	16.33	11,700
1963	May 14, 1963	12.34	5,510
1964	May 8, 1964	8.61	2,280
1965	Apr. 5, 1965	15.29	9,890
	May 27, 1965	14.94	9,300
	Sept.30, 1965	12.38	5,610

05482500 North Raccoon River near Jefferson, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1966	June 12, 1966	14.11	7,980
	June 28, 1966	11.47	4,620
1967	June 11, 1967	15.61	10,400
	June 19, 1967	15.61	10,400
	June 24, 1967	12.04	5,200
	June 28, 1967	11.75	4,900
1968	June 26, 1968	9.05	2,620
1969	Oct. 19, 1968	11.06	4,160
	Mar. 26, 1969	15.85	10,800
	Apr. 7, 1969	14.46	8,500
	Apr. 19, 1969	11.06	4,200
	June 30, 1969	12.88	6,110
	July 10, 1969	13.72	7,410
	July 30, 1969	12.16	5,220
1970	May 16, 1970	11.64 a	4,690
1971	Feb. 21, 1971	15.75 b	6,300 c
	Mar. 15, 1971	13.70	7,160
1972	July 20, 1972	12.25	5,550
1973	Feb. 27, 1973	13.19 b	5,460 c
	Mar. 4, 1973	14.37 b	7,370 c
	Mar. 15, 1973	13.34	6,720
	Mar. 27, 1973	11.64	4,940
	Apr. 13, 1973	10.91	4,260
	Apr. 18, 1973	12.56	6,030
	May 4, 1973	11.29	4,720
	May 9, 1973	13.42	6,940
	May 31, 1973	12.78	6,170
	June 19, 1973	10.95	4,260
	July 4, 1973	15.11	9,060
	July 11, 1973	12.38	5,680
	Aug. 26, 1973	11.13	4,150
	Sept. 29, 1973	15.97	10,400
1974	Oct. 14, 1973	14.06	7,240
	Nov. 23, 1973	12.04	5,340
	Feb. 20, 1974	15.11 b	5,900 c
	May 16, 1974	11.25	4,260
	May 18, 1974	13.35	6,400
1975	Apr. 28, 1975	12.84	6,060
	May 1, 1975	13.82	7,190

a From floodmark. b Affected by ice. c About.

05482500 North Raccoon River near Jefferson, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1976	May 24, 1976	10.31	3,330
1977	Aug. 26, 1977	5.29	404
1978	July 10, 1978	12.21	5,160
	Sept.17, 1978	14.67	8,200
	Sept.21, 1978	10.98	4,010
1979	Mar. 20, 1979	16.56	12,300
	Mar. 25, 1979	17.84	15,300
	Mar. 31, 1979	17.5	14,500
	June 30, 1979	13.3	7,000
	Aug. 26, 1979	11.38	4,800
1980	Apr. 5, 1980	8.93	2,550
1981	June 29, 1981	7.35	1,620
1982	Mar. 21, 1982	12.00	5,440
	May 5, 1982	11.30	4,720
	May 6, 1982	10.96	4,400
	May 29, 1982	12.52	6,040
	June 15, 1982	10.53	4,110
	July 9, 1982	10.61	4,190
	July 13, 1982	10.96	4,490
	July 21, 1982	12.91	6,540
1983	Oct. 11. 1982	10.91	4,420
	Feb. 24, 1983	12.80	6,690
	Mar. 9, 1983	15.92	11,600
	Mar. 18, 1983	12.16	5,970
	Apr. 3, 1983	14.11	8,530
	Apr. 16, 1983	14.33	8,850
	May 5, 1983	13.16	7,210
	June 24, 1983	16.39	12,500
	July 2, 1983	17.38	14,500
1984	Feb. 19, 1984	12.05	5,790
	Apr. 6, 1984	11.00	4,840
	Apr. 11, 1984	12.38	6,320
	Apr. 25, 1984	12.58	6,570
	May 1, 1984	15.69	11,300
	May 31, 1984	13.05	7,170
	June 11, 1984	14.94	9,930
	June 17, 1984	15.85	11,500
	June 21, 1984	17.86	15,600

05482600 Hardin Creek at Farnhamville, Iowa

Location.--Lat 42°16'01", long 94°25'10", near NE corner sec.14, T.86 N., R.31 W., Calhoun County at bridge on State Highway 175, west city limits of Farnhamville.
Drainage area.--43.7 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Mar. 29, 1952	8.09	318
1953	July 14, 1953	8.44	429
1954	Aug. 26, 1954	10.48	2,000
1955	Mar. 11, 1955	8.76	557
1956	Mar. 21, 1956	6.78	118
1957	June 16, 1957	7.90	270
1958	June 7, 1958	7.69	225
1959	June 1, 1959	9.06	700
1960	Mar. 29, 1960	9.75	840
1961	Sept.30, 1961	7.91	272
1962	July 14, 1962	9.20	812
1963	May 13, 1963	9.55	995
1964	Apr. 13, 1964	8.54	466
1965	May 26, 1965	9.78	1,110
1966	May 23, 1966	7.93	277
1967	June 13, 1967	9.34	854
1968	June 25, 1968	8.79	570
1969	July 26, 1969	10.45	1,960
1970	--	a	<90

05482600 Hardin Creek at Farnhamville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Mar. 12, 1971	9.38 c	480
1972	Oct. 31, 1971	9.09	700
1973	Mar. 17, 1973	9.27	820
1974	June 22, 1974	8.82	570
1975	Apr. 26, 1975	9.56	1,000
1976	--	a	<90
1977	Aug. 21, 1977	7.85	250
1978	--	a	<90
1979	Mar. 19, 1979	10.29	1,850
1980	--	a	<90
1981	July 3, 1981	8.00	255
1982	May 4, 1982	8.95	580
1983	June 28, 1983	9.90	1,300
1984	June 21, 1984	9.97	1,350

a Peak stage did not reach bottom of gage.
c Affected by ice.

05482800 Happy Run at Churdan, Iowa

Location.--Lat 42°10', long 94°30', near SW corner sec.17, T.85 N., R.31 W., Greene County, at bridge near west city limits of Churdan.
Drainage area.--7.58 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements and logarithmic extension above 100 ft³/s.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	Mar. 29, 1951	7.72	110
1952	Mar. 19, 1952	6.25	54
1953	--	a	<19
1954	Aug. 26, 1954	7.87	116
1955	July 10, 1955	7.80	113
1956	--	a	<19
1957	June 17, 1957	7.81	71
1958	--	a	<19
1959	June 1, 1959	7.70	77
1960	May 6, 1960	6.50	48
1961	Sept.30, 1961	6.42	46
1962	Mar. 25, 1962	8.57	150
1963	--	a	<19
1964	Apr. 13, 1964	7.27	61
1965	Sept.27, 1965	7.77	80
1966	June 12, 1966	7.36	64
1967	June 13, 1967	9.37	b

a Peak stage did not reach bottom of gage.
b Discharge not determined.

05482800 Happy Run at Churdan, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	--	a	<19
1969	Mar. 26, 1969	6.29	b
1970	--	a	<19
1971	Mar. 12, 1971	6.74	b
1972	--	a	<19
1973	Apr. 28, 1973	4.87	b
1974	--	a	<19
1975	--	a	<19
1976	--	a	<19
1977	Aug. 21, 1977	4.49	b
1978	--	a	<19
1979	Mar. 19, 1979	9.36	b
1980	--	a	<19
1981	July 3, 1981	5.64	63.5
1982	May 4, 1982	6.41	100
1983	Feb. 20, 1983	5.01	50
	Mar. 27, 1983	9.39 c	b
1984	May 1, 1984	4.21	17

a Peak stage did not reach bottom of gage.
b Discharge not determined.
c Ice affected.

05482900 Hardin Creek near Farlin, Iowa

Location.--Lat 42°06', long 94°26', in NW1/4 sec.14, T.84 N., R.31 W., Greene County, at bridge, 1.5 mi northeast of Farlin.
Drainage area.--101 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	Mar. 29, 1951	12.97	2,270
1952	Mar. 29, 1952	9.11	472
1953	July 14, 1953	7.96	300
1954	Aug. 27, 1954	12.57	1,810
1955	July 10, 1955	10.03	631
1956	--	a	<120
1957	June 17, 1957	10.59	743
1958	--	a	<120
1959	June 1, 1959	11.40	980
1960	Mar. 29, 1960	13.32	1,960
1961	Mar. 27, 1961	8.82	324
1962	Mar. 26, 1962	12.48	2,000
1963	May 13, 1963	10.87	930
1964	Apr. 13, 1964	9.39	615
1965	Sept.21, 1965	9.79	703
1966	June 12, 1966	9.13	474
1967	June 13, 1967	10.95	1,020
1968	--	a	<300

a Peak stage did not reach bottom of gage.

05482900 Hardin Creek near Farlin, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	July 26, 1969	12.17	1,950
1970	--	a	<300
1971	Mar. 12, 1971	12.37 c	1,110
1972	May 6, 1972	9.04	570
1973	Mar. 18, 1973	11.32	960
1974	May 28, 1974	9.79	700
1975	--	a	<300
1976	--	a	<300
1977	--	a	<300
1978	Mar. 16, 1978	9.26	510
1979	Mar. 19, 1979	12.69	2,330
1980	--	a	<300
1981	--	a	<300
1982	May 4, 1982	9.84	960
1983	Feb. 19, 1983	10.15	1,040
1984	Apr. 30, 1984	9.55	860

a Peak stage did not reach bottom of gage.
c Affected by ice.

05482950 East Fork Hardin Creek near Paton, Iowa
(Discontinued September 1955)

Location.--Lat 42°08'15", long 91°23'00", near S1/4 corner sec.20, T.85 N., R.30 W., Greene County, at bridge on county road H, 6 mi west of Paton.
Drainage area.--7.57 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	July 7, 1952	4.72	39
1953	Mar. 24, 1953	7.77	68
1954	Aug. 26, 1954	7.00	60
1955	July 10, 1955	7.37	64
Discontinued September 1955			

05483000 East Fork Hardin Creek near Churdan, Iowa

Location.--Lat 42°06'27", long 94°22'12", in SE1/4 SW1/4 sec.5, T.84 N., R.30 W., Greene County, on left bank 35 ft upstream from bridge on county highway E26, 4.4 mi upstream from mouth, and 6.5 mi southeast of Churdan.
Drainage area.--24.0 mi².
Gage.--Water-stage recorder. Datum is 1,050.90 ft NGVD of 1929.
Stage-discharge relation.--Defined by current-meter measurements below 180 ft³/s and above by logarithmic plotting.
Bankfull stage.--High banks are not subject to overflow.
Remarks.--Peak base for partial-duration series, 150 ft³/s. Base was 200 ft³/s prior to 1962.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	July 14, 1952	4.33 a	79
1953	June 10, 1953	5.17	105
1954	Aug. 26, 1954	7.73	329
1955	Oct. 13, 1954	6.15	250
	July 10, 1955	6.60	252
1956	May 13, 1956	4.42	112
1957	June 14, 1957	6.57	216
	June 16, 1957	8.82	371
1958	July 19, 1958	6.10	186
1959	May 31, 1959	7.36	288
1960	Mar. 29, 1960	7.63 b	300 c
	Apr. 24, 1960	8.04	350
	May 5, 1960	8.92	413
	May 25, 1960	6.30	231
1961	Feb. 22, 1961	5.41 b	150 c
1962	Mar. 25, 1962	6.06	231
	May 29, 1962	5.20	160
	July 14, 1962	7.46	315
	July 20, 1962	5.42	173
1963	Apr. 29, 1963	7.78	300

a Maximum for period July to September 1952.
b Affected by ice. c About.

05483000 East Fork Hardin Creek near Churdan, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	Apr. 13, 1964	5.36	172
	Apr. 27, 1964	5.18	159
1965	Mar. 31, 1965	8.28 b	300 c
	Apr. 5, 1965	6.13	214
	Sept.27, 1965	5.45	170
1966	June 12, 1966	8.32	367
	June 27, 1966	6.27	180
1967	June 9, 1967	6.40	235
	June 13, 1967	6.83	265
	June 16, 1967	5.57	179
	June 19, 1967	5.21	157
	June 24, 1967	5.80	193
	June 27, 1967	6.70	256
1968	June 25, 1968	4.13	77
1969	Oct. 17, 1968	6.15	191
	Mar. 19, 1969	6.83	297
	Mar. 24, 1969	6.34	248
	May 5, 1969	5.97	215
	June 29, 1969	6.34	201
	July 9, 1969	7.46	306
	July 26, 1969	6.46	211
1970	May 14, 1970	3.89	70
1971	Feb. 19, 1971	7.86	200 c
1972	Mar. 6, 1972	5.86 b	160 c
	Aug. 1, 1972	5.72	195
1973	Feb. 24, 1973	--	157 c
	Mar. 1, 1973	--	152 c
	Mar. 11, 1973	5.74	208
	Apr. 15, 1973	5.78	199
	May 7, 1973	5.95	205
	July 2, 1973	6.46	248
	Aug. 23, 1973	5.58	177
	Sept.26, 1973	8.26 d	385
1974	Oct. 11, 1973	5.65	197
	Feb. 17, 1974	5.25	159
	May 13, 1974	5.58	206
	May 16, 1974	6.13	243
	May 18, 1974	7.71	385

b Affected by ice. c About. d Backwater from debris.

05483000 East Fork Hardin Creek near Churdan, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1975	Mar. 18, 1975	6.83 b	--
	Apr. 28, 1975	5.39	195
1976	May 23, 1976	5.11	148
1977	Sept.30, 1977	6.02	197
1978	July 9, 1978	5.64	180
	Sept.13, 1978	7.59	225
	Sept. 20, 1978	5.88	191
1979	Mar. 19, 1979	7.46	376
1980	June 4, 1980	5.62	179
1981	July 4, 1981	6.86	207
	Aug. 26, 1981	6.19	169
1982	Feb. 21, 1982	7.12	237
	May 4, 1982	7.16	282
	May 21, 1982	5.62	175
	May 26, 1982	5.28	155
	July 18, 1982	5.34	158
1983	e	5.59 b	173
	Mar. 6, 1983	5.94	194
	June 29, 1983	7.45	237
1984	Feb. 15, 1984	5.32	187
	Apr. 29, 1984	7.10	331
	June 13, 1984	4.93	158
	June 16, 1984	4.98	162

b Affected by ice.
e Peak stage did not reach bottom of gage.

05483349 Middle Raccoon River tributary at Carroll, Iowa

Location.--Lat.42°03', long 94°53', in NW 1/4 sec. 36, T.84 n., R.35 W., Carroll County, at bridge on U.S.Highway 71, 1.5 mi south of CArroll.
Drainage area.--6.58 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 12, 1966	90.12	500
1967	June 27, 1967	90.45	550
1968	June 25, 1968	89.69	440
1969	July 26, 1969	90.37	540
1970	--	a	<80
1971	Mar. 13, 1971	89.64 c	400
1972	Sept.12, 1972	87.67	200
1973	July 1, 1973	90.58	580
1974	--	a	<80
1975	Apr. 27, 1975	90.34	530
1976	May 23, 1976	91.06	680
1977	--	a	<80
1978	--	a	<80
1979	--	a	<80
1980	--	19.66	b
1981	June 29, 1981	22.83	b
1982	Mar. 19, 1982	23.07	80
1983	June 27, 1983	22.76	b

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

05483349 Middle Raccoon River tributary at Carroll, Iowa
--(Continued)--

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	June 13, 1984	22.91	b

b Discharge not determined.

05483450 Middle Raccoon River near Bayard, Iowa

Location.--Lat 41°46'43", long 94°29'33": in SW1/4 SW1/4 sec. 32, T.81 N., R.31 W., Guthrie County, on left bank 50 ft downstream from bridge on State Highway 25, 5.8 mi southeast of Bayard, 10.4 mi upstream from dam at Lake Panorama, 30.2 mi upstream from mouth and 279.2 mi upstream from mouth of Des Moines River.
Drainage area.--375 mi².
Gage.--Water-stage recorder. Datum of gage is 1,040.00 ft Natinal Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series 1,200 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1979 a	Mar. 23, 1979	17.68	3,460
	Mar. 30, 1979	14.74	2,520
	May 3, 1979	12.73	1,220
	June 28, 1979	17.65	3,410
	July 23, 1979	16.63	2,770
	July 24, 1979	13.36	1,440
	July 30, 1979	12.79	1,240
1980	Mar. 16, 1980	11.51	859
1981	May 23, 1981	13.73	1,580
	July 4, 1981	13.23	1,400
	Aug. 2, 1981	15.34	2,200
1982	Feb. 22, 1982	18.71 b	3,480
	Mar. 12, 1982	13.21	1,390
	Mar. 20, 1982	17.53	3,340
	May 20, 1982	15.16	2,130
	May 22, 1982	13.20	1,390
	May 27, 1982	17.00	2,970
	June 16, 1982	16.14	2,540
1983	Feb. 20, 1983	17.30	3,180
	Mar. 7, 1983	15.79	2,390
	Apr. 1, 1983	15.62	2,320

1983 CONTINUED ON NEXT PAGE

a Peaks for 1979 are for March 23 to September 30.
b Affected by ice.

05483450 Middle Raccoon River near Bayard, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	Apr. 13, 1983	14.25	1,770
	May 3, 1983	15.44	2,140
	June 30, 1983	18.03	3,130
	July 2, 1983	19.79	5,190
1984	Feb. 16, 1984	14.76	1,700
	Apr. 9, 1984	14.24	1,440
	Apr. 22, 1984	16.12	2,150
	Apr. 27, 1984	15.72	2,000
	Apr. 30, 1984	19.99	4,960
	May 25, 1984	14.02	1,420
	May 29, 1984	15.65	2,060
	June 13, 1984	15.14	1,920
	June 15, 1984	16.33	2,400
	June 17, 1984	18.50	3,700
	June 20, 1984	14.85	1,810

05483600 Middle Raccoon River at Panora, Iowa

Location.--Lat 41°41'14", long 94°22'15", in NE1/4 NW1/4 sec.5, T.79 N., R.30 W., Guthrie County, on left bank 15 ft downstream from bridge on county highway, 0.2 mi southwest of Panora, and 1.6 mi downstream from Lake Panorama, 18.2 mi upstream from mouth and 267.2 mi upstream from mouth of Des Moines River.

Drainage area.--440 mi².

Gage.--Water-stage recorder and concrete control. Datum of gage is 991.20 ft National Geodetic Vertical Datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 4,500 ft³/s and above by logarithmic plotting.

Remarks.--Base for partial-duration series, 2,500 ft³/s. City of Panora diverts approximately 100 acre-ft/yr above station. Flow regulated by dam on Lake Panorama since August 1970.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 10, 1953	14.30 a	14,000 b
1958	July 2, 1958	11.87	9,150 b
	July 3, 1958	8.95	4,200
	July 19, 1958	8.07	3,020
1959	June 1, 1959	7.50	2,480
1960	Mar. 31, 1960	9.68	5,320
	May 7, 1960	8.33	3,740
1961	June 16, 1961	7.82	2,730
1962	Mar. 26, 1962	9.29	4,620
	June 10, 1962	8.85	3,940
1963	Aug. 7, 1963	9.05	4,200
1964	June 22, 1964	10.47	6,300
1965	Mar. 2, 1965	11.54 c	4,600 b
	Mar. 17, 1965	10.87	6,890
	Apr. 2, 1965	8.49	3,540
	Apr. 5, 1965	9.35	4,690
	May 27, 1965	7.90	2,840
1966	June 12, 1966	8.54	3,480
	June 29, 1966	8.79	3,800

a From floodmark. b About. c Affected by ice.

05483600 Middle Raccoon River at Panora, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967	June 7, 1967	8.45	3,550
	June 10, 1967	9.95 a	5,600
	June 12, 1967	8.37	3,450
	June 25, 1967	9.53 a	5,010
1968	June 26, 1968	6.18	1,150
1969	Mar. 20, 1969	9.84 a	5,380
	Mar. 24, 1969	10.25	5.950
	July 10, 1969	7.93	2,870
1970	May 15, 1970	7.83	2,780
1971	Feb. 19, 1971	12.98 ac	8,900 b
1972	Mar. 1, 1972	7.63	2,670
	May 7, 1972	7.51	2,550
	June 17, 1972	8.17	3,300
	Aug. 2, 1972	9.64	5,110
1973	Mar. 2, 1973	7.87	2,970
	Apr. 16, 1973	8.35	3,370
	Apr. 26, 1973	8.39	3,380
	May 9, 1973	8.87	4,180
	June 4, 1973	8.04	3,190
	July 3, 1973	13.56 a	12,000
	July 30, 1973	9.39	4,570
	Sept.28, 1973	8.99	4,090
1974	May 17, 1974	7.85	2,810
	May 19, 1974	14.80	14,000
	May 21, 1974	9.00	4,240
	May 27, 1974	9.13	4,410
	June 14, 1974	8.13	3,150
1975	Apr. 29, 1975	8.36	3,420
	June 18, 1975	7.88	2,850
1976	May 23, 1976	11.05	7,300
1977	Aug. 26, 1977	7.75	2,690
1978	Mar. 20, 1978	8.97	4,180
	Sept.13, 1978	9.18	4,470

a From floodmark. b About. c Affected by ice.

05483600 Middle Raccoon River at Panora, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1979	Mar. 19, 1979	12.95	10,700
	Mar. 24, 1979	7.78	2,730
	Mar. 30, 1979	7.58	2,500
	June 28, 1979	8.53	3,630
	July 23, 1979	7.66	2,590
1980	June 4, 1980	8.30	3,350
1981	Aug. 14, 1981	7.46	2,380
1982	Feb. 23, 1982	9.13	4,330
	Mar. 19, 1982	8.21	3,210
	May 27, 1982	8.42	3,580
	June 16, 1982	8.26	3,350
1983	Feb. 16, 1983	7.69	2,620
	Feb. 20, 1983	7.94	2,920
	Mar. 7, 1983	7.82	2,770
	Apr. 1, 1983	8.29	3,340
	June 28, 1983	8.61	3,730
	July 2, 1983	9.81	5,360
1984	Feb. 16, 1984	7.78	2,730
	Apr. 4, 1984	7.73	2,680
	Apr. 23, 1984	7.85	2,810
	Apr. 30, 1984	11.18	7,530
	June 16, 1984	8.19	3,210
	June 17, 1984	8.89	4,090

05484000 South Raccoon River at Redfield, Iowa

Location.--Lat 41°34'48", long 94°10'58", in SW1/4 SW1/4 sec.3, T.78 N., R.29 W., Dallas County, on left bank 15 ft downstream from bridge on county highway at Redfield, 1.0 mi downstream from Middle Raccoon River, 16.4 mi upstream from mouth and 248.0 mi upstream from mouth of Des Moines River.
Drainage area.--988 mi².
Gage.--Water-stage recorder. Datum of gage is 896.43 ft National Geodetic Vertical Datum of 1929. Prior to June 12, 1946, nonrecording gage, and June 12, 1946, to Sept. 3, 1966, water-stage recorder at site 20 ft upstream at same datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--14 feet.
Remarks.--Base for partial-duration series, 5,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1940	July 31, 1940	13.3	6,100
1941	June 28, 1941	10.5	3,550
1942	May 11, 1942	13.0	5,740
	Aug. 28, 1942	13.4	6,380
1943	Aug. 25, 1943	14.1	6,610
1944	May 3, 1944	13.2	5,930
	May 20, 1944	23.8	20,000
	May 23, 1944	16.9	9,750
	June 11, 1944	13.7	6,430
1945	May 14, 1945	15.0	7,730
	May 22, 1945	17.2	10,100
	May 30, 1945	15.0	7,730
	June 6, 1945	13.1	5,830
1946	Aug. 24, 1946	18.9	12,000
	Sept. 8, 1946	21.4	15,200
1947	June 2, 1947	19.9	15,000
	June 5, 1947	22.7	20,500
	June 12, 1947	24.3	23,800
	June 24, 1947	16.7	10,500
1948	Mar. 19, 1948	21.3	17,600
1949	Mar. 6, 1949	14.2	7,530

05484000 South Raccoon River at Redfield, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1950	May 5, 1950	14.7	7,990
	June 19, 1950	17.9	11,600
	June 23, 1950	13.8	7,080
1951	Mar. 29, 1951	20.10	15,400
	May 2, 1951	17.70	11,700
	June 2, 1951	18.14	12,200
	June 7, 1951	12.19	5,680
	July 3, 1951	16.26	10,100
1952	Mar. 13, 1952	11.53	5,160
	Mar. 31, 1952	14.39	7,840
	June 21, 1952	12.12	5,680
	June 27, 1952	16.06	9,740
1953	May 24, 1953	12.23	5,680
	June 10, 1953	23.08	21,300
1954	Aug. 22, 1954	13.84	7,200
1955	Apr. 24, 1955	12.86	6,310
1956	Sept. 4, 1956	9.80	3,840
1957	June 17, 1957	17.80	12,700
1958	July 2, 1958	29.04 a	35,000
	July 4, 1958	19.28	14,200
	July 19, 1958	15.80	9,580
	Sept. 6, 1958	25.12	25,500
1959	May 30, 1959	10.95	5,420
1960	Mar. 30, 1960	15.29	9,340
	May 7, 1960	15.31	9,340
1961	Feb. 23, 1961	11.23	5,590
	Mar. 27, 1961	10.67	5,160
	June 14, 1961	10.78	5,250
	Sept.30, 1961	11.00	5,420
1962	Mar. 19, 1962	17.50 b	--
	Mar. 24, 1962	14.42	8,350
	May 29, 1962	15.46	9,340
	June 9, 1962	13.01	7,090
1963	Mar. 3, 1963	13.43 b	6,300 c
	Apr. 29, 1963	15.25	9,240
	Aug. 7, 1963	10.85	5,080

a From floodmark. b Affected by ice.

05484000 South Raccoon River at Redfield, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	Apr. 13, 1964	13.57	7,720
	June 23, 1964	19.69	14,900
1965	Feb. 21, 9165	11.82 b	5,600 c
	Mar. 2, 1965	17.70	12,800
	Mar. 17, 1965	19.60	15,800
	Apr. 1, 1965	15.14	9,350
	Apr. 5, 1965	16.99	11,800
1966	June 12, 1966	15.17	9,460
1967	June 8, 1967	14.06	8,080
	June 10, 1967	17.12	12,000
	June 12, 1967	15.21	9,430
1968	Sept. 4, 1968	6.27	1,710
1969	Mar. 19, 1969	16.69	11,700
	Mar. 24, 1969	16.08	10,900
	June 29, 1969	11.75	5,990
	July 9, 1969	13.55	7,780
1970	May 14, 1970	14.50	9,050
1971	Feb. 19, 1971	20.82	17,800
	Mar. 14, 1971	14.61	9,200
	June 6, 1971	17.25	12,500
1972	Aug. 2, 1972	12.82	7,220
	Sept.11, 1972	13.95	8,410
1973	Mar. 14, 1973	10.33	5,010
	Apr. 1, 1973	10.95	5,650
	Apr. 16, 1973	14.77	9,650
	May 8, 1973	17.63	13,000
	June 5, 1973	10.74	5,260
	July 4, 1973	19.97	16,500
	July 30, 1973	10.96	5,450
	Sept.26, 1973	14.74	9,310
1974	Oct. 11, 1973	11.96	6,380
	Apr. 21, 1974	15.58	10,300
	Apr. 28, 1974	12.93	7,380
	May 16, 1974	10.64	5,210
	May 19, 1974	21.85	20,000
	May 21, 1974	13.42	8,300
	May 26, 1974	11.52	6,150

b Affected by ice. c About.

05484000 South Raccoon River at Redfield, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1975	Apr. 28, 1975	15.45	10,200
	June 18, 1975	14.28	8,680
	June 25, 1975	12.40	6,720
1976	Mar. 12, 1976	10.41	5,130
	May 23, 1976	12.71	7,490
1977	Aug. 26, 1977	15.90	11,300
	Aug. 28, 1977	13.76	8,740
	Sept. 3, 1977	12.97	7,870
1978	Mar. 21, 1978	b	8,640
	Mar. 22, 1978	14.02	8,990
	Apr. 17, 1978	17.13	12,700
	Sept.13, 1978	13.79	8,770
	Sept.14, 1978	14.63	9,760
1979	Mar. 13, 1979	10.75	5,550
	Mar. 19, 1979	22.81	20,400
	Aug. 10, 1979	12.10	6,910
1980	June 15, 1980	7.47	2,700
1981	May 23, 1981	7.08	2,430
1982	Feb. 21, 1982	14.22 b	6,150
	Feb. 23, 1982	12.46	5,650
	Mar. 19, 1982	12.85	7,740
	May 20, 1982	11.31	6,110
	May 26, 1982	10.31	5,110
	June 15, 1982	12.82	7,700
1983	Dec. 28, 1983	11.34	6,130
	Feb. 20, 1983	12.92	7,800
	Mar. 31, 1983	10.96	5,740
	May 19, 1983	12.44	7,280
	June 29, 1983	13.02	7,190
	July 3, 1983	11.24	6,020
1984	Apr. 30, 1984	18.58	14,500
	May 25, 1984	10.22	5,020
	June 15, 1984	10.84	5,630
	June 16, 1984	12.02	6,840
	June 17, 1984	12.03	6,850

b Affected by ice.

05484500 Raccoon River at Van Meter, Iowa

Location.--Lat 41°32'02", long 93°56'59", in SW1/4 SW1/4 sec.22, T.78 N., R.27 W., Dallas Co., on right bank 10 ft downstream from bridge on co. road R16,0.3 mi northeast of Van Meter, 1.1 mi downstream from confluence of North and South Raccoon Rivers, 29.0 mi upstream from mouth and 230.5 mi upstream from mouth of Des Moines River.
Drainage area.--3,441 mi².
Gage.--Water-stage recorder at present site after Aug. 9, 1934. Datum is 841.16 ft National Geodetic Vertical Datum of 1929. Prior to Oct.1, 1915, chain gage at same site and at datum 2 ft higher. Oct.1, 1915, to May 30, 1923, chain gage, May 31, 1923, to Sept.30, 1927, water-stage recorder, and Oct.1, 1927, to Aug.8, 1934, chain gage, all at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--13 feet.
Remarks.--Base for partial-duration series, 10,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1915	May 29, 1915	15.19	21,600

1916	Mar. 16, 1916	8.4	5,840
1917	June 7, 1917	18.4	35,200
	June 10, 1917	17.0	26,000
1918	June 6, 1918	13.7	14,800
1919	Apr. 24, 1919	12.6	12,400
	May 4, 1919	12.4	12,000
	June 4, 1919	11.7	10,700
	June 11, 1919	11.8	11,000
1920	Mar. 14, 1920	12.2 a	10,000 b
1921	Sept.20, 1921	11.1	9,670
1922	Apr. 11, 1922	12.1	11,400
1923	Mar. 27, 1923	11.6	10,300
1924	Oct. 3, 1923	11.2	10,000
	June 8, 1924	12.3	12,400
	June 25, 1924	15.2	20,100
1925	Aug. 7, 1925	10.1	8,060

a Affected by ice. b About.

05484500 Raccoon River at Van Meter, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1926	Sept.20, 1926	19.0	32,000
1927	Feb. 8, 1927	9.7	6,880
1928	Aug. 27, 1928	10.8	8,480
1929	Mar. 14, 1929	16.2	19,400
1930	May 13, 1930	8.8	5,870
1931	June 21, 1931	8.3	5,270
1932	Nov. 24, 1931	14.6	15,200
	Jan. 1, 1932	12.5	11,400
	Mar. 4, 1932	14.2	14,200
1933	Apr. 5, 1933	10.1	7,550
1934	Apr. 7, 1934	5.0	2,020
1935	Mar. 5, 1935	13.1	11,000
1936	Mar. 5, 1936	13.9	12,200
1937	Mar. 4, 1937	13.9	12,200
1938	June 2, 1938	11.6	8,590
1939	Mar. 12, 1939	17.85 a	14,000 b
	Mar. 16, 1939	13.0	10,600
1940	July 31, 1940	9.2	5,770
1941	June 2, 1941	10.0	6,920
1942	May 11, 1942	11.7	8,800
1943	June 16, 1943	12.9	10,000
	Aug. 16, 1943	14.7	12,500
1944	May 21, 1944	18.3	23,400
	June 11, 1944	15.1	13,100
	June 16, 1944	17.2	17,900
1945	Mar. 15, 1945	13.7	11,600
	Apr. 28, 1945	12.7	10,200
	May 15, 1945	13.4	11,200

1945 CONTINUED ON NEXT PAGE

a Affected by ice. b About.

05484500 Raccoon River at Van Meter, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1945 cont.	May 23, 1945	15.7	14,300
	May 31, 1945	15.0	12,900
	June 6, 1945	16.1	15,100
	June 13, 1945	13.0	10,900
1946	Aug. 25, 1946	13.2	10,300
	Sept. 9, 1946	16.1	15,100
1947	June 3, 1947	17.4	19,800
	June 5, 1947	19.3	25,600
	June 13, 1947	21.37 c	41,200
	June 23, 1947	16.4	17,300
	June 25, 1947	21.1	38,000
1948	Mar. 19, 1948	19.0	26,700
1949	Mar. 6, 1949	15.7	15,900
1950	Mar. 7, 1950	12.4	11,300
	June 20, 1950	16.1	17,600
	June 24, 1950	14.0	13,700
1951	Mar. 31, 1951	19.15	27,700
	May 2, 1951	17.00	19,900
	June 3, 1951	17.13	20,200
	June 8, 1951	14.47	14,400
	July 4, 1951	15.18	15,800
	July 6, 1951	11.55	10,100
1952	Apr. 1, 1952	14.81	15,100
	June 27, 1952	14.67	14,900
1953	June 11, 1953	19.42	26,000
1954	June 16, 1954	12.46	11,000
	June 25, 1954	17.40	20,800
	Aug. 22, 1954	12.07	10,200
	Aug. 31, 1954	14.14	13,800
1955	Apr. 24, 1955	11.43	8,620
1956	Sept. 4, 1956	7.43	4,150
1957	June 18, 1957	17.27	20,000
1958	July 3, 1958	21.77	35,200
	July 20, 1958	13.73	13,300
	Sept. 6, 1958	17.76	20,900

c From floodmark.

05484500 Raccoon River at Van Meter, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1959	June 4, 1959	13.22	13,500
1960	Apr. 2, 1960	21.18	32,300
	May 7, 1960	14.62	14,800
	May 26, 1960	11.76	10,400
1961	Mar. 27, 1961	12.35	11,300
1962	Mar. 31, 1962	17.23	19,700
	May 29, 1962	14.33	14,900
	June 11, 1962	12.42	11,900
	Sept. 7, 1962	11.45	10,400
1963	Mar. 4, 1963	14.38 a	10,000 b
	Mar. 11, 1963	13.85	12,200
	Apr. 29, 1963	12.62	12,200
1964	June 23, 1964	15.92	17,400
1965	Mar. 2, 1965	14.73 a	13,000 b
	Mar. 17, 1965	18.20 a	20,100 b
	Apr. 1, 1965	13.93	14,300
	Apr. 6, 1965	18.35	22,300
	May 30, 1965	11.20	10,400
1966	June 13, 1966	15.15	16,200
1967	June 8, 1967	13.09	12,300
	June 10, 1967	17.04	18,700
	June 12, 1967	18.07	20,600
	June 26, 1967	12.11	10,900
1968	June 27, 1968	7.05	4,360
1969	Mar. 25, 1969	17.60	22,800
	Apr. 9, 1969	12.07	10,900
	June 29, 1969	12.95	12,400
	July 10, 1969	14.18	14,700
	July 18, 1969	11.74	10,400
1970	May 14, 1970	14.23	14,800
1971	Feb. 20, 1971	18.85 a	23,000 b
	Mar. 14, 1971	14.55	15,400
	June 6, 1971	13.44	13,300
1972	June 18, 1972	10.74	8,840
	Aug. 2, 1972	10.96	9,140
	Aug. 6, 1972	10.71	8,790
	Sept.11, 1972	11.33	9,730

a Affected by ice. b About.

05484500 Raccoon River at Van Meter, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973	Feb. 2, 1973	15.15 a	14,300 b
	Feb. 25, 1973	11.00	9,200
	Mar. 7, 1973	13.43	13,300
	Mar. 14, 1973	14.80	16,000
	Apr. 1, 1973	13.48	13,400
	Apr. 16, 1973	17.59	22,700
	May 8, 1973	17.55	21,600
	June 1, 1973	10.68	8,750
	June 5, 1973	11.77	10,400
	July 1, 1973	20.74	32,400
	July 4, 1973	21.74	35,600
	Sept.29, 1973	13.16	12,800
1974	Oct. 1, 1973	15.33	17,100
	Oct. 11, 1973	14.01	14,300
	Oct. 15, 1973	11.87	10,600
	Apr. 21, 1974	13.47	13,400
	Apr. 29, 1974	14.33	15,000
	May 19, 1974	20.13	30,400
	May 27, 1974	11.95	11,000
	May 29, 1974	10.71	9,380
	June 9, 1974	11.87	11,100
1975	Mar. 21, 1975	12.34	11,300
	Apr. 28, 1975	13.90	14,100
	June 18, 1975	14.01	14,300
	June 25, 1975	11.92	10,700
	June 27, 1975	10.59	8,630
1976	Apr. 24, 1976	10.69	8,710
	May 24, 1976	12.84	12,200
1977	Aug. 26, 1977	12.50	11,600
	Aug. 28, 1977	12.79	11,900
1978	Mar. 22, 1978	17.62 a	20,800
	Aug. 18, 1978	14.48	15,300
	Sept.14, 1978	13.14	12,800
	Sept.20, 1978	12.63	11,800
1979	Mar. 19, 1979	20.39	29,900
	Apr. 2, 1979	15.80	17,000
	June 29, 1979	11.09	9,340
	Aug. 10, 1979	12.25	11,200

a Affected by ice. b About.

05484500 Raccoon River at Van Meter, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1980	June 15, 1980	7.76	4,870
1981	July 4, 1981	7.12	4,130
1982	Feb. 21, 1982	14.34 a	11,600
	Feb. 23, 1982	12.25	11,500
	Mar. 20, 1982	12.14	11,300
	May 20, 1982	12.86	12,700
	May 26, 1982	12.41	11,800
	June 15, 1982	14.21	15,100
	June 16, 1982	10.92	9,390
1983	Dec. 28, 1982	12.78	12,200
	Feb. 20, 1983	13.66	13,700
	Mar. 11, 1983	14.28	14,900
	Mar. 16, 1983	10.53	8,520
	Apr. 2, 1983	14.00	14,400
	Apr. 10, 1983	12.73	12,000
	Apr. 17, 1983	14.08	14,500
	May 7, 1983	13.64	13,700
	May 19, 1983	11.61	10,200
	June 26, 1983	12.70	12,100
	June 30, 1983	16.25	19,400
	July 3, 1983	18.59	25,500
1984	Feb. 12, 1984	13.61	13,900
	Feb. 19, 1984	11.61	10,800
	Apr. 12, 1984	11.64	10,200
	Apr. 16, 1984	11.21	9,550
	Apr. 30, 1984	19.51	28,500
	May 25, 1984	11.94	10,700
	May 29, 1984	11.39	9,830
	June 8, 1984	10.73	8,790
	June 9, 1984	13.45	13,300
	June 13, 1984	13.31	13,100
	June 17, 1984	18.09	24,000
	June 23, 1984	17.50	22,400

a Affected by ice.

05484800 Walnut Creek at Des Moines, Iowa

Location.--Lat 41°35'14", long 93°42'11", in SW1/4 SE1/4 sec.2, T.78 N., R.25 W., Polk County, on left bank, 25 ft downstream from bridge on 63rd Street in Des Moines, and 2.2 mi upstream from Raccoon River.
Drainage area.--78.4 mi².
Gage.--Water-stage recorder. Datum of gage is 801.04 ft National Geodetic Vertical Datum of 1929 (levels by Iowa Natural Resources Council).
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--13 ft.
Remarks.--Base for partial-duration series, 600 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1972	June 20, 1972	9.53	680
	Sept.10, 1972	8.86	644
1973	Dec. 30, 1972	10.39 a	700 b
	Feb. 1, 1973	14.00	2,350
	Apr. 16, 1973	11.85	1,610
	May 1, 1973	9.70	942
	May 8, 1973	9.99	878
	May 29, 1973	--	500 b
	July 1, 1973	17.72	9,000
	July 4, 1973	12.56	1,670
1974	Oct. 11, 1973	12.74	1,770
	Apr. 28, 1974	12.73	1,740
	May 13, 1974	7.94	465
	May 19, 1974	12.78	1,760
	June 9, 1974	17.44	8,160
1975	Apr. 27, 1975	9.08	736
	June 15, 1975	8.82	670
	June 18, 1975	11.53	1,440
	Aug. 27, 1975	17.00	5,800
	Aug. 29, 1975	10.19	948
1976	Apr. 18, 1976	14.24	2,470
	Apr. 24, 1976	12.20	1,530
	June 10, 1976	10.13	928
	June 12, 1976	9.82	875
	June 13, 1976	9.05	686
	June 28, 1976	13.41	2,060

a Affected by ice. b About.

05484800 Walnut Creek at Des Moines, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1977	Aug. 26, 1977	11.84	1,400
	Aug. 28, 1977	14.48	2,590
	Aug. 31, 1977	9.43	746
	Sept.17, 1977	8.70	602
1978	Mar. 20, 1978	8.80	620
	Apr. 17, 1978	9.99	933
	Apr. 17, 1978	10.75	1,180
	Aug. 27, 1978	10.32	965
	Sept.20, 1978	8.62	616
1979	June 13, 1979	10.30	1,010
	Aug. 10, 1979	9.59	855
	Aug. 19, 1979	8.72	662
	Aug. 21, 1979	8.77	672
1980	June 1, 1980	9.60	674
	June 4, 1980	9.28	827
	Aug. 16, 1980	9.80	954
1981	May 23, 1981	11.93	1,560
	June 24, 1981	11.49	1,420
	July 3, 1981	13.47	2,190
	July 17, 1981	11.44	1,440
	Aug. 14, 1981	12.25	1,700
	Aug. 28, 1981	8.45	643
1982	Feb. 23, 1982	a	821
	Mar. 19, 1982	8.58	702
	Apr. 16, 1982	8.79	766
	June 15, 1982	9.65	989
	July 6, 1982	9.39	920
	July 18, 1982	11.41	1,440
	July 21, 1982	8.56	668
	Aug. 5, 1982	12.08	1,650
1983	Dec. 27, 1982	8.84	757
	Apr. 12, 1983	8.67	728
	May 7, 1983	9.21	899

1983 CONTINUED ON NEXT PAGE

a Affected by ice.

05484800 Walnut Creek at Des Moines, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	May 19, 1983	8.56	740
	June 9, 1983	8.01	618
	June 29, 1983	11.60	1,490
	July 2, 1983	9.00	771
	July 3, 1983	12.64	1,840
	Aug. 30, 1983	8.30	609
1984	Nov. 3, 1983	8.41	700
	Nov. 19, 1983	8.14	638
	Apr. 29, 1984	9.85	989
	May 25, 1984	10.38	1,130
	May 28, 1984	9.01	774
	June 8, 1984	12.58	1,820
	June 9, 1984	14.63	2,820
	June 11, 1984	10.75	1,240
	June 14, 1984	10.56	1,180
	July 14, 1984	12.07	1,640
	July 26, 1984	10.77	1,240

05485500 Des Moines River below Raccoon River, at Des Moines, Iowa

Location.--Lat 41°34'30", long 93°35'48", in NE1/4 SE1/4 sec.10, T.78 N., R.24 W., Polk County, on right bank 10 ft downstream from bridge on SE 14th St at Des Moines, 0.8 mi downstream from Raccoon River and Scott Street Dam, and at mi 200.7.
Drainage area.--9,879 mi².
Gage.--Water-stage recorder. Datum of gage is 762.52 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1951, and Oct. 1, 1953, to Sept. 30, 1959, water-stage recorder above Scott Street Dam, 0.8 mi upstream at datum 11.16 ft higher. Oct. 1, 1951, to Sept. 30, 1953, and Oct. 1, 1959, to Sept. 30, 1961, nonrecording gage at present site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--21 ft.
Remarks.--Base for partial-duration series, 15,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1903	May 31, 1903	20.9 a	--

1940	Aug. 30, 1940	6.9	8,990
1941	June 16, 1941	--	13,000 b
1942	May 12, 1942	9.03	17,000
1943	Aug. 17, 1943	8.0	15,100
1944	May 4, 1944	8.60	16,700
	May 24, 1944	17.60	53,200
	June 17, 1944	16.20	45,500
1945	Mar. 17, 1945	12.38	27,000
	Apr. 17, 1945	10.46	21,700
	Apr. 28, 1945	11.21	23,900
	May 15, 1945	8.91	17,400
	May 25, 1945	12.62	28,400
	June 4, 1945	12.77	28,900
	June 13, 1945	--	21,200
1946	Mar. 16, 1946	9.37	19,100
	May 29, 1946	10.82	22,800
	June 20, 1946	8.86	17,300
	Sept.10, 1946	8.70	15,300

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a From flood profile, at Scott Street site and datum, by office of Des Moines City Engineer.
b Maximum daily, estimated.

05485500 Des Moines River below Raccoon River, at Des Moines Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)	
1947	Apr. 13, 1947	--	17,000	
	June 6, 1947	15.08	37,800	
	June 13, 1947	18.60	59,500	
	June 23, 1947	--	39,200	
	June 26, 1947	20.8	77,000	c
1948	Mar. 3, 1948	--	13,100	
	Mar. 20, 1948	15.69	44,400	
1949	Mar. 7, 1949	12.58	28,100	
	Mar. 29, 1949	8.38	17,200	
1950	Mar. 8, 1950	8.14	16,300	
	May 11, 1950	8.15	16,000	
	June 21, 1950	11.56	24,800	
1951	Mar. 1, 1951	--	15,000	
	Mar. 31, 1951	17.75	54,800	
	Apr. 27, 1951	10.82	22,500	
	May 5, 1951	15.64	42,000	
	June 4, 1951	13.80	33,100	
	June 21, 1951	8.15	16,600	
	June 4, 1951	--	33,000	
1952	Mar. 23, 1952	18.4	16,700	
	Apr. 1, 1952	22.5	28,900	
	June 27, 1952	19.7	20,800	
	July 12, 1952	20.0	21,600	
1953	June 12, 1953	24.50	34,200	
1954	June 16, 1954	8.64	16,900	
	June 24, 1954	20.08	67,300	
	Aug. 22, 1954	8.54	16,500	
	Aug. 26, 1954	10.55	20,800	
	Aug. 29, 1954	12.50	26,300	
1955	Apr. 27, 1955	--	11,600	
	July 11, 1955	7.27	11,600	
1956	Sept. 5, 1956	5.71	3,850	
1957	June 19, 1957	11.60	25,700	

c Maximum stage known since at least 1893, site and datum then in use.

05485500 Des Moines River below Raccoon River, at Des Moines Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1958	July 4, 1958	14.96	39,000
	July 20, 1958	9.34	19,100
	Sept. 7, 1958	8.00	16,000
1959	June 13, 1959	12.82	27,700
1960	Apr. 2, 1960	28.86	68,900
	Apr. 18, 1960	18.35	15,500
	May 7, 1960	22.50	26,300
	May 26, 1960	22.20	25,300
1961	Mar. 31, 1961	25.10	37,600
1962	Apr. 3, 1962	27.35	48,600
	May 30, 1962	19.38	18,700
	June 9, 1962	18.75	17,400
	Sept. 6, 1962	21.99	25,000
1963	Apr. 29, 1963	18.06	15,800
	May 15, 1963	18.15	16,200
1964	June 23, 1964	20.62	19,800
1965	Mar. 3, 1965	18.29	16,400
	Mar. 18, 1965	21.70	22,000
	Apr. 2, 1965	22.00	24,500
	Apr. 11, 1965	29.78	65,500
	May 29, 1965	21.20	22,100
	June 8, 1965	19.14	16,800
	Sept.24, 1965	18.95	17,700
1966	Oct. 2, 1965	21.16	22,800
	June 13, 1966	23.34	29,200
1967	June 13, 1967	25.70	38,600
	June 26, 1967	18.33	16,500
	June 30, 1967	18.45	16,700
1968	July 1, 1968	13.85	8,270
1969	Mar. 27, 1969	26.24	41,200
	Apr. 9, 1969	22.81	27,400
	Apr. 19, 1969	24.18	32,200
	July 2, 1969	23.72	30,500
	July 10, 1969	24.72	34,400
	July 18, 1969	20.94	22,300
	July 31, 1969	20.31	20,700
1970	May 18, 1970	21.08	22,600

05485500 Des Moines River below Raccoon River, at Des Moines Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Feb. 21, 1971	22.76	27,300
	Mar. 15, 1971	21.51	24,400
	Apr. 1, 1971	18.99	18,300
1972	May 8, 1972	18.27	16,300
	Aug. 3, 1972	18.00	15,800
	Aug. 9, 1972	18.44	16,700
1973	Feb. 2, 1973	21.90	25,000
	Mar. 15, 1973	25.11	37,300
	Mar. 28, 1973	20.26	21,300
	Apr. 1, 1973	21.74	25,100
	Apr. 17, 1973	26.44	43,600
	May 9, 1973	25.08	35,900
	June 1, 1973	21.23	23,000
	July 5, 1973	26.93	45,500
1974	Oct. 2, 1973	23.40	31,600
	Oct. 12, 1973	22.49	28,500
	Nov. 25, 1973	18.79	18,000
	Mar. 5, 1974	19.40	19,500
	Apr. 21, 1974	20.58	22,700
	Apr. 29, 1974	20.24	21,700
	May 20, 1974	27.15	48,400
	May 27, 1974	19.95	20,900
	June 9, 1974	23.11	30,400
	June 26, 1974	19.88	20,700
1975	Mar. 21, 1975	20.01	21,600
	Apr. 11, 1975	17.96	16,400
	May 2, 1975	23.61	33,200
	June 19, 1975	22.17	27,500
	June 27, 1975	21.93	26,200
1976	Apr. 24, 1976	19.07	18,700
	May 21, 1976	18.24	16,600
1977	Aug. 28, 1977	16.98	13,600
1978	Mar. 21, 1978	20.40	22,200
1979	Mar. 21, 1979	25.07	35,800
1980	June 19, 1980	18.17	14,900
1981	July 4, 1981	18.53	15,900
1982	May 21, 1982	21.99	24,900

05485500 Des Moines River below Raccoon River, at Des Moines Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	July 4, 1983	25.70	38,800
1984	June 19, 1984	28.46	58,400

05485640 Fourmile Creek at Des Moines, Iowa

Location.--Lat 41°36'50", long 93°32'43", in NE1/4 NE1/4 sec.32, T.79 N., R.23 W., Polk County, on right bank 20 ft downstream from bridge on Easton Blvd., 4.4 mi downstream from Muchikinock Creek and 5.0 mi upstream from Des Moines River.
Drainage area.--92.7 mi².
Gage.--Water-stage recorder. Datum of gage is 795.87 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1972	June 20, 1972	9.54	1,440
1973	Dec. 30, 1972	--	1,000 a
	Feb. 1, 1973	12.71	2,600
	Mar. 31, 1973	7.75	702
	Apr. 16, 1973	10.30	1,470
	May 1, 1973	--	600 a
	May 8, 1973	--	1,200 a
	May 29, 1973	--	500 a
	July 4, 1973	9.67	1,240
	Sept.29, 1973	9.75	1,310
1974	Oct. 11, 1973	9.77	1,270
	Apr. 29, 1974	10.89	1,620
	May 13, 1974	10.05	1,280
	May 18, 1974	14.61	5,010
	May 29, 1974	7.95	655
	June 9, 1974	14.84	5,340
	June 15, 1974	8.89	914
	June 19, 1974	14.28	4,550
	June 22, 1974	9.40	1,190
1975	Mar. 19, 1975	8.82	986
	Mar. 28, 1975	7.84	692
	Mar. 30, 1975	8.05	755
	Apr. 28, 1975	7.35	562
	June 14, 1975	7.40	582
	June 18, 1975	10.95	1,820
	June 27, 1975	10.70	1,700

a About.

05485640 Fourmile Creek at Des Moines, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1976	Apr. 18, 1976	14.20	4,440
	Apr. 21, 1976	12.29	2,570
	Apr. 24, 1976	11.20	1,950
	May 22, 1976	7.08	545
	June 28, 1976	10.74	1,880
1977	Aug. 26, 1977	8,18	854
	Aug. 28, 1977	14.64	5,380
	Sept. 3, 1977	7.51	668
	Sept.17, 1977	7.26	612
1978	Oct. 24, 1977	8.00	740
	Mar. 19, 1978	11.43	1,900
	Apr. 18, 1978	7.72	767
	July 19, 1978	8.13	830
	Sept.20, 1978	8.79	1,040
1979	Mar. 13, 1979	8.59	965
	Mar. 19, 1979	10.00	1,470
	Mar. 23, 1979	8.91	1,080
	Apr. 20, 1979	8.10	851
1980	June 17, 1980	b	b
1981	May 23, 1981	9.68	1,260
1982	Feb. 22, 1982	c	718
	Mar. 19, 1982	7.59	620
	Apr. 16, 1982	7.37	564
	June 15, 1982	10.12	1,440
	July 6, 1982	8.28	824
	July 16, 1982	14.46	4,800
	July 18, 1982	12.95	3,080
	Aug. 5, 1982	8.00	740
1983	Nov. 11, 1982	7.18	517
	Dec. 28, 1982	7.36	622
	Feb. 19, 1983	7.57	677
	Apr. 2, 1983	7.83	821
	Apr. 13, 1983	7.95	818
	May 7, 1983	7.02	552
	June 26, 1983	7.70	701
	June 28, 1983	13.55	3,650
	June 29, 1983	13.92	4,080
	July 2, 1983	9.87	1,340
	July 4, 1983	13.52	3,620
	Sep. 20, 1983	6.92	574

b Gage height and discharge unknown. c Affected by ice.

05485640 Fourmile Creek at Des Moines, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	Oct. 22, 1983	8.47	1,020
	Nov. 4, 1983	7.23	644
	Nov. 19, 1983	8.10	896
	Nov. 28, 1983	7.85	818
	Feb. 19, 1984	10.70	1,890
	Apr. 29, 1984	9.85	1,330
	May 25, 1984	10.44	1,760
	May 28, 1984	10.59	1,830
	June 9, 1984	13.23	3,670
	June 11, 1984	11.02	2,030
	June 13, 1984	10.92	1,980
	June 14, 1984	11.50	2,300
	June 16, 1984	8.61	1,020
	July 15, 1984	13.62	3,720
	July 26, 1984	8.51	971

05486000 North River near Norwalk, Iowa

Location.--Lat 41°27'25", long 93°39'10", in NW1/4 SW1/4 sec.20, T.77 N., R.24 W., Warren County, on left bank 10 ft downstream from bridge on county highway R57, 1.7 mi southeast of Norwalk, 5.2 mi upstream from Middle Creek, and 6.2 mi downstream from Badger Creek.
Drainage area.--349 mi².
Gage.--Water-stage recorder. Datum of gage is 788.45 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to June 12, 1946, nonrecording gage at same site and datum. Jan. 7 to Oct. 11, 1960, nonrecording gage at site 2.1 mi upstream at different datum.
Stage-discharge relation.--Defined by current-meter measurements below 9,100 ft³/s and above on basis of area-velocity studies.
Flood stage.--14 feet.
Remarks.--Base for partial-duration series, 1,700 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1940	Aug. 1, 1940	14.74	986
1941	Sept.17, 1941	17.4	1,530
1942	Oct. 9, 1941	19.8	2,250
	Nov. 2, 1941	20.4	3,800
	Dec. 25, 1941	19.0	2,040
	May 7, 1942	18.5	1,820
	May 12, 1942	20.62	4,350
	July 21, 1942	20.0	3,020
1943	Feb. 5, 1943	20.0 a	1,710 b
	June 18, 1943	20.51	3,720
1944	May 5, 1944	19.8	2,430
	May 22, 1944	20.3	3,430
	May 27, 1944	20.45	3,830
	June 12, 1944	20.1	2,970
1945	Mar. 17, 1945	19.7	2,290
	Apr. 5, 1945	19.8	2,430
	Apr. 17, 1945	19.9	2,590
	May 16, 1945	19.9	2,590
1946	Mar. 27, 1946	19.6	2,170
	Aug. 26, 1946	21.87	10,200

a Affected by ice. b About.

05486000 North River near Norwalk, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1947	Oct. 20, 1946	20.0	2,800
	Apr. 6, 1947	19.9	2,600
	Apr. 11, 1947	20.8	5,040
	May 30, 1947	20.6	4,370
	June 5, 1947	24.4	26,000
	June 13, 1947	25.3 c	32,000
	June 24, 1947	21.1	6,080
	July 7, 1947	19.3	2,080
1948	Mar. 19, 1948	21.36	7,200
1949	Mar. 5, 1949	18.68	1,860
1950	Mar. 2, 1950	20.8 a	2,500 b
	Mar. 6, 1950	20.32	3,430
	June 16, 1950	19.4	1,800
	June 20, 1950	20.6	2,260
1951	Mar. 30, 1951	19.77	2,380
	May 2, 1951	20.52	3,970
	May 27, 1951	20.25	3,300
	June 4, 1951	19.11	1,760
	June 9, 1951	19.40	1,980
	July 4, 1951	19.89	2,600
1952	Mar. 12, 1952	20.48	3,970
	May 25, 1952	19.79	2,440
	June 23, 1952	20.80	5,670
	June 29, 1952	18.96	1,820
	Aug. 17, 1952	19.22	1,820
1953	June 11, 1953	19.64	1,940
1954	May 31, 1954	18.45	1,600
1955	July 11, 1955	--	1,400 b
1956	Aug. 8, 1956	16.85	1,140
1957	May 11, 1957	18.26	1,410
1958	July 6, 1958	20.77	3,180
	July 21, 1958	20.20	2,220
1959	May 22, 1959	19.63	1,810
	May 31, 1959	20.33	2,660
	July 1, 1959	22.60	9,460

a Affected by ice. b About. c From floodmark.

05486000 North River near Norwalk, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)	
1960	Jan. 13, 1960	19.76		4,580	
	Mar. 30, 1960	21.0	a	6,800	b
	May 7, 1960	17.8		2,500	
	May 25, 1960	17.97		2,600	
1961	Mar. 19, 1961	19.92		2,290	
	Mar. 29, 1961	19.19		1,730	
	Apr. 14, 1961	20.05		2,480	
	June 8, 1961	20.18		2,130	
	June 15, 1961	19.90		1,910	
1962	Mar. 21, 1962	21.87	a	5,200	b
	May 31, 1962	20.30		2,830	
	June 11, 1962	20.29		2,830	
1963	Mar. 13, 1963	19.97	a	1,800	b
	May 1, 1963	19.72		2,080	
1964	June 25, 1964	20.23		2,130	
1965	Mar. 18, 1965	22.86	a	8,000	b
	Apr. 2, 1965	20.23		2,040	
	Apr. 6, 1965	21.20		4,330	
	July 2, 1965	20.84		2,770	
1966	June 14, 1966	20.41		1,580	
1967	June 14, 1967	20.45		1,920	
1968	Apr. 24, 1968	13.71		555	
1969	Mar. 19, 1969	21.43		3,840	
	July 19, 1969	20.44		2,220	
1970	Mar. 4, 1970	22.18		5,740	
	May 15, 1970	21.05		2,850	
1971	Feb. 21, 1971	22.4	a	2,200	b
	Mar. 15, 1971	19.97		1,730	
1972	Aug. 7, 1972	21.47		3,770	
	Sept.14, 1972	21.11		2,650	
1973	Jan. 1, 1973	--		2,800	b
	Jan. 19, 1973	--		2,200	b
	Feb. 3, 1973	--		5,600	b
	Mar. 12, 1973	20.02		1,760	

1973 CONTINUED ON NEXT PAGE

a Affected by ice. b About.

05486000 North River near Norwalk, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973 cont.	Mar. 15, 1973	19.97	1,730
	Mar. 27, 1973	19.98	1,740
	Apr. 2, 1973	21.90	4,900
	Apr. 17, 1973	22.23	5,920
	May 2, 1973	20.80	2,600
	May 9, 1973	21.83	4,690
	May 28, 1973	20.52	2,490
	July 6, 1973	22.05	5,350
1974	Oct. 3, 1973	21.95	5,050
	Apr. 30, 1974	21.71	4,370
	May 19, 1974	20.31	1,960
	June 10, 1974	23.25	8,500
1975	Mar. 20, 1975	21.55	4,100
	Mar. 29, 1975	19.52	1,810
	May 8, 1975	19.27	1,710
	June 20, 1975	19.78	1,910
	June 27, 1975	20.85	2,740
1976	Apr. 19, 1976	22.15	5,110
	Apr. 25, 1976	23.13	10,500
1977	Aug. 27, 1977	19.90	1,650
	Aug. 29, 1977	21.03	2,480
	Sept. 2, 1977	21.28	2,860
1978	Nov. 1, 1977	19.69	1,880
	Mar. 21, 1978	21.53	4,060
	Apr. 19, 1978	22.44	6,760
	Sept.21, 1978	19.57	2,000
1979	Mar. 20, 1979	21.57	4,140
1980	June 16, 1980	19.12	1,650
1981	July 5, 1981	21.18	2,750
	Aug. 2, 1981	19.48	1,780
1982	Feb. 23, 1982	22.00	--
	Mar. 21, 1982	20.31	2,280
	Apr. 17, 1982	21.49	3,950
	July 18, 1982	21.05	3,090
	Aug. 7, 1982	21.78	4,630
1983	Dec. 30, 1982	20.50	2,220
	Feb. 16, 1983	19.17	1,760
	Apr. 4, 1983	21.90	4,290
	Apr. 14, 1983	20.44	2,860

05486000 North River near Norwalk, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	Nov. 28, 1983	18.91	1,800
	Feb. 13, 1984	19.14	1,920
	Apr. 24, 1984	20.71	3,740
	May 1, 1984	22.21	8,830
	May 27, 1984	21.71	6,030
	June 11, 1984	23.03	13,700

05486490 Middle River near Indianola, Iowa

Location.--Lat 41°25'27", long 93°35'09", in SW1/4 SE1/4 sec.35, T.77 N., R.24 W., Warren Co., on right bank 10 ft downstream from bridge on co. road, and 4.6 mi northwest of Indianola.
Drainage area.--503 mi².
Gage.--Water-stage recorder. Datum is 776.15 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to June 11, 1946, June 9, 1947, to Nov.23, 1948, and Sept.8, 1951, to Oct.30, 1952, nonrecording gage and June 11, 1946, to June 8, 1947 (destroyed by flood), Nov.24, 1948, to Sept.7, 1951, Sept. 1, 1952, to Sept. 30, 1962, water-stage recorder at site 1.6 mi downstream at datum 2.81 ft lower.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--19 feet.
Remarks.--Base for partial-duration series, 4,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1940	July 31, 1940	12.40	2,400
1941	June 9, 1941	19.73	8,240
	Sept.16, 1941	17.0	5,060
1942	Nov. 1, 1941	19.5	7,960
	Dec. 24, 1941	16.5	4,750
	May 11, 1942	17.7	5,740
	July 19, 1942	17.5	5,540
1943	May 16, 1943	15.54	4,150
1944	May 22, 1944	20.32	9,490
1945	Mar. 15, 1945	19.36	7,860
	Apr. 16, 1945	19.0	7,280
	May 15, 1945	17.4	5,000
1946	Jan. 5, 1946	21.8 a	6,900 b
	June 20, 1946	18.4	6,550
	Aug. 25, 1946	18.90	7,190
1947	Apr. 5, 1947	18.8	7,650
	Apr. 11, 1947	19.8	9,250
	May 29, 1947	19.0	7,950
	June 5, 1947	25.0	21,800
	June 13, 1947	26.40 cd	34,000
	June 21, 1947	19.1	8,100

a Affected by ice. b About.
c From floodmark. d Former site and datum.

05486490 Middle River near Indianola, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)	
1948	Mar. 19, 1948	17.40		5,840	
1949	Feb. 24, 1949	17.28	a	--	
	June 25, 1949	15.67		4,670	
1950	Feb. 28, 1950	16.8	a	4,600	b
	June 19, 1950	16.47		5,600	
1951	Mar. 28, 1951	16.4		5,520	
	May 1, 1951	19.37		8,520	
	May 26, 1951	17.3		6,270	
	June 8, 1951	15.65		4,920	
1952	Mar. 13, 1952	15.65		4,920	
	May 23, 1952	16.71		5,760	
	June 22, 1952	22.20		14,400	
	Aug. 15, 1952	16.26		5,440	
1953	June 10, 1953	17.53		6,450	
1954	June 1, 1954	17.55		6,540	
	June 12, 1954	16.28		5,440	
	June 16, 1954	16.80		5,840	
1955	July 10, 1955	11.88		2,850	
1956	Aug. 18, 1956	11.48		2,650	
1957	May 11, 1957	12.90		3,350	
1958	July 2, 1958	17.54		6,090	
	Sept. 8, 1958	19.22		8,260	
1959	May 21, 1959	17.13		6,090	
	May 30, 1959	17.2	b	6,000	b
	July 1, 1959	19.52		8,650	
1960	Jan. 13, 1960	19.44		8,520	
	Mar. 30, 1960	20.43		9,900	
	May 25, 1960	15.26		4,710	
1961	Feb. 18, 1961	18.6	a	6,500	b
	Mar. 13, 1961	16.97		5,520	
	Sept.13, 1961	16.76		5,360	

a Affected by ice. b About.

05486490 Middle River near Indianola, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1962	Nov. 16, 1961	16.27	5,440
	Mar. 20, 1962	19.42	8,520
	May 29, 1962	16.16	5,360
	June 10, 1962	15.14	4,570
1963	Mar. 4, 1963	19.61 a	4,500 b
1964	June 23, 1964	16.45	4,810
	Sept. 7, 1964	18.13	5,960
1965	Mar. 17, 1965	20.45	9,700
	Apr. 6, 1965	21.00	9,120
	Apr. 9, 1965	15.93	4,570
	Sept.21, 1965	17.33	5,460
1966	May 15, 1966	17.56	5,770
	May 17, 1966	17.10	5,400
1967	June 12, 1967	17.69	5,680
1968	Apr. 24, 1968	9.96	1,370
1969	July 19, 1969	20.84 c	9,280
	July 27, 1969	16.57	4,900
1970	Aug. 8, 1970	20.62	8,970
1971	Feb. 19, 1971	18.62 a	4,600 b
	May 24, 1971	16.40	4,800
1972	Sept.14, 1972	21.46	9,150
1973	Dec. 30, 1972	--	7,000 b
	Feb. 2, 1973	22.77	11,100
	Mar. 11, 1973	17.10	4,610
	Mar. 14, 1973	17.81	5,170
	Mar. 25, 1973	17.34	4,780
	Apr. 1, 1973	21.28	8,940
	Apr. 16, 1973	21.46	9,150
	May 1, 1973	17.79	5,150
	May 8, 1973	21.20	8,840
1974	Oct. 12, 1973	22.41	9,310
	Apr. 29, 1974	22.62	9,520
	June 9, 1974	25.33	12,600
1975	Mar. 20, 1975	16.07	4,550
	June 19, 1975	18.01	5,910
	June 25, 1975	20.43	7,890

a Affected by ice. b About. c From floodmark.

05486490 Middle River near Indianola, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1976	Apr. 18, 1976	21.74	9,140
	Apr. 24, 1976	22.46	9,900
1977	Aug. 26, 1977	23.04	12,800
	Aug. 28, 1977	18.85	6,420
	Sept. 1, 1977	17.14	5,100
1978	Oct. 24, 1977	16.76	4,920
	Oct. 31, 1977	16.49	4,730
	Mar. 19, 1978	19.16	6,780
	Mar. 21, 1978	16.36	4,640
	Mar. 22, 1978	16.78	4,930
	Apr. 18, 1978	21.46	9,190
	Sept.20, 1978	16.19	4,520
1979	Mar. 19, 1979	18.32	6,100
	Apr. 26, 1979	17.87	5,920
1980	June 15, 1980	16.08	4,260
1981	July 4, 1981	22.78	12,300
1982	Feb. 20, 1982	a	4,730
	Mar. 19, 1982	16.78	4,710
	Apr. 16, 1982	19.23	6,740
	July 6, 1982	20.09	7,720
	July 16, 1982	22.21	11,100
	Aug. 5, 1982	16.85	4,760
1983	Oct. 9, 1982	16.67	4,640
	Dec. 6, 1982	16.11	4,530
	Dec. 28, 1982	18.34	6,710
	Apr. 2, 1983	18.33	5,910
1984	Apr. 22, 1984	18.69	6,240
	Apr. 30, 1984	21.50	9,780
	May 25, 1984	21.65	9,800
	June 10, 1984	21.24	9,000
	June 15, 1984	19.74	7,050

a Affected by ice.

05487470 South River near Ackworth, Iowa

Location.--Lat 41°20'14", long 93°29'10", in SE1/4 SE1/4 sec.34, T.76 N., R.23 W., Warren Co., on right bank 15 ft downstream from bridge on co. road 2.2 mi southwest of Ackworth.
Drainage area.--460 mi².
Gage.--Water-stage recorder. Datum of gage is 769.97 ft NGVD of 1929. Prior to June 12, 1946, nonrecording gage, June 13, 1946, to Apr. 13, 1960, water-stage recorder, and Apr. 14, 1960, to Sept. 30, 1961, nonrecording gage, all at site 4.0 mi downstream at datum 8.06 ft lower.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Flood stage.--19 feet.
Remarks.--Base for partial-duration series, 5,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1930	June ??, 1930	24.50 a	30,000 b
1940	Aug. 11, 1940	8.3	1,770
1941	June 9, 1941	20.6	13,400
	Sept.16, 1941	17.9	8,570
1942	Oct. 22, 1941	16.9	7,420
	Nov. 1, 1941	18.7	9,480
	Dec. 23, 1941	14.3	5,210
	July 19, 1942	18.4	9,090
1943	May 15, 1943	15.1	6,130
	June 12, 1943	13.8	5,130
1944	Apr. 22, 1944	13.4	5,030
	May 2, 1944	16.3	7,460
	May 22, 1944	19.7	10,900
	June 9, 1944	17.5	8,600
1945	Mar. 15, 1945	14.8	6,140
	Apr. 16, 1945	19.6	11,800
	May 14, 1945	18.5	10,100
	May 25, 1945	15.4	6,660
1946	Jan. 6, 1946	22.3 c	5,100 b
	Mar. 26, 1946	16.3	7,470
	June 19, 1946	20.0	12,600
	Aug. 25, 1946	15.5	7,470

a From information by local residents. b About.
c Affected by ice.

05487470 South River near Ackworth, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1947	Arp. 4, 1947	18.6	10,300
	Apr. 11, 1947	13.9	7,290
	May 29, 1947	19.8	12,400
	June 5, 1947	24.6	34,000
	June 13, 1947	23.1	22,500
	June 22, 1947	21.9	17,300
1948	Mar. 15, 1948	16.0	8,900
1949	Feb. 24, 1949	14.5	7,250
	June 25, 1949	17.8	11,000
1950	Feb. 28, 1950	16.6	10,300
	May 9, 1950	20.1	15,200
	June 14, 1950	13.9	7,350
	June 18, 1950	13.5	6,950
1951	Mar. 28, 1951	12.02	5,450
	Apr. 13, 1951	11.90	5,360
	May 1, 1951	16.80	10,500
	May 26, 1951	18.84	13,100
	June 2, 1951	15.12	8,660
	June 7, 1951	14.43	7,960
	July 3, 1951	12.17	5,980
1952	Mar. 13, 1952	12.23	5,980
	May 23, 1952	13.01	5,800
	June 22, 1952	21.83	16,600
	Aug. 15, 1952	14.32	7,780
1953	Feb. 20, 1953	12.81	6,220
	Mar. 30, 1953	12.53	5,950
	June 10, 1953	20.65	16,200
1954	Apr. 25, 1954	13.70	7,100
	June 1, 1954	12.37	5,860
	June 16, 1954	13.03	6,400
1955	July 10, 1955	12.02	5,500
1956	Aug. 18, 1956	7.69	2,350
1957	Apr. 3, 1957	9.01	3,130
1958	July 2, 1958	14.43	6,040
	July 19, 1958	13.88	5,590

05487470 South River near Ackworth, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1959	Mar. 26, 1959	12.5	5,150
	Apr. 20, 1959	13.03	5,500
	May 22, 1959	22.81	13,700
	May 29, 1959	19.35	11,700
	June 30, 1959	19.52	11,800
	Aug. 7, 1959	14.83	6,940
	Sept.26, 1959	15.04	7,100
1960	Jan. 13, 1960	21.26	13,000
	Mar. 30, 1960	22.60	18,100
	May 6, 1960	16.6	8,190
	May 25, 1960	19.7	11,300
	Sept.24, 1960	18.0	9,450
1961	Feb. 18, 1961	19.80	11,400
	Mar. 13, 1961	19.60	11,000
1962	Nov. 16, 1961	23.62	9,480
	Feb. 5, 1962	18.73	5,790
	Mar. 19, 1962	25.53	12,300
	June 11, 1962	24.32	10,100
1963	Apr. 29, 1963	20.82	7,260
	Aug. 6, 1963	18.38	5,580
1964	June 23, 1964	16.90	4,480
1965	Mar. 17, 1965	25.47	12,100
	Apr. 6, 1965	16.62	5,080
	Apr. 8, 1965	18.57	6,450
	June 4, 1965	21.30	8,540
	Sept.21, 1965	23.31	9,350
1966	May 15, 1966	25.58	12,100
	June 9, 1966	21.53	8,780
	June 13, 1966	19.35	7,030
1967	June 12, 1967	25.35	11,500
	June 22, 1967	19.88	7,070
1968	Apr. 23, 1968	14.87	3,810
1969	June 12, 1969	18.82	6,660
	June 28, 1969	17.49	5,640
	July 18, 1969	28.20	15,200
	July 27, 1969	18.71	6,570
	Sept.23, 1969	17.70	5,790
1970	Aug. 8, 1970	27.46	14,500

05487470 South River near Ackworth, Iowa__(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Oct. 9, 1970	22.00	9,200
	May 24, 1971	17.27	5,490
1972	May 7, 1972	18.73	6,580
	Aug. 2, 1972	22.21	9,370
	Aug. 6, 1972	24.98	12,000
	Sept.13, 1972	24.42	11,400
1973	Dec. 30, 1972	--	13,000 b
	Feb. 2, 1973	27.35	14,400
	Mar. 11, 1973	17.66	5,760
	Mar. 14, 1973	17.43	5,600
	Mar. 25, 1973	19.78	7,420
	Mar. 31, 1973	24.42	11,400
	Apr. 13, 1973	18.50	6,500
	Apr. 16, 1973	25.53	12,500
	May 7, 1973	20.27	7,820
	May 27, 1973	22.89	9,910
	July 4, 1973	17.81	5,840
1974	Oct. 3, 1973	23.39	10,400
	Oct. 12, 1973	28.30	15,400
	Dec. 4, 1973	19.34	6,830
	Jan. 27, 1974	18.75	6,600
	Apr. 28, 1974	19.05	6,360
	May 18, 1974	22.54	8,880
	June 10, 1974	29.07	19,500
1975	Mar. 17, 1975	20.96	8,360
	June 25, 1975	20.72	8,150
	June 27, 1975	21.73	9,060
1976	Apr. 18, 1976	23.31	10,600
	Apr. 21, 1976	20.69	8,120
	Apr. 24, 1976	24.34	11,800
1977	Aug. 26, 1977	26.99	15,800
1978	Oct. 23, 1977	21.55	8,900
	Oct. 31, 1977	17.42	5,440
	Apr. 18, 1978	24.17	11,600
	June 23, 1978	19.51	7,110
	July 1, 1978	17.00	5,100
	Sept.20, 1978	22.81	10,000
1979	Apr. 25, 1979	16.68	4,880
1980	June 15, 1980	24.31	11,900

b About.

05487470 South River near Ackworth, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1981	June 8, 1981	18.00	5,600
	July 5, 1981	32.85	32,700
1982	Feb. 20, 1982	19.10	6,470
	Mar. 19, 1982	20.90	8,840
	Apr. 16, 1982	20.00	7,960
	May 6, 1982	24.00	12,300
	July 3, 1982	22.55	9,700
	July 6, 1982	24.60	12,000
	July 16, 1982	32.00	26,000
1983	Dec. 5, 1982	19.98	8,520
	Dec. 28, 1982	21.47	10,300
	Apr. 2, 1983	19.77	7,450
	Apr. 12, 1983	17.12	5,350
1984	Apr. 22, 1984	21.81	9,470
	Apr. 30, 1984	23.15	10,900
	May 25, 1984	22.06	10,100

05487600 South White Breast Creek near Osceola, Iowa
(Discontinued September 30, 1981)

Location.--Lat 40°57'36", long 93°41'28", near southwest corner sec.12, T.71 N., R.25 W., Clarke County, at bridge, 6 mi southeast of Osceola.
Drainage area.--28.0 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and inderict measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 8, 1953	11.21	1,280
1954	May 29, 1954	5.27	302
1955	July 9, 1955	12.02	1,440
1956	--	a	<75
1957	Apr. 2, 1957	9.90	1,020
1958	July 3, 1958	11.57	1,350
1959	Aug. 6, 1959	13.09	1,680
1960	Mar. 27, 1960	11.44	1,330
1961	Sept.14, 1961	11.04	1,240
1962	Nov. 16, 1961	12.08	2,400
1963	Apr. 22, 1963	11.65	2,000
1964	Sept. 6, 1964	13.51	4,000
1965	May 8, 1965	11.99	2,300
1966	May 17, 1966	11.00	1,640
1967	June 21, 1967	13.05	3,500
1968	Apr. 23, 1968	10.16	1,150
1969	July 17, 1969	12.89	3,200

a Peak stage did not reach bottom of gage.

05487600 South White Breast Creek near Osceola, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	May 13, 1970	12.87	3,200
1971	Feb. 19, 1971	10.59 c	500 d
1972	--	a	<140
1973	Apr. 15, 1973	12.05	2,400
1974	Oct. 11, 1973	13.51	3,400
1975	--	a	<140
1976	Apr. 24, 1976	13.33	3,300
1977	--	a	<140
1978	May 12, 1978	11.65	2,000
1979	May 2, 1979	12.06	2,500
1980	June 2, 1980	11.53	1,900
1981	July 4, 1981	14.88	9,200
Discontinued September 1981			

a Peak stage did not reach bottom of gage. c Affected by ice.
d About.

05487800 White Breast Creek at Lucas, Iowa

Location.--Lat 41°01', long 93°28', in NE1/4 sec.23, T.72 N., R.23 W., Lucas County, at bridge on U.S Highway 65, near south city limits of Lucas.
Drainage area.--128 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 8, 1953	15.15	3,420
1954	May 29, 1954	8.52	583
1955	July 8, 1955	14.95	2,960
1956	--	a	<110
1957	Apr. 4, 1957	12.85	1,460
1958	July 30, 1958	13.59	1,760
1959	May 22, 1959	16.98	8,800
1960	Mar. 29, 1960	15.80	5,600
1961	Sept.14, 1961	14.41	2,570
1962	Nov. 16, 1961	15.20	3,700
1963	Apr. 22, 1963	14.10	2,310
1964	June 20, 1964	12.95	1,620
1965	May 8, 1965	14.67	2,820
1966	Apr. 19, 1966	13.26	1,770
1967	June 13, 1967	14.60	2,750
1968	Apr. 23, 1968	15.42	4,260
1969	July 17, 1969	14.81	3,020
1970	May 13, 1970	14.38	2,700

a Peak stage did not reach bottom of gage.

05487800 White Breast Creek at Lucas, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Oct. 9, 1970	12.78	1,450
1972	Sept.11, 1972	16.58	7,300
1973	Feb. 2, 1973	16.68	7,700
1974	Oct. 11, 1973	17.51	11,000
1975	--	a	<250
1976	Apr. 25, 1976	16.68	7,700
1977	Aug. 26, 1977	16.05	6,100
1978	May 12, 1978	16.66	7,600
1979	Mar. 22, 1979	14.18	2,500
1980	June 2, 1980	13.60	2,000
1981	July 4, 1981	18.27	15,500
1982	May 6, 1982	15.87	5,000
1983	Apr. 1, 1983	14.73	3,100
1984	Apr. 29, 1984	15.03	3,700

a Peak stage did not reach bottom of gage.

05487980 White Breast Creek near Dallas, Iowa

Location.--Lat 41°14'41", long 93°16'08", in NW1/4 NW1/4 sec.3, T.74 N., R.21 W., Marion County, on left bank 15 ft downstream from bridge on county highway, 0.5 mi downstream from Kirk Branch, and 1.7 mi northwest of Dallas.
Drainage area.--342 mi².
Gage.--Water-stage recorder. Datum of gage is 759.12 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--22 feet.
Remarks.--Base for partial-duration series, 3,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1962	June 11, 1962	28.87 a	12,000 b
1963	Mar. 4, 1963	18.95	3,500
	Mar. 19, 1963	21.40	5,550
1964	May 8, 1964	17.24	3,490
	June 15, 1964	18.40	3,580
	June 22, 1964	19.74	4,200
1965	Mar. 17, 1965	22.49	6,640
	Apr. 5, 1965	19.44	4,870
	Apr. 8, 1965	16.43	3,360
	Apr. 11, 1965	16.18	3,240
	Apr. 25, 1965	16.15	3,400
	Sept.21, 1965	20.57	5,490
1966	Apr. 18, 1966	17.29	3,860
	May 15, 1966	20.32	5,350
	May 17, 1966	21.24	5,890
	May 24, 1966	16.61	3,530
1967	June 12, 1967	20.95	5,720
	June 16, 1967	17.74	4,020
	June 23, 1967	18.81	4,560
1968	Apr. 23, 1968	22.40	6,940
1969	Apr. 27, 1969	19.44	5,190
	June 28, 1969	19.39	5,090
	July 17, 1969	23.91	7,180

a From floodmark. Flood of June 6, 1947 may have been slightly higher. b About.

05487980 White Breast Creek near Dallas, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	Apr. 12, 1970	17.53	4,060
	Aug. 9, 1970	23.39	7,570
1971	Oct. 9, 1970	20.24	5,640
	Feb. 19, 1971	21.09 c	4,700 b
	Feb. 26, 1971	17.25	3,980
1972	May 7, 1972	18.80	4,780
	Aug. 2, 1972	20.15	5,590
	Aug. 6, 1972	22.35	6,910
	Sept.12, 1972	22.75	7,150
1973	Dec. 30, 1972	19.45 c	3,880 b
	Feb. 1, 1973	23.03	7,320
	Mar. 25, 1973	18.68	4,710
	Mar. 31, 1973	21.52	6,410
	Apr. 16, 1973	24.19	8,200
	May 2, 1973	19.92	3,080 b
	May 7, 1973	19.32	3,800 b
	May 27, 1973	24.15	5,500 b
	July 4, 1973	20.58	3,800 b
	Aug. 12, 1973	15.65	3,140
	Sept.29, 1973	19.77	5,360
1974	Oct. 3, 1973	23.00	7,300
	Oct. 11, 1973	26.04	9,430
	Dec. 4, 1973	17.25	3,820
	Jan. 27, 1974	--	3,400 b
	May 17, 1974	16.03	3,250
	May 18, 1974	23.25	7,270
	May 19, 1974	22.79	6,930
	June 9, 1974	25.58	8,410
1975	Mar. 17, 1975	18.37 c	4,200 b
	June 25, 1975	16.72	3,560
1976	Apr. 18, 1976	17.48	3,890
	Apr. 21, 1976	17.69	4,110
	Apr. 24, 1976	23.77	7,980
1977	Aug. 26, 1977	22.73	7,140
1978	Oct. 24, 1977	21.27	6,260
	Oct. 31, 1977	17.08	3,750
	Mar. 20, 1978	16.45	3,420
	Mar. 21, 1978	16.28	3,340
	Apr. 18, 1978	20.19	5,610

1978 CONTINUED ON NEXT PAGE

b About. c Affected by ice.

05487980 White Breast Creek near Dallas, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1978 cont.	Apr. 19, 1978	17.11	3,770
	May 13, 1978	17.62	4,070
	June 23, 1978	19.10	4,960
	Sept.20, 1978	20.20	5,620
1979	Mar. 3, 1979	19.66	5,400
	Mar. 13, 1979	16.56	3,570
	Mar. 23, 1979	18.70	4,830
	May 2, 1979	17.66	4,200
1980	June 15, 1980	16.32	3,360
	June 19, 1980	21.78	6,570
	June 22, 1980	17.56	4,040
1981	Apr. 14, 1981	16.14	3,950
	June 9, 1981	16.95	4,480
	July 5, 1981	26.61	12,300
1982	Feb. 19, 1982	18.01	3,500
	Mar. 16, 1982	14.39	3,140
	Mar. 19, 1982	17.01	4,640
	May 6, 1982	19.28	6,120
	July 3, 1982	26.73	12,300
	July 6, 1982	14.57	3,240
	July 16, 1982	33.45	37,300
	Aug. 5, 1982	16.25	4,180
	Aug. 15, 1982	14.13	3,000
	Sept.17, 1982	17.36	4,860
1983	Oct. 9, 1982	24.49	10,100
	Nov. 12, 1982	14.85	3,390
	Dec. 5, 1982	18.69	4,630
	Dec. 28, 1982	18.43	4,470
	May 29, 1983	14.64	3,060
	Apr. 2, 1983	20.67	6,820
	Apr. 13, 1983	15.40	3,470
1984	Nov. 1, 1983	16.42	3,900
	Nov. 10, 1983	15.52	3,450
	Nov. 28, 1983	15.40	3,040
	Apr. 22, 1984	18.77	5,520
	Apr. 30, 1984	20.45	6,670
	May 25, 1984	18.22	5,160
	July 26, 1984	15.02	3,180

05488000 White Breast Creek near Knoxville, Iowa
(Discontinued Sept. 30, 1962)

Location.--Lat 42°19'25", long 93°08'55", in NE1/4 SW1/4 sec.3, T.75 N., R.20 W., Marian County, on right bank 10 ft downstream from bridge on State Highway 92, 1.1 mi upstream from Butcher Creek, 2.2 mi west of Knoxville, and 11.1 mi upstream from mouth.
Drainage area.--380 mi².
Gage.--Recording. Datum of gage is 734.73 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Prior to Feb. 16, 1949, nonrecording at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Bankfull stage.--High banks are not subject to overflow.
Remarks.--Base for partial-duration series, 3,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1945	Aug. 2, 1945	--	300 a
1946	Jan. 7, 1946	--	5,000
	Mar. 17, 1946	11.7	--
	June 20, 1946	18.4	8,740
	Aug. 25, 1946	10.7	--
1947	Apr. 5, 1947	15.5	5,200
	Apr. 10, 1947	15.4	5,100
	May 29, 1947	17.0	7,050
	June 6, 1947	19.6	14,000
	June 13, 1947	16.7	6,620
	June 22, 1947	17.1	7,200
1948	Mar. 16, 1948	11.2	2,730
1949	Feb. 23, 1949	15.30	5,400
	June 25, 1949	16.38	6,580
1950	Feb. 28, 1950	15.83	5,900
	May 10, 1950	17.95	9,100
	June 18, 1950	12.16	3,540
1951	Mar. 28, 1951	11.17	3,290
	May 26, 1951	14.70	5,020
	July 3, 1951	14.98	5,200
1952	Mar. 13, 1952	12.49	3,880
	June 21, 1952	18.16	9,500
	Aug. 15, 1952	11.44	3,380

a Maximum for period July to September 1945.

05488000 White Breast Creek near Knoxville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)	
1953	Nov. 17, 1952	15.89		6,000	
	Feb. 20, 1953	11.25	b	3,100	c
	Mar. 30, 1953	13.72		4,700	
	June 10, 1953	15.90		6,540	
1954	Apr. 25, 1954	12.01		3,850	
1955	July 10, 1955	9.74		2,590	
1956	Aug. 8, 1956	10.79		3,000	
1957	May 13, 1957	10.42		2,760	
1958	July 2, 1958	18.37		7,300	
	July 4, 1958	18.24		7,020	
	July 19, 1958	12.35		3,660	
1959	Mar. 20, 1959	11.31	b	3,600	c
	Mar. 26, 1959	14.0		4,850	
	Apr. 20, 1959	14.2		5,000	c
	May 11, 1959	11.5		3,680	
	May 22, 1959	17.75		7,800	
	May 31, 1959	16.64		6,660	
	Sept.26, 1959	10.77		3,390	
1960	Jan. 12, 1960	17.10		7,100	
	Mar. 30, 1960	19.02		11,000	
	Apr. 17, 1960	12.4	d	3,900	c
	May 7, 1960	17.0		7,000	
	May 25, 1960	16.7	d	8,000	c
1961	Feb. 18, 1961	15.74		5,940	
	Mar. 6, 1961	12.80		4,260	
	Mar. 13, 1961	15.48		5,800	
	Mar. 23, 1961	10.27		3,190	
	Sept.14, 1961	14.75		5,330	
1962	Nov. 3, 1961	12.46		4,120	
	Nov. 16, 1961	16.80		6,830	
	Mar. 20, 1962	16.48		7,000	
	June 11, 1962	19.30		11,700	

Discontinued Sept. 30, 1962

b Affected by ice. c About. d Estimated.

05488500 Des Moines River near Tracy, Iowa

Location.--Lat 41°16'53", long 92°51'34", in NW1/4 SE1/4 sec.19, T.75 N., R.17 W., Mahaska County, on right bank 250 ft upstream from abandoned Bellefountaine Bridge, 0.5 mi downstream from bridge on State Highway 92, 0.8 mi east of Tracy, 3.1 mi upstream from Cedar Creek, 6.4 mi downstream from English Creek, and at mi 130.4.
Drainage area.--12,479 mi².
Gage.--Water-stage recorder. Datum of gage is 670.91 ft National Geodetic Vertical Datum of 1929. Prior to June 26, 1940, and June 30, 1952, to Nov. 4, 1960, nonrecording gage, and June 27, 1940, to June 29, 1952, water-stage recorder, at site 250 ft downstream at same datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--14 ft.
Remarks.--Base for partial-duration series, 20,000 ft³/s. Peak discharge above base discontinued upon beginning of storage in Lake Red Rock Mar. 12, 1969.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1903	May 31, 1903	25. a	130,000 a
1920	Mar. 16, 1920	13.0	25,900
	Mar. 27, 1920	13.7	28,200
	Apr. 20, 1920	12.5	24,200
	May 14, 1920	15.0	32,800
	July 15, 1920	13.6	27,900
1921	Sept.17, 1921	13.3	26,900
1922	Apr. 13, 1922	12.4	23,100
	May 27, 1922	13.4	26,600
1923	Mar. 26, 1923	13.3	26,300
1924	Mar. 4, 1924	12.6	23,800
	Mar. 31, 1924	12.0	21,700
	June 27, 1924	16.5	38,200
1925	June 23, 1925	8.7	11,500
1926	June 15, 1926	13.0	25,200
	Sept.24, 1926	16.3	37,500

a About.

05488500 Des Moines River near Tracy, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1927	Apr. 20, 1927	15.8	35,500
	Apr. 30, 1927	11.7	20,700
	May 24, 1927	11.9	21,400
1928	Aug. 4, 1928	11.4	19,700
1929	Mar. 16, 1929	18.6	45,500
1930	June 17, 1930	16.4	33,500
1931	June 22, 1931	9.0	11,800
1932	Nov. 26, 1931	16.5	34,000
1933	Apr. 7, 1933	16.7	35,000
1934	Apr. 9, 1934	5.5	4,950
1935	June 3, 1935	15.4	26,900
	June 20, 1935	15.7	28,000
	June 28, 1935	20.2	54,600
	July 4, 1935	18.6	43,300
1936	Mar. 5, 1936	14.2	23,100
1937	Mar. 5, 1937	17.9	38,900
1938	Sept.23, 1938	15.2	26,200
1939	Mar. 13, 1939	17.5	36,600
1940	Aug. 15, 1940	9.3	11,600
1941	June 11, 1941	13.8	21,500
1942	Nov. 2, 1941	15.7	28,000
	Jan. 26, 1942	13.4	20,900
	May 14, 1942	14.4	23,700
	July 15, 1942	13.2	20,400
	July 20, 1942	13.2	20,400
1943	May 17, 1943	15.7	28,000
	June 13, 1943	13.4	20,900
1944	Apr. 24, 1944	16.1	29,000
	May 4, 1944	16.8	32,200
	May 23, 1944	21.6	75,000
	June 10, 1944	17.3	35,500
	June 13, 1944	17.3	36,600
	June 19, 1944	18.9	46,200
1945	Mar. 17, 1945	18.5	39,300
	Mar. 26, 1945	15.8	29,400
	Apr. 5, 1945	13.0	20,000
	Apr. 18, 1945	18.8	41,400
	Apr. 29, 1945	14.5	24,000

1945 CONTINUED ON NEXT PAGE

05488500 Des Moines River near Tracy, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1945 cont.	May 16, 1945	16.6	32,000
	May 27, 1945	17.7	37,300
	June 10, 1945	16.4	31,100
	June 21, 1945	14.2	23,200
1946	Jan. 6, 1946	18.8	40,700
	Mar. 17, 1946	15.3	27,000
	Mar. 27, 1946	14.3	23,400
	May 31, 1946	13.6	21,300
	June 20, 1946	17.8	35,400
	Aug. 26, 1946	13.1	20,300
1947	Mar. 13, 1947	13.3	20,800
	Apr. 6, 1947	17.1	33,600
	Apr. 12, 1947	16.6	31,800
	Apr. 21, 1947	16.0	29,500
	May 30, 1947	16.8	32,500
	June 6, 1947	25.8	125,200
	June 14, 1947	26.5 b	155,000
	June 23, 1947	20.7	66,200
	June 27, 1947	21.5	76,000
1948	Feb. 28, 1948	14.4	25,400
	Mar. 17, 1948	13.7	23,000
	Mar. 22, 1948	20.1	59,700
1949	Mar. 5, 1949	19.6 c	27,000 a
	Mar. 9, 1949	15.4	29,300
	June 25, 1949	13.6	22,600
1950	Mar. 1, 1950	16.0	31,700
	May 10, 1950	15.6	30,100
	June 20, 1950	14.9	26,900
1951	Apr. 2, 1951	19.81	56,300
	Apr. 14, 1951	18.50	45,400
	May 5, 1951	18.74	46,800
	May 26, 1951	15.89	81,300
	May 26, 1951	15.89	31,300
	June 9, 1951	16.79	35,300
	July 3, 1951	16.87	35,800

a About. b Maximum stage known since 1851.
c Affected by ice.

05488500 Des Moines River near Tracy, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1952	Mar. 13, 1952	14.93	27,300
	Mar. 23, 1952	13.23	21,300
	Apr. 4, 1952	15.25	28,500
	May 24, 1952	13.04	20,700
	June 22, 1952	17.40	38,400
	June 29, 1952	13.84	23,300
	July 14, 1952	12.91	20,400
1953	Feb. 21, 1953	12.93	20,100
	Mar. 31, 1953	13.26	21,600
	June 14, 1953	16.19	27,700
1954	June 17, 1954	14.02	23,500
	June 27, 1954	22.14	69,900
	Sept. 1, 1954	14.8	25,900
1955	July 12, 1955	10.63	14,300
1956	Aug. 20, 1956	5.80	4,480
1957	June 20, 1957	13.58	24,100
1958	July 3, 1958	16.64	28,200
	July 7, 1958	16.98	33,100
	July 21, 1958	14.12	22,900
1959	Mar. 20, 1959	13.20	21,300
	Mar. 27, 1959	13.85	22,900
	May 22, 1959	17.00	29,600
	May 31, 1959	17.92	38,900
	July 2, 1959	16.65	32,600
1960	Jan. 14, 1960	16.70	33,100
	Apr. 4, 1960	23.00	75,500
	Apr. 18, 1960	12.50	20,700
	May 7, 1960	17.80	38,400
	May 26, 1960	17.60	
1961	Feb. 19, 1961	15.81 c	25,000 a
	Mar. 7, 1961	14.37	23,800
	Mar. 14, 1961	16.89	32,900
	Mar. 23, 1961	13.27	20,200
	Apr. 2, 1961	18.12	38,200
	Apr. 13, 1961	14.10	22,700
	Sept.14, 1961	14.92	25,500

a About. c Affected by ice.

05488500 Des Moines River near Tracy, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1962	Nov. 17, 1961	16.98	29,300
	Mar. 20, 1962	19.34	42,300
	Apr. 5, 1962	20.69	50,600
	Apr. 21, 1962	13.47	20,800
	May 30, 1962	14.81	25,100
	June 12, 1962	19.68	45,800
	Sept. 8, 1962	14.07	23,800
1963	Mar. 5, 1963	16.00 c	22,000 a
	Apr. 30, 1963	13.87	22,100
1964	June 24, 1964	15.63	27,600
1965	Mar. 18, 1965	18.27	39,200
	Apr. 11, 1965	23.17	77,300
	Apr. 26, 1965	15.45	27,400
	May 31, 1965	13.57	21,000
	June 6, 1965	14.82	25,200
	Sept.22, 1965	16.18	30,000
1966	Oct. 4, 1965	13.60	21,100
	June 15, 1966	17.24 d	33,800
1967	June 17, 1967	20.38	47,400
1968	Apr. 24, 1968	11.07	14,300
1969	Apr.9-11,1969	--	29,500 e
	Apr. 11, 1969	15.87	--
1970	May 20, 1970	12.29	18,200
1971	Feb. 26, 1971	15.62	28,100
1972	Aug. 11, 1972	11.94	17,400
1973	May 7, 1973	15.69	28,900
1974	Mar. 7, 1974	13.40	22,600
1975	Mar. 23, 1975	14.11	25,100
1976	Apr. 24, 1976	12.69	20,900

a About. c Affected by ice.
d From graph based on gage readings. e Daily.

05488500 Des Moines River near Tracy, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1977	Sept. 3, 1977	10.03	14,300
1978	Mar. 25, 1978	14.22	25,300
1979	Apr. 16, 1979	15.34	28,600
1980	June 21, 1980	10.64	15,800
1981	July 7, 1981	11.44	17,800
1982	July 16, 1982	19.62 f	35,000
1983	Apr. 13, 1983	15.57	29,300
1984	June 27, 1984	18.11	42,600

f Backwater from Cedar Creek.

05488620 Coal Creek near Albia, Iowa

Location.--Lat 41°01'02",long 92°50'46",in SW 1/4 sec. 20, T.72 N., R.17 W., Monroe County, at bridge on U.S. Highway 34, 2 mi southwest of Albia.
Drainage area.--13.5 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	May 12, 1966	78.02	360
1967	June 9, 1967	84.61	4,500
1968	--	a	<200
1969	--	a	<200
1970	Sept.24, 1970	79.92	880
1971	Feb. 17, 1971	77.38	250
1972	--	78.92	570
1973	July 4, 1973	81.44	1,600
1974	June 9, 1974	81.92	1,900
1975	--	a	<130
1976	Apr. 24, 1976	82.07	2,100
1977	Aug. 8, 1977	86.90	8,500
1978	May 7, 1978	80.09	920
1979	Mar. 24, 1979	77.77	320
1980	June 2, 1980	82.95	2,800
1981	July 4, 1981	82.56	2,400
1982	July 3, 1982	88.51	12,700

a Peak stage did not reach bottom of gage.

05488620 Coal Creek near Albia, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Oct. 9, 1982	79.99	920
1984	Apr. 29, 1984	81.71	1,800

05489000 Cedar Creek near Bussey, Iowa

Location.--Lat 41°13'09", long 92°54'38", at SW corner sec.11, T.74 N., R.18 W., Marion County, on left bank 10 ft downstream from bridge on State Highway 156, 0.8 mi downstream from North Cedar Creek, 1.6 mi northwest of Bussey, 3.0 mi upstream from Honey Creek, and 8.9 mi upstream from mouth.
Drainage area.--374 mi².
Gage.--Water-stage recorder. Datum of gage is 682.15 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Feb. 21, 1949, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--18 ft.
Remarks.--Base for partial-duration series, 4,000.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1946	June ??, 1946	28.05 a	31,500
1948	Feb. 28, 1948	24.90	15,900
	Mar. 16, 1948	19.98	5,760
	Mar. 20, 1948	19.18	5,040
1949	Feb. 24, 1949	21.58	7,800
	June 25, 1949	20.28	6,130
1950	Feb. 9, 1950	17.92	4,150
	Feb. 28, 1950	19.48	5,350
	May 9, 1950	27.50	29,300
	June 19, 1950	18.65	4,690
1951	May 11, 1951	20.02	5,800
	May 26, 1951	21.37	7,680
	July 3, 1951	18.00	4,200
1952	June 3, 1952	19.83	5,620
	June 21, 1952	25.72	20,100
1953	Nov. 18, 1952	19.18	5,080
	Mar. 31, 1953	20.12	5,920
1954	Aug. 26, 1954	16.44	3,460
1955	Feb. 20, 1955	16.46	3,500

a Gage height 28.45 ft on upstream side of bridge; from levels to floodmarks by Corps of Engineers.

05489000 Cedar Creek near Bussey, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1956	Aug. 9, 1956	17.20	3,980
1957	Apr. 3, 1957	17.37	4,060
1958	July 3, 1958	28.06	29,000
	July 4, 1958	17.60	4,140
	July 20, 1958	18.63	4,560
1959	Mar. 20, 1959	20.25	6,090
	Mar. 27, 1959	18.92	4,860
	Apr. 1, 1959	19.78	5,650
	Apr. 20, 1959	19.48	5,360
	May 21, 1959	22.84	11,000
	May 30, 1959	--	9,000 b
1960	Jan. 13, 1960	19.58	5,450
	Mar. 30, 1960	25.71	18,800
	Apr. 18, 1960	18.34	4,500
	May 7, 1960	25.00	16,000
	May 17, 1960	19.32	5,180
	May 25, 1960	20.62	6,630
1961	Mar. 6, 1961	19.60	5,370
	Mar. 8, 1961	16.84	3,820
	Mar. 14, 1961	19.90	5,580
	Mar. 27, 1961	17.50	4,100
	Sept. 13, 1961	27.54	20,800
1962	Nov. 3, 1961	24.60	12,300
	Nov. 16, 1961	24.23	11,400
	Mar. 20, 1962	21.75	8,620
	May 30, 1962	18.60	4,660
	June 11, 1962	23.06	11,800
1963	Mar. 19, 1963	17.91	4,300
1964	June 16, 1964	20.27	6,350
1965	Mar. 18, 1965	20.51	6,500
	Apr. 6, 1965	19.81	5,660
	Apr. 9, 1965	18.14	4,220
	Apr. 26, 1965	20.11	5,980
	Sept. 22, 1965	24.18	11,400
1966	Dec. 24, 1965	16.68	3,770
1967	June 11, 1967	21.57	6,520
	June 22, 1967	19.73	5,180

b About.

05489000 Cedar Creek near Bussey, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	Apr. 24, 1968	20.28	5,250
1969	Apr. 27, 1969	17.11	3,720
1970	Sept.18, 1970	18.75	4,980
1971	Oct. 10, 1970	20.59	5,420
	Feb. 19, 1971	20.26	5,240
1972	May 8, 1972	19.14	4,670
	Aug. 6, 1972	18.23	4,220
1973	Feb. 2, 1973	21.42	6,920
	Mar. 26, 1973	18.32	4,390
	Apr. 1, 1973	20.25	5,820
	Apr. 13, 1973	18.06	4,240
	Apr. 17, 1973	21.63	7,160
	Apr. 22, 1973	19.68	5,340
	May 2, 1973	21.20	6,700
	May 8, 1973	19.01	4,860
	May 28, 1973	24.27	11,500
	July 5, 1973	21.97	7,560
1974	Oct. 4, 1973	22.97	8,030
	Oct. 11, 1973	20.87	6,280
	Jan. 27, 1974	21.00	6,430
	May 19, 1974	25.52	14,700
	June 9, 1974	22.73	8,670
1975	June 25, 1975	16.33	3,420
1976	Apr. 24, 1976	25.27	13,900
	May 5, 1976	18.90	4,780
	May 16, 1976	23.11	9,300
1977	Aug. 9, 1977	21.37	6,870
	Sept.18, 1977	17.98	4,190
1978	Oct. 25, 1977	21.40	6,900
	Nov. 1, 1977	19.40	5,130
	Mar. 19, 1978	18.91	4,790
	Mar. 22, 1978	18.17	4,300
	Apr. 11, 1978	19.75	5,400
	Apr. 18, 1978	21.60	7,120
	May 14, 1978	21.74	7,290
	June 24, 1978	18.72	4,650
	June 29, 1978	18.59	4,560
	July 7, 1978	20.69	6,220
	July 23, 1978	17.72	4,060
	Sept.21, 1978	20.11	5,760

05489000 Cedar Creek near Bussey, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1979	May 3, 1979	16.49	3,480
1980	June 5, 1980	20.60	6,140
	June 7, 1980	17.86	4,130
	June 15, 1980	21.69	7,230
1981	July 4, 1981	28.83	26,600
1982	Feb. 21, 1982	20.23	5,990
	Mar. 20, 1982	22.82	9,760
	Apr. 17, 1982	20.71	7,140
	May 7, 1982	18.93	5,510
	May 30, 1982	20.17	6,570
	July 3, 1982	34.61	96,000
	July 5, 1982	21.01	7,460
	July 14, 1982	23.66	11,000
	July 16, 1982	33.20	63,800
	Aug. 5, 1982	25.10	13,600
1983	Oct. 9, 1982	22.66	9,530
	Nov. 12, 1982	18.27	5,000
	Dec. 6, 1982	21.34	7,830
	Dec. 28, 1982	19.84	6,260
	Apr. 2, 1983	23.77	11,200
	Apr. 13, 1983	17.16	4,400
1984	Nov. 10, 1983	20.36	6,630
	Nov. 28, 1983	19.00	5,470
	Apr. 22, 1984	17.27	4,340
	Apr. 29, 1984	18.18	4,930
	June 8, 1984	19.06	5,620
	June 10, 1984	18.57	5,230
	June 15, 1984	17.14	4,260
	July 15, 1984	19.85	6,270

05489090 South Coal Creek near Bussey, Iowa

location.--Lat 41°13'18". long 92°47'36", in SE1/4 SE1/4 sec. 10, T.74 N., R.17 W., Mahaska County, on right bank 800 ft upstream from bridge on county highway, 2.9 mi upstream from mouth and 6.5 mi northeast of Bussey.
Drainage area.--12.9 mi².
Gage.--Water-stage recprder. Datum of gage is 671.67 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series 300 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1976	July 14, 1976	14.14	1,270 a
1977	Aug. 26, 1977	10.29	311
	Sept.17, 1977	10.27	307
1978	Oct. 23, 1977	14.99	1,590
	Mar. 21, 1978	10.61	364
	July 1, 1978	11.55	547
	July 7, 1978	15.16	1,650
	July 20, 1978	11.33	501
	July 22, 1978	14.61	1,440
	Sept.20, 1978	14.54	1,420
1979	Nov. 17, 1978	11.46	528
	Mar. 3, 1979	13.09 b	400
	Mar. 13, 1979	11.93 b	540
	May 2, 1979	12.08	669
1980	June 15, 1980	14.27	1,320
	June 22, 1980	12.20	711
1981	Apr. 12, 1981	12.69	831
	June 15, 1981	13.20	976
	June 24, 1981	10.40	332
	June 29, 1981	12.98	912
	July 4, 1981	11.99	652
	July 15, 1981	12.85	875
Discontinued Sept. 30, 1981			

a Peak is for period July 13, 1976 to Sept. 30, 1976.
b Affected by ice.

05489150 Little Muchakinock Creek at Oskaloosa, Iowa

Location.--Lat 41°16', long 92°38', in SE1/4 sec.25, T.75 N., R.16 W., Mahaska County, at bridge on State Highway 137, at south edge of Oskaloosa,.
Drainage area.--9.12 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)	
1966	May 17, 1966	87.18	580	
1967	--	a	<259	c
1968	--	a	<259	c
1969	July 17, 1969	86.47	360	
1970	Sept.17, 1970	89.06	4,500	c
1971	Oct. 9, 1971	87.31	670	c
1972	--	a	<259	
1973	May 27, 1973	87.34	680	c
1974	May 19, 1974	87.20	620	c
1975	--	a	<259	
1976	Apr. 24, 1976	88.80	3,070	
1977	--	a	<259	
1978	July 7, 1978	85.87	260	
1979	--	a	<259	
1980	June 5, 1980	86.69	410	
1981	June 24, 1981	88.08	1,200	
1982	July 16, 1982	87.10	550	
1983	--	a	<259	

a Peak stage did not reach bottom of gage.
c Discharges revised from those previously published.

05489150 Little Muchakinock Creek at Oskaloosa, Iowa --(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	Apr. 29, 1984	87.73	900

05489190 Muchakinock Creek near Eddyville, Iowa

Location.--Lat 41°12'04", long 92°38'24", in SW1/4 NW1/4 sec. 19, T. 74 N., R.15 W., Mahaska County, on left bank 20 ft downstream from bridge on State Highway 137, 3.0 mi north of Eddyville and 4.0 mi upstream from mouth.
Drainage area.--70.2 mi².
Gage.--Water-stage recorder. Datum of gage is 664.4 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements and indirect measurement of peak flow.
Remarks.--Base for partial-duration series 1,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1976	Nov. 30, 1976	13.36	1,110
	Apr. 24, 1976	18.10	8,000
	June 29, 1976	13.19	1,060
1977	July 16, 1977	9.19	332
1978	Apr. 18, 1978	13.27	1,080
	June 30, 1978	13.33	1,100
	July 1, 1978	13.29	1,090
	July 7, 1978	13.00	1,000
	July 22, 1978	13.76	1,240
1979	Mar. 13, 1979	12.85	960
Discontinued Sept. 30, 1979			

05489350 South Avery Creek near Blakesburg, Iowa

Location.--Lat 41°01', long 92°37', in SE1/4 sec.19, T.72 N., R.15 W., Wapello County, at bridge on U.S. Highway 34, 3.5 mi north of Blakesburg.
Drainage area.--33.1 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1965	Sept.21, 1965	87.60	10,300
1966	May 11, 1965	81.94	2,700
1967	June 9, 1967	88.95	15,000
1968	Oct. 15, 1967	82.59	3,200
1969	June 8, 1969	80.37	1,750
1970	Sept.17, 1970	82.19	2,900
1971	--	a	<660
1972	May 8, 1972	85.03	5,600
1973	Sept.27, 1973	83.91	4,300
1974	May 19, 1974	85.39	6,200
1975	--	a	<660
1976	Apr. 24, 1976	86.31	7,600
1977	Aug. 7, 1977	88.00	11,000
1978	July 21, 1978	83.75	4,100
1979	Mar. 24, 1979	80.03	1,500
1980	June 15, 1980	84.96	5,500
1981	July 4, 1981	84.94	5,400
1982	July 3, 1982	90.20	21,000

a Peak stage did not reach bottom of gage.

05489350 South Avery Creek near Blakesburg, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Apr. 2, 1983	83.63	4,000
1984	June 8, 1984	84.78	5,200

05489490 Bear Creek at Ottumwa, Iowa

Location.--Lat 41°00'43", long 92°27'54", in NW1/4 sec.27, T.72 N., R.14 W., Wapello County, at bridge on U.S. Highway 34, near west edge of Ottumwa.
Drainage area.--22.9 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1965	Sept. 21, 1965	93.80	4,000
1966	--	a	<1,000
1967	June 9, 1967	89.98	3,100
1968	Oct. 15, 1967	85.42	1,100
1969	July 5, 1969	85.70	1,200
1970	June 24, 1970	90.81	3,500
1971	--	a	<1,000
1972	May 8, 1972	86.21	1,400
1973	Jan. 19, 1973	86.08	1,350
1974	May 19, 1974	88.54	2,400
1975	--	a	<650
1976	Apr. 24, 1976	91.50	3,900
1977	Aug. 7, 1977	92.13	4,300
1978	July 21, 1978	88.38	2,300
1979	Mar. 29, 1979	87.88	2,150
1980	Aug. 17, 1980	89.05	2,700
1981	July 4, 1981	90.47	3,400
1982	Mar. 18, 1982	89.87	3,100

a Peak stage did not reach bottom of gage.

05489490 Bear Creek at Ottumwa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Dec. 5, 1982	88.87	2,600
1984	June 8, 1984	87.75	2,050

05489500 Des Moines River at Ottumwa, Iowa
(Published as "at Eldon", 1930-35)

Location.--Lat 41°00'39", long 92°24'40", in SE1/4 NE1/4 sec.25, T.72 N., R.14 W., Wapello County, on right bank 15 ft downstream from Wabash Railroad Bridge at Ottumwa, 0.4 mi downstream from Ottumwa powerplant, and at mi 94.1.
Drainage area.--13,374 mi².
Gage.--Water-stage recorder. Datum of gage is 622.00 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1930, nonrecording gages at Market St Bridge 1,700 ft upstream at datum 0.83 ft higher. Oct.1, 1930, to Mar.31, 1935, nonrecording gage at Eldon 15 mi downstream at different datum. Apr.1, 1935, to Oct.25, 1963, water-stage recorder at site 1,100 ft downstream at Vine Street Bridge at datum 0.77 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--10 ft.
Remarks.--Base for partial-duration series, 25,000 ft³/s. Peak discharge base discontinued upon beginning of storage in Lake Red Rock Mar. 12, 1969.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1903	May 31, 1903	19.4 a	140,000 b
1917	June 10, 1917	16.8	62,200
1918	June 10, 1918	14.0	43,500
	June 25, 1918	11.4	34,400
1919	Mar. 17, 1919	12.4	39,000
	Apr. 26, 1919	11.1	33,000
	May 7, 1919	14.4	45,900
	June 7, 1919	12.3	38,500
	June 12, 1919	9.4	26,100
1920	Mar. 16, 1920	9.4	27,200
	Mar. 26, 1920	12.4	35,700
	Apr. 20, 1920	12.0	34,000
	May 16, 1920	11.0	30,000
	July 16, 1920	10.8	29,200
1921	Sept.17, 1921	12.2	34,800
1922	May 27, 1922	10.5	28,000

a Present site and datum or about 22 ft at Market St Bridge; information by Corps of Engineers and U.S. Weather Service.
b Estimated.

05489500 Des Moines River at Ottumwa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1923	Mar. 27, 1923	10.3	27,300
1924	Mar. 3, 1924	9.91	25,700
	Mar. 5, 1924	10.0	26,100
	June 28, 1924	12.8	37,600
1925	June 16, 1925	7.0	14,900
1926	June 15, 1926	11.3	31,300
	Sept.25, 1926	12.5	36,200
1927	Apr. 21, 1927	13.0	38,600
	May 23, 1927	9.9	25,700
1928	Feb. 8, 1928	9.6	24,500
1929	Mar. 17, 1929	14.5	46,700
	Apr. 25, 1929	10.2	26,800
1930	June 16, 1930	10.60	28,400
1931	June 23, 1931	8.09	11,400
1932	Nov. 26, 1931	14.99	35,100
	Jan. 3, 1932	11.7	32,600
	Mar. 7, 1932	11.3	31,300
	June 27, 1932	9.8	25,300
	July 10, 1932	9.9	25,700
1933	Apr. 8, 1933	14.68	35,400
1934	Apr. 10, 1934	5.16	5,020
1935	June 4, 1935	10.2	29,200
	June 21, 1935	11.1	33,000
	June 28, 1935	15.45	53,200
	July 5, 1935	14.2	47,400
1936	Mar. 5, 6, 1936	9.50	27,800
1937	Feb. 21, 1937	--	29,200
	Mar. 6, 1937	14.77	50,300
1938	Sept.24, 1938	8.82	25,300
1939	Mar. 14, 1939	12.47	39,800
1940	Aug. 17, 1940	5.57	14,000
1941	June 11, 1941	8.33	22,800

05489500 Des Moines River at Ottumwa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1942	Nov. 3, 1941	9.96	29,000
	Jan. 27, 1942	9.7	28,000
1943	May 17, 1943	10.7	32,100
1944	Apr. 24, 1944	11.2	33,500
	May 5, 1944	10.9	32,700
	May 24, 1944	17.5	73,200
	June 11, 1944	12.6	39,200
	June 19, 1944	14.3	46,500
1945	Mar. 19, 1945	12.4	38,400
	Mar. 27, 1945	10.2	30,000
	Apr. 18, 1945	13.44	42,500
	May 17, 1945	13.0	40,900
	May 28, 1945	12.0	37,000
1946	Jan. 8, 1946	14.34	46,600
	Mar. 19, 1946	10.6	31,500
	June 20, 1946	13.8	44,200
	July 17, 1946	12.5	38,300
1947	Apr. 5, 1947	13.1	41,100
	Apr. 13, 1947	11.5	34,400
	Apr. 22, 1947	11.4	33,500
	May 31, 1947	11.4	34,000
	June 7, 1947	20.2 c	135,000
	June 15, 1947	20.1	130,700
	June 28, 1947	16.6	70,200
1948	Feb. 28, 1948	11.0	31,800
	Mar. 23, 1948	14.74	52,900
1949	Mar. 10, 1949	10.84	31,300
	June 26, 1949	9.3	25,500
1950	Mar. 1, 1950	9.8	26,600
	May 11, 1950	11.68	34,600
	June 20, 1950	10.8	30,600
1951	Apr. 4, 1951	15.15	55,200
	Apr. 14, 1951	13.93	45,400
	May 6, 1951	14.07	46,600
	May 27, 1951	11.68	34,600
	June 7, 1951	12.63	38,700
	July 4, 1951	13.15	41,500

c Maximum stage known since at least 1850.

05489500 Des Moines River at Ottumwa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1952	Mar. 13, 1952	11.28	32,800
	Apr. 5, 1952	10.28	28,600
	June 23, 1952	13.38	42,500
1953	Apr. 1, 1953	10.04	27,400
	June 14, 1953	10.51	29,400
1954	June 28, 1954	16.89	61,400
	Sept. 1, 1954	9.32	25,100
1955	July 12, 1955	5.79	13,800
1956	Aug. 9, 1956	4.39	9,720
1957	June 18, 1957	8.09	22,000
1958	July 4, 1958	10.86	33,500
	July 20, 1958	8.78	25,100
1959	May 23, 1959	10.76	32,900
	June 1, 1959	12.12	38,600
	July 3, 1959	10.05	29,600
1960	Jan. 14, 1960	11.55	36,300
	Apr. 1, 1960	17.49	70,500
	May 7, 1960	13.12	43,400
	May 27, 1960	12.10	38,600
1961	Feb. 19, 1961	13.70 d	41,400 e
	Mar. 8, 1961	9.45	27,200
	Mar. 15, 1961	11.17	34,500
	Apr. 3, 1961	11.75	37,200
	Sept.15, 1961	10.85	32,900
1962	Nov. 2, 1961	9.85	28,800
	Nov. 18, 1961	11.45	35,400
	Mar. 21, 1962	13.50	45,400
	Apr. 6, 1962	14.47	51,000
	May 8, 1962	8.92	25,300
	May 31, 1962	9.42	27,200
	June 13, 1962	13.30	44,400
1963	May 1, 1963	8.62	22,700
1964	June 24, 1964	9.91	26,200
1965	Mar. 17, 1965	12.63	37,400
	Apr. 11, 1965	18.33	78,600
	Sept.21, 1965	13.65	37,400

d Affected by ice. e About.

05489500 Des Moines River at Ottumwa, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1966	May 18, 1966	10.40	27,000
	June 16, 1966	11.65	32,000
1967	June 10, 1967	12.75	37,000
	June 17, 1967	14.87	48,600
1968	Apr. 24, 1968	8.28	20,000
1969	Apr. 17, 1969	11.63	32,200
1970	May 16, 1970	8.64	21,700
1971	Feb. 25, 1971	13.12	41,800
1972	May 8, 1972	8.70	22,000
1973	May 2, 1973	11.45	33,600
1974	May 19, 1974	10.41	--
	June 9, 1974	10.33	29,900
1975	Mar. 22, 1975	9.13	24,900
1976	Apr. 24, 1976	13.26	40,600
1977	Sept. 2, 1977	6.72	16,400
1978	May 13, 1978	9.62	26,600
1979	Apr. 20, 1979	11.34	33,400
1980	June 15, 1980	9.98	26,500
1981	July 4, 1981	9.53	25,200
1982	July 17, 1982	14.46	45,300
1983	Apr. 2, 1983	12.72	37,800
1984	June 27, 1984	14.64	47,800

05490500 Des Moines River at Keosauqua, Iowa

Location.--Lat 40°43'40", long 91°57'34", in SW1/4 SW1/4 sec.36, T.69 N., R.10 W., Van Buren County, on right bank 10 ft upstream from bridge on State Highway 1 at Keosauqua, 4.0 mi downstream from Chequest Creek, and at mi 51.3.
Drainage area.--14,038 mi².
Gage.--Water-stage recorder. Datum of gage is 547.36 ft National Geodetic Vertical Datum of 1929. Prior to Dec. 24, 1933, nonrecording gage, and Dec. 25, 1933, to Sept. 30, 1972, water-stage recorder, same site at datum 10.00 ft higher.
Stage-discharge relation.--Defined by current-meter measurements below 125,000 ft³/s and above by logarithmic plotting.
Flood stage.--25 ft.
Remarks.--Base for partial-duration series, 25,000 ft³/s. Only annual peaks are shown for 1912-15. Peak discharge above base discontinued upon beginning of storage in Lake Red Rock Mar. 12, 1969.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)	
1851	June 1, 1851	24.	--	
1903	June 1, 1903	27.85	146,000	
1904	Apr. 26, 1904	13.4	44,200	
1905	Mar. 1, 1905	9.9	28,100	
	June 10, 1905	23.8	108,000	
	July 2, 1905	10.8	31,700	
1906	Feb. 25, 1906	11.4	33,700	
1910	Apr. 6, 1910	5.0	11,800	a
1911	Sept.29, 1911	5.8	14,100	b
1912	Apr. 4, 1912	16.7	56,500	
1913	May 21, 1913	9.3	26,600	
1914	Sept.18, 1914	10.8	31,900	
1915	Aug. 3, 1915	18.6	67,600	

a Maximum for period April to September 1910.
b Maximum for period October to December 1910 and August September 1911.

05490500 Des Moines River at Keosauqua, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1916	Oct. 2, 1915	10.1	29,400
	Feb. 23, 1916	10.7	31,500
	Mar. 27, 1916	14.6	46,400
	May 14, 1916	10.3	30,100
	May 24, 1916	11.0	32,600
1917	Mar. 30, 1917	9.3	26,600
	June 6, 1917	16.0	51,000
	June 14, 1917	18.7	68,200
1918	May 29, 1918	9.2	26,200
	June 11, 1918	13.2	40,700
	June 25, 1918	13.6	42,200
1919	Mar. 16, 1919	14.4	45,400
	Apr. 27, 1919	11.0	32,600
	May 8, 1919	13.6	42,200
	June 8, 1919	12.0	36,300
1920	Mar. 26, 1920	14.1	44,100
	Apr. 21, 1920	11.2	33,300
	May 15, 1920	10.2	29,700
	July 14, 1920	11.2	33,300
1921	Sept.21, 1921	9.45	27,100
1922	May 28, 1922	9.6	27,600
1923	Mar. 28, 1923	9.2	26,200
1924	Mar. 5, 1924	9.3	26,600
	June 28, 1924	13.1	40,400
1925	June 16, 1925	7.6	20,800
1926	June 16, 1926	9.6	27,600
	Sept. 9, 1926	10.1	29,400
	Sept.15, 1926	12.4	37,800
	Sept.25, 1926	11.8	35,600
1927	Apr. 16, 1927	9.3	26,600
	Apr. 19, 1927	14.0	43,700
	May 25, 1927	10.4	30,400
	June 4, 1927	9.2	26,200
1928	Aug. 4, 1928	7.3	19,800
1929	Nov. 17, 1928	11.0	32,600
	Mar. 17, 1929	13.5	41,800
	Apr. 20, 1929	10.4	30,400
	Apr. 25, 1929	11.7	35,200

05490500 Des Moines River at Keosauqua, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)	
1930	June 15, 1930	10.1		29,400	
1931	July 3, 1931	7.2		19,500	
1932	Oct. 8, 1931	9.2		26,200	
	Nov. 25, 1931	11.7		35,200	
	Jan. 4, 1932	10.6		31,200	
	June 27, 1932	8.9		25,200	
	July 10, 1932	10.2		29,700	
	Aug. 14, 1932	8.9		25,200	
1933	Apr. 8, 1933	11.3		33,700	
1934	Apr. 4, 1934	4.1		9,880	
1935	June 4, 1935	10.7		31,600	
	June 19, 1935	12.5		39,000	
	June 29, 1935	15.9		54,400	
	July 6, 1935	14.6		48,300	
1936	Mar. 6, 1936	9.39		26,900	
1937	Feb. 21, 1937	13.9	c	30,900	d
	Mar. 6, 1937	14.87		50,600	
1938	Sept.25, 1938	9.05		25,100	
1939	Mar. 12, 1939	14.30		46,900	
1940	Aug. 18, 1940	6.28		15,600	
1941	June 11, 1941	9.30		26,200	
1942	Oct. 10, 1941	10.1		29,300	
	Nov. 4, 1941	10.37		30,100	
	Jan. 27, 1942	9.7		27,300	
1943	May 17, 1943	11.71		35,300	
	June 13, 1943	10.4		30,100	
1944	Apr. 15, 1944	10.0		29,600	
	Apr. 23, 1944	15.3		55,500	
	May 6, 1944	11.3		35,500	
	May 25, 1944	18.30		72,300	
	June 11, 1944	--		41,600	
	June 15, 1944	--		38,700	
	June 20, 1944	14.2		49,900	

c Affected by ice. d About.

05490500 Des Moines River at Keosauqua, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1945	Mar. 19, 1945	12.6	39,800
	Mar. 27, 1945	10.1	32,200
	Apr. 19, 1945	13.4	47,300
	May 17, 1945	13.88	49,500
	May 28, 1945	11.8	39,800
	June 9, 1945	10.9	35,600
	June 16, 1945	10.5	33,600
	June 22, 1945	9.0	27,100
1946	Jan. 8, 1946	13.8	49,600
	Mar. 17, 1946	11.5	37,000
	Mar. 24, 1946	9.6	27,500
	June 18, 1946	19.50	78,300
	July 18, 1946	14.8	51,000
1947	Apr. 6, 1947	14.2	47,900
	Apr. 13, 1947	10.9	32,200
	Apr. 22, 1947	11.0	32,600
	June 8, 1947	25.1	123,000
	June 16, 1947	25.14	124,000
	June 24, 1947	17.8	71,000
	June 30, 1947	19.4	80,200
1948	Feb. 28, 1948	9.7	30,000
	Mar. 17, 1948	8.8	26,400
	Mar. 19, 1948	13.1	46,200
	Mar. 23, 1948	14.38	52,800
1949	Feb. 27, 1949	8.4	25,000
	Mar. 6, 1949	9.1	27,900
	Mar. 11, 1949	9.9	31,300
	Mar. 27, 1949	9.2	28,300
	Mar. 31, 1949	9.97	31,700
	June 24, 1949	9.1	27,000
1950	Mar. 2, 1950	8.9	27,000
	May 11, 1950	10.6	34,400
	June 19, 1950	11.40	38,100
1951	Apr. 4, 1951	14.38	53,000
	Apr. 28, 1951	10.07	32,200
	May 10, 1951	16.45	63,500
	May 28, 1951	10.72	34,900
	June 8, 1951	12.26	42,400
	June 22, 1951	10.01	32,200
	July 5, 1951	12.14	41,400

05490500 Des Moines River at Keosauqua, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1952	Mar. 13, 1952	11.57	39,000
	Mar. 20, 1952	8.69	26,200
	Apr. 6, 1952	9.63	30,000
	June 24, 1952	12.45	42,900
1953	Apr. 1, 1953	9.95	31,600
	June 15, 1953	9.71	30,300
1954	June 29, 1954	16.14	60,800
	Sept. 2, 1954	8.66	25,800
1955	Oct. 10, 1954	7.57	22,100
1956	Aug. 10, 1956	4.46	11,600
1957	June 21, 1957	7.44	21,300
1958	July 5, 1958	10.50	33,800
1959	Mar. 21, 1959	8.63	25,800
	Mar. 28, 1959	8.66	26,200
	May 24, 1959	10.60	34,300
	June 1, 1959	12.08	41,400
	July 3, 1959	9.58	29,900
1960	Jan. 15, 1960	12.0	40,900
	Apr. 2, 1960	18.34	73,800
	May 7, 1960	16.15	62,400
	May 25, 1960	11.56	39,000
1961	Feb. 19, 1961	10.57	34,300
	Mar. 8, 1961	9.82	30,800
	Mar. 16, 1961	10.18	32,500
	Apr. 4, 1961	10.83	35,200
	Sept.14, 1961	10.95	36,100
1962	Nov. 3, 1961	10.94	35,600
	Nov. 16, 1961	12.56	43,900
	Mar. 22, 1962	12.62	43,900
	Apr. 7, 1962	14.10	51,400
	May 8, 1962	9.16	28,200
	May 31, 1962	8.88	27,000
	June 13, 1962	12.82	44,900
1963	Mar. 4, 1963	10.63 c	--
	Mar. 19, 1963	7.97	23,500
	May 1, 1963	7.97	23,500
1964	June 25, 1964	8.86	27,000

c Affected by ice. d About.

05490500 Des Moines River at Keosauqua, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	Mar. 17, 1965	13.60 c	39,000 d
	Apr. 12, 1965	19.36	79,800
	Apr. 26, 1965	10.30	33,000
	June 6, 1965	8.45	25,300
	Sept.21, 1965	14.28	50,800
1966	Feb. 10, 1966	12.22 c	--
	May 18, 1966	8.73	26,300
	June 17, 1966	10.15	32,300
1967	June 11, 1967	10.00	31,600 d
	June 17, 1967	13.74	49,600
	June 22, 1967	12.61	44,000
1968	Apr. 25, 1968	6.60	18,500
1969	Jan. 23, 1969	13.29 c	--
	July 19, 1969	11.77	39,800
1970	Aug. 5, 1970	8.35	24,900
1971	Feb. 27, 1971	10.82	35,300
1972	May 8, 1972	18.26	24,500
1973	Apr. 21, 1973	28.02	72,200
1974	Jan. 21, 1974	24.79 c	--
	May 20, 1974	21.51	38,500
1975	Mar. 24, 1975	18.51	25,500
1976	Apr. 24, 1976	27.23	67,900
1977	Aug. 8, 1977	16.68	18,800
1978	May 13, 1978	21.94	40,600
1979	Apr. 20, 1979	21.49	38,500
1980	June 15, 1980	22.07	41,200
1981	July 4, 1981	22.74	44,800
1982	July 17, 1982	27.14	67,900
1983	Apr. 4, 1983	20.90	35,600

c Affected by ice. d About.

05490500 Des Moines River at Keosauqua, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	Feb. 15, 1984	24.65	c
	June 27, 1984	23.13	46,600

c Affected by ice.

05491000 Sugar Creek near Keokuk, Iowa
(Discontinued September 1973)

Location.--Lat 40°26'33", long 91°28'24", in NW1/4 SE1/4 sec.7, T.65 N., R.5 W., Lee County, on left bank 13 ft downstream from bridge on county highway W62, 2.8 mi downstream from Barlean Creek, 4.6 mi upstream from mouth, and 6.0 mi northwest of post office in Keokuk.

Drainage area.--105 mi².

Gage.--Water-stage recorder. Datum of gage is 510.20 ft National Geodetic Vertical Datum of 1929. Prior to June 25, 1923, and Nov. 28, 1928, to Sept. 30, 1931, nonrecording gage; June 25, 1923, to Oct. 8, 1928, and Aug. 29, 1958, to Oct. 1, 1967, water-stage recorder at site of former bridge on old channel 0.6 mi downstream at same datum. Oct. 6, 1967, to Mar. 11, 1968, nonrecording gage at present site and datum.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--11 feet.

Remarks.--Base for partial-duration series, 2,000 ft³/s. Records for period 1922 through 1924 furnished by Union Electric Corp. formerly Mississippi Power Company. Only annual peaks are shown prior to 1959.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1905	June 9, 1905	20.60 a	33,000 b
1922	July 12, 1922	10.0	2,780 c
1923	Mar. 15, 1923	5.8	980
1924	Aug. 7, 1924	9.81	2,400
1925	July 7, 1925	9.30	2,180
1926	Sept.8,16,1926	10.58	3,040
1927	June 11, 1927	13.5	6,170
1928	Oct. 1, 1927	13.85	6,620
1929	Nov. 17, 1928	--	d

a Maximum stage known.
b Estimated on basis of velocity-area study.
c Maximum for period April-September 1922.
d Discharge not determined.

05491000 Sugar Creek near Keokuk, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1930	June 15, 1930	9.0	1,970
1931	June 6, 1931	10.00	2,560
1959	Apr. 19, 1959	10.56	2,320
	Aug. 6, 1959	10.88	2,270
	Sept.27, 1959	10.92	2,460
	Sept.28, 1959	12.22	4,300
1960	Oct. 6, 1959	11.72	3,500
	Mar. 30, 1960	11.40	2,900
	Apr. 17, 1960	11.17	2,500
	June 23, 1960	11.54	3,200
	July 1, 1960	10.73	2,100
	July 12, 1960	12.87	6,120
1961	Sept.14, 1961	12.32	4,750
1962	Nov. 3, 1961	11.08	2,440
	Nov. 16, 1961	10.62	2,150
	Feb. 5, 1962	11.37 e	--
1963	Mar. 4, 1963	11.29	2,950
1964	Apr. 5, 1964	10.20	2,000
	Apr. 20, 1964	11.77	3,400
1965	Jan. 1, 1965	11.32	2,980
	Jan. 23, 1965	10.47	2,220
	Mar. 17, 1965	11.35	2,440
	Apr. 6, 1965	12.65	4,580
	July 14, 1965	10.01	2,050
1966	June 13, 1966	8.12	1,100
1967	Apr. 1, 1967	12.09	3,100
	June 13, 1967	11.12	2,250
	June 17, 1967	12.13	3,140
	June 22, 1967	11.57	2,560
	June 24, 1967	12.08	3,090
	July 31, 1967	12.96	4,260
1968	Oct. 31, 1967	11.4	--
	June 25, 1968	9.98	1,500
1969	July 7, 1969	12.21	2,260

e Affected by ice.

05491000 Sugar Creek near Keokuk, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	Oct. 13, 1969	12.79	2,500
	May 14, 1970	13.27	3,170
	May 15, 1970	12.26	2,310
	Aug. 6, 1970	12.90	2,900
	Aug. 18, 1970	12.30	2,380
	Sept.15, 1970	11.87	2,140
	Sept.22, 1970	15.80	6,400
1971	Dec. 11, 1970	9.73	1,250
	Feb. 18, 1971	12.04 e	--
1972	Dec. 21, 1971	12.10	2,260
	June 15, 1971	10.53	1,520
1973	Mar. 7, 1973	11.76	2,060
	Apr. 9, 1973	12.70	2,440
	Apr. 22, 1973	16.30	5,700
	May 2, 1973	12.45	2,480
Discontinued September 1973			

e Affected by ice.

05494300 Fox River at Bloomfield, Iowa
(Discontinued September 1973)

Location.--Lat 40°46'10", long 92°25'05", in SW1/4 SE1/4 sec.13, T.69 N., R.14 W., Davis County, on left bank 15 ft downstream from bridge on county highway V20, 1.3 mi northwest of county courthouse at Bloomfield, and 8.6 mi downstream from North Fox Creek.
Drainage area.--87.7 mi².
Gage.--Water-stage recorder. Prior to Oct. 1, 1957, crest-stage gage. Datum of gage is 755.57 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 2,000 ft³/s. Only annual peaks are shown prior to 1958.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1905	June 9, 1905	a	b
1946	June 18, 1946	a	b
1953	Mar. 30, 1953	12.22	1,640
1954	May 28, 1954	9.94	1,060
1955	Apr. 24, 1955	14.57	2,360
1956	July 31, 1956	8.87	827
1957	Apr. 21, 1957	9.26	913
1958	June 12, 1958	17.15	2,930
	July 30, 1958	17.10	2,890
	July 31, 1958	19.18	3,970
1959	Aug. 5, 1959	21.62	5,660
	Sept. 1, 1959	16.48	3,300
1960	Oct. 5, 1959	20.87	6,130
	Mar. 29, 1960	20.71	5,990
	May 6, 1960	24.02	8,600
	May 25, 1960	15.85	2,960
1961	Mar. 13, 1961	10.65	1,160

a Exceeded all other known floods at this location.
b Discharge not determined.

05494300 Fox River at Bloomfield, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1962	Nov. 2, 1961	13.98	2,200
	Nov. 16, 1961	19.88	5,430
1963	Mar. 4, 1963	14.59	2,440
1964	Apr. 20, 1964	11.98	1,550
1965	Mar. 17, 1965	17.60	3,780
	Apr. 8, 1965	19.67	5,060
	Apr. 11, 1965	16.57	3,180
	Apr. 15, 1965	14.12	2,140
	Sept.21, 1965	20.75	4,590
1966	May 11, 1966	8.13	595
1967	Apr. 1, 1967	15.88	3,000
	June 13, 1967	14.81	2,130
	June 21, 1967	16.32	2,740
1968	Oct. 30, 1967	11.71	1,470
1969	July 6, 1969	20.31	4,740
1970	Aug. 5, 1970	17.68	2,860
	Aug. 8, 1970	22.06	4,760
	Aug. 22, 1970	15.06	2,100
	Sept.15, 1970	19.46	3,510
	Sept.22, 1970	22.29	4,890
1971	Oct. 9, 1970	21.46	4,400
	Dec. 11, 1970	18.63	3,190
	Feb. 18, 1971	--	2,100 c
1972	Dec. 15, 1971	20.36	3,890
	Apr. 21, 1972	15.95	2,330
1973	Mar. 31, 1973	14.94	2,100
	Apr. 20, 1973	23.30	5,590
	Apr. 21, 1973	17.88	2,930
	May 2, 1973	17.91	2,940
	May 27, 1973	23.14	5,480

Discontinued September 1973

c About.

05494500 Fox River at Cantril, Iowa
(Discontinued September 1951)

Location.--Lat 40°39'35", long 92°03'46", in NW1/4 SW1/4 sec.30, T.68 N., R.10 W., Van Buren County, on left bank 5 ft downstream from bridge on State Highway 2, 0.25 mi upstream from Bone Run, and 1 mi northeast of Cantril.
Drainage area.--161 mi².
Gage.--Nonrecording prior to Nov. 7, 1940; recording thereafter. Datum is 657.98 ft NGVD of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 4,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1920	June 10, 1920	13.70	3,980

1941	June 10, 1941	13.7	3,980
1942	Oct. 9, 1942	15.4	5,220
1943	May 16, 1943	15.4	5,640
	June 11, 1943	15.2	5,460
1944	Apr. 23, 1944	16.9	7,460
1945	May 15, 1945	15.92	5,780
1946	Jan. 5, 1946	15.6 a	5,430 b
	June 18, 1946	18.94	16,500
	July 18, 1946	18.7	15,000
1947	Apr. 5, 1947	14.7	4,820
	June 5, 1947	16.0	5,880
	June 6, 1947	--	4,360
	June 13, 1947	15.4	5,250
1948	Mar. 19, 1948	16.0	5,880
1949	June 24, 1949	11.45	3,270
1950	June 15, 1950	17.4	10,000
	June 19, 1950	15.5	6,380
1951	June 25, 1951	14.93	5,780
	July 20, 1951	15.82	6,500
	July 22, 1951	14.28	5,160
Discontinued September 1951			

a Affected by ice. b About.

05495600 South Wyaconda River near West Grove, Iowa
(Discontinued September 1975)

Location.--Lat 40°43', long 92°30', near northwest corner sec.5, T.68 N., R.14 W., Davis County, at bridge, 2.5 mi east of West Grove.
Drainage area.--4.69 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	Mar. 30, 1953	8.18	530
1954	Apr. 6, 1954	8.09	485
1955	Oct. 10, 1954	9.15	1,250
1956	--	a	<35
1957	June 11, 1957	6.98	142
1958	July 31, 1958	9.21	1,310
1959	Aug. 5, 1959	9.64	1,970
1960	Oct. 6, 1959	9.39	1,490
1961	Mar. 27, 1961	7.34	215
1962	Nov. 16, 1961	7.96	424
1963	Mar. 4, 1963	8.95	1,080
1964	June 15, 1964	7.45	242
1965	Apr. 8, 1965	9.22	1,320
1966	May 11, 1966	6.49	86

a Peak stage did not reach bottom of gage.

05495600 South Wyaconda River near West Grove, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967	June 13, 1967	7.51	258
1968	Apr. 4, 1968	7.90	400
1969	July 5, 1969	8.75	920
1970	Sept.15, 1970	10.11	3,100
1971	Mar. 11, 1971	7.38	200
1972	--	a	b
1973	Apr. 22, 1973	9.68	2,000
1974	--	a	b
1975	--	a	b
Discontinued September 1975			

a Peak stage did not reach bottom of gage.
b Discharge not determined.

06483270 Rock River at Rock Rapids, Iowa
(Discontinued September 1974)

Location.--Lat 43°26'13", long 96°09'58", in NE1/4 SW1/4 sec.33, T.100 N., R.45 W., Lyon County, on right bank at dam on north side of city park in Rock Rapids, 0.3 mi upstream from Tom Creek, 0.5 mi northeast of junction of U.S. Highways 75 and 9, and at mi 42.8.
Drainage area.--788 mi².
Gage.--Water-stage recorder. Datum of gage is 1,331.55 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--6 feet.
Remarks.--Base for partial-duration series, 2,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1960	Mar. 30, 1960	8.86	15,500
	Apr. 2, 1960	6.28	8,920
	Apr. 14, 1960	3.33	2,210
1961	Mar. 2, 1961	3.82 a	2,800 b
1962	Mar. 29, 1962	9.56	16,400
	Apr. 4, 1962	5.46	5,970
	May 23, 1962	4.58	4,290
	May 29, 1962	3.45	2,010
	June 18, 1962	3.64	2,380
	July 6, 1962	3.49	2,080
1963	June 11, 1963	3.18	1,550
1964	Sept. 7, 1964	2.88	1,110
1965	Apr. 2, 1965	4.47	4,000
	Apr. 7, 1965	7.58	11,400
1966	Feb. 10, 1966	6.02	7,580

a Affected by ice. b About.

06483270 Rock River at Rock Rapids, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967	Apr. 3, 1967	3.72	2,470
1968	Sept.25, 1968	2.02	191
1969	Oct. 18, 1968	3.61	2,230
	Apr. 8, 1969	10.23	29,000
	June 29, 1969	9.42	18,900
	July 8, 1969	3.90	3,090
	July 23, 1969	3.90	3,090
1970	Apr. 7, 1970	3.63	2,530
	May 28, 1970	4.08	3,450
1971	Feb. 19, 1971	5.30	6,250
	June 10, 1971	3.59	2,450
1972	Mar. 15, 1973	5.55 a	4,200 b
	May 3, 1973	3.88	3,030
1973	Mar. 4, 1973	-- c	4,000
	Mar. 12, 1973	3.53	2,300
1974	Mar. 5, 1974	2.57	830
Discontinued September 1974			

a Affected by ice. b About.
c Gage height unknown, occurred during snowmelt and ice breakup.

06483410 Otter Creek north of Sibley, Iowa

Location.--Lat 43°28', long 95°44', in NE1/4 sec.25, T.100 N., R.42 W., Osceola County, at bridge on county road L40, 4 mi north of Sibley.
Drainage area.--11.9 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Mar. 29, 1952	6.95	300
1953	June 7, 1953	8.06	982
1954	June 20, 1954	7.73	751
1955	Apr. 23, 1955	4.56	52
1956	Mar. 28, 1956	4.12	45
1957	--	a	<37
1958	--	a	<37
1959	May 30, 1959	7.62	674
1960	Mar. 30, 1960	6.60	229
1961	Mar. 27, 1961	a	<68
1962	Mar. 31, 1962	8.49	1,410
1963	--	a	<68
1964	--	a	<68
1965	May 15, 1965	6.91	322
1966	June 2, 1966	6.31	166
1967	--	a	<68
1968	--	a	<68

a Peak stage did not reach bottom of gage.
b Discharge not determined.

06483410 Otter Creek north of Sibley, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	Apr. 6, 1969	7.97	920
1970	July 13, 1970	6.45	200
1971	Feb. 19, 1971	6.56 c	115
1972	--	a	<68
1973	Mar. 3, 1973	6.75	280
1974	--	a	<68
1975	Aug. 22, 1975	6.33	175
1976	May 22, 1976	5.69	86
1977	Mar. 13, 1977	6.37	180
1978	July 7, 1978	6.56	230
1979	Aug. 21, 1979	7.41	320
1980	Oct. 31, 1979	6.92	170
1981	--	a	<68
1982	Feb. 23, 1982	7.71 c	b
1983	June 20, 1983	6.92	170
1984	June 12, 1984	7.59	640

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

06483420 Schutte Creek near Sibley, Iowa
(Discontinued September 1973)

Location.--Lat 43°28', long 95°47', NW1/4 sec.23, T.100 N., R.42 W., Osceola County, at culvert, 6 mi northwest of Sibley.
Drainage area.--1.43 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Mar. 29, 1952	4.49	175
1953	June 7, 1953	5.15	503
1954	June 19, 1954	4.04	86
1955	Apr. 23, 1955	3.84	62
1956	Aug. 13, 1956	3.55	46
1957	June 18, 1957	3.81	60
1958	--	a	<15
1959	May 30, 1959	3.84	62
1960	Mar. 30, 1960	4.17	100
1961	Mar. 27, 1961	3.76	54
1962	June 17, 1962	3.77	55
1963	--	a	<15
1964	--	a	<15
1965	May 15, 1965	4.47	168
1966	June 2, 1966	4.13	100
1967	Mar. 2, 1967	4.35	b
1968	--	a	<15

a Peak stage did not reach bottom of gage.
b Discharge not determined.

06483420 Schutte Creek near Sibley, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	Apr. 6, 1969	4.98	392
1970	--	a	<15
1971	Feb. 19, 1971	4.11 c	55
1972	--	a	<15
1973	Mar. 3, 1973	4.62	60
Discontinued September 1973			

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

06483430 Otter Creek at Sibley, Iowa

Location.--Lat 43°24', long 95°46', near N1/4 corner sec.14, T.99 N., R.42 W., Osceola County, at bridge on county road A22, 1 mi northwest of Sibley.
Drainage area.--29.9 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft³/s)
1952	Mar. 29, 1952	8.14		822
1953	June 7, 1953	9.82		5,400
1954	June 20, 1954	9.49		3,860
1955	Apr. 23, 1955	5.96		107
1956	Mar. 28, 1956	5.24		64
1957	Mar. 25, 1957	6.59		175
1958	June 4, 1958	6.12		120
1959	May 30, 1959	7.98		698
1960	Mar. 30, 1960	7.74		554
1961	Mar. 27, 1961	7.07		281
1962	Mar. 31, 1962	6.87	c	2,000
1963	--	a		<50
1964	--	a		<50
1965	May 15, 1965	7.17		354
1966	June 2, 1966	6.80		250
1967	June 7, 1967	6.46		184
1968	--	a		<50
1969	Apr. 6, 1969	8.75		1,960

a Peak stage did not reach bottom of gage.
c Affected by ice.

06483430 Otter Creek at Sibley, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	Apr. 3, 1970	6.95	210
1971	Feb. 19, 1971	6.61 c	160
1972	May 1, 1972	5.33	76
1973	Mar. 3, 1973	7.14	290
1974	--	a	<50
1975	Aug. 22, 1975	5.61	94
1976	May 22, 1976	5.37	78
1977	Mar. 13, 1977	5.91	115
1978	July 22, 1978	6.33	155
1979	Aug. 21, 1979	8.70	1,500
1980	Oct. 31, 1979	7.79	530
1981	June 14, 1981	5.86	110
1982	Feb. 23, 1982	8.68 c	b
1983	June 20, 1983	8.52	1,150
1984	June 12, 1984	8.81	1,750

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

06483440 Dawson Creek near Sibley, Iowa

Location.--Lat 43°23', long 95°43', near NW corner sec.20, T.99 N., R.41 W., Osceola County, at culvert on county road A30, 2 mi southeast of Sibley.
Drainage area.--4.35 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Mar. 29, 1952	5.31	460
1953	June 7, 1953	6.21	4,290
1954	June 20, 1954	5.25	400
1955	Apr. 23, 1955	4.71	110
1956	Aug. 13, 1956	4.06	52
1957	July 3, 1957	4.81	140
1958	June 4, 1958	4.81	140
1959	May 30, 1959	5.73	1,290
1960	Mar. 30, 1960	5.27	440
1961	Mar. 27, 1961	4.67	110
1962	July 5, 1962	4.66	113
1963	July 24, 1963	5.16	328
1964	May 12, 1964	4.47	72
1965	Aug. 21, 1965	4.66	108
1966	June 2, 1966	5.04	247
1967	June 7, 1967	5.61	975
1968	July 20, 1968	4.40	64
1969	June 28, 1969	5.20	360

06483440 Dawson Creek near Sibley, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	Apr. 3, 1970	6.11	3,000
1971	Feb. 19, 1971	5.56 c	80
1972	June 7, 1972	3.74	38
1973	--	--	<31
1974	June 22, 1974	4.72	115
1975	Aug. 22, 1975	5.77	1,350
1976	May 22, 1976	5.32	480
1977	Sept.20, 1977	4.38	65
1978	July 22, 1978	5.37	550
1979	Aug. 21, 1979	6.93	b
1980	Oct. 31, 1979	6.15	3,300
1981	June 14, 1981	6.68	b
1982	Feb. 23, 1982	7.29 c	b
1983	June 20, 1983	6.34	b
1984	June 12, 1984	6.67	b

b Discharge not determined. c Affected by ice.

06483450 Wagner Creek near Ashton, Iowa
(discontinued September 1981)

Location.--Lat 43°21', long 95°46', on south line sec.35, T.99 N., R.42 W., Osceola County, at bridge on county road A34, 3 mi northeast of Ashton.
Drainage area.--7.09 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Mar. 29, 1952	4.31	390
1953	June 7, 1953	5.37	2,840
1954	June 20, 1954	5.29	2,600
1955	Apr. 23, 1955	3.60	40
1956	Aug. 13, 1956	3.56	32
1957	July 3, 1957	3.96	180
1958	Apr. 5, 1958	3.52	24
1959	May 30, 1959	5.29	2,600
1960	Mar. 30, 1960	4.53	475
1961	Mar. 27, 1961	3.64	52
1962	Mar. 31, 1962	4.58	516
1963	--	a	b
1964	May 12, 1964	3.10	b
1965	Aug. 21, 1965	4.37	395
1966	June 2, 1966	4.59	523
1967	Mar. 2, 1967	3.91	165
1968	--	a	b

a Peak stage did not reach bottom of gage.
b Discharge not determined.

06483450 Wagner Creek near Ashton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	Apr. 6, 1969	3.64	210
1970	Mar. 2, 1970	3.18	160
1971	Feb. 19, 1971	3.55 c	145
1972	June 7, 1972	2.63	b
1973	June 18, 1973	3.42	b
1974	--	d	--
1975	Aug. 22, 1975	14.89	b
1976	May 22, 1976	13.78	95
1977	Apr. 14, 1977	13.20	36
1978	July 22, 1978	14.34	b
1979	Aug. 21, 1979	16.15	b
1980	Oct. 31, 1979	14.93	110
1981	--	a	b
Discontinued September 1981			

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.
d Gage removed during bridge construction.

06483460 Otter Creek near Ashton, Iowa

Location.--Lat 43°20', long 95°46', in SE1/4 sec.2, T.98 N., R.42 W., Osceola County, at bridge on county road A34, 2 mi northeast of Ashton.
Drainage area.--88.0 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Mar. 29, 1952	9.88	2,100
1953	June 7, 1953	12.01	17,400
1954	June 20, 1954	11.17	6,320
1955	Apr. 23, 1955	7.14	393
1956	Aug. 13, 1956	7.62	489
1957	July 3, 1957	8.51	754
1958	Apr. 5, 1958	7.01	367
1959	May 30, 1959	10.27	2,880
1960	Mar. 30, 1960	9.37	1,300
1961	Mar. 27, 1961	7.01	367
1962	Mar. 31, 1962	10.65	3,990
1963	June 10, 1963	6.61	303
1964	--	a	<200
1965	Apr. 1, 1965	11.67 c	1,700 d
1966	June 2, 1966	6.16	245
1967	June 7, 1967	9.20	1,120
1968	--	a	<200

a Peak stage did not reach bottom of gage.
c Affected by ice. d About.

06483460 Otter Creek near Ashton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	Apr. 6, 1969	10.77	4,900
1970	Apr. 5, 1970	8.18	730
1971	June 6, 1971	8.00	660
1972	May 1, 1972	6.49	280
1973	--	--	b
1974	--	a	<200
1975	Aug. 22, 1975	9.56	1,800
1976	--	a	<200
1977	--	a	<200
1978	Sept.14, 1978	7.27	440
1979	Aug. 21, 1979	12.39	18,000
1980	Oct. 31, 1979	8.98	1,050
1981	June 14, 1981	8.15	660
1982	Feb. 23, 1982	10.11 c	b
1983	June 20, 1983	10.92	4,500
1984	Feb. 15, 1984	9.83 c	b

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

06483495 Burr Oak Creek near Perkins, Iowa

Location.--Lat 43°14'34", long 96°10'28", in SE1/4 sec. 5,T.97 N.,R.45 W, Sioux County, at bridge on U.S. Highway 75, 4 mi north of Perkins.
Drainage area.--30.9 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)	
1966	June 2, 1966	85.75	760	
1967	June 7, 1967	85.99	880	
1968	--	a	<90	
1969	Apr. 5, 1969	86.26	1,020	
1970	Mar. 3, 1970	86.30	1,040	
1971	June 6, 1971	86.66	1,220	
1972	June 7, 1972	87.19	1,700	
1973	June 18, 1973	86.98	1,500	
1974	June 22, 1974	83.57	170	
1975	June 4, 1975	85.55	670	c
1976	May 22, 1976	85.02	500	c
1977	Aug. 16, 1977	83.01	110	c
1978	July 22, 1978	82.92	100	c
1979	May 11, 1979	84.67	380	c
1980	Oct. 31, 1979	85.22	560	c
1981	June 14, 1981	85.30	590	c

a Peak stage did not reach bottom of gage.
c Discharges revised from those previously published.

06483495 Burr Oak Creek near Perkins, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	Feb. 23, 1982	85.29	590 c
1983	June 20, 1983	88.37	2,800
1984	June 12, 1984	86.30	1,040

c Discharge revised from that previously published.

06483500 Rock River near Rock Valley, Iowa

Location.--Lat 43°21'52", long 96°17'39", in SW1/4 SW1/4 sec.16, T.97 N., R.46 W., Sioux County, on right bank 3 ft upstream from bridge on county highway K30, 0.3 mi north of Rock Valley and at mi 19.1.
Drainage area.--1,592 mi².
Gage.--Water-stage recorder. Datum of gage is 1,222.54 ft National Geodetic Vertical Datum of 1929. Prior to Aug.13, 1952, nonrecording gage, June 4, 1949, to Aug.12, 1952, supplementary water-stage recorder operating above 6.2 ft gage height and Aug.13, 1952 to May 4, 1976, water-stage recorder, at site 3.2 mi downstream at datum 10.73 ft lower.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--11 feet.
Remarks.--Base for partial-duration series, 3,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1897	--	17.00 a	b
1948	July 23, 1948	10.9	4,090 c
1949	Mar. 6, 1949	12.30	5,790
	Mar. 29, 1949	11.75	5,160
	Apr. 8, 1949	12.10	5,530
1950	Mar. 5, 1950	11.60 d	--
	Mar. 25, 1950	11.48	4,560
	Mar. 28, 1950	11.33	4,320
1951	Mar. 30, 1951	11.37	5,170
	Apr. 5, 1951	14.77	14,300
	June 30, 1951	11.08	4,740
1952	Mar. 20, 1952	12.55	6,100
	Mar. 31, 1952	15.30	17,300
1953	Mar. 14, 1953	10.83	4,220
	May 27, 1953	10.27	3,520
	June 8, 1953	15.99	18,900
	June 29, 1953	9.95	3,150
	Aug. 6, 1953	10.83	4,220

a From information by State Highway Commision.
b Discharge not determined.
c Maximum for period June through September.
d Affected by ice.

06483500 Rock River near Rock Valley, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1954	Mar. 20, 1954	12.11	5,300
	June 21, 1954	15.86	19,200
1955	Mar. 12, 1955	9.31	2,370
1956	July 2, 1956	7.59	1,160
1957	June 19, 1957	10.55	3,770
	July 3, 1957	9.97	3,050
1958	Apr. 7, 1958	6.18	545
1959	June 1, 1959	14.06	10,200
1960	Mar. 31, 1960	15.38	16,700
	Apr. 2, 1960	14.93	14,100
1961	Mar. 2, 1961	13.06	8,580
	Mar. 16, 1961	10.29	3,410
1962	Mar. 30, 1962	16.91	28,400
	Apr. 5, 1962	14.26	11,000
	May 24, 1962	11.02	4,260
	June 18, 1962	11.80	5,220
1963	June 12, 1963	7.56	1,300
1964	Sept. 8, 1964	7.70	1,390
1965	Apr. 2, 1965	13.91	11,200
	Apr. 7, 1965	14.94	15,700
1966	Feb. 10, 1966	14.78	11,700
1967	Mar. 4, 1967	10.06	3,260
	Apr. 4, 1967	9.90	3,110
1968	July 20, 1968	4.16	182
1969	Apr. 7, 1969	17.32	40,400
	June 25, 1969	10.36	3,350
	June 20, 1969	16.03	20,800
	July 10, 1969	12.24	5,740
	July 24, 1969	10.05	3,030
1970	Mar. 4, 1970	13.10	7,350
	Apr. 6, 1970	10.92	3,980
	May 28, 1970	14.05	10,200
1971	Feb. 19, 1971	13.73	9,060
	June 10, 1971	10.72	3,930

06483500 Rock River near Rock Valley, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	Mar. 13, 1972	12.04	5,890
	May 3, 1972	10.45	4,070
	June 7, 1973	11.21	4,740
1973	Mar. 4, 1973	14.20	10,700
	Mar. 12, 1973	10.64	3,670
1974	Feb. 19, 1974	7.02 d	--
	Feb. 21, 1974	6.65	988
1975	Apr. 30, 1975	8.71	2,370
1976	Mar. 15, 1976	8.64	2,250
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1978	Oct. 2, 1977	10.60	3,300
	Mar. 21, 1978	15.32 d	7,990
1979	Mar. 23, 1979	18.91	19,300
	Mar. 30, 1979	15.12	7,670
	Apr. 13, 1979	13.96	5,790
	May 11, 1979	13.60	5,350
	Aug. 11, 1979	11.27	3,000
	Aug. 23, 1979	15.82	7,930
	Aug. 29, 1979	11.29	3,120
1980	Nov. 2, 1979	15.67	8,820
	Nov. 17, 1979	10.88	3,000
	June 7, 1980	12.74	4,220
1981	June 16, 1981	11.20	3,200
1982	Feb. 24, 1982	14.61	7,070
1983	Nov. 12, 1982	11.37	3,670
	Feb. 23, 1983	ice jam	unknown
	Mar. 1, 1983	14.83	8,450
	Mar. 7, 1983	15.99	10,600
	Apr. 2, 1983	13.69	6,960

1983 CONTINUED ON NEXT PAGE

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d Affected by ice.

06483500 Rock River near Rock Valley, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	Apr. 14, 1983	15.74	10,100
	May 4, 1983	11.60	3,890
	May 9, 1983	10.46	3,030
	June 15, 1983	12.36	4,970
	June 20, 1983	18.85	19,000
	June 28, 1983	14.96	8,680
	July 4, 1983	14.61	8,090
1984	Mar. 27, 1984	15.59	9,630
	Apr. 4, 1984	14.48	7,440
	Apr. 9, 1984	unknown	7,200
	Apr. 13, 1984	16.17	11,000
	Apr. 28, 1984	12.21	4,640
	May 2, 1984	13.51	6,000
	May 7, 1984	15.82 e	10,100
	June 13, 1984	15.07	8,560
	June 18, 1984	18.06	16,300
	June 22, 1984	17.75	15,300

e From floodmark.

06484000 Dry Creek at Hawarden, Iowa
(Discontinued September 1969)

Location.--Lat 42°59'48", long 96°28'10", in NE1/4 NE1/4 sec.2, T.94 N., R.48 W., Sioux County, on left bank 6 ft downstream from bridge on State Highway 10 at east edge of Hawarden and 2.0 mi upstream from mouth.
Drainage area.--48.4 mi².
Gage.--Water-stage recorder and concrete control. Datum of gage is 1,170.42 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers benchmark). Prior to Oct. 30, 1949, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements below 860 ft³/s, extended above on basis of contracted-opening measurement of peak flow.
Bankfull stage.--10 ft.
Remarks.--Base for partial-duration series, 300 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1925	Sept. 1926	18.0 a	--
1934	--	15.8	--
1949	Mar. 5, 1949	13.10	686
1950	Mar. 24, 1950	13.5 b	500 c
1951	Mar. 27, 1951	13.83	950
	Mar. 29, 1951	13.29	b
	Apr. 3, 1951	9.92	319
	June 25, 1951	11.41	509
	July 3, 1951	13.28	850
1952	Mar. 16, 1952	11.0	451
	Mar. 30, 1952	14.14	1,020
	July 7, 1952	12.59	714
	Aug. 28, 1952	11.74	556
1953	June 7, 1953	17.57	10,900
1954	Mar. 16, 1954	11.24	479
	June 10, 1954	11.76	566
	June 19, 1954	12.14	630

a From information by State Highway Commision.
b Affected by ice. c About.

06484000 Dry Creek at Hawarden, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1955	Mar. 2, 1955	8.68 b	--
	Mar. 9, 1955	6.96	81
1956	July 31, 1956	8.09	152
1957	July 4, 1957	12.00	606
1958	Apr. 6, 1958	5.92	17
1959	May 28, 1959	11.18	376
	May 31, 1959	14.75	1,000
1960	Mar. 28, 1960	15.10	2,430
	Apr. 2, 1960	15.36	3,000
	Apr. 12, 1960	10.32	388
1961	Feb. 23, 1961	13.04 b	500 c
	Mar. 14, 1961	10.66	425
1962	Mar. 28, 1962	15.88	2,330
	June 17, 1962	11.33	730
	Aug. 30, 1962	9.07	360
1963	Feb. 7, 1963	6.83 b	--
	July 5, 1963	6.77	150
1964	May 24, 1964	6.99	217
1965	Apr. 1, 1965	8.80	1,760
	Apr. 6, 1965	8.94	2,000
	June 12, 1965	7.58	542
	June 29, 1965	7.92	810
1966	Feb. 9, 1966	9.67 b	2,000 c
1967	Mar. 1, 1967	9.20 b	--
	June 7, 1967	8.04	850
	June 16, 1967	8.08	890
	June 19, 1967	8.45	1,300
1968	June 26, 1968	7.60	400
1969	Apr. 4, 1969	10.90	4,400
	Apr. 6, 1969	8.58	658
	Apr. 7, 1969	8.12	428
	June 25, 1969	10.34	934

Discontinued Sept. 30, 1969

b Affected by ice. c About.

06485500 Big Sioux River at Akron, Iowa

Location.--Lat 42°49'42", long 96°33'45", in NW1/4 SW1/4 sec.31, T.93 N., R.48 W., Plymouth Co., IA, on left bank at west edge of Akron, 0.6 mi downstream from bridge on State Highway 48.
Drainage area.--9,030 mi² approximately, of which about 1,970 mi² is probably noncontributing.
Gage.--Water-stage recorder. Datum of gage is 1,118.90 ft National Geodetic Vertical Datum of 1929. Prior to Dec.3, 1934, nonrecording gage 300 ft upstream at same datum.
Stage-discharge relation.--Defined by current-meter measurements; subject to extensive changes due to levee breaks in vicinity.
Flood stage.--16 ft.
Remarks.--Base for partial-duration series 3,500 ft³/s. Only annual peaks are shown prior to 1935.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1926	Sept 18, 1926	19.4	a
1929	Mar. 15, 1929	18.63	20,800
1930	June 6, 1930	9.92	3,740
1931	Aug. 9, 1931	5.60	1,390
1932	Mar. 1, 1932	18.04	16,900
1933	Sept. 5, 1933	17.8	14,200
1934	June 8, 1934	16.08	10,600
1935	Mar. 7, 1935	12.24 b	a
	Mar. 10, 1935	10.06 b	3,000 c
1936	Mar. 12, 1936	18.63	18,000
	May 26, 1936	11.79	5,300
	Sept.16, 1936	12.92	6,720
1937	Mar. 10, 1937	12.99 b	5,300 c
	Apr. 14, 1937	12.23	4,880
	May 26, 1937	13.14	5,760
1938	Mar. 5, 1938	12.90 b	4,200 c
	Mar. 18, 1938	17.21	11,200
	May 6, 1938	10.58	3,540
	July 4, 1938	17.5	12,700
	Sept.12, 1938	11.03	3,800
	Sept.17, 1938	16.58	9,800

a Discharge not determined. b Affected by ice. c About.

06485500 Big Sioux River at Akron, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1939	Mar. 17, 1939	15.45 b	6,300 c
	Mar. 21, 1939	11.59	4,370
1940	Mar. 22, 1940	11.06 b	--
	Apr. 2, 1940	17.32	11,700
1941	Mar. 4, 1941	10.98 b	--
	Mar. 12, 1941	13.24	5,550
	Mar. 25, 1941	13.52	5,820
	Apr. 2, 1941	11.78	4,350
1942	May 16, 1942	12.98	4,870
	May 30, 1942	15.74	7,940
	June 4, 1942	19.23	21,400
	June 29, 1942	13.96	5,810
	Aug. 2, 1942	18.28	16,600
	Aug. 31, 1942	15.23	7,280
	Sept. 5, 1942	16.18	8,620
	Sept.21, 1942	11.52	3,680
1943	Feb. 24, 1943	15.17	7,200
	Mar. 27, 1943	11.86	3,920
	June 18, 1943	17.35	12,000
	June 27, 1943	14.69	6,630
	July 7, 1943	11.65	3,920
	Aug. 15, 1943	12.03	4,160
1944	Feb. 29, 1944	18.24	15,900
	May 7, 1944	12.95	4,820
	May 15, 1944	14.60	6,600
	May 21, 1944	11.24	3,510
	June 4, 1944	11.45	3,640
	June 12, 1944	17.18	11,600
	June 18, 1944	17.01	11,100
	July 15, 1944	16.51	9,840
	Aug. 7, 1944	12.89	4,770
1945	Feb. 20, 1945	12.03	4,150
	Mar. 14, 1945	17.42	12,300
	May 23, 1945	10.86	3,500
	May 30, 1945	12.07	4,220
	June 17, 1945	16.48	9,820
	July 16, 1945	11.40	3,790

b Affected by ice. c About.

06485500 Big Sioux River at Akron, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1946	Mar. 5, 1946	15.28	8,970
	Mar. 17, 1946	15.05	8,400
	Apr. 22, 1946	11.45	4,040
1947	Apr. 14, 1947	14.44	7,400
	May 2, 1947	12.90	5,120
	June 15, 1947	16.8	10,500
	June 26, 1947	12.86	4,660
	July 2, 1947	12.43	4,290
1948	Mar. 2, 1948	18.50 b	6,500 c
	Mar. 21, 1948	16.87	10,800
	May 12, 1948	11.08	3,610
	July 25, 1948	14.49	6,600
	Aug. 2, 1948	11.58	3,910
1949	Mar. 8, 1949	17.08	11,400
	Mar. 31, 1949	16.22	9,170
	Apr. 9, 1949	17.11	11,400
1950	Mar. 7, 1950	12.56 b	4,000 c
	Mar. 28, 1950	13.36	5,260
	June 18, 1950	13.4	5,450
1951	Apr. 6, 1951	19.66	28,800
	July 1, 1951	16.08	8,390
	July 4, 1951	15.54	7,580
1952	Feb. 15, 1952	11.81 b	4,300 c
	Mar. 22, 1952	16.10	9,650
	Apr. 1, 1952	19.75	33,000
	Apr. 10, 1952	17.71	16,500
	June 19, 1952	10.92	3,840
	July 7, 1952	15.36	8,180
1953	Mar. 16, 1953	14.22	6,780
	May 28, 1953	12.71	5,090
	June 8, 1953	19.33	21,800
	June 30, 1953	13.31	5,560
	Aug. 7, 1953	13.04	5,340
1954	Mar. 22, 1954	18.11	15,600
	June 22, 1954	19.95	21,700
1955	Mar. 11, 1955	12.25	4,940
1956	June 17, 1956	8.13	1,840

b Affected by ice. c About.

06485500 Big Sioux River at Akron, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1957	Mar. 26, 1957	12.14	4,580
	June 21, 1957	19.57	19,400
	July 5, 1957	14.40	5,980
1958	Apr. 8, 1958	5.98	1,120
1959	June 3, 1959	16.93	8,430
1960	Apr. 1, 1960	21.56	49,500
	Apr. 15, 1960	16.18	8,930
1961	Mar. 5, 1961	16.18	9,050
	Mar. 17, 1961	14.12	5,840
1962	Mar. 31, 1962	22.08	54,300
	May 26, 1962	16.11	8,500
	May 31, 1962	12.98	4,620
	June 10, 1962	12.34	4,100
	June 19, 1962	16.78	9,010
	July 8, 1962	12.34	4,240
1963	Aug. 7, 1963	7.59	1,650
1964	Apr. 4, 1964	9.30	2,540
1965	Apr. 8, 1965	20.85	21,000
	May 11, 1965	12.10	4,150
	May 18, 1965	12.04	4,110
	May 28, 1965	11.74	3,930
	June 13, 1965	13.96	5,420
	June 15, 1965	12.04	4,110
	June 29, 1965	14.25	5,680
1966	Feb. 12, 1966	19.85 b	16,500 c
	Mar. 20, 1966	11.74	4,090
1967	Mar. 5, 1967	14.79 b	5,300 c
	Apr. 5, 1967	11.96	4,230
	June 22, 1967	11.78	3,910
1968	June 27, 1968	4.80	635
1969	Apr. 9, 1969	22.99	80,800
	July 2, 1969	18.26	13,100
	July 11, 1969	13.58	5,400

b Affected by ice. c About.

06485500 Big Sioux River at Akron, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	Mar. 6, 1970	15.70	7,480
	Apr. 8, 1970	13.76	5,610
	May 28, 1970	15.42	7,160
	May 30, 1970	16.30	8,580
1971	Feb. 22, 1971	17.16 b	6,200 c
	Mar. 16, 1971	11.79	4,240
	Mar. 31, 1971	11.26	3,890
	June 11, 1971	15.69	7,310
1972	Mar. 17, 1972	17.35	10,200
	May 4, 1972	15.58	8,060
	June 8, 1972	17.02	10,500
1973	Mar. 5, 1973	18.74 b	12,500 c
	Mar. 14, 1973	16.62	8,710
1974	June 22, 1974	9.76	3,000
1975	May 1, 1975	9.76	2,920
1976	Mar. 15, 1976	10.31	3,250
	Feb. 18, 1976	12.26	--
1977	Mar. 15, 1977	13.60	5,270
1978	Mar. 22, 1978	19.88	18,200
	Apr. 9, 1978	15.88	6,890
	Apr. 21, 1978	14.11	5,280
1979	Mar. 25, 1979	21.74 b	30,500
	Apr. 1, 1979	18.18	13,100
	Apr. 16, 1979	18.16	12,600
	May 13, 1979	16.80	8,330
	Aug. 12, 1979	12.70	4,380
	Aug. 25, 1979	14.81	5,770
	Aug. 30, 1979	13.29	4,690
1980	Nov. 14, 1979	17.10	8,730
	May 30, 1980	12.76	4,530
	June 8, 1980	14.17	5,500
1981	June 17, 1981	10.75	3,180
1982	Feb. 25, 1982	16.45	6,500

b Affected by ice. c About.

06485500 Big Sioux River at Akron, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Oct. 12, 1982	12.70	4,680
	Oct. 25, 1982	10.86	3,530
	Nov. 14, 1982	13.64	5,390
	Nov. 23, 1982	13.19	5,080
	Mar. 9, 1983	20.83	21,000
	Apr. 4, 1983	17.92	12,500
	Apr. 15, 1983	19.01	15,500
	May 5, 1983	16.65	9,320
	May 11, 1983	16.45	8,880
	June 22, 1983	21.49	34,500
	June 28, 1983	19.28	16,300
1984	Feb. 19, 1984	14.33	4,900
	Apr. 14, 1984	21.52	37,300
	May 3, 1984	17.40	11,600
	May 9, 1984	18.63	15,100
	May 30, 1984	13.52	4,810
	June 19, 1984	21.24	34,500
	June 23, 1984	22.27	52,200

06486000 Missouri River at Sioux City, Iowa

Location.--Lat 42°29'10", long 96°24'47", in NW1/4 SE1/4 sec.16, T.29 N., R.9 E., sixth principal meridian, Dakota County, Nebraska, on right bank on upstream side of Dakota Ave at South Sioux City, Nebraska, 2.0 mi downstream from Big Sioux River, and at mi 732.3.
Drainage area.--314,600 mi², approximately.
Gage.--Water-stage recorder. Datum of gage is 1,056.98 ft National Geodetic Vertical Datum of 1929. Sept.2, 1878, to Dec.31, 1905, nonrecording gages at various locations within 1.7 mi of present site and at various datums. Jan.1, 1906, to Feb.14, 1935, nonrecording gage, and Feb.15, 1935, to Sept.30, 1969, water-stage recorder at present site at datum 19.98 ft higher, and Oct.1, 1969 to Sept.30, 1970, at datum 20.00 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--36 ft.
Remarks.--Flow regulated by upstream main-stem reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1929	Apr. 1, 1929	12.5 a	190,000
1930	Mar. 6, 1930	9.4	108,000
	Apr. 10, 1930	9.8 a	--
1931	June 16, 1931	9.79	54,700
----		-----	
1939	Apr. 3, 1939	14.35	168,000
1940	June 16, 1940	8.90	55,700
1941	June 15, 1941	13.0	121,000
1942	June 8, 1942	13.77	127,000
1943	Apr. 10, 1943	18.72	212,000
1944	Apr. 12, 1944	15.45	180,300
1945	Mar. 22, 1945	9.35	116,400
1946	June 21,22,1946	8.6	87,900
1947	Apr. 4, 1947	15.10	178,000

a Probably backwater from ice.

06486000 Missouri River at Sioux City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1948	Mar. 27, 1948	9.6	115,000
	June 27, 1948	9.8	--
1949	Apr. 10, 1949	15.72	178,000
1950	Apr. 25, 1950	18.44	252,000
1951	Apr. 8, 1951	13.04	152,000
1952	Apr. 14, 1952	24.28	441,000
1953	June 19, 1953	9.19	--
	June 25, 1953	9.16	109,000
1954	June 21, 1954	6.83	51,300
1955	Mar. 12, 1955	5.79	56,200
	July 10, 1955	6.19	--
1956	Aug. 18, 1956	7.10	38,900
1957	Oct. 3, 1956	6.33	36,200
	June 25, 1957	6.43	--
1958	July 2, 1958	7.28	39,500
1959	May 31, 1959	6.50	33,600
1960	Apr. 3, 1960	10.52	101,000
1961	Aug. 10, 1961	5.77	32,700
1962	Mar. 28, 1962	8.60 b	--
	Apr. 2, 1962	6.92	71,600
1963	June 2, 1963	6.00	34,400
1964	Aug. 6, 1964	6.26	37,400
1965	Aug. 21, 1965	5.67	35,600
1966	July 27, 1966	6.00	38,200
1967	July 25, 1967	5.09	--
	Aug. 30, 1967	4.93	37,100
1968	July 24, 1968	5.27	38,300
1969	Apr. 10, 1969	7.58	77,700

b Affected by ice.

06486000 Missouri River at Sioux City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	Oct. 1, 1969	5.47	51,200
1971	Feb. 19, 1971	30.65 b	80,000
1972	July 17, 1972	24.53	55,800
	July 21, 1972	25.06	--
1973	Nov. 13, 1972	22.97	54,400
1974	June 23, 1974	21.49	41,100
	Aug. 1, 1974	21.75	--
1975	Aug. 26, 1975	26.66	--
	Sept. 6, 1975	26.41	64,900
1976	Oct. 8, 1975	25.59	--
	Nov. 20, 1975	24.02	67,400
1977	Oct. 2, 1976	20.73	40,100
1978	July 23, 1978	25.42	62,500
1979	Nov. 5, 1978	23.48	57,800
1980	Oct. 31, 1979	20.53	44,000
1981	June 14, 1981	20.97	40,900
1982	Oct. 14, 1981	19.81	35,700
1983	Nov. 24, 1982	22.78	50,200
1984	June 25, 1984	30.91	104,000

b Affected by ice.

06599800 Perry Creek near Merrill, Iowa

Location.--Lat 42°43'16", long 96°20'33", in NW1/4 sec.12, T.91 N., R.47 W., Plymouth County, at bridge on county road C44, 5 mi west of Merrill.
Drainage area.--8.17 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements, step-backwater computations and indirect measurements at 2,540 ft³/s.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 7, 1953	9.51	2,540
1954	June 19, 1954	5.84	169
1955	May 26, 1955	3.60	37
1956	Mar. 1, 1956	4.10	54
1957	May 11, 1957	5.66	151
1958	May 31, 1958	8.73	857
1959	May 30, 1959	8.81	932
1960	June 20, 1960	5.02	69
1961	Mar. 26, 1961	7.44	428
1962	Mar. 27, 1962	12.22 c	2,000 d
1963	--	a	<20
1964	July 10, 1964	7.09	358
1965	Mar. 31, 1965	9.39 c	300 d
1966	Feb. 9, 1966	8.68 c	b
1967	Mar. 2, 1967	10.8 c	b
1968	--	a	<20
1969	June 25, 1969	8.21	620

a Peak stage did not reach bottom of gage. c Affected by ice.
b Discharge not determined. d About.

06599800 Perry Creek near Merrill, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	--	a	<20
1971	Feb. 18, 1971	9.52 c	145
1972	July 20, 1972	8.92	950
1973	July 9, 1973	7.66	330
1974	June 22, 1974	4.77	b
1975	June 18, 1975	5.24	b
1976	--	a	<20
1977	June 23, 1977	9.38	2,100
1978	Mar. 19, 1978	8.87 c	b
1979	May 9, 1979	5.16	b
1980	May 30, 1980	4.96	b
1981	June 14, 1981	10.15	b
1982	July 6, 1982	9.89	b
1983	June 20, 1983	9.62	b
1984	June 12, 1984	8.93	b

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

06599950 Perry Creek near Hinton, Iowa

Location.--Lat 42°37'11", long 96°22'20", in NE 1/4 sec. 15, T.90 N, R.47 W, Plymouth County, at bridge on county road, 4 mi west of Hinton. Prior to 1975 at site about 1 mi upstream at drainage area of 30.8 mi².
Drainage area.--33.2 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 7, 1953	17.93	4,980
1954	June 19, 1954	14.44	1,660
1955	May 26, 1955	8.93	350
1956	--	a	b
1957	July 8, 1957	10.76	655
1958	May 31, 1958	15.50	2,350
1959	May 30, 1959	16.32	3,000
1960	Aug. 28, 1960	9.96	520
1961	Mar. 14, 1961	7.44	180
1962	Mar. 27, 1962	17.05	3,800
1963	June 4, 1963	8.56	305
1964	May 5, 1964	9.89	485
1965	Mar. 31, 1965	11.01 c	600 d
1966	Feb. 9, 1966	16.01 c	b
1967	May 10, 1967	12.58	1,070
1968	--	a	<156

a Peak stage did not reach bottom of gage. c Affected by ice.
b Discharge not determined. d About.

06599950 Perry Creek near Hinton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	June 25, 1969	12.15	940
1970	--	a	<156
1971	--	a	<156
1972	--	a	<156
1973	--	a	<156
1974	--	a	<156
1975	June 18, 1975	26.77	b
1976	Feb. 2, 1976	28.67 c	b
1977	June 23, 1977	34.70	b
1978	Mar. 19, 1978	33.27 c	b
1979	Mar. 22, 1979	30.93	b
1980	May 30, 1980	30.08	b
1981	June 14, 1981	38.68	b
1982	Feb. 23, 1982	34.48 c	b
1983	June 20, 1983	32.61	b
1984	June 20, 1984	36.77	b

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

06600000 Perry Creek at 38th Street, Sioux City, Iowa

Location.--Lat 42°32'08", long 96°24'39", in SE1/4 SE1/4 sec. 8, T.89 N., R.47 W., Woodbury County, on left bank at downstream side of bridge on 38th Street in Sioux City, 3.6 mi upstream from mouth. upstream from mouth.
Drainage area.--65.1 mi².
Gage.--Non-recording prior to May 20, 1954. From May 20, 1954 to Sept. 30, 1969 water-stage recorder at present site at datum 5.0 ft higher. Datum of gage is 1,112.04 ft National Geodetic Vertical Datum of 1929 (City of Sioux City bench mark).
Stage-discharge relation.--Defined by current-meter and indirect measurements
Flood stage.--19 feet.
Remarks.--Base fro partial duration series, 800 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1939	May 27, 1939	11.33	3,950
1940	June 4, 1940	12.30	4,680
1941	Sept.15, 1941	9.05	2,340
1942	June 19, 1942	5.40	718
1943	July 20, 1943	6.35	775
1944	July 7, 1944	25.5	9,600
1945	June 26, 1945	8.10	2,020
1946	Feb. 6, 1946	8.44 a	900 b
	May 18, 1946	8.05	1,070
	May 23, 1946	7.85	1,020
	Sept. 8, 1946	7.82	1,020
1947	June 22, 1947	4.42	246
1948	Feb, 16, 1948	7.53	935
	Feb. 17, 1948	7.30	881
	Feb. 27, 1948	9.34	1,470
	June 22, 1948	10.40	1,840
	July 29, 1948	9.54	1,540
	Aug. 14, 1948	14.12	3,350

a Affected by ice. b About.

06600000 Perry Creek at 38th Street, Sioux City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1949	Mar. 4, 1949	7.77	900
	Mar. 24, 1949	7.11	827
	July 27, 1949	12.32	2,570
	Aug. 13, 1949	17.28	5,080
	Sept. 3, 1949	19.85	6,580
	Sept.10, 1949	21.80	7,780
1950	Mar. 4, 1950	10.5 a	1,600 b
	June 17, 1950	12.47	2,650
	JUly 12, 1950	17.75	5,380
	JUly 21, 1950	8.7	1,280
	Aug. 7, 1950	9.42	1,500
	Aug. 11, 1950	9.00	1,370
1951	Mar. 25, 1951	7.62	962
	Mar. 27, 1951	10.97	2,050
	June 19, 1951	17.38	5,480
	Aug. 12, 1951	7.53	1,340
	Aug. 14, 1951	5.96	844
	Aug. 17, 1951	6.75	1,110
	Aug. 20, 1951	6.43	984
	Aug. 27, 1951	7.54	1,340
	Sept. 9, 1951	10.21	2,310
1952	Jan. 19, 1952	7.75	1,430
	Mar. 12, 1952	8.33	1,620
	Mar. 30, 1952	7.08	1,200
	June 8, 1952	8.32	1,610
	July 7, 1952	17.40	5,480
1953	June 7, 1953	12.56	3,470
1954	May 26, 1954	5.55	1,080
	May 31, 1954	6.30	1,300
	June 2, 1954	4.97	881
	June 19, 1954	13.75	4,010
1955	May 26, 1955	6.98	1,580
	July 9, 1955	15.40	4,880
1956	Aug. 4, 1956	4.88	865
	Aug. 18, 1956	9.42	2,440
1957	June 22, 1957	6.20	1,320
	July 8, 1957	7.90	1,920
1958	May 31, 1958	8.89	1,540

a Affected by ice. b About.

06600000 Perry Creek at 38th Street, Sioux City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1959	May 30, 1959	12.14	2,660
1960	Mar. 29, 1960	10.70	2,140
	Apr. 1, 1960	13.05	3,020
	July 12, 1960	7.32	1,120
	Aug. 5, 1960	6.22	836
	Aug. 28, 1960	12.16	2,700
1961	Mar. 14, 1961	5.43	864
	June 14, 1961	13.20	3,540
	July 26, 1961	8.85	1,880
1962	Mar. 27, 1962	13.27	3,580
	June 7, 1962	10.50	2,480
	June 10, 1962	6.46	1,050
	July 27, 1962	8.40	1,750
1963	June 2, 1963	13.60	3,710
	June 5, 1963	6.65	1,200
1964	May 5, 1964	4.95	760
1965	Mar. 31, 1965	5.59	913
1966	Feb. 8, 1966	13.00	3,460
1967	May 10, 1967	11.70	2,940
	June 7, 1967	6.69	1,230
	June 10, 1967	10.47	2,470
	June 13, 1967	6.59	1,200
	June 17, 1967	6.88	1,280
	June 19, 1967	10.75	2,570
1968	July 17, 1968	3.49	408
1969	Apr. 1, 1969	6.70	1,230
	Apr. 4, 1969	8.15	1,670
	June 25, 1969	11.02	2,430
----		-----	
1981 c	June 28, 1981	11.76	1,210
	June 29, 1981	13.00	1,580
	July 3, 1981	13.99	1,910
1982	Feb. 23, 1982	14.60 d	2,120

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c For period June through September. d From floodmark.

06600000 Perry Creek at 38th Street, Sioux City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	June 20, 1983	13.87	1,870
	June 27, 1983	12.88	1,540
	July 23, 1983	11.35	1,090
1984	June 12, 1984	12.45	1,160
	June 20, 1984	18.16	3,500
	June 21, 1984	16.63	2,310

06600100 Floyd River at Alton, Iowa

Location.--Lat 42°58'55", long 96°00'03", in NE1/4 NE1/4 sec.11, T.94 N.,R.44 W., Sioux Co., on left bank at downstream side of Chicago and Northwestern Railway bridge at east edge of Alton, 34.3 mi upstream from West Branch Floyd River and at mi 58.1.
Drainage area.--268 mi².
Gage.--Water-stage recorder. Datum of gage is 1,269.55 ft National Geodetic Vertical Datum of 1929.
Flood stage.--12 ft.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 800 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 7 or 8, 1953	--	45,500 ab
1956	July 11, 1956	9.45	287
1957	July 4, 1957	10.54	440
1958	June 3, 1958	9.82	336
1959	June 1, 1959	12.77	1,130
	Aug. 2, 1959	12.72	1,110
1960	Mar. 28, 1960	17.27	4,150
	Apr. 2, 1960	16.06	2,740
	Aug. 28, 1960	12.12	830
1961	Mar. 3, 1961	15.73 c	2,100 a
	Mar. 18, 1961	13.08	1,150
1962	Mar. 28, 1962	18.35	12,200
	June 5, 1962	12.41	930
1963	Mar. 17, 1963	8.80 c	150 a
1964	July 11, 1964	10.89	565
1965	Apr. 1, 1965	17.36	5,340
1966	Feb. 9, 1966	16.62	3,600
1967	June 16, 1966	13.75	1,400
1968	July 20, 1968	8.61	198

a About. b From information by Corps of Engineers.
c Affected by ice.

06600100 Floyd River at Alton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	Apr. 4, 1969	17.78	8,510
1970	Mar. 3, 1970	15.47	2,280
1971	Feb. 19, 1971	17.17 c	4,000 a
	June 5, 1971	15.62	2,240
	June 7, 1971	16.46	3,360
1972	Mar. 12, 1972	15.59	2,620
	June 8, 1972	13.74	1,410
1973	Jan. 19, 1973	--	1,000 a
	Mar. 3, 1973	15.95	2,750
	Aug. 24, 1973	13.58	1,330
1974	June 22, 1974	14.00	1,500
1975	Mar. 21, 1975	14.62	1,960
	Apr. 29, 1975	11.80	1,050
	June 5, 1975	16.55	3,490
	June 23, 1975	12.65	1,220
1976	Mar. 16, 1976	9.16	427
1977	July 24, 1977	7.46	148
1978	Mar. 19, 1978	13.37	1,450
1979	Mar. 23, 1979	18.4	14,000
	Mar. 30, 1979	--	1,600
	May 11, 1979	16.07	2,870
1980	Nov. 1, 1979	12.26	1,120
	June 6, 1980	12.68	1,230
1981	June 15, 1981	14.17	1,440
1982	Feb. 23, 1982	14.35	1,500
	July 6, 1982	16.39 d	3,270
1983	Mar. 1, 1983	15.26	2,060
	Mar. 7, 1983	15.32	2,110
	Apr. 4, 1983	--	900

1983 CONTINUED ON NEXT PAGE

a About. c Affected by ice. d From floodmark.

06600100 Floyd River at Alton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	Apr. 13, 1983	16.08	2,880
	May 3, 1983	13.68	1,360
	June 15, 1983	10.85	987
	June 20, 1983	18.54 d	16,300
	June 28, 1983	--	2,630
	July 1, 1983	--	2,750
1984	Feb. 17, 1984	13.15	1,970
	Mar. 25, 1984	14.03	2,570
	Apr. 13, 1984	13.20	2,000
	May 1, 1984	11.40	1,190
	May 7, 1984	12.04	1,430
	June 13, 1984	16.58	4,990
	June 16, 1984	12.19	1,480
	June 18, 1984	12.95	1,840
	June 22, 1984	15.21	3,550

d From floodmark.

06600300 West Branch Floyd River near Struble, Iowa

Location.--Lat 42°55'15", long 96°10'30", in NE1/4 NE1/4 sec.32, T.94 N., R.45 W., Sioux County, on right bank at downstream side of bridge on county highway B62, 2.2 mi northeast of Struble, 14 mi upstream from Floyd River, and 39.3 mi upstream from mouth of Floyd River.
Drainage area.--180 mi².
Gage.--Water-stage recorder. Datum of gage is 1,239.40 ft National Geodetic Vertical Datum of 1929 (State Highway Commision bench mark).
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--14 feet.
Remarks.--Base for partial-duration series, 400 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1956	July 12, 1956	9.22	463
1957	June 28, 1957	9.50	430
	July 4, 1957	11.32	840
	July 8, 1957	9.96	500
1958	Apr. 6, 1958	7.34	218
1959	May 29, 1959	9.38	495
	May 31, 1959	10.27	646
1960	Mar. 29, 1960	14.72	3,880
	Apr. 2, 1960	14.62	3,630
	May 21, 1960	10.83	740
1961	Mar. 1, 1961	--	450
	June 13, 1961	8.08	402
	Aug. 22, 1961	8.55	501
1962	Mar. 28, 1962	15.63	8,060
	Apr. 3, 1962	10.64	1,110
	May 22, 1962	9.94	892
	June 5, 1962	8.00	480
	June 8, 1962	7.62	400
	June 17, 1962	11.28	1,320
1963	July 30, 1963	9.03	700
1964	May 24, 1964	6.72 a	236
	Sept. 8, 1964	7.14	--

a Backwater from vegetation.

06600300 West Branch Floyd River near Struble, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	Apr. 1, 1965	14.49 b	2,800 c
	Apr. 6, 1965	11.93	1,520
	June 5, 1965	8.12	506
	June 7, 1965	9.08	719
	June 29, 1965	10.47	1,070
	July 7, 1965	9.04	710
1966	Oct. 1, 1965	9.63	851
	Feb. 9, 1966	15.27	4,120
	June 3, 1966	9.05	719
1967	Mar. 2, 1967	12.45 b	--
	Mar. 3, 1967	12.27 b	800 c
	June 9, 1967	10.12	974
	June 12, 1967	11.42	1,350
	June 16, 1967	10.47	1,070
	June 19, 1967	8.81	658
1968	July 20, 1968	12.14	1,580
	Sept. 22, 1968	9.61	864
1969	Apr. 4, 1969	14.90 d	4,380
	June 25, 1969	10.87	966
	July 3, 1969	9.84	715
	July 8, 1969	10.05	762
1970	Mar. 3, 1970	--	1,900 c
	May 28, 1970	14.61	3,450
1971	Feb. 19, 1971	15.50	7,500
	June 10, 1971	14.00	2,450
1972	Mar. 12, 1972	11.14	1,230
	June 8, 1972	14.06	2,860
	July 21, 1972	7.50	464
1973	Dec. 30, 1972	14.35 b	800 c
	Mar. 3, 1973	14.30	3,100
	Mar. 11, 1973	7.45	446
	Mar. 14, 1973	7.96	550
	June 19, 1973	9.67	946
	July 10, 1973	10.71	1,240
	Aug. 24, 1973	7.60	501
1974	June 22, 1974	15.03	4,870

b Affected by ice. c About.
d Gage height in well, 15.4 ft, from outside gage.

06600300 West Branch Floyd River near Struble, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1975	Mar. 20, 1975	--	500 c
	Apr. 27, 1975	8.24	627
	June 4, 1975	13.58	2,430
	June 12, 1975	8.90	758
	June 17, 1975	7.86	519
	June 22, 1975	9.35	872
1976	May 21, 1976	14.38	3,180
1977	May 27, 1977	6.45	273
1978	Mar. 19, 1978	13.41	2,550
	July 6, 1978	14.19	3,220
	July 21, 1978	8.79	815
	July 22, 1978	13.14	2,370
1979	Mar. 20, 1979	b	830
	Mar. 22, 1979	15.16	6,880
	Mar. 29, 1979	10.66	1,360
	Mar. 30, 1979	12.77	2,150
	May 10, 1979	9.26	962
	July 30, 1979	8.03	636
1980	Oct. 31, 1979	8.15	659
	May 30, 1980	13.17	2,390
	June 5, 1980	7.17	444
	June 7, 1980	9.95	1,140
	July 4, 1980	7.11	432
1981	June 14, 1981	10.87	1,310
	July 4, 1981	10.33	1,150
1982	Feb. 23, 1982	14.63 d	2,830
	May 27, 1982	7.82	621
1983	Feb. 28, 1983	12.41	2,080
	Mar. 7, 1983	12.13	1,990
	Apr. 11, 1983	10.53	1,210
	Apr. 13, 1983	13.05	2,600

1983 CONTINUED ON NEXT PAGE

b Affected by ice. c About.

06600300 West Branch Floyd River near Struble, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	Apr. 16, 1983	9.69	1,080
	May 3, 1983	10.56	1,330
	May 7, 1983	8.08	586
	June 14, 1983	8.77	744
	June 18, 1983	7.64	494
	June 20, 1983	15.86	7,590
	June 27, 1983	14.53	4,140
	July 1, 1983	10.12	1,090
	July 29, 1983	8.45	685
1984	Feb. 21, 1984	8.26	664
	Mar. 24, 1984	12.88	2,440
	Mar. 27, 1984	10.76	1,380
	Apr. 4, 1984	7.53	480
	Apr. 8, 1984	8.82	790
	Apr. 12, 1984	10.59	1,320
	Apr. 22, 1984	7.65	494
	Apr. 26, 1984	8.67	744
	Apr. 30, 1984	8.82	783
	May 6, 1984	9.66	1,030
	May 28, 1984	9.06	853
	June 7, 1984	7.91	566
	June 12, 1984	12.70	2,280
	June 16, 1984	9.89	1,100
	June 20, 1984	14.37	4,610
	June 23, 1984	11.49	1,640

06600500 Floyd River at James, Iowa

Location.--Lat 42°34'36", long 96°18'43", in SE1/4 SE1/4 sec.30, T.90 N., R.46 W., Plymouth County, on right bank at downstream side of bridge on county road C70, 0.2 mi east of James, 14.3 mi downstream from West Branch Floyd River, and at mi 9.5.
Drainage area.--882 mi².
Gage.--Water-stage recorder. Datum of gage is 1,092.59 ft National Geodetic Vertical Datum of 1929. Prior to Sept.11, 1938, June 9 to Nov.5, 1953, and Oct.1, 1955, to May 22, 1957, nonrecording gage and May 23, 1957, to Sept.30, 1970, water-stage recorder at same site at datum 10.0 ft higher.
Flood stage.--26 ft.
Stage-discharge relation.--Defined by current-meter measurements below 16,000 ft³/s and extended above on basis of contracted-opening and flow-over-embankment measurement of peak flow.
Remarks.--Base for partial-duration series, 2,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1935	June 28, 1935	15.2	1,460
1936	Mar. 10, 1936	18.1 a	4,050 b
1937	May 27, 1937	17.2	3,570
1938	Sept.15, 1938	16.5	2,060
1939	Mar. 12, 1939	16.1 a	1,300 b
1940	June 5, 1940	15.4	1,390
1941	Mar. 11, 1941	16.2	1,720
1942	June 4, 1942	18.8	6,280
1943	June 17, 1943	15.2	1,360
1944	Feb. 27, 1944	17.4	3,600
	May 13, 1944	18.8	7,440
	June 13, 1944	18.1	5,150
	July 7, 1944	17.7	4,350
	July 12, 1944	17.2	3,320
1945	Mar. 12, 1945	18.4	5,320
1946	Mar. 1, 1946	15.3	1,400

a Affected by ice. b About.

06600500 Floyd River at James, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1947	June 25, 1947	17.8	3,240
1948	Mar. 17, 1948	17.1	2,710
1949	Mar. 5, 1949	18.1	4,520
	Sept.12, 1949	18.1	2,720
1950	June 19, 1950	19.2	4,840
1951	Mar. 28, 1951	19.94	8,320
	Apr. 5, 1951	18.55	5,380
	May 3, 1951	17.37	3,520
	May 20, 1951	17.10	2,520
	June 19, 1951	17.65	3,040
	June 29, 1951	17.76	3,160
	July 5, 1951	19.95	5,980
	Aug. 15, 1951	19.35	5,020
	Sept.12, 1951	19.98	6,180
1952	Feb. 14, 1952	18.15	4,300
	Mar. 13, 1952	17.49	3,290
	Mar. 20, 1952	18.58	5,240
	Mar. 31, 1952	20.32	13,900
	July 7, 1952	19.12	4,700
1953	June 8, 1953	25.30 c	71,500
1954	Mar. 19, 1954	18.61	4,800
	June 22, 1954	19.88	6,250
1955	July 10, 1955	16.25	2,260
1956	July 13, 1956	8.60	318

1957	July 5, 1957	13.83	1,330
1958	May 31, 1958	13.12	970
1959	June 1, 1959	17.59	1,920
1960	Mar. 29, 1960	21.93	15,100
	Apr. 2, 1960	20.83	9,480
	May 22, 1960	17.22	2,710
1961	Mar. 2, 1961	18.00	2,870
1962	Mar. 29, 1962	22.41	20,600

c Maximum stage since at least 1892, from floodmarks, from information by Corps of Engineers.

06600500 Floyd River at James, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1963	June 2, 1963	18.33	3,810
1964	Sept. 9, 1964	11.66	726
1965	Apr. 2, 1965	20.20	7,500
1966	Feb. 10, 1966	20.09	7,170
1967	June 19, 1967	15.14	2,000
1968	July 21, 1968	10.57	829
1969	Apr. 5, 1969	21.59	17,300
	June 25, 1969	10.23	2,580
1970	Mar. 4, 1970	12.27	4,740

1971	Feb. 19, 1971	28.13	13,400
	June 9, 1971	22.90	7,440
1972	Mar. 6, 1972	18.66 a	--
	Mar. 13, 1972	17.63	2,940
1973	Dec. 30, 1972	--	2,500 b
	Jan. 19, 1973	17.74	2,870
	Mar. 4, 1973	20.46	5,660
	July 9, 1973	17.57	2,990
1974	June 23, 1974	16.63	2,180
1975	June 6, 1975	16.42	2,180
1976	May 22, 1976	14.95	1,610
1977	July 24, 1977	15.14	1,720
1978	Mar. 20, 1978	21.94	7,630
	July 6, 1978	18.08	3,800
	July 23, 1978	18.63	4,270
1979	Mar. 23, 1979	28.19	15,500
	Mar. 31, 1979	17.59	4,020
	May 12, 1979	16.97	3,550
1980	May 30, 1980	17.6	4,000
	June 7, 1980	16.15	2,960
1981	June 14, 1981	16.77	3,400
	July 4, 1981	15.94	2,780

a Affected by ice. b About.

06600500 Floyd River at James, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	Feb. 24, 1982	19.10 e	5,220
	July 8, 1982	16.42	3,130
	July 11, 1982	17.43	3,890
1983	Mar. 2, 1983	18.14	4,440
	Mar. 7, 1983	19.15	5,260
	Apr. 1, 1983	16.87	3,480
	Apr. 14, 1983	20.14	6,120
	May 3, 1983	18.26	4,500
	June 21, 1983	28.85 e	18,000
	June 28, 1983	24.69 e	11,800
	July 2, 1983	18.30 f	5,070
1984	Feb. 17, 1984	16.30	3,440
	Mar. 25, 1984	18.23	5,070
	Apr. 13, 1984	16.92	3,940
	May 1, 1984	15.87	2,920
	May 7, 1984	16.51	3,400
	June 8, 1984	17.80	4,690
	June 13, 1984	19.10	5,870
	June 16, 1984	17.70	4,600
	June 21, 1984	21.18	7,880

e From floodmark.
f Observed.

06601480 Big Whiskey slough near Remsen, Iowa

Location.--Lat 42°28'30",long 96°15'01", in NW1/4 sec. 3, T.88 N., R.46 W, Plymouth County, at State Highway 3, 4.2 mi east of Remsen.
Drainage area.--12.9 mi².
Stage-discharge relation.--Defined by current-meter measurement.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	--	a	b
1967	June 9, 1967	92.16	480
1968	--	a	b
1969	Apr. 5, 1969	92.75	720
1970	Mar. 2, 1970	91.41	280
1971	Feb. 18, 1971	92.59 c	--
1972	--	a	b
1973	Mar. 3, 1973	92.04	440
1974	--	a	b
1975	Mar. 19, 1975	91.52 c	b
1976	--	a	b
1977	--	a	b
1978	July 22, 1978	92.78	730
1979	Mar. 22, 1979	94.87	--
1980	June 6, 1980	91.32	255
1981	June 14, 1981	92.57	620
1982	July 6, 1982	94.11	b

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

06601480 Big Whiskey slough near Remsen, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	June 20, 1983	93.11	b
1984	June 12, 1984	92.77	725

b Discharge not determined.

06602020 West Fork ditch at Hornick, Iowa
(Published as "at Holly Springs April 1939-September 1969)

Location.--Lat 42°13'37", long 96°04'40", in SW1/4 sec.27, T.86 N., R.45 W., Woodbury County, on left bank at upstream side of State Highway 141 bridge, 1.0 mi east of Hornick, 9.2 mi upstream from Wolf Creek, and 13.5 mi north of Onawa.
Drainage area.--403 mi².
Gage.--Water-stage recorder. Datum of gage is 1,045.82 ft National Geodetic Vertical Datum of 1929. Prior to June 16, 1959, nonrecording gage at site 3.0 mi upstream and June 16, 1959 to Sept. 30, 1969, recording gage at site 2.2 mi upstream at datum 7.0 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--18 feet.
Remarks.--Base for partial-duration series, 1,800 ft³/s. West Fork ditch is a dredged channel which carries flow of West Fork Little Sioux River at Holly Springs south southeast 12.0 mi to a confluence with Wolf Creek (Haitz ditch) and from this point stream is named Monona-Harrison ditch.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1939	Aug. 3, 1939	15.0	1,320
1940	June 4, 1940	19.8	3,360
1941	Sept.15, 1941	19.0	2,580
1942	June 30, 1942	13.7	878
1943	July 19, 1943	18.0	2,480
1944	July 8, 1944	19.7	3,590
	Aug. 1, 1944	19.0	3,050
1945	Mar. 12, 1945	21.4	5,250
	Aug. 6, 1945	22.4	6,600
1946	Feb. 7, 1946	17.7 a	1,100 b
1947	June 25, 1947	15.9	1,520
1948	Feb. 29, 1948	17.2	2,000
	Mar. 17, 1948	17.0	1,920

a Affected by ice. b About.

06602020 West Fork ditch at Hornick, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1949	June 1, 1949	17.2	2,040
1950	June 19, 1950	22.2	6,300
1951	Mar. 28, 1951	22.28	6,450
	May 2, 1951	17.8	2,580
	June 19, 1951	16.2	2,140
	Aug. 16, 1951	16.0	2,100
1952	Feb. 12, 1952	16.10 a	2,000 b
	Mar. 14, 1952	13.40	2,060
	Mar. 31, 1952	16.35	3,440
	July 8, 1952	18.75	5,000
1953	June 9, 1953	18.89	5,050
1954	June 20, 1954	22.91	7,860
1955	July 10, 1955	11.30	1,640
1956	May 29, 1956	6.9	390
1957	June 14, 1957	14.24	2,300
	June 17, 1957	13.97	2,220
	June 22, 1957	14.2	2,300
	June 29, 1957	14.08	2,260
1958	Feb. 25, 1958	11.31 a	700 b
1959	May 29 1959	18.00	4,320
	May 30, 1959	16.60	3,500 b
1960	Mar. 30, 1960	25.2	10,000
	Apr. 2, 1960	17.27	3,280
	May 26, 1960	16.09	2,890
	Aug. 29, 1960	14.67	2,480
1961	Mar. 16, 1961	11.25	1,840
	June 14, 1961	12.07	2,140
1962	Mar. 28, 1962	22.46	12,400
	July 20, 1962	12.4	2,200
1963	June 2, 1963	18.33	6,040
	June 5, 1963	12.36	2,370

a Affected by ice. b About.

06602020 West Fork ditch at Hornick, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	May 6, 1964	11.60	2,130
	May 25, 1964	14.76	3,620
1965	Apr. 2, 1965	18.29	6,290
	Apr. 4, 1965	13.57	2,890
	Apr. 7, 1965	16.23	4,560
1966	Feb. 10, 1966	16.20	4,400
1967	June 5, 1967	10.94	1,810
	June 7, 1967	11.67	2,080
	June 10, 1967	16.10	4,330
	June 14, 1967	15.60	3,980
	June 19, 1967	11.31	1,940
1968	June 25, 1968	11.47	1,790
1969	Apr. 2, 1969	14.86	3,550
	Apr. 4, 1969	18.51	6,230

	June 26, 1969	17.76	4,950
	July 4, 1969	11.69	2,090

1975	Apr. 27, 1975	14.40	2,050
	June 22, 1975	15.30	2,400
1976	May 22, 1976	10.05	778
1977	June 23, 1977	15.20	2,200
	Aug. 9, 1977	14.09	1,830
1978	Mar. 20, 1978	18.01	3,920
1979	Mar. 20, 1979	20.05 c	5,600
	May 10, 1979	13.79	2,110
	Aug. 22, 1979	13.76	2,090
1980	Oct. 31, 1979	11.95	1,420
1981	June 15, 1981	14.55	2,440
1982	Feb. 23, 1982	18.80 d	4,710
	July 11, 1982	15.15	2,710
1983	Feb. 28, 1983	16.05	2,520
	Mar. 7, 1983	15.42	2,230

1983 CONTINUED ON NEXT PAGE

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c Observed. d From floodmark.

06602020 West Fork ditch at Hornick, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	Apr. 1, 1983	14.68	1,940
	Apr. 13, 1983	16.42	2,700
	May 3, 1983	15.95	2,470
	June 18, 1983	15.28	2,170
	June 21, 1983	18.58	4,160
	June 28, 1983	16.51	2,750
1984	Mar. 24, 1984	14.36	1,820
	June 8, 1984	22.13	8,730
	June 12, 1984	18.87	4,420
	June 19, 1984	22.80	9,960
	June 22, 1984	21.04	6,960

06602190 Elliot Creek at Lawton, Iowa

Location.--Lat 42°28', long 96°11', in NW1/4 sec.3, T.88 N., R.46 W., Woodbury County, at bridge on U.S. Highway 20, at west edge of Lawton.
Drainage area.--34.8 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	--	a	<1,100
1967	June 8, 1967	83.61	2,450
1968	June 24, 1968	80.61	1,660
1969	June 25, 1969	84.40	2,650
1970	--	a	<1,100
1971	--	a	<1,100
1972	July 17, 1972	85.09	2,810
1973	July 9, 1973	83.28	2,380
1974	--	a	<1,100
1975	June 18, 1975	80.21	1,500
1976	May 22, 1976	81.10	1,780
1977	Aug. 11, 1977	83.03	2,300
1978	Mar. 22, 1978	79.72	1,330
1979	--	a	<1,100
1980	--	a	<1,100
1981	--	a	<1,100
1982	Feb. 23, 1982	78.65 c	b

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

06602190 Elliot Creek at Lawton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	June 20, 1983	79.13	1,220
1984	June 12, 1984	86.14	3,050

06602400 Monona-Harrison ditch near Turin, Iowa

Location.--Lat 41°57'52", long 95°59'30", in NW1/4 NE1/4 sec.32, T.83 N., R.44 W., Monona County, on left pier at downstream side of bridge on county highway E54, 1.0 mi west of gaging station on Little Sioux River near Turin, 4 mi southwest of Turin, and 12.5 mi upstream from mouth.
Drainage area.--900 mi².
Gage.--Water-stage recorder. Datum of gage is 1,015.00 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark). Oct. 14, 1953, to Sept. 30, 1975, recording gage at same site at datum 5.00 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--25 ft.
Remarks.--Monona-Harrison ditch is a dredged channel, a continuation of West Fork ditch and discharges into the Missouri River 1.5 mi upstream from the mouth of the Little Sioux River. Only peaks since 1958 are listed. Base for partial-duration series, 2,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1958	July 2, 1958	6.01	1,400
1959	May 29, 1959	14.72	8,570
	May 31, 1959	13.73	9,120
1960	Mar. 30, 1960	16.32	10,400
	Apr. 2, 1960	13.95	7,800
	May 22, 1960	10.58	4,480
	May 27, 1960	10.02	4,000
	Aug. 6, 1960	8.82	3,060
	Aug. 29, 1960	11.96	5,700
1961	Mar. 15, 1961	8.13	3,170
1962	Mar. 28, 1962	16.09	11,400
	June 4, 1962	7.40	2,700
	June 10, 1962	10.45	4,960
	July 14, 1962	11.60	6,100
	July 20, 1962	9.6 a	4,500 b
1963	June 2, 1963	16.87	12,400
	June 5, 1963	11.51	6,400

a Affected by ice. b About.

06602400 Monona-Harrison ditch near Turin, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	May 6, 1964	12.01	7,580
	May 26, 1964	16.10	11,400
1965	Apr. 1, 1965	19.54 a	9,000 b
	Apr. 7, 1965	11.43	5,870
1966	Oct. 1, 1965	7.79	2,620
	Feb. 9, 1966	13.42	7,780
	June 9, 1966	8.27	2,960
1967	June 7, 1967	10.06	3,940
	June 10, 1967	12.93	5,810
	June 14, 1967	16.18 c	8,860
	June 17, 1967	7.78	2,620
	June 20, 1967	9.43	3,570
1968	June 26, 1968	8.20	2,460
1969	Oct. 18, 1968	7.81	2,640
	Mar. 24, 1969	8.94	2,800
	Apr. 2, 1969	12.35	4,780
	Apr. 5, 1969	14.00	5,900
	June 27, 1969	14.19	6,030
	July 4, 1969	8.35	2,500
1970	Mar. 4, 1970	7.27	2,000
1971	Feb. 19, 1971	23.03	19,900
	Mar. 13, 1971	9.33	2,580
	June 7, 1971	15.40	7,040
1972	May 1, 1972	10.07	2,930
	July 17, 1972	16.93	8,720
1973	Jan. 18, 1973	10.15	3,020
	Mar. 3, 1973	11.78	4,010
	July 10, 1973	12.63	4,600
1974	May 19, 1974	9.03	2,440
1975	Apr. 28, 1975	14.32	6,470
	June 22, 1975	13.21	5,390

1976	May 23, 1976	5.85	1,280
1977	June 24, 1977	14.61	2,750
	Aug. 9, 1977	18.37	5,510

a Affected by ice. b About. c From floodmark.

06602400 Monona-Harrison ditch near Turin, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1978	Mar. 19, 1978	21.90	9,570
1979	Mar. 20, 1979	20.95	7,440
1980	May 31, 1980	13.0	2,200
1981	June 15, 1981	11.91	1,910
1982	Feb. 22, 1982	18.96 c	5,510
	Feb. 23, 1982	18.74	5,320
1983	Mar. 1, 1983	15.76	3,420
	Mar. 7, 1983	18.23	4,950
	Apr. 1, 1983	15.63	3,350
	Apr. 13, 1983	17.68	4,570
	May 3, 1983	18.42	5,090
	June 14, 1983	17.94	4,750
	June 18, 1983	16.55	3,830
	June 21, 1983	18.47	5,120
	June 28, 1983	15.62	3,340
1984	Mar. 24, 1984	13.83	2,520
	Apr. 13, 1984	14.88	2,980
	May 7, 1984	--	2,600
	June 8, 1984	23.17	9,550
	June 12, 1984	20.22	6,700
	June 18, 1984	24.80	13,300
	June 22, 1984	22.01	8,900

c From floodmark.

06603920 Loon Creek near Orleans, Iowa
(Discontinued September 1974)

Location.--Lat 43°31'16", long 95°06'05", in NW1/4 SE1/4 sec.25, T.101 N., R.36 W., Jackson County, Minnesota, on left bank at downstream side of bridge on co. road, 100 ft downstream from outlet structure of Loon Lake and 5.5 mi north of Orleans.
Drainage area.--31 mi².
Gage.--Water-stage recorder. Prior to Dec. 21, 1971, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1971	June 7, 1971	6.05	63 a
1972	May 24, 1972	5.53	47 b
1973	Mar. 25, 1973	5.32	37
1974	June 10, 1974	5.57	47
Discontinued September 1974			

a From graph based on gage readings.
b From high-water mark.

06605000 Ocheyedan River near Spencer, Iowa

Location.--Lat 43°07'44", long 95°12;37", in SW1/4SW1/4 sec. 15, T.96 N., R.37 W., T.96 N., R.37 W., Clay County, on left bank 3 ft downstream from bridge on county highway M 38, 3.4 mi west southwest of Spencer and 4.1 mi upstream from mouth.
Drainage area.--426 mi².
Period of record.--October 1977 to current year.
Gage.--Water-stage recorder. Datum of gage is 1311.66 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Base for partial duration is 1,700 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 8, 1953	12.89	26,000
1969	Apr. 8, 1969	11.2 a	12,000
1978	Mar. 15, 1978	9.39 b	--
	Mar. 20, 1978	8.35	1,780
	July 7, 1978	8.93	2,300
	July 23, 1978	9.25	3,200
1979	Mar. 23, 1979	9.96 b	--
	Mar. 31, 1979	9.19	2,980
	May 11, 1979	9.54	3,960
	Aug. 23, 1979	9.12	2,840
	Aug. 28, 1979	8.29	1,890
	Sept.14, 1979	8.00	1,700
1980	Nov. 2, 1979	8.93	2,300
	June 5, 1980	8.64	2,190
1981	June 15, 1981	6.75	1,180
1982	July 10, 1982	9.68	4,520
1983	Mar. 7, 1983	9.20	3,120
	Apr. 3, 1983	8.25	2,030
	Apr. 14, 1983	9.63	4,320
	June 21, 1983	10.49	6,450
	June 30, 1983	9.44	3,080

a About. b Affected by ice.

06605000 Ocheyedan River near Spencer, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	Mar. 26, 1984	9.02	2,720
	Apr. 9, 1984	7.82	1,770
	Apr. 13, 1984	9.24	3,080
	June 13, 1984	10.13	5,100
	June 18, 1984	9.59	3,180
	June 22, 1984	10.15	5,200

06605100 Little Sioux River at Spencer, Iowa
(Discontinued September 1942)

Location.--Lat 43°08', long 95°08', in sec.18, T.96 N., R.36 W., Clay County, at bridge on U.S. Highway 18 and 71 at Spencer, 0.75 mi downstream from Ocheyedan River, and at mi 160.3.
Drainage area.--1,030 mi².
Gage.--Nonrecording. Datum of gage is 1,294.56 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 17, 1937, at datum 0.40 ft lower.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--10 ft.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1936	--	15.40 a	--
1937	June 14, 1937	13.96	3,250
1938	Sept.16, 1938	14.97	5,000
1939	Mar. 14, 1939	9.98 b	--
	Aug. 11, 1939	9.86	1,080
1940	June 24, 1940	7.38	503
1941	Mar. 10, 1941	10.95	1,340
1942	Aug. 31, 1942	12.30	2,170
1953	June 8, 1953	20.20	30,000
1965	Apr. 6, 1965	17.37	16,700

a From floodmark, datum used in 1942.
b Backwater from ice.

06605340 Prairie Creek near Spencer, Iowa

Location.--Lat 43°05'16", long 95°09'40", in SE1/4 sec. 36, T.96 N., R.37 W., Clay County, at bridge on U.S. Highway 71, about 4 mi south of Spencer.
Drainage area.--22.3 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 2, 1966	89.45	720
1967	June 16, 1967	87.73	170
1968	Sept. 23, 1968	88.62	370
1969	June 25, 1969	90.13	1,250
1970	--	a	<110
1971	July 4, 1971	90.77	2,200
1972	June 27, 1972	88.13	225
1973	Mar. 6, 1973	88.79	380
1974	--	a	<110
1975	Apr. 28, 1975	88.89	430
1976	--	a	<110
1977	--	a	<110
1978	--	a	<110
1979	Mar. 22, 1979	89.85	1,080
1980	June 5, 1980	89.13	520
1981	July 4, 1981	88.80	400
1982	July 9, 1982	90.19	1,320

a Peak stage did not reach bottom of gage.
b Discharge not determined.

06605340 Prairie Creek near Spencer, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	June 20, 1983	90.66	940
1984	June 21, 1984	89.53	410

06605600 Little Sioux River at Gillett Grove, Iowa
(Discontinued September 1973)

Location.--Lat 43°01'06", long 95°02'34", in SW1/4 NE1/4 sec.25, T.95 N., R.36 W., Clay County, on left bank 5 ft downstream from bridge on county highway B53, 0.4 mi northwest of Gillett Grove, 0.9 mi above Elk Creek, and at mi 146.1.
Drainage area.--1,334 mi².
Gage.--Water-stage recorder. Datum of gage is 1,266.84 ft National Geodetic Vertical Datum of 1929.
Flood stage.--12 ft.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 1,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 9, 1953	17.87	24,000 a
1959	May 21, 1959	12.19	3,340
	June 3, 1959	13.23	4,500
1960	Mar. 30, 1960	13.78	5,140
	Apr. 3, 1960	13.64	4,880
	May 22, 1960	13.39	4,640
	May 28, 1960	12.28	3,440
1961	Mar. 6, 1961	--	1,600 b
	Mar. 26, 1961	16.93	12,900
1962	Mar. 31, 1962	15.70	9,680
	July 3, 1962	9.61	1,660
	July 7, 1962	13.61	4,880
	Sept. 1, 1962	9.40	1,600
1963	Mar. 18, 1963	9.50 c	1,100 b
1964	Sept.11, 1964	13.20	3,980
	Sept.22, 1964	9.81	1,510

a Estimated on basis of interpretive flood studies.
b About. c Affected by ice.

06605600 Little Sioux River at Gillett Grove, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)	
1965	Apr. 7, 1965	18.67		20,200	
	May 18, 1965	9.64		1,570	
	May 27, 1965	11.08		2,280	
1966	Feb. 12, 1966	12.22		3,360	
	May 24, 1966	9.82		1,640	
1967	June 18, 1967	11.28		2,430	
1968	Sept.24, 1968	7.74		867	
1969	Oct. 20, 1968	10.82		1,840	
	Apr. 8, 1969	17.78		15,900	
	May 23, 1969	10.23		1,810	
	June 26, 1969	12.61		3,590	
	July 3, 1969	14.66		6,920	
	July 11, 1969	14.36		6,320	
	July 28, 1969	12.32		3,540	
1970	Mar. 6, 1970	11.21	c	1,630	b
	Apr. 8, 1970	10.73		2,120	
1971	Feb. 20, 1971	14.24	c	4,200	b
	Mar. 14, 1971	14.53	c	6,000	b
	Mar. 31, 1971	12.34		3,530	
	June 9, 1971	13.92		5,870	
	July 5, 1971	12.03		3,140	
1972	Mar. 14, 1972	10.53	c	2,520	b
	May 4, 1972	10.43		2,660	
	July 23, 1972	8.87		1,740	
1973	Mar. 6, 1973	12.10	c	2,600	b
	Mar. 16, 1973	10.83		2,370	
	Mar. 27, 1973	9.44		1,700	
	Apr. 17, 1973	9.49		1,720	
	May 3, 1973	9.15		1,570	
	May 30, 1973	10.61		2,230	

Discontinued September 1973

b About. c Affected by ice.

06605750 Willow Creek near Cornell, Iowa

Location.--Lat 42°43', long 95°10', in SE1/4 sec.12, T.94 N., R.37 W., Clay County, at bridge on U.S. Highway 71, 2 mi northwest of Cornell.
Drainage area.--78.6 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 2, 1966	88.86	1,440
1967	June 16, 1967	88.98	1,520
1968	Sept.23, 1968	86.99	540
1969	June 25, 1969	91.35	3,700
1970	--	a	<203
1971	June 6, 1971	89.57	1,950
1972	June 27, 1972	87.08	590
1973	Aug. 23, 1973	88.54	1,360
1974	May 15, 1974	87.48	800
1975	Apr. 28, 1975	89.45	1,650
1976	--	a	<203
1977	--	a	<203
1978	Sept.12, 1978	88.23	1,080
1979	Mar. 22, 1979	91.49	3,700
1980	June 5, 1980	89.35	1,780
1981	--	a	<203
1982	July 9, 1982	89.92	2,200

a Peak stage did not reach bottom of gage.
b Discharge not determined.

06605750 Willow Creek near Cornell, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	June 20, 1983	90.87	2,700
1984	June 17, 1984	90.37	2,100

06605850 Little Sioux River at Linn Grove, Iowa

Location.--Lat 42°53'24", long 95°14'30", in SW1/4 SW1/4 sec.5, T.93 N., R.37 W., Buena Vista County, on right bank at downstream side of bridge on State Highway 264, in Linn Grove, and at mi 123.7.
Drainage area.--1,548 mi².
Gage.--Water-stage recorder. Datum of gage is 1,223.60 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current meter measurements.
Flood stage.--12 ft.
Remarks.-- Difference between peak and daily discharge usually less than 5 percent, therefore only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 10, 1953	20.96	22,500

1961	Mar. 26, 1961	20.54	14,700
1962	Mar. , 1962	--	10,500

1965	Apr. 7, 1965	22.25	21,000

1973	Mar. 7, 1973	14.52 a	3,060 b
1974	Nov. 23, 1973	10.77	1,770
1975	Apr. 29, 1975	17.85	8,620
1976	Mar. 15, 1976	10.86	2,010
1977	Mar. 14, 1977	7.76	930
1978	July 27, 1978	14.80	3,900
1979	Mar. 24, 1979	18.2 a	8,090
1980	Nov. 5, 1979	14.34	3,580
1981	June 19, 1981	10.19	1,790
1982	July 12, 1982	18.40	8,390

a Affected by ice. b About.

06605850 Little Sioux River at Linn Grove, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	Oct. 6, 1982	14.10	3,440
	Oct. 24, 1982	11.10	2,130
	Nov. 15, 1983	13.26	3,090
	Mar. 8, 1983	17.73	8,490
	Apr. 15, 1983	18.06	9,130
	May 5, 1983	14.35	3,740
	June 23, 1983	17.38	7,680
	July 2, 1983	17.81	8,570
1984	Feb. 18, 1984	a	2,500
	Mar. 29, 1984	15.05	4,450
	Apr. 14, 1984	16.82	7,000
	May 3, 1984	15.45	4,950
	May 31, 1984	11.90	2,460
	June 17, 1984	19.58	13,100
	June 24, 1984	19.16	12,000

a Affected by ice.

06605890 Waterman Creek at Hartley, Iowa

Location.--Lat 43°11'06", long 95°30'43", in NE1/4 sec.36, T.97 N., R.40 W., O Brien County, at bridge on U.S. Highway 18, 1.8 mi west of Hartley.
Drainage area.--28.7 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	--	a	<37
1967	Mar. 2, 1967	85.75	390
1968	--	a	<37
1969	Apr. 6, 1969	87.83	2,000
1970	Mar. 2, 1970	86.99 c	b
1971	June 5, 1971	86.95	970
1972	May 1, 1972	86.03	480
1973	June 18, 1973	84.33	100
1974	June 22, 1974	84.21	91
1975	June 4, 1975	87.88	2,100
1976	--	a	<37
1977	--	a	<37
1978	July 22, 1978	86.89	940
1979	Aug. 26, 1979	85.93	450
1980	June 6, 1980	87.66	1,700
1981	--	a	<37

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

06605890 Waterman Creek at Hartley, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	Feb. 23, 1982	88.05 c	b
1983	June 20, 1983	87.65	1,700
1984	June 12, 1984	87.65	1,700

b Discharge not determined. c Affected by ice.

06606600 Little Sioux River at Correctionville, Iowa

Location.--Lat 42°28'20", long 95°47'49", in NE1/4 NW1/4 sec.1, T.88 N., R.43 W., Woodbury County, on right bank 10 ft upstream from bridge on State Highway 31, 0.5 mi west of Correctionville and at mile 56.0
Drainage area.--2,500 mi².
Gage.--Water-stage recorder. Datum of gage is 1,096.49 ft National Geodetic Vertical Datum of 1929. May 28, 1918, to July 1, 1925, and Oct.29, 1928, to July 15, 1929, nonrecording gage 0.2 mi downstream at datum 1.25 ft lower. July 16, 1929, to July 2, 1932, and June 15, 1936, to Nov.7, 1938, nonrecording gage at present site and datum.
Flood stage.--19 ft.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 4,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1891	June 23, 1891	29.34 a	--
1919	Mar. 18, 1919	14.9	5,500
	June 12, 1919	19.6	10,700
	June 28, 1919	15.1	5,640
	July 13, 1919	17.6	8,350
1920	Mar. 13, 1920	17.4	8,920
	June 1, 1920	14.2	5,100
	June 7, 1920	14.8	5,440
1921	May 27, 1921	11.7	3,960
1922	Mar. 13, 1922	9.0	2,520
1923	Mar. 25, 1923	11.3	--
	Mar. 26, 1923	--	2,000
1924	June 29, 1924	13.9	4,950
	Aug. 15, 1924	12.4	4,200
1925	June 4, 1925	9.30	2,190
1929	Mar. 14, 1929	16.3	6,250
	Mar. 18, 1929	15.70	6,170
1930	June 13, 1930	11.2	2,990

a Present datum, from levels to floodmark by Soil Conservation Service.

06606600 Little Sioux River at Correctionville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1931	July 17, 1931	10.3	2,540
1932	Apr. 21, 1932	17.70	6,560

	May 26, 1932	14.5	4,330
1937	May 31, 1937	16.4	5,500
	June 19, 1937	17.0	5,950
	Aug. 19, 1937	15.7	5,030
1938	Sept. 8, 1938	15.4	4,380
	Sept.21, 1938	18.9	7,250
1939	Mar. 12, 1939	15.23 b	2,200 c
1940	Aug. 26, 1940	16.2	4,730
1941	Sept.15, 1941	17.0	4,740
1942	June 19, 1942	15.3	3,800
1943	July 4, 1943	18.5	6,530
	July 20, 1943	18.4	6,600
1944	May 19, 1944	19.4	8,500
	June 12, 1944	21.1	13,000
	July 7, 1944	17.4	5,450
	July 15, 1944	16.6	4,560
1945	Mar. 13, 1945	19.6	8,220
	May 29, 1945	16.6	4,630
	June 12, 1945	18.1	6,190
	June 15, 1945	19.1	7,420
	Aug. 5, 1945	21.9	14,800
1946	Feb. 5, 1946	17.7	5,870
1947	May 1, 1947	20.3	10,400
	June 24, 1947	19.0	7,670
	July 1, 1947	15.5	4,440
	July 5, 1947	15.7	4,550
1948	Feb. 27, 1948	18.7	7,770
1949	Mar. 6, 1949	16.32 b	4,150 c
1950	June 18, 1950	18.7	6,860

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b Affected by ice. c About.

06606600 Little Sioux River at Correctionville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1951	Mar. 29, 1951	19.47	7,990
	Apr. 7, 1951	22.58	17,900
	May 6, 1951	17.74	5,700
	July 6, 1951	17.21	5,200
	Aug. 14, 1951	18.36	6,480
	Aug. 17, 1951	18.51	6,600
	Aug. 20, 1951	15.84	4,060
	Sept.12, 1951	16.89	4,920
1952	Mar. 13, 1952	17.07	5,100
	Mar. 20, 1952	17.06	5,100
	Apr. 1, 1952	19.30	7,680
	Apr. 4, 1952	20.37	10,400
	July 7, 1952	17.66	5,700
1953	June 12, 1953	22.09	17,500
	June 25, 1953	16.95	5,260
1954	June 21, 1954	23.36	20,900
1955	July 10, 1955	15.60	4,280
1956	May 31, 1956	7.05	452
1957	June 22, 1957	16.76	5,700
1958	June 3, 1958	11.85	2,060
1959	May 28, 1959	18.56	7,240
	May 31, 1959	19.30	8,280
	June 11, 1959	16.8	5,200
1960	Mar. 29, 1960	22.57	16,000
	May 22, 1960	18.53	7,100
	May 26, 1960	20.38	10,400
	Aug. 28, 1960	16.00	4,540
1961	Mar. 14, 1961	15.68	4,340
	Mar. 29, 1961	22.32	16,400
	June 14, 1961	16.11	4,640
	Aug. 9, 1961	19.04	7,800
1962	Mar. 30, 1962	23.14	19,800
	July 14, 1962	15.55	4,500
1963	June 2, 1963	21.54	13,500
1964	May 6, 1964	16.15	4,720

06606600 Little Sioux River at Correctionville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	Apr. 7, 1965	25.86	29,800
1966	Feb. 11, 1966	17.62	6,040
1967	June 14, 1967	18.71	7,390
	June 20, 1967	16.37	4,930
1968	Sept.24, 1968	11.91	2,040
1969	Apr. 8, 1969	23.61	21,000
	June 27, 1969	19.82	9,110
	July 8, 1969	18.50	6,710
	July 15, 1969	17.87	6,120
1970	Mar. 5, 1970	15.38	4,400
1971	Feb. 20, 1971	22.23	16,000
	Feb. 26, 1971	--	5,200 c
	Mar. 15, 1971	15.85	4,700
	Mar. 18, 1971	18.09	6,530
	Mar. 29, 1971	15.77	4,650
	June 7, 1971	18.89	7,560
1972	Mar. 8, 1972	14.81 b	--
	July 17, 1972	14.46	4,130
1973	Mar. 3, 1973	18.40	7,060
	Aug. 25, 1973	16.00	5,050
1974	June 24, 1974	12.85	3,320
1975	Apr. 24, 1975	15.40	4,960
	May 2, 1975	20.45	10,500
	June 29, 1975	16.99	5,800
1976	Mar. 13, 1976	10.50	2,100
1977	June 23, 1977	15.06	4,840
1978	Mar. 21, 1978	18.59	7,600
	June 17, 1978	18.81	8,450
	July 7, 1978	15.99	5,440
	July 23, 1978	14.71	4,480
	July 30, 1978	14.04	4,000

b Affected by ice. c About.

06606600 Little Sioux River at Correctionville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1979	Mar. 24, 1979	22.13	13,100
	May 16, 1979	13.84	4,000
	Aug. 19, 1979	14.91	4,740
	Aug. 21, 1979	14.91	4,740
	Aug. 30, 1979	14.70	4,590
1980	Nov. 8, 1979	14.34	4,480
	June 6, 1980	13.83	4,000
1981	June 15, 1981	11.84	2,810
1982	Feb. 25, 1982	14.85	4,710
	May 27, 1982	14.37	4,420
	July 16, 1982	19.26	9,100
1983	Oct. 11, 1982	14.10	4,370
	Mar. 8, 1983	21.63	16,000
	Apr. 14, 1983	21.50	14,600
	May 4, 1983	17.33	6,990
	June 22, 1983	22.06	16,400
	June 29, 1983	21.70	15,200
	July 23, 1983	13.54	4,000
1984	Feb. 18, 1984	14.97	4,870
	Apr. 17, 1984	19.32	10,000
	May 7, 1984	17.56	7,870
	May 29, 1984	13.23	4,000
	June 9, 1984	16.58	6,790
	June 14, 1984	19.36	10,100
	June 18, 1984	23.28	20,400

06606700 Little Sioux River near Kennebec, Iowa
(Discontinued Sept. 30, 1969)

Location.--Lat 42°04'55", long 96°00'50", in SE1/4 SW1/4 sec.18, T.84 N., R.44 W., Monona County, near left bank on downstream side of pier of bridge on County road 1.1 mi south of Kennebec, 5.5 mi northeast of Onawa, and 6.0 mi upstream from Maple River and at mi 22.0.
Drainage area.--2,738 mi².
Gage.--Nonrecording prior to May 24, 1950; recording thereafter. Datum of gage is 1,027.02 ft National Geodetic Vertical Datum of 1929 (Monona County Highway Department bench mark). Prior to Oct. 12, 1959, at datum 0.87 ft higher.
Flood stage.--25 ft.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 4,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1940	June 4, 1940	20.8	4,120
	July 29, 1940	21.8	--
1941	Sept.16, 1941	20.9	3,850
1942	June 2, 1942	20.5	4,010
	June 6, 1942	21.6	4,880
1943	Feb. 27, 1943	20.7	4,170
	July 8, 1943	23.6	6,310
1944	May 20, 1944	25.0	10,800
	June 13, 1944	24.9	10,800
	July 7, 1944	20.2	4,710
	July 18, 1944	19.3	4,140
	Aug. 1, 1944	19.2	4,070
1945	Mar. 18, 1945	24.8	8,400
	May 31, 1945	23.1	6,820
	June 13, 1945	21.7	5,940
	June 17, 1945	24.1	8,200
	Aug. 7, 1945	25.0	8,590
1946	Feb. 6, 1946	23.4 a	6,000 b

a Affected by ice. b About.

06606700 Little Sioux River near Kennebec, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)	
1947	May 2, 1947	22.9		8,390	
	May 6, 1947	18.8		4,860	
	June 25, 1947	22.4		7,940	
1948	Feb. 28, 1948	24.2		7,870	
	Mar. 16, 1948	21.4		5,590	
1949	Mar. 4, 1949	24.0	a	5,300	b
1950	June 12, 1950	19.1		4,470	
	June 18, 1950	22.4		6,140	
1951	Mar. 28, 1951	24.86	a	8,400	b
	Apr. 11, 1951	24.33		12,000	
	May 1, 1951	18.92		5,330	
	June 8, 1951	17.22		4,640	
	June 19, 1951	17.12		4,570	
	July 3, 1951	21.30		7,000	
	Aug. 15, 1951	22.30		6,500	
	Aug. 17, 1951	22.15		7,800	
	Aug. 21, 1951	17.81		5,090	
	Sept. 12, 1951	19.43		6,460	
1952	Feb. 13, 1952	17.73	a	4,500	b
	Mar. 13, 1952	18.15		5,710	
	Mar. 20, 1952	17.35		5,070	
	Apr. 2, 1952	20.32		7,650	
	Apr. 5, 1952	21.67		9,170	
	July 7, 1952	19.77		7,150	
1953	June 14, 1953	23.97		11,500	
	June 26, 1953	16.88		4,660	
1954	June 22, 1954	26.18		13,500	
1955	Mar. 11, 1955	14.15		3,430	
1956	June 6, 1956	6.99		464	
1957	June 23, 1957	15.53		4,300	
1958	Feb. 28, 1958	10.92		1,900	
1959	May 29, 1959	17.84		5,260	
	May 31, 1959	19.90		7,040	
	June 11, 1959	16.80		4,600	

a Affected by ice. b About.

06606700 Little Sioux River near Kennebec, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1960	Mar. 30, 1960	23.26	16,400
	May 27, 1960	19.57	9,610
	Aug. 29, 1960	14.53	4,140
1961	Mar. 30, 1961	20.70	14,500
	June 15, 1961	15.23	5,180
	Aug. 10, 1961	17.07	5,810
1962	Mar. 28, 1962	22.40 c	--
	Mar. 31, 1962	--	19,000 b
	July 14, 1962	18.13	8,260
	July 20, 1962	14.71	4,730
	Sept. 1, 1962	15.16	5,180
1963	June 2, 1963	23.00	15,700
	June 5, 1963	--	5,000 b
1964	May 26, 1964	18.02	7,450
1965	Apr. 8, 1965	26.50	29,700
1966	Feb. 9, 1966	19.90 a	--
	Feb. 11, 1966	15.78	5,110
1967	June 7, 1967	14.52	4,050
	June 10, 1967	16.80	4,500
	June 14, 1967	19.30 c	8,000
	June 16, 1967	18.78	6,400
	June 21, 1967	15.62	4,830
1968	Aug. 27, 1968	11.24	2,050
1969	Apr. 9, 1969	24.90	18,900
	June 27, 1969	20.57	9,560
	July 9, 1969	18.80	7,230
	July 17, 1969	17.87	6,210
Discontinued Sept. 30, 1969			

a Affected by ice. b About. c Backwater from Maple River.

06606790 Maple Creek near Alta, Iowa

Location.--Lat 42°45', long 95°22', in NE1/4 sec.31, T.92 N., R.38 W., Buena Vista County, at bridge on State Highway 3, 6 mi northwest of Alta.
Drainage area.--15.5 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	--	a	<60
1967	--	a	<60
1968	June 25, 1968	87.29	440
1969	June 25, 1969	89.75	5,300
1970	--	a	<60
1971	June 6, 1971	88.25	1,150
1972	May 1, 1972	85.35	b
1973	Mar. 6, 1973	86.75	260
1974	June 22, 1974	86.02	144
1975	June 25, 1975	88.47	1,440
1976	--	a	<60
1977	--	a	<60
1978	Sept.12, 1978	86.12	145
1979	Mar. 22, 1979	87.28	560
1980	June 5, 1980	85.46	84
1981	June 14, 1981	87.29	560
1982	Mar. 19, 1982	85.48	98

a Peak stage did not reach bottom of gage.
b Discharge not determined.

06606790 Maple Creek near Alta, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	June 20, 1983	89.63	3,500
1984	Apr. 14, 1984	86.38	190

06607000 Odebolt Creek near Arthur, Iowa
(Discontinued September 1975)

Location.--Lat 42°20'10", long 95°22'52", in SE1/4 NE1/4 sec.21, T.87 N., R.39 W., Ida County, near center of span on downstream side of bridge on county highway M27, 700 ft south of State Highway 175, 1.8 mi west of Arthur and 6.5 mi upstream from mouth.
Drainage area.--39.3 mi².
Gage.--Water-stage recorder. Datum of gage is 1,258.57 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1951	July 3, 1951	11.96 a	4,320 b
1958	Feb. 27, 1958	7.04	378
1959	May 31, 1959	12.18	5,160
1960	Mar. 29, 1960	13.00 c	700 d
	Apr. 1, 1960	8.29	560
1961	June 13, 1961	8.42	576
	June 14, 1961	9.50	835
	June 27, 1961	8.73	630
1962	Mar. 27, 1962	11.98 c	3,000 d
	July 14, 1962	9.82	805
	Aug. 30, 1962	13.78	5,200
1963	June 4, 1963	10.77	1,010
	June 6, 1963	9.24	700
1964	May 23, 1964	11.50	1,650
	May 25, 1964	11.61	1,720
1965	Mar. 31, 1965	14.11 c	630 d
	Apr. 3, 1965	11.14	1,360
	May 25, 1965	7.74	520

a From floodmark.
b From contracted-opening measurement of peak flow.
c Affected by ice. d About.

06607000 Odebolt Creek near Arthur, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)	
1966	May 23, 1966	7.90		529	
1967	June 9, 1967	11.87		1,880	
	June 14, 1967	11.44		1,440	
	June 16, 1967	8.62		618	
1968	June 25, 1968	5.74		216	
1969	Mar. 20, 1969	8.55	c	500	d
	Apr. 1, 1969	8.31		588	
	Apr. 3, 1969	9.71	a	811	
1970	May 13, 1970	7.80		512	
1971	Feb. 18, 1971	13.98	c	2,000	d
	Mar. 12, 1971	8.72		637	
1972	June 17, 1972	8.63		847	
	June 28, 1972	8.20		754	
	July 17, 1972	9.93		1,540	
	July 24, 1972	8.14		749	
1973	Jan. 17, 1973	9.16	c	447	d
1974	May 29, 1974	7.10		700	
1975	Mar. 20, 1975	7.18	c	--	
	Apr. 27, 1975	6.25		535	
Discontinued September 1975					

a From floodmark. c Affected by ice. d About.

06607200 Maple River at Mapleton, Iowa

Location.--Lat 42°09'28", long 95°48'27", in SE1/4 SE1/4 sec.23, T.85 N., R.43 W., Monona County, on right bank on downstream side of bridge on State Highway 175, 0.5 mi southwest of Mapleton and 16.0 mi upstream from mouth and 30.9 mi upstream from mouth of Little Sioux River.
Drainage area.--669 mi².
Gage.--Water-stage recorder. Datum of gage is 1,085.86 ft National Geodetic Vertical Datum of 1929. Nonrecording prior to Aug. 20, 1952, and from June 21, 1954, to Sept. 20, 1956; recording remainder of time. June 21, 1954, to Sept. 6, 1955 at site 1.4 mi upstream at datum 4.05 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--18 ft.
Remarks.--Only annual peaks are shown for 1942-50. Base for partial-duration series, 4,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1936	Mar. ??, 1936	--	2,900
1939	July 4, 1939	16.0	1,910
1940	June 4, 1940	19.4	2,920
1941	Sept.16, 1941	--	889
1942	June 30, 1942	20.3	5,480
1943	June 16, 1943	18.8	3,940
1944	June 13, 1944	--	4,730
1945	Aug. 7, 1945	21.0	7,570
1946	May 24, 1946	17.5	5,460
1947	June 22, 1947	17.0	4,800
1948	Feb. 27, 1948	21.1	9,400
1949	Mar. 4, 1949	19.2 a	7,000
1950	June 12, 1950	22.1	13,000

a Affected by ice.

06607200 Maple River at Mapleton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1951	Mar. 27, 1951	20.1	10,800
	May 1, 1951	14.27	4,790
	June 19, 1951	16.50	6,800
	June 23, 1951	14.60	5,040
	July 3, 1951	13.45	4,100
	Aug. 15, 1951	17.27	7,630
1952	Mar. 13, 1952	11.95	4,360
	June 21, 1952	14.68	7,060
	June 27, 1952	19.05	13,400
	July 7, 1952	14.25	6,700
1953	June 25, 1953	17.66	11,500
1954	May 27, 1954	14.00	6,460
	June 20, 1954	20.40	15,600
1955	July 10, 1955	13.00	6,800 b
1956	June 6, 1956	10.24	3,260
1957	June 14, 1957	9.95	2,820
1958	Feb. 27, 1958	8.6 a	1,800 b
1959	May 28, 1959	13.18	5,520
	May 31, 1959	19.70	14,000
1960	Mar. 30, 1960	17.90	11,400
	June 15, 1960	12.80	5,670
1961	June 13, 1961	9.36	4,280
1962	Mar. 28, 1962	16.05	13,500
	July 14, 1962	10.13	4,580
	Aug. 31, 1962	15.40	11,800
1963	June 2, 1963	11.02	5,480
	June 4, 1963	15.50	12,000
1964	May 25, 1964	15.36	11,800
1965	Apr. 1, 1965	12.14	9,240
1966	June 9, 1966	7.17	2,950

a Affected by ice. b About.

06607200 Maple River at Mapleton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967	June 7, 1967	8.39	4,090
	June 9, 1967	12.98	11,100
	June 14, 1967	12.81	10,400
	June 16, 1967	12.76	10,300
1968	Aug. 9, 1968	5.33	1,480
1969	Apr. 2, 1969	8.93	4,670
	Apr. 4, 1969	10.58	6,250
	June 26, 1969	9.68	5,570
	June 28, 1969	8.52	4,220
1970	May 13, 1970	9.76	5,660
1971	Feb. 19, 1971	15.17	15,700
	Mar. 13, 1971	10.98	7,440
1972	June 13, 1972	10.28	6,310
	June 17, 1973	9.15	4,930
1973	Mar. 2, 1973	8.85	6,660
	June 18, 1973	7.85	4,610
1974	May 18, 1974	8.95	6,180
	May 21, 1974	7.75	4,620
	May 29, 1974	7.39	4,220
1975	Apr. 27, 1975	13.17	11,200
1976	May 22, 1976	4.64	1,680
1977	July 20, 1977	9.83	5,750
	July 24, 1977	9.19	4,980
	Aug. 9, 1977	8.75	4,480
1978	Mar. 20, 1978	9.23	6,570
	June 18, 1978	8.24	5,210
	June 20, 1978	7.27	4,090
	July 7, 1978	7.27	4,090
	Sept.12, 1978	16.74	20,800
1979	Mar. 18, 1979	11.07	9,430
	Mar. 20, 1979	13.76 a	11,000
	Mar. 24, 1979	10.84	9,040
1980	Mar. 15, 1980	4.37	1,590
1981	July 25, 1981	5.96	2,580

a Affected by ice.

06607200 Maple River at Mapleton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	July 6, 1982	10.84	7,950
	July 18, 1982	10.53	7,570
1983	Mar. 7, 1983	7.97	4,510
	June 13, 1983	10.17	6,640
	June 19, 1983	10.84	7,550
	June 21, 1983	16.84	17,200
	June 28, 1983	10.97	7,700
1984	June 8, 1984	15.51	14,900
	June 13, 1984	12.44	10,800
	June 16, 1984	14.01	13,100

06607300 Maple River at Turin, Iowa
(Discontinued 1941)

Location.--Lat 42°01', long 95°57', in SW1/4 NE1/4 sec.10, T.83 N., R.44 W., Monona County, at bridge on State Highway 37, 0.7 mi east of Turin.
Drainage area.--734 mi².
Gage.--Nonrecording. Datum of gage is 1,028.45 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft³/s)	
1936	Mar. ??, 1936	20.20	a	29,000	b
1939	July 4, 1939	16.0	c	1,910	
1940	June 4, 1940	19.4		2,920	
1941	Sept.16, 1941	15.5	d	889	
Discontinued 1941					

a Affected by ice.
b About.
c Maximum for period April to September 1939.
d Backwater from Little Sioux River.

06607500 Little Sioux River near Turin, Iowa

Location.--Lat 41°57'52", long 95°58'21", in NW1/4 NE1/4 sec.33, T.83 N., R.44 W., Monona County, on left bank on downstream side of bridge on county road E54, 2.5 mi downstream from Maple River, 3.8 mi south of Turin and at mi 13.5.
Drainage area.--3,526 mi².
Gage.--Water-stage recorder. Datum is 1,019.85 ft National Geodetic Vertical Datum of 1929 (Corps of Engineers bench mark).
Flood stage.--25 ft.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 4,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1959	May 29, 1959	19.17	8,550
	May 31, 1959	21.80	14,000
	June 11, 1959	14.78	6,370
1960	Mar. 30, 1960	25.08	23,900
	May 23, 1960	16.88	7,680
	May 27, 1960	19.40	11,200
	June 16, 1960	16.20	6,840
	Aug. 29, 1960	13.60	4,520
1961	Mar. 4, 1961	13.92	5,270
	Mar. 15, 1961	15.32	6,470
	Mar. 30, 1961	21.02	14,000
	June 15, 1961	15.83	6,920
	Aug. 10, 1961	16.20	7,300
1962	Mar. 29, 1962	23.97	24,400
	May 23, 1962	12.52	4,590
	June 10, 1962	12.57	4,680
	July 8, 1962	12.47	4,590
	July 14, 1962	17.32	9,360
	July 20, 1962	13.68	5,580
	Sept. 1, 1962	19.63	12,600
1963	June 2, 1963	23.30	19,400
	June 5, 1963	19.65	12,600
1964	May 26, 1964	19.95	13,200
1965	Apr. 8, 1965	26.05	27,100
1966	Feb. 11, 1966	--	6,500 b
	Feb. 16, 1966	15.94 a	--

a Affected by ice. b About.

06607500 Little Sioux River near Turin, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967	June 7, 1967	16.37	6,950
	June 10, 1967	21.72	14,500
	Jun 12, 1967	16.03	6,450
	June 15, 1967	22.87	16,900
	June 19, 1967	15.07	5,620
	June 24, 1967	14.80	5,400
1968	Aug. 27, 1968	11.60	3,020
1969	Mar. 23, 1969	18.90	6,000 b
	Mar. 28, 1969	15.02	5,870
	Apr. 8, 1969	24.26	20,300
	June 27, 1969	21.90	13,900
	July 9, 1969	18.75	7,540
	July 17, 1969	17.64	6,770
1970	Mar. 5, 1970	14.47	4,580
	May 14, 1970	14.36	4,500
1971	Feb. 19, 1971	27.44 a	30,000 b
	Feb. 26, 1971	14.44	4,560
	Mar. 13, 1971	21.38	13,200
	Mar. 19, 1971	16.93	6,680
	Mar. 29, 1971	17.00	6,750
	June 8, 1971	20.09	10,800
	July 10, 1971	14.48	4,590
1972	June 13, 1972	15.39	5,360
	July 18, 1972	17.70	7,770
1973	Jan. 17, 1973	--	4,800 b
	Mar. 2, 1973	--	9,000 b
	Mar. 5, 1973	20.40	12,900
	Aug. 26, 1973	15.98	5,330
1974	May 18, 1974	17.64	7,400
	May 21, 1974	15.18	5,120
	June 24, 1974	14.38	4,520
1975	Apr. 11, 1975	14.74	4,780
	Apr. 25, 1975	16.13	5,920
	Apr. 28, 1975	23.24	17,500
	June 22, 1975	18.34	8,210
1976	May 23, 1976	11.96	2,790
1977	June 23, 1977	15.14	4,800
	Aug. 9, 1977	18.00	7,280

a Affected by ice. b About.

06607500 Little Sioux River near Turin, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1978	Mar. 19, 1978	26.47 a	25,000
	June 18, 1978	17.97	7,770
	June 20, 1978	13.77	3,860
	July 8, 1978	17.53	7,280
	July 24, 1978	14.62	4,540
	Sept.14, 1978	18.89	8,950
1979	Mar. 20, 1979	23.89	21,600
	Mar. 23, 1979	24.77	24,900
	May 12, 1979	14.91	4,800
	May 16, 1979	14.98	4,860
	Aug. 20, 1979	15.27	5,120
	Aug 22, 1979	17.42	7,170
	Aug. 28, 1979	15.56	5,380
1980	Nov. 9, 1979	15.43	5,270
	Feb. 23, 1980	17.62 a	--
	June 7, 1980	14.82	4,720
1981	June 16, 1981	12.54	3,010
1982	Feb. 22, 1982	22.11	14,700
	May 19, 1982	14.79	4,700
	May 20, 1982	15.36	5,200
	May 27, 1982	16.71	6,460
	July 7, 1982	19.94	10,500
	July 18, 1982	22.21	15,000
	July 21, 1982	15.86	5,650
	Sept.12, 1982	14.65	5,000
1983	Oct. 11, 1982	15.34	5,310
	Nov. 17, 1982	14.62	4,750
	Feb. 26, 1983	19.98	11,100
	Mar. 7, 1983	23.72	19,600
	Apr. 14, 1983	20.82	16,600
	May 3, 1983	18.30	10,600
	May 20, 1983	14.60	5,560
	June 14, 1983	16.33	7,530
	June 21, 1983	26.54	31,200
	June 30, 1983	23.00	20,300
	July 23, 1983	14.14	5,810

a Affected by ice

06607500 Little Sioux River near Turin, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	Mar. 15, 1984	12.23	5,110
	Apr. 17, 1984	15.80	10,900
	May 7, 1984	15.45	9,080
	May 29, 1984	14.17	6,350
	June 8, 1984	19.77	21,500
	June 13, 1984	19.17	19,800
	June 16, 1984	22.60	31,000
	June 19, 1984	21.88	28,400
	June 26, 1984	12.36	5,290

06608500 Soldier River at Pisgah, Iowa

Location.--Lat 41°49'52", long 95°55'50", in NW1/4 NE1/4 sec.14, T.81 N., R.44 W., Harrison County, on left bank on downstream side of bridge on county highway F20 at west edge of Pisgah and 13.1 mi upstream from mouth.
Drainage area.--407 mi².
Gage.--Water-stage recorder. Datum of gage is 1,036.53 ft National Geodetic Vertical Datum of 1929. Prior to Oct.11, 1954, nonrecording gage at same site and datum with supplementary water-stage recorder operating above 8.2 ft gage height Mar.2, 1946, to Sept. 24, 1953.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--28 feet.
Remarks.--Base for partial-duration series, 5,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1940	June 4, 1940	25.7	17,000
	July 9, 1940	25.1	16,000
	July 11, 1940	17.5	7,740
	Aug. 3, 1940	17.6	7,820
1941	June 2, 1941	12.6	4,220
1942	June 2, 1942	24.0	14,300
	June 28, 1942	26.1	17,800
	July 19, 1942	14.0	5,200
	July 24, 1942	15.5	6,250
1943	July 21, 1943	16.0	6,620
	Aug. 22, 1943	20.0	9,760
1944	May 12, 1944	16.0	6,620
	June 12, 1944	25.0	15,700
	Aug. 1, 1944	17.5	7,740
1945	Mar. 9, 1945	16.0	6,620
	May 21, 1945	20.0	9,760
	May 31, 1945	20.2	9,940
1946	Feb. 5, 1946	17.0 a	5,830 b
	May 24, 1946	15.6	6,320
	June 28, 1946	20.1	9,850
	June 30, 1946	16.8	7,220
	Sept. 4, 1946	22.6	12,400
	Sept. 7, 1946	15.2	6,040

a Affected by ice. b About.

06608500 Soldier River at Pisgah, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1947	June 22, 1947	14.1	5,270
1948	Feb. 27, 1948	22.1	11,800
	Mar. 16, 1948	16.3	6,790
	July 29, 1948	15.0	5,860
1949	Mar. 4, 1949	22.0 a	9,500 b
	June 21, 1949	15.9	6,470
	Aug. 12, 1949	15.9	6,540
1950	Feb. 28, 1950	20.4 a	9,000 b
	Mar. 4, 1950	14.7	5,690
	June 2, 1950	18.4	8,420
	June 12, 1950	28.17	22,500
	June 18, 1950	23.7	13,900
	Aug. 12, 1950	16.1	6,700
1951	Mar. 26, 1951	24.85	17,000
	May 1, 1951	18.55	10,000
	June 2, 1951	16.35	7,860
	June 17, 1951	27.46	20,400
	July 3, 1951	23.52	15,400
	Aug. 14, 1951	17.56	9,000
	Aug. 17, 1951	15.48	7,050
	Aug. 20, 1951	13.65	5,380
	Sept. 9, 1951	14.60	6,240
	Sept.12, 1951	14.05	5,720
1952	Oct. 4, 1951	13.55	5,380
	Jan. 19, 1952	17.35	8,800
	Mar. 12, 1952	13.45	5,210
	June 21, 1952	17.85	9,200
	June 27, 1952	25.18	17,500
	July 6, 1952	16.80	8,220
1953	June 25, 1953	16.40	7,860
	Aug. 3, 1953	16.24	7,680
	Aug. 6, 1953	13.80	5,550
1954	Apr. 21, 1954	17.6	9,000
	May 27, 1954	17.68	9,100
	June 19, 1954	23.35	15,200
	June 21, 1954	20.0	11,400
1955	Mar. 8, 1955	11.79	3,890
1956	July 11, 1956	10.68	2,880

a Affected by ice. b About.

06608500 Soldier River at Pisgah, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)
1957	June 16, 1957	17.64		9,000
1958	July 2, 1958	13.7		5,260
1959	May 28, 1959	14.60		6,010
	May 31, 1959	16.87		8,060
1960	June 16, 1960	14.00		5,580
1961	Mar. 15, 1961	11.47		3,480
1962	Mar. 23, 1962	14.70		8,100
	May 28, 1962	12.96		5,800
	June 10, 1962	13.25		6,100
	Aug. 30, 1962	22.40		15,500
1963	June 5, 1963	19.14		12,000
	Aug. 6, 1963	16.89		9,800
1964	May 24, 1964	20.50		13,400
	May 26, 1964	22.21		15,300
1965	Feb. 28, 1965	19.23	a	--
	Mar. 17, 1965	13.90		6,800
	Mar. 31, 1965	19.13		12,000
	Apr. 3, 1965	13.98		6,880
	May 25, 1965	14.70		7,600
1966	Feb. 9, 1966	11.00		3,900
1967	June 7, 1967	14.3		7,200
	June 9, 1967	19.2		12,100
	June 14, 1967	19.3	c	12,200
	June 19, 1967	12.70		5,600
1968	June 25, 1968	18.03		10,600
1969	Mar. 18, 1969	14.08		6,980
1970	May 14, 1970	9.68		2,710
1971	Feb. 19, 1971	23.70		17,000
	Mar. 13, 1971	14.50		7,400
1972	July 11, 1972	21.87		15,000
	Sept. 12, 1972	12.52		5,420

a Affected by ice. c From floodmark.

06608500 Soldier River at Pisgah, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973	Jan. 17, 1973	11.04 a	--
	Mar. 1, 1973	10.71	3,640
1974	May 19, 1974	12.71	5,610
1975	Apr. 28, 1975	11.05	3,950
1976	May 23, 1976	8.70	1,830
1977	Aug. 31, 1977	23.85	13,600
1978	Mar. 20, 1978	14.90	5,420
	Sept.13, 1978	25.60	17,900
	Sept.14, 1978	16.67	6,900
1979	Mar. 18, 1979	18.37	11,300
	Mar. 30, 1979	12.17	5,050
1980	June 15, 1980	11.01	3,910
1981	July 25, 1981	10.25	3,220
1982	Feb. 20, 1982	14.90	6,260
	May 29, 1982	17.74	9,000
	Sept.12, 1982	22.04	13,500
1983	June 20, 1983	13.21	4,820
1984	June 16, 1984	20.35	11,700

a Affected by ice.

06609500 Boyer River at Logan, Iowa

Location.--Lat 41°38'33", long 95°46'57" , in SE1/4 NW1/4 sec.19, T.79 N., R.42 W., Harrison County, on left bank 9 ft downstream from Illinois Central Railroad bridge at Logan and 15.8 mi upstream from mouth.
Drainage area.--871 mi².
Gage.--Water-stage recorder. Datum of gage is 1,009.38 ft National Geodetic Vertical Datum of 1929 (Chicago and Northwestern Railway Company bench mark). Prior to Oct.18, 1960 nonrecording gages at various sites within 600 ft of present location at same datum. Supplementary water stage recorder operating above 4.8 ft gage height Oct.22, 1946, to Oct.7, 1954, at site 100 ft upstream and Oct.8, 1954, to Oct.18, 1960, supplementary water-stage recorder at present site, both at same datum.
Flood stage.--19 ft.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 6,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1881	May 1881	25. a	--

1918	June 5, 1918	17.9	8,710
1919	Apr. 23, 1919	17.8	8,620
	June 11, 1919	16.7	7,640
	June 21, 1919	16.0	7,040
	July 13, 1919	16.5	7,470
1920	Aug. 20, 1920	10.7	3,210
1921	Sept.10, 1921	13.5	6,890
1922	Feb. 22, 1922	--	6,900
	July 28, 1922	12.9	6,410
	Aug. 21, 1922	14.0	7,470
1923	June 18, 1923	15.6	9,200
1924	June 8, 1924	16.8	10,500
	June 24, 1924	19.0	13,200
1925	June 3, 1925	18.7	12,800

1938	Sept. 6, 1938	19.1	13,500

a About.

06609500 Boyer River at Logan, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1939	July 3, 1939	15.0	9,000
1940	June 4, 1940	19.1	13,500
	July 9, 1940	19.2	13,600
1941	June 11, 1941	10.4	4,400
1942	June 28, 1942	19.0	13,400
	July 19, 1942	19.0	13,400
1943	May 15, 1943	19.2	13,400
	June 3, 1943	17.0	11,200
	Aug. 22, 1943	13.5	6,980
1944	June 4, 1944	13.0	6,700
	June 8, 1944	17.8	11,800
	June 12, 1944	18.2	12,300
1945	Apr. 23, 1945	19.1	13,000
	May 27, 1945	12.6	6,140
	June 1, 1945	16.6	10,300
	June 6, 1945	15.0	8,540
	June 9, 1945	16.7	10,400
	July 18, 1945	18.4	12,400
1946	Feb. 5, 1946	16.1	9,750
	Sept. 4, 1946	17.2	11,000
1947	June 1, 1947	12.7	6,670
	June 12, 1947	16.8	11,000
	June 22, 1947	18.2	12,600
1948	Feb. 27, 1948	15.2	9,630
	Mar. 16, 1948	13.5	7,840
	Mar. 18, 1948	15.0	9,400
	July 29, 1948	13.7	8,350
1949	Mar. 4, 1949	19.2	17,400
	June 27, 1949	13.2	7,960
	July 20, 1949	12.4	6,980
	Sept.11, 1949	14.6	9,840
1950	Feb. 28, 1950	19.4 b	16,000 a
	Mar. 4, 1950	12.0	6,500
	May 25, 1950	16.4	12,400
	June 2, 1950	16.5	12,600
	June 12, 1950	17.3	13,900
	June 18, 1950	20.0	18,800
	Aug. 12, 1950	17.5	14,000

a About. b Affected by ice.

06609500 Boyer River at Logan, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1951	Mar. 28, 1951	20.03	23,000
	May 1, 1951	19.76	22,500
	June 1, 1951	16.16	14,400
	June 18, 1951	18.53	19,200
	July 3, 1951	20.00	23,000
	Aug. 14, 1951	15.7	13,500
	Aug. 17, 1951	14.0	10,500
	Aug. 20, 1951	11.6	6,930
	Sept. 9, 1951	14.2	10,800
	Sept.12, 1951	11.0	6,200
1952	Oct. 21, 1951	11.0	6,200
	Jan. 19, 1952	17.0	16,000
	June 21, 1952	19.50	19,000
	June 27, 1952	19.00	18,000
	July 7, 1952	14.20	9,900
1953	June 10, 1953	15.30	11,300
1954	Apr. 21, 1954	15.18	12,300
	June 21, 1954	18.80	17,700
	Aug. 22, 1954	10.82	6,360
1955	Mar. 8, 1955	--	6,000
	July 10, 1955	12.52	8,450
1956	May 13, 1956	11.7	7,440
1957	June 14, 1957	13.58	9,940
	June 16, 1957	22.67	23,600
	June 22, 1957	13.45	9,660
	June 25, 1957	--	6,000
1958	July 2, 1958	18.70	17,400
1959	May 5, 1959	--	6,000
	May 31, 1959	15.00	13,100
1960	Mar. 29, 1960	14.62	10,200
1961	May 31, 1961	11.08	6,360
	June 14, 1961	11.77	7,600
	June 27, 1961	15.40	14,800
	Aug. 1, 1961	11.40	6,840
1962	Mar. 28, 1962	13.70	12,400
	May 26, 1962	12.82	7,720
	May 29, 1962	12.64	7,440
	June 10, 1962	14.82	10,900
	Aug. 31, 1962	14.86	11,000

06609500 Boyer River at Logan, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1963	June 6, 1963	11.66	7,800
	Aug. 6, 1963	11.30	6,680
1964	May 24, 1964	19.52	19,600
	May 26, 1964	16.34	14,200
	Aug. 28, 1964	14.28	10,600
1965	Mar. 1, 1965	25.22 b	c
	Mar. 31, 1965	15.93	13,600
	Apr. 3, 1965	11.98	6,970
	May 26, 1965	19.33	19,400
	Sept. 7, 1965	13.23	8,990
1966	June 28, 1966	9.10	3,450
1967	June 9, 1967	16.89	15,200
	June 13, 1967	12.47	7,750
	June 15, 1967	14.22	10,700
1968	June 25, 1968	17.50	16,000
1969	Mar. 18, 1969	13.75	9,900
	Mar. 23, 1969	11.91	7,170
	Apr. 4, 1969	11.82	7,050
	June 28, 1969	11.28	6,240
1970	Mar. 3, 1970	7.28	1,840
1971	Feb. 19, 1971	22.65	25,000
	Mar. 13, 1971	16.28	14,200
1972	Feb. 29, 1972	11.48	6,770
	Sept.11, 1972	21.76	23,500
1973	Dec. 30, 1972	12.10	7,590
	Jan. 18, 1973	--	12,000 a
	Mar. 1, 1973	11.42	6,700
	July 3, 1973	12.80	8,600
	Sept.26, 1973	20.32	21,000
1974	May 19, 1974	20.21	20,900
1975	Apr. 28, 1975	13.84	10,200
1976	May 23, 1976	7.25	2,260
1977	Aug. 31, 1977	11.38	3,860

a About b Affected by ice. c Unknown.

06609500 Boyer River at Logan, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1978	Mar. 21, 1978	16.81	12,100
	Sept.13, 1978	21.73	21,900
1979	Mar. 18, 1979	22.47	23,400
	Mar. 23, 1979	15.28	10,500
	Mar. 30, 1979	18.18	15,100
	June 18, 1979	15.06	10,200
1980	June 15, 1980	14.84	9,870
1981	June 29, 1981	12.96	7,350
1982	Feb. 20, 1982	17.76	14,400
	Mar. 19, 1982	12.29	6,540
	May 29, 1982	18.93 d	16,400
1983	June 28, 1983	12.43	6,290
1984	Apr. 29, 1984	13.76	8,380
	June 15, 1984	14.63	8,700
	June 17, 1984	13.98	7,840

d From floodmark.

06609600 Willow Creek near Logan, Iowa
(Discontinued September 1975)

Location.--Lat 41°37'54", long 95°53'27", in NW1/4 NE1/4 sec.30, T.79 N., R.43 W., Harrison County, on right bank on downstream side of bridge on county highway F50, 5.5 mi west of Logan, and 7.5 mi upstream from mouth.
Drainage area.--129 mi².
Gage.--Water-stage reocrder. Datum of gage is 1,005.40 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1957	June 15, 1957	24.90 a	b

1973	Feb. 24, 1973	11.08	1,090
	Mar. 1, 1973	10.60	922
	Apr. 16, 1973	9.40	532
	July 30, 1973	13.11	2,100
	Sept.26, 1973	13.07	1,800
1974	May 16, 1974	10.51	894
	May 18, 1974	18.78	7,970
	May 30, 1974	15.63	4,170
	Aug. 9, 1974	9.64	607
	Aug. 13, 1974	10.64	941
1975	Apr. 28, 1975	10.75	985
	May 6, 1975	14.24	2,990
	Aug. 18, 1975	14.46	3,220
Discontinued September 1975			

a From information by Corps of Engineers.
b Discharge not determined.

06610000 Missouri River at Omaha, Nebraska

Location.--Lat 41°15'32", long 95°55'20", in SE1/4 NW1/4 sec.23, T.15 N., R.13 E., Douglas County, on right bank on left side of concrete floodwall, at foot of Douglas Street, 275 ft downstream from Interstate 480 bridge in Omaha, and at mi 615.9.
Drainage area.--322,800 mi², approximately.
Gage.--Water-stage recorder. Datum of gage is 958.24 ft National Geodetic Vertical Datum of 1929. Apr.10, 1872, to Aug.31, 1928, staff, cable, and chain gages at several sites within 0.6 mi of present site not more than 0.43 ft below present datum. Sept.1, 1928, to Nov.30, 1929, chain gage on Illinois Central Railroad bridge 2 mi upstream at datum 2.97 ft higher. Dec.1, 1929, to May 26, 1930, chain gage and May 27, 1930, to Oct.18, 1931, wire-weight gage, at present site and datum. Oct.19, 1931, to Sept.30, 1936, water-stage recorder 0.4 mi downstream at present datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--19 ft.
Remarks.--Flow partly regulated by upstream main-stem reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1929	June 7, 1929	14.28	198,000
1930	Mar. 15, 1930	11.9	84,400
1931	June 18, 1931	10.85	52,800
1932	June 19, 1932	15.12	137,000
1933	May 29, 1933	13.03	102,000
1934	Mar. 5, 1934	15.00	125,000
1935	July 19, 1935	16.85	99,800
1936	Mar. 9, 1936	16.90 a	--
	Mar. 23, 1931	--	89,200
1937	June 24, 1937	18.15	111,000
1938	July 10, 1938	--	117,000
	July 11, 1938	18.75	--

a Affected by ice.

06610000 Missouri River at Omaha, Nebraska--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1939	Apr. 5, 1939	--	141,000
	Apr. 6, 1939	19.30	--
1940	June 5, 1940	--	54,600
	June 18, 1940	10.96	--
1941	June 18, 1941	17.20	107,000
1942	June 11, 1942	18.30	121,000
1943	Apr. 12, 1943	--	200,000
	Apr. 13, 1943	22.45	--
1944	Apr. 16, 1944	19.40	149,000
1945	Mar. 22, 1945	--	106,000
	Mar. 23, 1945	14.52	--
1946	June 24, 1946	13.20	84,700
1947	July 1, 1947	19.10	150,000
1948	Mar. 28, 1948	14.0	112,000
1949	Apr. 13, 1949	20.00	183,000
1950	Apr. 27, 1950	21.24	196,000
1951	Apr. 11, 1951	18.20	152,000
1952	Apr. 18, 1952	30.20	396,000
1953	June 26, 1953	13.69	112,000
1954	June 21, 1954	11.12	87,400
1955	Mar. 13, 1955	--	51,500
	July 11, 1955	7.36	--
1956	Mar. 18, 1956	--	42,600
	July 13, 1956	7.47	--
1957	June 16, 1957	9.25	59,000
1958	July 2, 1958	8.55	45,400
1959	June 1, 1959	9.77	57,000

06610000 Missouri River at Omaha, Nebraska--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1960	Apr. 1, 1960	--	120,000
	Apr. 4, 1960	16.96	--
1961	June 15, 1961	7.66	41,700
1962	Mar. 29, 1962	16.48	115,000
1963	June 5, 1963	9.97	61,700
1964	May 26, 1964	11.10	68,900
1965	Apr. 8, 1965	11.82	69,800
1966	Feb. 10, 1966	10.69	61,800
1967	June 16, 1967	14.03	68,400
1968	Jan. 19, 1968	13.98 a	--
	June 25, 1968	10.39	53,000
1969	Apr. 12, 1969	16.82	100,000
1970	Oct. 1, 1969	9.88	51,900
	Aug. 2, 1970	10.33	--
1971	Mar. 14, 1971	13.94	91,900
	June 11, 1971	14.08	--
1972	July 18, 1972	12.64	--
	Sept.11, 1972	12.57	70,500
1973	Nov. 3, 1972	9.28	59,200
	Sept.26, 1973	11.14	--
1974	May 19, 1974	10.86	52,400
1975	Aug. 18, 1975	13.66	70,200
1976	Oct. 2, 1975	11.83	--
	Nov. 21, 1975	10.98	75,000
1977	Aug. 31, 1977	10.37	51,400
1978	Mar. 19, 1978	14.19	88,400
1979	Mar. 19, 1979	13.26	90,000
1980	Nov. 1, 1979	9.07	54,000

a Affected by ice.

06610000 Missouri River at Omaha, Nebraska--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1981	June 16, 1981	9.68	47,800
1982	Feb. 23, 1982	--	63,000
	May 29, 1982	11.24	--
1983	Mar. 8, 1983	22.41	82,200
1984	June 27, 1984	29.02 b	116,000

b Backwater from Platte River.

06610500 Indian Creek at Council Bluffs, Iowa
(Discontinued September 1976)

Location.--Lat 41°17'32", long 95°49'59", in SE1/4 SW1/4 sec.18, T.75 N.,R.43 W., Pottawattamie Co., on left bank at downstream side of first bridge off State Highway 183, on Mud Hollow Road at north edge of Council Bluffs, 8.8 mi upstream from mouth.
Drainage area.--7.99 mi².
Gage.--Water-stage recorder. Datum of gage is 1,038.86 ft National Geodetic Vertical Datum of 1929 (City of Council Bluffs bench mark). Prior to Apr. 12, 1955, nonrecording gage at site 0.2 mi downstream at different datum.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 700 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1942	June 20, 1942	--	9,200 a
1955	July 8, 1955	9.16	543
1956	July 7, 1956	10.21	769
	July 13, 1956	9.86	718
1957	June 7, 1957	10.15	943
	June 15, 1957	13.79	2,050
1958	July 29, 1958	14.16	2,200
1959	May 2, 1959	14.08	2,160
	May 9, 1959	9.75	845
	May 18, 1959	10.92	1,120
	July 17, 1959	11.27	1,230
	Aug. 2, 1959	11.50	1,290
	Aug. 22, 1959	9.37	753
1960	May 24, 1960	10.18	943
	June 20, 1960	10.62	1,050
	Aug. 5, 1960	9.76	845
1961	May 30, 1961	6.65	302
1962	July 21, 1962	8.50	570
1963	Feb. 5, 1963	4.00 b	--
	June 6, 1963	3.65	56

a From information by Corps of Engineers.
b Affected by ice.

06610500 Indian Creek at Council Bluffs, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	May 26, 1964	7.57	422
1965	Sept. 7, 1965	15.36	2,980
1966	June 26, 1966	8.82	632
1967	June 15, 1967	9.57	916
1968	May 15, 1968	9.55 c	912
1969	May 2, 1969	5.16	158
1970	Jan. 24, 1970	4.12 b	--
	Aug. 2, 1970	4.02	91
1971	May 10, 1971	10.50	1,100
1972	May 26, 1972	6.32	314
1973	Sept.26, 1973	7.53	568
1974	Oct. 10, 1973	2.94	20
1975	June 18, 1975	4.76	154
1976	Nov. 2, 1975	4.38	140 d
(Discontinued September 1976)			

b Affected by ice. c From floodmark.
d Caused by removal of construction dam.

06610520 Mosquito Creek near Earling, Iowa
(Discontinued September 1979)

Location.--Lat 41°45'10", long 95°27'50", in N1/2 SE1/4 sec.11, T.80 N., R.40 W., Shelby County, on right bank at stream-stabilization structure 1,300 ft downstream from bridge on State Highway 191 and 2.3 mi southwest of Earling.
Drainage area.--32.0 mi².
Gage.--Duplex water-stage recorder. Datum is 1,222.56 ft NGVD of 1929. Headwater (base gage) and tailwater (supplementary gage) elevations obtained at stream-stabilization structure.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 500 ft³/s. The stabilization structure is a dam approximately 16 ft high constructed of sheet piling and derrick stone. The crest of the piling is rectangular at low stages and trapezoidal at high stages. Discharges computed from headwater gage readings.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1965	Sept. 7, 1965	20.82	589
1966	May 22, 1966	21.39	870
	May 23, 1966	21.84	1,120
	June 28, 1966	22.38	1,390
1967	June 7, 1967	23.67	2,370
	June 9, 1967	20.65	512
	June 11, 1967	21.95	1,190
	June 15, 1967	24.42 a	2,960
	June 19, 1967	21.17	755
1968	June 23, 1968	20.74	558
	June 24, 1968	24.00	2,640
	June 25, 1968	22.85	1,700
1969	Mar. 18, 1969	22.64	2,420
	June 22, 1969	20.18	563
	June 28, 1969	22.40	2,240
	July 9, 1969	21.97	1,840
1970	May 13, 1970	22.05 b	1,860
1971	Feb. 18, 1971	22.97 c	1,800 d
	Mar. 11, 1971	21.75	1,540
	June 8, 1971	20.50	710
	June 30, 1971	22.30	1,960
	July 10, 1971	20.94	835

a From floodmark.
b From graph based on tailwater gage heights.
c Affected by ice.
d About.

06610520 Mosquito Creek near Earling, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	Feb. 20, 1972	21.55	1,440
	Feb. 23, 1972	21.66	1,530
	Feb. 28, 1972	21.80	1,640
	Sept.11, 1972	31.18	12,000
1973	Dec. 30, 1972	21.42	1,340
	Jan. 17, 1973	20.76	867
	Feb. 23, 1973	21.12	1,030
	Feb. 28, 1973	20.86	842
	May 7, 1973	20.33	579
	June 4, 1973	20.50	616
	July 2, 1973	21.68	1,460
	July 9, 1973	21.25	1,150
	July 30, 1973	20.98	953
	Sept.26, 1973	26.42	6,700
1974	Feb. 17, 1974	20.58	725
	May 16, 1974	24.58	3,780
	May 18, 1974	24.37	3,570
1975	Apr. 28, 1975	23.55	2,800
	June 18, 1975	20.25	520
1976	May 23, 1976	19.53	192
1977	May 21, 1977	24.45	3,650
	July 17, 1977	21.34	1,170
	Aug. 31, 1977	--	2,200
	Sept. 3, 1977	--	1,500
	Sept. 9, 1977	22.72	2,130
1978	Nov. 9, 1977	20.61	775
	Mar. 20, 1978	22.40	1,880
	May 28, 1978	22.00	1,590
	Sept.12, 1978	29.79	9,910
1979	Mar. 18, 1979	23.05	2,390
	Mar. 22, 1979	20.62	760
	Mar. 29, 1979	21.51	1,280
	Apr. 20, 1979	20.58	740
	June 18, 1979	25.05	4,250
	June 19, 1979	26.26	5,460
	July 27, 1979	21.68	1,380
	July 30, 1979	27.83	7,280
	Aug. 22, 1979	22.17	1,720
	Sept. 6, 1979	23.56	2,800

Discontinued September 1979

06610600 Mosquito Creek at Neola, Iowa

Location.--Lat 41°26'36", long 95°36'42", in NE 1/4 sec. 25, T. 77 N., R. 42 W., Pottawattamie County, at bridge on county road, 0.5 mi south of Neola. Prior to April 19, 1963 at site 0.9 mi upstream at drainage area of 128 mi².
Drainage area.--131 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	Aug. 29, 1952	21.33	18,500
1953	--	a	<1,600
1954	Aug. 22, 1954	9.28	2,700
1955	July 9, 1955	12.30	4,800
1956	May 13, 1956	10.56	3,400
1957	June 16, 1957	17.07	10,500
1958	July 2, 1958	23.26	23,500
1959	June 28, 1959	12.11	4,700
1960	Aug. 5, 1960	10.38	3,300
1961	July 27, 1961	12.62	5,000
1962	May 26, 1962	15.34	8,200
1963	June 5, 1963	16.34	2,780
1964	May 24, 1964	27.15	13,100
1965	Mar. 1, 1965	28.41	15,100
1966	May 23, 1966	22.08	6,100
1967	June 15, 1967	18.03	2,650
1968	June 23, 1968	16.01	1,550
1969	July 9, 1969	19.36	4,350

a Peak stage did not reach bottom of gage.

06610600 Mosquito Creek at Neola, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	--	a	<1,200
1971	--	a	<1,200
1972	Sept. 11, 1972	31.23	20,300
1973	Sept. 26, 1973	28.45	15,700
1974	May 16, 1974	16.89	3,000
1975	Aug. 29, 1975	16.58	2,900
1976	June 14, 1976	17.46	3,350
1977	May 21, 1977	18.93	4,250
1978	Sept. 13, 1978	31.28	20,700
1979	Mar. 29, 1979	23.51	7,600
1980	June 6, 1980	27.56	13,800
1981	May 4, 1981	22.77	6,800
1982	Feb. 20, 1982	23.74	8,200
1983	June 14, 1983	19.74	3,900
1984	June 15, 1984	18.45	2,900

a Peak stage did not reach bottom of gage.

06806000 Waubonsie Creek near Bartlett, Iowa
(Discontinued Sept. 30, 1969)

Location.--Lat 40°53'04", long 95°44'47", in NE1/4 NE1/4 sec.11, T.70 N., R.43 W., Fremont County, on left pier on downstream side of highway bridge, 2.5 mi east of Bartlett, 3.5 mi west of Tabor and 3.6 mi upstream from mouth.
Drainage area.--30.4 mi².
Gage.--Recording. Datum of gage is 936.96 ft NGVD of 1929. Prior to June 16, 1951, nonrecording and Jan.10, 1946, to May 8, 1950, supplementary high-stage recorder at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements below 3,900 ft³/s and above by slope-area measurements.
Remarks.--Base for partial-duration series, 1,200 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1946	Aug. 7, 1946	20.0	1,500
	Sept. 4, 1946	37.7	12,500
1947	June 4, 1947	34.0	9,400
	June 12, 1947	27.4	5,000
	June 18, 1947	19.5	1,580
	June 22, 1947	18.45	1,250
	Aug. 24, 1947	18.68	1,330
1948	Feb. 27, 1948	23.5 a	2,700 b
	Aug. 10, 1948	18.95	1,420
	Sept. 1, 1948	18.47	1,280
1949	June 1, 1949	20.15	1,820
	June 13, 1949	20.6	1,960
	June 22, 1949	27.66	5,150
	June 27, 1949	32.88	10,300
	July 6, 1949	17.15	1,630
1950	May 4, 1950	19.45	2,510
	May 8, 1950	37.8	14,500
	June 8, 1950	36.7	13,500
	July 12, 1950	26.1	5,860
	Aug. 12, 1950	17.7	1,830
1951	July 3, 1951	20.03	2,840
1952	Oct. 4, 1951	15.68	1,240
	Aug. 8, 1952	18.37	2,200
1953	June 27, 1953	15.82	1,270

a Affected by ice. b About.

06806000 Waubonsie Creek near Bartlett, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1954	May 31, 1954	16.10	1,360
	Aug. 21, 1954	17.9	2,000
	Aug. 23, 1954	21.6	3,560
1955	Sept.29, 1955	17.54	1,860
1956	July 11, 1956	18.07	1,430
	July 15, 1956	26.9	5,200
	Aug. 1, 1956	20.97	2,450
	Aug. 18, 1956	23.85	2,820
1957	June 7, 1957	22.85	2,430
	July 1, 1957	19.98	1,500
1958	July 19, 1958	22.64	2,360
	July 30, 1958	22.57	2,360
1959	May 18, 1959	25.90	3,760
	July 31, 1959	22.42	2,290
	Aug. 28, 1959	20.50	1,640
	Sept.18, 1959	20.43	1,610
1960	Aug. 18, 1960	21.72	2,040
1961	June 27, 1961	21.42	1,940
1962	May 28, 1962	22.67	2,400
1963	Sept.10, 1963	20.07	1,490
1964	May 26, 1964	22.93	2,460
	June 14, 1964	21.09	1,840
	June 16, 1964	20.10	1,540
1965	May 22, 1965	18.05	1,200
	June 29, 1965	21.72	2,770
	July 1, 1965	17.84	1,320
	July 19, 1965	22.96	3,320
1966	June 25, 1966	14.14	369
1967	June 5, 1967	24.14	3,850
	June 7, 1967	19.98	2,080
	June 21, 1967	22.14	2,950
1968	July 31, 1968	13.41	242
1969	Oct. 16, 1968	19.68 c	--
	July 18, 1969	19.42	1,100

Discontinued Sept. 30, 1969

c Backwater from beaver dam.

06807000 Missouri River at Nebraska City, Nebraska

Location.--Lat 40°40'55", long 95°50'48", in NW1/4 NE1/4 sec.9, T.8 N., R.14 E., Oteo County, on right bank 0.7 mi upstream from Waubonsie Hwy. Bridge at Nebraska City, and at mi 562.6.
Drainage area.--410,000 mi², approximately. The 3,959 mi² in Great Divide Basin is not included.
Gage.--Water-stage recorder. Datum of gage is 905.36 ft National Geodetic Vertical Datum of 1929, supplementary adjustment of 1954. Aug.12, 1929, to June 26, 1930, chain gage on railroad bridge, June 27, 1930, to Oct.21, 1931, wire-weight gage, and Oct.22, 1931, to Mar.31, 1963, water-stage recorder, all at site 0.7 mi downstream at datum 1.09 ft lower.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--18 ft.
Remarks.--Flow regulated by upstream main-stem reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1930	May 11, 1930	11.63	95,200
1931	Jan. 5, 1931	11.02	--
	June 24, 1931	10.76	56,200
1932	June 17-19,1932	12.9	138,000
1933	May 29, 1933	12.2	112,000
1934	Mar. 5, 1934	12.4	138,000
1935	Jan. 16, 1935	15.25	--
	June 23,24,1935	13.9	106,000
1936	Mar. 6, 1936	15.25	--
	Mar. 10, 1936	14.05	113,000
1937	June 25, 1937	16.55	111,000
1938	July 12, 1938	17.90	125,000
1939	Apr. 6, 1939	17.15	149,000
1940	June 8, 1940	12.95	69,500
1941	June 19, 1941	17.05	106,000
1942	May 21, 1942	18.40	134,000
1943	Apr. 14, 1943	19.88	181,000

06807000 Missouri River at Nebraska City, Nebraska--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1944	June 14, 1944	19.70	214,000
1945	Feb. 14, 1945	16.85 a	--
	June 17, 1945	16.30	129,000
1946	June 24, 1946	13.7	96,700
1947	July 1,2,1947	20.1	172,000
1948	Feb. 27, 1948	18.65 a	--
	July 29, 1948	17.5	135,000
1949	Mar. 6, 1949	25.8 a	--
	Apr. 13, 1949	20.32	182,000
1950	Apr. 28, 1950	20.95	185,000
1951	Mar. 29, 1951	17.17	163,000
	June 2, 1951	18.52	--
1952	Apr. 18, 1952	27.66 a	--
	Apr. 19, 1952	24.48	414,000
1953	June 27, 1953	15.91	121,000
1954	June 21, 1954	16.83	123,000
1955	Mar. 3, 1955	12.98 a	--
	Mar. 14, 1955	11.60	65,000
1956	Jan. 11, 1956	12.12 a	--
	Mar. 19, 1956	10.4	54,000
1957	June 18, 1957	17.08	116,000
1958	Aug. 6, 1958	13.48	85,000
1959	June 1, 1959	14.92	--
	Aug. 3, 1959	14.80	83,400
1960	Apr. 5, 1960	21.43	178,000
1961	June 15, 1961	11.42	55,600
1962	Mar. 31, 1962	20.65	151,000
1963	June 25, 1963	15.66	92,400
1964	June 17, 1964	17.46	108,000

a Affected by ice.

06807000 Missouri River at Nebraska City, Nebraska--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	May 26, 1965	15.65	94,200
1966	Oct. 1, 1965	14.50	90,100
	Feb. 8, 1966	16.75 a	--
1967	June 17, 1967	22.95	166,000
1968	Jan. 24, 1968	16.22 a	--
	June 26, 1968	13.92	71,000
1969	Feb. 26, 1969	19.32 a	--
	Apr. 13, 1969	18.36	105,000
1970	Jan. 22, 1970	16.06 a	--
	Oct. 7, 1970	12.78	56,600
1971	Feb. 22, 1971	18.45	114,000
	June 12, 1971	18.98	--
1972	Sept.13, 1972	15.82	86,500
1973	May 28, 1973	16.99	86,800
1974	Jan. 12, 1974	18.63 a	--
	May 19, 1974	16.31	86,700
1975	June 24, 1975	15.45	73,600
	Aug. 19, 1975	15.57	--
1976	Nov. 21, 1975	15.36	77,300
1977	Sept. 1, 1977	13.73	64,100
1978	Mar. 22, 1978	22.43	156,000
1979	Mar. 19, 1979	19.93	122,000
1980	June 4, 1980	15.53	74,800
1981	Aug. 7, 1981	13.58	61,200
1982	May 21, 1982	18.57	113,000
1983	July 1, 1983	21.21	121,000
1984	June 15, 1984	24.78	182,000

a Affected by ice.

06807320 West Nishnabotna River at Harlan, Iowa
(Discontinued December 31, 1982)

Location.--Lat 41°38'41", long 95°18'50", in NW1/4 NE1/4 sec.19, T.79 N., R. 38 W, Shelby County, 250 ft downstream from State Highway 44, 1.4 mi downstream from West Fork and 95.6 mi upstream from mouth of Nishnabotna River.
Drainage area.--316 mi².
Gage.--Water-stage recorder. Datum of gage is 1,162 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--
Remarks.--Base for partial-duration series 1,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1978	Nov. 9, 1977	10.47	3,340
	Mar. 21, 1978	18.88	7,790
	May 29, 1978	12.00	2,130
	Sept.13, 1978	26.18	14,500
1979	Mar. 18, 1979	24.03	12,200
	Mar. 23, 1979	14.72	4,040
	Mar. 30, 1979	11.74	2,090
	June 19, 1979	14.66	4,000
	July 30, 1979	16.59 a	5,520
	Sept. 6, 1979	10.60	1,500
1980	June 6, 1980	17.02	5,870
1981	Aug. 2, 1981	11.69	2,060
	June 15, 1980	13.46	3,150
1982	Feb. 20, 1982	20.32	8,490
	Mar. 19, 1982	18.90	7,210
	Aug. 30, 1982	10.81	1,600

Discontinued December 31, 1982

a From high water mark.

06807410 West Nishnabotna River at Hancock, Iowa

Location.--Lat 41°23'24", long 95°22'17", in NE1/4 sec.18, T.76 N, R.39 W., Pottawattamie County, on downstream end of right pier of bridge on county highway G30, 0.6 mi west of Hancock school, 59.6 mi upstream from East Nishnabotna River and at mi 75.1 upstream from mouth of Nishnabotna River.
Drainage area.--609 mi².
Gage.--Water-stage recorder. Datum of gage is 1,085.94 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--8 feet.
Remarks.--Base for partial-duration series, 4,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1960	Mar. 29, 1960	13.64	9,320
	May 6, 1960	12.57	8,120
	Aug. 7, 1960	9.70	4,800
1961	Mar. 14, 1961	10.31	5,430
	June 27, 1961	10.01	4,460
	July 28, 1961	9.69	4,160
1962	Mar. 22, 1962	10.90	6,680
	May 21, 1962	12.10	7,420
	May 26, 1962	11.58	6,800
	May 29, 1962	13.50	9,240
	June 10, 1962	11.18	6,200
1963	Mar. 11, 1963	9.75	4,860
	Mar. 14, 1963	8.98	4,100
1964	Apr. 2, 1964	9.20	4,010
	May 8, 1964	9.55	5,320
	May 26, 1964	14.50	10,500
	June 22, 1964	10.92	6,090
	July 3, 1964	10.10	5,210
	July 7, 1964	9.65	4,700
	July 11, 1964	12.34	7,760
1965	Mar. 1, 1965	20.44 a	18,000 b
	Mar. 17, 1965	15.39	12,000
	Mar. 31, 1965	13.94	13,100
	Apr. 5, 1965	10.91	8,070
	May 26, 1965	11.49	8,940
	Sept. 28, 1965	8.85	5,160

a Affected by ice. b About.

06807410 West Nishnabotna River at Hancock, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1966	June 12, 1966	9.07	4,170
1967	June 7, 1967	11.05	6,260
	June 12, 1967	9.09	4,830
	June 16, 1967	14.16	10,900
	June 19, 1967	8.88	4,620
	June 24, 1967	8.71	4,450
	June 28, 1967	8.58	4,320
1968	June 25, 1968	6.41	2,380
1969	Mar. 18, 1969	15.02	12,600
	Mar. 24, 1969	9.98	5,040
	July 9, 1969	11.38	6,830
1970	Mar. 2, 1970	9.56	4,580
	May 13, 1970	9.89	4,930
1971	Feb. 19, 1971	18.56	17,700
	Mar. 14, 1971	10.98	6,730
	June 6, 1971	10.28	5,610
1972	Feb. 29, 1972	8.81	4,210
	Sept.13, 1972	22.12	26,400
1973	Dec. 30, 1972	9.47	5,070
	Jan. 17, 1973	11.86	7,270
	Feb. 24, 1973	8.63	4,120
	Mar. 1, 1973	9.43	4,920
	May 7, 1973	12.07	7,800
	July 4, 1973	11.90	7,780
	Sept.26, 1973	16.54	14,300
1974	Oct. 11, 1973	9.13	4,730
	May 16, 1974	9.10	4,700
	May 19, 1974	12.81	8,950
1975	Apr. 28, 1975	14.13	10,700
	June 23, 1975	10.42	6,110
	June 25, 1975	10.85	6,580
	Aug. 29, 1975	10.47	6,170
1976	June 13, 1976	12.70	8,810
1977	Sept. 1, 1977	4.70	1,110
1978	Mar. 21, 1978	13.82	10,500
	Apr. 8, 1978	8.57	4,330
	Sept.13, 1978	17.85	16,800

06807410 West Nishnabotna River at Hancock, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1979	Mar. 13, 1979	10.44	6,130
	Mar. 18, 1979	19.54	18,300
	Mar. 23, 1979	9.45	5,000
	July 30, 1979	10.73	6,210
1980	June 6, 1980	11.22	6,630
1981	May 4, 1981	6.75	2,510
	June 15, 1980	14.01	9,880
1982	Feb. 21, 1982	15.84	13,900
	Mar. 19, 1982	13.94	11,200
1983	Feb. 20, 1983	11.70	8,310
1984	Apr. 30, 1984	10.55	6,840
	June 13, 1984	9.57	5,170
	June 15, 1984	14.52	12,000
	June 16, 1984	13.28	10,300

06807470 Indian Creek near Emerson, Iowa

Location.--Lat 41°02', long 95°23', in NW1/4 sec. 19, T.72 N., R.39 W., Montgomery County, at bridge on U.S. Highway 34, 1 mi east of Emerson.
Drainage area.--37.3 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 25, 1966	87.12	b
1967	June 21, 1967	91.16	b
1968	--	a	b
1969	--	a	b
1970	Aug. 3, 1970	85.88	520
1971	--	b	<500
1972	Sept.12, 1972	87.17	630
1973	Jan. 17, 1973	87.39	660
1974	May 30, 1974	85.78	510
1975	Aug. 25, 1975	87.36	660
1976	June 14, 1976	89.52	2,000
1977	Aug. 31, 1977	88.29	820
1978	--	a	b
1979	Mar. 18, 1979	89.35	1,600
1980	June 4, 1980	88.78	1,000
1981	--	a	b
1982	June 15, 1982	92.63	15,800
1983	--	a	<910

a Peak stage did not reach bottom of gage.
b Discharge not determined.

06807470 Indian Creek near Emerson, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	June 15, 1984	87.87	1,310

06807720 Middle Silver Creek near Avoca, Iowa

Location.--Lat 41°28'33", long 95°28'06", near N1/4 corner sec.17, T.77 N., R.40 W., Pottawattamie County, at bridge on State Highway 83, 7 mi west of Avoca.
Drainage area.--3.21 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by step-backwater computations and an indirect measurement at 642 ft³/s.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	--	a	<141
1954	--	a	<141
1955	July 9, 1955	8.73	642
1956	Sept. 5, 1956	5.37	233
1957	June 16, 1957	8.51	629
1958	Aug. 13, 1958	9.36	815
1959	May 2, 1959	8.10	563
1960	May 24, 1960	7.16	429
1961	June 27, 1961	6.83	387
1962	May 20, 1962	7.00	408
1963	June 5, 1963	7.79	516
1964	June 22, 1964	6.39	335
1965	--	a	<141
1966	May 23, 1966	7.33	451
1967	June 15, 1967	9.0	725 d
1968	--	a	<141
1969	July 9, 1969	8.03	553
1970	--	a	<141

a Peak stage did not reach bottom of gage. d About.

06807720 Middle Silver Creek near Avoca, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Feb. 19, 1971	7.42 c	b
1972	--	a	<141
1973	Sept.26, 1973	10.65	1,040
1974	--	a	<141
1975	Aug. 29, 1975	9.13	730
1976	June 14, 1976	11.21	1,200
1977	Aug. 5, 1977	6.49	200
1978	Sept.13, 1978	8.53	550
1979	Mar. 18, 1979	7.52	350
1980	June 6, 1980	6.71	220
1981	May 4, 1981	8.99	680
1982	Feb. 20, 1982	9.35	750
1983	June 14, 1983	6.30	170
1984	Feb. 15, 1984	7.36 c	b
	Apr. 30, 1984	6.03	150

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.

06807760 Middle Silver Creek near Oakland, Iowa

Location.--Lat 41°19'28", long 95°33'19", near E1/4 corner sec.4, T.75 N., R.41 W., Pottawattamie County, at bridge 8.5 mi northwest of Oakland.
Drainage area.--25.7 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 10, 1953	9.53	991
1954	Aug. 22, 1954	8.27	759
1955	July 9, 1955	9.94	1,120
1956	Aug. 17, 1956	7.56	631
1957	June 16, 1957	9.81	1,040
1958	Sept. 5, 1958	12.28	1,450
1959	May 28, 1959	9.24	1,030
1960	May 25, 1960	8.15	898
1961	June 12, 1961	7.15	778
1962	July 13, 1962	5.55	586
1963	June 5, 1963	6.55	706
1964	--	a	<396
1965	June 29, 1965	8.31	917
1966	June 26, 1966	7.79	855
1967	July 15, 1967	11.26	1,300
1968	May 15, 1968	6.79	735
1969	--	7.56	700
1970	--	a	<396

a Peak stage did not reach bottom of gage.

06807760 Middle Silver Creek near Oakland, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	June 6, 1971	10.10	1,120
1972	Sept.11, 1972	8.23	790
1973	July 4, 1973	14.73	2,110
1974	May 19, 1974	5.38	360
1975	Aug. 25, 1975	13.38	1,780
1976	June 14, 1976	14.68	2,100
1977	May 21, 1977	4.59	260
1978	Sept.13, 1978	11.60	1,400
1979	Mar. 18, 1979	11.55	1,400
1980	June 6, 1980	6.64	550
1981	May 4, 1981	7.34	660
1982	Feb. 21, 1982	10.90	1,250
1983	June 14, 1983	9.56	1,020
1984	Apr. 30, 1984	7.39	670

06807780 Middle Silver Creek at Treynor, Iowa

Location.--Lat 41°14'37", long 95°36'53", near NE corner sec.1, T.74 N., R.42 W., Pottawattamie County, at bridge on county road L55, 1 mi north of Treynor.
Drainage area.--42.7 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1953	June 10, 1953	12.28	1,700
1954	June 21, 1954	9.80	1,180
1955	Mar. 2, 1955	10.32	1,280
1956	Aug. 30, 1956	a	b
1957	June 16, 1957	10.01	1,220
1958	Sept. 5, 1958	16.01	2,600
1959	June 28, 1959	11.89	1,620
1960	Aug. 28, 1960	13.84	2,060
1961	Feb. 22, 1961	9.84	1,320
1962	July 27, 1962	9.00	1,020
1963	June 5, 1963	8.26	1,110
1964	June 22, 1964	8.82	1,320
1965	June 29, 1965	9.24	1,390
1966	June 26, 1966	15.82	2,560
1967	June 7, 1967	10.98	1,600
1968	May 15, 1968	5.41	735
1969	July 17, 1969	9.96	1,330
1970	May 12, 1970	6.13	690

a Peak stage did not reach bottom of gage.
b Discharge not determined.

06807780 Middle Silver Creek at Treynor, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	May 10, 1971	7.51	900
1972	Sept.11, 1972	5.59	600
1973	July 4, 1973	17.06	3,700
1974	--	a	<710
1975	Aug. 25, 1975	8.36	1,620
1976	June 14, 1976	13.92	2,850
1977	--	a	<710
1978	Sept.13, 1978	7.01	1,300
1979	Mar. 18, 1979	8.24	1,600
1980	June 6, 1980	11.37	2,300
1981	--	a	<710
1982	Feb. 21, 1982	5.46	950
1983	June 14, 1983	6.40	1,160
1984	Apr. 30, 1984	12.28	2,500

a Peak stage did not reach bottom of gage.

06808000 Mule Creek near Malvern, Iowa
(Discontinued Sept. 30, 1969)

Location.--Lat 40°56'36", long 95°35'42", in NE1/4 NE1/4 sec.19, T.71 N., R.41 W., Mills County, on right bank 170 ft upstream from culvert on county highway L63, 1.8 mi upstream from mouth and 4.3 mi south of Malvern.

Drainage area.--10.6 mi^2.

Gage.--Water-stage recorder. Datum of gage is 974.20 ft National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service). Prior to Oct. 1, 1964, water-stage recorder at site 180 ft downstream. Oct. 1, 1964, to Mar. 25, 1965, nonrecording gage with supplemental water-stage recorder at site 180 feet downstream. Mar. 26 to July 13, 1965, nonrecording gages at various locations.

Stage-discharge relation.--Defined by current-meter measurements below 510 ft^3/s and extended above on basis of slope-area measurement of peak flow.

Remarks.--Base for partial-duration series, 300 ft^3/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1954	Aug. 21, 1954	15.84	2,070 a
	Aug. 23, 1954	14.19	1,680
1955	Mar. 1, 1955	7.51	411
1956	July 11, 1956	7.55	398
	July 15, 1956	15.54	1,990
	Aug. 18, 1956	10.4	867
1957	May 29, 1957	12.58	1,310
	June 7, 1957	9.80	849
	June 15, 1957	6.30	334
	June 17, 1957	7.40	479
	July 1, 1957	8.70	678
1958	July 19, 1958	6.92	334
	July 30, 1958	12.35	1,180
1959	May 2, 1959	6.62	332
	May 18, 1959	11.50	1,180
	May 29, 1959	8.07	549
	Sept.18, 1959	7.57	472

a Maximum during period June to September 1954.

06808000 Mule Creek near Malvern, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1960	Aug. 28, 1960	8.22	565
	Sept.24, 1960	7.30	428
1961	June 27, 1961	8.12	549
1962	May 28, 1962	10.00	886
1963	Sept.10, 1963	6.00	256
1964	May 26, 1964	10.86	1,060
	June 14, 1964	8.57	632
1965	Mar. 1, 1965	10.58	1,000
	May 22, 1965	14.10	1,820
	July 19, 1965	10.25	542
	Sept. 7, 1965	8.39	303
1966	May 15, 1966	5.28	24
1967	June 5, 1967	15.80	1,400
	June 7, 1967	12.25	840
	June 11, 1967	8.72	350
1968	Aug. 16, 1968	4.92	14
1969	July 18, 1969	11.70	745

Discontinued September 30, 1969

06808200 Spring Valley Creek near Tabor, Iowa
(Discontinued Sept. 30, 1964)

Location.--Lat 40°54'35", long 95°36'00", in SW1/4NE1/4 sec.31, T.71 N., R.41 W., Mills Co., on L bank 20' dwnstr from hwy bridge, 1.5 mi upstrm from mouth and 4 mi northeast of Tabor.
Drainage area.--7.65 mi².
Gage.--Recording gage and concrete control. Altitude of gage is 975 ft (from topographic map).
Stage-discharge relation.--Defined by current-meter measurements below 210 ft³/s and above by slope-area measurement.
Remarks.--Base for partial-duration series, 250 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1956	June 11, 8956	8.59	317
	July 15, 1956	13.50	2,310
	Aug. 18, 1956	8.78	359
1957	May 29, 1957	12.07	1,480
	June 7, 1957	10.58	865
	June 17, 1957	8.90	380
	July 1, 1957	10.33	778
1958	July 19, 1958	10.85	935
	July 30, 1958	15.48	4,150
1959	May 18, 1959	12.57	1,730
	May 29, 1959	10.0 a	670
	Aug. 5, 1959	8.40	279
	Sept.18, 1959	8.51	298
1960	Aug. 17, 1960	9.30	473
	Aug. 28, 1960	12.28	1,570
	Sept.24, 1960	8.63	328
1961	June 27, 1961	12.13	1,480
1962	May 28, 1962	11.77	1,300
	May 31, 1962	9.36	486
	June 6, 1962	8.85 a	370 a
1963	Sept.10, 1963	12.13	1,480
1964	May 26, 1964	12.12	1,480
	June 14, 1964	9.55	525
	June 20, 1964	9.66	566
	July 11, 1964	8.55	298

a About.

DISCONTINUED SEPT. 30,1964

06808500 West Nishnabotna River at Randolph, Iowa

Location.--Lat 40°52'23", long 95°34'48", in NE1/4 NE1/4 sec.17, T.70 N., R.41 W., Fremont County, on right bank 30 ft upstream from bridge on State Highway 184, 0.5 mi west of Randolph, and 16.2 mi upstream from East Nishnabotna River.
Drainage area.--1,326 mi².
Gage.--Water-stage recorder. Datum of gage is 932.99 ft National Geodetic Vertical Datum of 1929, unadjusted. Prior to Aug.26, 1955, nonrecording gage and June 30, 1949, to Aug.25, 1955, supplementary water-stage recorder, operating above gage height 8.4 ft at same site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--19 feet.
Remarks.--Base for partial-duration series, 6,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1947	June ??, 1947	24.00 a	b
1949	Mar. 5, 1949	24.6 c	16,000 a
	June 13, 1949	14.2	6,800
1950	Feb. 28, 1950	18.50	20,000
	May 9, 1950	21.93	29,600
	June 9, 1950	16.29	11,300
	June 18, 1950	15.40	9,300
	July 12, 1950	16.17	11,100
	Aug. 12, 1950	16.25	11,100
1951	Apr. 27, 1951	12.95	7,050
	May 1, 1951	21.35	28,200
	May 10, 1951	13.02	7,050
	June 2, 1951	21.66	29,100
	June 7, 1951	16.90	15,600
	June 20, 1961	14.96	11,200
	July 3, 1951	21.77	29,400
	Aug. 15, 1951	13.19	7,450
	Aug. 17, 1951	12.72	6,510
	Aug. 20, 1951	15.86	13,400
1952	June 22, 1952	20.50	25,500
	June 27, 1952	18.37	19,500
	Aug. 29, 1952	18.80	20.600
1953	June 28, 1953	11.77	4,980
1954	Aug. 23, 1954	17.15	13,400

a About. b Discharge not determined. c Affected by ice.

06808500 West Nishnabotna River at Randolph, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)	
1955	Mar. 2, 1955	14.69		10,500	
	July 9, 1955	16.18		13,900	
1956	July 8, 1956	17.8		17,900	
	July 15, 1956	14.06		9,260	
1957	June 16, 1957	17.58		15,600	
1958	Feb. 24, 1958	18.62	c	19,100	a
	July 3, 1958	17.70		16,500	
	July 19, 1958	15.35		8,400	
	July 30, 1958	17.30		14,600	
	Aug. 6, 1958	16.50		11,800	
	Sept. 6, 1958	18.20		17,900	
1959	May 3, 1959	13.15		6,580	
	May 18, 1959	14.43		8,200	
	May 29, 1959	18.13		16,200	
1960	Mar. 30, 1960	19.18		20,600	
	May 6, 1960	14.42		7,570	
	June 30, 1960	14.73		8,200	
	Aug. 7, 1960	14.26		7,360	
	Aug. 29, 1960	17.16		14,500	
	Sept.18, 1960	14.76		8,410	
1961	Mar. 13, 1961	15.56		11,700	
	June 27, 1961	14.36		7,570	
1962	Mar. 22, 1962	14.94		8,830	
	May 23, 1962	14.39		7,570	
	May 29, 1962	21.60		26,600	
	June 11, 1962	15.18		8,620	
1963	Mar. 11, 1963	15.33		12,000	
1964	May 26, 1964	18.76		17,400	
	June 14, 1964	16.72		11,400	
	June 23, 1964	16.30		10,400	
	July 11, 1964	16.23		10,200	
1965	Mar. 1, 1965	22.76	c	28,000	a
	Mar. 17, 1965	19.25		18,400	
	Apr. 1, 1965	15.47		9,900	
	Apr. 5, 1965	15.80		11,000	
	May 22, 1965	15.37		9,670	
	May 25, 1965	15.01		7,860	
	June 29, 1965	18.35		17,900	
	Sept. 7, 1965	15.33		9,580	

a About. c Affected by ice.

06808500 West Nishnabotna River at Randolph, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)	
1966	June 26, 1966	19.38		21,200	
1967	June 5, 1967	19.13		20,400	
	June 8, 1967	20.54		25,600	
	June 10, 1967	20.91		27,000	
	June 12, 1967	17.68		15,900	
	June 16, 1967	18.52		18,500	
	June 21, 1967	22.60		35,500	
	June 25, 1967	14.66		8,120	
1968	June 26, 1968	9.14		944	
1969	Feb. 26, 1969	15.65		10,300	
	Mar. 18, 1969	16.67		12,900	
	July 9, 1969	15.68		10,400	
	July 18, 1969	14.44		7,650	
1970	May 14, 1970	13.31		5,560	
1971	Feb. 19, 1971	19.00		20,000	
	Mar. 12, 1971	14.90		8,620	
	May 11, 1971	14.89		8,600	
	May. 18, 1971	14.32		7,400	
1972	May. 6, 1972	13.87		6,580	
	Sept.14, 1972	21.71		18,500	
1973	Dec. 29, 1973	18.55	c	12,000	a
	Jan. 17, 1973	18.75	c	13,200	
	Feb. 24, 1973	15.39		9,720	
	Mar. 1, 1973	14.35		7,460	
	Mar. 14, 1973	14.30		7,360	
	Apr. 16, 1973	15.27		9,440	
	Apr. 30, 1973	14.02		6,830	
	May 8, 1973	17.72		16,000	
	July 4, 1973	--	d	10,000	a
	Sept.26, 1973	19.79		19,000	
1974	Oct. 11, 1973	16.27		6,850	
	May 19, 1974	16.95		7,590	
1975	Apr. 28, 1975	17.78		12,000	
	June 18, 1975	16.22		8,790	
	June 25, 1975	15.88		8,180	
	Aug. 29, 1975	16.41		7,780	
1976	June 14, 1976	19.90		13.700	

a About c Affected by ice.
d Gage removed for construction of new bridge.

06808500 West Nishnabotna River at Randolph, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1977	Sept. 4, 1977	18.14	10,200
1978	Mar. 21, 1978	c	9,000
	July 22, 1978	19.18	12,100
	Sept.14, 1978	19.46	12,700
	Sept.20, 1978	15.96	6,850
1979	Mar. 13, 1979	10.44	6,130
	Mar. 18, 1979	21.20	17,100
	Mar. 23, 1979	9.45	5,000
	July 30, 1979	10.73	6,210
1980	June 2, 1980	15.82	6,680
	June 4, 1980	19.60	13,000
	June 7, 1980	16.14	7,100
	June 15, 1980	17.71	9,440
1981	May 4, 1981	10.89	1,970
1982	Feb. 21, 1982	18.40	10,700
	Mar. 19, 1982	17.01	8,320
	May 21, 1982	16.80	8,150
	June 15, 1982	23.51	27,600
1983	Feb. 20, 1983	16.45	7,550
	May 19, 1983	17.15	8,540
1984	Apr. 30, 1984	18.11	10,200
	May 25, 1984	16.23	7,260
	June 5, 1984	16.45	7,550
	June 13, 1984	21.55	18,000
	June 15, 1984	22.35	20,900
	June 17, 1984	18.64	11,200

c Affected by ice.

06809000 Davids Creek near Hamlin, Iowa
(Discontinued Sept. 30, 1973)

Location.--Lat 41°40'25", long 94°48'20", in NE1/4 NE1/4 sec.9, T.79, R.34 W., Audubon County, bridge on State Highway 44, 5.2 mi east of Hamlin, and 8 mi upstream from mouth.
Drainage area.--26.0 mi².
Gage.--Water-stage recorder. Datum of gage is 1,266.54 ft NGVD of 1929. Prior to Oct. 1, 1972, at datum 5 ft higher.
Stage-discharge relation.--Defined by current-meter measurements below 500 ft³/s and extended above on basis of slope area measurement of peak flow.
Remarks.--Base for partial-duration series, 400 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	June 21, 1952	10.72	435
	June 27, 1952	12.55	760
	July 7, 1952	10.85	450
	Aug. 15, 1952	13.07	860 a
	Aug. 29, 1952	11.27	526
1953	Feb. 19, 1953	10.55	420
	June 4, 1953	11.18	510
	June 10, 1953	11.46	558
1954	Aug. 23, 1954	8.89	199
1955	Apr. 23, 1955	10.27	378
1956	June 6, 1956	11.34	406
	Aug. 16, 1956	11.31	406
	Sept. 4, 1956	12.41	574
1957	June 16, 1957	14.80	1,160
1958	July 2, 1958	19.35	22,700
	July 3, 1958	14.84	1,190
	July 19, 1958	12.26	625
	Sept. 5, 1958	11.08	425
1959	May 29, 1959	9.66	240
1960	Mar. 29, 1960	12.94 b	900 c
	Aug. 7, 1960	10.70	580
1961	Feb. 22, 1961	10.90	620
	Sept.30, 1961	10.32	510

a Maximum during period June to September 1952.
b Affected by ice. c About.

06809000 Davids Creek near Hamlin, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1962	June 8, 1962	13.62	1,550
	June 19, 1962	10.43	529
1963	May 4, 1963	8.91	322
1964	Apr. 2, 1964	10.22	795
	Apr. 13, 1964	9.82	714
	June 20, 1964	10.59	888
	June 22, 1964	13.54	2,010
1965	Mar. 1, 1965	14.63 b	1,800 c
	Mar. 17, 1965	14.46 b	1,300 c
	Mar. 31, 1965	10.30	928
	Apr. 5, 1965	11.87	1,370
	June 22, 1965	9.51	723
1966	June 12, 1966	14.91	3,020
1967	June 7, 1967	9.54	808
	June 9, 1967	9.24	730
	June 12, 1967	10.96	1,380
1968	Jan. 26, 1968	4.18 b	--
	Apr. 23, 1968	3.28	25
1969	Mar. 17, 1969	12.17 d	1,810
	Mar. 19, 1969	6.83	487
	Mar. 24, 1969	8.19	752
	June 28, 1969	7.42	594
1970	May 14, 1970	9.27	995
1971	Feb. 18, 1971	9.28 b	700 c
	Mar. 13, 1971	7.76	734
	June 6, 1971	6.48	499
1972	Aug. 1, 1972	5.64	520
	Sept.11, 1972	6.04	584

1973	Jan. 17, 1973	--	400 c
	Feb. 28, 1973	11.60	809
	May 7, 1973	10.73	677
	May 27, 1973	9.26	445
	July 2, 1973	9.65	426
	July 4, 1973	11.46	700
	July 9, 1973	9.50	405
	Sept.26, 1973	9.76	441
Discontinued Sept. 30, 1973			

b Affected by ice. c About. d Maximum gage height for year, 12.85 ft Mar. 17, 1969. (backwater from ice).

06809210 East Nishnabotna River near Atlantic, Iowa

Location.--Lat 41°20'37", long 95°04'31", in NW1/4 NW1/4 sec.35, T.76 N., R.67 W., Cass County, on left bank at downstream side of bridge on county highway, 1.9 mi upstream from Turkey Creek, 5.4 mi southwest of Atlantic and 84.6 mi upstream from mouth of Nishnabotna River.
Drainage area.--436 mi².
Gage.--Water-stage recorder. Datum of gage is 1,105.83 ft National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1970, at site 2.0 mi upstream at datum 5.00 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--17 ft.
Remarks.--Base for partial-duration series, 3,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1961	Feb. 22, 1961	13.08	4,120
	Mar. 14, 1961	12.85	3,800
1962	Mar. 23, 1962	12.90	6,270
	May 26, 1962	11.30	3,970
	May 29, 1962	14.34	8,310
	June 10, 1962	12.32	4,980
1963	Mar. 4, 1963	13.58 a	--
	Mar. 11, 1963	11.50	4,090
1964	Apr. 2, 1964	13.24	6,720
	Apr. 13, 1964	12.61	6,270
	May 26, 1964	14.90	8,980
	June 20, 1964	17.10	13,000
	June 22, 1964	18.16	15,200
	July 3, 1964	12.08	4,720
	July 11, 1964	13.40	6,570
1965	Mar. 1, 1965	20.43	20,500
	Mar. 17, 1965	20.10	19,400
	Mar. 31, 1965	14.24	7,810
	Apr. 5, 1965	16.80	12,300
	June 8, 1965	11.54	4,020
1966	June 12, 1966	17.86 b	14,500
1967	June 8, 1967	13.10	5,490
	June 10, 1967	12.00	4,380
	June 12, 1967	14.37	8,100

1967 CONTINUED ON NEXT PAGE

a Affected by ice. b From floodmark.

06809210 East Nishnabotna River near Atlantic, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1967 cont.	June 16, 1967	13.87	7,220
	June 24, 1967	11.70	4,020
	June 28, 1967	13.64	6,940
1968	June 30, 1968	7.20	560
1969	Feb. 27, 1969	14.85 a	7,000 c
	Mar. 17, 1969	17.65	14,100
	Mar. 20, 1969	11.37	4,040
	Mar. 24, 1969	12.61	5,930
	June 28, 1969	12.95	6,030
	July 9, 1969	15.46	9,980
1970	Mar. 2, 1970	16.00	11,000
	May 11, 1970	14.00	7,510
	May 14, 1970	13.90	7,300
1971	Feb. 19, 1971	17.35	15,200
	Mar. 13, 1971	10.48	4,320
	June 6, 1971	9.77	3,590
1972	Aug. 2, 1972	9.42	3,240
	Sept.12, 1972	22.81	26,700
1973	Dec. 30, 1972	--	3,800 c
	Jan. 17, 1973	12.10	6,340
	Feb. 1, 1973	9.43	3,250
	Feb. 24, 1973	9.25	3,070
	Mar. 1, 1973	9.21	3,740
	Mar. 11, 1973	9.15	3,680
	Mar. 31, 1973	10.67	4,540
	Apr. 15, 1973	10.31	4,290
	May 7, 1973	14.63	10,400
	May 28, 1973	10.20	4,160
	July 1, 1973	10.50	4,440
	July 4, 1973	12.21	6,490
	Sept.26, 1973	9.61	3,610
1974	Oct. 11, 1973	11.65	5,720
	May 19, 1974	9.30	3,270
1975	Mar. 21, 1975	11.07	5,720
	Apr. 28, 1975	12.20	6,480
	June 18, 1975	9.85	3,790
	June 25, 1975	11.78	5,890
1976	Mar. 12, 1976	9.06	3,050
	June 14, 1976	12.34	6,680

a Affected by ice.

c About.

06809210 East Nishnabotna River near Atlantic, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1977	Sept. 3, 1977	10.29	4,230
1978	Mar. 20, 1978	12.25	6,440
	Sept.13, 1978	12.00	6,280
1979	Mar. 13, 1979	10.41	4,680
	Mar. 18, 1979	18.42	18,500
1980	June 6, 1980	14.25	9,500
	June 15, 1980	16.50	13,500
1981	June 15, 1981	7.21	1,650
1982	Feb. 20, 1982	12.40	6,730
	Mar. 19, 1982	11.99	10,300
	May 20, 1982	9.15	5,470
	May 26, 1982	10.99	8,620
	Aug. 30, 1982	8.75	4,860
1983	Feb. 19, 1983	9.64	3,580
	May 1, 1983	9.20	3,290
	June 28, 1983	9.13	3,160
1984	Apr. 27, 1984	9.87	4,250
	Apr. 30, 1984	15.42	12,600
	May 25, 1984	9.79	4,170
	June 16, 1984	10.95	5,430

06809500 East Nishnabotna River at Red Oak, Iowa

Location.--Lat 41°00'41", long 95°14'07", in NW1/4 SE1/4 sec.29, T.72 N., R.38 W., Montgomery Co., on left bank on downstream side of Coolbaugh Street bridge in Red Oak, 38.0 mi upstream from West Nishnabotna River and 53.5 mi upstream from mouth of Nishnabotna River.
Drainage area.--894 mi².
Gage.--Water-stage recorder. Datum of gage is 1,005.45 ft National Geodetic Vertical Datum of 1929, unadjusted. Prior to July 5, 1925, nonrecording gage at present site at datum 4.60 ft higher. May 29, 1936, to Nov. 13, 1952, nonrecording gage with supplementary water-stage recorder in operation above 3.2 ft gage height, July 30, 1939 to June 13, 1966, water-stage recorder, all at site 0.5 mi upstream at datum 5.00 ft higher. June 14, 1966 to Sept. 30, 1969, at present site at datum 5.00 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--18 ft.
Remarks.--Base for partial-duration series, 4,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1917	June 7, 1917	21.7	23,500
1918	May 29, 1918	13.6	3,740
1919	June 13, 1919	13.1	3,300
1920	Apr. 21, 1920	12.6	2,920
1921	Sept.21, 1921	12.4	2,800
1922	Sept. 2, 1922	13.6	3,740
1923	Sept.29, 1923	12.2	2,700
1924	June 9, 1924	16.5	6,800
	June 26, 1924	18.2	10,000
1925	June 25, 1925	10.00	1,850
----	----------	----	----
1936	Sept.16, 1936	14.8	3,800
1937	Feb. 19, 1937	15.7	4,800
	Mar. 4, 1937	18.6	9,600
1938	Sept.14, 1938	14.9	3,810

06809500 East Nishnabotna River at Red Oak, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1939	Aug. 12, 1939	18.2	9,070
1940	Aug. 13, 1940	15.83	5,000
1941	June 4, 1941	15.5	4,580
	June 10, 1941	15.4	4,550
1942	May 12. 1942	15.9	5,100
	June 29, 1942	16.1	5,300
	July 20, 1942	18.4	8,100
1943	Feb. 4, 1943	17.9	8,610
	May 16, 1943	16.8	6,810
1944	May 22, 1944	17.7	8,200
	June 14, 1944	16.0	5,900
	Aug. 2, 1944	17.9	8,500
1945	Mar. 11, 1945	15.5	5,400
	Apr. 24, 1945	16.5	6,400
	May 15, 1945	17.6	8,000
	May 23, 1945	20.5	16,100
	May 28, 1945	15.8	8,000
	June 1, 1945	17.0	9,800
	June 7, 1945	17.2	10,100
	June 16, 1945	14.5	6,300
1946	Jan. 6, 1946	16.4 a	6,400 b
	Feb. 6, 1946	18.2	12,000
	Mar. 6, 1946	13.5	5,350
	Mar. 13, 1946	12.9	4,850
	May 3, 1946	12.6	4,600
	June 18, 1946	14.3	6,090
	Aug. 26, 1946	18.2	12,000
1947	Oct. 18, 1946	14.3	6,800
	Apr. 11, 1947	16.1	8,900
	May 15, 1947	12.5	5,150
	June 2, 1947	19.0	13,900
	June 5, 1947	18.7	13,400
	June 13, 1947	23.2	36,200
	June 18, 1947	12.1	7,100
	June 23, 1947	19.6	15,800
1948	Feb. 28, 1948	15.8	12,400
	Mar. 19, 1948	18.9	18,400
	July 21, 1948	12.0	7,000
	July 28, 1948	10.3	5,200

a Affected by ice. b About.

06809500 East Nishnabotna River at Red Oak, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1949	Mar. 5, 1949	17.7	15,800
	Mar. 22, 1949	9.8	4,720
	June 2, 1949	9.6	4,540
	July 20, 1949	9.8	4,720
1950	Feb. 9, 1950	10.5	6,550
	Feb. 28, 1950	11.8	8,580
	May 9, 1950	11.2	7,620
	June 18, 1950	11.4	7,940
1951	Mar. 29, 1951	14.31	10,700
	Apr. 25, 1951	9.55	4,850
	May 1, 1951	16.97	15,200
	June 2, 1951	14.1	10,400
	June 8, 1951	13.7	9,920
	July 3, 1951	14.9	11,600
	Aug. 20, 1951	10.9	6,190
1952	Mar. 11, 1952	10.56	5,860
	Mar. 31, 1952	11.58	7,020
	June 22, 1952	15.53	12,600
	June 27, 1952	13.54	9,500
	July 3, 1952	9.95	5,250
	July 7, 1952	11.28	6,660
	Aug. 15, 1952	10.22	5,450
	Aug. 29, 1952	12.58	8,280
1953	June 10, 1953	7.77	3,250
1954	Aug. 23, 1954	14.08	10,400
1955	Mar. 3, 1955	13.58	9,640
	Apr. 24, 1955	10.19	5,450
1956	Sept. 5, 1956	12.57	7,630
1957	May 30, 1957	11.35	6,780
	June 17, 1957	15.12	11,800
1958	Feb. 24, 1958	12.17 a	7,710 b
	July 3, 1958	22.27	35,600
	July 19, 1958	13.20	9,700
	Aug. 1, 1958	10.30	5,960
	Sept. 7, 1958	18.58	19,900
1959	Feb. 27, 1959	9.25 a	4,800 b
	May 3, 1959	10.35	6,080
	May 29, 1959	15.14	12,700

a Affected by ice. b About.

06809500 East Nishnabotna River at Red Oak, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1960	Mar. 30, 1960	16.40	15,100
	May 25, 1960	9.25	5,000
1961	Feb. 23, 1961	10.88	6,880
	Mar. 15, 1961	12.25	8,510
1962	Mar. 23, 1962	12.00	9,460
	May 29, 1962	15.28	13,000
	June 9, 1962	11.61	7,730
1963	Mar. 11, 1963	10.90	8,920
1964	Apr. 2, 1964	10.87	10,700
	Apr. 13, 1964	10.38	9,700
	May 26, 1964	14.43	11,600
	June 20, 1964	15.00	13,200
	June 23, 1964	15.96	14,300
	July 3, 1964	9.33	5,000
	July 11, 1964	12.77	9,320
1965	Mar. 2, 1965	19.40	22,200
	Mar. 17, 1965	17.01	16,300
	Apr. 1, 1965	11.94	8.170
	Apr. 5, 1965	14.96	12,400
	June 29, 1965	11.42	7,500
1966	June 12, 1966	15.56	15,100
	June 26, 1966	9.24	6,040
1967	June 9, 1967	14.02	12,300
	June 12, 1967	13.71	11,900
	June 16, 1967	14.05	12,400
	June 21, 1967	11.35	8,600
	June 24, 1967	9.30	6,140
	June 28, 1967	8.90	5,700
1968	May 16, 1968	1.29	355
1969	Feb. 27, 1969	11.22	8,830
	Mar. 18, 1969	14.48	13,700
	Mar. 20, 1969	7.75	4,890
	Mar. 25, 1969	8.65	5,810
	June 29, 1969	10.40	6,730
	July 9, 1969	12.25	9,020
1970	Mar. 2, 1970	18.59	11,700
	May 12, 1970	15.84	8,790
	May 14, 1970	17.59	11,400

06809500 East Nishnabotna River at Red Oak, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1971	Feb. 19, 1971	20.76	17,000
	Mar. 14, 1971	13.94	6,830
	June 6, 1971	13.92	6,810
1972	Sept.13, 1972	27.43	38,000
1973	Dec. 30, 1972	15.47	7,810
	Jan. 17, 1973	17.73	10,900
	Feb. 2, 1973	14.35	6,500
	Mar. 1, 1973	12.72	4,810
	Mar. 14, 1973	13.25	5,310
	Mar. 31, 1973	14.50	6,660
	Apr. 16, 1973	14.37	6,520
	May 8, 1973	19.20	14,500
	May 28, 1973	13.40	6,240
	July 4, 1973	15.49	8,740
	Sept.26, 1973	13.08	5,460
1974	Oct. 11, 1973	15.28	8,460
	Mar. 3, 1974	12.08	4,600
1975	Mar. 21, 1975	15.00	7,600
	Mar. 28, 1975	12.40	4,730
	Apr. 28, 1975	15.84	8,610
	June 19, 1975	12.72	5,050
	June 25, 1975	14.19	6,630
1976	June 14, 1976	18.78	12,800
1977	Aug. 28, 1977	14.35	6,820
	Aug. 31, 1977	13.55	5,900
	Sept. 2, 1977	13.33	5,660
1978	Mar. 21, 1978	16.34	9,280
	Apr. 18, 1978	13.82	6,270
	Sept.14, 1978	15.70	8,440
1979	Mar. 13, 1979	15.34	8,010
	Mar. 19, 1979	21.20	16,900
	Mar. 23, 1979	12.78	5,110
	Mar. 29, 1979	12.17	4,500
	June 27, 1979	14.83	7,400
1980	June 4, 1980	13.43	5,750
	June 6, 1980	18.44	12,300
	June 15, 1980	19.60	14,200

06809500 East Nishnabotna River at Red Oak, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1981	June 16, 1981	8.48	1,710
1982	Feb. 20, 1982	19.94 a	--
	Feb. 21, 1982	19.22	13,600
	Mar. 19, 1982	16.50	9,530
	May 26, 1982	14.74	7,290
	June 15, 1982	18.86	13,000
1983	Dec. 28, 1982	12.24	4,510
	Feb. 20, 1983	13.71	6,060
	May 2, 1983	12.91	5,190
1984	Apr. 27, 1984	15.06	7,680
	Apr. 30, 1984	20.11	15,000
	May 25, 1984	14.63	7,150
	June 8, 1984	13.08	5,370
	June 13, 1984	13.70	6,050
	June 15, 1984	18.28	12,100
	June 16, 1984	16.61	9,680

a Affected by ice.

06810000 Nishnabotna River above Hamburg, Iowa

Location.--Lat 40°37'57", long 95°37'32", in SW1/4 SE1/4 sec.11, T.67 N., R.42 W., Fremont County, on left bank 2 mi northeast of Hamburg, 1.6 mi downstream from confluence of East and West Nishnabotna Rivers and at mi 13.2.
Drainage area.--2,806 mi².
Gage.--Water-stage recorder. Datum of gage is 894.17 ft National Geodetic Vertical Datum of 1929. Prior to Oct.1, 1923, chain gage at site 6 mi downstream at different datum. Oct.5, 1928, to Sept.6, 1929, chain gage at site 1,000 ft upstream at datum 0.42 ft higher. Sept.7, 1929, to Feb.11, 1935, chain gage and Feb.12, 1935, to June 5, 1947, wire-weight gage, at present site and datum. June 6 to July 22, 1947, staff gage at site 1,000 ft upstream at different datum. July 23, 1947, to Nov.16, 1950, staff gage at present site and datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--16 feet.
Remarks.--Base for partial-duration series, 9,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1917	June 7, 1917	21.00	--
1922	Apr. 12, 1922	16.7	11,800
1923	Mar. 27, 1923	16.00	8,800
1929	Mar. 13, 1929	22.3	21,100
	July 6, 1929	18.2	9,500
	July 15, 1929	19.10	11,100
1930	Feb. 8, 1930	13.8 a	3,020 b
1931	June 22, 1931	18.1	9,350
1932	Nov. 25, 1931	19.1	11,100
	Aug. 16, 1932	19.1	10,300
1933	Jan. 22, 1933	17.1	8,020
1934	June 9, 1934	14.6	5,620
1935	June 26, 1935	17.5	8,500
1936	Mar. 5, 1936	22.2	20,600
1937	Mar. 5, 1937	21.6	16,500

a Affected by ice. b About.

06810000 Nishnabotna River above Hamburg, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1938	Aug. 28, 1938	17.9	9,060
	Sept.14, 1938	18.2	9,650
1939	Mar. 12, 1939	23.0 a	22,100 b
	Aug. 11, 1939	17.9	9,060
1940	Aug. 8, 1940	18.4	9,800
	Aug. 12, 1940	18.9	10,700
	Aug. 14, 1940	18.2	9,500
	Aug. 17, 1940	18.4	9,800
1941	June 9, 1941	20.4	14,600
	Sept.15, 1941	19.1	11,100
1942	Oct. 22, 1941	18.8	10,500
	June 20, 1942	19.2	11,700
	June 25, 1942	19.2	11,400
1943	May 16, 1943	19.1	11,100
	June 3, 1943	18.6	10,100
	June 5, 1943	18.6	10,100
	Aug. 3, 1943	18.9	10,700
1944	May 26, 1944	17.9	9,060
	June 4, 1944	19.5	11,600
	June 9, 1944	18.8	9,200
	June 15, 1944	20.8	11,800
1945	Mar. 11, 1945	18.6 a	9,350 b
	Apr. 23, 1945	18.8	10,500
	May 15, 1945	18.4	9,800
	May 23, 1945	22.6	21,000
	June 3, 1945	18.0	9,200
1946	Feb. 6, 1946	18.9	10,700
	June 18, 1946	19.1	11,100
	Sept. 4, 1946	19.7	11,300
1947	Apr. 10, 1947	19.5	9,800
	June 2, 1947	19.80	11,200
	June 6, 1947	23.0	28,700
	June 14, 1947	25.7	52,100
	June 24, 1947	26.03 c	55,500
1948	Feb. 28, 1948	21.5	17,600
	Mar. 20, 1948	24.5	36,300

a Affected by ice. b About.
c From floodmark, present site and datum.

06810000 Nishnabotna River above Hamburg, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1949	Mar. 7, 1949	25.9	32,200
	June 2, 1949	19.2	12,000
	June 28, 1949	18.5	9,950
1950	Feb. 9, 1950	18.4	10,500
	May 10, 1950	22.5	19,900
	June 19, 1950	18.4	10,500
	Aug. 12, 1950	19.2	12,000
1951	Mar. 29, 1951	21.46	16,200
	May 2, 1951	24.51	23,800
	June 3, 1951	24.32	23,200
	June 8, 1951	21.0	14,500
	June 20, 1951	17.9	9,170
	July 4, 1951	21.89	16,600
1952	Mar. 13, 1952	18.2	10,700
	June 23, 1952	20.92	12,800
	June 28, 1952	20.6	12,300
	Aug. 29, 1952	20.20	11,800
1953	June 9, 1953	14.65	5,440
1954	Aug. 23, 1954	21.32	12,600
1955	Apr. 24, 1955	18.8	12,000
	July 9, 1955	18.64	10,600
1956	July 8, 1956	20.90	13,500
	Sept. 6, 1965	18.38	9,760
1957	June 7, 1957	18.90	13,400
	June 16, 1957	21.59	20,400
1958	July 6, 1958	22.75	14,600
	July 19, 1958	19.45	10,000
	July 30, 1058	20.43	11,300
	Aug. 6, 1958	20.53	11,400
	Sept. 6, 1958	20.55	10,300
1959	May 19, 1959	17.90	9,640
	May 29, 1959	21.70	15,400
1960	Mar. 31, 1960	24.56	23,900
1961	Feb. 23, 1961	18.30	9,240
	Mar. 13, 1961	21.33	14,400
	Mar. 15, 1961	20.35	12,600

06810000 Nishnabotna River above Hamburg, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1962	Mar. 23, 1962	21.60	16,200
	May 29, 1962	23.62	18,000
	June 9, 1962	19.05	9,500
1963	Mar. 12, 1963	22.02	15,600
1964	May 26, 1964	23.32	19,900
	June 20, 1964	22.02	16,200
	June 23, 1964	22.72	17,300
	July 11, 1964	21.80	15,400
1965	Mar. 2, 1965	24.83	24,700
	Mar. 17, 1965	24.20	22,600
	Apr. 1, 1965	18.90	10,100
	Apr. 5, 1965	21.45	14,800
	May 22, 1965	20.69	13,200
	June 29, 1965	22.30	17,000
	July 19, 1965	20.05	11,300
1966	June 13, 1966	18.70	9,330
	June 26, 1966	--	16,000 b
1967	June 10, 1967	24.53 d	20,000 b
	June 12, 1967	24.47 d	19,000 b
	June 16, 1967	23.40 d	12,500 b
	June 21, 1967	24.17 d	12,000 b
1968	June 27, 1968	8.85	798
1969	Mar. 18, 1969	24.19	19,700
	July 10, 1969	21.07	12,300
	July 18, 1969	23.23	17,100
1970	Mar. 3, 1970	20.05	10,300
	May 14, 1970	19.12	10,400
1971	Feb. 19, 1971	26.25	--
	Feb. 20, 1971	--	25,000 b
	Mar. 14, 1971	18.64	9,700
1972	Sept.15, 1972	27.42	25,200
1973	Dec. 30, 1972	22.19	16,700
	Jan. 18, 1973	24.3 a	16,000 b
	Feb. 1, 1973	19.80	11,500
	Feb. 24, 1973	19.72	10,000
	Mar. 15, 1973	18.98	9,250

1973 CONTINUED ON NEXT PAGE

a Affected by ice. b About. d Backwater from Missouri River.

06810000 Nishnabotna River above Hamburg, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973 cont.	Apr. 1, 1973	20.62	11,400
	Apr. 17, 1973	20.75	11,600
	May 8, 1973	23.38	16,900
	May 28, 1973	19.92	10,300
	July 4, 1973	24.39	17,300
	Sept.27, 1973	23.45	17,900
1974	Oct. 12, 1973	23.07	16,300
1975	Mar. 21, 1975	18.99	12,600
	Apr. 28, 1975	21.63	13,300
	June 25, 1975	20.75	11,600
1976	June 14, 1976	25.70	21,400
1977	Aug. 31, 1977	23.16	12,000
	Sept. 4, 1977	23.24	12,200
1978	Mar. 21, 1978	24.98	17,700
	Apr. 17, 1978	22.98	15,000
	July 22, 1978	24.72	19,300
	Sept.15, 1978	25.17	20,500
1979	Mar 3, 1979	--	16,000
	Mar. 7, 1979	27.46	--
	Mar. 13, 1979	22.43	13,900
	Mar. 19, 1979	--	23,000
	July 24, 1979	22.43	13,900
1980	June 4, 1980	24.93	19,800
	June 7, 1980	--	15,000
	June 15, 1980	23.20 e	15,500
1981	July 9, 1981	13.29	3,190
1982	Feb. 22, 1982	23.17	17,000
	Apr. 16, 1982	20.63	10,800
	May 21, 1982	21.37	11,800
	June 15, 1982	27.25	29,100
	Aug. 15, 1982	20.73	10,700
1983	Feb. 15, 1983	18.98	9,350
	Feb. 20, 1983	20.88	12,700
	June 18, 1983	19.78	9,040
	June 30, 1983	20.81	10,800

e From highwater mark.

06810000 Nishnabotna River above Hamburg, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	Apr. 27, 1984	21.13	11,400
	Apr. 30, 1984	25.65	21,800
	Mar. 26, 1984	22.29	13,600
	June 5, 1984	20.96	11,000
	June 8, 1984	20.46	10,200
	June 9, 1984	23.71	16,700
	June 13, 1984	27.08	21,900
	June 16, 1984	27.90	24,300

06811760 Tarkio River near Elliot, Iowa

Location.--Lat 41°06', long 95°06', NE1/4 sec.28, T.73 N., R.37 W., Montgomery County, at bridge, 4.5 mi southeast of Elliot.
Drainage area.--10.7 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter and indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)	
1952	June 22, 1952	11.88	1,200	
1953	--	a	<180	e
1954	--	a	<180	e
1955	Mar. 2, 1955	8.88	630	e
1956	July 7, 1956	6.19	250	e
1957	May 29, 1957	5.16	135	e
1958	Aug. 28, 1958	11.48	1,150	e
1959	May ??, 1959	c	b	
1960	June 30, 1960	10.33	1,060	
1961	Feb. 27, 1961	5.95	230	
1962	May 28, 1962	11.68	1,490	
1963	Mar. 11, 1963	6.59	307	
1964	May 26, 1964	9.79	922	
1965	Apr. 5, 1965	8.26	584	
1966	June 26, 1966	7.51	443	
1967	June 7, 1967	9.38	825	

a Peak stage did not reach bottom of gage.
b Discharge not determined.
c Gage removed during bridge construction.
e Discharges revised from those previously published.

06811760 Tarkio River near Elliot, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	--	a	<205
1969	--	a	<205
1970	Aug. 3, 1970	6.84	350
1971	--	a	<205
1972	Sept.11, 1972	10.21	1,000 e
1973	Feb. 1, 1973	7.53	430
1974	--	a	<205
1975	Mar. 19, 1975	6.66 d	b
1976	June 14, 1976	13.28	2,300
1977	Aug. 27, 1977	11.59	1,400
1978	May 27, 1978	10.33	1,020
1979	Mar. 29, 1979	11.40	1,350
1980	June 2, 1980	10.28	1,000
1981	--	a	<205
1982	June 15, 1982	13.57	2,500
1983	June 28, 1983	6.23	280
1984	June 9, 1984	8.51	610

a Peak stage did not reach bottom of gage.
b Discharge not determined. d Affected by ice.
e Discharge revised from that previously published.

06811800 East Tarkio Creek near Stanton, Iowa

Location.--Lat 41°05', long 95°06', in W1/2 sec.34, T.73 N., R.37 W., Montgomery County, at bridge, 7 mi north of Stanton.
Drainage area.--4.66 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)	
1952	June 22, 1952	6.49	234	
1953	June 9, 1953	5.26	136	
1954	Aug. 23, 1954	5.41	146	
1955	Mar. 2, 1955	7.21	313	
1956	July 7, 1956	7.56	357	
1957	May 15, 1957	6.07	196	
1958	Aug. 28, 1958	12.21	1,960	
1959	May 19, 1959	9.08	588	
1960	June 30, 1960	11.94	1,750	
1961	--	a	<232	c
1962	May 28, 1962	8.81	542	
1963	--	a	<232	c
1964	June 22, 1964	9.62	695	
1965	June 8, 1965	9.41	652	
1966	June 26, 1966	9.65	702	
1967	June 9, 1967	13.74	4,790	
1968	--	a	<232	c
1969	June 26, 1969	7.68	372	

a Peak stage did not reach bottom of gage.
c Discharges revised from those previously published.

06811800 East Tarkio Creek near Stanton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	--	a	<232 c
1971	--	a	<232 c
1972	Sept. 11, 1972	11.03	1,300
1973	Feb. 1, 1973	8.54	520
1974	--	a	<232
1975	June 25, 1975	10.60	1,080
1976	June 14, 1976	11.11	1,350
1977	Aug. 27, 1977	11.61	1,600
1978	--	a	<232
1979	Mar. 29, 1979	8.93	600
1980	--	a	<232
1981	--	a	<232
1982	June 15, 1982	12.82	2,600
1983	--	a	<232
1984	--	a	<232

a Peak stage did not reach bottom of gage.
b Discharge not determined.
c Discharges revised from those previously published.

06811820 Tarkio River tributary near Stanton, Iowa

Location.--Lat 41°03', long 95°06', NE 1/4 sec.16, T.72 N., R.37 W., Montgomery County, at box culvert 4 mi north of Stanton.
Drainage area.--0.67 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by step-backwater computations and by indirect measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	June 2, 1952	4.51	248
1953	--	a	<97
1954	June 21, 1954	3.35	128
1955	Mar. 2, 1955	3.82	166
1956	July 15, 1956	4.88	318
1957	May 15, 1957	3.54	142
1958	Aug. 28, 1958	4.86	313
1959	May 28, 1959	3.97	179
1960	June 30, 1960	4.62	266
1961	Mar. 12, 1961	3.40	132
1962	May 28, 1962	3.73	158
1963	Mar. 4, 1963	2.90	99
1964	May 24, 1964	3.99	181
1965	June 8, 1965	3.28	124
1966	June 26, 1966	a	<60
1967	June 9, 1967	5.18	835
1968	--	a	<60
1969	--	a	<60

a Peak stage did not reach bottom of gage.

06811820 Tarkio River tributary near Stanton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1970	--	a	<60
1971	--	a	<60
1972	Sept. 11, 1972	2.64	150 d
1973	Feb. 1, 1973	2.36	125 d
1974	--	a	<60
1975	Mar. 14, 1975	2.50 c	<60
1976	--	a	<60
1977	--	a	<60
1978	--	a	<60
1979	--	a	<60
1980	--	2.05	105
1981	--	a	<60
1982	--	a	<60
1983	June 28, 1983	2.25	115 d
1984	--	a	<60

a Peak stage did not reach bottom of gage.
b Discharge not determined. c Affected by ice.
d Discharges revised from those previously published.

06811840 Tarkio River at Stanton, Iowa

Location.--Lat 40°58'52", long 95°06'32", in NW1/4 SW1/4 sec.4, T.71 N., R.37 W., Montgomery County, on right bank 10 ft downstream from bridge on county highway, 0.1 mi downstream from Little Tarkio Creek, and 0.5 mi west of Stanton.
Drainage area.--49.3 mi^2.
Gage.--Water-stage recorder and concrete control. Datum of gage is 1,104.67 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements below 1,600 ft^3/s and above by slope-area measurement.
Remarks.--Only annual peaks are shown prior to 1958. Base for partial-duration series, 1,500 ft^3/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1952	June 22, 1952	15.68	3,720
1953	--	a	--
1954	Aug. 23, 1954	10.23	250
1955	Mar. 2, 1955	13.44	1,820
1956	July 16, 1956	15.37	3,380
1957	--	a	--
1958	July 3, 1958	14.26	2,400
	July 30, 1958	14.74	2,750
	Aug. 6, 1958	13.84	2,010
1959	May 19, 1959	13.12	1,580
	May 29, 1959	14.13	2,300
1960	Mar. 28, 1960	14.53	2,640
	June 30, 1960	16.23	4,240
	Aug. 28, 1960	13.79	2,070
	Sept.18, 1960	16.61	4,650
	Sept.24, 1960	13.81	2,070
1961	Mar. 27, 1961	13.70	2,000
1962	May 29, 1962	14.65	2,730
1963	Mar. 11, 1963	12.37	1,140

a Unknown.

06811840 Tarkio River at Stanton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	Apr. 26, 1964	13.41	1,790
	May 26, 1964	16.83	4,780
	June 14, 1964	13.27	1,720
	June 19, 1964	16.78	4,730
	June 22, 1964	18.66	6,790
	July 11, 1964	14.88	3,000
1965	Mar. 17, 1965	15.42	3,150
	Apr. 5, 1965	14.18	2,290
	May 22, 1956	13.89	2,090
	June 8, 1965	18.70	6,840
	June 29, 1965	14.45	2,480
1966	June 26, 1966	14.96	2,830
	July 15, 1966	13.27	1,690
1967	June 7, 1967	15.56	3,530
	June 9, 1967	28.56	22,500
	June 12, 1967	18.06	6,070
	June 21, 1967	21.21	9,990
	June 27, 1967	12.98	2,070
1968	May 13, 1968	9.78	173
1969	June 26, 1969	14.74	2,610
	June 28, 1969	16.35	3,900
1970	Apr. 11, 1970	13.17	1,690
1971	June 7, 1971	13.11	1,640
1972	June 19, 1972	12.98	1,570
	Sept.12, 1972	16.46	4,440
1973	Feb. 1, 1973	14.20	2,410
	May 7, 1973	14.64	2,750
1974	Oct. 11, 1974	12.61	1,470
1975	Mar. 17, 1975	13.56 b	1,500 c
	June 25, 1975	12.84	1,600
1976	June 14, 1976	20.19	8,650
1977	Aug. 27, 1977	16.34	4,240
	Aug. 31, 1977	18.47	7,020
	Sept. 2, 1977	16.26	4,160
	Sept.17, 1977	14.46	2,670

b Affected by ice. c About.

06811840 Tarkio River at Stanton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1978	Nov. 9, 1977	14.62	2,790
	Apr. 17, 1978	15.57	3,520
	July 22, 1978	13.26	1,930
1979	Mar. 3, 1979	14.40	2,300
	Mar. 18, 1979	13.65	1,800
1980	June 2, 1980	14.53	2,630
	June r, 1980	15.76	3,730
	Sept. 5, 1980	13.47	1,820
1981	July 19, 1981	10.60	252
1982	Feb. 20, 1982	13.25	1,770
	Mar. 19, 1982	13.12	1,680
	Apr. 16, 1982	16.49	4,410
	May 4, 1982	18.34	6,380
	May 21, 1982	13.33	1,730
	June 8, 1982	14.45	2,560
	June 15, 1982	21.23	10,100
1983	June 29, 1983	15.23	3,250
1984	May 19, 1984	13.70	1,980
	May 25, 1984	14.51	2,610
	June 5, 1984	13.42	1,790
	June 9, 1984	15.65	3,620
	June 15, 1984	14.73	2,800

06811875 Snake Creek near Yorktown, Iowa

Location.--Lat 40°45', long 95°08', in NW1/4 sec.32, T.69 N., R.37 W., Page County, at bridge on State Highway 2, 1.5 mi northeast of Yorktown.
Drainage area.--9.10 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	May 15, 1966	93.87	1,400
1967	June 21, 1967	91.38	750
1968	--	a	<510
1969	July 17, 1969	91.03	670
1970	--	a	<510
1971	--	a	<510
1972	--	a	<510
1973	Feb. 1, 1973	93.70	1,350
1974	June 9, 1974	94.00	1,450
1975	June 18, 1975	92.32	970
1976	May 22, 1976	91.01	670
1977	Aug. 28, 1977	94.83	1,700
1978	July 21, 1978	94.73	1,660
1979	Mar. 3, 1979	94.10	1,500
1980	--	a	<510
1981	--	a	<510
1982	Aug. 29, 1982	94.63	1,600

a Peak stage did not reach bottom of gage.

Snake Creek near Yorktown, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	June 28, 1983	91.88	880
1984	June 15, 1984	92.85	1,100

06812000 Tarkio River at Blanchard, Iowa
(Discontinued June 30, 1940)

Location.--Lat 40°35'40", long 95°13'25", on line between SE1/4 sec.20 and NE1/4 sec.29, T.67 N., R.38 W., Page County, at bridge on State Highway 333, 1 mi north of Blanchard and 8.2 mi downstream from Snake Creek.
Drainage area.--200 mi², approximately.
Gage.--Recording. Datum of gage is 940.32 feet National Geodetic Vertical Datum of 1929. Prior to Mar. 5, 1940, at 5.00 ft higher datum.
Stage-discharge relation.--Defined by current-meter measurements below 3,200 ft³/s and by slope-area measurement at 9,980 ft³/s.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1934	Sept.26, 1934	--	182 a
1935	May 31, 1935	9.10	1,920
1936	Apr. 28, 1936	12.7	4,330
1937	May 21, 1937	12.16	5,620
1938	Aug. 20, 1938	10.12	4,240
1939	Mar. 12, 1939	18.12	9,980
1940	Apr. 29, 1940	--	168 b
Discontinued June 30, 1940			

a Maximum for period Mar. 13 to Sept. 30, 1934.
b Maximum for period Oct. 1, 1939, to June 30, 1940.

06813500 Missouri River at Rulo, Nebraska

Location.--Lat 40°03'14", long 95°25'12", in NW1/4 NW1/4 sec.17, T.1 N., R.18 E., Richardson County, on downstream end of middle pier of bridge on U.S. Highway 159 at Rulo, 3.2 mi upstream from Nemaha River, and at mi 498.0.
Drainage area.--414,900 mi², approximately. The 3,959 mi² in Great Divide Basin is not included.
Gage.--Water-stage recorder. Datum of gage is 837.23 ft National Geodetic Vertical Datum of 1929. Prior to Sept. 13, 1950, nonrecording gage at site 80 ft upstream at same datum.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--17 ft.
Remarks.--Flow regulated by upstream main-stem reservoirs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1881	--	22.90 a	--
1950	Apr. 29, 1950	--	185,000
	Apr. 30, 1950	21.6	--
1951	May 2, 1951	20.9	--
	June 3, 1951	--	175,000
1952	Apr. 22, 1952	25.60	358,000
1953	June 28, 1953	17.47	117,000
1954	June 22, 1954	17.18	122,000
1955	Feb. 19, 1955	17.99 b	--
	Mar. 14, 1955	--	59,500
1956	Aug. 19, 1956	12.2	54,000
1957	June 18, 1957	18.71	117,000
1958	July 11, 1958	17.4 c	99,000
1959	May 30, 1959	16.62	109,000
1960	Apr. 6, 1960	22.36	181,000
1961	Sept.13, 1961	14.10	80,100
1962	Apr. 1, 1962	19.58	142,000

a From floodmark. b Affected by ice.
c Backwater from Nemaha River.

06813500 Missouri River at Rulo, Nebraska--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)		Discharge (ft^3/s)
1963	June 26, 1963	15.24		102,000
1964	June 17, 1964	17.18		116,000
1965	Mar. 1, 1965	17.10		118,000
	June 30, 1965	19.52		--
1966	Feb. 8, 1966	16.30	b	--
	Oct. 1, 1966	14.86		88,900
1967	June 18, 1967	22.41		151,000
1968	Jan. 27, 1968	15.97	b	--
	June 27, 1968	13.03		68,500
1969	Feb. 26, 1969	20.55	b	--
	Apr. 14, 1969	17.45		109,000
1970	Jan. 28, 1970	14.97	b	--
	Aug. 4, 1970	13.17		60,500
1971	Mar. 15, 1971	16.28		131,000
	June 13, 1971	18.05		--
1972	Sept.13, 1972	17.84		94,200
1973	Dec. 29, 1972	20.74	b	--
	Apr. 1, 1973	19.69		120,000
1974	Oct. 12, 1973	23.41	c	125,000
1975	Sept. 4, 1975	16.69		86,600
1976	Nov. 22, 1975	15.19		79,400
1977	Sept. 5, 1977	16.87		83,100
1978	Mar. 23, 1978	22.01		161,000
1979	Mar. 23, 1979	20.33		136,000
1980	June 5, 1980	16.81		84,600
1981	Aug. 7, 1981	14.43		63,200
1982	June 16, 1982	19.73		126,000

b Affected by ice. c Backwater from Nemaha River.

06813500 Missouri River at Rulo, Nebraska--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	July 2, 1983	21.38	122,000
1984	June 16, 1984	24.40	242,000

06817000 Nodaway River at Clarinda, Iowa

Location.--Lat 40°44'19", long 95°00'47", NE1/4 sec.32, T.69 N., R.36 W., Page Co., on downstream side of bridge at east edge of Clarinda and 7.5 mi upstream from East Nodaway River.
Drainage area.--762 mi².
Gage.--Water-stage recorder. Datum is 960.36 ft NGVD of 1929. Prior to July 5, 1925, and May 28, 1936, to Mar.26, 1957, nonrecording gage at same site and datum.
Stage-discharge relation.--Defined by current-meter meas. below 15,000 ft³/s and above by overflow profile and channel ratio.
Flood stage.--14 feet.
Remarks.--Base for partial-duration series, 5,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1903	Aug. ??, 1903	25.40 a	--

1918	May 29, 1918	9.7	4,630 b
1919	Apr. 11, 1919	13.0	7,900
	Apr. 24, 1919	10.2	5,100
	Sept.30, 1919	11.8	5,460
1920	May 12, 1920	11.3	5,140
1921	June 3, 1921	7.2	2,140
1922	July 29, 1922	11.0	4,900
1923	June 9, 1923	6.1	1,600
1924	June 9, 1924	16.4	9,840
	June 27, 1924	15.0	8,400
1925	June 14, 1925	12.00	5,700 c

1936	Sept.12, 1936	7.2 d	2,440
1937	Feb. 19, 1937	11.4	6,300
	Mar. 4, 1937	17.0	12,100
	May 21, 1937	16.5	11,600
	May 26, 1937	9.7	4,630

a From floodmark. b Maximum for period May to Sept. 1918.
c Maximum for period Oct. 1, 1924, to July 4, 1925.
d Maximum for period May 26 to Sept. 30, 1936.

06817000 Nodaway River at Clarinda, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1938	May 31, 1938	14.7	9,600
	June 11, 1938	11.3	6,200
	Aug. 31, 1938	11.3	6,200
1939	Mar. 12, 1939	17.6	13,000
	July 5, 1939	13.5	7,050
	Aug. 11, 1939	12.6	6,240
1940	Aug. 13, 1940	10.9	4,690
1941	June 3, 1941	15.2	8,760
	June 9, 1941	18.0	11,000
	Sept.15, 1941	15.8	9,120
1942	Oct. 7, 1941	16.0	9,300
	Nov. 1, 1941	12.0	5,700
	May 11, 1942	15.0	8,400
	May 22, 1942	12.9	6,510
	June 20, 1942	14.9	8,310
1943	Feb. 3, 1943	11.5	5,300
	June 16, 1943	13.8	7,320
	Aug. 3, 1943	13.8	7,320
1944	May 3, 1944	12.9	6,510
	May 26, 1944	13.3	6,870
	June 4, 1944	16.6	9,660
	June 8, 1944	14.2	7,500
1945	Mar. 11, 1945	11.0	5,900
	Mar. 15, 1945	13.8	8,700
	May 14, 1945	15.9	10,900
	May 21, 1945	14.0	8,700
1946	Mar. 26, 1946	11.6	6,500
	June 18, 1946	15.8	11,100
1947	Apr. 10, 1947	11.7	7,200
	May 29, 1947	11.5	7,200
	June 2, 1947	10.9	6,400
	June 5, 1947	21.3	17,200
	June 13, 1947	25.3 a	31,100
	June 18, 1947	17.6	12,600
	June 21, 1947	18.0	13,200
1948	Feb. 27, 1948	10.3	5,200
	Mar. 19, 1948	17.4	12,800
	July 22, 1948	10.6	5,450

a From floodmark.

06817000 Nodaway River at Clarinda, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1949	Feb. 23, 1949	11.5	6,350
	Mar. 4, 1949	13.1	8,000
	June 1, 1949	16.0	11,000
1950	Feb. 28, 1950	12.0	6,900
	May 9, 1950	19.8	15,400
1951	Mar. 28, 1951	15.5	10,400
	Apr. 30, 1951	13.0	7,700
	May 1, 1951	19.5	15,000
	June 2, 1951	14.4	8,740
	June 15, 1951	18.0	13,000
	July 3, 1951	18.1	13,100
1952	Mar. 11, 1952	10.0	5,130
	May 22, 1952	11.0	6,080
	June 22, 1952	17.15	13,400
1953	Apr. 30, 1953	5.6	1,630
1954	Aug. 23, 1954	10.13	3,930
1955	July 9, 1955	13.50	7,100
1956	July 7, 1956	10.0	3,850
1957	May 30, 1957	10.45	6,980
	June 17, 1957	9.86	6,150
1958	July 3, 1958	15.85	13,800
	July 30, 1958	15.56	13,600
	Sept. 7, 1958	10.26	6,810
	Sept.10, 1958	12.60	9,880
1959	Feb. 24, 1959	11.27 e	6,500 f
	May 11, 1959	11.79	8,990
	May 30, 1959	14.97	13,200
	June 30, 1959	11.70	8,830
	Aug. 6, 1959	14.00	11,700
1960	Jan. 12, 1960	16.90	14,900
	Mar. 30, 1960	18.88	16,900
	June 30, 1960	12.40	9,620
	Aug. 29, 1960	13.80	11,400
	Sept.18, 1960	13.82	11,400

e Affected by ice. f About.

06817000 Nodaway River at Clarinda, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1961	Feb. 23, 1961	11.85	8,820
	Mar. 13, 1961	12.08	10,100
	Mar. 27, 1961	9.35	5,380
	Apr. 11, 1961	13.20	10,700
	Sept.13, 1961	10.65	7,120
1962	Mar. 19, 1962	12.05	9,100
	May 29, 1962	16.10	17,300
	July 21, 1962	10.76	7,740
1963	Mar. 4, 1963	10.32	6,840
	Mar. 11, 1963	9.34	5,320
	Apr. 29, 1963	11.10	9,540
1964	Apr. 13, 1964	12.04	9,900
	May 8, 1964	10.36	7.020
	May 26, 1964	10.88	7,920
	June 14, 1964	11.61	9,180
	June 20, 1964	13.64	12,800
	June 23, 1964	15.50	16,200
	July 3, 1964	9.15	5,180
	July 12, 1964	9.39	5,460
1965	Feb. 20, 1965	9.60	5,910
	Mar. 1, 1965	16.68	18,300
	Mar. 17, 1965	16.36	17,700
	Apr. 5, 1965	10.16	6,590
	Apr. 8, 1965	10.06	6,410
	June 8, 1965	9.31	5,330
	June 29, 1965	12.45	10,700
	July 1, 1965	10.13	6,530
	Sept.21, 1965	9.81	7,760
1966	June 26, 1966	11.80	9,540
1967	June 8, 1967	9.16	5,360
	June 10, 1967	18.35	20,200
	June 16, 1967	9.50	5,840
	June 21, 1967	16.60	18,200
1968	Aug. 4, 1968	3.85	677
1969	June 28, 1969	12.78	11,300
	July 9, 1969	9.83	6,300
	July 18, 1969	15.65	16,500
1970	Mar. 3, 1970	10.00	8,100
	Aug. 3, 1970	8.85	5,350
1971	Feb. 19, 1971	12.50	10,800
	May 7, 1971	10.65	7,720

06817000 Nodaway River at Clarinda, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1972	May 6, 1972	10.70	7,620
	July 26, 1972	9.76	6,200
	Sept.13, 1972	20.00	27,000
	Sept.18, 1972	11.03	9,750
1973	Oct. 31, 1972	9.08	5,270
	Dec. 30, 1972	12.54	10,400
	Jan. 17, 1973	11.00	7,900
	Feb. 1, 1973	16.63	18,500
	Mar. 14, 1973	9.46	5,750
	Mar. 31, 1973	13.50	12,000
	Apr. 16, 1963	15.80	16,700
	May 1, 1973	9.16	5,360
	May 7, 1973	13.63	12,300
	July 2, 1973	8.88	5,030
1974	Oct. 11, 1973	17.74	21,400
	Nov. 21, 1973	9.68	6,670
	Apr. 21, 1974	11.50	9,400
	Apr. 29, 1974	10.10	7,250
	June 9, 1974	9.00	5,790
1975	Mar. 18, 1975	8.66	5,380
	Mar. 20, 1975	8.72	5,450
	June 25, 1975	12.68	11,400
1976	Apr. 24, 1976	9.44	6,360
	June 14, 1976	18.88	26,400
	July 30, 1976	11.14	9,620
1977	Aug. 28, 1977	14.26	15,000
	Aug. 31, 1977	18.27	24,800
	Sept. 2, 1977	19.28	27,600
	Sept. 4, 1977	9.80	7,120
	Sept.17, 1977	9.40	6,560
	Sept.24, 1977	10.53	8,200
1978	Oct. 31, 1978	11.00	10,800
	Nov. 8, 1978	8.33	6,560
	Mar. 19, 1978	7.05	6,170
	Apr. 17, 1978	17.03	23,300
	May 7, 1978	8.31	6,530
	May 20, 1978	7.55	5,470
	May 23, 1978	8.12	6,270
	May 27, 1978	8.96	7,540
	July 20, 1978	9.73	8,770
	July 21, 1978	14.73	17,900

06817000 Nodaway River at Clarinda, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1979	Mar. 3, 1979	14.17	15,400
	Mar. 7, 1979	8.14	5,220
	Mar. 18, 1979	15.18	17,600
	Mar. 29, 1979	7.97	5,020
	June 27, 1979	11.94	11,100
1980	June 2, 1980	8.78	6,630
	June 4, 1980	10.15	8,490
	June 7, 1980	8.59	6,390
1981	Apr. 12, 1981	6.12	3,540
1982	Feb. 20, 1982	13.11	13,400
	Mar. 19, 1982	12.20	11,700
	Apr. 16, 1982	15.80	19,000
	May 5, 1982	13.85	14,900
	May 21, 1982	9.00	6,920
	June 15, 1982	19.70 a	29,100
	Aug. 5, 1982	9.93	8,180
1983	Nov. 12, 1982	7.80	5,270
	Dec. 28, 1982	8.05 g	5,400
	June 29, 1983	9.52	7,340
1984	Apr. 29, 1984	14.49 a	16,200
	May 13, 1984	9.90	8,110
	May 19, 1984	11.04	9,790
	May 25, 1984	12.98	13,200
	June 9, 1984	15.51	18,400
	June 15, 1984	11.46	10,400

a From floodmark.
g Peak stage did not reach bottom of gage.

06818598 Platte River near Stringtown, Iowa

Location.--Lat 40°59', long 94°30', SE1/4 sec.2, T.71 N.,R.32 W., Adams Co., at bridge on U.S.Hwy 34, 3.8 mi east of Stringtown.
Drainage area.--51.7 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	May 15, 1966	89.59	710
1967	June 21, 1967	91.05	2,600
1968	--	a	b
1969	July 10, 1969	90.37	1,450
1970	--	a	b
1971	May 23, 1971	91.59	b
1972	--	89.03	b
1973	Feb. 1, 1973	91.91	3,300
1974	Oct. 11, 1974	92.09	3,800
1975	June 24, 1975	90.61	1,330
1976	Apr. 17, 1976	90.66	1,400
1977	Sept. 3, 1977	90.23	1,050
1978	Apr. 18, 1978	90.82	1,520
1979	July 24, 1979	91.02	1,400
1980	June 4, 1980	91.37	1,900
1981	Apr. 12, 1981	90.81	1,250
1982	Mar. 19, 1982	91.34	1,800

a Peak stage did not reach bottom of gage.
b Discharge not determined.

06818598 Platte River near Stringtown, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	May 18, 1983	90.70	1,180
1984	June 14, 1984	91.65	2,350

06818750 Platte River near Diagonal, Iowa

Location.--Lat 40°46'02", long 94°24'46", NE1/4NW1/4 sec.22, T.69 N., R.31 W., Ringgold County, on left downstream side of bridge on county road 4.6 mi southwest of Diagonal.
Drainage area.--217 mi².
Gage.--Water-stage recorder. Datum is 1,095.27 ft NGVD of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 3,000 ft³/s. Prior to 1979, 1,200 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1967	June 1967	23.16 a	6,360
1968	Apr. 23, 1968	15.11	2,440 b
	Aug. 4, 1968	11.57	1,310
1969	Apr. 27, 1969	19.13	4,060
	May 8, 1969	19.32	4,150
	July 9, 1969	20.73	4,470
	July 18, 1969	22.76	5,360
1970	May 13, 1970	17.30	3,120
1971	Nov. 9, 1970	16.23	2,850
	Feb. 19, 1971	20.66 c	3,900 d
	Feb. 26, 1971	12.47 c	1,400 d
	May 8, 1971	15.61	2,570
	May 24, 1971	22.24	6,070
1972	May 7, 1972	13.26	1,880
	Sept.13, 1972	22.54	5,970
1973	Nov. 7, 1972	12.73	1,860
	Nov. 13, 1972	11.94	1,630
	Dec. 30, 1972	19.11	4,260
	Jan. 17, 1973	--	2,100 d
	Feb. 2, 1973	23.19	6,380
	Mar. 11, 1973	13.88	2,110
	Mar. 14, 1973	15.24	2,610
	Mar. 25, 1973	17.16	3,350
	Apr. 1, 1973	22.34	5,850
	Apr. 12, 1973	12.40	1,670
	Apr. 16, 1973	21.39	5,280
	May 2, 1973	13.62	1,990
	May 8, 1973	18.63	3,900

a From floodmark by local resident.
b For period April through September 1968.
c Affected by ice.
d About.

06818750 Platte River near Diagonal, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1974	Oct. 12, 1973	23.24	6,400
	Nov. 21, 1973	16.47	3,040
	Nov. 24, 1973	12.61	1,680
	Dec. 4, 1973	13.86	2,060
	Apr. 21, 1974	12.12	1,540
	May 30, 1974	16.69	3,170
	June 9, 1974	23.03	6,270
1975	Mar. 18, 1975	16.52	3,040
	Mar. 28, 1975	12.80	1,740
	June 11, 1975	15.37	2,600
	June 19, 1975	15.57	2,680
	June 23, 1975	13.75	2,020
1976	Apr. 18, 1976	22.05	5,680
	Apr. 20, 1976	18.43	3,850
	Apr. 24, 1976	19.67	4,380
	June 15, 1976	15.71	2,730
1977	Aug. 28, 1977	15.83	2,780
	Sept. 1, 1977	17.00	3,300
	Sept. 2, 1977	19.28	4,250
	Sept.18, 1977	15.23	2,590
	Sept.24, 1977	13.57	2,010
1978	Oct. 22, 1977	16.27	3,160
	Oct. 24, 1977	20.93	5,260
	Oct. 31, 1977	20.47	5,040
	Apr. 18, 1978	22.03	5,820
	May 7, 1978	--	4,500
	July 21, 1978	19.85	4,730
	July 22, 1978	18.60	4,170
1979	Mar. 3, 1979	20.61	--
	Mar. 4, 1979	--	4,000
	Mar. 18, 1979	18.38	4,070
	July 24, 1979	19.35	4,510
1980	June 2, 1980	20.13	4,940
	June 4, 1980	18.80	4,350
1981	Apr. 12, 1981	13.03	2,150

06818750 Platte River near Diagonal, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1982	Feb. 20, 1982	18.00	4,010
	Mar. 19, 1982	21.05	5,360
	Apr. 17, 1982	20.04	4,880
	May 6, 1982	20.38	5,050
	May 15, 1982	19.11	4,480
	May 21, 1982	19.86	4,820
	May 26, 1982	18.27	4,100
	May 29, 1982	15.89	3,120
	June 8, 1982	19.28	4,550
	Aug. 30, 1982	17.41	3,760
1983	Oct. 9, 1982	21.64 e	5,640
	Dec. 5, 1982	16.70	3,480
	June 28, 1983	15.91	3,170
1984	Apr. 27, 1984	16.37	3,340
	Apr. 30, 1984	19.35	4,590
	May 19, 1984	22.77	6,190
	May 22, 1984	18.31	4,140
	May 25, 1984	16.12	3,250
	June 10, 1984	18.42	4,190
	June 15, 1984	21.77	5,700

e Peak stage did not reach bottom of gage.

06819110 Middle Branch One Hundred and Two River near Gravity, Iowa

Location.--Lat 40°50', long 94°44', SE1/4 sec.27, T.70 N., R.34 W., Taylor County, at bridge on State Highway 148, 4.8 mi north of Gravity.
Drainage area.--33.5 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	June 26, 1966	82.83	2,800 d
1967	June 12, 1967	83.52	5,000 d
1968	--	a	<790
1969	Apr. 26, 1969	82.95	3,200
1970	--	a	<790
1971	--	a	<790
1972	--	a	<790
1973	Feb. 1, 1973	83.65 c	5,800
1974	June 9, 1974	82.94	3,000
1975	--	a	<790
1976	--	a	<790
1977	Aug. 28, 1977	81.50	950
1978	--	a	<790
1979	--	a	<790
1980	--	a	<790
1981	--	a	<790
1982	--	a	<790

a Peak stage did not reach bottom of gage.
c Affected by ice. d About.

06819110 Middle Branch One Hundred and Two River near Gravity, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983	--	a	<790
1984	--	a	<790

a Peak stage did not reach bottom of gage.

06819190 East Fork One Hundred and Two River near Bedford, Iowa

Location.--Lat 40°38'01", long 94°44'41", NE1/4 NE1/4 sec.9, T.67 N., R.34 W., Taylor County, on left bank at downstream side of bridge on county road J55, and 2.8 mi southwest of Bedford.
Drainage area.--92.1 mi².
Gage.--Water-stage recorder. Datum of gage is 1,057.51 ft National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1968, at datum 5.00 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--14 ft.
Remarks.--Base for partial-duration series, 2,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1960	Jan. 12, 1960	15.95	5,400
	Mar. 29, 1960	14.50	3,120
	June 30, 1960	14.29	4,120
	Aug. 25, 1960	11.11	2,140
	Aug. 29, 1960	11.81	2,530
1961	Mar. 13, 1961	11.00	2,240
	Mar. 27, 1961	12.20	2,760
1962	Oct. 12, 1961	11.04	2,240
	Nov. 16, 1961	11.29	2,360
	Feb. 16, 1962	13.20 a	--
1963	Apr. 29, 1963	9.46	2,230
1964	May 8, 1964	9.53	2,330
	June 21, 1964	11.16	3,180
	Sept. 6, 1964	11.75	3,490
1965	June 4, 1965	8.98	2,300
	June 8, 1965	12.20	4,330
	July 1, 1965	9.40	2,540
	Sept.21, 1965	9.08	2,670
1966	June 26, 1966	8.28	2,650
	June 28, 1966	7.64	2,260
1967	June 12, 1967	13.77	6,800
	June 14, 1967	6.53	2,000
	June 27, 1967	7.87	2,720
1968	Apr. 23, 1968	4.20 b	910

a Affected by ice. b From floodmark.

06819190 East Fork One Hundred and Two River near Bedford, Iowa --(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1969	Apr. 26, 1969	15.95	7,160
	May 7, 1969	13.65	5,000
	May 21, 1969	11.69	3,420
	July 9, 1969	12.76	4,260
	July 18, 1969	11.54	3,300
1970	Apr. 11, 1970	8.58	1,660
1971	Feb. 18, 1971	--	2,500 c
1972	May 5, 1972	11.04	2,520
	Sept.12, 1972	11.81	2,960
1973	Dec. 30, 1972	11.29	2,700
	Feb. 1, 1973	14.87	5,710
	Mar. 13, 1973	9.30	2,260
	Mar. 25, 1973	10.79	3,150
	Mar. 31, 1973	14.08	5,180
	Apr. 16, 1973	13.68	4,920
	May 7, 1973	9.96	2,660
1974	Oct. 11, 1973	20.72	9,980
	Nov. 20, 1973	10.35	2,800
	Dec. 4, 1973	9.76	2,540
	May 17, 1974	12.14	3,960
	May 30, 1974	10.99	3,270
	June 9, 1974	17.58	7,640
1975	June 11, 1975	14.04	5,030
	June 23, 1975	10.33	2,760
1976	Apr. 17, 1976	15.50	6,500
	Apr. 20, 1976	11.81	4,110
	Apr. 24, 1976	13.37	5,120
1977	Aug. 9, 1977	10.75	2,680
	Aug. 28, 1977	13.17	4,600
	Aug. 31, 1977	13.65	4,890
	Sept. 2, 1977	9.12	2,370
	Sept. 3, 1977	10.16	2,890
	Sept.24, 1977	8.50	2,080
1978	Oct. 22, 1977	11.80	3,780
	Oct. 23, 1977	15.11	5,840
	Oct. 31, 1977	17.28	7,420

1978 CONTINUED ON NEXT PAGE

c About.

06819190 East Fork One Hundred and Two River near Bedford, Iowa --(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1978 cont.	Apr. 17, 1978	12.12	3,970
	May 7, 1978	14.13	5,230
	May 20, 1978	8.90	2,230
	May 27, 1978	8.37	2,090
	Sept. 20, 1978	10.31	3,020
1979	Mar. 3, 1979	--	3,000
	Mar. 18, 1979	8.95	2,350
	July 24, 1979	18.35	8,280
	July 29, 1979	12.03	3,970
1980	June 2, 1980	15.93	6,460
	June 4, 1980	12.66	4,320
1981	Apr. 11, 1981	8.45	2,110
1982	Feb. 20, 1982	10.27	2,990
	Mar. 19, 1982	14.78	5,660
	May 6, 1982	9.16	2,430
	May 15, 1982	13.97	5,130
	May 21, 1982	15.22	5,960
	May 25, 1982	9.84	2,770
	June 8, 1982	13.54	4,860
	July 6, 1982	8.50	2,130
	Aug. 14, 1982	8.83	2,280
	Aug. 30, 1982	14.52	6,280
	Sept. 17, 1982	10.23	3,580
1983	Oct. 8, 1982	10.04	2,870
	Dec. 28, 1982	9.69	2,690
	June 18, 1983	8.33	2,050
	June 28, 1983	9.52	2,610
1984	Apr. 27, 1984	18.49	2,600
	Apr. 29, 1984	18.96	3,090
	May 13, 1984	17.75	2,450
	May 19, 1984	18.25	2,700
	May 22, 1984	19.74	3,550
	June 15, 1984	21.90	4,930

06897950 Elk Creek near Decatur City, Iowa

Location.--Lat 40°43'18", long 93°56'12", SE1/4 sec.34, T.69 N., R.27 W., Decatur County, at right downstream corner of bridge on county road, 5.2 mi upstream from mouth.
Drainage area.--52.5 mi².
Gage.--Water-stage recorder. Datum is 924.70 ft NGVD of 1929. Oct.1, 1967, to Sept.30, 1974, at datum 10.00 ft higher.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Base for partial-duration series, 500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1959	Aug. 6, 1959	20.5 to 22.5 a	b
1967	June 14, 1967	18.35	15,000 c
1968	Apr. 23, 1968	10.50	2,900
	July 23, 1968	8.14	1,540
	Aug. 4, 1968	9.75	2,450
1969	Apr. 4, 1969	6.11	654
	Apr. 17, 1969	7.55	1,300
	Apr. 26, 1969	11.39	3,490
	May 7, 1969	10.44	2,930
	May 21, 1969	11.32	3,440
	June 12, 1969	8.47	1,700
	June 28, 1969	10.27	2,760
	June 30, 1969	10.40	2,840
	July 9, 1969	15.23	7,710
	July 18, 1969	8.69	1,820
1970	Apr. 18, 1970	8.98	1,990
	May 12, 1970	13.59	5,310
	Aug. 3, 1970	5.77	500
	Sept.15, 1970	6.72	848
	Sept.17, 1970	5.93	556
	Sept.22, 1970	6.79	876
1971	Oct. 9, 1970	5.94	559
	Oct. 26, 1970	6.49	756
	Nov. 9, 1970	5.78	503
	Dec. 10, 1970	6.49	756
	May 6, 1971	6.10	636
	May 7, 1971	6.56	784

a Information from county, 300 ft downstream.
b Discharge not determined. c Estimated from rating curve extended above 5,300 ft³/s by step-backwater computation.

06897950 Elk Creek near Decatur City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)	
1972	May 7, 1972	11.46	3,480	
	May 12, 1972	7.42	1,220	
	June 17, 1972	9.64	2,400	
	July 19, 1972	7.76	1,360	
	July 26, 1972	9.71	2,470	
	Sept. 12, 1972	15.41	8,130	
1973	Nov. 13, 1972	6.21	654	
	Dec. 29, 1972	--	3,400	e
	Jan. 16, 1973	10.07	2,640	
	Feb. 1, 1973	13.25	4,920	
	Mar. 10, 1974	7.91	1,420	
	Mar. 13, 1974	10.77	3,060	
	Mar. 25, 1974	9.65	2,390	
	Apr. 1, 1973	--	2,000	e
	Apr. 16, 1973	--	2,200	e
	May 7, 1973	--	700	e
	Aug. 11, 1973	8.46	1,700	
	Sept. 26, 1973	11.50	3,500	
1974	Oct. 11, 1973	13.60	5,320	
	Nov. 20, 1973	7.49	1,220	
	Dec. 4, 1973	9.90	2,540	
	Jan. 20, 1974	--	1,000	e
	Jan. 26, 1974	--	1,300	e
	Mar. 8, 1974	6.05	598	
	Apr. 21, 1974	12.50	4,170	
	May 30, 1974	12.47	4,150	
	June 9, 1974	--	4,600	e

1975	Oct. 31, 1974	15.14	675	
	Mar. 16, 1975	--	800	e
	Mar. 17, 1975	15.77	832	
	Mar. 27, 1975	14.76	582	
	May 7, 1975	16.39	1,010	
	June 23, 1975	14.98	635	
	Sept. 11, 1975	14.87	608	
1976	Mar. 6, 1976	--	1,000	
	Mar. 29, 1976	16.68	1,400	
	Apr. 18, 1976	21.70	5,450	
	Apr. 20, 1976	19.51	3,340	
	Apr. 24, 1976	25.80	11,400	

e About.

06897950 Elk Creek near Decatur City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1977	Sept. 2, 1977	13.60	320
1978	Oct. 23, 1977	17.98	1,960
	Oct. 31, 1977	18.62	2,340
	Mar. 21, 1978	15.78	1,110
	Apr. 10, 1978	16.65	1,500
	Apr. 17, 1978	21.67	5,530
	May 7, 1978	22.45	6,460
	May 11, 1978	17.50	2,010
	July 21, 1978	20.37	4,200
	Sept.18, 1978	14.42	653
	Sept.20, 1978	25.73	11,100
1979	Mar. 16, 1979	14.59	677
	Mar. 18, 1979	16.76	1,540
	Mar. 23, 1979	19.85	3,870
	Mar. 30, 1979	16.17	1,420
	May 2, 1979	15.30	1,060
	June 27, 1979	15.83	1,130
1980	Mar. 15, 1980	15.23	892
	June 2, 1980	28.22	16,400
	June 4, 1980	19.26	3,170
	Aug. 31, 1980	22.37	6,270
	Sept. 1, 1980	16.79	1,560
	Sept. 5,1980	16.99	1,660
1981	Apr. 12, 1981	14.82	746
	Apr. 13, 1981	19.61	3,450
1982	Mar. 19, 1982	26.06	12,600
	Apr. 16, 1982	20.00	4,310
	May 6, 1982	21.40	5,780
	May 14, 1982	20.75	5,070
	May 17, 1982	14.45	776
	May 21, 1982	16.02	1,440
	May 29, 1982	16.40	1,640
	June 8, 1982	19.65	3,990
	June 15, 1982	16.90	1,920
	June 25, 1982	15.50	1,190
	July 6, 1982	23.65	8,690
1983	Dec. 24, 1982	14.83	964
	Dec. 27, 1982	21.08	5,420
	Apr. 2, 1983	14.05	735
	May 6, 1983	18.00	2,640

1983 CONTINUED ON NEXT PAGE

06897950 Elk Creek near Decatur City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1983 cont.	May 27, 1983	19.00	3,420
	June 3, 1983	16.18	1,540
	June 29, 1983	16.44	1,680
1984	Nov. 27, 1983	14.10	630
	Apr. 3, 1984	14.85	922
	Apr. 22, 1984	16.06	1,460
	Apr. 27, 1984	14.84	918
	Apr. 29, 1984	17.79	2,490
	May 19, 1984	14.79	899
	May 22, 1984	16.77	1,840
	June 8, 1984	17.95	2,610
	June 9, 1984	19.75	4,080

06898000 Thompson River at Davis City, Iowa
(Published as "Grand River" prior to 1918)

Location.--Lat 40°38'25", long 93°48'29", in SE1/4 SE1/4 sec.35, T.68 N., R.26 W., Decatur County, on right bank 15 feet downstream from bridge on U.S. Highway 69 at Davis City.
Drainage area.--701 mi².
Gage.--Water-stage recorder. Datum of gage is 874.04 feet National Geodetic Vertical Datum of 1929. May 14, 1918, to July 2, 1925, July 14, 1941, to Feb. 24, 1942, nonrecording gage, and Feb. 25, 1942, to Feb. 8, 1967, water-stage recorder at same site at datum 2.00 ft higher.
Stage-discharge relation.--Defined by current-meter measurements below 15,000 ft³/s and above on basis of velocity-area study.
Flood stage.--9 feet.
Remarks.--Base for partial-duration series, 4,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1885	Aug. 8, 1885	22.80 a	30,000
1897	Apr. 24, 1897	21.70	--
1903	Aug. 27, 1903	21.00	--
1909	July 6, 1909	20.30	--
1915	Mar. 28, 1915	19.60	--
1918	June 6, 1918	14.7	5,660
1919	Mar. 16, 1919	17.8	10,100
	Apr. 22, 1919	14.6	5,580
	May 4, 1919	17.8	10,100
	June 4, 1919	18.8	12,500
	Sept.30, 1919	14.2	5,260
1920	Nov. 11, 1919	15.2	6,100
	Mar. 24, 1920	16.9	8,350
	Mar. 26, 1920	16.0	7,000
	Apr. 2, 1920	15.2	6,100
	Apr. 21, 1920	16.4	7,600
	Apr. 27, 1920	13.7	4,890
	May 13, 1920	16.9	8,350
1921	May 11, 1921	14.5	5,500
	June 2, 1921	15.1	5,280

a From floodmark.

06898000 Thompson River at Davis City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)	
1922	May 23, 1922	15.0	5,200	
	July 18, 1922	19.9	13,200	
	July 30, 1922	15.5	5,600	
	Sept. 1, 1922	17.6	8,040	
1923	Nov. 13, 1922	17.4	7,760	
1924	Mar. 1, 1924	14.4	4,720	
	June 26, 1924	19.0	10,200	
1925	June 3, 1925	13.1	3,860	b
1926	Sept 9, 1926	19.10	10,800	

1941	Sept.17, 1941	9.4	4,440	c
1942	Oct. 9, 1941	12.0	6,700	
	Nov. 2, 1941	12.2	6,900	

	June 20, 1942	13.5	8,380	
	June 26, 1942	12.0	6,700	
1943	May 15, 1943	11.5	6,420	
	June 13, 1943	12.1	6,910	
1944	Apr. 23, 1944	14.2	8,810	
	May 3, 1944	11.7	6,590	
	May 21, 1944	9.7	4,960	
1945	Mar. 17, 1945	11.5	6,620	
	Apr. 17, 1945	13.9	8,700	
	May 15, 1945	12.9	7,750	
1946	Jan. 6, 1946	15.2	11,500	
	May 3, 1946	10.0	6,400	
	June 19, 1946	11.1	7,610	
1947	Apr. 5, 1947	11.7	8,200	
	Apr. 12, 1947	11.6	8,100	
	May 30, 1947	8.9	5,300	
	June 6, 1947	19.3	19,500	
	June 14, 1947	20.1	21,300	
	June 23, 1947	12.6	9,320	
1948	Mar. 20, 1948	8.6	4,860	
1949	June 26, 1949	7.8	4,190	
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b Maximum Oct. 1, 1924, to July 2, 1925.
c Maximum July 19 to Sept. 30, 1941.

06898000 Thompson River at Davis City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1950	May 10, 1950	11.8	12,000
	June 19, 1950	11.4	11,300
1951	Mar. 29, 1951	6.98	5,100
	May 2, 1951	13.75	15,200
	May 12, 1951	6.98	5,100
	May 27, 1951	9.82	8,900
	July 5, 1951	7.26	5,490
1952	Nov. 13, 1951	6.61	4,620
	Mar. 13, 1952	7.79	6,140
1953	Mar. 30, 1953	5.86	3,890
1954	June 15, 1954	4.56	2,520
1955	Mar. 3, 1955	4.81	2,760
1956	Aug. 9, 1956	4.70	2,670
1957	Apr. 3, 1957	7.54	5,250
1958	July 15, 1958	9.22	7,400
	July 27, 1958	8.19	5,850
1959	Mar. 26, 1959	7.67	5,430
	Apr. 20, 1959	9.18	6,900
	May 11, 1959	10.25	7,900
	May 31, 1959	10.60	8,300
	July 1, 1959	8.04	5,700
	Aug. 6, 1959	18.42	17,500
	Sept.27, 1959	10.35	8,100
1960	Jan. 14, 1960	11.92	9,690
	Mar. 30, 1960	16.63	15,200
	Apr. 17, 1960	6.97	4,800
	July 1, 1960	9.89	7,600
1961	Feb. 18, 1961	6.63 d	4,600 e
	Mar. 14, 1961	6.78	5,230
	Sept.13, 1961	8.22	6,820
1962	Nov. 3, 1961	6.61	5,050
	Nov. 16, 1961	8.86	7,200
	Mar. 20, 1962	7.56	5,970
	May 31, 1962	6.18	4,690
	June 10, 1962	6.27	4,780
1963	Mar. 4, 1963	6.00	4,510

d Affected by ice. e About.

06898000 Thompson River at Davis City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1964	June 21, 1964	7.05	5,410
	Sept. 8, 1964	9.14	7,400
	Sept.23, 1964	7.74	6,060
1965	Mar. 17, 1965	9.08	9,120
	Apr. 8, 1965	9.35	9,520
	May 8, 1965	9.10	9,150
	July 1, 1965	5.69	4,760
	Sept.21, 1965	8.87	8,820
1966	May 17, 1966	5.82	4,900
	June 13, 1966	5.70	4,770
	July 28, 1966	7.80	6,820

1967	June 14, 1967	11.96	10,400
	June 23, 1967	11.65	9,980
1968	Apr. 23, 1968	8.58	5,650
1969	Apr. 28, 1969	7.87	4,830
	May 9, 1969	7.71	4,700
	June 13, 1969	9.69	7,190
	July 9, 1969	12.01	10,500
	July 19, 1969	11.39	9,460
1970	May 14, 1970	7.99	4,940
1971	Feb. 20, 1971	8.40 d	5,200 e
1972	May 7, 1972	9.63	7,160
	Sept.12, 1972	10.82	8,470
	Sept.16, 1972	12.45	10,600
1973	Dec. 30, 1972	10.15	7,850
	Feb. 3, 1973	11.28	9,420
	Mar. 11, 1973	8.29	5,510
	Mar. 14, 1973	8.89	6,230
	Mar. 25, 1973	9.05	6,420
	Mar. 31, 1973	11.27	9,400
	Apr. 16, 1973	10.71	8,590
	May 2, 1973	8.10	5,280
	May 8, 1973	8.36	5,590
	Sept.26, 1973	9.21	6,610
1974	Oct. 11, 1973	14.21	14,200
	Apr. 21, 1974	8.27	5,530
	May 30, 1974	8.49	5,750
	June 10, 1974	19.43	24,300

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d Affected by ice. e About.

06898000 Thompson River at Davis City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1975	Mar. 18, 1975	7.38	4,420
1976	Nov. 30, 1975	8.09	5,270
	Apr. 20, 1976	9.93	7,520
	Apr. 26, 1976	13.26	12,500
1977	Sept. 3, 1977	6.12	3,120
1978	Oct. 24, 1977	9.07	6,500
	Mar. 22, 1978	9.16	6,880
	Apr. 10, 1978	7.61	5,020
	Apr. 19, 1978	11.37	9,960
	May 7, 1978	10.46	8,510
	July 22, 1978	7.59	4,880
	Sept.20, 1978	11.68	10,200
1979	Mar. 19, 1979	7.84	5,090
	Mar. 23, 1979	10.34	8,220
1980	June 2, 1980	12.94	12,400
	June 5, 1980	8.99	6,610
	Aug. 31, 1980	8.25	5,660
	Sept. 1, 1980	8.06	5,440
1981	Apr. 14, 1981	8.06	5,420
	July 5, 1981	7.99	5,340
1982	Mar. 19, 1982	11.84	10,600
	Apr. 17, 1982	7.57	4,840
	May 6, 1982	10.72	8,940
	May 15, 1982	7.93	5,260
	May 22, 1982	9.22	6,880
	July 7, 1982	7.34	4,580
1983	Dec. 6, 1982	7.47	4,720
	Dec. 28, 1982	9.06	6,710
	Apr. 3, 1983	8.08	5,530
	May 27, 1983	8.46	6,000
1984	Apr. 22, 1984	8.05	5,470
	Apr 30, 1984	8.15	5,590
	May 20, 1984	7.57	4,910
	May 26, 1984	7.50	4,830
	June 9, 1984	9.23	6,950
	June 12, 1984	7.27	4,570
	June 18, 1984	7.98	5,390

06898400 Weldon River near Leon, Iowa

Location.--Lat 40°41'45", long 93°38'07", in NE1/4 NE1/4 sec.17, T.68 N., R.24 W., Decatur Co., on left bank 10 ft downstream from bridge on co. road J46 and 6.5 mi southeast of Leon.
Drainage area.--104 mi².
Gage.--Water-stage recorder. Datum is 906.26 ft NGVD of 1929.
Stage-discharge relation.--Defined by current-meter measurements below 5,600 ft³/s and above by indirect measurement.
Remarks.--Base for partial-duration series, 4,500 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1959	Nov. 17, 1958	17.87	7,410
	Apr. 20, 1959	17.32	6,870
	May 21, 1959	19.16	8,740
	May 29, 1959	16.74	6,330
	May 30, 1959	15.37	5,220
	Aug. 6, 1959	25.27	48,600 a
1960	Oct. 5, 1959	16.00	5,700
	Mar. 29, 1960	18.12	7,220
	Apr. 16, 1960	19.72	9,210
	May 16, 1960	15.88	4,910
1980	June 5, 1980	16.81	84,600
1961	Feb. 18, 1961	16.00	5,000
	Mar. 5, 1961	19.85	8,020
	July 15, 1961	21.62	10,000
	Sept.13, 1961	22.14	11,600
	Sept.30, 1961	15.91	4,930
1962	Nov. 2, 1961	15.62	4,720
	Nov. 16, 1961	17.25	5,860
	May 29, 1962	15.96	5,000
	June 10, 1962	21.63	10,000
1963	Mar. 4, 1963	13.95 b	--
	Mar. 18, 1963	13.22	3,150
1964	Sept. 6, 1964	19.48	7,750
1965	Apr. 8, 1965	15.45	4,760
	Sept.21, 1965	19.10	7,570
1966	June 13, 1966	10.65	1,840
1967	June 12, 1967	15.48	4,640
	June 14, 1967	15.80	4,860

a Greatest flood since 1919. b Affected by ice.

06898400 Weldon River near Leon, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1968	Apr. 22, 1968	20.12	8,310
1969	Apr. 26, 1969	17.97	6,480
1970	May 14, 1970	20.11	8,300
	Sept.17, 1970	15.63	4,740
1971	Oct. 9, 1970	14.90	4,230
1972	Sept.12, 1972	17.19	5,850
	Sept.14, 1972	17.20	5,980
1973	Feb. 1, 1973	15.60	4,720
	Mar. 31, 1973	18.95	7,260
	Apr. 16, 1973	16.54	5,480
1974	Oct. 11, 1973	21.45 c	9,710
	Apr. 21, 1974	15.61	4,770
	May 30, 1974	16.65	5,460
	June 9, 1974	17.30	6,100
1975	Apr. 23, 1975	12.52	2,660
1976	Apr. 18, 1976	15.60	4,720
	Apr. 24, 1976	16.70	5,490
1977	Aug. 9, 1977	10.84	1,460
1978	Oct. 24, 1977	18.68	7,130
	Apr. 17, 1978	15.89	4,990
	May 7, 1978	16.88	5,690
	Sept.20, 1978	15.79	4,950
1979	Mar. 23, 1979	16.05	5,180
1980	June 2, 1980	21.61	10,000
	June 4, 1980	18.80	7,140
	Sept. 1, 1980	17.90	6,420
1981	July 4, 1981	20.17	8,700
1982	Mar. 19, 1982	19.37	7,990
	May 6, 1982	17.63	6,600
1983	Oct. 9, 1982	14.37	4,060
1984	June 9, 1984	14.16	3,940

c From floodmark.

06903400 Chariton River near Chariton, Iowa

Location.--Lat 40°57'12", long 93°15'27", in SW1/4 NE1/4 sec.15, T.71 N., R.21 W., Lucas County, on right bank 15 ft downstream from bridge on co. road S43, 5.0 mi southeast of Chariton.
Drainage area.--182 mi².
Gage.--Water-stage recorder. Datum is 917.96 ft NGVD of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--18 ft.
Remarks.--Base for partial-duration series, 1,200 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1947	June 5, 1947	21.65 a	11,000

1960	Mar. ??, 1960	23.0 b	15,000 b

1966	Feb. 9, 1966	15.90	1,360
1967	June 10, 1967	16.82	1,670
	June 14, 1967	18.08	2,820
	June 21, 1967	19.53	4,930
1968	Apr. 23, 1968	19.90	5,660
1969	Apr. 27, 1969	16.26	1,360
	July 10, 1969	16.21	1,340
	July 13, 1969	16.77	1,640
	July 21, 1969	16.32	1,390
1970	Apr. 19, 1970	16.61	1,550
	May 15, 1970	17.44	2,120
	Aug. 8, 1970	20.15	6,320
	Sept.17, 1970	18.29	3,230
1971	Oct. 9, 1970	17.28	2,080
1972	May 8, 1972	16.32	1,390
	Sept.13, 1972	17.29	1,990
	Sept.14, 1972	18.08	2,820
1973	Feb. 2, 1973	17.63	2,290
	Mar. 7, 1973	16.20	1,330
	Mar. 11, 1973	16.49	1,470
	Mar. 26, 1973	16.89	1,710

1973 CONTINUED ON NEXT PAGE

a From floodmarks. b About.

06903400 Chariton River near Chariton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973 cont.	Apr. 1, 1973	17.22	1,940
	Apr. 16, 1973	18.02	2,740
	May 2, 1973	17.01	1,790
	May 7, 1973	16.44	1,470
	May 27, 1973	17.30	2,080
	June 19, 1973	17.58	2,240
	July 4, 1973	16.12	1,290
	Aug. 12, 1973	16.46	1,460
	Sept.25, 1973	16.81	1,670
	Sept.28, 1973	16.03	1,250
1974	Oct. 3, 1973	15.98	1,230
	Oct. 12, 1973	20.20	6,300
	Dec. 5, 1973	15.95	1,220
	Jan. 27, 1974	17.55	2,220
	Apr. 21, 1974	16.85	1,750
	May 18, 1974	16.03	1,250
	June 9, 1974	17.89	2,590
	June 13, 1974	16.82	1,770
1975	Mar. 18, 1975	16.27	1,360
	June 28, 1975	16.82	1,670
1976	Apr. 21, 1976	17.17	1,430
	Apr. 25, 1976	18.59	2,490
	June 14, 1976	20.35	5,460
1977	Aug. 27, 1977	17.27	1,490
1978	Oct. 24, 1977	1934	3,520
	Oct. 31, 1977	17.28	1,500
	Mar. 22, 1978	17.48	1,300
	Apr. 10, 1978	18.22	3,340
	Apr. 18, 1978	17.66	1,730
	May 7, 1978	17.51	1,830
	May 13, 1978	17.43	1,770
	Sept.21, 1978	19.79	3,660
1979	Mar. 4, 1979	18.24 c	1,600
	Mar. 24, 1979	17.75	1,890
	May 3, 1979	17.09	1,540
1980	June 2, 1980	20.84	7,000
	June 4, 1980	20.31	5,380
	Sept. 1, 1980	16.70	1,210

c Affected by ice.

06903400 Chariton River near Chariton, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1981	Apr. 14, 1981	16.86	1,580
	June 8, 1981	18.47	2,800
	June 15, 1981	19.36	3,890
	July 4, 1981	23.14	16,600
1982	Mar. 19, 1982	18.54	2,880
	Apr. 17, 1982	17.83	2,220
	May 7, 1982	17.55	2,020
	May 21, 1982	17.55	2,020
	May 29, 1982	17.33	1,900
	July 3, 1982	18.97	3,360
	July 16, 1982	19.85	4,650
	Aug. 30, 1982	18.02	2,370
1983	Oct. 9, 1982	20.74	6,530
	Dec. 6, 1982	17.55	2,010
	Dec. 28, 1982	16.82	1,630
	Apr. 2, 1983	17.73	2,420
1984	Apr. 12, 1984	16.34	1,630
	Apr. 22, 1984	16.58	1,740
	Apr. 30, 1984	17.07	1,970
	June 8, 1984	17.17	1,780
	June 10, 1984	17.16	1,730
	June 15, 1984	16.73	1,620

06903500 Honey Creek near Russell, Iowa
(Discontinued Sept. 30, 1962)

Location.--Lat 40°55'25", long 93°07'55", in SW1/4 NW1/4 sec.26, T.71 N., R.20 W., Lucas County, on left bank 15 ft downstream from highway bridge, 0.7 mi upstream from Chariton River, and 5.5 mi southeast of Russell.
Drainage area.--13.2 mi².
Gage.--Recording. Datum of gage is 901.73 ft National Geodetic Vertical Datum of 1929 (levels by Soil Conservation Service).
Stage-discharge relation.--Defined by current meter measurements below 640 ft³/s and extended above on basis of contracted-opening and flow-over-road measurement of peak flow.
Remarks.--Base for partial-duration series, 250 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1952	June 21, 1952	9.86	586 a
1953	Feb. 20, 1953	7.12	250
	Mar. 30, 1953	8.37	388
	June 10, 1953	7.32	265
1954	Apr. 26, 1954	7.10	245
1955	Feb. 19, 1955	6.27	170
1956	July 31, 1956	7.34	265
1957	Apr. 22, 1957	7.17	263
	May 21, 1957	7.11	254
1958	Feb. 24, 1958	7.20	273
	July 2, 1958	8.86	638
	July 4, 1958	8.32	418
	July 30, 1958	8.84	394
	Sept.23, 1958	7.12	264

a Maximum for period June to September.

06903500 Honey Creek near Russell, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1959	Mar. 19, 1959	8.19 b	470 c
	Mar. 26, 1959	7.97 b	400 c
	Apr. 1, 1959	8.48	669
	Apr. 20, 1959	8.40 d	450 c
	Apr. 27, 1959	7.26	296
	May 21, 1959	11.26	4,100
	May 30, 1959	8.89	645
	Sept.27, 1959	7.06	270
1960	Dec. 28, 1959	7.49 d	260 c
	Jan. 12, 1960	8.51	669
	Mar. 28, 1960	9.16	1,080
	Apr. 16, 1960	8.92	900
	May 6, 1960	9.33	1,260
	May 16, 1960	7.57 d	1,000 c
	May 20, 1960	7.51	340
	May 24, 1960	7.28	303
1961	Feb. 18, 1961	8.30 d	450 c
	Mar. 6, 1961	9.51	1,390
	Mar. 13, 1961	8.58 d	450 c
	Mar. 27, 1961	7.97	448
	Sept.13, 1961	9.88 d	c,000 c
	Sept.30, 1961	8.00 d	400 c
1962	Nov. 2, 1961	9.66 d	1,000 c
	Nov. 13, 1961	7.68	382
	Nov. 16, 1961	9.55 d	1,100 c
	May 29, 1962	8.18 d	300 c
	June 11, 1962	7.27	296

Discontinued Sept. 30, 1962

b Affected by ice.
c About.
d Backwater from Chariton River.

06903700 South Fork Chariton River near Promise City, Iowa

Location.--Lat 40°48'02", long 93°11'32", in SW1/4 SW1/4 sec.5, T.69 N., R.20 W., Wayne County, on right bank 20 ft downstream from bridge on county highway S50, 1.3 mi downstream from Jordan Creek and 4.3 mi northwest of Promise City.
Drainage area.--168 mi².
Gage.--Water-stage recorder. Datum of gage is 913.70 ft National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--18 feet.
Remarks.--Base for partial-duration series, 2,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1965	Sept 21, 1965	25.50 a	b
1968	Apr. 20, 1968	14.60	2,710
	Apr. 23, 1968	20.96	6,950
1969	Jan. 16, 1969	15.05 c	1,900 d
	Apr. 27, 1969	14.29	2,600
	July 13, 1969	13.81	2,290
1970	Apr. 18, 1970	13.69	2,250
	May 14, 1970	19.12	4,280
	Aug. 8, 1970	21.32	7,660
	Sept.17, 1970	20.44	6,160
	Sept.22, 1970	18.61	4,420
	Sept.24, 1970	14.53	2,690
1971	Oct. 9, 1970	20.98	6,970
	Feb. 18, 1971	18.93 c	3,300 d
	Feb. 26, 1971	14.90 c	2,300 d
	Mar. 11, 1971	12.38	2,010
1972	Sept.14, 1972	17.68	3,930
1973	Dec. 29, 1972	--	3,000 d
	Jan. 17, 1973	--	2,600 d
	Feb. 2, 1973	18.73	4,500
	Mar. 7, 1973	14.60	2,710
	Mar. 11, 1973	13.97	2,490
	Mar. 25, 1973	18.41	4,300

1973 CONTINUED ON NEXT PAGE

a From floodmark. b Discharge not determined.
c Affected by ice. d About.

06903700 South Fork Chariton River near Promise City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1973 cont.	Mar. 31, 1973	19.14	4,810
	Apr. 12, 1973	14.82	2,800
	Apr. 16, 1973	19.21	4,870
	Apr. 21, 1973	12.78	2,130
	May 2, 1973	18.81	4,560
	May 7, 1973	14.82	2,790
	May 27, 1973	18.20	4,170
	June 18, 1973	13.25	2,280
1974	Oct. 3, 1973	15.13	2,900
	Oct. 12, 1973	19.35	4,980
	Dec. 4, 1973	12.49	2,030
	Jan. 27, 1974	17.72 c	3,000 d
	May 31, 1974	15.43	3,000
	June 9, 1974	18.98	4,680
	June 13, 1974	14.34	2,620
	July 4, 1974	16.80	3,540
1975	Apr. 24, 1975	13.06	2,170
	June 28, 1975	20.85	6,580
1976	Mar. 5, 1976	17.88	4,030
	Apr. 24, 1976	20.27	5,930
	May 16, 1976	14.25	2,590
	June 14, 1976	20.29	5,960
1977	Aug. 26, 1977	18.75	4,520
	Sept.13, 1977	15.27	2,940
1978	Oct. 24, 1977	19.72	5,300
	Oct. 31, 1977	17.08	3,660
	Apr. 10, 1978	21.92	9,700
	Apr. 18, 1978	18.74	4,510
	May 7, 1978	19.78	5,460
	May 13, 1978	18.32	4,250
	Sept.20, 1978	17.73	3,970
1979	Mar. 4, 1979	19.74 c	2,900
	Mar. 13, 1979	14.73	2,710
	Mar. 24, 1979	19.18	4,910
	May 3, 1979	16.59	3,480
	June 8, 1979	12.59	2,100
	June 27, 1979	15.40	3,000

c Affected by ice. d About.

06903700 South Fork Chariton River near Promise City, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)	
1980	June 3, 1980	22.92	11,200	
	June 4, 1980	19.61	5,800	
	Sept. 1, 1980	21.48	8,550	
	Sept. 5, 1980	12.83	2,140	
1981	Dec. 8, 1981	18.20	4,190	
	Apr. 12, 1981	12.67	2,120	
	Apr. 14, 1981	17.58	3,940	
	June 8, 1981	16.18	3,290	
	July 4, 1981	29.95	28,000	
	July 15, 1981	17.8	3,790	
1982	Feb. 20, 1982	c	2,140	
	Mar. 16, 1982	14.43	2,510	
	Mar. 19, 1982	21.97	9,420	
	Apr. 16, 1982	16.37	3,330	
	May 6, 1982	14.25	2,450	
	May 21, 1982	12.93	2,010	
	May 29, 1982	20.27	6,680	
	June 9, 1982	12.99	2,030	
	July 16, 1982	22.32	10,000	
	July 19, 1982	20.24	6,640	
	July 21, 1982	17.84	4,050	
	Sept.17, 1982	15.24	2,850	
1983	Oct. 9, 1982	20.57	4,380	e
	Nov. 12, 1982	17.99	4,140	
	Dec. 5, 1982	19.39	5,520	
	Dec. 28, 1982	17.74	3,970	
	Apr. 2, 1983	19.43	5,570	
	Apr. 12, 1983	17.99	4,140	
1984	Apr. 22, 1984	15.58	2,710	
	Apr. 30, 1984	19.21	5,600	
	May 20, 1984	16.88	3,290	
	June 10, 1984	19.83	6,500	

c Affected by ice.
e Peak stage did not reach bottom of gage.

06903900 Chariton River near Rathbun, Iowa

Location.--Lat 40°49'22", long 92°53'22", in SE1/4 NE1/4 sec.35, T.70 N., R.18 W., Appanoose County, on left bank 600 ft downstream from outlet of Rathbun Dam, 1.8 mi north of Rathbun 3.7 mi upstream from Walnut Creek and at mi 142.1.
Drainage area.--549 mi².
Gage.--Water-stage recorder. Datum of gage is 847.92 ft National Geodetic Vertical Datum of 1929. Prior to Nov.16, 1960, nonrecording gage and Nov. 17, 1960, to Sept. 30, 1969, water-stage recorder, at site 3.1 mi downstream at datum 4.65 ft lower.
Stage-discharge relation.--Defined by current-meter measurements.
Flood stage.--18 ft.
Remarks.--Base for partial-duration series 3,000 ft³/s, discontinued upon beginning of storage in Rathbun Lake Nov. 21, 1969.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1957	Apr. 5, 1957	13.72	1,500
1958	Aug. 4, 1958	17.3	2,070
1959	Mar. 21, 1959	19.51	4,100
	Apr. 3, 1959	18.9	3,160
	Apr. 22, 1959	19.72	4,420
	May 22, 1959	24.0	16,600
	May 31, 1959	21.1	7,100
1960	Jan. 15, 1960	20.0	4,900
	Mar. 31, 1960	25.3 a	21,800
	Apr. 19, 1960	19.6	4,260
	May 7, 1960	19.0	3,300
1961	Mar. 9, 1961	19.18	3,620
	Mar. 15, 1961	19.80	4,580
	Sept.15, 1961	23.09	13,000
1962	Nov. 4, 1961	23.10	12,200
	Nov. 18, 1961	22.25	10,000
	Mar. 20, 1962	20.84	6,500
1963	Mar. 6, 1963	19.90	4,760
1964	June 24, 1964	19.22	4,200

a From floodmark, site and datum then in use.

06903900 Chariton River near Rathbun, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1965	Mar. 19, 1965	20.30 b	4,300 c
	Apr. 10, 1965	19.94	5,190
	Sept. 22, 1965	22.98	10,000
1966	May 12, 1966	16.04	2,410
1967	June 16, 1967	20.31	5,680
	June 23, 1967	24.54	9,260
1968	Apr. 27, 1968	16.09	2,390
1969	Jan. 17, 1969	14.63 bd	--
	July 14, 1969	12.45	1,000
1970	May 14, 1970	13.92 d	--
	June 11, 1970	8.26	594
1971	Oct. 13, 1970	12.90	1,460
1972	Jan. 5, 1972	13.02	1,480
1973	May 7, 1973	14.77	1,830
1974	Oct. 3, 1973	14.92	1,880
1975	Apr. 1, 1975	12.14	1,190
1976	June 27, 1976	12.18	1,210
1977	Aug. 30, 1977	10.58	803
1978	Apr. 10, 1978	14.47 d	--
	May 17, 1978 e	--	1,240
1979	July 11, 1979	11.62	1,220
1980	Aug. 4, 1980	11.88	1,190
1981	Dec. 11, 1981	12.97	1,510
1982	Aug. 15, 1982	13.15	1,540
1983	Feb. 14, 1983	13.35	1,570
1984	Feb. 19, 1984	12.19	1,240

b Affected by ice. c About.
d Backwater from Walnut Creek. e And May 18-21, May 23-26.

06903980 Chariton River near Udell, Iowa

Location.--Lat 40°46'53", long 92°50'12", in NE1/4 sec.17, T.69 N., R.17 W., Appanoose County, at bridge, 5.0 mi west of Udell.
Drainage area.--631 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1973	May 2, 1973	852.22	2,130
1974	Oct. 5, 1973	857.58	5,000
1975	--	a	<2,000
1976	Mar. 5, 1976	856.72	4,300
1977	--	a	<2,000
1978	Apr. 10, 1978	857.35	4,800
1979	Apr. 21, 1979	852.08	2,200
1980	June 2, 1980	857.16	4,600
1981	July 4, 1981	859.37	6,400
1982	July 16, 1982	860.22	8,000
1983	Apr. 2, 1983	854.89	3,350
1984	June 9, 1984	853.07	2,700

a Peak stage did not reach bottom of gage.

06903990 Cooper Creek at Centerville, Iowa

Location.--Lat 40°45'02", long 92°51'36", in NW1/4 sec.30, T.69 N., R.17 W., Appanoose County, at bridge on State Highway 5, at north edge of Centerville
Drainage area.--47.8 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1966	May 11, 1966	68.1	590
1967	June 21, 1967	73.24	1,950
1968	May 20, 1968	72.03	1,530
1969	--	71.11	1,270
1970	May 14, 1970	76.88	3,800
1971	Oct. 9, 1970	74.47	2,400
1972	--	a	b
1973	May 1, 1973	75.15	2,800
1974	Oct. 3, 1973	76.32	3,500
1975	July 1, 1975	69.98	970
1976	Mar. 5, 1976	76.05	3,300
1977	--	a	b
1978	May 7, 1978	73.92	2,200
1979	Apr. 21, 1979	72.21	1,600
1980	June 2, 1980	76.47	3,600
1981	July 4, 1981	79.49	6,060
1982	July 16, 1982	80.45	7,000
1983	Apr. 2, 1983	73.97	2,220

a Peak stage did not reach bottom of gage.
b Discharge not determined.

06903990 Cooper Creek at Centerville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1984	June 9, 1984	74.17	2,300

06904000 Chariton River near Centerville, Iowa
(Discontinued Sept. 30, 1959)

Location.--Lat 40°44'20", long 92°48'05", in NE1/4 NW1/4 sec. 34, T.69 N., R.17 W., Appanoose County, on left bank 10 feet downstream from bridge on State Highway 2, 3.5 mi downstream from Cooper Creek, and 3 mi east of Centerville.
Drainage area.--708 mi².
Gage.--Recording. Datum of gage is 825.68 feet National Geodetic Vertical Datum of 1929.
Stage-discharge relation.--Defined by current-meter measurements below 18,000 ft³/s and extended by logarithmic plotting.
Flood stage.--18 ft.
Remarks.--Base for partial-duration series, 3,000 ft³/s.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1938	June 2, 1938	9.8	1,730
1939	Mar. 13, 1939	23.4	16,500
	Apr. 16, 1939	16.2	4,680
	Aug. 11, 1939	14.8	3,900
1940	May 10, 1940	10.5	2,150
1941	June 3, 1941	13.9	3,380
	June 9, 1941	15.2	4,080
1942	Nov. 1, 1941	13.9	3,530
	June 23, 1942	15.4	4,140
1943	Dec. 27, 1942	14.5	4,060
	May 17, 1943	21.9	9,610
	June 13, 1943	19.8	7,100
1944	Apr. 15, 1944	14.5	3,980
	Apr. 24, 1944	22.6	13,000
	May 3, 1944	14.1	3,790
	May 5, 1944	16.2	4,930
	June 11, 1944	21.2	8,410
1945	Oct. 3, 1944	13.4	3,450
	Feb. 14, 1945	14.2	3,820
	Mar. 25, 1945	13.6	3,540
	Apr. 16, 1945	15.6	4,580
	Apr. 18, 1945	19.8	7,080
	May 17, 1945	22.6	12,600
	June 16, 1945	14.7	4,080

06904000 Chariton River near Centerville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1946	Jan. 5, 1946	18.7	6,240
	Jan. 7, 1946	23.2	14,000
	Mar. 17, 1946	14.7	4,050
	Mar. 23, 1946	15.9	4,730
	June 20, 1946	24.2	21,700
	July 17, 1946	23.4	17,100
	Aug. 25, 1946	13.0	3,240
	Aug. 28, 1946	13.3	3,340
1947	Oct. 25, 1946	12.6	3,050
	Mar. 14, 1947	12.7	3,110
	Apr. 5, 1947	22.6	13,200
	Apr. 20, 1947	12.5	3,020
	Apr. 23, 1947	12.8	3,160
	May 29, 1947	13.1	3,290
	June 7, 1947	23.9	20,300
	June 13, 1947	14.5	3,980
	June 18, 1947	13.2	3,340
	June 23, 1947	22.9	14,400
1948	Feb. 28, 1948	13.5	3,760
	Mar. 1, 1948	13.6	3,820
	Mar. 19, 1948	14.8	4,510
1949	Feb. 24, 1949	16.0 a	3,600 b
	Feb. 27, 1949	17.96 a	4,010 b
	June 25, 1949	14.9	4,790
	July 21, 1949	12.1	3,200
1950	June 14, 1950	11.9	3,100
	June 21, 1950	21.8	10,800
1951	Feb. 19, 1951	12.11	3,500
	Apr. 7, 1951	11.60	3,270
	May 12, 1951	15.27	5,160
	June 24, 1951	11.41	3,180
1952	Mar. 13, 1952	12.80	3,850
	June 3, 1952	13.25	4,050
	June 21, 1952	15.16	5,110
1953	Apr. 3, 1953	13.99	4,450
1954	June 4, 1954	6.02	930
1955	Oct. 5, 1954	10.03	2,550

a Affected by ice. b About.

06904000 Chariton River near Centerville, Iowa--(Continued)

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft^3/s)
1956	Aug. 2, 1956	10.20	2,640
1957	July 29, 1957	11.37	3,180
1958	July 31, 1958	13.50	3,140
	Sept.10, 1958	13.10	3,040
1959	Feb. 27, 1959	12.77 a	3,100 b
	Mar. 22, 1959	13.06	3,750
	Mar. 26, 1959	12.59	3,510
	Apr. 1, 1959	11.78	3,130
	Apr. 20, 1959	13.99	4,200
	May 22, 1959	23.20	14,100
	June 1, 1959	17.90	6,810
Discontinued Sept. 30, 1959			

a Affected by ice. b About.

06904010 Chariton River near Moulton, Iowa

Location.--Lat 40°41'30", long 92°46'15" in NE1/4 sec.14, T.68 N., R.17 W., Appanoose County, on right bank 6 ft downstream from bridge on County J45 road, 0.7 mi downstream from Hickory Creek, 5.0 mi west of Moulton, 8.0 mi upstream from Iowa-Missouri border, 20.8 mi downstream from Rathbun dam and at mile 121.5.
Drainage area.--740 mi².
Gage.--Water-stage recorder. Datum of gage is 800.00 ft above National Geodetic Vertical Datum of 1929.
Stage-Discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1980	June 4, 1980	35.17	7,660
1981	July 5, 1981	36.17	9,250
1982	July 16, 1982	36.83	11,200
1983	Apr. 2, 1983	34.16	6,470
1984	June 10, 1984	32.51	5,070

06904040 Chariton River at Coal City, Iowa

Location.--Lat 40°35'35", long 92°42'40", in NE1/4 sec.20, T.67 N., R.16 W., Appanoose County, at bridge in Coal City.
Drainage area.--816 mi².
Gage.--Crest-stage gage.
Stage-discharge relation.--Defined by current-meter measurements.
Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (ft³/s)
1973	May 2, 1973	821.74	4,760
1974	Oct. 5, 1973	822.77	5,100
1975	--	a	b
1976	Apr. 25, 1976	821.68	4,600
1977	--	a	b
1978	July 22, 1978	821.78	4,800
1979	Oct. 16, 1978	821.72	4,800
1980	June 2, 1980	823.69	7,000
1981	July 5, 1981	823.94	7,400
1982	July 5, 1982	823.97	7,400
1983	--	a	<2,500
1984	--	a	<2,500

a Peak stage did not reach bottom of gage.
b Discharge not determined.

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