United States Department of the Interior
Geological Survey - Water Resources Division

SURFACE WATER RECORDS OF INDIANA

1962

Prepared in cooperation with

Indiana Flood Control and Water Resources Commission
State Department of Conservation, Division of Water Resources
State Highway Commission
State Board of Health
Corps of Engineers, U. S. Army

Copies of this report may be obtained from
District Engineer, Surface Water Branch
U. S. Geological Survey
Room 407, 611 North Park Avenue
Indianapolis 4, Indiana

CALENDAR FOR WATER YEAR 1962

OCTOBER 1961

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

NOVEMBER 1961

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

DECEMBER 1961

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

JANUARY 1962

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

FEBRUARY 1962

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

MARCH 1962

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

APRIL 1962

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

MAY 1962

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

JUNE 1962

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JULY 1962

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

AUGUST 1962

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

SEPTEMBER 1962

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

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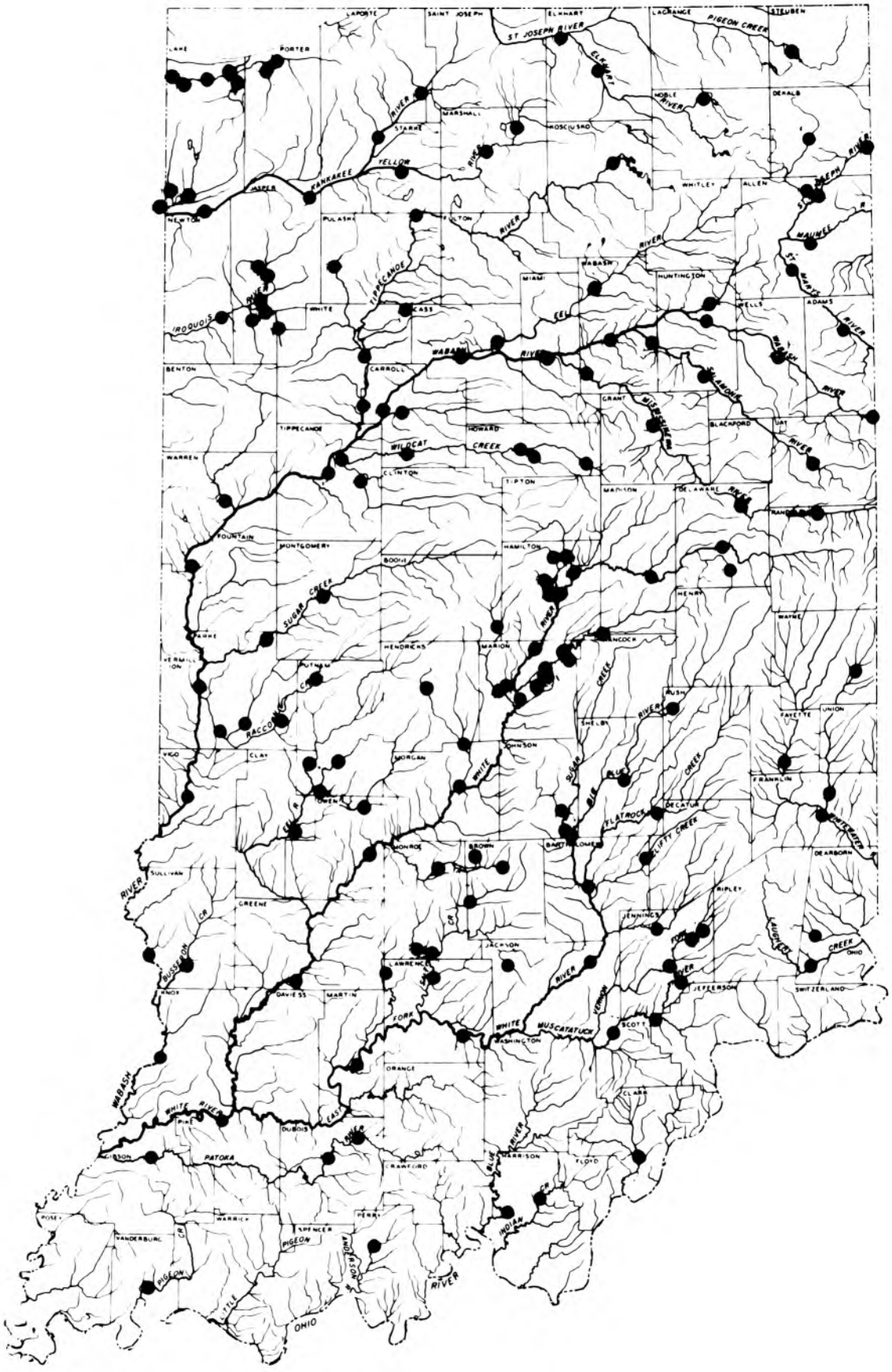
MAP SHOWING LOCATION OF GAGING STATIONS IN INDIANA



SURFACE WATER RECORDS OF INDIANA, 1962

INTRODUCTION

The surface-water records for the 1962 water year for gaging stations, partial-record stations, and miscellaneous sites within the State of Indiana are given in this report. For convenience there are also included records for a few pertinent gaging stations in bordering States. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey, under the direction of Malcolm D. Hale, district engineer, Surface Water Branch.

Through September 30, 1960, the records of discharge and stage of streams and contents and stage of lakes or reservoirs were published in an annual series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Since 1951 there have been 20 volumes in the series; each volume covered an area whose boundaries coincided with those of certain natural drainage areas. The records in Indiana were contained in Parts 3A, 4 and 5 of that series.

Beginning with the 1961 water year, streamflow records and related data will be released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these basic-data reports will be limited and primarily for local needs. The records later will be published in Geological Survey water-supply papers at 5-year intervals. These 5-year water-supply papers will show daily discharge and will be compiled on the same geographical areas previously used for the annual series; however, some of the 14 parts of conterminous United States will be further subdivided.

COOPERATION

Cooperative agreements between the U.S. Geological Survey and organizations of the State of Indiana for the systematic collection of streamflow records began in 1930. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreements with the Survey are:

> State Department of Conservation, Donald E. Foltz, director, through Division of Water Resources, C. H. Bechert, director; State Highway Commission, David Cohen, chairman, G. E. Goodwin, executive director, and F. L. Ashbaucher, chief engineer; State Board of Health, A. C. Offutt, commissioner, and B. A. Poole, director, Bureau of Environmental Sanitation; Indiana Flood Control and Water Resources Commission, Joe H. Nixon, chairman, J. I. Perrey, chief engineer.

Assistance in the form of funds or services was given by the Corps of Engineers, U. S. Army, in collecting records for 43 gaging stations published in this report.

The following organizations aided in collecting records:

> City of Indianapolis, through its Board of Public Works and Sanitation and its Flood Control Board; cities of Anderson, Bloomington, Muncie, North Vernon, Richmond, and Jasper; Indianapolis Water Co.; Indianapolis Power and Light Co.; Public Service Co. of Indiana; Container Corporation of America; Continental Steel Co.; city of Ft. Wayne Filtration Plant; Indiana and Michigan Electric Co.; Sanitary District of Chicago; and city of Hammond.

DEFINITION OF TERMS AND ABBREVIATIONS

The terms of streamflow and other hydrologic data, as used in this report, are defined as follows:

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height 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 obtained.

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

Cubic foot per second (cfs) is the rate of discharge of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

Cubic feet per second per square mile (cfsm) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Runoff in inches (in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.983471 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

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

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, a long reach of the channel, or an artificial structure.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

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

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

DOWNSTREAM ORDER AND STATION NUMBERS

Stations are listed in the same downstream order used in the water-supply papers. Records are listed in a downstream direction along the main stem with all stations on a tributary entering above a main-stem station listed before that station. If a tributary enters between two main-stem stations, it is listed between them. A similar order is followed listing stations on first rank, second rank, and other ranks of tributaries. To indicate the rank of any tributary on which a gaging station is situated and the stream to which it is immediately tributary, each indention in the listing of gaging stations in the table of contents of this report represents one rank. This downstream order and system of indention shows which gaging stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each gaging station is situated.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. The numbers have been assigned in the same downstream order used in the annual series of water-supply papers. In assigning station numbers, no distinction is made between partial-record stations and continuous-record gaging stations, so that the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Gaps are left in the numbers to allow for new stations that may be established; hence the numbers are not consecutive.

The complete number for each station, such as 3A-3355.00, includes the part number "3A" and a six digit station number. In this report, the part number and only the essential digits of the station number are shown. For example, the complete number 3A-3355.00 would appear as 3A-3355, just to the left of the station name. In this report, the records are listed in downstream order by parts. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. Records of stage are obtained either from a water-stage recorder that gives a continuous chart of the fluctuations or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter by the general methods

adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in Water-Supply Paper 888 and are also outlined in standard textbooks on the measurement of stream discharge.

Rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height, to those rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is in effect the shifting-control method.

At some gaging stations the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in determining discharge. Information required for determining the slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage. For such stations, the rate of change in stage is used as a factor in determining discharge.

At some gaging stations the stage-discharge relation is affected by ice during the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and engineers, and comparable records of discharge for other stations in the same or nearby basins.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute the daily discharge. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated

on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins.

The data in this report generally comprise a description of the station, a skeleton rating table, and a table showing the daily discharge and monthly and yearly discharge of the stream. Records are published for the water year which begins on October 1 and ends on September 30. A calendar for the 1962 water year is shown on page 11 to facilitate finding the day of the week for any date.

The description of the station gives the location, drainage area, records available, type and history of gages, average discharge, extremes of discharge, and general remarks. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage given under "Location" for some stations, is that determined and used by the Corps of Engineers unless otherwise noted. Under "Records available" are given periods for which there are published records for the present station or for stations generally equivalent to the present one. Under "Gage" are given the type of gage currently in use and the datum of the gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of records available. The references to "datum of 1929" and adjustments of other years are to the datum and adjustments of the U.S. Coast and Geodetic Survey. Under "Average discharge" is given the average discharge for the number of years indicated. It is not given for stations having fewer than five complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. Under "Extremes" are given the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation (also the minimum discharge if useful); and the minimum gage height if it is significant. In the first paragraph, the data given are for the complete current water year unless otherwise specified. In the second paragraph, the data given are for the periods of record within the calendar year dates in the heading (not necessarily those for the complete years indicated by the heading dates). Reliable information concerning major floods that have occurred outside the period of record are given in the third or last paragraph under "Extremes." Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder, a crest-stage indicator, or a non-recording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge, it is given separately. Information pertaining to the accuracy of the records and to conditions which affect the natural flow at the gaging station is given under "Remarks."

Skeleton rating tables are published for all stations except those for which the daily discharge for the greater part of the open-water period was determined by the shifting-control method, the slope method, or other special methods involving an equivalent adjustment to the gage height of more than one-tenth foot. Skeleton rating tables generally are not published for canals, ditches or springs.

The daily table gives the discharge corresponding to the daily mean gage height unless there are large or rapid changes in the discharge during a day. For days having large or rapid changes, discharge for the day is computed by averaging the mean discharges for several parts of a day. For stations equipped with nonrecording gages, the daily discharge corresponds to once-daily readings of the gage or to the mean of twice-daily readings; but for periods of rapidly changing stage the discharge is determined from a gage-height graph based on gage readings.

In the table of daily discharge, the figures for the maximum day and the minimum day for each month are underlined. If the figure is repeated, it is underlined only on the first day of its occurrence.

In the monthly summary below the daily table, the line headed "Total" gives the sum of the daily figures; it is the total cfs-days for the month. The line headed "Mean" gives the average flow in cubic feet per second during the month. Discharge for the month is expressed in cubic feet per second per square mile (line headed "Cfsm"), and in inches (line headed "In.").

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges, not the momentary discharges when the water was at crest stage. Likewise, the minimums in this summary are the minimum daily discharges.

Subsequent to July 27, 1961, all stations east of the new time-zone boundary line between Eastern Standard and Central Standard time have been operated on Eastern Standard time. Peak discharges and their times of occurrence and corresponding gage heights for most stations are listed below the table of daily and monthly discharge. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any stream for which the peaks are subjected to substantial control by man. Time of day is expressed in 24-hour time, for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330.

Footnotes to the table of daily discharge indicate periods for which discharge was computed or estimated by unusual or special

methods because of no gage-height record, ice effect, or other conditions that reduce the degree of accuracy of the records. The footnotes are either reference footnotes, with corresponding symbols used in the table of daily discharge to indicate the days included, or general footnotes, introduced by the word "Note," in which the days included are stated. The methods used in computing data for such footnoted periods have been explained in preceding paragraphs.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description states the degree of accuracy of the records. "Excellent" indicates that, in general, the error in the daily records is believed to be less than 5 percent; "good," less than 10 percent; "fair," less than 15 percent; and "poor," probably more than 15 percent. The records of monthly and yearly mean discharge and runoff are, in general, more nearly accurate than the daily records.

Discharge at some stations, as indicated by the monthly mean, may vary widely from natural runoff, owing to diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur when relatively large negative adjustments are made or when evaporation is large in comparison with the observed discharge.

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SUPPLEMENTAL DATA

Data collected at partial-record stations and at miscellaneous sites are given at the end of this report. The data are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations, and the second is a table of discharge measurements at miscellaneous sites. Data on records available on lakes in Indiana are given in a third table.

A compilation of records for the area covered by this report through September 1950 has been published as Water-Supply Papers 1305(3A), 1307(4), and 1308(5). These reports contain a summary of monthly and annual discharges for all previously published records as well as some records not contained in the annual series of water-supply papers. All records were re-examined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical.

Information of a more detailed nature than that published for most of the gaging stations is on file in the district office, such as discharge measurements and recorder charts or nonrecording-gage readings. Most gaging-station records in the State through 1959 have been analyzed with an electronic computer to give: (1) the number of days in each year that the daily discharge was between selected limits (duration tables); (2) the lowest mean discharge for selected numbers of consecutive days in each year; and (3) the highest mean discharge for selected numbers of consecutive days in each year.

MIAMI RIVER BASIN

3-2750. Whitewater River near Alpine, Ind.

Location.--Lat 39°34'23", long 85°09'27", in sec. 14, T. 13 N., R. 12 E., on right bank, 500 ft downstream from highway bridge, 0.4 mile downstream from Wilson Creek, 1.6 miles northeast of Alpine, and 4.7 miles upstream from Bear Creek.

Drainage area.--539 sq mi.

Records available.--October 1928 to September 1962. Prior to October 1936, published as West Fork Whitewater River near Alpine.

Gage.--Water-stage recorder. Datum of gage is 750.19 ft above mean sea level, datum of 1929. Prior to Nov. 9, 1928, staff gage at same site and datum.

Average discharge.--34 years, 541 cfs.

Extremes.--Maximum discharge during year, 9,720 cfs Feb. 27 (gage height, 12.06 ft); minimum, 100 cfs Sept. 29, 30 (gage height, 4.14 ft).
1928-62: Maximum discharge, 35,000 cfs Jan. 14, 1937 (gage height, 16.61 ft); minimum, 14 cfs Sept. 22, 1931; minimum daily, 30 cfs Aug. 6, 1934.
Flood in March 1913 reached a stage of about 18.5 ft, from floodmarks, at site 2,700 ft upstream.

Remarks.--Records good.

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 16; stage-discharge relation affected by ice Dec. 30, 31, Jan. 11, 12, Feb. 9)

Oct. 1 to Jan. 27		Jan. 28 to Sept. 30	
4.4	127	4.1	91
4.9	330	4.5	202
5.5	682	5.0	408
6.0	1,120	6.0	1,180
9.0	4,860	11.0	7,640

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	380	157	190	285	634	1,610	870	1,090	465	158	176	237
2	276	153	183	285	530	1,120	830	1,220	436	155	170	226
3	236	153	183	285	530	950	710	870	384	230	164	186
4	211	175	237	285	634	830	634	598	360	296	158	192
5	198	164	1,770	330	790	750	598	465	360	226	152	202
6	183	160	873	883	598	670	598	408	338	202	180	170
7	168	157	517	1,730	465	634	564	384	338	186	* 192	155
8	160	150	405	827	430	598	530	384	317	173	173	146
9	157	147	355	580	400	1,980	530	436	296	230	158	143
10	153	147	355	460	380	2,730	465	384	275	* 196	152	140
11	147	144	355	350	384	2,360	465	408	275	173	143	* 135
12	144	144	* 355	340	384	3,360	436	384	* 256	237	137	124
13	140	147	330	345	384	1,980	436	338	237	226	137	124
14	140	* 147	285	355	* 465	1,380	436	317	223	311	135	124
15	137	147	280	4,500	465	1,080	408	296	216	2,180	132	122
16	137	308	280	* 3,860	408	950	384	* 275	202	1,380	130	119
17	* 137	308	487	1,610	384	830	* 360	275	189	1,430	127	114
18	134	272	517	1,120	360	750	360	256	189	598	124	112
19	140	240	580	872	436	750	360	256	189	408	119	109
20	144	223	1,010	752	436	* 830	338	234	186	338	114	107
21	137	206	647	682	408	4,520	338	230	176	296	114	105
22	134	202	517	3,170	756	3,480	317	745	170	275	112	105
23	134	240	487	1,500	870	1,860	360	384	167	275	109	105
24	134	258	487	917	530	1,380	338	296	164	256	107	102
25	147	258	430	717	564	1,120	317	275	164	256	107	107
26	144	240	405	2,860	6,500	990	317	578	158	275	170	107
27	134	227	405	3,860	5,440	870	296	634	155	256	167	105
28	130	215	380	1,380	3,230	750	296	710	152	223	140	102
29	127	202	330	990	----------	710	296	530	146	206	130	102
30	211	202	285	870	----------	750	296	498	143	196	124	100
31	175	----------	285	670	----------	790	----------	530	----------	186	224	----------
Total	5,129	5,893	14,205	37,670	27,795	43,362	13,483	14,688	7,326	12,033	4,477	4,027
Mean	165	196	458	1,215	993	1,399	449	474	244	388	144	134
Cfsm	0.306	0.364	0.850	2.25	1.84	2.60	0.833	0.879	0.453	0.720	0.267	0.249
In.	0.35	0.41	0.98	2.59	1.92	3.00	0.93	1.01	0.51	0.83	0.31	0.28

Calendar year 1961 : Max 12,600 Min 62 Mean 708 Cfsm 1.31 In. 17.82
Water year 1961-62 : Max 6,500 Min 100 Mean 521 Cfsm 0.967 In. 13.12

Peak discharge (base, 6,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-16	0030	11.22	7,470				
1-27	0200	10.26	6,580				
2-27	0300	12.06	9,720				

* Discharge measurement made on this day.

3-2755. East Fork Whitewater River at Richmond, Ind.

Location.--Lat 38°48'24", long 84°54'26", in SE¼ sec. 7, T. 13 N., R. 1 W., on left bank, 50 ft downstream from highway bridge, three-quarters of a mile south of Richmond, and 2 miles upstream from Short Creek.
Drainage area.--123 sq mi.
Records available.--April 1949 to September 1962.
Gage.--Water-stage recorder. Datum of gage is 854.01 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to July 27, 1949, wire-weight gage at same site and datum.
Average discharge.--13 years, 123 cfs.
Extremes.--Maximum discharge during year, 4,170 cfs Feb. 26 (gage height, 7.56 ft); minimum, 8.8 cfs Oct. 9; minimum gage height, 0.28 ft Sept. 21.
1949-62: Maximum discharge, 14,100 cfs Jan. 21, 1959 (gage height, 12.44 ft), from rating curve extended above 5,000 cfs on basis of contracted-opening measurement of peak flow; maximum gage height, 12.49 ft Jan. 15, 1950; minimum discharge, 0.6 cfs Sept. 21, 1955; minimum gage height, -0.12 ft Sept. 16, 1959.
Maximum stage known, 15.0 ft in March 1913, from floodmarks (discharge not determined).
Remarks.--Records fair except those for periods of indefinite stage-discharge relation, which are poor. Some regulation at low flow by powerplant above station. During periods of low flow, the City of Richmond diverts a small amount of water for municipal supply which is returned at the sewage plant below the gage.

Rating tables, water year 1961-62, except periods of ice effect and indefinite stage-discharge relation
(gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 5-8, 10-21, 24-26, July 21, 22, July 24 to Aug. 26)

Oct. 1 to Dec. 5

0.3	8.1	1.2	156
.4	16	2.0	377
.5	26	3.0	765
.6	40		

Dec. 6 to Sept. 30

0.3	15	2.0	460
.4	23	2.5	662
.5	34	4.0	1,430
.8	77	5.0	2,090
1.0	123	6.0	2,830
1.5	275		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	15	23	49	93	266	140	97	123	25	30	35
2	35	16	23	49	75	160	136	86	86	41	28	30
3	25	25	22	49	82	126	107	52	66	94	28	26
4	21	20	134	49	130	107	98	40	58	37	27	40
5	19	17	569	96	157	100	93	35	58	32	30	28
6	15	18	205	424	102	91	91	37	55	47	35	25
7	16	16	93	324	b 75	84	86	36	44	37	* 28	23
8	14	15	75	177	b 66	82	77	51	38	88	26	22
9	14	16	66	b 110	b 61	443	74	42	44	64	20	22
10	14	16	64	b 76	b 59	581	66	37	40	* 35	19	23
11	13	16	66	b 58	58	568	63	38	42	73	17	* 21
12	14	16	* 66	b 52	60	1,380	61	36	76	68	21	21
13	16	20	58	b 53	58	432	61	35	* 46	32	20	21
14	16	* 22	49	55	* 82	* 293	56	35	38	191	20	27
15	12	20	41	1,740	79	223	55	28	37	582	20	25
16	13	75	54	* 507	66	171	55	* 27	32	298	20	21
17	* 14	58	95	258	58	146	* 50	23	32	261	20	21
18	14	42	105	148	56	133	52	24	32	99	20	21
19	17	32	162	114	92	140	49	21	32	56	21	21
20	17	30	268	93	75	158	49	19	30	42	19	20
21	15	26	140	82	69	732	48	99	28	54	18	18
22	13	24	102	778	239	476	53	106	27	34	18	18
23	13	50	95	276	171	275	56	40	25	41	16	19
24	15	44	82	143	95	207	46	25	24	32	16	20
25	18	42	69	100	91	165	46	41	23	30	39	24
26	14	35	64	1,080	2,440	143	44	188	23	30	80	21
27	12	35	71	485	738	121	42	466	22	27	30	19
28	13	29	66	239	502	109	42	569	21	28	26	19
29	14	26	b 57	157	----------	98	41	198	21	28	24	19
30	23	23	b 49	128	----------	100	50	438	22	30	22	18
31	16	---------	b 49	98	----------	118	---------	217	----------	30	93	----------
Total	568	839	3,082	8,047	5,929	8,228	1,987	3,186	1,245	2,566	851	688
Mean	18.3	28.0	99.4	260	212	265	66.2	103	41.5	82.8	27.5	22.9
Cfsm	0.149	0.228	0.808	2.11	1.72	2.15	0.538	0.837	0.337	0.673	0.224	0.186
In.	0.17	0.25	0.93	2.43	1.79	2.48	0.60	0.96	0.38	0.78	0.26	0.21

Calendar year 1961 : Max 3,240 Min 9.3 Mean 125 Cfsm 1.02 In. 13.78
Water year 1961-62 : Max 2,440 Min 12 Mean 102 Cfsm 0.829 In. 11.24

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	1300	6.51	3,230				
1-26	1530	5.13	2,160				
2-26	1230	7.56	4,170				
3-12	0530	5.42	2,390				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Stage-discharge relation indefinite June 18 to July 1.

3-2760. East Fork Whitewater River at Brookville, Ind.

Location.--Lat 39°26'00", long 85°00'11", in NE¼NE¼ sec. 20, T. 9 N., R. 2 W., on right bank, 65 ft downstream from bridge on State Highway 101, 0.9 mile northeast of Brookville, and 1.8 miles upstream from mouth.

Drainage area.--382 sq mi.

Records available.--March 1954 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 623.76 ft above mean sea level, datum of 1929. Prior to May 22, 1954, wire-weight gage at site, 65 ft upstream at same datum.

Average discharge.--8 years, 386 cfs.

Extremes.--Maximum discharge during year, 8,940 cfs Feb. 26 (gage height, 7.21 ft); minimum, 47 cfs Aug. 25 (gage height, -0.06 ft).
1954-62: Maximum discharge, 36,100 cfs Jan. 21, 1959 (gage height, 16.50 ft); minimum, 18 cfs Sept. 19, 1955; minimum gage height, that of Aug. 25, 1962.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 10, 13-16, Dec. 29 to Jan. 5, Jan. 11, 12, Feb. 13, 17-19, May 17-21, 24, 25)

Oct. 1 to Feb. 26				Feb. 27 to Sept. 30			
0.0	45	2.5	1,220	-0.10	42	3.5	2,260
.2	62	4.0	2,890	.2	88	4.0	2,890
.5	130	6.0	6,300	.7	205	5.0	4,380
1.0	300	7.0	8,500	1.2	389	6.0	6,300
1.5	542			2.3	1,060		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	438	96	114	189	366	1,140	655	371	389	70	100	205
2	216	77	108	199	300	685	598	878	342	74	96	135
3	141	70	103	199	321	570	542	414	252	110	92	94
4	108	84	101	213	389	516	464	305	235	192	90	84
5	89	93	877	238	490	464	438	270	205	106	88	102
6	79	81	632	570	366	389	438	220	205	181	102	79
7	74	72	414	878	300	389	414	235	178	109	124	74
8	65	70	280	598	b 210	389	389	220	160	112	* 92	70
9	62	69	256	389	190	1,100	366	235	147	345	84	67
10	60	69	242	321	190	1,800	324	220	152	147	77	64
11	59	67	280	245	195	1,580	305	252	178	* 106	74	62
12	58	67	256	227	b 205	3,450	305	205	192	96	68	* 62
13	55	65	* 213	b 230	238	1,650	305	192	* 173	152	67	116
14	55	65	177	b 235	300	1,060	288	175	152	288	70	205
15	55	* 76	161	3,090	* 321	* 812	270	162	128	1,660	67	270
16	54	106	138	2,270	280	655	* 252	145	120	1,230	67	252
17	53	256	516	* 845	238	570	252	* 130	112	812	65	252
18	* 53	183	438	598	223	516	252	120	104	438	64	252
19	52	167	598	464	245	516	235	114	106	305	64	252
20	60	136	845	389	280	516	220	106	108	235	60	235
21	62	122	598	342	260	4,190	220	98	100	192	57	96
22	60	103	438	2,910	366	2,230	205	192	92	192	57	88
23	56	189	414	1,260	570	1,140	220	178	92	173	54	88
24	55	280	414	655	655	845	220	130	84	162	49	83
25	60	209	342	490	795	685	205	104	81	140	47	83
26	59	177	300	1,220	6,560	598	192	459	77	192	147	84
27	61	164	300	1,900	4,830	516	192	655	77	133	128	64
28	60	144	260	715	2,830	464	178	1,310	72	118	84	52
29	58	130	234	570	----------	438	178	598	70	110	72	53
30	62	125	206	516	----------	438	178	438	68	108	67	53
31	150	---------	203	342	----------	490	---------	655	----------	104	81	----------
Total	2,629	3,612	10,458	23,307	22,513	30,801	9,300	9,786	4,451	8,392	2,454	3,676
Mean	84.8	120	337	752	804	994	310	316	148	271	79.2	123
Cfsm	0.222	0.314	0.882	1.97	2.10	2.60	0.812	0.827	0.387	0.709	0.207	0.322
In.	0.26	0.35	1.02	2.27	2.19	3.00	0.91	0.95	0.43	0.82	0.24	0.36

Calendar year 1961 : Max 8,940 Min 39 Mean 432 Cfsm 1.13 In. 15.34
Water year 1961-62 : Max 6,560 Min 47 Mean 360 Cfsm 0.942 In. 12.80

Peak discharge (base, 4,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-26	0700	7.21	8,940				
3-21	1430	5.37	5,100				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Discharge computed from twice daily wire-weight gage readings Oct. 1 to Dec. 4, Dec. 6 to Jan. 14, Jan. 17-21, 24-26, Jan 28 to Feb. 25, Mar. 2-8, 15-20, Mar. 24 to May 27, May 29 to July 14, July 17 to Sept. 30.

3-2765. Whitewater River at Brookville, Ind.

Location.--Lat 39°24'24", long 85°00'45", in NW¼ sec. 32, T. 9 N., R. 2 W., on right bank at downstream side of highway bridge, 0.3 mile downstream from East Fork and 1.1 miles south of Brookville.

Drainage area.--1,239 sq mi.

Records available.--June 1915 to September 1917, October 1917 to May 1920 (gage heights only), and July 1923 to September 1962. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 595.71 ft above mean sea level, datum of 1929. July 1923 to Sept. 27, 1928, chain gage at same site and datum. Prior to July 1923, chain gage at same site at datum 1.5 ft higher.

Average discharge.--41 years (1915-17, 1923-62), 1,274 cfs.

Extremes.--Maximum discharge during year, 26,500 cfs Feb. 26 (gage height, 15.67 ft); minimum, 200 cfs Sept. 28 (gage height, 0.72 ft).
1915-20, 1923-62: Maximum discharge, 81,800 cfs Jan. 21, 1959 (gage height, 27.78 ft); from rating curve extended above 45,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 49 cfs Jan. 5, 1935; minimum gage height, 0.12 ft Sept. 21, 1955.
Maximum stage known, 39.0 ft Mar. 25, 1913 (present datum), from floodmarks (discharge not determined).

Remarks.--Records good

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 12, 13, Feb. 8-10)

Oct. 1 to Mar. 1				Mar. 2 to Sept. 30			
1.1	200	5.0	3,460	0.7	200	4.0	2,530
1.4	335	8.0	7,800	1.0	288	6.0	5,250
2.0	735	12.0	16,500	1.5	490	10.0	12,900
3.0	1,510	13.0	19,000	2.0	775		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,060	292	347	665	1,350	3,700	2,320	1,410	1,140	272	321	468
2	665	272	335	630	1,110	2,640	2,220	3,280	980	272	304	454
3	428	263	324	630	1,110	2,120	1,820	1,820	742	361	288	321
4	353	286	436	665	1,270	1,820	1,550	1,300	650	490	288	321
5	324	303	2,760	772	1,510	1,640	1,460	1,060	620	402	288	321
6	286	281	1,750	1,600	1,270	1,460	1,380	910	590	417	288	288
7	263	268	1,190	2,760	850	1,380	1,380	840	540	600	360	272
8	250	259	885	1,830	750	1,380	1,220	808	515	360	* 321	256
9	237	259	735	1,190	700	4,900	1,220	840	515	545	288	256
10	233	255	772	922	700	5,930	1,060	808	515	381	272	242
11	226	250	885	810	735	4,570	1,020	1,060	490	* 321	256	256
12	222	246	810	740	772	8,090	980	910	468	414	256	* 242
13	218	241	* 735	740	772	4,250	1,020	775	490	402	256	272
14	222	250	595	772	1,040	2,970	980	710	* 445	673	256	343
15	222	* 255	560	9,220	* 1,040	* 2,420	910	650	424	5,600	256	424
16	215	460	595	7,880	922	2,020	* 875	590	381	3,650	256	402
17	211	700	1,830	* 2,980	848	1,820	840	* 565	360	2,120	256	381
18	* 211	525	1,590	2,100	810	1,640	840	540	360	1,380	242	381
19	222	440	1,830	1,750	960	1,550	775	490	590	910	242	402
20	230	395	2,280	1,510	1,040	1,640	742	490	402	680	242	338
21	233	365	1,670	1,350	885	12,000	710	478	340	590	242	242
22	226	347	1,270	7,940	1,430	8,050	680	1,090	340	540	242	242
23	218	525	1,270	3,820	2,010	3,950	742	808	321	515	242	242
24	215	665	1,270	2,190	2,560	2,970	710	565	304	490	242	227
25	226	560	1,040	1,750	2,430	2,420	680	515	304	445	242	227
26	226	492	922	2,670	18,200	2,120	650	1,090	304	490	326	242
27	218	447	960	6,340	13,200	1,730	620	2,120	288	424	323	214
28	215	414	848	2,760	9,100	1,640	590	2,530	288	381	272	214
29	211	377	735	2,100	----------	1,460	590	1,380	272	360	242	214
30	246	359	735	1,750	----------	1,550	590	1,460	272	340	242	214
31	359	----------	700	1,350	----------	2,020	----------	1,380	----------	321	293	----------
Total	8,891	11,051	32,664	74,186	69,374	97,850	31,174	33,272	14,250	25,146	8,444	8,918
Mean	287	368	1,054	2,393	2,478	3,156	1,039	1,073	475	811	272	297
Cfsm	0.232	0.297	0.851	1.93	2.00	2.55	0.839	0.866	0.383	0.655	0.220	0.240
In.	0.27	0.33	0.98	2.22	2.08	2.94	0.94	1.00	0.43	0.76	0.25	0.27

Calendar year 1961: Max 30,300 Min 140 Mean 1,479 Cfsm 1.19 In. 16.19
Water year 1961-62: Max 18,200 Min 211 Mean 1,138 Cfsm 0.918 In. 12.47

Peak discharge (base, 12,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	1630	11.22	14,500				
1-22	1100	10.73	13,300				
2-26	1400	15.67	26,500				
3-21	1000	11.05	15,200				

* Discharge measurement made on this day.

3-2767. South Hogan Creek near Dillsboro, Ind.

Location.--Lat 38°01'47", long 85°02'17", in NW¼ sec. 7, T. 4 N., R. 2 W., on left downstream abutment of bridge on county road at Dillsboro station, 1¼ miles northeast of Dillsboro, and 1½ miles downstream from Whitaker Creek.

Drainage area.--38.2 sq mi.

Records available.--July 1961 to September 1962. Occasional low-flow measurements, water year 1960.

Gage.--Water-stage recorder. Datum of gage is 571.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 7,440 cfs Jan. 22 (gage height, 10.19 ft, from floodmark); no flow for several days in August and September.
1961-62: Maximum discharge, that of Jan. 22, 1962; no flow for several days in 1961-62.
Flood of Jan. 21, 1959, reached a stage of 14.00 ft (discharge, 16,300 cfs, computed from contracted-opening).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 10-15, Mar. 10-20)

Oct. 1 to Feb. 24

1.34	0.0	1.7	4.4	2.8	102
1.4	.2	1.9	12	3.0	147
1.5	.7	2.2	30	3.5	298
1.6	1.8	2.5	57	4.0	493

Feb. 25 to Sept. 30

1.20	0.0	1.7	7.9	3.5	312
1.3	.4	1.8	14	4.0	493
1.4	1.1	2.0	27	5.0	1,010
1.5	2.2	2.5	85	6.0	1,750
1.6	4.3	3.0	178	7.0	2,710

Note.--Same as following table above 4.0 ft.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.8	6.2	13	16	65	62	29	6.6	1.8	1.3	2.0
2	1.6	.8	5.5	12	15	45	* 37	35	4.0	g* 1.6	* .8	2.7
3	1.1	1.3	5.5	13	15	33	30	20	3.1	g 7.4	.6	1.7
4	.9	1.2	6.0	15	20	31	26	12	* 3.1	g 22	.5	1.7
5	.8	1.4	* 140	24	26	32	25	9.4	2.9	g 11	.4	2.2
6	.6	1.2	29	169	18	28	25	8.9	3.1	g 28	.5	2.0
7	.5	1.1	19	129	* 12	29	23	8.9	2.4	g 231	1.0	1.3
8	.3	1.0	14	40	12	49	21	8.4	1.7	29	1.0	.8
9	.2	.9	14	b* 25	22	559	25	7.9	1.5	16	.9	.7
10	.2	* .8	119	b 18	24	186	21	* 6.6	3.0	11	.7	* .7
11	.2	.7	91	b 16	21	129	20	30	15	5.8	.5	.6
12	* .2	.7	78	b 16	16	283	19	18	15	3.6	.3	.4
13	.2	.9	34	b 15	16	* 100	19	12	7.4	11	.3	.3
14	.2	2.5	20	15	22	61	19	8.9	4.0	151	.2	.3
15	.1	7.0	17	* 738	17	49	17	6.6	2.6	2,350	.2	.4
16	.1	133	67	92	18	43	15	4.8	1.8	355	.2	.3
17	.1	29	252	g 59	20	38	14	3.8	1.3	50	.2	.2
18	.1	12	138	g 33	20	34	14	2.9	.9	29	.1	.2
19	.1	10	133	g 21	30	36	13	2.4	20	20	.1	.1
20	.2	8.0	94	g 17	21	62	12	2.2	5.7	14	.1	0
21	.2	6.5	39	g 16	22	728	11	2.2	2.6	11	0	0
22	.2	5.5	30	g 1,360	91	126	11	2.0	1.6	7.9	0	0
23	.5	140	76	65	471	58	12	1.8	1.1	8.9	0	0
24	.5	29	58	33	256	44	11	1.5	352	7.9	0	0
25	.5	19	30	26	164	35	8.9	1.6	30	5.1	0	0
26	.5	14	22	86	1,280	32	8.9	26	14	4.0	0	0
27	.4	11	24	103	966	25	7.4	97	7.4	3.4	.1	0
28	.4	9.0	22	32	414	23	7.0	42	4.3	2.6	1.2	0
29	.4	8.0	18	24	----------	21	7.0	16	2.9	2.2	.7	0
30	.5	7.0	17	22	----------	21	7.4	20	2.1	2.1	.4	0
31	.8	----------	14	18	----------	70	----------	11	----------	1.7	.8	----------
Total	13.0	463.3	1,632.2	3,265	4,045	3,075	548.6	458.8	523.1	3,405.0	13.1	18.6
Mean	0.42	15.4	52.7	105	144	99.2	18.3	14.8	17.4	110	0.42	0.62
Cfsm	0.011	0.403	1.38	2.75	3.77	2.60	0.479	0.387	0.455	2.88	0.011	0.016
In.	0.01	0.45	1.59	3.17	3.93	3.00	0.53	0.45	0.51	3.32	0.01	0.02

Calendar year 1961: Max - Min - Mean - Cfsm - In. -
Water year 1961-62: Max 2,350 Min 0 Mean 47.8 Cfsm 12.5 In. 16.99

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-22	unknown	10.19	7,440				
2-23	1900	6.82	2,500				
2-26	0500	8.68	4,940				
7-1	1100	9.63	6,400				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
g Mean daily gage heights computed from twice-daily readings of wire-weight gage.
Note.--No gage-height record Oct. 31 to Nov. 9, Nov. 18 to Dec. 5.

3-2770. Laughery Creek near Farmers Retreat, Ind.

Location.--Lat 38°57'05", long 85°04'22", in sec. 2, T. 4 N., R. 3 W., on right bank, 2 miles southeast of Farmers Retreat and 3 3/4 miles downstream from Bear Creek.

Drainage area.--248 sq mi.

Records available.--October 1940 to September 1962.

Gage.--Water-stage recorder. Altitude of gage is 526 ft (by barometer). Prior to Apr. 16, 1941, staff gage at same site and datum.

Average discharge.--22 years, 280 cfs.

Extremes.--Maximum discharge during year, 7,750 cfs July 15 (gage height, 12.44 ft); minimum, 1.7 cfs Sept. 24, 26, 27; minimum gage height, 0.36 ft Aug. 24, 25.
1940-62: Maximum discharge, 47,800 cfs Jan. 21, 1959 (gage height, 21.13 ft), from rating curve extended above 14,000 cfs on basis of slope-area measurement of peak flow; no flow at times in most years.

Remarks.--Records good. Some regulation at low flow by mill above station.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 15				Jan. 15 to Sept. 30			
0.4	2.0	1.1	34	0.3	1.2	1.2	40
.5	3.0	1.4	73	.4	2.2	1.5	82
.6	4.3	2.0	190	.5	3.5	2.0	185
.7	6.4	3.0	450	.6	5.4	3.0	440
.8	9.6	4.0	800	.7	8.2	5.0	1,200
.9	14	5.0	1,260	.8	12	8.0	3,050
				.9	16	10.0	4,800

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	4.8	49	b 105	172	1,200	663	80	46	12	20	7.4
2	18	4.8	43	89	138	500	470	112	35	* 19	* 16	19
3	112	7.7	40	79	128	335	* 360	174	29	29	15	14
4	66	7.2	45	89	132	272	248	132	24	26	14	11
5	37	8.7	* 497	114	138	260	210	87	* 24	32	11	18
6	25	7.5	392	454	210	248	185	66	21	34	10	21
7	17	6.9	203	1,110	149	210	160	58	18	281	11	15
8	14	6.4	123	532	99	244	138	51	15	529	11	11
9	8.7	5.8	102	b* 230	176	2,020	149	48	15	150	17	8.2
10	7.5	* 6.6	364	b 145	191	2,500	124	* 45	18	60	25	* 7.1
11	5.8	9.0	450	b 130	138	1,100	122	139	27	36	21	6.2
12	* 5.2	8.7	480	b 120	118	2,040	112	165	66	28	16	5.4
13	5.0	8.4	275	b 115	* 110	* 1,060	110	140	46	22	13	4.6
14	4.3	23	179	b 110	124	570	103	85	30	144	9.6	5.4
15	3.6	32	127	1,890	182	410	101	79	21	3,420	7.9	5.2
16	3.4	339	172	2,110	172	310	94	50	15	3,850	6.5	4.4
17	3.0	280	800	552	160	248	84	40	13	772	6.0	3.9
18	2.7	149	920	322	172	210	77	35	10	272	5.7	3.2
19	2.3	91	645	272	210	198	72	30	11	149	5.7	2.7
20	2.4	66	840	210	272	185	65	26	19	99	4.4	2.4
21	2.7	52	450	149	248	2,360	59	24	12	71	3.5	2.1
22	3.6	43	275	3,600	460	2,230	58	24	9.6	60	3.4	2.0
23	3.6	451	288	*2,360	1,200	732	58	21	7.9	62	2.8	2.0
24	3.5	366	392	535	1,940	440	56	19	109	48	2.2	1.8
25	3.2	214	314	360	1,160	335	50	15	158	47	1.9	1.9
26	3.4	135	202	456	3,940	260	50	228	79	51	3.8	1.8
27	3.5	94	168	960	4,470	210	47	208	46	37	6.5	1.7
28	3.4	75	147	622	3,420	172	45	272	30	29	7.1	2.0
29	3.6	60	176	335	----------	149	42	114	21	26	6.0	2.1
30	3.7	54	147	260	----------	138	41	108	15	35	5.2	2.0
31	4.6	----------	b 120	198	----------	292	----------	68	----------	24	5.2	----------
Total	420.7	2,616.5	9,425	18,613	20,029	21,438	4,153	2,743	990.5	10,454	293.4	194.5
Mean	13.6	87.2	304	600	715	692	138	88.5	33.0	337	9.46	6.48
Cfsm	0.055	0.352	1.23	2.42	2.88	2.79	0.556	0.357	0.133	1.36	0.038	0.026
In.	0.06	0.39	1.42	2.79	3.00	3.22	0.62	0.41	0.15	1.57	0.04	0.03

Calendar year 1961 : Max 12,100 Min 2.3 Mean 375 Cfsm 1.51 In. 20.54
Water year 1961-62 : Max 4,470 Min 1.7 Mean 250 Cfsm 1.01 In. 13.70

Peak discharge (base, 6,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-22	0700	11.70	6,760				
2-26	0700	11.36	6,380				
7-15	2230	12.44	7,750				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

3-2940. Silver Creek near Sellersburg, Ind.

Location.--Lat 38°22'15", long 85°43'35", in SW¼ lot 68, Clark Military Grant, on upstream side of Straws Mill bridge on Watson Road, 0.3 mile downstream from Pleasant Run, 2.4 miles southeast of Sellersburg, and 11.9 miles upstream from mouth.

Drainage area.--188 sq mi.

Records available.--October 1954 to September 1962.

Gage.--Wire-weight gage read twice daily. Crest-stage gage since May 11, 1959. Altitude of gage is 430 ft (from topographic map).

Average discharge.--8 years, 231 cfs.

Extremes.--Maximum discharge during year, 7,800 cfs Feb. 27 (gage height, 23.04 ft); no flow Aug. 25.
1954-62: Maximum discharge, 19,600 cfs Jan. 22, 1959 (gage height, 30.89 ft from floodmarks), from rating curve extended above 6,300 cfs on basis of contracted-opening measurements of peak flow, at site 5.2 miles upstream, (drainage area, 164 sq mi), adjusted to gage site; no flow at times each year.

Remarks.--Records poor.

Rating table, water year 1961-62 (gage height, in feet, and discharge in cubic feet per second)
(Shifting-control method used Nov. 3-15, Dec. 4, 5, 9-12, 16-19, Feb. 11-14, 18, 21, 23 Apr. 29 to June 30; backwater from the Ohio River Mar. 2-7)

3.6	0	4.1	4.8	8.0	630
3.7	.1	4.2	9.8	0.0	1,090
3.8	.5	4.7	44	14.0	2,100
3.9	1.2	5.0	71	19.0	4,350
4.0	2.5	6.0	202	23.0	7,800

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	1.0	44	93	150	*2590	361	88	28	202	* 2.0	388
2	44	1.4	36	76	143	* 600	493	124	33	143	2.5	278
3	20	4.1	33	82	130	470	339	82	71	* 88	2.5	105
4	17	14	81	99	124	410	276	63	88	130	2.2	69
5	12	5.4	471	248	105	350	228	45	117	27	1.3	82
6	7.1	* 2.2	210	791	111	290	256	51	202	24	1.3	* 39
7	8.3	2.3	117	383	93	265	186	* 32	76	22	2.8	27
8	5.8	1.7	82	297	82	246	171	32	55	12	4.8	12
9	* 4.1	1.2	444	*227	188	1,200	* 157	31	26	12	6.2	14
10	4.8	1.4	814	157	478	768	157	36	27	12	3.9	14
11	8.3	3.6	768	136	210	791	164	308	* 71	4.1	4.1	14
12	7.1	2.0	*449	117	210	* 653	157	186	157	3.2	3.6	14
13	9.8	8.3	190	117	219	405	143	124	88	3.2	2.5	12
14	16	65	99	136	202	297	143	65	47	5.4	2.0	7.1
15	8.3	58	130	1,080	* 157	237	130	51	33	14	1.4	7.1
16	5.4	219	232	883	157	178	93	44	21	93	2.0	7.7
17	6.2	194	584	339	171	136	82	45	22	48	1.1	2.0
18	4.8	111	383	237	202	130	65	28	12	33	1.2	2.0
19	3.4	276	308	210	246	157	76	24	9.0	21	1.2	2.0
20	4.8	210	178	297	178	164	70	19	15	14	1.0	2.0
21	5.4	52	186	421	237	1,650	67	15	7.1	13	.3	2.0
22	4.8	44	186	3,250	276	860	67	150	9.0	12	.2	1.9
23	4.8	361	186	5,160	511	471	57	35	6.2	9.0	.2	1.1
24	7.1	219	186	792	2,150	361	53	25	5.2	4.8	.2	2.0
25	9.8	136	178	427	492	276	54	9.8	5.2	3.4	0	2.0
					2,980							
26	4.5	76	157	339	2,980	210	45	31	2.8	3.2	.8	2.0
27	1.0	54	178	339	7,000	178	41	25	2.2	2.2	1.5	2.0
28	1.2	52	171	276	6,300	157	40	33	4.5	1.2	1.8	1.0
29	3.2	48	117	246	----------	157	36	34	3.2	1.5	3.0	.8
30	6.6	46	105	210	----------	186	34	69	4.1	1.8	3.0	.4
31	4.8	---------	99	171	----------	339	---------	47	----------	1.1	11	----------
Total	274.4	2,269.6	7,402	17,636	23,502	15,182	4,241	1,951.8	1,247.5	964.1	71.6	1,113.1
Mean	8.85	75.7	239	569	839	490	141	63.0	41.6	31.1	2.31	37.1
Cfsm	0.047	0.403	1.27	3.03	4.46	2.61	0.750	0.335	0.221	0.165	0.012	0.197
In.	0.05	0.45	1.46	3.49	4.64	3.01	0.84	0.39	0.25	0.19	0.01	0.22

Calendar year 1961: Max 13,900 Min 1.0 Mean 297 Cfsm 1.58 In. 21.42
Water year 1961-62: Max 7,000 Min 0 Mean 208 Cfsm 1.11 In. 15.00

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-23	0630	21.25	6,000				
2-24	0630	15.40	2,610				
2-27	1630	23.04	7,800				
3-21	unknown	15.60	2,690				

* Discharge measurement made on this day.

3-3025. Indian Creek near Corydon, Ind.
(Formerly published as Big Indian Creek near Corydon, Ind.)

Location.--Lat 38°16'35", long 86°06'35", in SE¼ sec. 6, T. 3 S., R. 4 E., on upstream side of bridge on State Highway 335, 0.6 mile upstream from Raccoon Branch and 4½ miles north of Corydon.

Drainage area.--129 sq mi.

Records available.--October 1943 to September 1962. Prior to October 1961 published as Big Indian Creek near Corydon, Ind.

Gage.--Water-stage recorder. Datum of gage is 577.12 ft above mean sea level, datum of 1929. Dec. 9, 1948 to June 12, 1952, recorder records for stages above 6.3 ft. Prior to Dec. 9, 1948, wire-weight gage at same site and datum.

Average discharge.--19 years, 175 cfs.

Extremes.--Maximum discharge during year, 7,980 cfs Feb. 28 (gage height, 16.06 ft); minimum, 0.7 cfs Aug. 22-25 (gage height, 4.17 ft).

1943-62: Maximum discharge, 23,800 cfs Jan. 21, 1959 (gage height, 22.22 ft), from rating curve extended above 7,000 cfs on basis of contracted-opening measurement of peak flow; no flow at times during 1943-44, 1951-54, 1959, minimum gage height, that of Aug. 22-25, 1962.

Remarks.--Records fair.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-Nov. 15)

4.1	0	5.5	66
4.2	1.0	6.0	124
4.3	2.4	7.0	370
4.4	4.4	8.0	820
4.7	14	9.0	1,370
5.0	29	13.0	4,500

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	2.4	36	80	168	* 920	530	38	15	4.7	a 1.3	147
2	45	1.9	34	75	149	550	410	55	14	22	a 1.2	304
3	19	2.9	31	70	124	410	310	48	16	22	a 1.1	62
4	9.4	6.5	38	70	117	325	265	39	25	13	a 1.0	48
5	5.6	4.7	551	70	104	295	237	36	81	27	a 2.0	43
6	3.1	* 2.7	250	300	91	237	200	33	43	16	a 3.5	25
7	2.4	2.2	158	585	70	212	178	* 31	28	16	a 2.0	* 16
8	2.0	2.7	110	340	75	200	158	29	21	10	a 1.5	11
9	1.6	2.5	112	224	169	617	* 158	27	16	7.0	*a 1.0	8.8
10	* 1.4	2.5	644	149	325	550	132	25	14	4.9	1.1	7.6
11	1.4	2.4	632	130	224	410	124	271	* 26	* 3.9	1.2	6.5
12	1.4	2.0	* 450	124	200	* 410	132	149	75	3.9	1.1	5.2
13	1.9	3.3	295	117	178	325	117	80	46	3.7	1.0	4.7
14	2.2	20	212	104	158	265	104	57	30	a 2.5	1.0	7.3
15	2.2	35	168	1,160	* 132	224	97	43	22	a 2.7	.9	6.7
16	2.2	240	140	670	132	200	85	36	17	a 3.5	.9	5.7
17	2.4	172	366	370	124	168	80	30	14	23	.9	5.2
18	2.2	70	355	280	110	140	75	25	12	12	.9	5.4
19	2.2	46	325	224	140	140	70	22	10	6.5	.9	4.7
20	2.2	37	265	178	124	149	62	20	9.1	3.9	.8	3.9
21	1.9	31	212	149	117	1,220	57	19	7.0	a 3.0	.8	3.3
22	1.7	27	189	3,650	132	720	55	16	6.2	a 3.0	.8	2.4
23	1.9	358	168	1,110	366	430	51	15	5.4	a 3.5	.7	1.9
24	2.0	212	168	550	1,750	325	47	13	5.7	a 3.0	.7	1.6
25	2.0	168	132	390	620	265	44	12	6.7	a 2.5	.7	2.4
26	2.0	80	117	340	3,220	237	42	15	18	a 2.2	4.0	3.9
27	2.0	66	124	430	4,310	189	40	27	11	a 2.0	2.4	4.4
28	1.9	55	124	325	4,380	158	38	25	6.5	a 1.7	3.9	4.9
29	1.9	46	91	265	----------	140	36	22	4.9	a 1.6	3.9	4.9
30	2.0	40	104	237	----------	199	34	17	3.9	a 1.5	3.3	4.7
31	2.2	----------	85	189	----------	623	----------	17	----------	a 1.4	6.7	----------
Total	143.3	1,741.7	6,686	12,955	17,809	11,253	3,968	1,292	609.4	233.6	53.2	762.1
Mean	4.62	58.1	216	418	636	363	132	41.7	20.3	7.54	1.72	25.4
Cfsm	0.036	0.450	1.67	3.24	4.93	2.81	1.02	0.323	0.157	0.058	0.013	0.197
In.	0.04	0.50	1.92	3.74	5.13	3.24	1.14	0.37	0.18	0.07	0.01	0.22

Calendar year 1961: Max 8,910 Min 1.4 Mean 207 Cfsm 1.60 In. 21.77
Water year 1961-62: Max 4,380 Min 0.7 Mean 158 Cfsm 1.22 In. 16.56

Peak discharge (base, 4,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-22	1800	14.70	6,270				
2-28	0700	16.06	7,980				

* Discharge measurement made on this day.
a No gage-height record.

3-3030. Blue River near White Cloud, Ind.

Location.--Lat 38°14'15", long 86°13'50", in NW¼SE¼ sec. 19, T. 3 S., R. 3 E., on left bank, 400 ft downstream from Spring Creek, 0.2 mile upstream from bridge on State Highway 62, and three-quarters of a mile north of White Cloud.

Drainage area.--461 sq mi.

Records available.--October 1930 to September 1962. Monthly figures only for some periods, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 434.30 ft above mean sea level, datum of 1929. Prior to Nov. 16, 1938, staff gage at same site and datum.

Average discharge.--32 years, 617 cfs.

Extremes.--Maximum discharge during year, 16,200 cfs Feb. 27 (gage height, 16.34 ft); minimum, 18 cfs Aug. 23 (gage height, 1.57).
1930-62: Maximum discharge, 28,500 cfs Jan. 22, 1959 (gage height, 23.07 ft), from rating curve extended above 22,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 9.2 cfs Oct. 1, 1941; minimum gage height, 1.40 ft Sept. 20, 1940, Sept. 30, 1941.

Remarks.--Records good except those for periods of doubtful gage-height record, which are fair.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 27 to Dec. 5)

1.5	13	3.0	400
1.6	21	4.0	930
1.8	46	6.0	2,460
2.1	98	10.0	6,900
2.5	205	17.0	17,300

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	86	36	128	335	720	7,010	2,370	275	197	60	38	335
2	190	35	113	335	665	3,000	1,720	315	175	58	33	275
3	193	36	102	315	590	2,120	1,410	315	193	112	32	468
4	113	43	123	295	540	1,640	1,130	315	202	160	30	400
5	76	48	130	295	515	1,340	990	258	222	118	30	355
6	60	48	810	400	468	1,130	870	240	199	130	46	222
7	49	* 66	540	947	422	990	810	222	184	96	61	* 138
8	43	50	400	1,060	378	930	720	* 205	158	86	54	98
9	39	38	378	810	590	1,640	* 665	199	136	78	* 73	78
10	* 38	32	810	565	640	2,550	615	187	120	64	55	70
11	38	31	1,340	422	720	1,880	565	430	207	* 56	42	61
12	33	30	1,270	468	615	1,560	565	640	* 315	52	36	55
13	31	42	* 930	490	590	* 1,340	540	468	355	49	32	50
14	29	98	690	445	540	1,060	515	355	275	48	30	49
15	24	113	540	1,680	* 490	930	468	295	205	56	28	61
16	26	297	490	3,100	468	810	445	258	163	76	26	58
17	25	335	810	1,560	445	720	422	205	138	128	25	48
18	29	335	1,340	1,060	445	665	400	187	120	136	25	42
19	30	205	1,200	870	490	615	378	169	109	94	24	36
20	30	160	1,060	720	540	615	355	160	100	70	23	36
21	31	120	870	640	515	1,820	335	181	92	58	23	32
22	31	102	690	6,780	540	2,280	335	149	86	52	21	30
23	32	261	615	10,500	1,110	1,480	315	166	80	54	19	29
24	32	295	565	3,000	d 4,740	1,200	295	172	82	55	19	28
25	31	355	540	1,880	d 3,130	990	295	133	80	56	24	29
26	31	275	490	1,480	d 7,230	870	295	131	78	52	43	30
27	31	222	468	1,480	14,900	810	275	275	82	48	49	28
28	33	190	445	1,340	13,500	690	275	355	80	46	35	25
29	31	169	445	1,130	----------	640	275	222	71	42	29	24
30	30	146	378	990	----------	690	258	181	64	42	29	23
31	31	----------	378	810	----------	1,580	----------	169	----------	39	79	----------
Total	1,526	4,213	19,088	46,202	56,536	45,595	18,906	7,832	4,558	2,271	1,113	3,213
Mean	49.2	140	616	1,490	2,019	1,471	630	253	152	73.3	35.9	107
Cfsm	0.107	0.304	1.34	3.23	4.38	3.19	1.37	0.549	0.330	0.159	0.078	0.232
In.	0.12	0.34	1.54	3.72	4.56	3.68	1.53	0.63	0.37	0.18	0.09	0.26

Calendar year 1961: Max 23,700 Min 24 Mean 764 Cfsm 1.66 In. 22.51
Water year 1961-62: Max 14,900 Min 19 Mean 578 Cfsm 1.25 In. 17.02

Peak discharge (base, 7,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-23	1030	13.89	12,400				
2-27	1100	16.34	16,200				

* Discharge measurement made on this day.
d Doubtful gage-height record.

3-3033. Middle Fork Anderson River at Bristow, Ind.

Location.--Lat 38°08'19", long 86°43'16", in E½ sec. 27, T. 4 S., R. 3 W., at bridge on State Highway 145 at Bristow, 2.0 miles downstream from Coon Branch, and 6.0 miles upstream from Sulphur Fork Creek.
Drainage area.--41.9 sq mi.
Records available.--August 1961 to September 1962.
Gage.--Water-stage recorder. Datum of gage is 395.00 ft above mean sea level, datum of 1929.
Extremes.--Maximum discharge during year, 3,400 cfs Jan. 22 (gage height, 16.84 ft); no flow for many days.
1961-62: Maximum discharge, that of Jan. 22, 1962; minimum, no flow for many days each year.
Flood of Jan. 21, 1959, reached a stage of 20.0 ft (from floodmark), discharge 15,000 cfs (from rating curve extended above 7,000 cfs on basis of logarithmic plotting). This is the maximum flood since 1905, from information by local resident.
Revisions.--The maximum discharge during the period of record in the 1961 water year has been revised to 264 cfs Aug. 12, 1961 (gage height, 11.22 ft), superseding figure published in Surface Water Records of Indiana - 1961.
Remarks.--Records fair.
Revisions.--Revised figures of discharge, in cubic feet per second, for the period of record in the 1961 water year, superseding figures published in Surface Water Records of Indiana - 1961, are given herewith:

Date 1961	Discharge	Date 1961-Con.	Discharge	Date 1961-Con.	Discharge	Date 1961-Con.	Discharge	Date 1961-Con.	Discharge
Aug. 9	0	Aug. 20	.4	Aug. 31	.1	Sept. 11	.6	Sept. 22	0
10	.1	21	.3	Sept. 1	.1	12	.4	23	0
11	.2	22	.2	2	.1	13	.3	24	0
12	94	23	.2	3	.1	14	.2	25	0
13	6.1	24	.4	4	.1	15	.1	26	0
14	2.6	25	2.1	5	3.1	16	0	27	0
15	1.6	26	1.0	6	15	17	0	28	0
16	1.2	27	.6	7	12	18	0	29	0
17	1.0	28	.3	8	3.3	19	0	30	0
18	.7	29	.2	9	1.8	20	0		
19	.5	30	.1	10	1.0	21	0		

Month	Cfs-days	Maximum	Minimum	Mean	Per square mile	Runoff in inches
September 1961.....	38.2	15	0	1.27	0.030	0.03

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0	1.9	14	33	145	163	58	27	0.9	0.4	26
2	0	0	1.9	13	27	97	97	42	26	.9	.2	14
3	0	0	1.8	11	26	76	70	24	28	.8	.1	9.0
4	0	0	14	11	24	61	58	18	38	.7	.1	37
5	0	0	102	12	23	52	49	14	40	20	.1	8.3
6	.1	0	26	41	18	43	43	12	25	26	0	* 3.5
7	.1	* 0	15	49	14	41	39	9.6	20	9.6	.1	2.0
8	.1	0	10	36	16	49	35	* 7.9	16	4.4	* .1	1.1
9	0	0	46	25	217	201	40	6.8	16	3.3	.1	.6
10	0	0	169	* 17	121	109	* 33	10	16	2.2	0	.4
11	* 0	0	85	12	70	79	46	213	24	* 1.1	0	.2
12	0	0	61	11	55	67	43	49	36	.7	0	.1
13	0	0	* 35	13	46	* 52	37	28	* 23	.5	0	.1
14	0	.3	25	17	* 38	42	32	20	16	.5	0	18
15	0	4.7	22	720	32	36	29	15	13	1.2	0	10
16	0	12	28	142	32	32	26	12	9.6	3.3	0	4.2
17	0	9.7	128	64	27	29	24	9.1	6.5	3.0	0	2.0
18	* 0	4.1	103	43	36	26	23	7.6	5.3	1.0	0	1.0
19	0	2.9	109	35	61	29	21	6.5	4.0	.6	0	.5
20	0	2.4	58	27	38	42	19	5.6	3.0	.3	0	.3
21	0	1.9	38	48	39	342	18	6.2	2.5	.2	0	.2
22	0	2.1	29	*1,490	38	109	17	5.6	2.0	.1	0	.1
23	0	8.4	29	* 199	147	73	16	4.4	2.5	.6	0	.1
24	0	12	26	* 103	403	58	15	3.5	6.8	1.7	0	.1
25	0	6.0	22	79	115	49	14	3.0	4.2	.6	0	.2
26	0	4.4	20	97	*943	46	13	21	2.8	.4	0	.2
27	0	3.8	21	111	1,220	38	12	117	2.5	.2	0	.2
28	0	3.1	20	67	932	33	12	62	1.6	.1	0	.1
29	0	2.4	15	52	----------	30	12	25	1.2	15	0	.1
30	0	2.1	14	43	----------	142	12	227	1.1	5.3	0	.1
31	0	---------	13	32	----------	384	---------	49	----------	.9	5.1	----------
Total	0.4	82.3	1,288.6	3,634	4,791	2,612	1,068	1,091.8	419.6	106.1	6.3	139.7
Mean	0.01	2.74	41.6	117	171	84.3	35.6	35.2	14.0	3.42	0.20	4.66
Cfsm	0.00024	0.065	0.993	2.79	4.08	2.01	0.850	0.840	0.334	0.082	0.0048	0.111
In.	0.0003	0.07	1.14	3.22	4.25	2.32	0.95	0.97	0.37	0.09	0.006	0.12

Calendar year 1961 : Max -- Min -- Mean -- Cfsm -- In. --
Water year 1961-62 : Max 1,490 Min 0 Mean 41.8 Cfsm 0.998 In. 13.51

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-22	1030	16.84	3,400				
2-28	0030	16.23	2,620				

* Discharge measurement made on this day.

3-3221. Pigeon Creek at Evansville, Ind.

Location.--Lat 37°59'45", long 87°31'30", in SW¼ sec. 15, T. 6 S., R. 10 W., on left bank at downstream side of Oak Hill Road bridge at Evansville and 7.1 miles upstream from mouth.

Drainage area.--326 sq mi.

Records available.--October 1960 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 352.24 ft above mean sea level, datum of 1929. Auxiliary water-stage recorder 1.3 miles downstream from base gage.

Extremes.--Maximum discharge during year, 5,510 cfs Mar. 1; maximum gage height, 21.45 ft Mar. 7; minimum daily discharge, reverse flow of 302 cfs occurred Apr. 15 (backwater from Ohio River); minimum discharge unaffected by backwater, 1.3 cfs Oct. 15-17; minimum gage height, 1.33 ft Aug. 16.
1960-62: Maximum discharge, 12,100 cfs May 10, 1961 (gage height, 27.94 ft); minimum daily, that reverse flow of Apr. 15, 1962; minimum unaffected by backwater, that of Oct. 15-17, 1961.

Remarks.--Records poor.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	16	10	44	200	5,310	1,620	77	116	13	14	29
2	8.3	16	8.8	43	216	4,490	1,610	192	94	12	10	139
3	13	32	7.8	41	252	3,130	1,430	139	66	14	7.8	350
4	11	13	39	42	72	1,770	538	83	48	15	5.8	* 800
5	7.3	9.4	362	56	211	510	438	57	51	28	32	334
6	6.3	16	293	131	173	* 0	483	41	47	46	* 88	91
7	5.8	12	80	271	61	756	451	35	90	305	80	42
8	4.9	* 7.8	40	211	52	756	363	32	47	211	192	29
9	3.3	4.9	108	108	989	1,860	508	33	32	57	46	27
10	3.3	3.7	583	79	1,190	1,850	375	* 27	31	40	16	28
11	3.3	3.0	664	61	1,130	1,870	131	487	93	20	7.3	24
12	* 3.7	7.4	449	76	795	1,860	- 209	575	250	* 14	4.5	23
13	3.7	34	321	123	* 383	1,570	- 277	182	123	22	3.3	13
14	3.3	28	* 120	66	271	927	- 237	76	* 60	17	2.6	617
15	1.7	14	70	1,240	192	505	- 302	47	41	11	2.0	946
16	1.3	65	90	1,410	155	383	272	36	31	11	2.0	554
17	1.5	139	576	1,200	139	514	427	29	24	12	2.0	173
18	2.3	72	1,000	1,320	123	497	321	25	23	11	2.6	77
19	4.9	30	1,020	1,320	164	408	226	23	21	11	3.0	43
20	6.3	18	672	590	155	469	0	77	19	9.4	3.0	30
21	6.8	13	300	250	123	1,800	- 294	164	18	8.3	3.7	23
22	6.8	32	211	* 2,000	139	1,360	0	46	16	6.8	4.5	16
23	7.3	192	- 197	* 2,530	494	1,530	81	24	16	17	4.9	14
24	8.8	230	252	* 2,870	2,240	1,550	164	16	23	25	5.4	13
25	6.8	71	197	* 3,450	1,630	926	100	16	65	25	14	13
26	8.3	33	250	* 2,950	2,990	402	60	494	41	16	16	12
27	12	24	94	* 2,150	4,380	295	33	1,400	25	11	39	14
28	12	17	108	1,260	5,440	306	33	1,170	20	7.8	19	15
29	12	14	66	* 461	---------	367	33	1,260	18	6.3	7.8	14
30	12	12	59	* 400	---------	560	34	293	15	6.8	5.4	12
31	14	----------	52	161	---------	940	----------	116	----------	16	5.8	----------
Total	213.0	1,179.2	7,905.6	26,914	24,359	39,471	8,412	7,272	1,564	1,025.4	649.4	4,515
Mean	6.87	39.3	255	868	870	1,273	280	235	52.1	33.1	209	150
Cfsm	0.021	0.121	0.782	2.66	2.67	3.90	0.859	0.721	0.160	0.102	0.064	0.460
In.	0.02	0.14	0.90	3.07	2.78	4.50	0.96	0.83	0.18	0.12	0.07	0.51

Calendar year 1961 : Max 12,000 Min -197 Mean 484 Cfsm 1.48 In. 20.15
Water year 1961-62 : Max 5,440 Min -302 Mean 338 Cfsm 1.04 In. 14.08

* Discharge measurement made on this day.

3-3225. Wabash River near New Corydon, Ind.

Location.--Lat 40°33'50", long 84°48'10", in SE¼ sec. 3, T. 24 N., R. 15 E., first principal meridian, on left bank, 10 ft downstream from county bridge on Indiana-Ohio State line road, 2 miles east of New Corydon and 2 3/4 miles downstream from Beaver Creek, and at mile 465.6.

Drainage area.--258 sq mi.

Records available.--April 1951 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 830.10 ft above mean sea level, datum of 1929. Prior to June 23, 1953, wire-weight gage at same site and datum.

Extremes.--Maximum daily discharge during year, 4,500 cfs Jan. 27; maximum gage height, 19.17 ft Jan. 27 (ice jam); minimum, 3.0 cfs Sept. 2; minimum gage height, 6.53 ft Sept. 18.
1951-62: Maximum discharge, 8,720 cfs Jan. 22, 1959 (gage height, 20.47 ft, from floodmarks); minimum, 0.7 cfs Sept. 13, 1954; minimum gage height, 5.40 ft Aug. 18, 1951.

Remarks.--Records fair except those for missing gage-height record or ice effect, which are poor. Flow slightly affected by regulation of Grand Lake Reservoir, diversion from or into St. Marys River basin, and into Miami and Erie Canal.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 15-24, Dec. 29 to Jan. 4, Feb. 21-26, Mar. 21, 22, Apr. 9 to May 1, May 17-27, May 30 to June 5, June 9)

6.45	3.0	13.0	730
8.5	107	14.0	1,080
9.5	179	16.0	2,230
11.0	340	17.0	3,200
12.0	500		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	119	8.5	14	14	271	a 840	197	11	27	7.5	12	4.6
2	119	8.0	13	14	238	a 490	197	86	24	6.5	12	3.8
3	70	8.0	12	16	227	282	125	113	20	5.5	12	4.2
4	48	8.0	10	44	238	197	101	107	17	5.5	12	35
5	42	8.5	9.5	786	414	207	95	85	15	6.5	13	35
6	40	8.5	11	1,200	316	188	75	70	40	6.5	13	16
7	38	8.0	17	317	249	188	65	65	50	6.5	16	12
8	38	8.0	20	139	238	188	62	70	34	6.5	14	9.0
9	35	8.0	16	90	227	347	58	101	35	7.0	13	9.0
10	34	7.5	14	b 68	217	1,120	55	113	62	7.5	* 12	8.5
11	34	7.5	12	b 63	207	820	50	113	58	7.0	11	7.0
12	34	7.5	b 11	58	207	1,360	48	95	70	7.5	10	7.5
13	34	7.5	b 10	58	a 205	960	45	80	90	12	10	6.5
14	50	7.5	b 9.0	b 70	a 200	500	45	70	95	12	8.0	13
15	95	8.0	10	a 800	a 200	260	42	58	65	44	8.5	16
16	95	13	8.0	a 670	a 205	260	42	45	40	85	8.5	10
17	80	40	7.0	a 500	a 205	249	40	32	24	70	6.5	8.0
18	101	55	9.0	a 310	a 220	238	38	24	17	35	6.0	6.5
19	107	48	22	a 170	a 260	249	38	22	14	24	6.5	9.0
20	113	29	* 34	a 130	b 310	293	35	18	14	19	4.2	9.0
21	113	* 17	48	b 90	328	1,660	32	16	13	28	6.0	8.5
22	113	18	52	b 200	* 316	*1,860	30	15	12	52	* 8.0	8.0
23	119	19	42	b 450	354	790	27	15	12	55	5.5	9.5
24	* 125	40	30	b*210	328	500	26	* 13	12	28	4.6	8.0
25	65	70	b 27	b 220	316	368	24	9.0	12	20	6.0	8.5
26	23	65	b 25	b 1,000	1,160	293	* 20	7.0	12	18	14	* 11
27	12	48	b 23	b 4,500	3,200	260	18	35	* 12	16	20	10
28	10	32	b 21	a 2,100	1,310	238	14	48	10	14	10	10
29	9.5	22	20	a 1,000	---------	227	12	42	8.0	13	6.5	10
30	9.0	18	18	482	---------	207	10	28	7.5	13	4.6	12
31	8.5	---------	15	354	---------	197	---------	28	---------	13	4.2	---------
Total	1,933.0	653.0	589.5	16,123	12,166	15,836	1,666	1,634.0	921.5	651.0	297.6	325.1
Mean	62.4	21.8	19.0	520	434	511	55.5	52.7	30.7	21.0	9.60	10.8
Cfsm	0.242	0.084	0.074	2.02	1.68	1.98	0.215	0.204	0.119	0.081	0.037	0.042
In.	0.28	0.09	0.09	2.33	1.75	2.28	0.24	0.24	0.13	0.09	0.04	0.05

Calendar year 1961 : Max 2,700 Min 2.0 Mean 200 Cfsm 0.775 In. 10.48
Water year 1961-62 : Max 4,500 Min 3.8 Mean 145 Cfsm 0.562 In. 7.61

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	-	-	4,500				
2-27	0300	17.08	3,310				
3-21	2100	16.29	2,500				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3230. Wabash River at Bluffton, Ind.

Location.--Lat 40°44', long 85°11', in sec. 4, T. 26 N., R. 12 E., on downstream side of left abutment of Main Street Bridge in Bluffton, 2 miles downstream from Sixmile Creek and at mile 434.5.

Drainage area.--506 sq mi.

Records available.--October 1930 to September 1962. Gage-height records collected at same site since December 1910 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 793.01 ft above mean sea level, datum of 1929. Prior to Mar. 31, 1934, chain gage at same site and datum. Mar. 31 to Dec. 5, 1934, staff gage at nearby site at same datum.

Average discharge.--32 years, 401 cfs.

Extremes.--Maximum discharge during year, about 6,000 cfs Jan. 29; maximum gage height, 12.91 ft Jan. 29 (ice jam); minimum, 7.2 cfs Sept. 30; minimum gage height, 0.93 ft Aug. 18, 19.
1930-62: Maximum discharge, 11,800 cfs Feb. 15, 1950 (gage height, 16.07 ft); minimum, 3.9 cfs July 18, 1936; minimum gage height, 0.84 ft Sept. 24, 1944.
Maximum stage known, about 21.0 ft Mar. 25, 26, 1913, on basis of gage readings published in newspapers (discharge, 25,000 cfs, from rating curve extended above 11,700 cfs on basis of a rainfall-runoff relation).

Remarks.--Records good except those for periods of ice effect, which are fair. Flow slightly affected by regulation of Grand Lake Reservoir, diversion from or into St. Marys River basin, and into Miami and Erie Canal.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 14-30)

0.8	7.2	2.5	265
1.0	13	3.0	410
1.1	18	6.0	1,560
1.3	35	10.0	3,800
1.5	59	12.0	5,390
1.7	89	14.0	8,300
2.0	149		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	140	19	* 49	47	1,500	3,280	350	60	111	21	* 17	17
2	171	18	43	45	970	2,410	350	349	72	25	16	14
3	171	* 21	39	43	720	1,400	321	685	55	30	14	18
4	125	21	39	46	685	840	215	410	57	25	14	16
5	75	20	41	* 81	1,100	545	* 171	365	102	24	13	46
6	* 57	20	36	745	900	410	160	149	63	38	15	67
7	52	20	35	1,400	740	475	138	109	60	45	14	54
8	51	21	34	1,300	620	475	115	160	87	40	16	32
9	49	21	40	1,100	530	1,080	119	840	65	39	15	21
10	47	20	41	450	470	1,750	100	720	64	25	15	17
11	48	19	39	450	440	2,080	86	350	160	25	14	16
12	47	19	35	* 430	410	2,760	79	240	626	34	13	15
13	52	20	33	415	410	2,580	81	182	1,040	28	12	14
14	51	25	33	149	365	2,410	78	147	800	33	12	22
15	53	25	33	552	380	1,700	76	113	380	69	12	12
16	131	273	33	1,200	365	960	70	89	204	232	11	11
17	145	336	36	850	365	650	65	76	123	228	11	11
18	102	265	37	550	380	545	59	67	87	123	10	11
19	149	171	39	420	380	580	57	57	66	73	10	9.0
20	160	119	41	340	410	685	53	53	53	59	11	8.0
21	149	89	48	292	380	2,190	52	62	43	98	11	7.4
22	149	76	70	475	310	2,810	51	69	37	113	11	7.4
23	149	145	83	800	410	3,340	51	62	34	171	11	7.4
24	160	215	66	700	360	3,100	52	49	32	107	* 12	7.6
25	171	240	64	900	350	2,020	54	41	36	67	17	8.0
26	123	193	62	1,500	1,540	1,200	52	45	47	48	19	* 7.6
27	69	138	60	2,400	*2,930	720	48	52	* 41	35	45	7.8
28	45	98	58	4,000	3,280	545	48	71	30	26	41	7.6
29	32	76	55	*5,600	---------	475	47	100	25	22	39	7.6
30	25	62	52	3,600	---------	410	* 45	87	23	19	27	7.6
31	21	---------	50	2,350	---------	380	---------	* 72	---------	18	19	---------
Total	2,969	2,805	1,424	32,150	21,700	44,805	3,243	5,931	4,623	1,940	517	507.0
Mean	95.8	93.5	45.9	1,037	775	1,445	108	191	154	62.6	16.7	16.9
Cfsm	0.189	0.185	0.091	2.05	1.53	2.86	0.213	0.377	0.304	0.124	0.033	0.033
In.	0.22	0.21	0.10	2.36	1.59	3.30	0.24	0.43	0.34	0.14	0.04	0.04

Calendar year 1961: Max 7,050 Min 8.8 Mean 466 Cfsm 0.921 In. 12.49
Water year 1961-62: Max 5,600 Min 7.4 Mean 336 Cfsm 0.664 In. 9.01

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-29	Unknown	--	About 6,000				
2-28	2100	9.55	3,570				
3-23	1900	9.43	3,450				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 14, 15, 25-27, Dec. 29 to Jan. 2, Jan. 8-13, 16-20, Jan. 23 to Feb. 2, Feb. 5-10, 22-24. Discharge computed from graph based on once-daily readings of the wire-weight gage Dec. 31 to Jan. 2, Jan. 16-19, 22-26, Feb. 10-20.

3-3235. Wabash River at Huntington, Ind.

Location.--Lat 40°51'20", long 85°29'53", in SW¼ NE¼ sec. 27, T. 28 N., R. 9 E., on right bank at the Huntington Water and Light Plant, 2 miles south of Huntington, 3¼ miles upstream from Little Wabash River, and at mile 409.

Drainage area.--710 sq mi.

Records available.--January 1951 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 700.04 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to July 5, 1951, staff gage at same site and datum.

Average discharge.--11 years, 619 cfs.

Extremes.--Maximum discharge during year, about 6,300 cfs Jan. 29; maximum gage height, 15.69 ft Jan. 29 (ice affected); minimum daily, 9.0 cfs Sept. 27-30.
1951-62: Maximum discharge, 14,900 cfs Feb. 10, 1959; maximum gage height, 23.20 ft Feb. 10, 1959 (backwater from ice); minimum, 4.3 cfs Oct. 8, 1956 (gage height, 8.98 ft).
Flood in March 1913 reached a stage of 22.7 ft (from high water mark by Corps of Engineers).

Remarks.--Records fair except those for periods of ice effect or no gage-height record, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 8-13, 17-24, Jan. 4, 5, May 13-21, May 28 to June 4)

9.0	1.5	10.0	430
9.1	14	13.0	3,420
9.3	60	15.0	5,870
9.5	125	18.0	10,400
9.7	223		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	159	47	125	99	1,700	2,500	566	63	255	78	22	40
2	154	40	116	93	1,100	1,600	540	108	314	78	21	37
3	178	40	107	90	880	1,050	506	645	223	66	20	24
4	173	45	100	129	735	780	430	524	212	78	26	37
5	133	50	95	159	1,200	660	335	314	690	82	20	37
6	97	47	90	992	950	600	294	178	408	85	24	37
7	78	* 45	* 86	2,570	780	645	281	122	* 229	84	18	* 57
8	72	42	72	2,080	645	*735	242	129	189	76	18	50
9	69	42	69	1,450	580	1,090	261	385	261	72	24	50
10	69	37	75	900	525	2,080	255	780	195	45	13	30
11	63	35	75	600	480	2,170	* 173	574	163	51	16	18
12	63	30	69	390	447	3,310	146	378	301	* 63	14	20
13	* 63	30	57	270	447	2,980	138	301	880	26	13	22
14	63	40	61	340	*415	2,470	138	242	880	24	14	24
15	57	95	65	750	430	1,810	122	189	600	35	16	28
16	52	300	70	* 1,490	415	1,200	111	159	362	90	14	35
17	122	350	75	1,080	408	830	100	* 129	249	229	12	24
18	129	400	81	840	430	735	84	108	163	173	11	20
19	97	280	94	735	450	780	90	104	142	104	11	18
20	138	205	87	650	490	930	72	97	122	84	12	16
21	138	155	90	580	438	2,600	63	97	97	150	* 12	14
22	133	120	111	520	348	3,880	63	118	81	159	12	14
23	138	170	133	960	600	3,640	62	110	75	142	12	13
24	138	260	133	900	506	3,640	61	93	66	98	11	9.4
25	167	285	128	1,000	438	2,470	61	80	69	70	14	11
26	173	310	126	2,000	1,530	1,620	60	96	78	47	28	11
27	122	250	122	4,700	4,480	1,090	60	120	70	34	16	9.0
28	90	212	120	5,000	3,640	830	60	159	63	30	42	9.0
29	75	175	115	5,900	----------	735	59	167	57	27	72	9.0
30	63	148	109	3,700	----------	690	59	249	50	24	63	9.0
31	52	---------	104	2,600	----------	600	---------	307	----------	22	57	----------
Total	3,318	4,285	2,960	43,567	25,487	50,750	5,492	7,125	7,544	2,426	678	732.4
Mean	107	143	95.5	1,405	910	1,637	183	230	251	78.3	21.9	24.4
Cfsm	0.151	0.201	0.135	1.98	1.28	2.31	0.258	0.324	0.354	0.110	0.031	0.034
In.	0.17	0.22	0.16	2.28	1.33	2.66	0.29	0.37	0.40	0.13	0.04	0.04

Calendar year 1961: Max 9,760 Min 13 Mean 627 Cfsm 0.883 In. 11.98
Water year 1961-62: Max 5,900 Min 9.0 Mean 423 Cfsm 0.596 In. 8.09

Peak discharge (base, 5,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-29	unknown	-	6,300 about				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 14-16, Dec. 25 to Jan. 3, Jan. 9 to Feb. 2, Feb. 5-7, 9-11, 18-20, Mar. 1-5. No gage-height record Nov. 15-27, Nov. 29 to Dec. 7, Apr. 23-30, May 22-27, June 27-29, July 5-11, July 24 to Aug. 2, Aug. 17-23, Sept. 13, 27-30.

GPO 802-131-3

3-3240. Little River near Huntington, Ind.
(Formerly published as Little Wabash River near Huntington, Ind.)

Location.--Lat 40°54'14", long 85°24'22", in NE¼ NW¼ sec. 9, T. 28 N., R. 10 E., on right bank on upstream side of highway bridge, 5 miles east of Huntington.

Drainage area.--266 sq mi.

Records available.--October 1943 to September 1962. Prior to January 1944 monthly discharge only, published in WSP 1305. Published as Little River at Huntington, January 1944 to September 1948, Little River near Huntington, October 1948 to September 1956, and Little Wabash River near Huntington, October 1956 to September 1961.

Gage.--Water-stage recorder. Datum of gage is 728.10 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1948, wire-weight gage 4 miles downstream at datum 8.79 ft lower. Oct. 1, 1948, to Sept. 5, 1950, wire-weight gage at present site and datum.

Average discharge.--19 years, 240 cfs.

Extremes.--Maximum discharge during year, 2,880 cfs Feb. 26 (gage height, 14.03 ft); minimum daily, 2.5 cfs Sept. 28-30; minimum gage height, 1.46 ft Aug. 21-25.
1943-62: Maximum discharge, 5,990 cfs Jan. 4, 1950; maximum gage height, 18.43 ft Feb. 11, 1959; minimum discharge, 1.0 cfs Oct. 8, 1946, site and datum then in use; minimum gage height since October 1948, 1.30 ft Oct. 1, 1949.

Remarks.--Records good except those for periods of ice effect, no gage-height record, and days affected by backwater from temporary dam, which are fair.

Rating table, water year 1961-62, except periods of ice effect and backwater from temporary dam
(gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-4, June 7, 8, 10-12)

1.2	1.8	4.0	242
1.4	4.1	6.0	616
1.6	11	10.0	1,590
2.0	30	14.0	2,880
2.5	61		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	109	38	69	37	* 212	600	212	58	69	22	8.3	4.8
2	83	36	65	40	a 162	250	157	168	50	20	7.9	4.4
3	58	36	58	44	120	150	120	242	40	22	7.6	6.0
4	47	50	61	47	304	110	109	126	51	20	7.2	7.5
5	39	54	65	58	1,340	90	104	98	227	18	7.2	11
6	32	44	144	795	600	74	114	69	212	16	9.7	9.4
7	29	* 39	* 98	1,470	200	116	114	61	* 114	15	10	* 7.4
8	26	36	74	820	127	*a 700	98	103	91	13	9.0	5.8
9	26	32	61	350	68	1,180	226	104	170	17	7.6	4.8
10	24	30	61	180	62	1,440	212	83	164	17	7.2	4.4
11	22	28	58	140	55	837	* 138	98	98	15	6.9	4.1
12	22	26	58	130	50	2,310	109	74	200	* 18	6.6	3.8
13	* 26	27	54	128	50	1,800	164	74	120	16	6.6	3.6
14	54	33	50	120	* 58	830	170	61	65	14	6.6	3.5
15	38	47	47	320	54	380	126	50	47	14	7.9	3.6
16	32	721	44	900	54	242	98	44	37	14	7.6	3.3
17	31	1,140	54	350	54	198	83	* 41	31	13	7.2	3.2
18	27	456	61	* 180	74	342	78	38	27	12	6.9	3.2
19	26	227	54	168	144	616	74	47	24	11	6.6	3.1
20	28	170	47	153	118	788	61	41	23	12	6.6	3.1
21	25	144	40	138	130	1,800	58	37	22	37	6.3	3.0
22	24	132	39	180	132	1,980	58	44	20	27	* 6.0	2.8
23	23	695	39	230	115	971	58	37	20	22	6.0	2.7
24	22	595	49	198	100	595	50	31	22	17	6.0	2.7
25	31	273	47	157	88	475	47	28	20	13	7.9	2.7
26	54	198	44	1,250	1,480	380	47	90	17	11	24	2.6
27	44	150	41	2,700	2,660	306	47	156	16	10	22	2.6
28	37	109	41	2,450	1,950	273	44	69	15	9.7	14	2.5
29	37	93	40	a 1,200	---	242	44	50	14	9.7	10	2.5
30	36	78	39	637	---	361	44	175	14	9.4	8.4	2.5
31	38	---	38	361	---	306	---	166	---	9.0	5.6	---
Total	1,150	5,737	1,740	15,931	10,561	20,742	3,064	2,553	2,040	493.8	267.4	126.6
Mean	37.1	191	56.1	514	377	669	102	82.4	68.0	15.9	8.63	4.22
Cfsm	0.139	0.718	0.211	1.93	1.42	2.52	0.383	0.310	0.256	0.060	0.032	0.016
In.	0.16	0.80	0.24	2.22	1.48	2.90	0.43	0.36	0.29	0.07	0.04	0.02

Calendar year 1961 : Max 2,010 Min 7.8 Mean 182 Cfsm 0.684 In. 9.31
Water year 1961-62 : Max 2,700 Min 2.5 Mean 176 Cfsm 0.662 In. 9.01

Peak discharge (base, 2,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	1730	13.90	2,840				
2-26	2400	14.03	2,880				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 14, 15, Dec. 28 to Jan. 2, Jan. 9-20, 22, 23, Feb. 6-11, 20, 21, 23, 24, Mar. 1-5. Backwater from temporary dam Aug. 30 to Sept. 30.

3-3242. Salamonie River at Portland, Ind.

Location.--Lat 40°25'40", long 85°02'20", in SE¼ sec. 23, T. 23 N., R. 13 E., on right bank at downstream side of county road bridge, 2.4 miles downstream from Butternut Creek, 3.2 miles west of Portland, and 3.7 miles downstream from Little Salamonie River.

Drainage area.--86.0 sq mi.

Records available.--September 1959 to September 1962.

Gage.--Water-stage recorder from July 5, 1960 to date. Datum of gage is 877.59 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 1, 1960, wire-weight gage at site, 1.4 miles upstream at 6.43 ft higher datum.

Extremes.--Maximum discharge during year, 3,270 cfs Jan. 26 (gage height, 16.42 ft); minimum daily, 1.4 cfs Aug. 24.
1959-62: Maximum discharge, that of Jan. 26, 1962; minimum, 0.6 cfs Oct. 31, 1960.

Remarks.--Records poor.

Rating table, water year 1961-62, except for periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1, 2, Apr. 27 to May 1)

1.47	1.3	3.0	83
1.5	1.8	4.0	196
1.6	3.7	7.0	682
1.7	6.2	12.0	1,890
1.8	10	13.0	2,190
2.0	21		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9.5	3.5	9.5	11	36	62	44	30	5.0	2.9	5.9	1.7
2	7.9	3.5	8.3	12	33	38	36	71	3.5	2.8	5.0	1.5
3	6.8	3.7	7.1	12	31	27	26	44	2.9	95	4.3	1.5
4	5.9	5.4	7.9	31	60	18	22	25	2.4	51	3.7	93
5	5.1	4.4	17	344	142	11	23	16	3.5	19	3.2	25
6	4.4	3.8	20	990	65	14	25	14	9.0	11	3.1	3.9
7	3.2	3.7	15	562	30	16	25	14	4.5	7.2	3.6	3.6
8	3.2	3.7	13	107	23	28	22	282	2.4	5.8	3.3	3.6
9	3.2	3.7	8.3	28	20	389	18	153	15	24	2.9	3.6
10	3.2	3.7	9.5	21	17	456	17	53	9.0	8.7	* 2.7	3.5
11	3.2	3.7	12	18	15	459	15	42	7.0	6.4	2.4	3.3
12	3.5	3.7	17	* 17	14	710	13	34	976	56	2.2	3.5
13	3.9	3.4	15	17	13	238	14	28	124	24	2.0	3.3
14	3.9	3.4	13	32	12	116	13	21	48	20	2.0	9.0
15	3.5	5.4	11	1,500	12	62	12	16	26	62	2.0	7.0
16	3.8	204	10	938	12	47	9.8	12	16	55	1.8	4.5
17	4.3	144	16	200	12	42	9.6	11	10	24	1.8	3.3
18	4.3	44	17	60	12	42	9.6	9.8	5.4	21	1.8	3.1
19	4.3	26	22	46	12	57	9.4	8.7	5.6	15	1.7	3.2
20	4.8	20	* 59	35	13	113	8.4	7.4	5.0	11	1.5	3.3
21	4.4	* 19	38	28	20	1,440	8.1	6.2	4.5	1,280	1.5	3.3
22	3.9	20	26	885	* 163	* 825	7.8	6.2	4.1	231	* 2.7	3.3
23	3.2	128	17	702	94	210	8.4	6.0	4.5	62	1.9	3.2
24	5.4	187	15	490	31	136	8.4	* 5.5	13	34	1.4	3.0
25	* 7.0	59	14	442	24	92	8.1	9.0	5.4	22	1.6	3.1
26	3.2	38	13	2,090	1,240	68	* 7.1	68	4.6	40	3.5	3.5
27	3.0	28	13	* 2,100	827	53	7.1	125	* 3.9	28	2.7	* 3.2
28	3.0	18	12	208	130	42	6.8	50	2.9	16	1.9	3.2
29	2.8	14	12	83	----------	36	5.9	29	2.6	12	1.6	3.1
30	3.0	11	11	62	----------	32	7.5	25	2.8	10	1.5	3.0
31	3.7	----------	11	44	----------	34	----------	12	----------	7.7	1.6	----------
Total	134.5	1,018.7	489.6	12,115	3,113	5,913	447.0	1,233.8	1,328.5	2,264.5	78.8	216.3
Mean	4.34	34.0	15.8	391	111	191	14.9	39.8	44.3	73.0	2.54	7.21
Cfsm	0.050	0.395	0.184	4.55	1.29	2.22	0.173	0.463	0.515	0.849	0.030	0.084
In.	0.06	0.44	0.21	5.25	1.34	2.56	0.19	0.53	0.57	0.98	0.03	0.09

Calendar year 1961: Max 1,500 Min 1.6 Mean 88.5 Cfsm 1.03 In. 13.97
Water year 1961-62: Max 2,100 Min 1.4 Mean 77.7 Cfsm 0.903 In. 12.25

Peak discharge (base, 1,400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	1400	13.63	2,380	3-21	1700	12.65	2,070
1-22	1530	10.78	1,550	6-12	0630	10.67	1,520
1-26	2300	16.42	3,270	7-21	1200	12.04	1,890
2-26	1830	13.12	2,220				

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 13, 14, Dec. 23 to Jan. 3, Jan. 9, 12, 13, 17-21, Jan. 31 to Feb. 3, Feb. 7-17, 24, 25, Feb. 28 to Mar. 6. No gage-height record Oct. 16-23, Oct. 30 to Nov. 3, Nov. 6-14, Jan. 10, 11, Apr. 11-26, May 15-25, June 1-11, June 17 to July 2, July 6-14, 17-20, July 26 to Sept. 3, Sept. 6-30.

3-3243. Salamonie River near Warren, Ind.

Location.--Lat 40°42'45", long 85°27'13", in SW¼ sec. 12, T. 26 N., R. 9 E., on right downstream side of county road bridge, 1,700 ft downstream from unnamed tributaries entering from the right and left, 4,000 ft upstream from abandoned concrete and stone dam, and 2.4 miles northwest of Warren.

Drainage area.--422 sq mi.

Records available.--March 1957 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 784.75 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to July 28, 1960, wire-weight gage at same site and datum.

Average discharge.--5 years, 424 cfs.

Extremes.--Maximum discharge during year, 6,900 cfs Jan. 29 (gage height, 13.16 ft); maximum gage height, 13.65 ft Jan. 26 (ice jam); minimum, 7.5 cfs Sept. 21; minimum gage height, 6.32 ft Aug. 20.
1957-62: Maximum discharge, 13,200 cfs Feb. 10, 1959 (gage height, 17.05 ft); minimum, 5.0 cfs Sept. 18, 19, 1959; minimum gage height, that of Aug. 20, 1962.

Remarks.--Records good except those for periods of ice effect and missing gage-height record, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 16, Aug. 23-27)

6.27	8.3	6.7	110
6.3	11	7.0	265
6.4	22	7.5	658
6.5	44	9.0	2,320
6.6	73	13.0	6,660

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	41	*96	68	370	1,200	194	90	301	41	*68	22
2	26	38	83	68	250	350	182	664	146	44	62	16
3	20	*38	77	68	235	170	155	1,010	86	59	59	17
4	19	77	80	71	475	110	132	370	71	249	59	198
5	19	74	98	* 129	1,100	74	*128	216	124	196	53	340
6	19	68	90	1,900	500	100	132	142	289	102	59	132
7	19	59	86	3,200	190	130	137	102	166	74	56	68
8	17	50	80	2,200	155	188	132	778	106	62	59	47
9	19	44	71	350	130	933	182	1,750	142	94	50	36
10	19	38	71	165	115	1,970	182	758	74	62	38	30
11	17	38	71	140	100	1,750	142	614	59	50	36	26
12	16	36	77	132	90	2,980	119	506	633	74	32	24
13	*22	38	74	125	83	2,540	124	808	1,630	241	32	24
14	32	50	70	120	83	1,060	119	348	530	204	30	30
15	22	59	69	600	80	569	110	221	210	796	28	12
16	19	1,050	68	1,500	80	378	94	155	137	1,120	26	11
17	17	1,630	74	1,000	80	295	86	128	102	408	26	17
18	17	708	77	a 700	77	277	86	106	90	216	20	15
19	19	332	80	a 350	94	362	83	110	80	132	19	12
20	20	226	80	a 180	80	658	74	98	68	98	16	9.7
21	20	172	90	a 280	90	3,090	71	90	65	828	13	8.3
22	20	142	124	571	180	4,300	68	86	59	2,200	13	11
23	20	413	102	1,200	500	4,080	74	83	53	2,650	*15	12
24	22	614	94	890	290	1,990	74	77	65	762	20	13
25	65	498	89	350	160	908	71	74	94	271	28	17
26	65	260	84	2,400	*2,420	614	65	65	*71	468	36	*17
27	59	188	80	*6,200	4,080	440	62	118	59	295	116	15
28	50	142	76	6,540	3,750	332	62	*271	47	160	131	14
29	80	110	73	a 4,200	---	277	62	172	41	110	50	13
30	65	94	71	2,300	---	254	* 62	310	38	90	32	13
31	50	---	69	600	---	216	---	283	---	77	24	---
Total	922	7,327	2,514	38,597	15,837	32,595	3,264	10,603	5,636	12,233	1,306	1,220
Mean	29.7	244	81.1	1,245	566	1,051	109	342	188	395	42.1	40.7
Cfsm	0.070	0.578	0.192	2.95	1.34	2.49	0.258	0.810	0.445	0.936	0.100	0.096
In.	0.08	0.64	0.22	3.40	1.40	2.87	0.29	0.93	0.50	1.08	0.12	0.11

Calendar year 1961 : Max 6,420 Min 12 Mean 445 Cfsm 1.05 In. 14.29
Water year 1961-62 : Max 6,540 Min 8.3 Mean 362 Cfsm 0.858 In. 11.64

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-7	0630	9.86	3,310	3-12	0400	9.73	3,090
1-29	0030	13.16	6,900	3-22	0200	10.98	4,510
2-26	2330	11.28	4,820				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 13-15, Dec. 24 to Jan. 2, Jan. 6, 9-17, 23-26, Jan. 31 to Feb. 3, Feb. 5-12, 23-25, Mar. 1-7.

3-3245. Salamonie River at Dora, Ind.

Location.--Lat 40°48'42", long 85°41'02", in NE¼ sec. 12, T. 27 N., R. 7 E., on right bank, 1½ miles northwest of Dora, and 3 miles upstream from mouth.

Drainage area.--553 sq mi.

Records available.--November 1923 to September 1962. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 673.96 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 1, 1951, wire-weight or chain gage at site 1.5 miles upstream at datum 688.59 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Oct. 1, 1951 to Oct. 8, 1961, water-stage recorder located on left bank, 2,000 ft upstream at datum 679.77 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Average discharge.--38 years (1924-62), 512 cfs.

Extremes.--Maximum discharge during year, 7,360 cfs Jan. 27 (gage height, 10.80 ft); maximum gage height, 11.15 ft Jan. 26 (ice jam); minimum, 31 cfs Sept. 30 (gage height, 2.29 ft); minimum gage height, 2.01 ft Oct. 8.
1923-62: Maximum discharge, 16,500 cfs May 18, 1943 (gage height, 14.75 ft, from graph based on gage readings, site and datum then in use); minimum observed, 8.2 cfs Aug. 3, 1934 (gage height, 1.11 ft, site and datum then in use).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 7-12, Sept. 5-7)

Oct. 1-8

2.0	48
2.3	111

Oct. 9 to Sept. 30

2.2	24	4.0	600
2.5	60	8.0	3,980
2.9	138	11.0	7,660
3.5	345		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	97	114	158	98	600	1,500	390	126	540	52	104	59
2	89	96	141	98	430	600	345	465	390	50	96	50
3	83	90	128	98	350	450	305	1,430	224	57	93	49
4	72	131	* 131	105	450	300	270	720	389	59	89	126
5	68	147	184	345	1,300	140	215	368	930	317	84	422
6	61	128	190	1,700	620	170	225	252	600	218	90	* 325
7	56	* 110	161	3,880	350	210	225	193	* 440	124	86	177
8	50	104	141	3,040	300	* 368	225	530	252	85	83	110
9	* 47	90	131	1,100	260	930	270	2,020	345	71	80	90
10	46	83	126	240	225	2,200	250	1,340	252	100	74	73
11	44	76	119	200	190	2,540	* 235	895	144	85	67	60
12	44	73	121	190	174	4,280	197	690	106	* 98	60	53
13	49	71	115	180	161	3,300	190	930	1,710	119	53	49
14	109	78	108	177	152	2,020	180	630	1,340	325	49	49
15	112	104	104	895	* 141	1,000	167	368	440	1,050	47	46
16	85	1,200	102	1,700	141	640	147	270	270	1,500	* 44	46
17	71	2,620	121	1,350	136	465	131	* 214	184	550	42	41
18	62	1,520	121	1,050	144	440	121	177	136	255	41	40
19	59	660	124	* 840	252	500	116	152	126	180	41	42
20	57	440	121	320	140	1,000	108	158	100	160	40	40
21	56	325	114	480	155	3,580	102	144	85	1,100	39	36
22	53	288	133	660	210	5,600	100	144	80	2,700	38	35
23	53	769	164	1,700	522	4,500	100	121	76	3,100	36	35
24	52	860	141	1,000	370	2,800	98	110	80	1,500	35	33
25	83	755	129	580	270	1,650	100	96	71	500	39	34
26	170	515	123	3,500	2,330	1,090	98	209	110	640	47	34
27	141	345	117	6,620	4,900	790	92	288	83	400	52	34
28	114	270	112	5,920	3,980	630	89	305	71	245	285	33
29	174	224	107	7,060	----------	515	90	305	65	165	197	32
30	193	184	104	4,480	----------	490	89	345	56	130	98	31
31	141	----------	102	1,260	----------	465	----------	540	----------	114	71	----------
Total	2,591	12,470	3,993	50,866	19,253	45,163	5,270	14,535	9,695	16,049	2,300	2,284
Mean	83.6	416	129	1,641	688	1,457	176	469	323	518	74.2	76.1
Cfsm	0.153	0.759	0.235	2.99	1.26	2.66	0.321	0.856	0.589	0.945	0.135	0.139
In.	0.18	0.85	0.27	3.45	1.31	3.07	0.36	0.99	0.66	1.09	0.16	0.16

Calendar year 1961: Max 7,240 Min 20 Mean 571 Cfsm 1.04 In. 14.03
Water year 1961-62: Max 7,060 Min 31 Mean 505 Cfsm 0.922 In. 12.55

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	1830	10.80	7,360	3-21	Unknown	--	About 5,800
2-27	0600	9.17	5,230	or			
3-12	0430	8.88	4,900	3-22			

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 13-16, Dec. 25 to Jan. 4, Jan. 6, 10-13, 16-26, Feb. 1-11, Feb. 20, 21, 24, Mar. 1-7. No gage-height record Jan. 9, Mar. 15, 16, 19-25, 30, Apr. 5-10, July 15 to Aug. 15.

3-3250. Wabash River at Wabash, Ind.

Location.--Lat 40°47'25", long 85°49'13", in sec. 14, T. 27 N., R. 6 E., on right bank on upstream side of Wabash Street bridge in Wabash, 7 miles downstream from Salamonie River, and at mile 387.2.

Drainage area.--1,733 sq mi.

Records available.--August 1923 to September 1962. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 642.66 ft above mean sea level, datum of 1929. Prior to Jan. 16, 1934, chain gage, and Jan. 16, 1934, to Sept. 30, 1954, wire-weight gage at same site and datum.

Average discharge.--39 years, 1,492 cfs.

Extremes.--Maximum discharge during year, 16,400 cfs Jan. 27 (gage height, 17.70 ft); minimum, 53 cfs Aug. 24, 25 (gage height, 1.98 ft).

1923-62: Maximum discharge, 49,600 cfs May 18, 1943; maximum gage height, 24.44 ft Feb. 11, 1959, (ice jam); minimum discharge observed, 17 cfs Aug. 4, 5, 9, 1934, July 21, 22, 1936; minimum gage height, 1.66 ft Aug. 4, 5, 9, 1934.

Maximum stage known, 28.7 ft Mar. 26, 1913, from floodmark, determined by Corps of Engineers (discharge, 90,000 cfs, from rating curve extended above 49,000 cfs).

Remarks.--Records good except those for periods of missing gage-height record and ice effect, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 11-18, 22, 25, May 11-27)

Oct. 1 to Jan. 29
Mar. 13 to Sept. 30

1.9	50	7.0	2,500
2.3	113	12.0	7,300
3.0	275	16.0	13,000
4.0	630	17.0	15,000
5.0	1,100		

Jan. 30 to Mar. 12

4.0	715	10.0	5,630
5.0	1,260	15.0	11,900
7.0	2,740	20.0	22,300

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	370	245	440	242	g 5,940	g 7,860	1,220	320	805	143	173	123
2	405	219	405	255	g* 2,200	g 4,500	1,050	858	715	163	163	109
3	352	219	370	290	1,900	g 2,910	950	2,100	510	195	143	104
4	335	245	352	305	1,840	g 1,940	850	1,730	* 900	184	133	173
5	290	290	440	320	5,520	g 1,260	715	1,050	2,410	283	123	198
6	232	* 290	590	2,100	4,400	g 815	670	715	1,460	320	123	405
7	195	245	475	7,780	2,250	g* 915	670	550	950	232	133	* 260
8	173	232	* 405	6,310	1,580	2,090	630	850	670	195	113	207
9	163	207	352	g 3,400	1,310	3,080	* 715	2,020	850	195	109	195
10	153	195	335	g 1,650	1,120	6,260	900	2,420	805	232	109	163
11	143	184	335	g 1,000	965	5,940	715	1,800	550	232	97	133
12	* 133	173	320	g 765	915	12,700	630	1,460	550	* 260	92	123
13	143	163	290	g 700	865	9,540	630	1,400	1,880	232	89	108
14	195	173	280	g 660	865	6,200	670	1,160	2,230	320	84	109
15	260	207	280	g 2,000	* 815	3,940	590	805	1,160	370	81	92
16	219	1,270	290	a 4,000	815	2,590	510	670	760	1,030	79	90
17	195	4,740	305	a 3,050	815	1,730	475	550	510	1,000	78	93
18	260	2,870	320	2,300	815	1,590	422	* 475	405	670	74	87
19	232	1,540	335	1,900	1,000	2,020	405	440	335	475	72	84
20	219	1,000	320	1,680	990	2,860	370	440	290	320	68	81
21	245	805	305	1,440	910	7,830	352	405	245	370	* 64	79
22	245	715	290	1,350	965	12,200	320	422	219	1,430	60	78
23	245	1,610	335	1,800	1,140	10,100	335	405	207	2,340	57	78
24	245	2,180	320	g 1,700	1,390	8,380	320	370	207	2,100	54	76
25	260	1,660	295	g 2,800	1,020	5,200	305	335	184	715	64	78
26	388	1,220	275	5,020	4,220	3,580	305	337	195	475	92	78
27	405	900	260	g 14,800	g 13,300	2,420	290	670	184	630	85	79
28	320	715	248	g 14,200	g 11,100	1,800	275	550	173	422	120	78
29	305	590	242	g 14,400	----------	1,520	275	510	163	290	245	72
30	335	510	240	g 13,800	----------	1,460	275	550	153	232	173	70
31	290	---------	240	g 9,390	----------	1,460	----------	950	----------	195	143	---------
Total	7,950	25,612	10,289	121,407	70,965	136,690	16,839	27,317	20,675	16,250	3,293	3,703
Mean	256	854	332	3,919	2,534	4,410	561	881	689	524	106	123
Cfsm	0.148	0.493	0.192	2.26	1.46	2.54	0.324	0.508	0.398	0.302	0.061	0.071
In.	0.17	0.55	0.22	2.61	1.52	2.93	0.36	0.59	0.44	0.35	0.07	0.08

Calendar year 1961: Max 19,900 Min 66 Mean 1,507 Cfsm 0.870 In. 11.80
Water year 1961-62: Max 14,800 Min 54 Mean 1,263 Cfsm 0.729 In. 9.89

Peak discharge (base, 11,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	1800	17.70	16,400				
2-27	1400	16.43	14,100				
3-12	1030	16.11	13,600				
3-22	0800	15.78	12,600				

* Discharge measurement made on this day.
a No gage-height record.
g Computed from once-daily wire-weight gage readings.
Note.--Stage-discharge relation affected by ice Dec. 14-16, Dec. 25 to Jan. 2, Jan. 10-15, 18-25, Feb. 2, 3, 9, 10, 19-21.

3-3255. Mississinewa River near Ridgeville, Ind.

Location.--Lat 40°17', long 85°00', on line between secs. 7 and 8, T. 21 N., R. 14 E., on right bank, 10 ft downstream from highway bridge, 0.8 mile downstream from Mud Creek, and 2 miles east of Ridgeville.

Drainage area.--130 sq mi.

Records available.--August 1946 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 965.28 ft above mean sea level, datum of 1929, (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 4, 1950, wire-weight gage at same site and datum then in use.

Average discharge.--16 years, 136 cfs.

Extremes.--Maximum discharge during year, 5,800 cfs Jan. 26, July 21; maximum gage height, 13.50 ft Jan. 26; minimum, 6.5 cfs July 2 (gage height, 2.12 ft).
1946-62: Maximum discharge, 13,900 cfs June 10, 1958 (gage height, 16.25 ft), from rating curve extended above 5,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.1 cfs Oct. 24, 1946; minimum gage height, 1.65 ft Sept. 11, 1953.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 21-30, May 19-25, May 28 to June 5, June 7, 8, 10, 11, July 30 to Sept. 4)

2.0	4.8	3.5	136
2.1	7.8	5.0	404
2.2	12	7.0	880
2.3	16	10.0	1,790
2.4	22	11.0	2,350
2.5	29	12.0	3,290
3.0	78	13.0	4,740

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	84	13	32	33	110	150	106	350	12	8.6	33	10
2	78	13	30	35	90	118	89	318	10	7.8	27	8.2
3	51	14	27	38	84	100	72	176	8.2	102	24	8.6
4	40	20	28	49	130	91	72	112	7.1	72	21	34
5	33	17	100	468	160	84	67	84	9.8	33	18	15
6	27	14	72	1,140	100	77	67	72	27	33	17	12
7	23	14	51	729	93	72	67	60	9.8	21	20	11
8	21	14	38	224	84	78	63	167	7.1	17	* 17	11
9	19	14	33	155	78	564	58	136	67	72	15	11
10	18	14	39	120	71	680	51	94	12	25	14	11
11	18	14	54	102	65	845	46	89	15	17	13	10
12	17	14	60	92	66	1,200	46	72	281	167	12	11
13	18	13	37	83	65	426	50	63	89	72	11	10
14	18	13	32	78	72	208	44	51	52	67	11	29
15	16	14	30	900	62	142	39	42	35	364	11	18
16	15	152	30	400	63	118	34	35	26	208	10	13
17	16	118	63	185	59	106	32	32	20	118	10	9.8
18	16	59	72	115	56	106	33	28	16	72	10	9.4
19	16	43	94	85	63	148	31	26	17	49	9.4	10
20	18	38	* 148	67	54	192	29	21	15	41	8.2	10
21	16	* 37	84	53	59	1,780	25	18	13	3,980	* 8.2	10
22	14	40	67	490	* 192	* 820	23	18	12	1,400	8.2	10
23	12	189	72	145	90	360	26	16	13	338	7.8	9.8
24	13	168	59	* 100	70	242	22	* 12	40	200	7.4	9.0
25	* 14	94	55	84	60	176	21	10	16	148	9.0	9.8
26	14	72	49	2,550	1,870	142	* 21	27	12	192	20	11
27	12	55	44	3,050	1,310	118	21	32	* 9.8	124	14	* 10
28	12	42	40	404	404	106	21	24	8.6	94	9.4	10
29	12	39	37	224	----------	100	20	13	7.8	78	8.2	9.8
30	11	34	35	184	----------	94	20	26	8.2	54	7.8	9.4
31	14	----------	33	130	----------	94	----------	18	----------	42	9.0	----------
Total	706	1,395	1,645	12,512	5,680	9,537	1,316	2,242	976.4	9,216.4	420.6	360.8
Mean	22.8	46.5	53.0	404	203	308	43.9	72.3	29.2	265	13.6	12.0
Cfsm	0.175	0.358	0.408	3.11	1.56	2.37	0.338	0.556	0.225	2.04	0.105	0.092
In.	0.20	0.40	0.47	3.58	1.62	2.73	0.38	0.64	0.25	2.35	0.12	0.10

Calendar year 1961: Max 1,950 Min 2.1 Mean 144 Cfsm 1.11 In. 15.05
Water year 1961-62: Max 3,980 Min 7.1 Mean 123 Cfsm 0.946 In. 12.84

Peak discharge (base, 2,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	1900	13.50	5,800				
2-26	1900	12.15	3,520				
3-21	1900	11.40	2,680				
7-21	1130	13.49	5,800				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 13-15, Dec. 26 to Jan. 2, Jan. 9-13, 15-19, 22, 23, Jan. 31 to Feb. 12, Feb. 23-25, Mar. 1-6.

3-3260. Mississinewa River near Eaton, Ind.

Location.--Lat 40°20', long 85°19', in NE¼ sec. 31, T. 22 N., R. 11 E., on right bank at downstream side of bridge, 1½ miles upstream from Estey Creek and 2½ miles southeast of Eaton.

Drainage area.--304 sq mi.

Records available.--March 1952 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 880.60 ft above mean sea level, datum of 1929. Prior to Sept. 24, 1954, wire-weight gage at same site and datum.

Average discharge.--10 years, 292 cfs.

Extremes.--Maximum discharge during year, 9,540 cfs Jan. 27 (gage height, 15.42 ft); minimum, 15 cfs Sept. 28, 21-23, minimum gage height, 2.48 ft Sept. 28.
1952-62: Maximum discharge, 19,400 cfs June 10, 1958 (gage height, 18.53 ft) from rating curve extended above 6,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 2.0 cfs Sept. 23, 27, 1954 (gage height, 2.23 ft).

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-7)

Oct. 1 to Jan. 27				Jan. 28 to Sept. 30			
2.5	12	5.0	520	2.4	11	5.0	550
2.7	24	6.0	940	2.6	22	6.0	980
3.0	55	7.0	1,460	2.8	38	7.0	1,530
3.5	122	8.0	2,100	3.2	88	13.0	6,410
4.0	230	12.0	5,470	3.8	196	15.0	8,940
4.5	362	15.0	8,940				

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	23	59	74	225	677	174	194	87	46	84	22
2	80	24	54	76	190	320	174	845	56	39	70	22
3	99	28	54	82	175	218	136	550	45	342	61	24
4	73	31	54	92	200	170	119	288	40	472	54	51
5	60	29	57	241	350	145	111	174	76	185	49	85
6	49	31	125	1,540	240	128	119	128	88	136	48	45
7	40	31	106	2,400	178	115	111	103	59	82	* 46	29
8	34	29	74	1,240	137	103	111	166	45	70	44	24
9	30	26	61	g 422	114	488	103	420	34	49	41	22
10	28	26	60	g 260	100	1,730	96	233	58	66	35	22
11	27	26	67	g 195	94	1,530	82	246	136	62	33	20
12	26	26	92	g 167	88	2,320	78	185	834	154	30	19
13	25	26	100	g 150	82	1,980	82	128	672	260	28	18
14	26	28	89	g 142	84	729	84	103	222	218	26	24
15	26	27	76	g 1,470	84	420	74	90	119	1,020	25	28
16	27	64	68	g 2,000	75	302	66	74	82	1,030	25	38
17	24	373	66	g 1,250	71	233	62	70	61	480	24	28
18	23	212	99	g 660	66	208	60	64	49	246	23	21
19	24	122	* 122	g 350	70	260	61	59	40	136	22	19
20	27	86	218	g 220	70	450	59	54	34	142	20	17
21	26	* 73	245	g 130	70	* 1,910	54	49	33	5,290	21	15
22	29	68	148	g 400	265	3,680	51	49	29	7,950	* 20	15
23	27	92	130	g 1,000	* 390	1,600	53	* 48	28	3,990	19	15
24	25	419	130	g 390	150	755	53	45	53	855	19	16
25	* 26	305	114	* 270	128	550	* 50	38	74	450	21	17
26	26	169	102	3,320	1,710	390	48	56	47	360	87	17
27	26	122	93	* 8,380	4,480	302	48	194	30	316	54	* 16
28	26	92	88	4,110	2,180	233	47	128	* 26	196	41	15
29	23	74	83	772	----------	208	47	90	23	145	31	16
30	23	65	77	480	----------	174	50	110	22	111	25	16
31	24	----------	75	316	----------	164	----------	162	----------	96	22	----------
Total	1,095	2,747	2,986	32,599	12,066	22,492	2,463	5,133	3,202	24,894	1,148	736
Mean	35.3	91.6	96.3	1,052	431	726	82.1	166	107	803	37.0	24.5
Cfsm	0.116	0.301	0.317	3.46	1.42	2.39	0.270	0.546	0.352	2.64	0.122	0.081
In.	0.13	0.34	0.37	3.99	1.48	2.76	0.30	0.63	0.39	3.04	0.14	0.09

Calendar year 1961 : Max 4,410 Min 9.3 Mean 347 Cfsm 1.14 In. 15.48
Water year 1961-62 : Max 8,380 Min 15 Mean 306 Cfsm 1.01 In. 13.66

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	1030	15.42	9,540				
2-27	1500	11.33	4,880				
3-22	1500	10.17	4,000				
7-22	1030	14.83	8,660				

* Discharge measurement made on this day.
g Gage height computed from twice-daily wire-weight gage readings.
Note.--Stage-discharge relation affected by ice Dec. 13-15, Dec. 26 to Jan. 4, Jan. 10-14, 16-25, Feb. 1-12, 20, 24, 25, Mar. 2-7.

3-3265. Mississinewa River at Marion, Ind.

Location.--Lat 40°34', long 85°40', in sec. 31, T. 25 N., R. 8 E., on left bank, 12 ft downstream from Highland Avenue Bridge in Marion, 1 mile upstream from Hummels Creek, and 4 miles downstream from Lugar Creek.

Drainage area.--677 sq mi.

Records available.--September 1923 to September 1962. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 774.56 ft above mean sea level, datum of 1929. Prior to Dec. 9, 1933, chain gage at same site and datum.

Average discharge.--39 years, 647 cfs.

Extremes.--Maximum discharge during year, 16,500 cfs July 21 (gage height, 13.71 ft); minimum, 1.5 cfs Oct. 7 (gage height, 0.32 ft), caused by tainter gates above gage being closed temporarily.
1923-62: Maximum discharge, 25,000 cfs Mar. 21, 1927 (gage height, 17.4 ft from graph based on gage readings), from rating curve extended above 18,000 cfs; minimum, 1.1 cfs Apr. 17, 1959; minimum daily, 3.8 cfs Oct. 23, 1940, Oct. 9, 1943; minimum gage height, -0.27 ft Sept. 25, 1935.
Flood of March 1913 reached a stage of 19.2 ft, from information by Indiana Flood Control and Water Resources Commission.

Remarks.--Records good except those for periods of missing gage-height record or ice effect, which are fair. Flow periodically regulated by dam above station.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.6	12	1.5	248
.7	20	2.0	540
.8	30	4.0	2,300
.9	44	8.0	6,900
1.0	61	11.0	11,600
1.2	116	13.0	15,100

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	304	71	183	151	550	1,800	420	201	384	61	332	107
2	232	71	162	* 149	365	800	402	804	265	220	293	104
3	192	84	149	143	380	500	372	1,170	196	1,070	156	104
4	231	76	157	134	450	400	326	670	119	1,440	203	173
5	127	81	153	222	900	325	310	420	263	790	206	254
6	83	84	149	2,030	575	300	315	326	540	480	377	187
7	13	78	179	4,290	380	282	315	276	372	352	217	162
8	78	76	196	3,200	335	321	304	450	334	282	192	127
9	216	78	166	920	300	1,000	396	710	670	242	179	113
10	76	76	153	380	275	2,400	349	670	396	201	106	107
11	74	71	146	345	250	2,800	298	540	432	587	72	104
12	66	66	153	320	227	4,180	270	510	1,110	1,480	142	172
13	82	71	160	308	206	3,850	265	420	1,710	540	291	19
14	68	86	150	300	196	2,100	259	326	710	881	166	84
15	64	81	143	950	192	1,080	238	270	288	3,520	162	74
16	64	958	136	2,700	187	670	222	243	287	3,100	105	76
17	64	1,170	134	2,800	179	540	206	212	227	1,710	46	74
18	66	670	142	2,000	174	480	196	192	313	755	113	76
19	76	408	157	900	187	540	192	174	162	650	131	74
20	68	298	192	500	174	870	183	162	146	470	134	71
21	66	227	270	395	179	5,070	174	153	134	11,200	164	64
22	66	206	293	1,000	314	6,490	183	146	104	14,700	138	61
23	71	354	232	1,700	710	4,760	187	142	38	11,600	* 131	59
24	68	480	217	1,300	350	2,300	174	134	153	4,600	123	59
25	108	635	206	840	280	1,620	166	123	253	1,710	142	61
26	86	420	196	6,360	* 4,160	1,170	162	215	* 138	1,350	212	61
27	86	* 332	192	14,000	* 6,760	790	153	321	138	910	282	* 59
28	86	270	174	a 7,300	5,600	635	149	* 414	116	670	270	59
29	78	232	165	a* 3,500	----------	540	146	326	84	510	170	58
30	* 76	201	158	1,530	----------	* 480	* 153	480	18	450	138	58
31	76	---------	154	870	----------	450	----------	480	----------	* 384	120	----------
Total	3,111	8,011	5,417	61,537	24,835	49,543	7,485	11,680	10,100	66,915	5,513	2,861
Mean	100	267	175	1,985	887	1,598	250	377	337	2,159	178	95.4
Cfsm	0.148	0.394	0.258	2.93	1.31	2.36	0.369	0.557	0.498	3.19	0.263	0.141
In.	0.17	0.44	0.30	3.38	1.36	2.72	0.41	0.64	0.56	3.68	0.30	0.16

Calendar year 1961: Max 7,660 Min 13 Mean 717 Cfsm 1.06 In. 14.37
Water year 1961-62: Max 14,700 Min 13 Mean 704 Cfsm 1.04 In. 14.12

Peak discharge (base, 5,600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	0500	12.76	14,700				
2-26	2000	8.82	8,060				
3-21	1930	8.56	7,760				
7-21	2400	13.71	16,500				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 13-16, Dec. 29 to Jan. 3, Jan. 9-25, Feb. 1-11, 24, 25, Mar. 1-6.

3-3270. Mississinewa River at Peoria, Ind.

Location.--Lat 40°43', long 85°57', in sec. 10, T. 26 N., R. 5 E., on right upstream abutment of highway bridge at Peoria, 6 miles upstream from mouth and 6½ miles southeast of Peru.

Drainage area.--809 sq mi.

Records available.--October 1952 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 660.00 ft above mean sea level, datum of 1929. Prior to Oct. 7, 1954, wire-weight gage and crest-stage gage on highway bridge at same datum.

Average discharge.--10 years, 736 cfs.

Extremes.--Maximum discharge during year, 16,000 cfs Jan. 27 (gage height, 15.18 ft); minimum, 45 cfs Oct. 9 (gage height, 1.63 ft).
1952-62: Maximum discharge, 28,000 cfs June 11, 1958 (gage height, 19.26 ft); minimum, 13 cfs Mar. 15, 1960 (gage height, 1.28 ft), result of freezeup; minimum daily, 24 cfs Mar. 14, 1960, result of freezeup.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge in cubic feet per second)

Oct. 1 to Jan. 27				Jan. 28 to Sept. 30			
1.8	67	6.0	2,340	1.6	42	6.0	2,450
2.0	102	8.0	4,220	1.9	91	8.0	4,450
2.3	176	11.0	7,810	2.4	230	10.0	6,900
2.6	262	12.0	9,260	3.0	480	15.0	15,600
3.0	425	15.0	15,500	4.0	1,000		
4.0	940						

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	246	128	246	197	600	2,200	580	265	680	70	455	162
2	202	120	216	189	440	920	530	630	505	66	385	146
3	176	125	202	182	455	580	505	1,510	340	402	275	306
4	171	142	202	178	515	500	455	1,060	634	1,650	300	375
5	202	153	216	402	1,100	410	408	730	1,000	1,180	355	223
6	176	138	216	1,840	900	360	408	530	1,000	780	475	265
7	155	138	202	4,880	460	350	408	408	730	630	320	220
8	72	132	216	3,910	410	455	385	720	505	393	235	183
9	78	128	231	1,760	365	970	430	1,000	850	366	210	162
10	255	123	216	400	330	2,050	480	940	780	318	185	143
11	130	123	202	325	300	2,810	408	830	505	265	160	126
12	120	118	189	305	275	4,890	366	730	619	1,810	235	119
13	130	114	189	290	250	4,230	340	830	1,730	830	335	254
14	160	120	176	280	235	2,900	340	530	1,300	780	250	87
15	135	140	168	908	230	1,510	320	408	680	4,200	190	116
16	114	413	163	2,800	225	1,000	300	340	331	3,600	150	116
17	111	1,720	161	3,100	218	780	282	300	340	2,450	127	112
18	107	1,000	170	1,650	210	680	265	300	282	1,300	138	109
19	109	659	202	800	225	730	248	300	364	668	150	109
20	118	448	216	560	* 340	* 1,000	230	248	216	630	158	107
21	114	335	* 246	480	320	4,210	226	226	192	4,520	193	98
22	104	* 297	335	900	366	7,320	220	* 230	174	14,300	165	93
23	100	448	316	* 1,700	780	5,860	230	206	192	12,700	* 142	91
24	* 102	636	280	1,750	410	3,000	* 230	186	298	7,410	136	85
25	125	682	262	1,000	330	1,970	223	177	* 198	2,020	146	85
26	166	659	246	3,580	2,720	1,510	212	209	318	1,810	195	* 93
27	138	471	246	14,400	7,460	1,120	212	408	180	1,240	223	91
28	135	357	225	14,700	6,120	880	209	505	174	1,000	334	85
29	163	316	217	4,500	---------	780	216	505	152	780	300	80
30	158	280	209	2,100	---------	730	216	580	121	680	212	80
31	135	--------	203	1,000	---------	680	--------	780	---------	* 555	177	----------
Total	4,407	10,663	6,784	71,066	26,589	57,385	9,882	16,621	15,390	69,403	7,311	4,321
Mean	142	355	219	2,292	950	1,851	329	536	513	2,239	236	144
Cfsm	0.176	0.439	0.271	2.83	1.17	2.29	0.407	0.662	0.634	2.77	0.292	0.178
In.	0.20	0.49	0.31	3.26	1.22	2.87	0.45	0.76	0.71	3.19	0.34	0.20

Calendar year 1961: Max 8,540 Min 70 Mean 807 Cfsm 0.998 In. 13.53
Water year 1961-62: Max 14,700 Min 66 Mean 821 Cfsm 1.01 In. 14.00

Peak discharge (base, 6,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	1900	15.18	16,000	7-22	Unknown	--	About 15,600
2-27	0400	11.08	8,460				
3-22	0400	10.80	8,020				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 14-18, 28, Dec. 31 to Jan. 4, Jan. 10-14, 23-25, 29, 30, Feb. 24, 25, Mar. 1-7. No gage-height record Dec. 29, 30, Jan. 16-22, Jan. 31 to Feb. 19, July 15, 16, 21-25, Aug. 1-23.

3-3275. Wabash River at Peru, Ind.

Location.--Lat 40°44'35", long 86°05'45", in sec. 32, T. 27 N., R. 4 E., on right bank at upstream side of bridge on U. S. Highway 31, half a mile southwest of Peru, 4.3 miles downstream from Mississinewa River, and at mile 370.5.

Drainage area.--2,655 sq mi.

Records available.--August 1943 to September 1962. Discharge measurements only during May and July 1943.

Gage.--Water-stage recorder. Datum of gage is 617.94 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to June 20, 1961, wire-weight gage at same site and datum.

Average discharge.--19 years, 2,460 cfs.

Extremes.--Maximum discharge during year, 34,300 cfs Jan. 27 (gage height, 18.02 ft, from graph based on gage readings); minimum, 154 cfs Aug. 19 (gage height, 1.94 ft).
1943-62: Maximum discharge, 68,000 cfs May 18, 1943 (gage height, 24.46 ft, from floodmark); minimum, 62 cfs Sept. 19, 1945; minimum gage height, 1.70 ft Oct. 5, 26, 1946.
Flood of Mar. 26, 1913, reached a stage of 28.1 ft (discharge, about 115,000 cfs, from rating curve extended above 63,000 cfs).

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1961-62 except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 9-12, 15-22, 24, Jan. 5, 27, Apr. 21 to May 1)

Oct. 1 to Jan. 27		Jan. 28 to Sept. 30	
2.2	220	1.98	170
3.0	610	2.7	530
5.0	2,200	3.5	1,110
7.0	4,510	5.0	2,650
12.0	14,000	8.0	6,940
18.0	30,800	13.0	17,200
		18.0	33,600

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	670	400	775	440	6,260	12,400	2,320	622	1,880	280	688	305
2	610	353	740	455	4,150	7,120	2,100	1,320	1,670	224	* 622	275
3	580	353	640	475	3,130	4,710	1,880	3,740	1,200	524	560	290
4	525	353	610	505	2,770	3,250	1,670	3,630	1,490	1,760	475	755
5	500	400	670	610	6,940	2,320	1,470	2,430	5,460	1,570	305	420
6	475	425	880	1,640	6,000	1,880	1,380	1,670	3,630	985	502	755
7	425	400	775	11,600	3,890	1,570	1,380	1,280	2,540	945	720	590
8	307	353	670	11,300	2,540	2,540	1,380	1,610	1,770	790	475	475
9	228	330	640	6,370	2,210	4,150	1,380	3,130	2,100	590	420	448
10	376	307	610	2,700	1,770	9,930	1,770	3,890	2,320	530	392	392
11	298	298	610	1,500	1,470	9,310	1,470	3,250	1,670	590	365	315
12	261	289	640	1,200	1,380	17,200	1,280	2,540	1,670	905	260	315
13	307	275	590	1,150	1,280	15,200	1,200	2,650	3,540	1,280	247	340
14	289	279	560	1,090	1,200	10,600	1,200	2,210	4,710	1,200	365	256
15	376	284	550	1,800	1,110	6,580	1,110	1,470	2,770	3,040	295	234
16	353	753	580	6,550	1,110	4,430	985	1,200	1,670	5,010	260	247
17	307	6,010	610	7,400	1,070	3,250	865	945	1,200	4,290	260	238
18	284	4,240	580	5,100	1,110	2,890	790	865	865	2,650	212	229
19	353	2,500	610	3,500	1,500	3,130	720	865	945	1,770	170	220
20	330	1,660	610	2,750	1,520	* 4,430	688	720	655	1,570	207	216
21	330	1,260	* 610	2,200	1,480	12,100	622	688	590	3,050	212	212
22	376	* 1,100	610	* 1,930	1,470	20,500	590	* 655	530	14,400	229	203
23	353	1,580	740	2,380	* 1,770	17,500	590	655	475	17,000	* 224	199
24	* 353	3,030	640	3,080	2,430	13,100	* 622	590	755	12,600	212	199
25	376	2,400	555	3,980	1,670	8,560	622	530	* 475	4,150	238	191
26	425	2,110	505	6,420	6,960	6,100	590	530	622	2,770	365	203
27	525	1,580	455	28,200	20,200	4,430	622	985	448	2,210	340	* 199
28	500	1,340	420	31,700	18,200	3,500	590	1,200	392	1,770	392	195
29	450	1,020	410	*25,600	--------	2,890	560	1,280	365	1,280	530	191
30	500	880	413	17,500	--------	2,650	590	1,200	340	1,110	448	191
31	450	--------	425	10,400	--------	2,650	--------	1,880	---------	828	365	---------
Total	12,492	36,562	18,733	201,525	106,590	219,870	33,036	50,230	48,747	91,671	11,355	9,298
Mean	403	1,219	604	6,501	3,807	7,093	1,101	1,620	1,625	2,957	366	310
Cfsm	0.152	0.459	0.227	2.45	1.43	2.67	0.415	0.610	0.612	1.11	0.138	0.117
In.	0.18	0.51	0.26	2.82	1.49	3.08	0.46	0.70	0.68	1.28	0.16	0.13

Calendar year 1961: Max 26,400 Min 121 Mean 2,310 Cfsm 0.870 In. 11.81
Water year 1961-62: Max 31,700 Min 170 Mean 2,302 Cfsm 0.867 In. 11.75

Peak discharge (base, 18,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	1700	18.02	34,300	3-22	1030	14.35	21,100
2-27	1300	14.27	20,800	7-22	2000	13.45	18,200
3-12	1430	13.57	18,800				

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 13, 14, Dec. 25 to Jan. 4, Jan. 11-20, 23, 24, Feb. 6, 19-21. Gage height computed from twice-daily observer's readings Oct. 1-9, 13-24, 26-29, Nov. 17 to Jan. 30, Feb. 22, May 29 to June 26, July 3-30, Aug. 4-15, 25-29, Sept. 12-17, 26-30.

3-3280. Eel River at North Manchester, Ind.

Location.--Lat 40°59', long 85°46', in NE¼ sec. 5, T. 29 N., R. 7 E., on right bank, 200 ft downstream from Main Street Bridge at North Manchester and 1¼ miles upstream from Pony Creek. Records include flow of Pony Creek.
Drainage area.--416 sq mi, includes that of Pony Creek.
Records available.--October 1929 to September 1962. Prior to April 1930, monthly discharge only, published in WSP 1305. Gage-height records since October 1924 are available in the District office.
Gage.--Water-stage recorder. Datum of gage is 738.00 ft above mean sea level, datum of 1929. Prior to July 23, 1953, wire-weight gage or chain gage on downstream side of Second Street Bridge, 700 ft upstream at same datum.
Average discharge.--33 years, 355 cfs.
Extremes.--Maximum discharge during year, 3,880 cfs Mar. 12 (gage height, 9.93 ft); minimum, 41 cfs June 29 (gage height, 1.48 ft).
1929-62: Maximum discharge observed, 7,500 cfs Feb. 27, 1936 (gage height, 14.00 ft); minimum not determined, occurred Oct. 7, 1957, due to unusual regulation; minimum daily, 16 cfs Oct. 19, 1956.
Remarks.--Records fair except those for periods of ice effect, which are poor. Diurnal fluctuation caused by grist mill above station.
Revisions.--Some records of daily discharge for the water year 1957 are in error and revised figures are available in the District office. Revisions will be published in the next water supply paper.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 19 to Nov. 16, Nov. 18-22, Nov. 25 to Dec. 12, May 10 to June 3, June 12 to July 20)

1.6	32
1.9	78
2.5	213
3.0	344
5.0	1,070
8.0	2,570
10.0	3,960

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	237	120	177	120	450	930	480	165	177	49	55	66
2	249	120	165	120	400	660	410	400	151	68	55	55
3	213	125	155	123	390	470	344	655	130	123	54	51
4	189	177	165	131	500	360	314	445	134	108	55	58
5	160	177	515	201	1,900	314	314	300	225	95	54	* 60
6	143	* 153	* 410	553	1,200	261	314	249	* 213	88	70	52
7	132	134	300	1,510	580	* 308	314	213	165	75	75	48
8	123	125	237	990	400	1,110	300	261	136	76	64	46
9	114	120	213	540	320	1,200	* 314	286	177	76	57	58
10	112	112	201	400	270	1,910	344	249	213	71	51	60
11	108	108	189	300	230	1,610	300	261	215	* 70	48	52
12	* 105	103	189	260	213	3,660	261	249	329	89	46	51
13	105	101	157	240	201	* 3,380	329	249	225	86	49	52
14	123	99	136	230	* 189	2,350	344	* 225	165	88	49	66
15	120	97	127	* 580	177	1,510	300	201	134	95	54	58
16	114	450	165	1,100	189	910	261	177	112	88	* 57	54
17	108	910	237	700	177	762	237	165	93	78	55	52
18	105	480	249	500	237	1,070	225	158	80	73	52	51
19	103	329	225	400	480	1,370	213	165	71	71	48	49
20	103	261	213	365	329	1,560	201	201	66	67	42	51
21	103	237	201	344	344	1,800	189	177	60	93	44	54
22	99	237	201	360	274	1,800	177	177	57	64	46	55
23	97	690	201	329	225	1,110	177	155	61	60	48	55
24	105	690	201	344	220	910	165	143	91	51	48	55
25	114	428	189	314	201	834	160	139	76	44	60	57
26	151	329	189	1,100	1,540	726	153	151	60	42	84	60
27	136	274	152	3,170	2,960	655	148	165	49	45	63	63
28	125	237	134	2,690	2,020	585	141	155	45	46	55	63
29	120	213	122	1,510	---	550	141	151	41	49	52	61
30	120	189	118	950	---	550	139	165	42	54	49	61
31	116	---	118	520	---	550	---	237	---	55	52	---
Total	4,052	7,825	6,251	20,994	16,616	35,775	7,709	7,089	3,793	2,237	1,691	1,674
Mean	131	261	202	676	593	1,154	257	229	126	72.2	54.5	55.8
Cfsm	0.315	0.627	0.486	1.62	1.43	2.77	0.618	0.550	0.303	0.174	0.131	0.134
In.	0.36	0.70	0.56	1.87	1.49	3.19	0.69	0.63	0.34	0.20	0.15	0.15

Calendar year 1961: Max 2,460 Min 48 Mean 355 Cfsm 0.853 In. 11.58
Water year 1961-62: Max 3,660 Min 41 Mean 317 Cfsm 0.762 In. 10.33

Peak discharge (base, 2,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	1330	9.41	3,520				
2-27	0130	9.14	3,310				
3-12	1130	9.93	3,880				
3-21	2100	7.37	2,240				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 13-16, Dec. 27 to Jan. 4, Jan. 9-20, Jan. 31 to Feb. 11, Feb. 24, Mar. 1-4.

3-3285. Eel River near Logansport, Ind.

Location.--Lat 40°46'55", long 86°15'50", in sec. 14, T. 27 N., R. 2 E., on right bank at downstream side of county bridge on Adamsboro Road, 5½ miles northeast of Logansport and 6.9 miles upstream from mouth.

Drainage area.--791 sq mi.

Records available.--July 1943 to September 1962. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 621.50 ft above mean sea level, datum of 1929. Prior to Aug. 15, 1956, wire-weight gage at same site and datum.

Average discharge.--19 years, 742 cfs.

Extremes.--Maximum discharge during year, 6,540 cfs Feb. 27, Mar. 12; maximum gage height, 9.92 ft Jan. 27 (ice jam); minimum, 113 cfs Aug. 23 (gage height, 2.96 ft).
1943-62: Maximum discharge, 13,100 cfs Jan. 5, 1950 (gage height, 11.80 ft); minimum, 65 cfs Mar. 16, 1960, result of freezeup (gage height, 2.60 ft).
Flood of May 18, 1943, reached a stage of 13.2 ft, from floodmark (discharge, 17,000 cfs, from rating curve extended above 9,900 cfs by logarithmic plotting).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.7	68	4.5	820
3.0	122	6.0	2,220
3.5	268	8.0	5,100
4.0	497	9.0	6,900

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	347	305	470	230	860	a 2,000	940	392	392	176	141	141
2	443	305	443	230	730	1,300	820	443	347	176	136	141
3	443	305	418	232	630	970	713	820	305	197	136	151
4	370	392	418	245	599	760	681	860	347	207	139	*162
5	326	443	526	347	2,890	650	650	650	713	203	132	165
6	305	418	860	963	a 1,800	586	650	555	782	197	160	141
7	268	370	713	3,240	a 1,150	526	681	470	526	186	160	136
8	268	347	555	a 1,940	a 880	1,070	650	555	418	181	173	129
9	250	326	497	a 1,140	720	2,000	650	618	940	* 173	146	136
10	233	305	443	a 745	655	3,100	681	586	1,020	170	139	136
11	233	286	443	a 600	600	2,820	650	586	745	184	134	134
12	226	286	443	a 530	555	5,820	618	555	713	216	132	134
13	326	286	443	a 505	526	5,820	618	681	* 713	186	129	129
14	418	286	295	a 500	497	4,280	713	586	497	192	127	151
15	370	268	* 240	a 1,000	470	* 2,700	681	497	370	189	* 129	141
16	* 305	* 497	305	a 2,050	470	1,800	618	443	305	192	127	139
17	286	1,520	392	a 1,430	470	1,430	555	392	268	184	127	129
18	268	1,250	418	a 1,000	470	1,520	526	* 370	250	173	127	124
19	250	820	418	a 810	844	2,000	497	370	250	165	127	120
20	250	681	392	a 730	* 890	2,700	* 470	347	220	162	118	118
21	250	586	370	a 700	730	4,440	443	370	210	170	120	118
22	250	586	347	680	640	4,440	443	370	203	195	118	118
23	250	1,250	370	680	560	2,700	418	347	207	189	115	120
24	250	1,610	370	680	490	2,000	418	326	223	176	115	120
25	286	1,160	347	680	440	1,700	392	305	233	165	127	122
26	326	860	347	2,050	2,750	1,520	392	305	216	157	165	122
27	347	713	290	5,800	6,000	1,340	370	347	200	151	168	122
28	326	618	245	a 4,800	4,020	1,160	370	347	189	146	157	120
29	326	555	230	a 2,700	----------	1,070	347	326	184	146	144	120
30	326	497	228	1,750	----------	1,020	347	305	178	146	127	120
31	326	---------	229	1,230	----------	1,020	---------	326	----------	146	136	----------
Total	9,448	18,131	12,505	40,217	32,336	66,262	17,002	14,450	12,164	5,496	4,231	3,959
Mean	305	604	403	1,297	1,155	2,137	567	466	405	177	136	132
Cfsm	0.386	0.764	0.509	1.64	1.46	2.70	0.717	0.589	0.512	0.224	0.172	0.167
In.	0.44	0.85	0.59	1.89	1.52	3.11	0.80	0.68	0.57	0.26	0.20	0.19

Calendar year 1961 : Max 5,460 Min 114 Mean 751 Cfsm 0.949 In. 12.89
Water year 1961-62 : Max 6,000 Min 115 Mean 647 Cfsm 0.818 In. 11.10

Peak discharge (base, 5,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
			About	3-22	0030	8.17	5,460
1-27	Unknown	--	6,000				
2-27	1000	8.75	6,540				
3-12	2300	8.76	6,540				

* Discharge measurement made this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 14-16, Dec. 27 to Jan. 4, Jan. 22-27, Jan. 30 to Feb. 3, Feb. 9-11, 20-25, Mar. 2-5.

3-3290. Wabash River at Logansport, Ind.

Location.--Lat 40°44'47", long 86°22'39", in NE¼ sec. 35, T. 27 N., R. 1 E., on left bank 150 ft downstream from Cicott Street Bridge in Logansport, 1,000 ft downstream from Eel River, and at mile 353.7.
Drainage area.--3,751 sq mi.
Records available.--April to September, November and December 1903, March to November 1904, March 1905 to July 1906, May 1923 to September 1962. January, February and December 1904, January and February 1905 (gage heights only). Gage-height records collected at same site December 1910 to December 1916, and since January 1926 are contained in reports of U. S. Weather Bureau.
Gage.--Water-stage recorder. Datum of gage is 573.28 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). April 1903 to July 1906, chain gage at site 150 ft upstream at datum 2.12 ft higher. May 1923 to Mar. 15, 1925, chain gage at site 150 ft upstream at datum 0.19 ft higher. Mar. 16, 1925, to Mar. 31, 1927, and Oct. 1, 1927, to Feb. 8, 1934, chain gage at site 150 ft upstream at present datum. Apr. 1 to Sept. 30, 1927, staff gage at present site at datum approximately 2.85 ft higher.
Average discharge.--39 years (1923-62), 3,300 cfs.
Extremes.--Maximum discharge during year, 38,100 cfs Jan. 28 (gage height, 13.63 ft); minimum, 302 cfs Sept. 30; minimum gage height, 2.78 ft Aug. 20.
1903-6, 1923-62: Maximum discharge, 89,800 cfs May 18, 1943 (gage height, 21.32 ft); minimum, 97 cfs Sept. 25, 1941; minimum daily, 135 cfs Sept. 26, 1941; minimum gage height, 2.27 ft July 23, 1936.
Maximum stage known, 25.3 ft Mar. 26, 1913, from floodmarks (discharge, 140,000 cfs, estimated).
Remarks.--Records good except those for periods of ice effect, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 17, 18, June 11-21)

2.7	260	6.0	6,700
3.1	590	10.0	21,400
3.5	1,100	14.0	40,300
5.0	4,120		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,180	820	1,350	620	7,400	18,200	3,480	1,180	2,440	563	950	545
2	1,100	772	1,260	660	4,700	11,000	3,060	1,440	2,040	572	885	491
3	1,100	796	1,180	700	4,120	6,000	2,640	3,900	1,640	760	796	533
4	950	885	1,100	745	3,900	4,400	2,440	5,060	1,440	1,620	736	*950
5	885	885	1,180	810	8,600	3,200	2,340	3,480	5,800	2,140	601	808
6	885	950	1,640	7,160	11,400	2,300	2,140	2,440	5,060	1,640	712	724
7	760	885	1,640	18,600	5,840	2,340	2,140	1,840	3,480	1,260	784	820
8	689	820	1,350	14,600	3,900	3,270	2,040	2,040	2,440	1,100	885	689
9	590	772	1,180	8,260	3,480	6,400	2,040	2,850	3,480	820	678	656
10	572	724	1,100	3,500	3,000	13,100	2,440	4,580	3,690	*820	601	590
11	678	700	1,020	2,400	2,500	13,400	2,340	4,120	2,640	820	563	527
12	581	689	1,020	2,000	2,140	25,000	2,040	3,270	2,040	1,590	509	473
13	930	678	1,020	1,840	2,040	24,600	1,940	3,270	2,920	2,540	428	473
14	885	678	860	1,750	1,940	17,800	1,940	3,060	*4,820	1,640	*482	572
15	808	678	*870	3,270	1,840	*11,000	1,940	2,240	3,270	2,900	554	455
16	*796	1,120	920	9,280	1,740	7,300	1,640	1,740	2,040	5,580	473	419
17	689	*6,510	1,020	10,000	1,740	5,060	1,540	*1,440	1,350	5,060	446	402
18	634	6,120	1,020	6,500	1,840	4,580	1,440	1,260	1,180	3,270	419	378
19	667	3,900	1,020	4,500	*2,850	5,580	1,350	1,260	1,020	2,140	354	370
20	678	2,640	1,020	3,800	2,680	7,620	*1,260	1,180	885	1,540	338	362
21	656	2,140	1,020	3,200	2,540	18,400	1,180	1,100	784	3,060	378	354
22	667	1,940	950	2,850	2,440	27,800	1,180	1,180	748	16,600	370	346
23	656	2,850	1,100	3,480	2,400	23,800	1,100	1,100	772	19,800	386	338
24	667	5,060	1,020	4,200	2,450	18,200	1,100	1,020	1,840	15,400	370	330
25	678	4,120	880	5,320	2,540	12,400	1,100	950	1,020	5,520	410	346
26	784	3,480	800	8,830	9,630	8,940	1,100	1,020	820	3,270	581	323
27	885	2,850	725	32,400	29,100	6,700	1,100	1,260	784	2,640	554	323
28	950	2,140	670	38,100	25,500	5,060	1,100	1,740	678	2,240	536	316
29	950	1,740	630	31,900	---------	4,340	1,100	1,640	645	1,640	634	316
30	950	1,540	610	21,000	---------	3,900	1,100	1,540	612	1,260	689	316
31	885	---------	605	12,400	---------	3,900	---------	2,140	---------	1,100	667	---------
Total	24,785	59,882	31,780	264,675	154,250	325,590	53,350	66,340	62,378	110,905	17,769	14,545
Mean	800	1,996	1,025	8,538	5,509	10,500	1,778	2,140	2,079	3,578	573	485
Cfsm	0.213	0.532	0.273	2.28	1.47	2.80	0.474	0.571	0.554	0.954	0.153	0.129
In.	0.25	0.59	0.31	2.63	1.53	3.23	0.53	0.66	0.62	1.10	0.18	0.14

Calendar year 1961 : Max 34,400 Min 275 Mean 3,466 Cfsm 0.924 In. 12.51
Water year 1961-62 : Max 38,100 Min 316 Mean 3,249 Cfsm 0.866 In. 11.77

Peak discharge (base, 22,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-28	0300	13.63	38,100				
2-27	1430	12.00	30,000				
3-12	2000	11.50	27,800				
3-22	0900	11.72	28,600				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 14-16, Dec. 25 to Jan. 5, Jan. 10-14, 17-21, 24, Feb. 1, 2, 10, 11, 20, 23, 24, Mar. 3-6. Gage heights computed from once daily wire-weight gage readings Jan. 30 to Feb. 19, Mar. 1, 2.

3-3295. Wabash River at Delphi, Ind.

Location.--Lat 40°35'26", long 86°41'54", in SE¼ sec. 24, T. 25 N., R. 3 W., on downstream side of second pier from left abutment of highway bridge, 1 mile west of Delphi, 1.6 miles upstream from Deer Creek, 8.6 miles upstream from Tippecanoe River, and at mile 330.8.

Drainage area.--4,032 sq mi.

Records available.--October 1939 to September 1962. Prior to January 1940 monthly discharge only, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 519.90 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark). Prior to July 19, 1942, wire-weight gage at same site and datum.

Average discharge.--23 years, 3,489 cfs.

Extremes.--Maximum discharge during year, about 39,000 cfs Jan. 28; maximum gage height, 24.70 ft Jan. 28 (backwater from ice); minimum, 410 cfs Aug. 20, Sept. 24, 26-30; minimum gage height, 1.39 ft Sept. 30.
1939-62: Maximum discharge, 85,300 cfs May 19, 1943 (gage height, 25.60 ft); maximum gage height, 27.48 ft Feb. 11, 1959 (ice jam); minimum daily discharge, 158 cfs Sept. 19, 20, 1941.
Maximum stage known, 28.4 ft Mar. 26, 1913, from information by State Highway Commission (discharge, about 145,000 cfs, from rating curve extended above 82,000 cfs by logarithmic plotting).

Remarks.--Records good except those for periods of missing gage-height record or ice effect, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 6-9)

1.0	220	10.0	10,700
2.0	720	14.0	17,000
3.0	1,500	18.0	26,000
5.0	3,600	21.0	37,000

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,500	1,060	1,680	860	a 9,300	18,100	3,960	1,230	2,450	810	1,140	720
2	1,230	945	1,590	880	5,800	11,300	3,480	1,320	2,250	1,060	1,020	610
3	1,230	980	1,410	910	5,300	a 7,600	* 3,120	2,380	1,860	2,050	* 910	560
4	1,140	1,140	1,320	950	5,200	a 5,400	2,890	4,720	1,590	1,680	875	1,020
5	980	1,140	* 1,320	1,000	9,300	a 4,100	2,670	3,720	3,900	2,450	810	1,410
6	945	1,140	1,590	2,880	12,400	a 3,400	2,560	2,670	5,270	2,050	810	* 910
7	875	* 1,140	1,860	11,300	a 7,800	* 2,780	2,450	2,150	* 3,960	1,770	840	980
8	780	1,020	1,680	a 16,000	a* 4,700	2,890	2,450	2,050	2,890	1,410	980	910
9	720	910	1,500	a 10,000	a 4,100	5,690	2,450	2,780	3,600	1,140	910	840
10	638	875	1,410	a 6,000	a 3,550	10,700	2,450	* 4,200	4,460	910	750	750
11	* 665	810	1,320	a 2,800	a 3,100	12,400	2,670	4,200	3,840	945	720	692
12	692	810	1,230	2,400	a 2,950	19,300	2,350	3,600	2,670	1,020	665	638
13	692	780	1,020	2,300	2,750	23,200	2,250	3,240	2,560	* 2,480	610	585
14	1,230	780	990	2,200	2,600	18,100	2,250	3,240	4,590	2,050	585	638
15	945	750	1,000	3,600	2,480	12,200	2,250	2,560	3,960	2,450	610	638
16	910	875	1,100	6,670	2,350	8,150	2,050	2,050	2,670	4,720	610	535
17	840	4,010	1,220	9,000	2,250	5,830	1,860	1,680	1,950	5,130	a 520	510
18	750	7,250	1,320	a 6,300	2,250	4,850	1,770	1,500	1,590	3,840	a 490	460
19	720	4,720	1,230	a 4,600	2,560	5,270	1,680	1,500	1,410	2,560	a 470	460
20	780	3,240	1,230	a 4,050	3,200	7,250	1,590	1,410	1,320	1,860	a 410	438
21	750	2,450	1,140	a 3,650	3,120	14,400	1,500	1,230	1,060	3,000	a 450	438
22	720	2,250	1,140	a 3,300	3,000	25,700	1,410	1,320	1,020	10,300	a 440	438
23	720	2,890	1,230	a 4,100	2,920	23,700	1,410	1,230	980	16,800	460	438
24	720	4,850	1,320	a 5,000	2,890	18,400	1,320	1,140	1,680	14,700	460	410
25	810	4,850	1,230	a 5,800	3,240	13,700	1,320	1,060	1,860	7,550	510	438
26	840	3,960	1,120	13,200	7,490	9,950	1,230	1,060	1,140	3,600	750	410
27	910	3,240	1,020	32,000	26,000	7,550	1,230	1,230	1,060	2,890	692	410
28	1,060	2,560	940	37,000	25,100	5,830	1,140	1,770	945	2,450	610	410
29	1,230	2,150	900	* 33,000	---------	4,850	1,140	1,770	810	2,050	610	410
30	1,230	1,860	870	22,000	---------	4,330	1,140	1,680	810	1,590	720	410
31	1,230	---------	850	a 15,000	---------	4,200	---------	1,770	---------	1,320	720	---------
Total	28,482	65,435	38,780	269,750	167,700	321,120	62,040	67,460	70,155	108,635	21,157	18,516
Mean	919	2,181	1,251	8,669	5,989	10,360	2,068	2,176	2,338	3,504	682	617
Cfsm	0.228	0.541	0.310	2.15	1.49	2.57	0.513	0.540	0.580	0.869	0.169	0.153
In.	0.26	0.60	0.36	2.48	1.55	2.96	0.57	0.62	0.65	1.00	0.19	0.17

Calendar year 1961 : Max 33,300 Min 340 Mean 3,468 Cfsm 0.860 In. 11.68
Water year 1961-62 : Max 37,000 Min 410 Mean 3,392 Cfsm 0.841 In. 11.41

Peak discharge (base, 24,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-28	unknown	-	39,000 about	3-22	1800	18.34	26,900
2-27	1030	19.28	30,200				
3-13	0430	17.45	24,200				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 14-17, Dec. 26 to Jan. 5, Jan. 12-14, 17, 28-30, Feb. 2-6, 13-15, 20, 23.

3-3297. Deer Creek near Delphi, Ind.

Location.--Lat 40°36', long 86°37', on line between SE¼ sec. 22 and NE¼ sec. 27, T. 25 N., R. 2 W., on downstream side of left wingwall of highway bridge, 3 miles northeast of Delphi and 4½ miles upstream from mouth.

Drainage area.--278 sq mi.

Records available.--October 1943 to September 1962. Prior to March 1944 monthly discharge only, published in WSP 1305.

Gage.--Water-stage recorder. Altitude of gage is 542 ft (by barometer). Prior to Sept. 18, 1950, wire-weight gage at same site and datum.

Average discharge.--19 years, 247 cfs.

Extremes.--Maximum discharge during year, 3,630 cfs Jan. 27 (gage height, 9.13 ft); maximum gage height, 11.72 ft Jan. 26 (ice jam); minimum, 24 cfs Sept. 30 (gage height, 2.22 ft).
1943-62: Maximum discharge, 14,400 cfs June 10, 1958 (gage height, 18.26 ft); minimum, 5.6 cfs Sept. 27, 1954.
Flood in May 1943 reached a stage of 19.8 ft, from floodmarks (discharge, 18,000 cfs, from rating curve extended above 8,000 cfs by logarithmic plotting).

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.2	24
2.6	69
3.0	142
3.5	280
4.0	460
6.0	1,470
9.0	3,550

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	132	144	66	360	480	296	127	97	52	*123	42
2	52	115	134	68	290	350	264	179	88	194	110	41
3	48	125	125	73	250	260	* 220	166	82	1,300	100	39
4	45	179	125	90	399	220	206	152	79	830	90	40
5	41	179	127	168	830	206	206	132	186	522	80	49
6	39	147	* 121	866	480	* 161	220	123	* 404	312	97	* 47
7	38	129	117	1,470	* 250	154	220	115	280	206	92	39
8	37	* 117	106	980	218	179	206	179	226	161	88	36
9	35	106	106	590	195	582	220	* 206	1,770	136	83	39
10	35	99	106	350	175	780	206	192	880	113	79	38
11	* 35	94	106	220	158	621	179	179	590	102	66	35
12	35	90	108	207	150	1,710	179	166	404	102	59	33
13	240	87	97	188	142	1,080	179	149	280	* 119	55	32
14	199	87	91	180	144	636	166	132	206	238	50	33
15	119	83	88	350	138	441	154	119	166	636	49	32
16	90	209	90	700	132	348	138	110	136	567	47	36
17	74	544	97	490	127	280	132	102	115	385	46	31
18	65	330	102	340	129	264	129	108	100	264	44	30
19	63	249	100	275	330	366	125	110	92	192	41	28
20	62	192	92	230	250	590	117	99	83	290	39	27
21	58	161	85	200	220	2,290	112	92	75	2,410	37	27
22	55	179	85	300	264	2,730	113	90	71	1,890	35	27
23	54	544	92	440	250	1,530	117	83	68	1,240	33	26
24	54	567	95	345	245	1,080	110	77	171	730	31	27
25	72	385	92	500	348	830	104	74	140	522	37	30
26	77	296	88	1,860	1,710	683	102	151	97	385	72	29
27	74	249	80	3,310	2,100	544	100	287	75	312	88	29
28	98	206	73	2,170	980	441	100	192	63	234	60	27
29	249	179	69	1,030	---	385	100	147	56	206	49	26
30	220	159	67	730	---	348	102	121	59	166	43	25
31	161	---	66	470	---	330	---	104	---	142	44	---
Total	2,582	6,218	3,074	19,256	11,264	20,899	4,822	4,263	7,139	14,958	1,967	1,000
Mean	83.3	207	99.2	621	402	674	161	138	238	483	63.5	33.3
Cfsm	0.300	0.745	0.357	2.23	1.45	2.42	0.579	0.496	0.856	1.74	0.228	0.120
In.	0.35	0.83	0.41	2.57	1.51	2.79	0.65	0.57	0.96	2.01	0.26	0.13

Calendar year 1961: Max 2,940 Min 32 Mean 249 Cfsm 0.896 In. 12.15
Water year 1961-62: Max 3,310 Min 25 Mean 267 Cfsm 0.960 In. 13.04

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	2000	9.13	3,630	6-9	1400	6.97	2,030
2-26	2030	7.88	2,730	7-21	1430	7.94	2,730
3-12	0600	6.90	2,030				
3-21	2330	8.42	3,080				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 13-16, Dec. 27 to Jan. 3, Jan. 11-26, Jan. 31 to Feb. 3, Feb. 7-12, 20, 23, 24, Mar. 1-4.

3-3305. Tippecanoe River at Oswego, Ind.

Location.--Lat 41°19'14", long 85°47'21", in NE¼ NE¼ sec. 14, T. 33 N., R. 6 E., on left bank 10 ft downstream from dam at Tippecanoe Lake Outlet in Oswego and 3 miles east of Leesburg.

Drainage area.--115 sq mi.

Records available.--October 1949 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 830.00 ft above mean sea level, datum of 1929. Prior to Aug. 12, 1953, staff gage at same site and datum.

Average discharge.--13 years, 110 cfs.

Extremes.--Maximum discharge during year, 356 cfs Mar. 21-27; maximum gage height, 7.58 ft Mar. 25; minimum, 6.1 cfs Aug. 23 (gage height, 4.80 ft).
1949-62: Maximum discharge, 700 cfs Oct. 17, 1954 (gage height, 8.64 ft); minimum, 1.7 cfs Nov. 13, 14, 1956; minimum gage height, 4.36 ft Sept. 8, 1953.

Remarks.--Records fair. Occasional regulation by flashboards at lake outlet.

Rating tables, water year 1961-62 (gage height, in feet, and discharge in cubic feet per second)
(Shifting-control method used Jan. 1-15, Apr. 25 to May 3, June 16 to Sept. 30)

Oct. 1 to Jan. 15 May 4 to Sept. 30		Jan. 16 to May 3	
4.46	6.3	5.5	57
4.7	12	6.0	97
5.0	23	6.5	157
5.5	47	7.0	234
6.0	84	7.6	356
6.6	150		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	144	50	108	72	143	143	312	60	44	17	9.9	7.4
2	132	50	108	72	150	143	290	64	44	21	9.6	7.9
3	126	54	102	72	150	143	270	60	41	20	9.6	7.9
4	120	58	102	72	157	143	252	58	41	16	9.9	8.9
5	114	54	102	72	164	143	234	50	44	15	9.4	* 9.1
6	108	54	* 102	76	a 172	* 143	234	35	* 44	14	11	9.1
7	97	54	102	84	a 180	150	218	33	41	14	11	8.9
8	88	* 54	97	84	a 180	150	202	31	39	13	11	9.1
9	84	54	97	84	a 180	150	* 194	30	40	12	10	9.6
10	* 76	58	97	84	a 180	157	194	30	44	11	9.9	21
11	72	61	97	80	a 180	164	186	31	44	* 9.1	9.4	33
12	68	64	92	80	a 180	218	178	34	44	8.9	8.9	36
13	68	68	88	84	*a 175	252	178	37	44	8.6	8.2	37
14	68	68	88	84	157	290	171	* 39	41	9.4	8.2	40
15	64	72	84	88	157	312	157	41	40	9.6	* 7.7	47
16	61	72	84	92	150	312	157	54	37	9.4	7.2	54
17	58	76	80	* 92	143	334	143	64	35	9.1	7.2	41
18	58	72	80	92	143	334	136	61	33	8.9	7.7	34
19	54	68	80	92	136	334	124	61	33	8.9	7.2	32
20	58	64	80	92	136	334	118	58	31	9.4	7.2	34
21	54	64	80	92	136	356	112	61	29	11	7.2	29
22	54	64	80	97	130	356	107	72	27	11	6.8	24
23	50	68	80	97	130	356	107	72	29	11	6.5	24
24	50	68	76	97	124	356	102	68	28	11	6.8	20
25	50	68	76	97	124	356	97	61	26	10	6.5	18
26	50	84	76	102	130	356	84	61	25	10	7.2	18
27	50	108	76	107	136	356	64	61	24	10	7.2	19
28	50	114	76	112	136	334	60	58	23	9.9	7.0	19
29	50	108	72	124	---	334	60	58	21	10	7.2	18
30	50	108	72	136	---	334	60	58	19	10	7.4	18
31	50	---	72	136	---	312	---	50	---	10	7.2	---
Total	2,276	2,079	2,706	2,845	4,259	8,155	4,801	1,611	1,055	358.2	257.2	693.9
Mean	73.4	69.3	87.3	91.8	152	263	160	52.0	35.2	11.6	8.30	23.1
Cfsm	0.638	0.603	0.759	0.798	1.32	2.29	1.39	0.452	0.306	0.101	0.072	0.201
In.	0.74	0.67	0.88	0.92	1.38	2.64	1.55	0.52	0.34	0.12	0.08	0.22

Calendar year 1961: Max 312 Min 24 Mean 89.3 Cfsm 0.777 In. 10.51
Water year 1961-62: Max 356 Min 6.5 Mean 85.2 Cfsm 0.741 In. 10.06

* Discharge measurement made on this day.
a No gage-height record.

GPO 802-191-4

3-3315. Tippecanoe River near Ora, Ind.

Location.--Lat 41°10', long 86°34', in NE¼ sec. 7, T. 31 N., R. 1 W., on right bank at downstream side of highway bridge, 1.3 miles southwest of Ora and 2.0 miles downstream from Osborn ditch.

Drainage area.--839 sq mi.

Records available.--September 1943 to September 1962. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Water-stage recorder. Altitude of gage is 694 ft (by barometer). Prior to July 30, 1956, wire-weight gage on upstream side of bridge at same datum.

Average discharge.--19 years, 811 cfs.

Extremes.--Maximum discharge during year, 4,370 cfs Mar. 14 (gage height, 12.79 ft); minimum, 120 cfs Sept. 30 (gage height, 4.45 ft). 1943-62: Maximum discharge, 7,800 cfs Apr. 5, 1950 (gage height, 14.40 ft); minimum, that of Sept. 30, 1961; minimum gage height, 4.15 ft Aug. 14, 1944, Oct. 16, 17, 1946.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 27 to Dec. 13, Apr. 10 to May 4, July 29 to Sept. 30)

4.3	120
5.0	266
7.0	805
9.0	1,490
11.0	2,680
12.7	4,260

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	925	495	745	410	1,080	2,000	1,640	631	416	278	190	170
2	990	495	715	430	850	1,680	1,540	659	390	278	180	170
3	925	495	687	490	910	1,320	1,410	659	390	339	180	160
4	865	576	687	620	1,460	1,130	1,380	659	364	390	170	170
5	805	603	865	865	2,320	1,030	1,340	631	364	390	160	* 160
6	745	576	955	1,100	2,950	1,000	1,340	603	390	364	211	160
7	687	549	865	1,740	1,550	990	1,340	576	390	339	233	160
8	659	522	805	2,200	1,300	1,060	1,270	631	390	314	* 222	160
9	603	522	745	2,400	1,050	1,200	1,240	659	390	302	211	160
10	576	522	715	1,800	950	1,640	1,200	659	522	278	200	160
11	549	468	715	1,100	900	1,960	1,160	659	603	* 266	190	160
12	522	468	745	920	845	2,450	1,100	659	631	290	180	150
13	522	468	745	920	800	3,630	1,100	687	* 631	278	170	150
14	576	549	670	1,000	795	* 4,260	1,130	659	549	278	160	170
15	576	603	580	1,130	790	3,830	1,100	631	495	278	160	190
16	576	* 659	630	1,300	800	* 3,170	1,020	576	442	278	160	180
17	* 549	835	700	1,050	850	2,600	955	* 549	390	266	160	180
18	522	865	775	890	930	2,260	925	495	364	255	150	170
19	522	805	775	830	1,090	2,260	* 895	522	339	244	150	180
20	495	775	745	780	1,300	2,380	835	495	314	244	150	180
21	495	746	715	750	990	2,680	805	495	314	244	150	160
22	468	775	687	740	* 850	3,000	775	495	302	244	140	160
23	468	990	715	730	760	3,170	745	468	302	244	140	150
24	468	1,240	687	730	700	2,920	715	442	339	244	138	150
25	468	1,200	687	740	760	2,600	687	442	416	244	150	140
26	495	1,100	687	1,210	955	2,380	687	442	390	244	190	134
27	495	990	687	1,790	1,960	2,200	659	468	339	233	190	134
28	495	925	560	2,380	2,380	2,020	631	468	314	222	180	130
29	495	835	480	2,450	----------	1,840	603	468	302	211	170	124
30	522	805	450	1,820	----------	1,790	603	442	290	200	170	122
31	522	----------	425	1,400	----------	1,740	----------	442	----------	200	160	----------
Total	18,580	21,456	21,644	36,715	32,875	68,190	30,830	17,371	12,072	8,479	5,365	4,744
Mean	599	715	698	1,184	1,174	2,200	1,028	560	402	274	173	158
Cfsm	0.714	0.852	0.832	1.41	1.40	2.62	1.23	0.667	0.479	0.327	0.206	0.188
In.	0.82	0.95	0.96	1.63	1.46	3.02	1.37	0.77	0.53	0.38	0.24	0.21

Calendar year 1961 : Max 3,300 Min 200 Mean 795 Cfsm 0.948 In. 12.86
Water year 1961-62 : Max 4,260 Min 122 Mean 763 Cfsm 0.909 In. 12.34

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 14-17, Dec. 28 to Jan. 4. No gage-height record Jan. 9-26, Jan. 30 to Feb. 4, Feb. 6-25, Mar. 1-6.

3-3323. Little Indian Creek near Royal Center, Ind.

Location.--Lat 40°53', long 86°35', in NW¼ sec. 13, T. 28 N., R. 2 W., on right bank at downstream side of county road bridge, 2.9 miles upstream from mouth, 3.2 miles downstream from Fredericks ditch, and 4.8 miles northwest of Royal Center.

Drainage area.--35.0 sq mi.

Records available.--July 1959 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 692.73 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 346 cfs Mar. 21 (gage height, 6.09 ft); minimum, 3.0 cfs Sept. 30 (gage height, 0.86 ft).
1959-62: Maximum discharge, that of Mar. 21, 1961; minimum, 1.4 cfs Apr. 25, 1959 (gage height, 0.70 ft); minimum gage height, 0.63 ft Mar. 16, 1960.
Maximum stage known, 11.2 ft in Spring of 1957, from information by local residents.

Remarks.--Records fair except those for periods of ice effect, no gage-height record, and those for May through September, which are poor.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 7, May 19 to Sept. 22)

Oct. 1 to Dec. 7		Dec. 8 to Sept. 30			
1.0	5.7	0.8	3.3	2.0	61
1.3	18	0.9	6.5	4.0	190
2.0	60	1.0	11	6.0	338
4.0	190	1.1	16		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	13	20	a 13	30	66	46	18	9.1	8.5	7.6	7.6
2	25	12	18	a 13	26	33	*41	20	7.2	11	7.2	5.2
3	21	19	18	13	23	26	36	18	6.5	48	6.8	4.6
4	18	32	23	13	84	23	36	17	5.9	26	7.2	18
5	16	23	*42	44	211	22	38	16	*36	16	6.8	14
6	13	19	36	197	*a 96	*21	44	16	26	12	14	*8.0
7	12	*18	31	a 220	a 60	44	41	15	16	11	10	5.5
8	11	17	27	a 100	a 44	66	36	28	12	10	11	4.6
9	*11	16	26	*a 55	30	119	44	*25	41	9.5	8.0	5.2
10	10	14	26	a 40	25	155	38	22	46	9.1	*6.2	4.9
11	9.6	14	25	a 32	24	155	34	22	41	9.5	5.5	3.9
12	9.2	14	34	a 28	24	298	31	20	22	16	5.5	3.6
13	9.6	14	26	a 27	25	211	38	20	16	11	5.2	3.6
14	10	15	21	a 25	26	134	36	17	12	*12	5.2	6.2
15	9.2	15	17	a 35	26	96	31	15	12	16	5.5	4.9
16	8.8	45	19	a 31	26	66	28	14	10	17	5.5	4.3
17	8.4	42	22	a 29	25	56	26	12	10	13	5.5	3.9
18	8.1	29	25	a 27	26	58	25	12	9.5	11	5.5	3.9
19	8.4	23	24	a 25	27	102	23	12	9.5	10	5.2	3.6
20	8.8	21	22	a 24	27	108	22	11	9.5	10	5.2	3.3
21	8.4	19	22	23	28	290	20	14	9.1	20	4.9	3.3
22	8.1	41	22	22	28	282	20	16	9.1	13	4.9	3.3
23	8.1	108	24	22	26	204	20	13	10	11	4.6	3.3
24	8.4	69	22	21	23	155	18	12	66	10	4.6	3.3
25	10	48	22	23	21	120	18	12	28	9.5	5.7	3.3
26	10	39	24	112	154	96	17	58	16	9.1	16	3.1
27	8.4	32	22	211	211	72	17	56	11	8.5	7.6	3.1
28	10	27	a 19	127	127	61	17	28	10	8.5	5.2	3.1
29	16	25	a 17	70	---	54	17	19	9.1	8.5	3.9	3.1
30	16	22	a 15	50	---	54	17	15	8.5	8.5	3.9	3.1
31	14	---	a 14	40	---	51	---	12	---	8.0	4.3	---
Total	374.5	845	725	1,712	1,503	3,298	875	605	534.0	401.2	204.2	150.8
Mean	12.1	28.2	23.4	55.2	53.7	106	29.2	19.5	17.8	12.9	6.59	5.03
Cfsm	0.346	0.806	0.669	1.58	1.53	3.03	0.834	0.557	0.509	0.369	0.188	0.144
In.	0.40	0.90	0.77	1.82	1.59	3.49	0.93	0.64	0.57	0.43	0.22	0.16

Calendar year 1961: Max 253 Min 2.0 Mean 33.0 Cfsm 0.943 In. 12.83
Water year 1961-62: Max 298 Min 3.1 Mean 30.8 Cfsm 0.880 In. 11.92

Peak discharge (base, 250 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-7	0100	5.47	298	3-12	0400	5.72	314
1-26	2300	5.10	267	3-21	1700	6.09	346
2-5	0300	4.94	253				
2-26	2100	5.28	282				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 13-17, Jan. 3, 4, 21-24, Jan. 29 to Feb. 3, Feb. 9-11, 20, 21, 24, Mar. 1-4.

3-3324. Big Monon Creek near Francesville, Ind.

Location.--Lat 40°59', long 86°52', in NE¼ sec. 10, T. 29 N., R. 4 W., on right bank at downstream side of county road bridge, 1.1 miles east of Francesville, 1.6 miles downstream from unnamed tributary from right bank, and 10.2 miles upstream from mouth.

Drainage area.--145 sq mi.

Records available.--August 1959 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 653.17 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 1,480 cfs Mar. 21 (gage height, 11.15 ft); minimum, 17 cfs Sept. 7; minimum gage height, 1.31 ft Aug. 23.
1959-62: Maximum discharge, 2,100 cfs Apr. 24, 1961 (gage height, 13.27 ft); minimum, 14 cfs Sept. 21, 25, 26, 1959; minimum gage height, 1.10 ft Sept. 21, 1959.
Maximum stage known, about 18.60 ft in Spring of 1957, from information by local residents.

Remarks.--Records good except those for periods of missing gage-height record or ice effect, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 9, 10, Sept. 2-15)

1.2	17
1.8	54
4.0	268
8.0	836
10.0	1,200

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	196	116	156	98	180	180	268	130	70	41	32	28
2	186	111	146	95	174	145	* 226	160	70	50	32	23
3	156	156	146	94	170	124	206	136	70	170	29	22
4	146	206	198	94	470	112	216	113	70	112	28	20
5	126	176	* 377	257	899	106	268	104	* 128	71	28	20
6	116	146	257	810	* 230	* 100	446	104	100	54	* 47	* 19
7	106	* 136	216	1,050	190	264	351	98	85	50	54	17
8	101	121	176	* 588	172	364	279	* 250	74	45	42	18
9	* 96	116	166	310	157	364	279	196	110	42	40	23
10	92	106	166	245	149	603	236	176	150	41	35	27
11	87	101	146	200	146	573	206	176	113	47	31	24
12	82	111	246	185	142	1,010	186	156	90	71	30	22
13	92	143	197	175	142	618	216	156	69	52	29	21
14	101	268	158	175	146	404	206	126	59	* 70	29	23
15	116	216	134	240	166	302	186	111	55	66	30	23
16	111	326	128	210	166	257	166	106	51	78	28	23
17	101	326	140	200	176	246	166	101	49	62	28	21
18	92	236	156	196	186	314	156	96	48	50	27	22
19	92	206	156	191	236	488	146	106	47	47	27	21
20	106	186	146	184	196	530	136	96	46	66	26	23
21	106	176	146	180	181	1,110	136	101	46	82	26	22
22	101	290	146	175	176	958	136	106	46	62	24	23
23	96	558	166	170	146	618	136	92	50	66	23	23
24	96	390	156	170	137	502	120	82	190	58	24	23
25	101	290	146	196	130	446	120	82	135	50	38	24
26	92	246	156	302	500	364	112	96	70	47	37	27
27	87	216	146	502	563	314	112	96	51	45	33	25
28	92	186	129	390	314	302	112	86	46	42	28	25
29	116	176	117	326	---	268	112	80	42	39	23	24
30	126	166	108	250	---	264	112	75	41	36	22	25
31	126	---	104	200	---	326	---	71	---	34	23	---
Total	3,440	6,203	5,131	8,458	6,640	12,576	5,753	3,664	2,271	1,846	953	681
Mean	111	207	166	273	237	406	192	118	75.7	59.5	30.7	22.7
Cfsm	0.766	1.43	1.14	1.88	1.63	2.80	1.32	0.814	0.522	0.410	0.212	0.157
In.	0.88	1.60	1.31	2.17	1.70	3.23	1.47	0.94	0.58	0.47	0.24	0.18

Calendar year 1961 : Max 1,940 Min 18 Mean 181 Cfsm 1.25 In. 16.99
Water year 1961-62 : Max 1,110 Min 17 Mean 158 Cfsm 1.09 In. 14.77

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-7	0230	10.25	1,240				
2-5	0100	10.62	1,320				
3-21	1800	11.15	1,480				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 13-17, Dec. 28 to Jan. 4, Jan. 9-24, Jan. 30 to Feb. 3, Feb. 6-13, 21, 24, 25, Mar. 1-6. No gage-height record Apr. 23 to May 8, May 28 to July 14.

3-3325. Tippecanoe River near Monticello, Ind.

Location.--Lat 40°47', long 86°45', in sec. 21, T. 27 N., R. 3 W., at Norway plant of Northern Indiana Public Service Co., 2 miles north of Monticello.

Drainage area.--1,710 sq mi.

Records available.--October 1931 to September 1962.

Average discharge.--31 years, 1,479 cfs.

Extremes.--Maximum daily discharge during year, 9,990 cfs Mar. 21; minimum daily, 155 cfs Aug. 3.
1931-62: Maximum daily discharge, 16,800 cfs June 13, 1958; minimum daily, 103 cfs July 27, 1934.

Remarks.--Discharge computed on basis of records of operation of powerplant and flow over dam.

Cooperation.--Records of daily discharge furnished by Northern Indiana Public Service Co.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,700	1,000	1,440	1,070	2,050	3,550	2,880	1,400	873	528	437	369
2	1,560	916	1,510	1,150	1,600	2,860	2,790	1,210	728	713	283	369
3	1,600	1,140	1,360	1,110	1,810	2,360	2,500	1,400	782	1,640	155	283
4	1,430	1,180	1,520	1,300	2,980	2,280	2,380	1,140	728	1,090	219	239
5	1,380	1,290	2,260	1,580	6,360	2,090	2,570	1,140	1,150	873	219	348
6	1,220	1,210	2,000	4,620	3,100	1,750	3,130	1,250	1,090	655	328	348
7	1,150	1,140	1,960	6,780	2,720	2,110	2,820	916	990	564	249	261
8	1,110	916	1,620	5,220	2,620	2,840	2,600	1,660	802	619	521	261
9	938	916	1,620	2,610	2,210	3,400	2,570	1,320	1,360	515	293	261
10	1,070	1,070	1,290	2,020	2,180	5,050	2,420	1,510	1,530	437	412	369
11	916	867	1,480	2,020	2,020	5,160	2,160	2,320	1,790	555	326	304
12	916	1,020	1,620	1,650	1,960	9,680	2,080	1,850	1,480	728	391	261
13	850	1,040	1,550	1,810	1,810	6,960	2,080	1,680	1,220	601	283	304
14	916	1,350	1,290	1,870	1,730	6,440	2,120	1,510	1,070	655	304	413
15	980	1,430	1,100	2,260	1,750	6,680	2,030	1,360	1,120	891	326	239
16	916	1,710	1,360	2,460	1,700	5,900	1,860	1,410	873	1,060	326	304
17	1,040	2,000	1,440	2,160	1,520	5,000	1,810	1,070	873	939	304	326
18	817	1,810	1,620	2,100	1,760	4,400	1,650	1,060	800	582	283	261
19	916	1,600	1,480	2,020	1,870	4,820	1,650	1,110	582	528	268	304
20	916	1,670	1,280	1,640	1,640	5,250	1,480	1,220	634	637	321	293
21	784	1,430	1,260	1,590	1,810	9,990	1,430	923	655	682	261	304
22	916	1,880	1,320	1,560	1,730	9,560	1,430	990	618	628	283	283
23	784	3,070	1,320	1,430	1,600	7,360	1,480	973	582	610	283	283
24	916	2,900	1,320	1,470	1,380	6,730	1,330	873	691	455	294	291
25	824	2,550	1,220	1,340	1,570	5,960	1,300	873	691	528	345	304
26	916	2,370	1,230	2,400	4,220	5,140	1,220	1,000	655	496	588	261
27	887	2,000	1,280	4,000	5,750	4,440	1,210	1,270	655	437	196	326
28	916	1,810	916	3,140	4,550	3,770	1,110	1,020	519	437	348	261
29	998	1,810	801	3,090	---	3,370	1,110	1,020	610	473	283	261
30	1,040	1,620	718	3,010	---	3,520	1,150	1,070	437	437	239	261
31	1,040	---	782	2,380	---	3,460	---	873	---	437	391	---
Total	32,362	46,715	42,967	72,860	68,000	149,880	58,350	38,421	26,588	20,430	9,759	8,942
Mean	1,044	1,557	1,386	2,350	2,429	4,835	1,945	1,239	886	659	315	298
Cfsm	0.611	0.911	0.811	1.37	1.42	2.83	1.14	0.725	0.518	0.385	0.184	0.174
In.	0.70	1.02	0.94	1.58	1.48	3.26	1.27	0.84	0.58	0.44	0.21	0.19

Calendar year 1961 : Max 10,800 Min 218 Mean 1,707 Cfsm 0.998 In. 13.56
Water year 1961-62 : Max 9,990 Min 155 Mean 1,576 Cfsm 0.922 In. 12.51

3-3330. Tippecanoe River near Delphi, Ind.

Location.--Lat 40°37', long 86°45', in sec. 16, T. 25 N., R. 3 W., on right bank 2 miles northeast of Springboro, 2 miles downstream from Big Creek, and 5 miles northwest of Delphi.

Drainage area.--1,857 sq mi.

Records available.--March to December 1903, March to December 1904, March 1905 to July 1906, November and December 1908, July 1939 to September 1961. Published as "at Springboro" 1903.

Gage.--Water-stage recorder. Datum of gage is 552.01 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Mar. 14, 1903, to July 20, 1906, and Nov. 2 to Dec. 31, 1908, chain gage at site 5½ miles downstream at different datum.

Average discharge.--23 years (1939-62), 1,612 cfs.

Extremes.--Maximum discharge during year, 12,800 cfs Mar. 21 (gage height, 11.25 ft); minimum daily, 238 cfs Aug. 23, 27.
1903-6, 1908, 1939-62: Maximum discharge, 22,600 cfs Feb. 10, 1959 (gage height, 15.10 ft); minimum daily, 1 cfs Nov. 2, 3, 1954, caused by repair work at Oakdale Dam, 6½ miles upstream.

Remarks.--Records good. Flow regulated by powerplant above station.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 3, July 5-14)

2.3	190
2.7	360
3.5	945
5.0	2,430
7.0	5,060
11.0	12,400

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,660	1,070	1,700	1,230	2,370	3,860	3,040	1,620	967	789	* 554	596
2	1,700	1,010	1,580	1,270	2,130	3,150	2,920	1,600	746	1,560	443	420
3	1,600	1,100	1,570	1,260	2,060	1,680	* 2,530	1,690	842	3,080	402	303
4	1,440	1,510	1,670	1,440	2,550	2,600	2,590	1,430	865	1,780	264	450
5	1,410	1,240	2,410	1,620	6,700	2,200	2,680	1,370	1,260	1,170	578	550
6	1,360	1,330	* 2,090	4,760	3,400	1,900	3,210	1,470	* 1,160	923	721	* 314
7	1,100	1,180	2,110	7,060	3,000	* 2,400	2,740	1,120	1,100	684	489	255
8	1,170	* 1,100	1,740	5,700	* 2,900	3,120	2,850	1,820	884	768	766	290
9	1,030	1,020	1,860	2,800	2,400	3,480	2,680	* 1,730	1,510	666	528	332
10	1,140	1,150	1,540	2,200	2,330	5,270	2,530	1,770	1,630	554	498	588
11	* 1,010	1,030	1,560	2,200	2,190	5,170	2,390	2,570	1,910	614	386	255
12	1,020	1,050	1,720	1,800	2,040	8,680	2,180	2,070	1,390	1,030	494	327
13	836	1,140	1,800	2,000	1,960	7,060	2,270	1,670	1,270	* 877	426	489
14	1,010	1,420	1,320	2,020	1,920	6,340	2,180	1,700	1,090	1,090	396	558
15	1,000	1,440	1,400	2,350	1,900	6,340	2,280	1,400	1,340	1,240	348	265
16	1,000	1,750	1,410	2,700	1,850	5,700	1,940	1,370	927	1,490	418	368
17	1,010	2,120	1,640	2,350	1,720	4,760	1,870	1,170	886	1,160	374	436
18	842	2,020	1,780	2,300	1,800	4,150	1,830	1,100	837	864	410	323
19	1,020	1,840	1,700	2,200	1,990	4,720	1,380	1,110	718	798	354	332
20	1,010	1,760	1,390	1,800	1,890	5,330	1,720	1,300	718	866	416	347
21	802	1,550	1,380	1,700	1,810	10,600	1,480	986	662	1,090	340	378
22	994	2,000	1,510	1,700	1,890	10,200	1,720	977	650	917	464	424
23	742	3,180	1,520	1,580	1,870	7,420	1,540	1,090	625	911	238	358
24	986	3,010	1,510	1,600	1,520	6,880	1,360	852	740	520	388	466
25	890	2,550	1,560	1,500	1,250	6,020	1,470	839	864	715	618	350
26	984	2,530	1,380	2,400	4,510	4,950	1,440	1,180	666	734	948	332
27	834	2,250	1,430	4,300	6,050	4,330	1,310	1,380	808	526	238	400
28	988	1,880	1,040	3,450	4,500	3,530	1,340	1,250	596	508	464	252
29	984	2,000	1,070	3,350	----------	3,360	1,220	1,120	830	657	383	368
30	1,050	1,710	714	3,200	----------	3,580	1,580	1,110	733	450	342	253
31	1,070	----------	795	2,670	----------	3,580	----------	981	----------	558	440	----------
Total	33,692	49,940	47,899	79,510	72,500	152,360	62,270	42,845	29,224	29,589	14,128	11,379
Mean	1,087	1,665	1,545	2,533	2,589	4,915	2,076	1,382	974	954	456	379
Cfsm	0.585	0.897	0.832	1.36	1.39	2.65	1.12	0.744	0.525	0.514	0.246	0.204
In.	0.67	1.00	0.96	1.57	1.45	3.06	1.25	0.86	0.59	0.59	0.28	0.23

Calendar year 1961 : Max 9,800 Min 216 Mean 1,781 Cfsm 0.959 In. 13.03
Water year 1961-62 : Max 10,600 Min 238 Mean 1,711 Cfsm 0.921 In. 12.51

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 8-30, Feb. 6-8, Mar. 1-7.

3-3334.5 Wildcat Creek near Jerome, Ind.

Location.--Lat 40°26'29", long 85°55'08", on line between secs. 13 and 14, T. 23 N., R. 5 E., on right bank at downstream side of bridge on county road, 1100 East, 0.5 miles downstream from Mud Creek and 1.5 miles southeast of Jerome.

Drainage area.--148 sq mi.

Records available.--July 1961 to September 1962.

Gage.--Water-stage recorder. Datum of the gage is 820.00 ft above mean sea level, datum of 1929 (unadjusted).

Extremes.--Maximum discharge during year, 3,990 cfs Jan. 26 (gage height, 11.98 ft); minimum daily, 3.2 cfs, Oct. 7.
1961-62: Maximum, that of June 26, 1962; minimum daily, that of Oct. 27, 1961.
Maximum stage known, about 18 ft March 1913, from information by local residents.

Remarks.--Records fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 24 to Nov. 14)

Oct. 1 to Jan. 5		Jan. 6 to Sept. 30	
1.4	0.8	1.6	8.3
1.5	3.3	1.7	12
1.6	6.2	1.8	18
1.7	9.4	2.0	33
1.9	19	3.0	150
2.3	63	4.0	333
2.6	99	5.0	555
3.0	150	7.0	1,220
		10.0	2,670

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.7	6.8	29	b 19	164	333	123	58	54	20	47	23
2	4.2	6.2	26	b 19	123	196	93	99	41	130	40	22
3	3.8	6.5	24	b 22	105	136	77	99	34	666	34	22
4	3.6	7.1	25	25	144	105	73	77	31	483	30	30
5	3.5	7.4	26	42	375	81	74	62	180	222	28	44
6	3.5	7.4	23	405	179	61	74	56	172	130	55	46
7	3.2	6.8	22	696	130	60	74	49	123	87	63	36
8	3.4	5.9	19	375	93	68	69	95	82	74	45	30
9	3.7	5.6	20	179	81	369	79	150	291	70	33	31
10	3.7	5.3	22	b 130	64	531	76	111	172	51	26	25
11	3.7	5.6	23	b 110	52	441	68	105	105	52	24	21
12	5.4	5.6	24	b 92	b 49	1,220	64	93	130	143	22	19
13	10	6.2	b 21	b 84	b 47	666	67	83	105	93	* 20	18
14	5.2	7.4	b 20	b 82	b 45	375	56	69	68	217	19	21
15	4.5	8.0	b 21	381	b 44	222	52	60	50	726	18	18
16	4.6	44	24	540	b 43	164	46	52	41	582	16	17
17	4.6	130	26	204	b 42	130	44	47	34	333	16	16
18	5.2	67	* 27	143	44	117	44	44	30	188	16	15
19	6.6	43	25	99	74	* 157	43	41	30	123	17	14
20	5.2	32	26	b 82	63	222	40	39	28	186	18	13
21	4.7	22	24	b 70	* 58	1,200	36	37	27	2,610	29	13
22	4.6	21	24	252	83	1,460	37	* 35	27	1,230	31	12
23	* 4.9	98	25	* 213	117	786	40	33	27	459	22	11
24	5.3	* 143	26	130	68	531	* 34	30	129	270	* 16	* 11
25	8.1	93	26	117	69	396	33	28	93	188	20	12
26	8.1	73	25	* 2,170	1,210	291	33	36	49	270	87	12
27	7.4	59	b 25	* 2,650	1,300	213	33	43	34	188	99	11
28	7.4	46	25	1,020	555	172	33	58	* 27	123	60	10
29	7.8	39	25	507	---	150	34	54	24	93	36	10
30	8.1	32	b 22	375	---	130	34	75	22	71	28	10
31	7.8	---	b 21	232	---	123	---	73	---	58	25	---
Total	166.5	1,039.8	741	11,465	5,421	11,106	1,683	1,991	2,260	10,136	1,040	593
Mean	5.37	34.7	23.9	370	194	358	56.1	64.2	75.3	327	33.5	19.8
Cfsm	0.036	0.234	0.161	2.50	1.31	2.42	0.379	0.434	0.509	2.21	0.226	0.134
In.	0.04	0.26	0.19	2.88	1.36	2.79	0.42	0.50	0.57	2.55	0.26	0.15

Calendar year 1961: Max - Min - Mean - Cfsm - In. -
Water year 1961-62: Max 2,650 Min 3.2 Mean 131 Cfsm 0.885 In. 11.97

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	2100	11.98	3,990	7-21	1100	10.55	3,030
2-26	2100	9.28	2,250				
3-12	0730	7.43	1,380				
3-21	2200	8.72	1,950				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 1-23, Nov. 15, 16, Aug. 23 and Sept. 9-24.

3-3336. Kokomo Creek near Kokomo, Ind.

Location.--Lat 40°26'28", long 86°05'20", midway on line between secs. 16 and 17, T. 23 N., R. 4 E., on left bank at upstream side of county road bridge, 3.4 miles southeast of Kokomo, and 4.2 miles upstream from mouth.

Drainage area.--24.3 sq mi.

Records available.--July 1959 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 807.68 ft above mean sea level, datum of 1929 (unadjusted).

Extremes.--Maximum discharge during year, 487 cfs Jan. 26; maximum gage height, 8.13 ft Jan. 26 (ice jam); minimum daily, 1.0 cfs Oct. 6-12; minimum gage height, 1.41 ft Oct. 23.
1959-62: Maximum discharge, that of Jan. 26, 1962; minimum, 0.4 cfs Aug. 27, 28, Sept. 13-15, 1959; minimum gage height, 1.30 ft Aug. 12, 27, 1959.

Remarks.--Records fair except those for periods of no gage-height record, indefinite stage-discharge relation and ice effect, which are poor.

Rating table, water year 1961-62, except periods of indefinite stage-discharge relation and ice effect
(gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1, Feb. 26-27, Mar. 10, 12, 13, 21-24, June 30 to July 3, July 21-23, Aug. 19-20)

1.4	0.5
1.5	1.3
1.6	2.7
1.7	5.3
2.0	17
2.5	43
4.0	156
6.0	316
8.0	487

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	2.4	2.4	1.2	23	40	23	9.3	6.4	2.7	6.8	4.7
2	a 2.3	e 3.6	2.2	1.4	19	28	19	12	5.3	16	5.6	4.2
3	a 1.9	e 6.0	2.0	1.6	16	19	16	12	4.7	164	5.0	6.5
4	a 1.6	e 4.1	2.2	1.9	22	15	15	10	4.4	62	4.7	15
5	a 1.3	e 2.8	2.7	7.8	49	12	15	8.8	5.0	28	4.2	10
6	a 1.0	e 2.6	2.5	70	52	10	15	8.8	5.0	17	11	6.8
7	a 1.0	e 2.5	2.4	108	16	9.3	14	7.6	5.6	12	12	5.3
8	a 1.0	e 2.4	1.8	40	14	12	14	14	5.1	16	8.0	4.4
9	a 1.0	e 2.2	1.9	22	12	99	16	21	23	12	5.3	4.4
10	a 1.0	e 2.1	2.2	16	8.8	84	14	16	18	7.2	4.4	3.9
11	a 1.0	e 2.0	2.5	12	8.0	84	14	17	11	6.0	3.9	3.4
12	a 1.0	e 1.9	2.5	11	8.0	204	13	16	8.4	8.4	3.6	2.7
13	a 2.2	e 2.2	1.9	10	6.8	92	13	14	6.0	5.6	* 3.6	2.5
14	a 1.7	e 3.7	1.9	9.7	8.0	41	12	12	5.0	27	3.4	2.9
15	a 1.3	e 6.7	1.6	100	6.8	28	11	10	4.7	124	3.2	2.7
16	a 1.2	14	1.8	60	6.0	23	10	9.3	3.9	69	3.2	2.7
17	a 1.2	16	2.5	23	5.6	19	9.7	8.4	3.6	36	2.9	2.5
18	a 1.2	8.8	* 3.2	16	11	19	9.7	7.6	3.4	23	2.9	2.4
19	a 1.6	5.6	2.5	13	27	29	8.8	6.8	3.4	16	2.9	2.2
20	a 1.3	3.4	2.2	12	14	38	8.0	6.4	3.2	18	2.7	2.0
21	a 1.2	3.2	1.9	9.3	*12	317	7.6	* 6.0	2.9	284	9.3	2.0
22	a 1.2	* 3.2	1.9	39	19	284	8.0	5.3	2.9	108	4.4	2.2
23	a* 1.2	10	1.9	26	19	* 156	8.4	5.0	3.3	84	3.2	2.2
24	1.3	15	1.9	16	13	100	6.8	4.7	25	49	* 2.9	* 2.2
25	2.4	9.3	1.9	17	11	72	6.4	4.2	13	36	4.2	2.5
26	1.9	6.8	1.9	b* 325	266	49	6.4	12	6.8	28	29	2.4
27	1.9	5.0	2.0	* 406	204	37	* 6.4	13	4.4	21	18	2.2
28	2.4	3.6	1.8	124	69	32	6.8	13	* 3.4	14	11	2.0
29	2.5	2.9	1.3	66	----------	27	6.4	11	2.9	13	7.2	1.9
30	2.4	2.5	1.2	46	----------	26	6.0	11	2.9	11	5.0	1.9
31	2.4	---------	1.1	31	----------	25	----------	8.8	----------	8.8	5.0	----------
Total	49.1	156.5	63.7	1,641.9	946.0	2,030.3	339.4	321.0	202.6	1,326.7	198.5	112.7
Mean	1.58	5.22	2.05	53.0	33.8	65.5	11.3	10.4	6.75	42.8	6.40	3.76
Cfsm	0.065	0.215	0.084	2.18	1.39	2.70	0.465	0.428	0.278	1.76	0.263	0.155
In.	0.07	0.24	0.10	2.51	1.45	3.11	0.52	0.49	0.31	2.03	0.30	0.17

Calendar year 1961: Max 333 Min 0.5 Mean 16.3 Cfsm 0.671 In. 9.10
Water year 1961-62: Max 406 Min 1.0 Mean 20.2 Cfsm 0.831 In. 11.30

Peak discharge (base, 260 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	2100	8.05	487				
2-26	1600	7.06	415				
3-21	1400	7.11	415				
7-21	0700	6.30	364				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.
e Stage-discharge relation indefinite.

3-3337. Wildcat Creek at Kokomo, Ind.

Location.--Lat 40°28', long 86°09', in NW¼ sec. 2, T. 23 N., R. 3 E., on right bank in Kokomo, 0.3 mile downstream from Kokomo Creek, 0.4 mile upstream from Dixon Road bridge and on property of Continental Steel Corporation.

Drainage area.--245 sq mi.

Records available.--October 1955 to September 1962.

Gage--Water-stage recorder. Altitude of gage is 777 ft (from topographic map).

Average discharge.--7 years, 236 cfs.

Extremes.--Maximum discharge during year, 5,320 cfs Jan. 27 (gage height, 9.60 ft); minimum, 17 cfs Oct. 8 (gage height, 1.10 ft). 1955-62: Maximum discharge, 8,100 cfs Feb. 10, 1959 (gage height, 10.83 ft); minimum, 5.0 cfs Sept. 30, 1956; minimum gage height, 1.05 ft Dec. 4, 18, 1960.

Remarks.--Records fair.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 13 to Nov. 21, Aug. 29 to Sept. 30)

1.1	17	3.0	365
1.2	24	4.0	760
1.6	57	5.0	1,280
2.0	107	7.0	2,760
2.5	211	9.0	4,600

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	36	62	35	365	630	236	89	116	34	107	60
2	27	34	56	35	236	400	198	62	84	252	93	55
3	24	56	52	39	211	264	165	59	69	1,280	83	73
4	23	40	63	40	211	211	144	55	54	810	72	94
5	22	37	54	70	452	165	134	52	135	452	64	88
6	22	36	56	390	418	125	134	52	295	280	139	78
7	21	34	46	860	224	114	123	52	224	186	142	79
8	19	33	46	670	186	123	121	130	165	165	122	69
9	22	32	49	382	154	480	116	224	376	154	85	78
10	23	32	47	211	114	760	144	211	348	107	68	60
11	23	30	43	* 186	96	710	134	176	211	105	56	56
12	23	29	48	154	93	1,480	120	154	165	168	49	53
13	63	32	39	134	90	1,220	107	134	176	186	* 49	51
14	37	47	37	133	85	670	109	120	120	312	49	61
15	28	36	37	433	85	452	96	103	90	910	44	53
16	30	123	39	590	83	330	92	90	78	910	44	49
17	30	76	47	405	80	236	83	84	60	550	43	44
18	30	58	* 50	236	98	211	79	75	57	348	41	42
19	43	66	53	176	198	* 264	76	68	52	236	39	38
20	34	80	50	134	* 134	400	74	62	52	399	38	37
21	30	76	46	121	125	1,670	69	* 66	48	4,070	67	37
22	30	89	43	286	165	2,520	73	66	37	3,160	57	33
23	* 30	107	49	* 330	224	1,550	80	52	68	1,060	51	30
24	33	* 186	44	250	165	960	72	51	165	590	* 45	* 31
25	77	186	42	186	134	710	64	50	186	470	88	48
26	37	134	45	1,810	1,230	590	61	158	111	435	165	37
27	33	109	46	* 4,600	2,360	452	* 61	161	75	382	176	33
28	61	92	46	2,400	1,060	365	59	111	* 52	280	144	35
29	46	78	44	960	---	312	57	103	48	198	101	32
30	40	68	40	630	---	295	60	112	39	165	78	27
31	38	---	37	470	---	250	---	120	---	134	76	---
Total	1,029	2,072	1,456	17,356	9,076	18,919	3,141	3,102	3,756	18,798	2,475	1,561
Mean	33.2	69.1	47.0	560	324	610	105	100	125	606	79.8	52.0
Cfsm	0.136	0.282	0.192	2.29	1.32	2.49	0.429	0.408	0.510	2.47	0.326	0.212
In.	0.16	0.31	0.22	2.64	1.38	2.87	0.48	0.47	0.57	2.85	0.38	0.24

Calendar year 1961 : Max 3,100 Min 13 Mean 191 Cfsm 0.780 In. 10.57
Water year 1961-62 : Max 4,600 Min 19 Mean 227 Cfsm 0.927 In. 12.57

Peak discharge (base, 2,100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	1230	9.60	5,320				
2-27	0730	6.88	2,680				
3-22	0900	6.97	2,760				
7-21	1600	8.99	4,600				

* Discharge measurement made on this day.

3-3340. Wildcat Creek at Owasco, Ind.

Location.--Lat 40°27'50", long 86°38'15", in SE¼SE¼ sec. 4, T. 23 N., R. 2 W. (revised), on left bank, 500 ft downstream from State Highway 39 bridge, half a mile northwest of Owasco and 15 miles upstream from South Fork Wildcat Creek.

Drainage area.--390 sq mi.

Records available.--October 1943 to September 1962. Prior to March 1944, monthly discharge only, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 624.63 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1950, wire-weight gage 500 ft upstream at same datum.

Average discharge.--19 years, 375 cfs.

Extremes.--Maximum discharge during year, 8,200 cfs Jan. 28 (gage height, 10.89 ft); minimum, 28 cfs Oct. 7 (gage height, 1.08 ft).
1943-62: Maximum discharge, 10,200 cfs Jan. 5, 1950 (gage height, 13.3 ft), from rating curve extended above 6,700 cfs; minimum observed, 10 cfs Sept. 25, 1944.
Flood in May 18, 1943, reached a stage of 14.0 ft, from floodmarks.

Remarks.--Records fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 8, Apr. 12 to May 8, May 14 to June 7, June 13-23)

Oct. 1 to Nov. 15
June 25 to Sept. 30

1.1	29	3.0	460
1.3	44	5.0	1,520
1.6	75	7.0	2,820
2.0	139	9.0	4,860
2.4	240	11.0	8,400

Nov. 16 to June 24

1.6	82	3.0	520
2.0	157	5.0	1,520
2.5	314		

Note.--Same as preceding table above 5.0 ft.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	83	144	b 74	835	1,460	498	196	228	81	185	104
2	55	78	139	b 74	610	885	431	279	211	230	162	90
3	59	88	129	b 82	475	610	370	245	170	1,170	146	86
4	53	102	122	98	520	453	350	211	157	1,640	133	85
5	48	106	129	133	655	350	332	182	157	1,000	120	110
6	48	89	* 126	439	745	296	314	182	257	555	115	106
7	32	79	124	1,400	* 520	* 262	314	170	* 370	335	185	98
8	43	* 78	111	1,580	431	262	296	228	296	255	185	96
9	43	71	111	985	370	548	296	350	410	226	162	95
10	37	69	109	389	314	1,140	314	* 453	610	198	* 124	96
11	42	69	112	b 305	279	1,180	314	453	520	174	114	83
12	* 44	65	107	b 290	228	1,700	296	370	350	174	100	78
13	87	65	b 92	b 280	211	2,060	279	314	279	226	89	70
14	75	61	b 90	b 270	196	1,580	262	296	279	335	85	73
15	78	74	b 88	b 390	196	885	262	262	228	955	89	71
16	55	120	88	b 900	182	655	228	245	182	1,460	86	74
17	51	404	95	b 800	182	498	228	211	157	1,120	79	68
18	48	228	102	b 500	182	410	211	196	142	655	73	54
19	49	182	102	b 400	340	431	211	182	129	415	73	56
20	52	148	b 100	b 300	350	655	196	170	129	285	65	49
21	58	146	b 96	b 260	279	2,010	182	157	124	828	68	51
22	55	157	93	332	314	3,550	182	155	116	2,470	79	49
23	49	298	95	b 550	410	3,640	196	155	109	3,640	92	48
24	48	332	b 94	b 500	350	2,400	196	139	91	1,710	* 82	48
25	63	350	b 90	b 400	296	1,520	182	133	174	755	88	* 44
26	89	314	b 92	1,380	1,110	1,140	170	137	185	630	139	54
27	76	245	95	4,300	2,680	885	170	306	137	530	198	53
28	92	211	93	7,220	2,820	700	170	296	* 110	438	185	52
29	137	170	92	4,960	---	655	170	228	94	318	162	46
30	117	157	b 84	1,880	---	565	170	211	82	255	124	50
31	95	---	b 78	1,080	---	542	---	228	---	226	109	---
Total	1,933	4,639	3,222	32,551	16,080	33,927	7,790	7,340	6,483	23,289	3,696	2,137
Mean	62.4	155	104	1,050	574	1,094	260	237	216	751	119	71.2
Cfsm	0.160	0.397	0.267	2.69	1.47	2.81	0.667	0.608	0.554	1.93	0.305	0.183
In.	0.18	0.44	0.31	3.10	1.53	3.24	0.74	0.70	0.62	2.22	0.35	0.20

Calendar year 1961: Max 3,840 Min 31 Mean 301 Cfsm 0.772 In. 10.48
Water year 1961-62: Max 7,220 Min 32 Mean 392 Cfsm 1.01 In. 13.63

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-28	1700	10.89	8,200				
2-28	0930	7.31	3,040				
3-22	1900	8.25	3,840				
7-23	+ 1500	+ 8.20	3,840				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
\+ About.

3-3345. South Fork Wildcat Creek near Lafayette, Ind.

Location (revised).--Lat 40°25'04", long 86°46'05", in SW¼ sec. 21, T. 23 N., R. 3 W., on right bank 40 ft upstream from bridge on State Highway 26, one-half mile upstream from Middle Fork, 4¼ miles upstream from mouth, and 5 miles east of Lafayette.

Drainage area.--246 sq mi.

Records available.--October 1943 to September 1962. Prior to March 1944 monthly discharge only, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 563.45 ft above mean sea level (State Highway Department of Indiana bench mark). Prior to July 29, 1954, wire-weight gage at site 40 ft downstream at same datum.

Average discharge.--19 years, 240 cfs.

Extremes.--Maximum discharge during year, about 5,000 cfs Jan. 27; maximum gage height, 11.38 ft (backwater from ice); minimum, 33 cfs Oct. 10, 11 (gage height, 1.42 ft), minimum gage height, 1.32 ft Sept. 30.
1943-62: Maximum discharge, 12,600 cfs June 10, 1958 (gage height, 15.28 ft), from rating curve extended above 6,000 cfs on basis of contracted-opening measurement at 16.8 ft; minimum, 15 cfs Sept. 18, 19, 22, 1944.
Flood in May 1943 reached a stage of 16.8 ft, from floodmarks (discharge, 17,900 cfs, by contracted-opening method).

Remarks.--Records good except those for periods of ice effect, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 3-5, 11-20, 23-25, Sept. 2-4, 7-14, 17-30; stage-discharge relation affected by backwater Jan. 29, 30, July 4)

1.4	30
1.8	97
2.2	189
3.0	462
5.0	1,260
8.0	2,670
10.0	4,080

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	101	109	b 60	405	578	296	163	92	49	64	64
2	52	90	101	b 60	279	368	247	232	84	57	60	57
3	48	92	97	b 70	263	279	203	203	77	1,180	57	54
4	44	146	95	b 80	279	232	* 189	163	* 76	1,000	54	54
5	43	141	103	101	538	189	217	135	81	658	52	64
6	41	115	97	358	349	149	217	124	77	349	81	57
7	38	107	* 92	698	* 217	* 144	217	* 115	72	217	121	51
8	38	93	86	500	b 195	141	203	207	65	156	97	51
9	36	* 83	84	349	b 173	311	217	296	67	158	72	56
10	* 35	77	86	203	153	698	232	328	101	128	64	54
11	35	74	77	b 200	139	530	203	898	203	113	57	48
12	35	72	b 78	b 190	139	1,260	189	658	119	217	52	46
13	51	67	b 78	b 170	135	818	203	491	93	156	48	44
14	77	69	b 74	b 160	158	500	176	349	77	533	48	56
15	60	72	b 72	b 240	139	349	163	279	67	778	48	83
16	52	172	b 70	b 540	126	263	153	232	62	778	46	69
17	48	500	b 76	b 450	119	232	146	203	56	500	46	56
18	44	279	b 80	b 300	119	203	141	176	52	296	44	48
19	44	199	b 80	b 240	339	279	137	163	626	203	41	54
20	48	158	b 80	b 180	296	500	130	146	349	156	* 41	43
21	48	130	79	b 150	217	2,510	121	132	189	128	60	43
22	44	140	77	b 210	263	2,240	121	126	117	119	62	41
23	43	250	b 81	b 330	349	1,380	126	113	88	113	46	41
24	43	331	b 80	b 300	349	1,020	117	103	76	103	48	41
25	69	232	b 74	b 240	189	778	111	93	* 65	101	54	* 44
26	107	189	b 78	b 1,300	1,510	618	109	99	67	90	142	44
27	79	163	b 78	b 3,500	1,870	481	107	119	57	90	189	43
28	94	141	b 75	b 1,700	1,060	386	105	132	49	88	126	41
29	203	126	b 72	1,000	----------	331	103	113	44	74	90	41
30	156	115	b 68	700	----------	296	107	103	43	69	70	40
31	119	---------	b 63	500	----------	296	---------	92	---------	* 67	65	---------
Total	1,926	4,514	2,540	15,079	10,367	19,359	5,006	6,776	3,291	8,724	2,145	1,528
Mean	62.1	150	81.9	486	370	592	167	219	110	281	69.2	50.9
Cfsm	0.252	0.610	0.333	1.98	1.50	2.41	0.679	0.890	0.447	1.14	0.281	0.207
In.	0.29	0.68	0.38	2.28	1.56	2.78	0.76	1.03	0.50	1.31	0.32	0.23

Calendar year 1961 : Max 2,470 Min 27 Mean 209 Cfsm 0.850 In. 11.51
Water year 1961-62 : Max 3,500 Min 35 Mean 220 Cfsm 0.894 In. 12.12

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	unknown	unknown	+ 5,000				
3-21	1900	9.62	3,760				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
\+ About.

3-3350. Wildcat Creek near Lafayette, Ind.

Location.--Lat 40°26'26", long 86°49'46", on line between north half of sec. 13 and 14, T. 23 N., R. 4 W.(revised), on downstream side of county highway bridge, 2 miles east of corporate limits of Lafayette, 2½ miles upstream from mouth, and 3 miles downstream from South Fork Wildcat Creek.

Drainage area.--791 sq mi.

Records available.--May 1954 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 527.66 ft above mean sea level, datum of 1929 (Indiana Flood Control and Water Resources Commission bench mark). Prior to June 13, 1957, wire-weight gage at present site and datum.

Average discharge.--8 years, 786 cfs.

Extremes.--Maximum discharge during year, 10,600 cfs Jan. 27 (gage height, 15.04 ft); maximum gage height, 15.56 ft Jan. 28 (result of ice jam); minimum, 92 cfs Oct. 8 (gage height, 2.76 ft).
1954-62: Maximum discharge, 25,000 cfs June 10, 1958 (gage height, 21.52 ft), from rating curve extended above 18,000 cfs by logarithmic plotting; minimum, 46 cfs Sept. 27-29, 1954 (gage height, 2.40 ft).

Remarks.--Records good except those above 900 cfs, which are fair and those for periods of no gage-height record or ice effect, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.7	79
3.0	145
3.5	310
4.0	565
5.0	1,200
10.0	5,400
12.0	7,400
15.0	10,600

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	288	355	b 170	1,500	2,670	960	380	355	182	332	210
2	122	230	310	b 170	1,100	1,550	900	620	355	280	288	190
3	122	230	310	b 190	900	1,140	735	580	310	3,310	265	170
4	120	355	288	b 230	1,000	900	* 660	470	* 288	3,150	248	170
5	115	380	288	332	1,480	700	650	410	288	2,030	230	200
6	111	310	288	1,020	1,410	565	630	370	310	1,200	248	200
7	107	265	* 265	2,590	* 1,100	505	630	*340	480	805	332	190
8	96	230	248	2,350	900	* 480	610	450	405	565	332	180
9	104	* 215	230	1,400	735	869	620	700	455	505	310	180
10	102	200	230	800	565	2,110	660	960	700	455	248	180
11	102	197	230	b 660	505	1,950	640	2,030	900	380	215	170
12	* 107	194	230	b 600	455	3,870	600	1,340	565	665	200	150
13	170	185	b 220	b 560	430	3,390	580	1,020	430	505	182	140
14	215	182	b 210	b 540	455	2,750	540	805	380	1,140	168	150
15	182	179	b 210	b 800	405	1,710	510	630	332	1,950	168	170
16	152	307	b 200	b1,800	380	1,200	470	565	288	2,590	170	180
17	131	1,200	b 220	1,600	355	960	450	480	248	2,030	165	170
18	127	805	230	1,000	355	840	430	455	230	1,340	155	160
19	124	565	230	800	762	960	420	405	624	900	150	150
20	127	430	230	600	840	1,480	400	405	430	665	* 143	140
21	131	380	230	520	598	5,380	370	355	310	759	150	134
22	131	380	215	700	770	6,800	360	332	248	2,350	162	127
23	129	748	230	1,100	960	5,800	380	332	215	3,470	162	122
24	124	960	b 230	1,000	665	4,410	380	310	200	2,590	155	118
25	160	805	b 210	800	598	3,070	360	288	* 230	1,140	160	* 120
26	230	700	b 220	5,000	3,170	2,350	340	288	310	900	288	118
27	230	565	b 220	10,300	5,100	1,790	330	380	265	805	405	122
28	248	480	200	b 9,800	4,140	1,480	330	505	230	700	380	118
29	630	405	b 180	b 9,000	---	1,270	320	405	200	535	310	115
30	455	380	b 170	b 4,000	---	1,080	330	380	182	430	248	113
31	332	---	b 170	b 2,000	---	1,020	---	355	---	* 380	215	---
Total	5,370	12,750	7,297	62,432	31,633	65,049	15,595	17,345	10,763	38,706	7,184	4,657
Mean	173	425	235	2,014	1,130	2,098	520	560	359	1,249	232	155
Cfsm	0.219	0.537	0.297	2.55	1.43	2.65	0.657	0.708	0.454	1.58	0.293	0.196
In.	0.25	0.60	0.34	2.94	1.49	3.06	0.73	0.82	0.51	1.82	0.34	0.22

Calendar year 1961 : Max 7,200 Min 77 Mean 645 Cfsm 0.815 In. 11.08
Water year 1961-62 : Max 10,300 Min 96 Mean 764 Cfsm 0.966 In. 13.12

Peak discharge (base, 6,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	0630	15.04	10,600				
3-22	0030	12.60	8,000				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 9, 10, 17-26, Feb. 1-4, 6, Apr. 4 to May 9, Sept. 1-20.

3-3355. Wabash River at Lafayette, Ind.

Location.--Lat 40°25'19", long 86°53'49", in sec. 20, T. 23 N., R. 4 W., on right bank 20 ft downstream from Brown Street Bridge in Lafayette, 5.1 miles downstream from Wildcat Creek, and at mile 311.9.

Drainage area.--7,247 sq mi.

Records available.--February 1901 to January 1902, March to December 1902, January to May 1903, (gage heights only), October 1923 to September 1962. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected at same site since October 1913 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 504.14 ft above mean sea level, datum of 1929. Oct. 7, 1923 to Nov. 20, 1933, chain gage at same site and datum. Prior to May 2, 1903, staff gage half a mile upstream at different datum.

Average discharge.--39 years (1923-62), 6,372 cfs.

Extremes.--Maximum discharge during year, about 46,000 cfs Jan. 29; maximum gage height, 21.39 ft Jan. 29 (result of ice jam); minimum daily, 960 cfs Sept. 29, 30.

1901-3, 1923-62: Maximum discharge, 131,000 cfs May 19, 1943 (gage height, 28.47 ft); minimum, 265 cfs Jan. 12, 1954; minimum gage height, 0.24 ft Aug. 15, 18, 1901.

Maximum stage known, 32.9 ft Mar. 26, 1913, from floodmark, determined by U.S. Weather Bureau (discharge, 190,000 cfs, estimated).

Remarks.--Records good, except for periods of ice effect and no gage-height record, which are fair. Flow regulated at low stages by powerplants upstream. Records of water temperatures for the water year 1962 are given in WSP 1942.

Cooperation.--Gage-height record collected in cooperation with U. S. Weather Bureau.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	920	14.0	23,600
1.3	1,100	16.0	30,600
3.0	2,950	18.0	39,600
10.0	15,000	20.0	51,200

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,650	2,820	4,100	2,570	a 20,000	34,800	9,230	3,650	3,650	1,780	2,450	1,680
2	3,360	2,570	3,800	3,080	a 13,000	22,000	8,380	3,650	3,650	2,710	2,210	1,480
3	3,080	2,570	3,500	3,220	a 9,000	13,400	7,530	4,100	3,220	11,200	1,990	1,380
4	3,080	3,080	3,500	3,080	b 13,000	9,940	* 6,850	6,510	* 2,950	8,550	1,780	1,480
5	2,820	3,220	3,950	3,500	b*16,000	* 7,360	6,510	6,170	4,150	6,510	1,780	2,100
6	2,690	2,950	4,100	6,050	a 15,000	6,510	6,680	5,040	7,700	5,360	1,990	1,880
7	2,570	2,950	* 4,400	17,100	a 12,000	6,000	6,680	* 4,100	6,340	4,100	1,990	1,480
8	2,330	2,820	3,950	a25,000	a 10,000	6,850	6,340	4,400	4,880	3,360	1,990	1,580
9	2,210	* 2,450	3,650	a21,000	b 9,000	8,890	6,170	5,360	5,520	2,950	2,210	1,580
10	1,990	2,450	3,500	a11,000	b 8,000	16,800	6,170	6,850	7,700	2,570	1,780	1,580
11	2,100	2,330	3,360	a 7,000	a 7,000	20,000	6,170	10,100	7,360	2,330	1,580	1,380
12	* 2,100	2,330	3,360	a 5,000	6,510	27,300	5,680	8,380	5,680	3,360	1,480	1,280
13	1,990	2,330	3,360	a 4,200	6,000	37,100	5,520	6,680	4,560	3,800	1,480	1,280
14	2,690	2,330	2,820	a 4,000	5,680	34,800	5,360	6,340	5,520	5,040	1,280	1,380
15	2,570	2,820	2,690	a 6,000	5,360	25,500	5,360	5,360	6,340	6,170	1,280	1,380
16	2,450	2,820	2,820	a 9,000	5,040	18,200	5,040	4,720	4,560	8,380	1,380	1,190
17	2,330	5,740	3,360	a11,000	4,720	13,400	4,720	3,800	3,650	9,060	1,280	1,190
18	2,210	10,300	3,360	a10,000	4,560	11,000	4,400	3,500	3,080	7,190	1,280	1,140
19	1,990	8,210	3,500	a 8,000	5,360	11,000	4,250	3,360	2,950	5,200	1,190	1,060
20	2,100	6,170	3,360	a 7,000	6,340	14,200	4,100	3,360	2,690	3,950	* 1,140	1,010
21	1,990	5,040	3,080	a 6,000	6,170	23,300	3,800	2,950	2,450	5,040	1,100	1,010
22	2,100	4,560	2,950	a 5,600	5,840	41,600	3,800	2,820	2,210	10,700	1,140	1,060
23	1,880	6,340	3,080	a 5,200	6,340	45,000	3,650	2,950	1,990	20,200	1,190	1,010
24	2,100	8,720	3,220	a 5,600	5,520	38,600	3,650	2,690	2,210	20,800	1,060	1,060
25	2,100	8,890	3,080	a 8,000	5,840	29,800	3,220	2,450	* 3,220	13,600	1,280	a* 1,000
26	2,330	7,700	3,080	b12,000	11,500	21,000	3,360	2,450	2,690	6,680	2,100	a 1,000
27	2,210	6,680	3,080	b25,000	30,700	16,400	3,220	3,220	2,210	4,880	1,990	a 980
28	2,570	5,520	2,690	b35,000	39,600	12,800	3,080	3,500	1,990	4,250	1,580	a 980
29	3,220	4,880	1,280	b45,000	---	11,200	3,080	3,650	1,880	3,650	1,580	a 960
30	3,220	4,400	1,780	b40,000	---	10,100	3,080	3,360	1,880	* 3,220	1,480	a 960
31	2,950	---	2,210	a30,000	---	9,760	---	3,220	---	2,690	1,580	---
Total	76,980	135,990	99,970	384,200	293,080	604,610	155,080	139,690	119,880	199,280	49,620	39,530
Mean	2,483	4,533	3,225	12,390	10,470	19,500	5,169	4,474	3,963	6,428	1,601	1,284
Cfsm	0.343	0.626	0.445	1.71	1.44	2.69	0.713	0.617	0.547	0.887	0.221	0.177
In.	0.40	0.70	0.51	1.97	1.50	3.10	0.80	0.71	0.61	1.02	0.25	0.20

Calendar year 1961: Max 54,700 Min 920 Mean 6,539 Cfsm 0.902 In. 12.26
Water year 1961-62: Max 45,000 Min 960 Mean 6,287 Cfsm 0.868 In. 11.77

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3357. Big Pine Creek near Williamsport, Ind.

Location.--Lat 40°19', long 87°17', in SE¼ sec. 26, T. 22 N., R. 8 W., on upstream side of highway bridge, 1.6 miles north of city limits of Williamsport, and 2.5 miles upstream from mouth.

Drainage area.--329 sq mi.

Records available.--October 1955 to September 1962.

Gage.--Wire-weight gage, read twice daily, and crest-stage gage. Datum of gage is 511.68 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Average discharge.--7 years, 278 cfs.

Extremes.--Maximum discharge during year, 3,290 cfs Feb. 26 (gage height, 9.08 ft); maximum gage height, 13.91 ft Jan. 27 (result of ice jam); minimum discharge, 18 cfs Sept. 23-25, 30; minimum gage height, 2.95 ft Sept. 24.
1955-62: Maximum discharge, 12,600 cfs Feb. 10, 1959 (gage height, 16.00 ft from floodmark), from rating curve extended above 6,000 cfs on basis of contracted-opening measurement; minimum daily, 7.0 cfs Oct. 10, 1956.

Remarks.--Records poor.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 11		Jan. 12 to Sept. 30	
3.1	16	2.9	14
3.3	35	3.0	21
3.4	51	3.2	46
3.5	74	3.6	120
4.0	215	4.0	230
6.0	1,050	5.0	610
7.0	1,550	6.0	1,070
		8.0	2,360
		10.0	4,100

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	48	122	127	500	650	a 380	230	a 130	105	60	29
2	31	48	116	179	400	313	370	246	a 127	160	56	28
3	28	51	116	232	350	246	330	230	a 110	970	52	26
4	25	84	122	330	1,000	227	330	197	134	a 740	51	30
5	22	110	136	770	1,600	200	313	174	217	a 460	49	28
6	22	102	133	1,050	1,400	171	330	197	246	a 320	56	25
7	21	79	124	1,300	1,000	158	350	246	a 118	a 240	62	24
8	20	62	116	1,150	700	174	370	450	a 118	a 190	82	21
9	20	a 58	108	610	450	296	370	470	a 140	a 152	84	28
10	20	a 53	158	430	350	450	330	390	296	116	73	32
11	20	a 48	215	380	310	730	296	775	280	148	a 60	* 42
12	20	a 46	250	350	280	1,220	280	870	a 232	730	a 53	30
13	24	a 45	194	310	280	820	280	730	a 190	450	a 50	39
14	24	49	a 158	290	300	510	263	510	a 158	2,050	a 46	91
15	23	69	a 136	280	330	370	263	390	a 134	a 1,600	a* 45	a 72
16	22	170	a 150	260	296	296	227	313	a 125	970	40	a 52
17	22	* 270	188	250	263	246	217	263	a 118	a 700	38	a 38
18	* 22	167	173	230	263	280	200	263	a* 110	a* 530	38	a 29
19	25	a 140	152	200	280	490	* 180	223	a 105	a 370	35	a 24
20	30	a 128	* 133	190	296	820	174	217	99	a 280	32	a 22
21	27	105	147	210	* 350	2,130	168	217	99	a 270	35	a 21
22	26	119	158	210	370	* 2,760	168	* 180	95	a 300	32	19
23	25	209	167	200	390	1,710	a 162	163	91	390	30	18
24	34	250	150	190	280	a 1,350	a 150	153	103	490	28	18
25	35	a 215	127	180	565	a 1,000	a 143	148	97	390	40	18
26	38	a 180	122	500	1,950	a 800	138	146	95	191	46	21
27	32	a 153	113	1,500	2,200	a 640	134	174	93	112	39	23
28	28	a 143	110	1,300	1,460	a 540	132	210	91	84	30	29
29	74	133	110	1,000	----------	a 470	153	180	91	78	28	20
30	79	124	105	800	----------	a 435	148	a 160	88	71	25	18
31	53	----------	99	660	----------	a 400	----------	a 140	----------	62	25	----------
Total	918	3,458	4,408	15,668	18,213	20,902	7,349	9,255	4,130	13,719	1,420	915
Mean	29.6	115	142	505	650	674	245	299	138	443	45.8	30.5
Cfsm	0.090	0.350	0.432	1.53	1.98	2.05	0.745	0.909	0.419	1.35	0.139	0.093
In.	0.10	0.39	0.50	1.76	2.06	2.36	0.83	1.05	0.47	1.56	0.16	0.10

Calendar year 1961: Max 2,390 Min 9.2 Mean 237 Cfsm 0.720 In. 9.79
Water year 1961-62: Max 2,760 Min 18 Mean 275 Cfsm 0.836 In. 11.34

Peak discharge (base, 2,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	unknown	unknown	unknown				
2-26	unknown	9.08	3,290				
3-22	unknown	8.9	3,110				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Jan. 11 to Feb. 14.

3-3360. Wabash River at Covington, Ind.

Location.--Lat 40°08'24", long 87°24'20", in sec. 35, T. 20 N., R. 9 W., near center of span on downstream side of highway bridge at Covington, 2.9 miles downstream from Oppossum Run, 3.6 miles upstream from Spring Creek, and at mile 271.1.

Drainage area.--8,208 sq mi.

Records available.--October 1939 to September 1962: Gage-height records collected at site three-eighths of a mile downstream January 1927 to December 1930 and at present site since December 1930 are contained in reports of U. S. Weather Bureau.

Gage.--Wire-weight gage read twice daily. Datum of gage is 473.97 ft above mean sea level, datum of 1929.

Average discharge.--23 years, 7,231 cfs.

Extremes.--Maximum discharge during year, 50,500 cfs Mar. 24 (gage height, 22.96 ft, from graph based on gage readings; maximum gage height, 25.40 ft Jan. 31 (result of ice jam, from graph based on gage readings); minimum discharge observed, 1,350 cfs Sept. 30 (gage height, 3.49 ft).
1939-62: Maximum discharge, 147,000 cfs May 20, 1943 (gage height, 32.44 ft); minimum observed, 487 cfs Sept. 29, 1941 (gage height, 1.81 ft).
Maximum stage known, 35.1 ft in March 1913, from floodmark determined by U. S. Weather Bureau (discharge, 200,000 cfs estimated).

Remarks.--Records good except those for periods of ice effect and indefinite stage-discharge relation, which are fair.

Rating table, water year 1961-62, except periods of ice effect and indefinite stage-discharge relation
(gage height, in feet, and discharge, in cubic feet per second)

3.5	1,350
6.0	4,300
12.0	13,700
18.0	26,400
22.0	44,000
23.0	50,500

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,160	3,490	5,140	3,880	35,000	36,800	11,600	4,580	4,300	2,520	3,480	1,850
2	3,880	3,360	4,580	3,880	22,000	38,300	10,700	5,140	4,580	3,740	3,240	1,850
3	3,600	3,240	4,440	4,020	16,000	28,200	9,560	5,420	4,300	8,920	3,000	1,750
4	3,360	3,240	4,160	5,000	14,000	18,200	8,920	5,700	4,020	13,300	2,760	1,650
5	3,240	3,360	4,020	5,140	16,000	11,700	8,440	6,120	3,880	10,200	2,520	1,750
6	3,120	3,600	4,020	7,380	20,000	9,080	8,280	6,820	6,260	7,800	2,760	2,290
7	2,880	3,480	4,300	14,100	17,000	7,660	8,600	5,840	8,280	6,120	2,760	2,070
8	2,640	3,240	5,000	20,900	14,000	7,520	8,280	5,840	7,380	4,860	2,640	1,850
9	2,640	3,120	4,440	23,600	12,000	9,560	8,120	6,820	7,660	4,160	2,640	1,960
10	2,640	3,000	4,300	19,200	11,000	15,000	7,800	7,380	8,280	3,600	2,640	2,070
11	2,520	3,000	4,160	13,300	10,000	19,800	7,800	12,400	9,560	3,360	2,290	1,850
12	2,520	2,880	4,020	8,000	8,800	23,400	7,660	13,000	9,240	4,300	2,180	* 1,850
13	2,400	2,760	4,020	6,000	7,800	27,600	7,100	11,000	6,680	e 5,400	1,960	1,750
14	2,520	2,760	3,880	5,400	7,200	34,800	6,960	9,600	5,980	e 7,200	* 1,850	1,750
15	3,000	2,880	3,600	7,000	6,800	36,800	6,820	7,800	6,820	e 9,000	1,850	1,960
16	2,880	* 3,360	3,740	10,000	6,600	30,400	6,540	6,680	7,100	e 11,000	1,750	1,850
17	2,760	4,300	3,880	11,000	6,400	23,200	6,120	5,840	5,700	e* 12,000	1,850	1,650
18	2,520	7,800	4,020	12,000	6,200	18,200	5,840	5,280	4,720	e 10,000	1,750	1,650
19	* 2,520	10,200	4,160	11,000	6,000	13,700	* 5,700	4,720	* 3,480	e 8,000	1,650	1,550
20	2,520	7,960	* 4,020	9,000	7,400	14,400	5,420	4,580	3,600	6,820	1,650	1,450
21	2,640	6,400	4,020	8,000	* 7,960	21,600	5,140	4,440	3,360	5,840	1,650	1,450
22	2,290	5,840	3,880	7,400	7,660	30,400	4,860	* 4,300	3,000	8,440	1,650	1,450
23	2,400	6,540	3,740	6,800	7,800	* 41,800	4,860	3,880	2,760	15,700	1,550	1,450
24	2,400	8,280	3,740	7,000	7,380	49,200	4,720	3,880	2,760	22,200	1,550	1,450
25	2,520	9,720	4,020	9,000	7,240	44,600	4,440	3,600	3,000	20,700	1,550	1,450
26	2,520	8,920	4,020	13,000	10,900	37,300	4,300	3,360	3,600	13,700	1,850	1,450
27	2,640	8,280	3,740	20,000	19,400	28,600	4,300	3,600	3,240	7,960	2,400	1,450
28	2,760	7,100	3,480	30,000	28,600	21,600	4,160	4,580	2,760	6,260	2,290	1,350
29	3,600	5,840	2,760	40,000	----------	15,900	4,020	4,580	2,640	5,420	1,850	1,350
30	3,740	5,420	2,760	45,000	----------	13,500	4,160	4,580	2,400	4,720	1,850	1,350
31	3,600	----------	3,000	47,000	----------	12,300	----------	4,300	----------	4,160	1,850	----------
Total	89,430	153,360	123,060	433,000	347,140	741,120	201,220	184,660	151,340	257,400	67,260	50,600
Mean	2,885	5,112	3,970	13,970	12,400	23,910	6,707	5,957	5,045	8,303	2,170	1,687
Cfsm	0.351	0.623	0.484	1.70	1.51	2.91	0.817	0.726	0.615	1.01	0.264	0.206
In.	0.40	0.70	0.56	1.96	1.57	3.36	0.91	0.84	0.69	1.16	0.30	0.23

Calendar year 1961 : Max 62,100 Min 1,000 Mean 7,477 Cfsm 0.911 In. 12.35
Water year 1961-62 : Max 49,200 Min 1,350 Mean 7,615 Cfsm 0.928 In. 12.68

* Discharge measurement made on this day.
e Stage-discharge relation indefinite.
Note.--Stage-discharge relation affected by ice Jan. 12 to Feb. 20.

3-3390. Vermilion River near Danville, Ill.

Location.--Lat 40°05'53", long 87°35'37", in SE¼NW¼ sec. 22, T. 19 N., R. 11 W., on left bank 1.5 miles upstream from Stony Creek and 2½ miles southeast of Danville.

Drainage area.--1,280 sq mi, approximately.

Records available.--October 1914 to September 1921, June 1928 to September 1962. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 503.33 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Nov. 12, 1914, to Aug. 6, 1921, and June 13, 1928, to Jan. 9, 1935, chain gage at downstream side of Chicago & Eastern Illinois Railroad bridge 0.3 mile upstream at same datum.

Average discharge.--41 years, 904 cfs.

Extremes.--Maximum discharge during year, 12,300 cfs July 16 (gage height, 16.87 ft); minimum, 57 cfs Oct. 13.
1914-21, 1928-62: Maximum discharge, 48,700 cfs Mar. 13, 1939 (gage height, 28.59 ft); minimum daily, 2 cfs Oct. 9-14, 1920, Aug. 10, 1930.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Flow regulated at times by storage at Lake Vermilion on North Fork Vermilion River, 4½ miles above station (usable capacity, 7,440 acre-ft in 1940), and by Danville sewage-disposal plant.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	132	200	376	b 320	1,960	2,550	1,520	1,140	2,040	258	574	108
2	108	176	362	344	1,440	1,600	1,400	1,600	1,140	282	460	102
3	116	240	340	330	1,220	1,400	1,360	1,560	844	4,000	400	99
4	118	405	340	330	2,400	1,250	1,250	1,320	736	4,890	376	102
5	97	670	330	428	5,970	1,110	1,220	1,040	718	3,720	420	150
6	88	480	317	2,590	5,160	1,180	1,400	935	*1,300	* 2,200	2,960	197
7	80	358	290	5,880	3,720	886	1,560	823	1,360	1,360	2,520	135
8	80	290	* 262	* 5,160	2,280	788	1,440	1,880	935	1,000	1,440	145
9	74	258	258	2,760	* 1,480	970	1,400	3,630	3,610	788	900	179
10	71	229	246	a 1,700	1,110	2,790	1,360	3,360	4,440	664	* 676	405
11	* 71	232	250	a 1,400	865	3,810	1,180	6,510	5,520	574	495	684
12	60	226	344	a 1,200	795	5,790	1,080	5,790	4,080	495	390	* 585
13	80	* 209	358	a 1,100	970	5,340	1,040	4,080	2,360	854	344	405
14	125	203	b 470	b 1,000	1,720	* 3,630	970	* 2,680	1,640	8,480	322	353
15	125	197	b 490	b 1,000	2,120	2,360	865	1,680	1,250	10,400	299	612
16	84	229	515	b 950	1,480	1,520	* 781	1,440	1,040	11,700	274	510
17	71	270	530	b 900	1,080	1,040	730	1,400	879	10,400	258	376
18	69	322	495	a 800	970	970	712	1,680	748	8,220	229	294
19	88	299	465	a 700	2,650	1,110	688	1,520	658	4,980	206	290
20	86	246	480	a 650	2,680	1,840	646	1,400	602	2,680	179	266
21	86	203	420	b 730	1,840	8,470	602	1,110	558	2,000	197	226
22	95	240	385	b 740	1,680	10,600	585	970	515	2,780	167	246
23	97	677	485	b 700	2,200	* 9,700	580	865	480	4,890	170	226
24	95	1,570	724	b 660	1,600	7,410	552	774	460	4,710	148	206
25	120	1,110	760	640	1,250	4,350	510	652	430	3,180	203	194
26	97	865	682	1,720	6,270	3,180	495	706	348	1,800	222	167
27	113	700	b 600	5,160	9,210	2,200	490	935	286	1,320	182	140
28	199	568	b 400	5,160	7,100	1,960	490	1,760	254	1,080	148	128
29	250	445	b 290	b 4,000	---	1,840	500	1,520	236	935	132	113
30	312	395	b 260	b 3,400	---	1,680	536	1,220	243	823	123	113
31	215	---	b 280	2,840	---	1,560	---	1,320	---	694	108	---
Total	3,502	12,512	12,804	55,292	73,220	94,884	27,942	57,300	39,710	102,157	15,522	7,756
Mean	113	417	413	1,784	2,615	3,061	931	1,848	1,324	3,295	501	259
Cfsm	0.088	0.326	0.323	1.39	2.04	2.39	0.727	1.44	1.03	2.57	0.391	0.202
In.	0.10	0.36	0.37	1.61	2.13	2.76	0.81	1.66	1.15	2.97	0.45	0.23

Calendar year 1961: Max 10,800 Min 41 Mean 863 Cfsm 0.674 In. 9.15
Water year 1961-62: Max 11,700 Min 60 Mean 1,377 Cfsm 1.08 In. 14.60

Peak discharge (base, 6,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-7	1800	10.53	6,150	3-22	0330	15.54	10,800
2-5	1800	11.14	6,690	5-11	1000	11.47	7,050
2-27	1000	14.04	9,300	6-9	1200	10.52	6,150
3-12	1100	10.41	6,060	7-16	0300	16.87	12,300

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3395. Sugar Creek at Crawfordsville, Ind.

Location.--Lat 40°02'56", long 86°53'58", in NW¼ sec. 32, T. 19 N., R. 4 W., on left bank 327 ft upstream from Crawfordsville Electric Light and Power Co.'s dam, half a mile upstream from bridge on State Highway 43, and 1 mile downstream from Walnut Fork Creek.

Drainage area.--509 sq mi.

Records available.--June 1938 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 657.77 ft above mean sea level, datum of 1929.

Average discharge.--24 years, 479 cfs.

Extremes.--Maximum discharge during year, 15,100 cfs Jan. 27 (gage height, 11.22 ft); minimum, 29 cfs Aug. 24, 25 (gage height, 1.11 ft).
1938-62: Maximum discharge, 26,300 cfs June 28, 1957 (gage height, 14.48 ft), minimum, 1.8 cfs Sept. 28, 1954.
Maximum stage known, 17.3 ft in March 1913, from information by local resident (discharge, about 36,000 cfs).

Remarks.--Records good except those for periods of no gage-height record or ice effect, which are fair.

Rating table, water year 1961-62, except for periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	26
1.5	143
2.0	371
2.4	640
3.0	1,460
4.0	3,350
7.0	7,420
11.0	14,600

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	66	192	225	b 160	964	1,380	491	272	216	48	86	69
2	66	147	208	b 160	592	848	435	454	154	53	80	64
3	64	140	188	b 160	532	616	377	485	136	473	72	58
4	56	296	188	b 160	584	512	360	360	123	832	66	58
5	48	366	212	b 200	1,230	406	371	282	123	355	72	95
6	45	262	220	1,400	720	328	388	248	126	212	162	95
7	40	200	204	2,680	498	312	371	220	117	150	216	72
8	40	176	176	1,570	505	307	355	292	104	120	180	61
9	37	154	165	723	412	599	441	388	110	101	117	61
10	37	143	169	355	307	1,620	485	339	220	89	92	58
11	34	130	169	b 325	277	1,180	400	1,530	200	86	77	* 53
12	34	123	173	b 310	277	2,780	366	1,340	147	101	72	50
13	50	117	196	b 300	262	2,020	360	824	130	143	* 64	48
14	77	117	208	b 300	287	1,210	322	546	117	4,480	61	93
15	69	117	216	1,160	277	836	292	412	101	2,680	58	302
16	58	* 616	212	a1,500	248	650	258	333	92	1,590	53	192
17	56	1,810	229	a 800	239	526	244	292	83	925	50	126
18	48	951	234	584	225	466	239	262	83	505	48	98
19	50	568	225	495	766	669	229	234	102	* 344	45	83
20	* 50	417	302	371	526	1,190	* 216	212	* 229	248	40	72
21	48	328	* 292	366	406	5,760	204	204	140	196	40	66
22	48	302	244	472	730	* 5,550	204	* 297	101	192	42	64
23	45	810	447	680	886	3,260	208	208	86	267	37	58
24	42	1,070	632	485	436	2,300	192	173	77	239	34	56
25	58	624	441	417	423	1,740	184	150	72	184	115	64
26	89	479	349	7,800	4,390	1,260	180	147	66	162	244	61
27	101	394	307	14,200	5,040	938	173	169	58	143	212	58
28	98	317	208	6,190	2,360	720	173	253	56	123	133	56
29	165	277	173	2,590	----------	608	169	229	50	110	92	50
30	150	248	b 170	1,980	----------	560	176	184	48	101	72	50
31	188	----------	b 160	1,290	----------	519	---------	184	---------	92	66	----------
Total	2,057	11,891	7,542	50,173	24,399	41,670	8,863	11,523	3,467	15,344	2,798	2,391
Mean	66.4	396	243	1,618	871	1,344	295	372	116	495	90.3	79.7
Cfsm	0.130	0.778	0.477	3.18	1.71	2.64	0.580	0.731	0.228	0.972	0.177	0.157
In.	0.15	0.87	0.55	3.67	1.78	3.04	0.65	0.84	0.25	1.12	0.20	0.18

Calendar year 1961: Max 6,340 Min 20 Mean 505 Cfsm 0.992 In. 13.47
Water year 1961-62: Max 14,200 Min 34 Mean 499 Cfsm 0.980 In. 13.30

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	1530	11.22	15,100				
2-26	1600	6.10	6,270				
3-21	1500	6.61	6,880				
7-14	1130	7.84	8,650				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

GPO 802-191-5

3-3400. Sugar Creek near Byron, Ind.

Location.--Lat 39°55'52", long 87°07'33", in SW¼ sec. 8, T. 17 N., R. 6 W., on right bank, 30 ft upstream from highway bridge, 2½ miles northwest of Byron, and 5 miles downstream from Indian Creek.

Drainage area.--668 sq mi.

Records available.--October 1940 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 538.92 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Nov. 18, 1941, staff gage at same site and datum.

Average discharge.--22 years, 656 cfs.

Extremes.--Maximum discharge during year, 19,200 cfs Jan. 26 (gage height, 16.72 ft); minimum, 63 cfs Oct. 12, 13; minimum gage height, 2.12 ft Oct. 12, 13, Aug. 25.
1940-62: Maximum discharge, 32,200 cfs June 28, 1957 (gage height, 22.98 ft), minimum observed 12 cfs Sept. 21, 1941; minimum gage height observed, 1.70 ft Aug. 8, 1941.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 26		Jan. 27 to Sept. 30	
1.9	36	2.1	68
2.2	74	2.2	84
2.8	215	2.8	248
3.3	410	3.5	540
4.5	1,150	4.5	1,160
6.0	2,440	6.0	2,440
9.0	5,320	9.0	5,320
12.0	9,600	13.0	11,200
13.0	11,200	16.0	17,500

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	119	262	262	230	1,160	1,630	640	590	335	76	155	114
2	99	215	245	230	820	1,460	615	820	264	129	147	104
3	97	230	230	220	700	820	540	760	216	346	138	98
4	89	340	230	220	700	700	515	565	207	1,000	136	100
5	84	490	262	300	1,230	565	515	445	213	534	133	112
6	77	340	280	1,660	950	468	540	378	232	315	312	141
7	73	262	262	3,070	590	422	540	335	207	232	355	122
8	70	215	230	2,080	640	422	515	542	186	189	298	102
9	67	201	215	1,010	540	596	540	565	207	152	232	98
10	66	179	215	600	445	1,600	640	565	376	130	175	96
11	64	163	215	500	422	1,380	565	1,400	355	120	144	90
12	63	155	230	450	378	3,340	515	1,720	264	180	127	* 86
13	76	148	215	420	378	2,620	490	1,090	216	178	* 117	82
14	102	152	245	400	378	1,630	468	820	192	11,200	107	651
15	110	145	280	1,500	378	1,160	422	590	172	3,970	100	330
16	93	* 363	262	2,500	335	880	400	490	155	2,260	96	335
17	84	1,890	280	1,500	315	760	355	422	144	1,380	94	232
18	77	1,150	280	1,000	315	640	355	400	136	820	88	169
19	79	760	320	700	687	760	335	355	178	* 565	82	138
20	* 81	550	410	600	760	1,310	* 315	315	* 232	445	81	120
21	77	410	* 410	500	540	8,850	298	* 315	232	400	78	107
22	76	385	340	700	760	* 6,930	298	400	172	526	76	98
23	76	760	587	900	*1,020	3,790	298	355	147	615	74	92
24	83	1,300	880	660	615	2,620	280	280	150	468	73	88
25	140	820	670	600	590	1,990	264	248	120	355	468	96
26	128	640	490	9,790	5,090	1,460	264	264	107	315	553	94
27	145	520	350	15,900	5,840	1,160	264	399	98	248	315	90
28	155	410	270	8,920	2,800	950	264	445	92	216	232	84
29	230	340	250	2,980	----------	820	264	400	84	201	166	81
30	262	300	240	2,170	----------	760	297	315	81	180	127	78
31	245	---------	240	1,460	----------	700	----------	280	----------	172	117	----------
Total	3,287	14,095	9,895	63,770	29,376	53,193	12,611	16,868	5,770	27,917	5,396	4,228
Mean	106	470	319	2,057	1,049	1,716	420	544	192	901	174	141
Cfsm	0.159	0.704	0.478	3.08	1.57	2.57	0.629	0.814	0.287	1.35	0.260	0.211
In.	0.18	0.79	0.55	3.55	1.64	2.96	0.70	0.94	0.32	1.56	0.30	0.24

Calendar year 1961 : Max 8,530 Min 46 Mean 689 Cfsm 1.03 In. 14.00
Water year 1961-62 : Max 15,900 Min 63 Mean 675 Cfsm 1.01 In. 13.73

Peak discharge (base, 6,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	2100	16.72	19,200				
2-26	1630	10.76	7,770				
3-21	1300	13.40	11,900				
7-14	1230	16.29	18,200				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 27 to Jan. 5, Jan. 10-25.

3-3405. Wabash River at Montezuma, Ind.

Location.--Lat 39°47'33", long 87°22'26", in sec. 35, T. 16 N., R. 9 W., in downstream side of first pier from left bank of bridge on U. S. Highway 36 at Montezuma, 2.0 miles upstream from Raccoon Creek, 4.9 miles downstream from Sugar Creek, and at mile 240.

Drainage area.--11,100 sq mi, approximately.

Records available.--October 1927 to September 1962 in reports of Geological Survey. July 1924 to September 1927 (gage heights only) in reports of Indiana Department of Conservation.

Gage.--Water-stage recorder. Datum of gage is 457.75 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Oct. 1, 1927 to Sept. 11, 1934, chain gage and Sept. 12, 1934 to July 12, 1950, wire-weight gage, at same site and datum.

Average discharge.--35 years, 9,498 cfs.

Extremes.--Maximum discharge during year, 60,800 cfs Mar. 25 (gage height, 23.08 ft); maximum gage height, 24.63 ft Jan. 31 (result of ice jam); minimum discharge, 1,910 cfs Sept. 30 (gage height, 2.73 ft).
1927-62: Maximum discharge, 184,000 cfs May 20, 1943 (gage height, 32.83 ft); minimum observed, 560 cfs Sept. 24, 1941 (revised); minimum gage height, 1.43 ft Aug. 3, 10, 1934.
Maximum stage known, 34.0 ft Mar. 27, 1913, from floodmarks (discharge, 230,000 cfs, estimated).

Remarks.--Records fair except those for periods of no gage-height record and ice effect, which are poor.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from Raccoon Creek Mar. 22, July 15-17)

Oct. 1 to Jan. 29		Jan. 30 to Mar. 24 July 16 to Sept. 30				Mar. 25 to July 15			
3.4	2,250	2.8	2,050	21.0	45,700	3.8	3,200	20.0	41,500
9.0	11,300	7.0	9,110	23.0	59,900	9.0	12,200	23.0	59,900
16.0	27,500	14.0	24,000			16.0	27,500		
20.0	41,500								

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,520	3,900	5,480	b 2,800	b 42,000	36,600	16,400	7,500	6,310	3,200	6,080	2,630
2	4,050	3,750	5,000	b 3,200	b 37,000	37,500	15,400	9,240	6,650	3,800	5,400	2,630
3	3,750	3,600	4,680	b 3,700	b 31,000	37,500	14,000	9,240	6,150	6,480	4,890	2,790
4	3,600	3,900	4,520	b 4,100	b 25,000	33,000	12,800	8,520	5,510	17,000	4,390	2,630
5	3,450	4,360	4,360	5,000	b 21,000	21,200	12,200	8,880	5,350	15,800	4,230	2,470
6	3,300	4,680	4,520	7,560	b 25,000	14,700	12,000	9,240	6,310	12,200	4,890	2,950
7	3,150	4,200	4,680	17,000	b 23,000	11,900	12,200	8,180	9,240	9,240	7,130	3,270
8	3,000	3,900	4,840	22,700	b 20,000	10,400	12,000	8,350	8,880	7,160	6,080	2,790
9	2,850	3,750	4,680	24,500	b 18,000	11,000	11,800	10,400	9,240	5,670	5,060	2,630
10	2,700	3,450	4,360	22,400	a 16,000	15,100	11,400	11,600	11,400	5,030	4,720	* 2,950
11	2,550	3,300	4,200	b 15,000	a 15,000	22,800	11,000	19,200	15,400	4,550	4,230	3,110
12	2,400	3,150	4,200	b 10,000	a 13,000	30,600	10,600	22,000	14,800	4,400	3,750	3,270
13	2,550	3,000	4,200	b 7,600	a 12,000	33,300	10,000	18,800	11,600	5,670	3,430	2,790
14	2,550	3,000	4,200	b 6,200	a 12,000	35,100	9,240	14,600	8,520	23,300	* 3,270	5,400
15	2,700	* 3,000	4,200	b 7,000	a 11,000	37,500	8,880	11,800	8,010	35,000	3,110	5,910
16	3,000	3,450	3,900	b 9,000	a 10,000	38,100	8,520	9,800	8,350	* 33,000	2,950	3,910
17	2,850	4,680	4,050	b 11,000	a 9,400	35,700	8,180	8,520	6,990	* 29,000	2,950	3,270
18	2,700	6,440	4,200	b 13,000	a 9,200	27,900	7,840	8,180	6,150	27,300	2,950	2,950
19	* 2,550	9,430	4,520	b 13,000	a 9,500	19,800	* 7,500	7,500	* 5,350	21,200	2,790	2,790
20	2,550	8,920	4,840	b 12,000	a 11,000	19,200	7,160	6,990	5,030	14,300	2,630	2,630
21	2,550	6,760	4,680	b 11,000	a 11,000	36,500	6,990	* 6,650	4,870	11,000	2,630	2,470
22	2,550	5,960	4,360	b 10,000	a 11,000	* 46,000	6,650	6,480	4,400	10,400	2,630	2,470
23	2,400	6,440	4,520	b 9,400	a 10,000	49,900	6,480	5,990	4,250	16,500	2,470	2,470
24	2,550	8,750	5,160	b 9,200	a 10,000	56,600	6,310	5,670	4,100	* 24,800	2,470	2,330
25	2,700	10,400	5,320	b 10,000	a 9,700	57,400	6,150	5,350	3,950	26,500	2,630	2,330
26	2,850	10,400	* 5,000	b 15,000	a* 18,000	53,400	5,830	5,190	4,400	22,800	3,590	2,330
27	2,850	9,260	4,680	b 25,000	33,900	44,400	5,830	5,830	4,400	14,500	3,430	2,190
28	3,000	8,070	4,360	b 35,000	* 36,000	36,400	5,670	7,330	3,800	10,200	3,590	2,050
29	3,750	6,920	3,300	b 41,000	---------	27,200	5,510	6,990	3,500	8,570	3,110	2,050
30	4,200	5,960	2,250	b 45,000	---------	20,400	5,670	6,480	3,350	7,490	2,790	2,050
31	4,200	---------	b 2,400	b 47,000	---------	17,400	---------	6,310	---------	6,770	2,790	---------
Total	94,370	166,780	135,660	474,360	509,700	974,500	280,210	286,810	206,260	442,830	117,060	86,510
Mean	3,044	5,559	4,376	15,300	18,200	31,440	9,340	9,252	6,875	14,280	3,776	2,884
Cfsm	0.274	0.501	0.394	1.38	1.64	2.83	0.841	0.834	0.619	1.29	0.340	0.260
In.	0.32	0.56	0.45	1.59	1.71	3.26	0.94	0.96	0.69	1.49	0.39	0.29

Calendar year 1961: Max 84,500 Min 1,310 Mean 9,774 Cfsm 0.881 In. 11.96
Water year 1961-62: Max 57,400 Min 2,050 Mean 10,340 Cfsm 0.932 In. 12.65

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.
Note.--Computed from once-daily wire-weight gage readings Nov. 20-24, Jan. 13, 14, May 12 to July 6, July 9-23.

3-3408. Raccoon Creek near Fincastle, Ind.

Location.--Lat 39°48'45", long 86°57'14", in SW¼ sec. 22, T. 16 N., R. 5 W., on left bank at downstream side of county road bridge, 8,350 ft upstream from Ramp Creek and 3.1 miles northwest of Fincastle.

Drainage area.--132 sq mi.

Records available.--August 1957 to September 1962.

Gage.--Water-stage recorder. Datum of the gage is 686.03 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 139 cfs.

Extremes.--Maximum discharge during year, 15,100 cfs Jan. 26 (gage height, 15.42 ft); maximum gage height, 15.68 ft Jan. 26 (ice jam); minimum discharge, 8.2 cfs Aug. 23-25 (gage height, 1.65 ft).
1957-62: Maximum discharge, that of Jan. 26, 1962; minimum, 3.9 cfs Oct. 13, 1960.
Maximum flood known, 39,900 cfs June 28, 1957 (gage height, 19.10 ft) from slope-area measurement obtained immediately after the flood.

Remarks.--Records fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 28 to Mar. 11, Mar. 13-20, Aug. 13 to Sept. 13)

1.5	7.5	6.0	900
1.7	13	9.0	2,180
2.0	29	10.0	2,680
2.5	70	11.0	3,250
3.0	130	12.0	4,680
4.0	300	13.0	6,920

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	65	60	b 61	182	250	110	245	* 187	13	22	10
2	25	* 49	* 56	61	* 137	* 205	104	300	98	15	20	10
3	* 22	53	51	* 61	130	174	* 92	240	65	* 14	18	9.8
4	21	185	51	65	130	159	87	152	53	16	17	11
5	18	137	87	91	189	137	98	110	73	19	15	10
6	17	92	92	463	130	124	98	92	180	15	19	9.5
7	16	70	76	670	124	117	92	81	65	13	25	9.0
8	15	58	58	300	110	117	92	217	45	12	26	8.8
9	15	49	53	b 160	104	214	152	189	65	12	17	9.0
10	14	43	58	130	87	318	152	152	87	11	15	9.2
11	15	39	56	120	81	245	117	430	52	11	14	9.0
12	16	35	76	120	87	610	104	280	42	12	12	8.8
13	26	33	92	110	87	400	110	189	37	13	12	8.8
14	33	33	b 79	b 110	92	300	98	144	31	2,870	11	492
15	26	34	b 65	543	81	240	87	104	27	2,150	11	87
16	22	386	61	610	76	214	76	87	25	700	10	44
17	21	430	87	350	76	189	70	76	22	325	10	28
18	19	222	92	240	76	174	70	92	21	205	9.5	22
19	19	159	101	210	130	214	65	70	22	137	9.2	20
20	19	124	205	197	110	305	61	59	21	98	8.8	* 18
21	19	92	137	189	92	*3,910	57	64	19	87	* 8.8	17
22	18	92	110	265	166	1,370	57	152	18	144	8.8	17
23	18	256	223	300	159	520	57	87	17	* 189	8.5	16
24	22	231	222	231	110	375	52	59	17	137	8.2	16
25	140	159	152	222	117	280	50	48	16	87	8.8	16
26	92	130	b 110	b 6,430	1,350	222	49	65	16	61	15	16
27	57	110	b 90	4,520	811	182	48	265	14	48	45	16
28	42	87	b 70	640	375	159	47	335	13	38	22	16
29	38	76	b 66	375	---	137	47	152	13	33	14	15
30	36	65	b 64	280	---	130	* 50	98	12	29	12	15
31	66	---	b 62	205	---	117	---	76	---	25	11	---
Total	953	3,594	2,862	18,329	5,399	12,108	2,449	4,710	1,373	7,539	463.6	993.9
Mean	30.7	120	92.3	591	193	391	81.6	152	45.8	243	15.0	33.1
Cfsm	0.233	0.909	0.699	4.48	1.46	2.96	0.618	1.15	0.347	1.84	0.114	0.251
In.	0.27	1.01	0.81	5.16	1.52	3.41	0.69	1.33	0.39	2.12	0.13	0.28

Calendar year 1961: Max 2,830 Min 7.5 Mean 130 Cfsm 0.985 In. 13.38
Water year 1961-62: Max 6,430 Min 8.2 Mean 166 Cfsm 1.26 In. 17.12

Peak discharge (base, 1,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	2100	15.42	15,100				
2-26	1800	8.90	2,130				
3-21	1600	12.66	6,200				
7-14	2100	11.61	3,940				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

3-3409. Raccoon Creek at Ferndale, Ind.

Location.--Lat 39°41'44", long 87°05'01", in SW¼ sec. 33, T. 15 N., R. 6 W., on right bank, 1.2 miles southwest of Ferndale, 1.7 miles northeast of Mansfield, 2.0 miles upstream from Rocky Fork Creek and 2.4 miles downstream from Mansfield Reservoir dam.

Drainage area.--215 sq mi.

Records available.--October 1956 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 582.36 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark).

Average discharge.--6 years, 254 cfs (adjusted for change in contents).

Extremes.--Maximum discharge during year, 2,120 cfs July 14 (gage height, 8.60 ft); minimum, 30 cfs May 10 (gage height, 1.49 ft). 1956-62: Maximum discharge, 40,500 cfs June 28, 1957 (gage height, 19.87 ft) extended above 5,000 cfs on basis of records for station at Mansfield; minimum daily, 2.7 cfs Oct. 11, 1956.

Remarks.--Records fair. Flow regulated since October 1960 by Mansfield Reservoir (capacity, 132,840 acre-ft).

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 19-21, Mar. 31 to Apr. 13)

Oct. 1 to Dec. 29		Dec. 30 to Sept. 30	
1.7	56	1.5	31
2.0	97	1.7	56
3.0	254	2.0	107
4.2	485	4.0	572
		6.0	1,150
		8.0	1,880

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	422	254	82	117	107	107	1,000	135	* 48	51	970	47
2	422	* 254	* 91	117	* 105	* 107	1,000	51	48	51	970	47
3	* 422	363	91	* 117	105	107	* 1,000	39	48	* 51	125	48
4	308	402	97	117	105	107	1,060	36	50	48	51	48
5	210	382	111	149	105	105	1,090	33	51	48	48	47
6	186	344	118	195	103	105	1,060	33	52	48	48	46
7	186	326	125	184	845	105	1,060	32	50	47	47	46
8	186	254	118	127	1,640	107	1,060	33	50	47	46	47
9	194	272	104	127	1,720	117	1,060	32	51	46	46	48
10	210	272	104	127	1,640	117	1,030	47	51	46	46	48
11	210	254	104	364	1,520	127	1,030	50	50	46	47	48
12	210	254	111	598	1,480	138	970	44	51	47	47	48
13	290	254	125	598	1,480	117	437	48	50	51	47	48
14	308	236	125	572	1,480	101	149	48	48	338	47	301
15	186	236	125	464	1,440	99	149	50	48	197	47	69
16	178	344	125	138	1,400	99	138	50	50	105	47	90
17	202	382	132	138	1,030	99	138	48	50	101	47	565
18	202	443	162	127	206	99	127	48	50	101	46	880
19	202	443	202	127	117	795	117	50	48	101	46	970
20	210	422	272	127	206	1,640	107	50	48	538	46	* 970
21	202	422	290	127	310	432	98	52	48	940	* 46	940
22	202	464	178	127	333	127	90	50	48	531	46	940
23	202	485	272	127	333	107	90	48	47	* 379	47	770
24	254	485	326	127	195	107	90	47	47	* 940	47	195
25	317	464	290	127	172	105	88	48	48	940	50	252
26	402	464	202	358	218	103	76	48	48	* 970	48	264
27	402	464	178	127	138	101	68	74	50	1,030	47	241
28	402	464	140	117	117	101	68	51	50	1,000	47	230
29	402	426	104	107	----------	101	78	48	50	1,000	47	230
30	308	226	68	107	----------	101	* 165	48	50	1,000	47	230
31	272	----------	98	107	----------	549	----------	47	----------	1,000	47	----------
Total	9,309	10,755	4,660	6,188	19,650	6,332	14,693	1,518	1,478	11,838	3,383	8,753
Mean	268	358	150	200	666	204	490	49.0	49.3	382	109	292
(ƒ)	-204	-181	+2	+583	-518	+458	-341	+238	+21.8	+94	-89	-163
Adjusted for change in contents in Mansfield Reservoir												
Mean	64	177	152	783	148	662	149	287	71.1	476	20	129
Cfsm	0.298	0.823	0.707	3.64	0.688	3.08	0.693	1.33	0.331	2.21	0.093	0.600
In.	0.34	0.92	0.82	4.20	0.72	3.55	0.77	1.53	0.37	2.55	0.11	0.67

	Observed						Adjusted					
Calendar year 1961:	Max	1,850	Min	11	Mean	197	Mean	219	Cfsm	1.02	In.	13.73
Water year 1961-62:	Max	1,720	Min	32	Mean	265	Mean	263	Cfsm	1.22	In.	16.55

* Discharge measurement made on this day.
ƒ Change in contents, equivalent in cubic feet per second, in Mansfield Reservoir, furnished by Corps of Engineers.

3-3412. Little Raccoon Creek near Catlin, Ind.

Location.--Lat 39°40'38", long 87°13'38", in NW¼ sec. 7, T. 14 N., R. 7 W., on left bank at downstream side of county road bridge, 300 ft downstream from unnamed tributary from left bank, 0.4 mile upstream from Sunderland Branch, 1.2 miles southeast of Catlin, 2.4 miles upstream from Weisner Creek, and 3.8 miles upstream from the mouth.

Drainage area.--133 sq mi.

Records available.--December 1956 to September 1962 (fragmentary prior to October 1957).

Gage.--Water-stage recorder. Datum of gage is 515.56 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Average discharge.--5 years (1957-62), 133 cfs.

Extremes.--Maximum discharge during year, 13,700 cfs Jan. 26 (gage height, 15.27 ft); minimum, 6.2 cfs Aug. 18 (gage height, 1.80 ft due to unusual regulation).

1956-62: Maximum discharge, 53,400 cfs June 28, 1957 (gage height, 18.27 ft) from rating curve extended above 6,000 cfs on basis of combination contracted-opening, culvert, and flow-over-road measurement of peak flow, at site 8½ miles upstream, adjusted to drainage area at gage; minimum, 4.8 cfs Sept. 25, 1959 (gage height, 1.56 ft).

Remarks.--Records fair.

(Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 23 to July 13; stage-discharge relation indefinite June 22)

Oct. 1 to Mar. 21

1.8	9.0	4.0	355
1.9	15	7.0	1,220
2.1	30	12.0	2,890
2.4	64	13.0	3,770
3.0	161	14.0	6,600

Mar. 22 to Sept. 30

1.9	8.0	3.0	132
2.1	19	3.5	235
2.3	34	4.0	349
2.6	68	7.0	1,220

Note.--Same as preceding table above 7.0 ft.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	37	* 47	b 58	* 204	* 213	161	388	68	27	37	15
2	* 18	* 31	44	* 55	170	186	* 151	292	60	21	32	14
3	15	53	42	56	161	170	142	213	55	* 26	32	15
4	13	127	44	64	161	161	132	142	52	28	29	20
5	13	82	67	142	178	144	151	114	50	21	28	15
6	12	55	64	594	136	127	161	100	94	19	33	14
7	12	43	56	449	119	119	151	90	56	18	28	14
8	12	38	47	232	111	119	132	283	45	18	28	14
9	11	34	44	b 120	111	195	171	192	96	17	28	14
10	11	30	50	b 110	98	242	142	151	272	15	27	14
11	10	28	51	b 110	92	271	132	630	148	15	26	14
12	10	28	89	b 100	93	942	123	268	177	15	25	13
13	15	28	b 80	b 100	98	376	132	192	85	18	25	12
14	15	28	b 70	111	106	272	123	142	64	3,860	24	2,090
15	13	29	b 58	b 600	90	232	111	111	54	2,130	23	280
16	12	202	56	b 900	89	195	104	96	47	504	22	132
17	11	161	89	b 400	84	178	100	85	44	268	22	91
18	10	97	90	b 250	90	161	96	79	* 41	192	21	68
19	11	73	111	b 200	178	161	92	72	41	151	21	54
20	12	60	178	b 170	136	189	86	68	* 38	123	20	43
21	12	54	119	b 170	127	* 3,240	82	65	34	213	18	* 42
22	11	56	103	b 200	170	* 878	82	111	35	265	* 18	38
23	12	170	178	b 250	144	496	84	79	35	497	18	34
24	18	144	161	b 200	119	373	76	63	42	* 192	18	32
25	233	100	119	b 180	127	303	72	56	37	114	21	32
26	82	82	b 90	4,860	1,580	257	71	218	* 30	86	142	30
27	47	70	b 80	4,290	588	224	68	665	28	68	33	28
28	38	60	b 74	470	334	202	68	335	27	56	22	25
29	36	54	b 66	334	----------	182	68	151	25	51	19	25
30	33	50	b 62	292	----------	182	* 114	100	23	46	18	23
31	41	----------	b 60	213	----------	161	--------	* 78	----------	42	17	----------
Total	819	2,104	2,489	16,280	5,694	11,151	3,378	5,629	1,903	9,116	875	3,255
Mean	26.4	70.1	80.3	525	203	360	113	182	63.4	294	28.2	108
Cfsm	0.198	0.527	0.604	3.95	1.53	2.71	0.850	1.37	0.477	2.21	0.212	0.812
In.	0.23	0.59	0.70	4.55	1.59	3.12	0.95	1.58	0.53	2.55	0.24	0.91

Calendar year 1961: Max 4,580 Min 9.0 Mean 129 Cfsm 0.970 In. 13.21
Water year 1961-62: Max 4,860 Min 10 Mean 172 Cfsm 1.29 In. 17.54

Peak discharge (base, 1,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	2300	15.27	13,700	7-14	2030	14.48	8,800
2-26	1430	10.28	2,210	9-14	0800	12.45	3,160
3-21	1430	14.05	6,600				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

3-3413. Raccoon Creek at Coxville, Ind.

Location.--Lat 39°39'09", long 87°17'37", in SW¼ sec. 15, T. 14 N., R. 8 W., on right bank at downstream side of covered bridge on county road at Coxville, 0.8 mile upstream from Rock Run, 1.5 miles downstream from Little Raccoon Creek, and 2.1 miles northwest of Rosedale.

Drainage area.--440 sq mi.

Records available.--October 1956 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 494.00 ft above mean sea level, datum of 1929 (Indiana Flood Control and Water Resources Commission bench mark).

Average discharge.--6 years, 518 cfs (adjusted for change in contents; 5 years, 507 cfs; figure published last year in error).

Extremes.--Maximum discharge during year, 16,200 cfs Jan. 27 (gage height, 15.09 ft); minimum, 82 cfs Sept. 7, 8, 11-13; minimum gage height, 2.20 ft July 10, 13.
1956-62: Maximum discharge, 108,000 cfs June 28, 1957 (gage height, 21.23 ft) from rating curve extended above 35,000 cfs on basis of an estimate made by a slope-area study; minimum daily, 6.5 cfs Oct. 10, 1956.

Remarks.--Records good. Flow regulated since October 1960 by Mansfield Reservoir, (capacity, 132,840 acre-ft).

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-24, Dec. 1-18, June 12 to July 13)

2.3	82	8.0	1,550
2.5	105	11.0	3,150
3.0	179	12.0	4,240
4.0	367	13.0	6,450
5.0	630	14.0	10,000
6.0	930		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	488	* 345	* 211	211	* 462	* 488	1,140	1,320	163	105	1,050	88
2	* 488	323	195	* 211	390	413	* 1,140	660	155	99	1,050	88
3	488	390	179	211	390	390	1,140	437	147	112	596	88
4	437	601	179	211	390	390	1,170	323	140	105	228	140
5	323	515	211	340	413	345	1,230	263	140	* 99	195	93
6	263	437	195	998	345	323	1,230	245	211	99	179	88
7	245	437	195	968	423	302	1,230	211	155	99	163	82
8	245	345	179	515	1,790	302	1,200	369	132	93	147	82
9	245	323	179	345	1,910	437	1,290	323	195	93	140	88
10	263	323	179	819	2,030	515	1,200	263	362	88	132	88
11	263	323	179	810	1,870	493	1,170	884	237	88	125	82
12	263	302	211	1,110	1,830	1,400	1,170	462	488	88	125	82
13	282	302	211	1,020	1,830	750	900	345	228	105	118	82
14	413	302	211	1,020	1,870	543	462	282	179	3,070	112	4,530
15	282	302	195	1,290	1,790	462	390	245	163	4,730	112	880
16	228	650	195	630	1,750	413	367	211	155	998	105	390
17	245	630	245	488	1,630	367	345	195	147	543	105	433
18	245	543	245	413	690	345	323	179	140	413	105	900
19	245	572	345	345	572	520	302	179	140	345	99	1,020
20	263	543	488	302	462	1,770	282	163	132	412	99	1,020
21	263	515	488	302	515	8,430	263	155	125	1,050	99	* 990
22	263	572	367	302	690	* 2,480	245	211	118	1,050	* 93	990
23	263	810	488	323	601	990	245	163	118	834	93	990
24	282	720	572	302	488	750	245	147	118	* 1,060	93	413
25	572	660	515	302	413	630	228	140	118	1,110	93	323
26	488	630	390	5,410	2,510	543	211	255	112	1,110	218	323
27	462	601	345	7,540	1,140	488	195	816	105	1,050	112	302
28	462	572	282	1,050	690	437	195	604	105	1,050	99	263
29	462	543	245	750	----------	413	195	282	99	1,050	93	263
30	437	488	228	660	----------	413	* 235	228	99	1,080	88	263
31	345	----------	211	488	----------	477	----------	* 179	----------	1,080	88	----------
Total	10,513	14,619	9,558	29,686	29,884	27,019	19,938	10,739	4,926	23,308	6,154	15,464
Mean	339	487	276	958	1,067	872	665	346	164	752	199	515
(ƒ)	-204	-181	+2	+583	-518	+458	-341	+238	+22	+94	-89	-163
Adjusted for change in contents in Mansfield Reservoir												
Mean	135	306	278	1,541	549	1,330	324	584	186	846	110	352
Cfsm	0.305	0.691	0.628	3.48	1.24	3.00	0.731	1.32	0.420	1.91	0.248	0.795
In.	0.35	0.77	0.72	4.01	1.29	3.46	0.82	1.52	0.47	2.20	0.29	0.89

	Observed			Adjusted		
Calendar year 1961:	Max 12,000	Min 38	Mean 430	Mean 452	Cfsm 1.02	In. 13.87
Water year 1961-62:	Max 8,430	Min 82	Mean 578	Mean 576	Cfsm 1.30	In. 16.79

* Discharge measurement made on this day.
ƒ Change in contents, equivalent in cubic feet per second, in Mansfield Reservoir; furnished by Corps of Engineers.

3-3415. Wabash River at Terre Haute, Ind.

Location.--Lat 39°28'00", long 87°25'08", in NW¼ sec. 21, T. 12 N., R. 9 W., on left bank at upstream side of Wabash Avenue Bridge at Terre Haute, 2.2 miles upstream from Sugar Creek, 4 miles downstream from Lost Creek, and at mile 214.4.

Drainage area.--12,200 sq mi, approximately.

Records available.--August 1902 to December 1903 (gage height only), February 1905 to July 1906, October 1927 to September 1962. Gage-height records collected at site 3,300 ft upstream June 1891 to June 1897, and since December 1904 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 442.90 ft above mean sea level, datum of 1929. Aug. 3, 1902, to Dec. 31, 1903, chain gage at powerhouse 3,400 ft upstream at datum 3.0 ft higher. Feb. 25, 1905, to July 20, 1906, chain gage at Vandalia Railway bridge 2,600 ft upstream at datum 2.2 ft higher. Oct. 1, 1927, to Oct. 27, 1928, staff gage at present site and datum.

Average discharge.--35 years (1927-62), 10,450 cfs.

Extremes.--Maximum discharge during year, 53,300 cfs Mar. 26 (gage height, 21.64 ft); minimum daily, 2,400 cfs Sept. 29, 30.
1927-62: Maximum discharge, 189,000 cfs May 20, 1943 (gage height, 30.50 ft); minimum, 690 cfs Aug. 10, 1934 (gage height, 2.40 ft).
Maximum stage known, 31.1 ft Mar. 27, 1913, present site and datum (discharge, 245,000 cfs, estimated).

Remarks.--Records good except those for periods of no gage-height record, doubtful gage-height record and records from once-daily wire-weight gage readings, which are fair. Water for municipal supply for Terre Haute diverted above gage.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)

4.4	2,310
6.0	5,220
16.0	25,800
19.0	37,000
21.6	53,300

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.800	* 4.840	* 7.000	3.180	* 40.700	* 35.000	20.200	* 10.400	7.000	4.840	g 7.200	g 2.820
2	* 5.220	4.460	6.400	* 3.540	43.100	36.000	* 19.000	12.800	7.400	* 4.080	g 6.600	g 2.640
3	4.840	4.460	5.800	4.080	41.900	37.000	17.400	12.800	7.000	g 5.220	g 6.000	a 2.800
4	4.650	4.650	5.600	4.840	39.000	36.500	16.000	11.200	6.600	g 14.600	g 5.220	a 3.400
5	4.270	5.030	5.410	5.410	36.500	30.500	15.000	10.800	6.200	g 18.000	a 5.000	g 2.820
6	4.080	5.600	5.220	8.600	a 30.000	20.800	14.800	11.400	6.600	g 15.000	a 6.000	g 2.820
7	3.900	5.410	5.600	18.000	a 33.000	15.800	14.600	10.400	9.200	g 11.600	a 6.800	g 3.180
8	3.720	4.840	5.600	23.000	g 30.100	13.200	14.600	9.800	10.600	9.200	a 6.600	3.180
9	3.540	4.650	5.800	25.500	g 27.600	12.800	14.600	12.000	10.200	g 7.200	a 5.800	3.000
10	3.360	4.270	5.410	24.900	a 23.000	15.400	14.200	13.200	12.600	g 6.000	a 5.000	g 3.000
11	3.360	4.080	5.220	16.400	a 20.000	20.800	13.600	18.200	16.000	g 5.220	a 4.500	*g 3.180
12	3.180	3.900	5.220	10.800	a 18.000	27.300	13.200	23.000	17.600	g 4.840	a 4.100	3.180
13	3.180	3.900	5.410	8.400	a 16.000	30.900	12.800	22.000	15.200	d 6.200	a 3.700	3.180
14	3.180	3.720	5.030	7.600	a 15.000	32.900	11.800	18.400	11.600	d 14.100	g 3.360	5.900
15	3.360	3.720	5.030	8.800	a 14.000	35.000	11.000	14.800	9.600	d 29.700	g 3.180	8.800
16	3.540	4.080	4.840	11.400	a 13.000	36.500	10.400	12.600	9.600	d 37.000	g 3.000	4.840
17	3.540	5.220	5.030	11.800	a 13.000	37.000	10.200	10.800	9.200	d 36.000	g 3.000	3.900
18	3.360	6.800	5.220	11.800	a 12.000	34.100	9.600	9.800	7.600	32.100	g 3.000	3.540
19	3.360	10.000	5.600	12.000	a 12.000	26.400	9.200	9.200	6.600	26.700	a 2.900	3.540
20	3.180	11.400	6.200	12.400	a 14.000	21.800	8.600	8.400	5.800	19.800	a 2.700	3.540
21	3.180	9.600	6.200	12.800	g 14.000	32.200	8.400	7.800	5.410	g 14.000	g 2.640	3.360
22	3.180	8.000	5.800	12.800	g 13.800	46.200	8.000	7.600	5.220	g 12.000	g 2.640	3.180
23	3.180	7.800	5.600	12.400	g 13.800	49.000	7.600	7.200	4.650	g 16.400	*g 2.470	3.180
24	3.180	9.600	6.400	11.800	g 14.000	49.700	7.600	6.600	4.460	g 22.400	g 2.470	3.180
25	3.360	12.200	6.800	10.800	a 15.000	52.500	7.200	6.200	d 4.460	g 24.900	a 3.000	* 2.820
26	3.720	13.000	6.600	14.600	a 19.000	53.300	7.000	5.800	d 4.460	d 24.300	a 3.700	2.640
27	3.540	12.000	6.000	27.000	a 27.000	49.000	6.600	6.800	d 4.840	*d 18.800	d 3.900	2.640
28	3.720	10.800	5.600	37.000	33.300	43.100	6.400	8.600	d 4.460	d 13.200	g 3.720	2.470
29	4.080	9.200	3.900	*37.500	---	36.500	6.400	8.600	d 4.080	d 10.800	g 3.360	a 2.400
30	4.840	7.800	3.000	37.500	---	28.800	6.400	8.000	3.900	d 9.600	g 3.000	a 2.400
31	5.030	---	2.820	38.500	---	22.600	---	* 7.400	---	g 8.200	g 2.820	---
Total	117.630	205.030	169.360	485.150	641.800	1,018.600	342.400	342.600	238.140	482.000	127.380	101.530
Mean	3,795	6,834	5,463	15,650	22,920	32,860	11,410	11,050	7,938	15,550	4,109	3,384
Cfsm	0.311	0.560	0.448	1.28	1.88	2.69	0.935	0.906	0.651	1.27	0.337	0.277
In.	0.36	0.62	0.52	1.48	1.96	3.10	1.04	1.04	0.73	1.46	0.39	0.31

Calendar year 1961 : Max 74,200 Min 1,390 Mean 10,930 Cfsm 0.896 In. 12.15
Water year 1961-62 : Max 53,300 Min 2,400 Mean 11,700 Cfsm 0.959 In. 13.01

* Discharge measurement made on this day.
a No gage-height record.
d Doubtful gage-height record.
g Gage heights from daily readings of wire-weight gage.

3-3420. Wabash River at Riverton, Ind.

Location.--Lat 39°01'13", long 87°34'07", in sec. 30, T. 7 N., R. 10 W., on left bank at downstream side of Illinois Central Railroad bridge at Riverton, 0.6 mile downstream from Turtle Creek, and at mile 162.0.

Drainage area.--13,100 sq mi, approximately.

Records available.--October 1938 to September 1962. Prior to April 1939 monthly discharge only, published in WSP 1305. June 1911 to December 1914 (gage heights only) available in the Corps of Engineers office, Louisville, Ky.

Gage.--Water-stage recorder. Datum of gage is 414.65 ft above mean sea level, datum of 1929. June 23, 1911 to Dec. 31, 1914, staff gage maintained by Illinois Central Railroad at same site and datum. Apr. 18, 1939 to July 17, 1951, wire-weight gage at same site and datum, read twice daily.

Average discharge.--24 years, 11,409 cfs.

Extremes.--Maximum discharge during year, 55,500 cfs Mar. 27, 28; maximum gage height, 20.01 ft Mar. 28; minimum, 2,740 cfs Sept. 30 (gage height, 2.16 ft).

1938-62: Maximum discharge, 201,000 cfs May 21, 1943 (gage height, 29.36 ft); minimum observed, 858 cfs Sept. 27 to Oct. 1, 1941 (gage height, 0.02 ft).

Flood of Mar. 28, 1913, reached a stage of 26.4 ft, from graph based on once-daily readings by Illinois Central Railroad Co. (discharge, 250,000 cfs, estimated).

Remarks.--Records good.

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 20		Jan. 21 to Sept. 30			
1.1	1,600	2.1	2,620	16.0	32,000
2.0	2,540	6.0	8,000	18.0	41,000
10.0	15,100	12.0	19,500	20.0	55,500
15.0	27,000				

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5,930	5,030	7,760	3,480	36,500	31,600	36,000	15,900	7,550	4,540	8,640	3,470
2	5,630	4,880	7,140	3,760	38,500	32,200	29,400	18,300	7,400	5,100	7,700	3,220
3	5,330	4,740	6,530	4,180	40,000	35,200	24,300	16,100	7,700	4,690	7,100	3,220
4	4,880	4,740	6,230	4,740	42,200	37,000	19,800	13,900	7,250	6,950	6,500	3,730
5	4,740	5,030	6,080	5,630	42,800	38,500	17,500	11,900	6,950	15,700	5,660	4,260
6	4,460	5,330	5,930	10,000	41,600	37,500	16,500	11,500	6,650	17,100	6,500	3,340
7	4,180	5,630	5,780	14,700	40,500	30,800	15,900	11,500	7,400	14,100	5,660	3,220
8	4,040	5,330	5,930	18,800	39,500	20,700	15,700	10,500	9,440	10,900	7,100	3,470
9	3,900	5,030	6,080	22,000	38,000	16,300	16,300	10,900	10,900	8,800	6,950	3,340
10	3,620	4,740	6,080	24,300	36,000	17,100	15,900	12,500	11,300	7,400	6,080	3,100
11	3,480	4,460	5,780	23,500	30,400	19,300	15,100	16,700	14,100	6,500	5,380	3,220
12	3,340	4,180	6,530	15,100	24,300	27,300	14,300	21,300	16,900	5,940	5,100	3,340
13	3,340	4,180	6,530	10,500	18,700	29,400	13,700	24,000	17,100	5,520	4,540	3,340
14	3,340	4,040	5,930	8,560	16,500	30,800	13,100	22,500	14,300	8,320	4,260	4,540
15	3,340	3,900	5,630	9,040	15,700	32,800	12,100	18,500	11,100	18,800	3,990	8,000
16	3,340	4,320	5,630	11,000	15,300	34,400	11,300	15,100	9,600	27,900	3,860	7,700
17	3,620	4,880	6,530	11,600	14,900	36,000	10,700	12,700	9,600	30,800	3,730	5,240
18	3,620	* 5,630	6,680	11,600	13,700	37,500	10,300	10,900	8,800	32,000	3,600	4,260
19	3,480	6,980	6,830	11,800	13,500	38,000	9,780	9,960	7,700	32,800	3,600	3,860
20	3,480	9,680	7,600	11,800	13,500	36,000	9,280	9,280	6,800	31,200	* 3,470	3,860
21	3,340	10,200	7,290	12,100	14,500	37,000	8,960	8,800	6,220	24,000	3,470	3,730
22	3,200	9,040	6,980	12,900	15,500	39,500	8,640	8,320	6,080	16,300	3,340	3,600
23	3,200	8,720	6,680	12,900	15,100	42,800	8,480	8,000	5,800	14,500	3,220	3,600
24	3,340	8,720	6,830	* 12,300	15,500	47,500	8,160	7,550	5,520	18,300	3,100	3,470
25	* 3,340	9,840	7,140	11,500	* 14,900	50,700	* 9,000	7,100	5,660	23,400	3,220	3,470
26	3,480	11,600	7,290	12,500	19,100	53,100	7,700	6,800	5,100	* 25,800	3,340	3,100
27	3,760	12,000	6,980	25,200	26,700	55,500	7,400	6,800	* 5,100	24,900	3,730	2,980
28	3,760	11,100	6,530	29,400	30,000	* 55,500	7,100	* 8,320	5,240	19,700	3,730	* 2,860
29	3,760	10,000	6,080	31,200	----------	53,100	7,100	8,960	4,960	13,500	3,860	2,860
30	4,190	8,880	* 4,600	33,600	---------	48,300	7,100	8,640	4,540	10,900	3,730	2,740
31	4,740	----------	3,760	35,200	---------	42,200	----------	8,160	----------	9,440	3,730	----------
Total	121,190	202,830	197,370	464,890	723,400	1,143,600	405,600	381,390	252,760	494,790	147,890	114,140
Mean	3,909	6,761	6,367	15,000	25,840	36,890	13,520	12,300	8,425	15,960	4,771	3,805
Cfsm	0.298	0.516	0.486	1.15	1.97	2.82	1.03	0.939	0.643	1.22	0.364	0.290
In.	0.34	0.58	0.56	1.33	2.05	3.25	1.15	1.08	0.72	1.41	0.42	0.32

Calendar year 1961 : Max 68,800 Min 1,600 Mean 11,330 Cfsm 0.865 In. 11.72
Water year 1961-62 : Max 55,500 Min 2,740 Mean 12,740 Cfsm 0.973 In. 13.21

* Discharge measurement made on this day.

Note.--Discharge computed from graph based on daily readings of wire-weight gage Jan. 10-14 and Jan. 31 to Feb. 11.

3-3425. Busseron Creek near Carlisle, Ind.

Location.--Lat 38°58'30", long 87°25'35", in W½ sec. 17, T. 6 N., R. 9 W., on right bank 10 ft downstream from bridge on State Highway 58, 1½ miles northwest of Carlisle, and 6 3/4 miles upstream from mouth.

Drainage area.--228 sq mi.

Records available.--October 1943 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 425.36 ft above mean sea level (Indiana State Highway Department bench mark). Prior to Nov. 8, 1950, wire-weight gage at same site and datum.

Average discharge.--19 years, 224 cfs.

Extremes.--Maximum discharge during year, 3,570 cfs May 3 (gage height, 15.86 ft); minimum, 3.0 cfs Oct. 10 (gage height, 2.42 ft). 1943-62: Maximum discharge, 8,800 cfs Jan. 5, 1950 (gage height, 20.05 ft); maximum gage height, 20.30 ft May 9, 1961; no flow many days in 1954.

Remarks.--Records fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge in cubic feet per second)

Oct. 1 to Nov. 17		Nov. 18 to Sept. 30	
2.4	2.8	2.5	6.0
2.5	4.5	2.8	16
2.6	6.2	3.0	25
2.7	8.5	3.5	57
2.8	11	5.0	193
3.0	20	7.0	470
3.3	39	11.0	1,330
4.0	113	13.0	1,950
6.0	388	15.0	2,930
		16.0	3,650

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	14	19	b 40	b 100	*1,150	242	2,450	25	15	14	236
2	6.8	11	18	b 38	b 97	255	470	3,060	29	15	13	43
3	8.2	24	17	b 37	95	193	229	3,340	24	45	9.9	24
4	6.2	89	18	b 45	104	171	171	2,240	21	39	8.1	20
5	5.5	53	143	150	182	161	151	600	20	168	11	19
6	5.1	18	100	701	b 110	131	151	171	66	104	602	16
7	5.7	11	52	790	b 60	131	131	141	79	35	223	15
8	4.1	9.8	34	229	b 60	131	122	131	29	26	48	9.9
9	3.5	8.9	21	b 90	b 70	934	660	122	21	16	26	9.0
10	3.5	9.8	51	b 63	171	1,180	281	138	92	11	18	8.7
11	4.3	10	87	b 50	113	506	171	1,570	71	9.9	13	7.8
12	4.5	9.8	205	44	108	950	151	1,360	281	37	12	6.9
13	4.9	9.8	193	41	113	810	131	292	92	27	9.3	6.9
14	4.5	13	b 57	46	151	307	113	141	38	347	9.6	702
15	4.1	20	b 40	766	141	205	95	104	26	377	9.9	700
16	4.1	256	74	1,150	131	161	83	79	21	1,240	18	85
17	3.7	260	506	770	131	131	79	64	18	603	24	41
18	6.0	57	348	320	113	122	75	54	16	100	11	25
19	5.1	31	438	205	242	122	68	45	33	57	8.4	21
20	7.2	* 23	514	161	171	212	60	39	29	38	* 7.5	16
21	6.4	19	171	122	182	1,810	57	35	19	31	8.4	13
22	4.8	21	122	1,220	524	1,950	57	33	16	28	11	11
23	4.5	223	161	1,030	377	1,920	79	29	14	275	10	10
24	8.4	161	193	390	1,330	1,050	* 75	24	104	75	6.9	10
25	* 12	64	122	255	810	294	64	22	357	* 87	8.7	15
26	14	42	* 91	b 450	1,360	* 205	57	24	46	62	33	* 12
27	6.2	33	108	b 930	1,570	171	50	45	24	29	14	10
28	5.5	26	b 90	895	1,750	151	47	*122	* 20	24	9.6	9.3
29	4.9	22	b 60	268	----------	131	47	44	17	20	9.0	9.0
30	8.1	18	b 50	b 190	----------	141	187	28	14	26	7.8	9.0
31	28	---------	b 45	b 120	----------	171	---------	27	---------	20	247	---------
Total	209.8	1,567.1	4,148	11,606	10,366	15,957	4,354	16,574	1,662	3,986.9	1,461.1	2,120.5
Mean	6.77	52.2	134	374	370	515	145	535	55.4	129	47.1	70.7
Cfsm	0.030	0.229	0.588	1.64	1.62	2.26	0.636	2.35	0.243	0.566	0.207	0.310
In.	0.04	0.26	0.68	1.89	1.69	2.61	0.71	2.71	0.27	0.65	0.24	0.35

Calendar year 1961 : Max 8,160 Min 1.9 Mean 202 Cfsm 0.886 In. 12.06
Water year 1961-62 : Max 3,340 Min 3.5 Mean 203 Cfsm 0.890 In. 12.10

Peak discharge (base, 2,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
5-3	0430	15.86	3,570				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

3-3430. Wabash River at Vincennes, Ind.

Location.--Lat 38°40'52", long 87°32'04", near center of span on downstream side of bridge on U. S. Highway 50 at Vincennes, Knox County, 4.8 miles downstream from Maria Creek, 5.8 miles upstream from Embarrass River, and at mile 127.8.
Drainage area.--13,700 sq mi, approximately.
Records available.--October 1929 to September 1962. Prior to December 1929 monthly discharge only, published in WSP 1305. Gage-height records collected at same site since November 1904 are contained in reports of U. S. Weather Bureau.
Gage.--Wire-weight gage read twice daily. Datum of gage is 394.43 ft above mean sea level, datum of 1929. Prior to Aug. 14, 1940, staff and chain gages, and Aug. 14, 1940, to Sept. 30, 1946, wire-weight gage, at same site at datum 2.00 ft higher. Since Oct. 1, 1955, auxiliary water-stage recorder 4.7 miles upstream from base gage.
Average discharge.--33 years, 11,541 cfs.
Extremes.--Maximum discharge during year, 53,000 cfs Mar. 29; maximum gage height, 20.43 ft Mar. 29; minimum, 2,590 cfs Sept. 30 (gage height, 2.91 ft).
1929-62: Maximum discharge, 189,000 cfs May 22, 23, 1943 (gage height, 29.33 ft, present datum); minimum observed, 770 cfs Aug. 4, 5, 1934 (gage height, 1.40 ft, present datum).
Flood of Mar. 29, 1913, reached a stage of 26.3 ft, present datum, from floodmarks, determined by Corps of Engineers (discharge, 255,000 cfs, estimated).
Remarks.--Records fair.

Rating table, water year 1961-62 (gage height, in feet, and discharge in cubic feet per second)
(Fall used as a factor Jan. 7-13, Jan. 27 to Apr. 14, May 2-6, 11-17, June 12-15, July 6-8, 16-30)

2.9	2,590
3.0	2,800
8.0	14,800
16.0	40,000
21.0	63,000

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,280	4,900	9,150	3,850	33,000	29,500	42,000	12,700	8,900	4,690	10,400	4,480
2	6,280	4,900	8,160	3,640	35,000	*29,800	35,100	20,400	8,900	4,900	9,400	3,640
3	5,820	4,900	7,200	4,060	36,000	31,000	28,400	19,600	8,400	5,130	8,650	3,220
4	5,360	4,900	6,740	4,690	38,000	31,900	23,100	17,700	8,400	4,900	7,920	3,220
5	5,130	4,900	6,510	5,590	38,300	33,600	20,300	14,900	7,920	11,200	7,200	4,480
6	4,800	5,130	6,510	7,680	39,000	34,600	18,600	14,000	7,440	17,600	6,740	4,060
7	4,500	5,590	6,280	14,900	39,000	33,500	17,500	13,500	7,440	15,900	8,400	3,220
8	4,200	5,820	6,050	18,400	37,000	26,700	17,000	13,000	8,650	13,200	7,200	3,220
9	4,000	5,360	6,280	20,700	35,600	20,300	17,300	11,900	11,200	11,200	8,400	3,640
10	3,800	5,130	6,510	23,000	34,100	19,500	17,700	13,000	11,900	8,900	7,440	3,220
11	3,640	4,690	6,510	25,000	31,800	19,600	16,500	16,000	13,500	7,680	6,510	3,010
12	3,640	4,480	6,740	23,000	27,600	23,800	15,900	21,000	16,000	6,970	5,820	3,220
13	3,430	4,270	8,160	16,000	22,200	27,100	15,000	23,100	17,000	6,280	5,360	3,430
14	3,220	4,060	7,440	13,000	18,900	28,100	15,000	23,000	15,000	6,740	4,900	4,060
15	3,220	4,060	6,510	11,200	17,500	29,000	14,500	20,700	13,000	13,200	4,480	7,440
16	3,220	4,480	6,050	13,000	16,800	30,200	13,500	17,300	11,900	24,500	4,270	9,650
17	3,220	5,130	7,200	14,500	16,400	31,600	12,700	14,500	10,900	27,800	4,060	7,440
18	3,640	5,590	8,400	14,500	15,400	32,600	12,200	13,800	10,600	29,800	3,850	5,130
19	3,640	6,280	8,650	14,000	14,800	34,300	11,700	11,900	9,650	29,600	3,640	4,270
20	3,430	8,400	9,150	13,200	15,000	35,000	10,900	11,200	8,400	29,400	3,640	4,060
21	3,430	* 10,600	9,400	13,500	15,300	36,000	10,400	10,400	7,440	26,600	3,430	4,060
22	3,220	10,400	8,900	18,100	16,700	36,000	10,200	9,650	6,740	19,800	3,430	3,850
23	* 3,220	9,400	7,920	18,300	16,900	39,000	9,900	9,150	6,740	16,100	3,220	3,640
24	3,220	9,650	8,160	15,800	17,900	41,400	9,400	8,900	6,280	17,500	* 3,220	3,640
25	3,220	9,900	8,400	* 14,300	17,200	44,800	9,150	8,160	* 6,510	*21,600	3,220	3,640
26	3,220	11,400	8,400	13,500	20,000	47,300	* 8,900	7,680	6,050	23,900	3,220	3,430
27	3,640	12,700	* 8,160	20,000	24,900	50,300	8,400	7,680	5,360	24,600	3,640	* 3,010
28	3,850	12,500	7,680	27,000	28,300	51,800	8,160	8,160	5,590	21,700	4,060	2,800
29	3,640	11,700	7,200	29,000	----------	* 52,900	7,920	* 9,900	5,590	16,500	3,850	2,800
30	3,850	10,200	6,050	30,000	----------	51,200	7,920	10,200	5,130	13,000	4,060	2,700
31	4,480	----------	4,480	31,000	----------	47,500	----------	9,650	----------	11,900	3,850	----------
Total	123,460	211,420	228,950	494,410	717,600	1,078,900	465,250	422,730	276,530	491,790	167,480	121,680
Mean	3,983	7,047	7,385	15,950	25,630	34,800	15,510	13,640	9,218	15,860	5,403	4,056
Cfsm	0.291	0.514	0.539	1.16	1.87	2.54	1.13	0.996	0.673	1.16	0.394	0.296
In.	0.34	0.57	0.62	1.34	1.95	2.93	1.26	1.15	0.75	1.34	0.45	0.33

Calendar year 1961: Max 64,300 Min 1,610 Mean 11,910 Cfsm 0.869 In. 11.82
Water year 1961-62: Max 52,900 Min 2,700 Mean 13,150 Cfsm 0.960 In. 13.03

* Discharge measurement made on this day.

3-3455. Embarrass River at Ste. Marie, Ill.

Location.--Lat 38°56'10", long 88°01'10", in NW¼NW¼ sec. 30, T. 6 N., R. 14 W., on left bank at downstream side of highway bridge at Ste. Marie.

Drainage area.--1,513 sq mi.

Records available.--October 1909 to December 1912. August 1914 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 446.75 ft above mean sea level, datum of 1929 (Corps of Engineers benchmark). Prior to June 29, 1940, chain gage at same site and datum.

Average discharge.--51 years, 1,219 cfs.

Extremes.--Maximum discharge during year, 21,000 cfs Mar. 23 (gage height, 20.83 ft); minimum, 42 cfs Sept. 14, 30.
1909-12, 1914-62: Maximum discharge, 44,800 cfs Jan. 4, 1950 (gage height, 24.95 ft), from rating curve extended above 29,000 cfs; maximum gage height, 25.54 ft June 30, 1957; minimum discharge, 1 cfs Oct. 5-9, 1914.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 3, Nov. 12-16, July 16 to Aug. 6, Sept. 4-30)

0.3	35	10.0	3,400
1.0	134	16.0	6,700
2.0	324	18.0	8,850
3.0	570	20.0	17,600
5.0	1,230	21.0	21,600

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	246	120	528	b 660	7,950	a 6,200	1,760	956	750	281	281	86
2	232	134	478	b 620	6,700	a 4,200	1,600	1,600	615	260	252	103
3	210	247	440	b 650	5,380	3,550	1,480	1,520	528	250	225	95
4	179	997	428	750	3,600	2,720	1,370	1,760	465	238	204	179
5	155	1,200	502	1,380	3,650	2,090	1,300	1,680	428	250	184	542
6	136	915	555	5,200	* 3,700	1,760	1,370	1,480	404	302	700	189
7	123	780	478	a 6,600	3,000	1,520	1,480	1,260	392	440	1,720	129
8	108	705	416	a 7,400	2,860	1,370	1,400	1,060	380	515	973	100
9	97	600	392	a 6,500	2,950	1,600	1,480	1,020	369	465	416	88
10	90	490	380	4,000	2,810	3,260	1,760	985	954	404	452	78
11	86	404	465	2,720	2,090	3,700	1,440	1,160	2,780	346	452	71
12	81	346	1,500	2,000	1,560	4,200	1,300	1,960	3,800	292	369	67
13	76	302	1,720	1,760	1,400	4,050	1,200	2,270	3,200	258	292	54
14	76	* 279	b 820	1,680	1,480	3,150	1,090	2,270	2,400	262	234	56
15	72	258	b 750	1,880	1,680	2,810	985	2,220	2,140	276	204	108
16	69	622	845	2,630	1,800	2,580	915	1,920	1,760	850	182	62
17	72	1,200	1,480	2,400	1,920	2,180	845	1,440	1,300	1,720	167	82
18	67	720	1,600	1,880	1,680	1,800	780	1,120	1,020	1,880	153	76
19	* 67	540	1,600	1,520	2,560	* 1,560	735	950	1,020	1,960	144	67
20	65	478	2,720	1,260	2,580	1,690	705	880	735	2,140	134	61
21	61	440	*2,090	1,120	2,000	5,950	660	880	645	2,270	129	56
22	58	482	1,480	1,160	3,140	10,700	645	845	570	1,880	136	52
23	60	1,180	2,360	*1,200	3,450	13,600	630	765	585	1,260	144	51
24	72	1,370	2,900	1,120	3,200	11,100	630	* 660	502	862	120	49
25	86	1,020	1,800	1,120	2,900	8,650	585	600	599	845	114	48
26	102	985	1,520	2,010	5,170	7,950	* 555	540	560	* 690	169	45
27	112	950	1,400	5,500	6,700	7,220	528	528	404	600	169	* 45
28	110	845	1,340	7,310	7,610	5,350	515	780	* 358	540	* 134	45
29	102	705	b 1,050	11,100	------	2,950	515	765	324	452	106	45
30	95	600	b 850	12,100	------	2,320	515	868	302	416	93	43
31	100	----	b 750	a 9,600	------	2,000	----	1,020	----	346	92	---
Total	3,265	19,914	35,637	106,830	95,520	138,780	30,773	37,762	30,289	23,550	9,144	2,772
Mean	105	664	1,150	3,446	3,411	4,477	1,026	1,218	1,010	760	295	92.4
Cfsm	0.069	0.439	0.760	2.28	2.25	2.96	0.678	0.805	0.668	0.502	0.195	0.061
In.	0.08	0.49	0.88	2.63	2.35	3.41	0.76	0.93	0.74	0.58	0.22	0.07

Calendar year 1961 : Max 33,000 Min 22 Mean 1,097 Cfsm 0.725 In. 9.83
Water year 1961-62 : Max 18,600 Min 43 Mean 1,464 Cfsm 0.968 In. 13.14

Peak discharge (base, 6,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-8	unknown	unknown	7,600				
1-29	2400	19.15	13,600				
2-28	1600	17.36	7,950				
3-23	0300	20.83	21,000				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3460. North Fork Embarrass River near Oblong, Ill.

Location.--Lat 39°00'35", long 87°56'45", in extreme northwest corner of sec. 35, T. 7 N., R. 14 W., on left bank at downstream side of pier of bridge on State Highway 33, three-quarters of a mile upstream from Illinois Central Railroad bridge, 2 miles west of Oblong, and 8½ miles upstream from mouth.

Drainage area.--319 sq mi.

Records available.--October 1940 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 458.19 ft above mean sea level, datum of 1929. Prior to Dec. 11, 1940, wire-weight gage at same site and datum.

Average discharge.--22 years, 254 cfs.

Extremes.--Maximum discharge during year, 10,200 cfs Mar. 22 (gage height, 17.96 ft); minimum, 2.6 cfs Aug. 5, 6.
1940-62: Maximum discharge, 27,100 cfs Jan. 4, 1950 (gage height, 22.38 ft), from rating curve extended above 16,000 cfs; no flow for many days in 1953-54.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 12 to July 16, Aug. 7 to Sept. 30)

Oct. 1 to Dec. 12

0.3	2.0	1.5	67
.4	4.0	2.0	115
.7	15	5.0	483
1.0	31	8.0	964

Dec. 13 to Sept. 30

0.3	2.0	1.6	62	14.0	2,600
.4	4.0	2.0	100	15.0	3,480
.5	6.5	4.0	330	16.0	4,840
.7	12	7.0	750	17.0	7,000
1.0	24	11.0	1,530	18.0	10,200
1.3	39	13.0	2,120		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	9.0	48	b 55	402	922	138	642	34	18	9.5	17
2	18	7.8	43	b 52	258	306	166	1,660	28	16	5.8	16
3	14	21	40	56	182	234	199	745	24	15	4.0	12
4	15	130	43	* 123	194	204	155	264	22	15	3.4	146
5	12	201	92	417	428	188	134	160	20	17	3.0	362
6	9.0	93	152	1,860	* 470	166	166	116	21	21	492	74
7	7.4	55	101	3,370	228	144	210	91	18	17	780	34
8	6.2	38	65	a 2,300	160	142	166	81	15	15	121	23
9	5.1	29	53	a 700	150	374	222	140	22	13	38	18
10	4.6	24	52	a 350	194	1,300	270	104	337	12	24	15
11	4.4	22	108	a 200	182	1,340	172	409	655	12	18	14
12	4.4	20	890	a 140	142	1,690	138	774	551	14	15	12
13	4.4	18	a1,350	a 100	150	1,590	118	258	182	12	13	11
14	4.2	* 17	a 700	a 80	216	540	104	144	112	16	11	11
15	4.4	15	172	a 200	294	318	91	96	80	24	10	126
16	3.8	73	134	686	318	234	82	72	62	87	9.2	94
17	5.1	387	586	a 450	402	194	75	59	51	228	8.6	32
18	5.4	201	750	a 200	300	160	70	49	44	52	8.0	22
19	* 6.2	105	750	a 160	767	150	67	69	38	26	7.7	15
20	5.8	68	1,190	a 140	901	* 279	64	107	33	18	7.4	12
21	4.6	53	640	b 125	371	2,770	60	48	30	13	8.9	9.5
22	4.4	60	288	a 180	960	8,120	56	37	28	10	13	8.6
23	4.8	547	520	b 250	822	3,440	66	32	26	9.2	18	7.4
24	9.8	744	756	b 220	822	934	80	* 27	25	43	12	6.8
25	26	252	297	b 190	822	402	66	25	39	28	52	7.1
26	40	140	172	693	1,900	294	* 56	24	42	* 15	212	6.2
27	25	102	142	2,260	3,260	234	48	25	30	10	90	6.0
28	16	80	130	5,240	2,690	194	48	307	* 24	7.1	38	* 6.0
29	11	64	b 100	3,400	---------	172	48	180	21	5.2	* 23	5.2
30	9.8	54	b 80	1,460	---------	150	54	66	20	5.6	16	4.8
31	9.0	---------	b 62	a 690	---------	141	---------	42	---------	16	16	---------
Total	319.8	3,629.8	10,506	26,347	17,985	27,326	3,389	6,853	2,634	810.1	2,087.5	1,133.6
Mean	10.3	121	339	850	642	881	113	221	87.8	26.1	67.3	37.8
Cfsm	0.032	0.379	1.06	2.66	2.01	2.76	0.354	0.693	0.275	0.082	0.211	0.118
In.	0.04	0.42	1.22	3.07	2.10	3.19	0.40	0.80	0.31	0.09	0.24	0.13

Calendar year 1961: Max 17,100 Min 2.0 Mean 280 Cfsm 0.878 In. 11.90
Water year 1961-62: Max 8,120 Min 3.0 Mean 282 Cfsm 0.884 In. 12.01

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-28	1600	16.76	6,500				
3-22	1000	17.96	10,200				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3470. White River at Muncie, Ind.

Location.--Lat 40°12', long 85°23', in sec. 10, T. 20 N., R. 10 E., on right bank 200 ft downstream from Walnut Street Bridge in Muncie and 6 miles upstream from Bell Creek.
Drainage area.--242 sq mi.
Records available.--November 1930 to September 1962. Prior to October 1948, published as West Fork White River at Muncie. Daily gage heights from October 1924 to December 1929 are available in the District office.
Gage.--Water-stage recorder. Datum of gage is 920.10 ft above mean sea level (City of Muncie bench mark). Prior to Jan. 4, 1934, chain gage at highway bridge 200 ft upstream at datum 5.00 ft higher. Jan. 4, 1934, to Sept. 13, 1940, water-stage recorder and Sept. 14, 1940, to Feb. 14, 1941, staff gage, at present site at datum 4.00 ft higher. Feb. 15, 1941, to Jan. 27, 1942, wire-weight gage at bridge 200 ft upstream at present datum.
Average discharge.--31 years (1931-62), 220 cfs (adjusted for diversion after September 1937).
Extremes.--Maximum discharge during year, 5,780 cfs Jan. 27 (gage height, 8.29 ft); maximum gage height, 9.04 ft Jan. 16 (backwater from ice); minimum discharge, 7.4 cfs June 30; minimum gage height, -0.03 ft Aug. 23-25.
1930-62: Maximum discharge, 11,500 cfs Jan. 15, 1937 (gage height, 18.07 ft, present datum); minimum, 0.6 cfs Sept. 16, 1937; minimum daily, 1.1 cfs Sept. 16, 17, 23-25, 1954 and Oct. 10, 1956.
Maximum stage known, about 19.6 ft in March 1913, present datum (discharge, about 20,000 cfs).
Remarks.--Records good except those for periods of ice effect, which are fair. City of Muncie diverts part of its water supply 2.5 miles above gage and returns it to river at sewer outlet a short distance below gage. Records of diversion available since October 1937.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 21-25, Sept. 18-22)

Oct. 1 to Nov. 17		Nov. 18 to Sept. 30			
0.2	15	0.0	7.0	1.4	242
1.0	122	.1	11	2.0	490
1.4	240	.2	18	3.0	1,090
2.0	490	.5	47	6.0	3,520
		.9	107	8.0	5,480

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	35	54	60	180	443	150	266	62	40	51	28
2	136	25	54	59	160	270	140	490	49	38	44	33
3	93	29	52	59	140	200	113	399	45	483	40	30
4	67	30	51	69	209	155	103	242	36	379	38	25
5	53	40	91	159	296	135	100	152	49	172	36	20
6	43	36	168	773	180	120	100	120	103	106	* 37	20
7	39	30	130	1,160	145	107	98	98	78	83	53	20
8	36	27	91	645	120	91	98	123	49	55	48	20
9	30	25	78	120	102	437	89	191	43	113	38	24
10	25	24	75	85	95	1,090	79	145	47	74	29	22
11	22	25	79	72	89	1,020	70	142	54	52	30	18
12	21	28	84	66	82	1,530	67	133	168	113	30	17
13	25	24	73	62	76	950	67	111	226	119	24	15
14	24	24	65	62	81	490	70	86	119	121	20	17
15	26	24	60	700	83	315	67	72	70	1,470	20	18
16	24	100	58	1,400	72	242	59	62	55	1,530	19	21
17	19	244	83	1,000	72	188	52	55	47	820	18	18
18	18	140	126	600	70	168	52	51	45	378	22	13
19	20	100	* 122	350	* 70	194	51	51	32	209	23	13
20	20	* 79	216	215	62	277	47	49	29	140	18	12
21	25	65	197	155	63	* 1,120	48	44	24	410	* 12	12
22	26	60	138	500	110	1,680	51	46	20	1,160	12	16
23	23	87	124	750	190	880	48	* 52	20	554	11	18
24	19	194	122	450	112	515	45	44	30	226	10	17
25	* 20	155	111	* 260	130	378	*39	36	32	142	27	15
26	19	118	90	2,010	1,580	296	37	49	20	184	57	* 14
27	19	96	83	* 4,560	2,720	226	36	100	15	195	48	14
28	19	76	75	1,390	1,060	209	37	99	* 12	113	31	14
29	21	65	70	565	----------	206	39	65	9.0	86	26	14
30	19	59	66	378	----------	145	40	108	9.6	69	19	15
31	26	----------	63	240	----------	142	----------	113	----------	58	23	----------
Total	1,045	2,064	2,949	18,974	8,349	14,219	2,092	3,784	1,597.6	9,682	914	553
Mean	33.7	68.8	95.1	612	298	459	69.7	122	53.3	312	29.5	18.4
(ƒ)	+17.6	+16.8	+16.7	+17	+16	+16	+17.3	+17	+18.4	+18	+18.9	+17.8
Adjusted for diversion												
Mean	51.3	85.6	112	629	314	475	87.0	139	71.7	330	48.4	36.2
Cfsm	0.212	0.354	0.463	2.60	1.30	1.96	0.360	0.574	0.296	1.36	0.200	0.150
In.	0.24	0.40	0.53	3.00	1.35	2.26	0.40	0.66	0.33	1.57	0.23	0.17

	Observed						Adjusted					
Calendar year 1961:	Max	3,980	Min	4.6	Mean	221	Mean	238	Cfsm	0.983	In.	12.90
Water year 1961-62:	Max	4,560	Min	9.0	Mean	181	Mean	198	Cfsm	0.818	In.	11.14

Peak discharge (base, 2,500 cfs).--Jan. 27 (0800) 5,780 cfs (8.29 ft); Feb. 27 (0500) 3,520 cfs (5.96 ft).

* Discharge measurement made on this day.
ƒ Diversion, in cubic feet per second, for City of Muncie water supply; records furnished by Muncie Water Works Co.
Note.--Stage-discharge relation affected by ice Dec. 13-16, Dec. 26 to Jan. 3, Jan. 9-24, Jan. 31 to Feb. 3, Feb. 6-12, 22, 23, Mar. 2-6.

3-3475. Buck Creek near Muncie, Ind.

Location.--Lat 40°08'05", long 85°22'25", in SE¼ sec. 34, T. 20 N., R. 10 E., on left bank at downstream side of county highway bridge, 1 mile upstream from Muncie Water Works Co. pumping station and 4.2 miles southeast of courthouse in Muncie.

Drainage area.--36.7 sq mi.

Records available.--October 1954 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 944.67 ft above mean sea level, datum of 1929. Prior to May 5, 1955, wire-weight gage at same site and datum.

Average discharge.--8 years, 37.5 cfs.

Extremes.--Maximum discharge during year, 1,600 cfs Jan. 26 (gage height, 12.38 ft from floodmarks); minimum, 11 cfs Oct. 9, Aug. 22, Sept. 29, 30; minimum gage height, 2.40 ft June 9, Aug. 22.
1954-62: Maximum discharge, 1,710 cfs Jan. 21, 1959 (gage height, 12.64 ft); minimum daily, 5.8 cfs Sept. 12, Oct. 11, 1956; minimum gage height, 2.23 ft Aug. 2, 1961.
Maximum stage known about 15 ft, from information by local residents. Date unknown.

Remarks.--Records good except those for periods of ice effect and no gage-height record, which are fair. City of Muncie diverts part of its water supply 1 mile below the gage.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 16-23, June 25 to July 2, July 5-7, 10, 11, 13)

2.4	8.3	7.0	367
2.7	21	9.0	604
3.0	38	10.0	774
4.0	114		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	15	16	14	37	54	32	53	17	15	16	15
2	17	14	16	14	33	44	31	55	17	16	16	14
3	15	16	16	15	36	35	29	35	17	36	16	13
4	14	18	16	18	41	30	28	27	17	19	15	15
5	13	16	22	26	44	27	28	23	52	16	15	13
6	12	16	20	67	33	25	27	23	31	17	* 18	13
7	12	15	18	70	28	24	27	21	23	15	16	13
8	12	15	17	40	26	24	26	29	21	17	14	12
9	11	15	17	29	25	194	26	26	19	19	14	13
10	12	14	18	25	24	162	24	26	19	15	13	13
11	12	14	18	22	23	114	24	24	20	16	13	13
12	12	13	19	20	23	186	24	22	24	20	13	12
13	13	13	16	19	22	86	24	20	19	16	13	12
14	14	14	15	18	22	58	24	19	18	43	13	12
15	13	14	15	251	23	47	23	19	17	285	13	12
16	13	39	16	90	23	42	22	18	17	106	13	12
17	13	31	23	49	22	36	22	17	16	58	12	12
18	13	23	21	36	22	35	21	17	16	39	12	12
19	14	20	* 24	30	* 22	40	21	17	16	30	12	12
20	15	* 19	29	27	20	44	20	17	16	26	12	12
21	15	17	24	26	22	* 190	20	17	16	24	* 12	12
22	14	17	22	147	32	122	20	18	16	22	12	12
23	14	28	23	50	23	98	20	* 17	16	21	12	12
24	15	30	26	33	23	a 76	20	17	17	20	12	12
25	16	24	23	* 30	24	a 59	* 19	17	15	20	21	12
26	* 15	21	21	a 700	250	a 47	18	20	15	19	28	* 12
27	14	20	18	a 290	120	a 40	18	20	15	18	16	12
28	14	18	17	114	83	a 36	17	19	* 15	17	15	12
29	14	18	16	78	----------	34	17	17	14	17	14	11
30	16	17	15	58	----------	32	17	19	15	16	13	11
31	16	---------	15	42	----------	33	---------	18	----------	16	17	----------
Total	430	564	592	2,448	1,126	2,074	689	707	566	1,034	451	373
Mean	13.9	18.8	19.1	79.0	40.2	66.9	23.0	22.8	18.9	33.4	14.5	12.4
Cfsm	0.379	0.512	0.520	2.15	1.10	1.82	0.627	0.621	0.515	0.910	0.395	0.338
In.	0.44	0.57	0.60	2.48	1.14	2.10	0.70	0.72	0.57	1.05	0.46	0.38

Calendar year 1961: Max 533 Min 10 Mean 36.2 Cfsm 0.986 In. 13.39
Water year 1961-62: Max 700 Min 11 Mean 30.3 Cfsm 0.826 In. 11.21

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	Unknown	12.38	1,600				
7-15	0630	8.38	521				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 13-15, Dec. 26 to Jan. 3, Jan. 9-14, 16, 17, 23, Jan. 31 to Feb. 2, Feb. 6-14, 22-24, Feb. 26 to Mar. 1, Mar. 5, 6.

3-3480. White River at Anderson, Ind.

Location.--Lat 40°06', long 85°41', in sec. 18, T. 19 N., R. 8 E., on left bank at municipal water-supply plant in Anderson, 1 mile upstream from Killbuck Creek.

Drainage area.--401 sq mi.

Records available.--July 1925 to September 1926, October 1931 to September 1962. Monthly discharge only for some periods, published in WSP 1305. Gage-height records collected at site 700 ft downstream December 1910 to February 1918 and at present site since February 1918 are contained in reports of U. S. Weather Bureau. Prior to October 1948, published as West Fork White River at Anderson.

Gage.--Staff gage above concrete overflow dam. Gage read twice daily. Datum of gage is 825.02 ft above mean sea level, datum of 1929. Prior to May 12, 1934, chain gage at site 250 ft upstream at same datum.

Average discharge.--32 years, 378 cfs.

Extremes.--Maximum discharge during year, 7,110 cfs Jan. 27 (gage height, 13.21 ft, from graph based on gage readings); minimum, 69 cfs June 29, 30 (gage height, 7.38 ft); minimum gage height, 7.32 ft Aug. 24, Sept. 30.
1925-26, 1931-62: Maximum discharge observed, 17,100 cfs Jan. 15, 1937; maximum gage height, 19.96 ft June 14, 1958; minimum discharge observed, 8.8 cfs Sept. 24, 1940 (gage height, 6.92 ft).
Maximum stage known, 23.6 ft Mar. 25, 1913, present site and datum, based on determination by U. S. Weather Bureau at site then in use (discharge, 28,000 cfs, estimated).

Remarks.--Records fair. The City of Anderson diverts water for its municipal supply above the gage.

Cooperation.--Gage readings furnished by City of Anderson.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	94	127	112	370	1,020	324	372	178	104	152	123
2	152	104	119	108	315	605	306	829	160	134	142	111
3	178	108	111	107	285	488	276	737	142	474	* 142	111
4	142	160	97	117	354	390	234	526	134	647	142	119
5	115	108	189	178	481	350	240	366	229	360	134	108
6	100	108	229	474	370	305	252	288	252	246	138	104
7	97	108	229	1,390	306	270	240	270	200	206	152	100
8	88	108	183	509	275	246	165	318	178	178	142	108
9	81	104	152	206	250	582	252	360	174	200	138	108
10	91	97	160	145	228	1,890	229	330	142	234	123	108
11	84	94	142	128	217	1,660	194	300	138	160	119	108
12	81	97	147	120	206	2,010	189	288	270	288	111	94
13	91	94	130	116	194	1,660	206	258	384	282	111	97
14	104	115	118	114	189	973	199	229	276	330	108	130
15	84	115	107	855	194	647	178	200	194	1,700	104	97
16	78	206	104	2,370	189	488	165	178	156	2,500	108	104
17	81	330	156	2,010	170	414	160	174	147	1,440	97	108
18	78	294	178	1,170	165	366	160	170	142	783	94	100
19	84	194	217	829	160	384	156	170	134	468	91	94
20	97	160	217	450	160	488	152	165	130	330	* 84	94
21	91	134	324	305	156	1,340	156	152	123	282	91	94
22	84	123	* 252	526	229	2,500	156	174	104	1,020	88	88
23	84	178	206	1,170	* 400	* 1,550	160	* 147	97	924	81	94
24	84	* 276	204	737	288	973	147	147	134	408	75	78
25	97	246	190	* 488	264	692	* 142	134	97	282	81	88
26	* 94	160	170	2,130	1,560	605	130	142	97	270	354	* 94
27	91	165	154	*6,450	3,670	468	130	194	88	306	229	84
28	88	170	144	3,650	2,130	402	130	200	88	246	152	88
29	84	147	132	973	----------	427	127	183	* 69	206	123	84
30	97	134	122	647	----------	336	130	183	69	178	111	75
31	108	----------	117	470	----------	330	---------	246	----------	165	127	---------
Total	3,042	4,531	5,127	29,054	13,775	24,859	5,675	8,430	4,726	15,351	3,944	2,993
Mean	98.1	151	165	937	4.92	802	189	272	158	495	127	99.8
Cfsm	0.245	0.377	0.411	2.34	1.23	2.00	0.471	0.678	0.394	1.23	0.317	0.249
In.	0.28	0.42	0.47	2.70	1.28	2.31	0.53	0.78	0.44	1.42	0.37	0.28

Calendar year 1961: Max 5,010 Min 37 Mean 396 Cfsm 0.988 In. 13.39
Water year 1961-62: Max 6,450 Min 69 Mean 333 Cfsm 0.830 In. 11.28

Peak discharge (base, 2,700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	1630	13.21	7,110				
2-27	0900	11.19	3,950				
3-22	1000	10.31	2,760				
7-16	0100	10.36	2,890				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 13-16, Dec. 24 to Jan. 4, Jan. 10-14, 20, 21, Jan. 31 to Feb. 3, Feb. 6, 8-10, 23, Mar. 5, 6.

3-3485. White River near Noblesville, Ind.

Location.--Lat 40°07', long 85°58', in sec. 4, T. 19 N., R. 5 E., near center of span on downstream side of highway bridge, 1 mile west of Strawtown, 7 miles northeast of Noblesville, 9.5 miles upstream from Cicero Creek, and at mile 277.4.

Drainage area.--814 sq mi.

Records available.--May 1915 to September 1926, October 1928 to September 1962. Monthly discharge only for some periods, published in WSP 1305. Published as "West Branch of White River" prior to October 1922 and as "West Fork of White River" October 1922 to September 1948. Records of daily discharge for the water year 1928, published in WSP 663, have been found to be unreliable and should not be used. (The maximum for this year is believed to be reasonably accurate.)

Gage.--Water-stage recorder. Datum of gage is 763.08 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to July 1, 1922, chain gage at bridge 2 miles downstream at different datum. July 1, 1922, to Nov. 21, 1933, chain gage at present site and datum.

Average discharge.--45 years, 810 cfs.

Extremes.--Maximum discharge during year, 16,900 cfs Jan. 27 (gage height, 15.02 ft); minimum, 119 cfs Sept. 30, (gage height, 4.16 ft). 1915-26, 1928-62: Maximum discharge, 27,200 cfs Mar. 21, 1927 (gage height, 16.3 ft, from graph based on gage readings); maximum gage height, 16.35 ft June 14, 1958; minimum, 36 cfs Sept. 25, 1941.

Remarks.--Records good except those for periods of ice effect, which are fair. Discharge measurements generally made twice a month.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 6, 7, Jan. 26-31, Feb. 23, 24, Feb. 26 to Apr. 4)

4.1	105	12.0	6,390
4.5	209	13.0	8,140
5.0	395	14.0	10,800
7.0	1,600	15.0	14,700
10.0	4,060	16.0	21,800

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	241	153	258	a 225	1,000	2,420	705	404	440	175	294	194
2	241	161	241	a 218	780	1,470	650	822	332	183	275	190
3	275	166	225	a 214	665	1,140	622	950	275	928	258	175
4	258	209	225	a 240	740	885	568	732	258	1,280	241	186
5	225	189	258	312	1,000	732	540	568	703	791	225	183
6	200	169	258	861	750	650	540	465	791	650	258	164
7	189	175	332	2,580	650	595	515	418	595	732	294	158
8	175	166	294	1,600	580	595	515	465	418	465	258	153
9	166	164	258	940	515	1,540	568	678	950	465	241	153
10	166	161	258	a 620	490	3,230	540	622	760	418	209	153
11	161	161	258	a 490	465	2,820	490	568	418	332	200	151
12	156	156	258	a 430	440	3,680	440	515	595	374	186	148
13	156	158	258	400	440	3,590	440	465	732	465	180	143
14	175	175	230	370	418	2,020	418	418	595	595	175	277
15	158	177	214	1,100	418	1,400	395	374	440	1,820	169	177
16	148	490	210	2,500	395	1,080	352	332	352	3,680	166	148
17	151	950	258	3,700	374	885	352	312	294	2,660	161	139
18	148	705	275	2,400	374	760	332	294	297	1,540	158	134
19	151	465	332	2,000	374	822	332	275	352	950	148	134
20	169	374	352	1,080	374	1,020	312	275	258	678	146	129
21	161	312	440	620	374	2,860	312	258	241	732	146	127
22	153	275	418	1,100	465	6,000	294	294	225	1,950	146	124
23	148	374	395	1,500	822	4,360	294	258	206	2,260	143	124
24	151	540	418	1,600	595	2,580	294	241	294	1,340	139	122
25	166	568	395	1,200	490	1,810	275	241	275	822	146	134
26	164	465	352	6,990	3,050	1,470	275	241	225	705	356	139
27	148	374	310	15,200	7,510	1,210	275	332	206	622	374	129
28	143	332	285	13,100	5,850	1,020	275	465	186	540	275	127
29	139	275	260	4,490	----------	950	258	395	177	418	209	124
30	146	275	245	2,260	----------	822	258	465	172	374	186	122
31	158	---------	235	1,600	----------	732	---------	568	---------	332	200	----------
Total	5,386	9,314	9,005	71,940	30,398	55,148	12,436	13,710	12,062	29,276	6,562	4,551
Mean	174	310	290	2,321	1,086	1,779	415	442	402	944	212	152
Cfsm	0.214	0.381	0.356	2.85	1.33	2.19	0.510	0.543	0.494	1.16	0.260	0.187
In.	0.25	0.43	0.41	3.29	1.38	2.52	0.57	0.63	0.55	1.34	0.30	0.21

Calendar year 1961 : Max 8,140 Min 100 Mean 737 Cfsm 0.905 In. 12.29
Water year 1961-62 : Max 15,200 Min 122 Mean 712 Cfsm 0.875 In. 11.88

Peak discharge (base, 5,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	2030	15.02	16,900				
2-27	1830	12.62	8,140				
3-22	1600	11.58	6,390				

a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 14-16, 27-31, Jan. 8, 9, 13-25, Feb. 1-10.

GPO 802-181-6

3-3490. White River at Noblesville, Ind.

Location.--Lat 40°02'50", long 86°01'00", in SE¼ sec. 36, T. 19 N., R. 4 E., on right bank at downstream side of Logan Street bridge in Noblesville, 1½ miles upstream from Cicero Creek, 3½ miles downstream from dam at Clare, and at mile 269.0.
Drainage area.--837 sq mi.
Records available.--October 1946 to September 1962. Gage-height records collected at present site from December 1913 to December 1935, and at a site 400 ft downstream thereafter, are contained in reports of U. S. Weather Bureau. Prior to October 1948, published as West Fork White River at Noblesville.
Gage.--Water-stage recorder. Datum of gage is 738.16 ft above mean sea level, datum of 1929.
Average discharge.--16 years, 865 cfs.
Extremes.--Maximum discharge during year, 14,700 cfs Jan. 28 (gage height, 17.44 ft); minimum daily, 106 cfs Sept. 30; minimum gage height, 4.28 ft Aug. 24.
1946-62: Maximum discharge, 24,000 cfs June 15, 1958 (gage height 20.55 ft); minimum, 4.8 cfs Sept. 9, 1947; minimum gage height, 3.99 ft Sept. 18, 1948; minimum daily discharges, 44 cfs Sept. 28, 1954.
Maximum stage known, 23.8 ft Mar. 25, 19[illegible]3, present site and datum, from U. S. Weather Bureau records.
Remarks.--Records good except those for periods of indefinite stage-discharge relation, ice effect or no gage-height record, which are fair. Flow regulated by powerplant above station. Discharge measurements generally made twice a month. Records of water temperatures for the water year 1962 are given in WSP 1942.

Rating table, water year 1961-62, except periods of ice effect or indefinite stage-discharge relation
(gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-4, Oct. 14 to Dec. 26, Dec. 29, 30, Jan. 5, Apr. 1-5, Aug. 1-25, Aug. 28 to Sept. 14)

4.5	94
4.8	198
5.5	530
9.0	3,140
12.0	6,060
16.0	11,600
17.0	13,700

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	238	171	269	242	1,100	2,820	800	405	505	125	316	234
2	247	171	234	238	840	1,640	765	835	355	136	287	206
3	269	206	238	232	740	1,190	700	1,040	282	766	269	194
4	330	242	247	260	850	975	640	870	256	1,340	256	210
5	e 250	234	256	320	1,050	835	612	612	612	835	242	210
6	e 225	179	260	870	810	732	612	505	800	612	273	197
7	e 210	175	330	2,500	700	670	585	455	640	765	330	156
8	e 185	164	330	1,550	640	612	585	490	455	490	282	150
9	e 180	153	292	990	550	1,490	612	670	800	455	269	153
10	e 175	146	273	a 610	510	3,220	612	670	905	405	234	142
11	e 170	136	273	a 495	480	2,900	558	612	455	330	214	142
12	e 165	132	269	455	455	3,710	505	558	558	320	190	139
13	e 160	136	282	420	455	3,800	505	530	765	455	175	132
14	164	153	269	400	455	2,340	480	455	640	530	168	315
15	160	168	242	1,190	430	1,560	455	430	480	1,560	153	214
16	146	405	251	2,980	430	1,190	405	355	355	3,710	146	e 170
17	146	1,120	273	a 3,500	405	975	405	330	287	2,900	146	e 145
18	156	975	292	a 2,350	380	835	380	292	251	1,640	142	e 143
19	171	585	355	a 1,700	405	870	355	273	430	1,040	125	e 140
20	156	405	405	a 1,080	405	1,040	355	264	251	700	122	e 137
21	156	355	455	a 660	380	2,650	330	226	206	670	128	e 132
22	132	301	480	a 1,190	455	5,820	330	287	194	1,860	139	e 130
23	128	380	430	a 1,600	800	4,900	325	256	175	2,500	136	e 122
24	132	530	455	a 1,700	640	2,900	325	234	242	1,560	128	e 120
25	164	612	455	a 1,280	505	2,100	316	226	264	975	167	e 120
26	164	505	405	5,600	2,710	1,640	306	226	175	765	322	132
27	150	430	340	13,200	7,170	1,340	296	316	153	670	430	116
28	136	355	300	13,200	6,300	1,120	296	455	139	585	330	113
29	125	311	264	5,930	----------	1,040	292	430	113	455	251	113
30	139	296	251	2,580	----------	975	292	455	106	380	218	110
31	175	----------	250	1,720	----------	835	----------	612	----------	355	218	----------
Total	5,504	10,131	9,725	71,042	31,050	58,724	14,034	14,364	11,849	29,879	6,806	4,727
Mean	178	338	314	2,292	1,109	1,894	468	463	395	964	220	158
Cfsm	0.213	0.404	0.375	2.74	1.32	2.26	0.559	0.553	0.472	1.15	0.263	0.189
In.	0.25	0.45	0.43	3.16	1.38	2.61	0.62	0.64	0.53	1.33	0.30	0.21

Calendar year 1961: Max 7,940 Min 103 Mean 785 Cfsm 0.938 In. 12.73
Water year 1961-62: Max 13,200 Min 106 Mean 734 Cfsm 0.877 In. 11.91

Peak discharge (base, 6,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-28	0230	17.44	14,700				
2-27	2300	13.39	7,820				
3-22	2030	12.29	6,420				

a No gage-height record.
e Stage-discharge relation indefinite.
Note.--Stage-discharge relation affected by ice Dec. 27, 28, Dec. 31 to Jan. 4, Jan. 8, 9, 12-14, Feb. 1-6, 8-10.

3-3495. Cicero Creek near Arcadia, Ind.

Location.--Lat 40°11', long 86°00', on line between secs. 18 and 19, T. 20 N., R. 5 E., on left bank, on downstream side of county bridge, 1½ miles east of Arcadia and 5 miles upstream from Little Cicero Creek.

Drainage area.--131 sq mi.

Records available.--October 1954 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 815.12 ft above mean sea level, datum of 1929. Prior to Dec. 7, 1955, wire-weight gage at same site and datum.

Average discharge.--8 years, 129 cfs.

Extremes.--Maximum discharge during year, 3,020 cfs Jan. 27 (gage height, 10.25 ft); minimum, 2.5 cfs Oct. 23; minimum gage height, 1.77 ft Aug. 20, 21.
1954-62: Maximum discharge, 6,720 cfs June 29, 1957 (gage height, 11.86 ft); minimum, 0.4 cfs Oct. 10, 1956.
Maximum stage known, 15.6 ft (probably the flood of January 1937) from information by local residents.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 16)

1.7	2.7	3.5	180
1.8	4.8	4.5	390
1.9	7.4	8.0	1,340
2.1	16	9.0	1,850
2.5	47	10.0	2,760
3.0	106		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.8	6.3	36	32	160	a 260	93	41	28	31	7.4	7.8
2	5.0	6.3	33	31	123	a 175	80	45	24	18	6.6	6.3
3	4.6	7.1	29	31	112	a 150	66	44	22	576	6.6	5.5
4	4.4	12	29	44	136	a 110	61	36	21	415	6.0	23
5	4.0	17	32	76	317	a 86	64	33	29	172	5.8	38
6	4.0	12	29	419	145	a 70	64	32	32	93	14	22
7	3.5	9.0	27	715	105	a 59	62	31	26	58	14	13
8	3.3	7.4	21	390	86	a 62	60	64	24	42	7.8	10
9	2.9	6.6	22	180	73	a 270	71	87	41	32	5.3	8.6
10	2.9	5.5	23	135	65	a 480	69	67	61	23	4.8	* 7.8
11	2.9	5.3	24	109	57	a 380	62	73	36	20	4.4	6.8
12	3.1	4.8	* 26	* 96	* 50	a 720	59	74	28	31	4.2	6.0
13	3.3	4.6	25	91	44	*a 530	57	66	* 25	31	4.0	6.3
14	4.8	6.0	24	86	49	317	51	* 56	20	134	3.5	8.4
15	3.3	5.5	26	520	45	196	45	47	16	390	3.7	42
16	3.1	*134	32	560	43	a 158	42	42	15	317	4.2	36
17	3.1	234	37	240	41	a 127	* 41	39	13	164	4.2	17
18	* 3.3	112	36	165	41	a 106	41	36	32	87	* 4.2	12
19	3.7	75	33	120	a 50	a 113	40	35	126	55	3.3	9.0
20	4.6	56	35	118	a 50	a 175	37	33	66	40	3.1	7.1
21	3.3	42	33	112	a 56	770	36	32	35	* 35	3.1	6.3
22	3.1	39	32	236	a 67	1,150	36	31	25	31	4.2	6.0
23	2.7	182	44	180	a 119	690	36	29	22	28	4.0	6.0
24	2.9	196	87	135	a 100	490	34	27	45	31	4.2	5.3
25	6.9	119	70	120	a 76	365	33	24	32	31	7.0	6.6
26	7.8	87	57	1,590	a 600	254	33	25	21	23	28	6.6
27	6.3	69	48	2,760	a1,100	188	32	31	17	15	15	6.0
28	5.3	55	41	2,070	a 570	148	32	40	14	13	8.6	6.0
29	5.5	45	36	665	---	119	32	34	13	11	6.3	5.8
30	5.3	40	34	400	---	112	32	35	12	9.4	5.5	5.5
31	6.3	---	33	250	---	100	---	33	---	9.0	6.6	---
Total	131.0	1,600.4	1,094	12,676	4,480	8,930	1,501	1,322	921	2,965.4	209.6	352.7
Mean	4.23	53.3	35.3	409	160	288	50.0	42.6	30.7	95.7	6.76	11.8
Cfsm	0.032	0.407	0.269	3.12	1.22	2.20	0.382	0.325	0.234	0.731	0.052	0.090
In.	0.04	0.45	0.31	3.60	1.27	2.54	0.43	0.37	0.26	0.84	0.06	0.10

Calendar year 1961: Max 1,380 Min 2.3 Mean 117 Cfsm 0.893 In. 12.13
Water year 1961-62: Max 2,760 Min 2.7 Mean 99.1 Cfsm 0.756 In. 10.27

Peak discharge (base, 1,100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	1930	10.25	3,020				
2-26	Unknown	8.45	1,490				
3-22	0200	8.02	1,340				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 9, 10, 13-15, Dec. 27 to Jan. 3, Jan. 9-20, 23-25, Jan. 30 to Feb. 2, Feb. 7, 8, 10, 11.

3-3497. Little Cicero Creek near Arcadia, Ind.

Location.--Lat 40°10', long 86°03', on line between sec. 14 and 23, T. 20 N., R. 4 E., on left bank on downstream side of county road bridge, 0.5 mile downstream from Taylor Creek, 1.3 miles west of Arcadia, 3.9 miles upstream from mouth, and 9.3 miles northwest of Noblesville.

Drainage area.--44.7 sq mi.

Records available.--October 1955 to September 1962.

Gage.--Water-stage recorder. Altitude of gage is 840 ft (by barometer).

Average discharge.--7 years, 44.0 cfs.

Extremes.--Maximum discharge during year, 1,990 cfs Jan. 26 (gage height, 7.45 ft); minimum, 0.3 cfs, Aug. 23 (gage height, 1.20 ft).
1955-62: Maximum discharge, 3,980 cfs, June 28, 1957 (gage height, 8.69 ft); no flow Oct. 9, 10, 1956.

Remarks.--Records fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 8-29, Oct. 31 to Nov. 13, Nov. 16, Feb. 13-18, Apr. 13-28, Aug. 6 to Sept. 9)

1.0	0.1	1.9	16
1.1	0.5	2.2	43
1.2	1.0	2.5	79
1.3	1.6	3.0	152
1.4	2.4	4.0	373
1.5	3.4	5.0	656
1.6	5.1	6.0	1,010
1.7	7.4	7.0	1,620

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.4	7.6	13	9.5	a 46	a 77	42	12	4.9	4.5	2.3	1.0
2	3.3	6.5	11	9.2	a 32	a 48	31	13	4.6	5.3	2.2	1.3
3	2.6	7.6	9.9	9.2	22	a 31	24	12	4.4	279	2.2	1.3
4	2.3	21	11	11	41	a 20	22	9.2	3.9	135	2.0	1.4
5	2.0	13	12	40	79	b 13	24	7.9	7.1	62	2.0	2.4
6	1.8	8.5	9.9	207	a 48	b 11	24	7.4	6.8	23	4.4	1.8
7	1.6	7.1	9.2	269	a 32	9.2	24	7.1	4.4	20	7.9	1.4
8	1.6	6.5	7.4	127	a 26	16	22	25	3.4	12	3.1	1.2
9	1.3	5.6	7.6	a 60	a 22	191	38	22	6.5	7.4	2.0	1.3
10	1.2	5.3	9.2	a 45	a 19	143	31	16	8.8	5.1	1.5	* 1.3
11	1.2	4.9	8.8	a 36	a 17	122	26	30	6.0	5.2	1.2	1.2
12	1.4	4.6	* 18	a 32	a* 15	266	24	29	44	12	1.1	1.0
13	1.7	4.4	b 11	a 28	16	* 119	25	22	* 12	7.4	1.0	1.0
14	2.2	a 4.7	b 9.1	a 25	25	79	18	* 14	4.9	44	1.0	30
15	2.1	a 4.5	b 9.3	a 175	17	57	17	11	3.4	111	.9	13
16	1.6	* 127	10	a 212	17	41	13	10	2.8	103	.8	4.1
17	1.4	119	16	a* 55	15	30	* 13	10	2.4	45	.8	2.6
18	* 1.3	69	15	a 37	16	28	13	9.9	62	17	* .7	2.1
19	1.6	45	14	a 31	28	57	13	9.5	183	9.9	.6	1.9
20	1.8	31	34	a 27	10	85	11	9.5	68	7.1	.5	1.7
21	1.8	20	22	a 25	10	513	9.9	9.2	22	* 5.8	.6	1.6
22	1.6	21	16	a 78	51	390	9.9	9.5	9.9	5.4	.5	1.5
23	1.6	128	41	a 55	b 32	190	10	8.5	7.1	5.6	.4	1.5
24	1.6	91	63	a 43	b 20	135	9.2	7.4	27	5.4	.4	1.5
25	25	63	39	35	14	103	8.8	6.5	8.0	5.4	.7	1.5
26	12	47	b 28	1,210	597	91	8.5	7.4	4.9	4.2	3.2	1.7
27	5.4	34	b 21	886	310	73	8.5	9.9	3.9	3.6	3.1	1.8
28	4.8	23	b 15	190	127	66	8.5	15	3.2	3.1	1.4	1.6
29	4.6	19	b 11	119	---	56	8.2	9.2	3.1	3.0	1.1	1.3
30	a 5.8	15	b 10	97	---	50	8.2	7.4	3.1	2.6	1.0	1.3
31	7.6	---	9.9	a 64	---	47	---	5.8	---	2.6	1.0	---
Total	110.2	963.8	521.3	4,246.9	1,704	3,157.2	544.7	382.3	535.5	961.6	51.6	88.3
Mean	3.55	32.1	16.8	137	60.9	102	18.2	12.3	17.8	31.0	1.66	2.94
Cfsm	0.079	0.718	0.376	3.06	1.36	2.28	0.407	0.275	0.398	0.694	0.037	0.066
In.	0.09	0.80	0.43	3.53	1.42	2.63	0.45	0.32	0.44	0.80	0.04	0.07

Calendar year 1961: Max 1,020 Min 0.6 Mean 48.5 Cfsm 1.08 In. 14.71
Water year 1961-62: Max 1,210 Min 0.4 Mean 36.3 Cfsm 0.812 In. 11.02

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	1930	7.45	1,990				
2-26	1530	5.73	889				
3-21	2400	5.27	749				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3501. Hinkle Creek near Cicero, Ind.

Location.--Lat 40°06'05", long 86°05'10", on line between secs. 9 and 16, T. 19 N., R. 4 E., on left bank on downstream side of county road bridge, 3.7 miles above mouth, 4.0 miles upstream from Morse Reservoir Dam, 4.2 miles southwest of Cicero, and 5.7 miles northwest of Noblesville.

Drainage area.--16.3 sq mi.

Records available.--October 1955 to September 1962.

Gage.--Water-stage recorder. Altitude of gage is 820 ft (from topographic map).

Average discharge.--7 years, 21.9 cfs.

Extremes.--Maximum discharge during year, 2,720 cfs Jan. 26 (gage height, 7.60 ft); minimum, 0.7 cfs Aug. 23, 24, Sept. 8; minimum gage height, 1.06 ft Aug. 23, 24.
1955-62: Maximum discharge, 4,920 cfs June 28, 1957 (gage height, 8.45 ft); minimum, 0.1 cfs Sept. 27, 28, 1956 (gage height, 1.30 ft); minimum gage height, that of Aug. 23, 24, 1962.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-18, Sept. 26-30)

Oct. 1 to Jan. 26				Jan. 26 to Sept. 30			
1.1	0.7	2.0	69	1.0	0.6	2.0	88
1.2	1.8	2.5	152	1.1	1.0	2.5	196
1.3	3.5	3.0	252	1.2	2.2	4.0	640
1.4	6.5	5.0	688	1.3	5.0	5.0	990
1.5	12	6.0	990	1.4	11	6.0	1,450
1.6	19	7.0	1,720	1.7	43		
1.8	44						

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.1	8.2	6.5	7.2	22	30	17	6.9	2.8	3.3	1.6	0.9
2	2.4	6.9	6.2	7.2	17	20	13	8.6	2.6	1.9	1.5	.9
3	2.1	7.8	5.8	6.9	15	15	11	6.4	2.4	62	1.4	1.0
4	1.9	19	6.2	7.2	23	12	11	5.0	2.2	13	1.4	1.2
5	1.8	14	7.2	24	30	10	12	4.2	2.2	5.0	1.5	1.1
6	1.6	10	6.5	130	9.6	9.6	12	3.8	2.2	3.5	31	.8
7	1.6	8.7	5.8	83	8.5	9.3	11	3.8	1.9	2.8	12	.8
8	1.6	8.2	5.4	44	7.7	17	10	10	1.6	2.2	2.8	.8
9	1.5	6.9	6.5	25	7.3	110	15	7.4	1.9	1.7	1.7	.8
10	1.4	6.5	6.5	21	7.1	58	12	6.9	1.9	1.6	1.5	.9
11	1.5	6.2	6.9	18	7.0	57	11	16	1.9	1.9	1.2	* .8
12	1.8	6.2	* 12	16	6.9	120	10	11	9.7	3.2	1.1	.8
13	1.9	6.5	7.4	15	7.4	* 56	11	8.6	* 3.5	1.9	1.1	.8
14	2.2	13	7.0	14	* 9.3	37	9.3	* 6.9	2.2	18	1.0	3.5
15	2.4	14	7.2	110	8.0	28	8.6	6.4	1.9	19	1.0	1.7
16	2.4	* 85	7.7	112	8.0	20	7.4	5.9	1.6	12	1.0	1.0
17	2.2	46	12	* 28	6.9	18	* 7.4	5.0	1.5	5.9	1.0	1.0
18	* 2.1	26	9.8	19	8.0	18	6.9	5.0	4.5	3.8	* .8	1.1
19	3.5	18	12	14	12	29	6.4	4.6	16	3.2	.8	1.1
20	4.5	13	17	12	7.2	36	6.4	4.2	2.8	3.0	.8	1.2
21	3.5	11	12	10	9.3	* 387	5.9	3.8	2.0	* 2.6	.8	1.2
22	3.5	11	11	93	37	133	5.9	3.8	1.6	2.6	.8	1.2
23	3.1	49	23	20	19	76	6.4	3.5	1.6	3.0	.8	1.2
24	3.5	31	24	16	13	58	5.4	2.8	2.9	2.6	.8	1.4
25	7.2	19	15	14	11	44	5.4	3.0	1.4	2.4	1.8	1.7
26	6.5	16	12	1,190	330	35	4.6	6.1	1.2	2.0	3.9	1.6
27	5.4	12	10	195	88	28	4.6	9.5	1.1	1.9	1.2	1.5
28	4.0	9.2	9.0	68	45	23	5.0	10	1.0	1.7	.8	1.5
29	4.5	8.2	8.5	48	--------	19	5.0	5.4	1.0	1.6	.8	1.5
30	8.8	7.2	8.0	37	--------	18	5.0	4.2	1.0	1.7	.8	1.4
31	10	----------	7.7	29	--------	18	----------	3.5	--------	1.6	.8	----------
Total	103.5	503.7	301.8	2,433.5	780.2	1,548.9	261.6	192.2	82.1	192.6	79.5	36.4
Mean	3.34	16.8	9.74	78.5	27.9	50.0	8.72	6.20	2.74	6.21	2.56	1.21
Cfsm	0.205	1.03	0.598	4.82	1.71	3.07	0.535	0.380	0.168	0.381	0.157	0.074
In.	0.24	1.15	0.69	5.56	1.78	3.54	0.60	0.44	0.19	0.44	0.18	0.08

Calendar year 1961 : Max 775 Min 1.2 Mean 24.3 Cfsm 1.49 In. 20.21
Water year 1961-62 : Max 1,190 Min 0.8 Mean 17.9 Cfsm 1.10 In. 14.89

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	1330	7.60	2,720				
2-26	1230	4.08	670				
3-21	1500	4.15	700				

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 13, 14, 26-30, Jan. 9-12, 14, 15, 17-20, 24, 25, Jan. 31, Feb. 2, 6-9, 11, 20, 23, 24, Feb. 28 to Mar. 4, Mar. 6.

3-3505. Cicero Creek at Noblesville, Ind.

Location.--Lat 40°03'20", long 86°02'30", in sec. 35, T. 19 N., R. 4 E., on right bank 150 ft downstream from bridge on State Highway 38, 1 mile northwest of Noblesville, 1½ miles downstream from Hinkle Creek, and 2½ miles upstream from mouth.

Drainage area.--219 sq mi.

Records available.--July 1950 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 750.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Average discharge.--12 years, 200 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 7,050 cfs Jan. 27 (gage height, 14.17 ft); minimum, 1.5 cfs Aug. 16, 19, 20, Sept. 7, 8; minimum gage height, 3.58 ft Dec. 15, 16, Aug. 16, 19, 20, Sept. 7, 8.
1950-62: Maximum discharge, 9,800 cfs June 28, 1957 (gage height, 15.26 ft); minimum, 0.5 cfs Sept. 25, 1954.

Remarks.--Records good. Flow regulated by Morse Reservoir located approximately 1.2 miles upstream beginning Dec. 9, 1955 (capacity, 6,900,000,000 gal).

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 26

3.5	1.2	6.0	375
3.6	2.0	8.0	1,000
3.7	3.7	9.0	1,350
3.8	6.6	11.0	2,200
3.9	11	12.0	3,120
4.1	23	13.0	4,600
4.5	60	14.0	6,550
5.0	133		

Jan. 27 to Sept. 30

3.5	1.2	5.0	140
3.6	2.0	6.0	400
3.7	3.7	9.0	1,350
3.8	6.6	11.0	2,200
3.9	11	12.0	3,120
4.1	23	13.0	4,600
4.5	65	14.0	6,550

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	42	2.9	3.1	62	260	500	182	78	48	11	6.7	2.0
2	24	3.3	2.4	58	220	310	171	94	37	27	5.0	2.1
3	14	4.8	2.4	58	205	256	131	72	16	430	3.5	2.4
4	3.7	63	2.8	61	194	194	122	65	14	610	4.7	2.9
5	27	166	2.8	83	370	150	122	55	39	312	7.3	20
6	44	113	2.4	402	298	122	131	57	39	171	43	3.0
7	54	2.8	2.1	1,100	182	100	122	44	29	150	73	1.6
8	76	2.0	2.0	760	145	106	114	89	18	90	49	1.6
9	104	2.0	2.1	330	120	477	131	114	18	60	30	1.6
10	115	2.0	2.1	210	104	850	131	104	40	26	5.9	6.7
11	115	2.0	2.1	180	88	670	114	122	52	30	2.9	* 2.1
12	115	2.0	2.2	160	87	1,280	104	122	83	52	3.7	1.6
13	115	2.0	* 2.2	145	83	1,000	123	104	* 54	46	9.0	1.6
14	115	30	2.0	124	* 84	610	92	92	36	100	5.4	35
15	115	43	1.9	424	80	* 400	101	* 78	23	340	1.8	44
16	115	39	1.9	730	77	284	* 51	69	16	400	1.6	42
17	188	* 154	2.0	400	73	218	50	60	14	270	1.9	41
18	238	201	2.1	* 238	75	182	66	53	29	150	* 1.6	17
19	177	201	2.4	189	87	194	89	43	194	91	1.6	20
20	* 144	201	2.6	144	87	312	34	40	160	59	1.6	9.9
21	144	201	2.4	124	96	1,400	42	41	83	*56	18	2.6
22	144	201	2.2	207	114	1,980	50	33	53	43	37	2.0
23	133	201	2.6	250	205	1,240	70	28	38	57	37	4.4
24	124	201	2.8	201	160	850	46	36	59	29	39	2.2
25	52	201	2.2	189	131	670	48	12	51	39	43	8.4
26	2.2	201	2.2	3,030	1,060	520	46	35	38	35	44	4.9
27	2.0	201	2.2	*5,140	1,980	385	45	53	21	18	31	17
28	2.1	201	2.2	3,120	1,070	298	46	57	11	12	2.4	17
29	2.4	201	20	1,230	---	243	51	52	7.0	13	1.9	3.3
30	3.3	144	67	760	---	243	57	69	7.0	13	1.9	2.2
31	4.5	---	67	490	---	194	---	54	---	15	2.4	---
Total	2,554.2	3,189.8	218.4	20,599	7,735	16,238	2,682	2,025	1,327.0	3,755	516.8	322.1
Mean	82.4	106	7.05	664	276	524	89.4	65.3	44.2	121	16.7	10.7
(f)	-74.5	+5	+71.3	+7	+8	-14	0	0	-1.4	0	-5.1	+2.2
Adjusted for change in contents in Morse Reservoir												
Mean	7.9	111	78.4	671	284	510	89.4	65.3	42.8	121	11.6	12.9
Cfsm	0.036	0.507	0.358	3.06	1.30	2.33	0.408	0.298	0.195	0.552	0.053	0.059
In.	0.04	0.57	0.41	3.53	1.35	2.69	0.46	0.34	0.22	0.64	0.06	0.07

	Observed						Adjusted					
Calendar year 1961:	Max	2,490	Min	1.2	Mean	207	Mean	207	Cfsm	0.945	In.	12.89
Water year 1961-62:	Max	5,140	Min	1.6	Mean	168	Mean	168	Cfsm	0.767	In.	10.38

Peak discharge (base, 2,000 cfs).--Jan. 27 (0030) 7,050 cfs (14.17 ft); Feb. 27 (0500) 2,420 cfs (11.28 ft); Mar. 21 (2130) 2,270 cfs (11.11 ft).

* Discharge measurement made on this day.

/ Change in contents, equivalent in cubic feet per second, in Morse Reservoir; furnished by Indianapolis Water Co.

Note.--Stage-discharge relation affected by ice Dec. 16, 17, 27-29, Jan. 9, 13, Feb. 1-3, 8, 9, 23, 24, Mar. 1, 2. No gage-height record Jan. 11-13.

3-3510. White River near Nora, Ind.

Location.--Lat 39°54'35", long 86°06'20", in sec. 20, T. 17 N., R. 4 E., on downstream side of center pier of bridge on State Highway 100, 2 miles east of Nora, 14 miles upstream from Fall Creek and at mile 253.4.

Drainage area.--1,200 sq mi.

Records available.--October 1929 to September 1962. Prior to April 1930 monthly discharge only, published in WSP 1305. Prior to October 1948, published as West Fork White River near Nora.

Gage.--Water-stage recorder. Datum of gage is 710.94 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Oct. 26, 1929, to July 29, 1942, at site 200 ft downstream at same datum. Supplemental water-stage recorder 4½ miles downstream.

Average discharge.--33 years, 1,086 cfs.

Extremes.--Maximum discharge during year, 20,300 cfs Jan. 28 (gage height, 15.58 ft); minimum, 76 cfs Oct. 5 (gage height, 1.70 ft, result of regulation).

1929-62: Maximum discharge, 32,400 cfs May 19, 1943 (gage height, 18.19 ft); minimum, 40 cfs Sept. 2, 1934; minimum daily, 49 cfs Sept. 17, 1941.

Flood of Mar. 26, 1913, reached a stage of 22.4 ft, from floodmark, determined by State Highway Department of Indiana (discharge, 58,500 cfs, estimated).

Remarks.--Records good except those for periods of ice effect and no gage-height record, which are fair. Flow slightly regulated by Morse Reservoir. Discharge measurements generally made twice a month.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 28, Mar. 30 to Apr. 7)

2.0	167	3.0	569	9.0	6,600
2.1	200	4.0	1,180	11.0	9,640
2.2	235	5.0	1,950	13.0	13,000
2.3	270	6.0	2,930	15.0	18,000
2.4	306	7.0	4,030	16.0	21,900
2.5	342				

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	306	207	361	325	2,220	4,620	1,180	569	621	252	400	252
2	306	197	306	320	1,500	2,510	1,110	975	492	306	342	252
3	306	221	270	320	1,300	1,790	975	1,320	400	724	306	232
4	380	270	288	400	1,200	1,400	910	1,180	342	1,950	288	270
5	211	400	306	492	1,550	1,180	845	910	558	1,480	288	252
6	270	400	306	1,010	1,600	975	845	728	648	910	288	235
7	270	270	342	3,810	1,150	845	845	648	845	975	380	210
8	270	214	361	4,030	950	785	785	a 700	595	728	380	204
9	270	200	324	2,410	880	1,770	845	a 840	595	569	324	207
10	306	184	324	1,350	820	4,030	910	910	1,110	543	288	204
11	306	200	306	900	785	4,030	785	975	648	466	235	197
12	306	190	306	700	701	4,990	728	845	569	444	224	187
13	306	180	324	630	674	5,500	728	785	845	492	210	184
14	324	187	300	600	648	3,700	701	674	785	701	210	224
15	324	252	280	1,100	621	2,410	674	569	595	1,340	207	400
16	306	492	270	2,800	595	1,790	621	517	466	3,770	193	288
17	306	1,250	280	5,000	569	1,480	543	466	a 390	3,920	190	235
18	380	1,320	324	a 3,400	543	1,250	543	444	a 330	2,310	184	218
19	400	975	361	a 2,300	543	1,180	543	421	a 390	1,400	180	193
20	342	785	444	a 1,600	569	1,400	517	380	a 520	975	170	193
21	342	674	492	a 1,050	543	4,070	466	a 375	a 420	728	170	184
22	342	621	543	a 1,600	621	7,800	466	a 430	a 320	1,320	200	177
23	324	701	517	a 2,300	975	7,650	492	380	a 270	2,610	214	174
24	306	910	517	a 2,400	1,040	4,630	466	342	a 230	1,950	210	167
25	306	975	543	1,650	785	3,260	444	342	a 280	1,180	228	170
26	210	910	492	5,540	2,850	2,610	444	324	a 390	910	306	190
27	197	785	444	16,200	8,560	2,040	444	380	a 330	785	466	184
28	187	674	395	19,500	9,330	1,710	421	517	a 255	701	400	184
29	187	595	370	12,800		1,480	421	543	252	595	306	184
30	184	543	350	4,510		1,400	421	543	224	492	252	170
31	210		335	2,930		1,250		674		444	252	
Total	8,990	15,782	11,381	103,977	44,122	85,535	20,118	19,706	14,715	35,970	8,291	6,421
Mean	290	526	367	3,354	1,576	2,759	671	636	490	1,160	267	214
Cfsm	0.242	0.438	0.306	2.80	1.31	2.30	0.559	0.530	0.408	0.967	0.222	0.178
In.	0.28	0.49	0.35	3.23	1.36	2.65	0.62	0.61	0.46	1.11	0.26	0.20

Calendar year 1961: Max 11,700 Min 136 Mean 1,170 Cfsm 0.975 In. 13.24
Water year 1961-62: Max 19,500 Min 167 Mean 1,027 Cfsm 0.856 In. 11.62

Peak discharge (base, 7,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-28	1200	15.58	20,300				
2-28	0530	11.22	9,950				
3-23	0330	10.36	8,720				

a No gage-height record.

Note.--Stage-discharge relation affected by ice Dec. 14-17, Dec. 28 to Jan. 4, Jan. 10-17, 25, Feb. 2-10.

3-3515. Fall Creek near Fortville, Ind.

Location.--Lat 39°57'15", long 85°52'05", in sec. 5, T. 17 N., R. 6 E., on right bank at downstream side of bridge on State Highway 238, 1 mile downstream from Lick Creek and 2 miles northwest of Fortville.

Drainage area.--172 sq mi.

Records available.--July 1941 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 787.43 ft above mean sea level, datum of 1929 (levels by Indianapolis Water Co.). Prior to June 27, 1942, staff gage at same site and datum.

Average discharge.--21 years, 169 cfs.

Extremes.--Maximum discharge during year, 2,710 cfs Jan. 27 (gage height, 7.58 ft); minimum, 23 cfs Aug. 23, 24 (gage height, 1.22 ft).
1941-62: Maximum discharge, 8,240 cfs May 18, 1943 (gage height, 9.77 ft); minimum observed, 5.0 cfs Sept. 23, 24, 1941 (gage height, 1.04 ft).
Maximum stage known, about 12 ft March 1913, (information by local resident).

Remarks.--Records good, except those for periods of no gage-height record or ice effect, which are fair. Discharge measurements generally made twice a month.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 30		Dec. 31 to Sept. 30			
1.3	24	1.2	22	5.0	880
1.5	40	1.5	45	6.0	1,350
2.0	100	2.0	112	7.0	2,020
3.0	284	3.0	303	8.0	3,330
		4.0	558		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	50	60	b 58	a 193	393	163	195	59	42	47	42
2	61	47	57	b 58	163	283	154	263	54	50	44	40
3	54	49	55	b 62	163	223	136	233	53	a 130	41	38
4	48	72	55	66	173	183	136	173	53	a 95	40	45
5	a 45	72	66	75	223	163	136	136	87	a 67	40	40
6	a 41	60	68	185	a 175	144	136	120	86	a 88	47	37
7	a 38	55	63	393	a 141	127	136	112	65	a 310	48	34
8	a 37	50	57	253	a 128	127	127	120	56	a 155	42	33
9	a 34	47	56	154	a 118	560	136	127	52	112	38	33
10	a 35	46	57	b 130	a 113	772	127	112	48	84	37	34
11	35	44	61	b 115	a 108	445	120	136	47	68	35	32
12	35	44	61	b 105	104	528	112	127	200	84	33	32
13	36	44	58	b 98	97	419	112	112	303	79	34	31
14	38	46	b 56	b 94	112	303	112	97	136	113	32	51
15	39	47	b 53	554	104	253	104	89	94	621	32	49
16	38	163	51	a 720	97	223	97	83	73	499	32	37
17	40	212	63	a 430	94	193	96	79	61	263	31	32
18	37	131	78	a 240	91	173	94	76	54	183	30	29
19	37	96	83	a 168	96	193	91	72	197	127	30	28
20	42	82	108	a 141	91	223	89	68	144	104	28	27
21	41	73	108	a 127	93	850	87	65	86	89	27	27
22	41	68	87	325	158	1,150	86	86	65	82	26	28
23	39	92	86	a 360	173	588	87	84	57	83	26	28
24	39	140	95	203	120	419	83	69	82	77	24	27
25	41	108	91	163	120	325	80	62	72	68	28	30
26	40	91	b 76	1,260	1,020	263	79	66	54	61	90	30
27	38	80	b 70	2,440	1,540	223	79	73	47	57	65	29
28	36	70	b 66	920	708	203	77	77	42	53	45	29
29	36	64	b 63	445	----------	183	76	69	40	52	39	28
30	41	61	b 61	347	----------	173	77	62	39	50	35	28
31	62	---------	b 60	a 243	----------	163	---------	65	--------	47	41	----------
Total	1,276	2,304	2,129	10,932	6,516	10,468	3,225	3,308	2,506	3,993	1,187	1,008
Mean	41.2	76.8	68.7	353	233	338	108	107	83.5	129	38.3	33.6
Cfsm	0.240	0.447	0.399	2.05	1.35	1.97	0.628	0.622	0.485	0.750	0.223	0.195
In.	0.28	0.50	0.46	2.36	1.41	2.27	0.70	0.72	0.54	0.86	0.26	0.22

Calendar year 1961: Max 4,460 Min 28 Mean 194 Cfsm 1.13 In. 15.30
Water year 1961-62: Max 2,440 Min 24 Mean 134 Cfsm 0.779 In. 10.58

Peak discharge (base, 1,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	0100	7.58	2,710				
2-27	0500	6.95	2,020				
3-22	0600	6.02	1,350				

a No gage-height record.
b Stage-discharge relation affected by ice.

3-3520. Lawrence Creek at Fort Benjamin Harrison, Ind.

Location.--Lat 39°52'09", long 86°01'25", in S½ sec. 36, T. 17 N., R. 4 E., on left bank 100 ft upstream from Shafter Avenue Bridge in Fort Benjamin Harrison, 600 ft east of sewage disposal plant, and a third of a mile upstream from mouth.

Drainage area.--2.86 sq mi.

Records available.--March 1952 to September 1956, October 1957 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 749.10 ft above mean sea level, datum of 1929.

Average discharge.--9 years, 5.07 cfs.

Extremes.--Maximum discharge during year, 600 cfs Apr. 30, July 6; maximum gage height, 5.62 ft Apr. 30; minimum, 0.4 cfs Nov. 5 (gage height, 1.67 ft).
1952-56, 1957-62: Maximum discharge, 2,650 cfs May 28, 1956 (gage height, 9.32 ft); minimum, 0.1 cfs Aug. 1, 2, 1952, Oct. 29, 30, 1953.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. City of Lawrence discharges effluent from sewage treatment plant into creek above gage.

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 8-12, 19-24, 26, 28-30; stage-discharge relation affected by ice Dec. 29)

Oct. 1 to Mar. 21		Mar. 22 to Sept. 30	
1.7	0.6	1.8	0.6
1.8	1.6	1.9	1.5
1.9	3.2	2.0	3.4
2.1	8.2	2.2	12
2.4	22	2.4	22
2.9	67	2.6	37
3.1	92	2.7	46

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	1.4	2.0	2.1	4.7	10	5.2	42	2.5	1.6	2.3	4.8
2	1.7	* 1.5	1.8	* 2.4	* 4.4	7.9	5.2	22	2.0	1.8	2.2	3.7
3	1.5	7.3	1.8	3.4	4.0	7.0	4.4	* 11	2.0	22	2.1	4.6
4	1.5	2.3	4.2	3.4	6.0	5.7	3.7	7.4	3.0	2.0	2.1	15
5	* 1.5	1.8	3.0	4.7	7.4	5.0	* 4.0	5.2	2.1	1.8	2.0	3.7
6	1.5	1.7	2.4	25	5.7	4.4	4.8	4.0	2.0	* 46	2.7	2.0
7	1.5	1.6	2.1	11	5.0	4.4	4.4	3.7	2.0	18	2.9	1.5
8	1.4	1.4	2.0	7.3	4.3	8.5	4.0	8.8	2.0	6.5	2.3	1.2
9	1.5	1.5	2.1	5.1	3.7	22	4.4	3.7	2.0	2.5	2.0	1.2
10	1.4	1.6	3.0	4.3	3.2	11	4.1	9.4	2.0	2.5	1.9	2.0
11	1.4	1.4	2.6	3.8	2.8	12	3.9	21	2.0	2.5	1.8	1.2
12	1.4	1.4	2.8	3.5	3.0	14	3.7	9.6	2.0	8.0	1.8	1.2
13	1.9	1.8	2.1	3.2	3.4	10	3.4	6.5	2.0	2.8	1.9	1.5
14	1.4	2.6	2.0	9.8	3.1	7.9	3.2	4.4	2.0	2.6	1.8	13
15	1.2	1.5	2.0	42	2.8	7.3	3.0	3.4	2.0	15	1.8	2.7
16	1.4	17	4.7	8.9	2.6	6.4	2.8	3.2	1.8	8.2	1.8	1.5
17	1.4	3.6	5.4	5.9	2.5	5.9	2.6	2.7	1.8	4.7	1.7	1.5
18	1.2	2.6	4.5	4.9	2.5	5.6	2.5	2.7	2.7	2.7	1.7	1.5
19	2.2	2.3	8.2	4.7	2.4	6.4	2.4	2.7	1.6	2.5	1.6	1.2
20	1.3	2.1	5.4	4.5	2.4	16	2.3	2.3	1.5	2.4	1.5	1.2
21	1.2	2.0	4.0	4.0	2.4	* 86	2.3	3.5	1.5	2.4	1.4	1.2
22	1.1	3.4	3.6	17	3.7	21	2.2	4.4	1.6	2.3	1.4	1.2
23	1.4	9.4	5.2	4.9	6.1	15	2.2	2.9	1.5	6.0	1.3	1.2
24	1.3	4.5	3.8	4.7	4.1	12	2.1	2.3	1.8	2.5	1.2	1.2
25	2.9	3.2	3.0	4.3	3.4	10	2.0	2.7	1.8	2.3	1.1	* 1.8
26	1.2	2.8	3.2	86	62	8.3	2.0	2.9	1.4	5.7	2.2	1.2
27	1.5	2.6	3.2	30	17	7.0	1.9	4.0	1.5	4.0	1.5	1.5
28	1.5	* 2.4	3.1	11	*16	5.7	1.9	* 4.0	1.5	3.4	1.2	1.2
29	1.7	2.0	2.6	7.3	--------	5.2	1.9	2.7	1.8	2.9	1.1	1.2
30	2.7	2.0	2.2	6.0	--------	5.2	2.0	7.0	* 1.8	* 2.7	* 1.1	1.2
31	1.6	----------	2.1	5.3	--------	5.7	----------	3.4	----------	2.3	10	----------
Total	48.2	92.7	100.1	340.4	190.6	358.5	94.5	215.5	57.2	192.6	63.4	79.1
Mean	1.55	3.09	3.23	11.0	6.81	11.6	3.15	6.95	1.91	6.21	2.05	2.64
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1961 : Max 198 Min 0.3 Mean 6.77 Cfsm - In. -
Water year 1961-62 : Max 86 Min 1.1 Mean 5.02 Cfsm - In. -

Peak discharge (base, 300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	0900	4.77	390				
4-30	2400	5.62	600				
7-6	2000	5.60	600				

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 10-12, 27, Jan. 29 to Feb. 25, Mar. 4-7, Apr. 10-30, July 8-25, July 30 to Aug. 31.

3-3522. Mud Creek at Indianapolis, Ind.

Location.--Lat 39°53'30", long 86°00'57", in NE¼ sec. 25, T. 17 N., R. 4 E., on left bank at downstream side of Lantern Road Bridge at Indianapolis, 0.2 miles northeast of intersection of 75th Street and Sargent Road, 2.0 miles southeast of Castleton and 1.5 miles upstream from mouth.

Drainage area.--42.5 sq mi.

Records available.--May 1958 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 752.99 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Extremes.--Maximum discharge during year, 670 cfs Jan. 27 (gage height, 7.40 ft); minimum, 0.2 cfs Aug. 24 (gage height, 1.65 ft).
1958-62: Maximum discharge, 1,500 cfs June 10, 1958 (gage height, 8.36 ft); minimum, that of Aug. 24, 1962.

Remarks.--Records good except those for periods of no gage-height record or ice effect, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 26 to Nov. 2, Jan. 24 to Feb. 28, Mar. 5 to Apr. 6)

Oct. 1 to Apr. 5				Apr. 6 to Sept. 30			
1.8	2.5	3.5	108	1.7	0.7	2.3	15
1.9	4.6	4.0	170	1.8	2.0	2.5	26
2.1	11	5.0	340	1.9	3.6	3.0	58
2.4	25	6.0	580	2.1	8.4	3.5	106
3.0	63						

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a 4.2	4.6	9.0	9.4	* 45	b 70	32	94	11	11	4.4	3.4
2	a 5.0	* 3.4	8.3	* 9.4	35	b 46	29	100	10	9.3	4.2	2.9
3	a 4.5	4.1	7.6	9.8	34	b 40	26	* 66	10	44	4.2	2.8
4	a 3.7	4.9	8.0	9.8	35	b 35	24	44	10	23	4.2	3.8
5	* 3.2	6.4	8.3	13	45	31	25	34	67	13	3.8	3.4
6	3.2	5.5	8.3	79	35	26	* 25	29	66	* 9.6	5.3	2.9
7	3.0	4.6	8.0	184	b 30	24	24	24	35	8.1	5.6	2.6
8	2.8	4.3	7.0	96	26	25	23	27	22	7.4	4.4	2.5
9	3.0	3.9	6.6	b 43	24	149	29	24	16	6.6	4.0	2.5
10	2.8	3.9	7.0	b 31	20	145	27	23	13	5.8	3.6	2.5
11	3.0	3.6	7.0	b 28	17	88	24	44	12	6.3	3.4	2.3
12	2.8	3.4	7.6	b 26	18	144	23	40	11	6.8	3.4	2.0
13	3.2	3.6	7.0	b 25	18	93	23	32	11	5.6	3.6	1.8
14	3.4	3.6	6.6	b 24	20	67	20	26	9.6	29	3.4	5.0
15	3.4	3.4	6.0	254	17	52	19	22	9.0	31	3.4	4.4
16	3.2	22	6.4	a 265	16	42	17	19	8.4	23	3.4	3.3
17	3.4	63	9.0	a 50	15	37	16	18	7.9	14	3.3	2.8
18	3.2	40	11	a 38	15	34	16	16	7.6	10	3.3	2.5
19	3.4	26	12	a 32	15	38	15	16	7.6	8.4	3.1	2.2
20	3.6	19	18	a 29	14	45	15	14	7.1	7.6	2.9	2.0
21	3.6	13	18	a 27	14	* 288	14	16	6.6	6.8	2.8	2.0
22	3.2	12	15	87	29	308	14	20	6.3	6.8	2.6	2.0
23	3.2	17	15	b 43	29	144	14	15	6.1	8.1	2.6	2.0
24	3.2	35	20	28	21	93	13	13	6.1	6.8	2.4	* 2.0
.25	3.4	27	19	24	20	75	13	12	5.8	8.7	2.2	2.5
26	3.2	20	16	351	*298	63	12	12	5.6	9.6	4.2	2.6
27	3.2	16	b 14	580	*380	52	12	14	5.1	6.6	2.9	2.5
28	3.0	* 13	b 12	238	181	45	12	* 14	4.6	5.8	2.3	2.3
29	3.2	11	b 11	103	----------	41	12	12	4.4	5.6	2.2	2.2
30	3.2	10	10	75	----------	38	13	14	7.4	* 5.1	* 2.0	2.2
31	5.8	----------	9.4	52	----------	34	---------	12	---------	4.6	3.6	----------
Total	106.2	407.2	328.1	2863.4	1,466	2,412	581	866	409.2	354.0	106.7	79.9
Mean	3.43	13.6	10.6	92.4	52.4	77.8	19.4	27.9	13.6	11.4	3.44	2.66
Cfsm	0.081	0.320	0.249	2.17	1.23	1.83	0.456	0.656	0.320	0.268	0.081	0.063
In.	0.09	0.36	0.29	2.50	1.28	2.11	0.51	0.76	0.36	0.31	0.09	0.07

Calendar year 1961: Max 825 Min 2.3 Mean 47.5 Cfsm 1.12 In. 15.16
Water year 1961-62: Max 580 Min 1.8 Mean 27.3 Cfsm 0.642 In. 8.73

Peak discharge (base, 800 cfs).--No peak above base.

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3525. Fall Creek at Millersville, Ind.

Location.--Lat 39°51'05", long 86°05'20", in sec. 9, T. 16 N., R. 4 E., on left bank at downstream side of highway bridge at Millersville and 8.5 miles upstream from mouth.

Drainage area.--313 sq mi.

Records available.--October 1929 to September 1962. Monthly discharges only for some periods, published in WSP 1305. Twice daily readings at a chain gage at same site and datum from July 1925 to September 1926 are available in the District office.

Gage.--Water-stage recorder. Datum of gage is 722.16 ft above mean sea level, datum of 1929.

Average discharge.--33 years, 274 cfs (unadjusted).

Extremes.--Maximum discharge during year, 3,500 cfs Jan. 27 (gage height, 8.86 ft); minimum, 54 cfs June 28 (gage height, 1.85 ft).
1929-62: Maximum discharge, 12,900 cfs May 28, 1956 (gage height, 13.53 ft); minimum, 7.0 cfs Sept. 28, 1941 (gage height, 0.84 ft).
Maximum stage known, 16.3 ft Mar. 26, 1913, from floodmarks (discharge, 22,000 cfs, by slope-area measurement).

Remarks.--Records good. Discharge measurements generally made twice a month. Flow regulated by Geist Reservoir, 8.5 miles upstream, since January 1943 (capacity, 6,900,000,000 gal).

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 25, Jan. 29, 30, July 6-22)

Oct. 1-4

1.5	37
1.8	71
2.0	100

Oct. 5 to Sept. 30

1.8	54	4.0	580
2.0	78	6.0	1,500
2.5	162	8.0	2,780
3.0	273	9.0	3,590

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	75	79	67	b 99	411	1,020	261	491	103	94	71	94
2	71	81	65	b 97	323	620	249	545	116	98	76	84
3	68	94	64	b 96	285	442	225	442	91	214	77	82
4	71	81	68	134	285	351	203	351	79	182	76	134
5	70	79	76	152	337	310	203	273	134	125	89	102
6	71	81	72	352	323	273	214	225	172	164	102	86
7	71	79	70	790	261	225	214	203	125	310	76	82
8	71	79	66	661	225	214	203	203	91	214	79	81
9	73	79	76	b 390	225	640	225	225	86	143	78	82
10	76	79	78	b 270	192	1,200	225	192	76	98	74	82
11	79	79	78	b 229	172	970	214	323	78	90	68	81
12	82	79	81	b 205	162	1,020	192	285	86	116	66	79
13	84	81	76	b 199	162	925	172	225	192	88	70	79
14	84	88	74	192	162	661	172	192	237	283	79	100
15	81	85	72	666	162	510	172	172	162	580	78	94
16	78	165	70	1,020	152	411	152	152	116	745	76	85
17	78	172	89	790	143	351	143	143	88	510	76	84
18	78	97	94	475	143	310	134	125	76	323	76	79
19	82	88	105	351	152	310	134	116	108	214	74	79
20	81	76	134	273	143	366	134	102	172	143	76	78
21	77	76	100	237	152	1,670	116	127	134	108	76	77
22	76	77	85	366	203	2,010	116	172	97	125	76	76
23	74	116	105	545	273	1,450	134	134	77	134	76	74
24	74	134	143	411	261	970	125	103	73	108	76	73
25	79	106	143	310	225	703	116	98	84	92	92	74
26	73	89	b 132	1,510	1,140	545	116	108	74	125	102	73
27	72	82	b 124	3,330	2,410	411	116	134	65	91	88	73
28	72	74	b 115	2,560	1,890	366	106	134	59	73	81	73
29	72	65	b 108	1,250	---	310	116	116	68	65	78	73
30	76	70	b 104	790	---	297	116	134	79	67	78	72
31	79	---	b 102	510	---	285	---	116	---	69	116	---
Total	2,348	2,710	2,836	19,260	10,974	20,146	5,018	6,361	3,198	5,791	2,476	2,485
Mean	75.7	90.3	91.5	621	392	650	167	205	107	187	79.9	82.8
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
(≠)	-28.9	+28.2	+31.4	+9	+18	-21	-5	+1	-8	+6	-30.6	-33.0

Calendar year 1961: Max 5,770 Min 46 Mean 326 Cfsm 1.04 In. 14.12 ≠ +5.0
Water year 1961-62: Max 3,330 Min 59 Mean 229 Cfsm 0.732 In. 9.95 ≠ -3.0

Peak discharge (base, 2,000 cfs).--Jan. 27 (1230) 3,500 cfs (8.86 ft); Feb. 27 (2100) 2,480 cfs (7.63 ft); Mar. 21 (1900) 2,200 cfs (7.15 ft).

b Stage-discharge relation affected by ice.
≠ Change in contents, equivalent in cubic feet per second, in Geist Reservoir; furnished by Indianapolis Water Co.

3-3530. White River at Indianapolis, Ind.

Location.--Lat 39°45'05", long 86°10'30", on downstream side of second pier from right bank of Morris Street Bridge in Indianapolis, 2½ miles downstream from Fall Creek and at mile 235.8.

Drainage area.--1,627 sq mi.

Records available.--March 1904 to July 1906 and April 1930 to September 1962. Gage-height record published in reports of U. S. Weather Bureau for site 1.1 miles upstream Feb. 8, 1911 to Mar. 25, 1913 and at site 2.3 miles upstream since Oct. 16, 1913. Prior to October 1948, published as West Fork White River at Indianapolis.

Gage.--Water-stage recorder. Datum of gage is 662.26 ft (revised) above mean sea level, datum of 1929. March 1904 to July 1906, chain gage at railroad bridge three-quarters of a mile upstream at datum approximately 2.9 ft higher. April 1930 to July 20, 1931, float gage at Indianapolis sanitation plant 2½ miles downstream at datum 660 ft lower. July 21, 1931, to Mar. 2, 1932, staff gage at present site at datum 660 ft lower.

Average discharge.--33 years (1904-5, 1930-62), 1,411 cfs (adjusted for diversion and change in content since October 1955; includes sewage effluent, April 1930 to September 1931).

Extremes.--Maximum discharge during year, 22,500 cfs Jan. 28 (gage height, 15.60 ft); minimum, 124 cfs Aug. 21, 22 (gage height, 2.38 ft).

1904-6, 1930-62: Maximum discharge, 37,200 cfs May 18, 1943; maximum gage height, 21.57 ft Jan. 16, 1937; minimum, 6.8 cfs Sept. 21, 1941.

Flood of Mar. 26, 1913, reached a stage of 30.0 ft, from floodmarks determined by Indianapolis Water Co. (discharge, 70,000 cfs, estimated).

Remarks.--Records good except those for periods of missing gage-height record or ice effect, which are fair. Discharge measurements generally made twice a month. During the year the Indianapolis Water Co. diverted 28,000,000,000 gal of water for municipal use, most of which was returned 3 miles below the gage at sanitation plant. Slight fluctuation at low flow due to this diversion. Flow slightly regulated by Morse and Geist Reservoirs (combined usable capacity, 13,800,000,000 gal).

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	404	244	527	a 370	2,900	6,810	1,420	1,620	775	620	404	282
2	326	244	404	a 360	2,130	3,620	1,320	1,520	630	436	376	244
3	326	263	376	b 360	1,820	2,570	1,270	1,620	494	1,320	376	252
4	326	244	404	b 420	1,720	2,020	1,170	1,620	404	1,620	351	975
5	376	304	376	560	1,820	1,620	1,270	1,320	463	1,820	351	376
6	282	376	351	1,190	2,130	1,420	1,170	1,030	940	1,320	708	263
7	304	326	326	3,740	a 1,700	1,220	1,120	898	985	1,120	336	228
8	304	244	376	4,260	a 1,350	1,120	1,080	1,030	775	1,120	351	212
9	282	228	376	a 2,700	a 1,240	2,190	1,220	1,030	560	738	304	212
10	282	228	376	a 1,550	a 1,130	5,110	1,170	1,630	985	595	282	228
11	304	212	351	a 1,000	a 1,050	5,580	1,120	2,240	898	706	244	212
12	282	228	351	a 800	898	6,630	1,030	1,520	595	785	228	198
13	263	244	326	a 750	898	6,990	985	1,220	738	560	198	198
14	282	244	b 305	a 720	898	5,110	940	985	985	2,230	185	547
15	304	228	b 290	a 1,520	855	3,500	855	815	775	2,570	198	326
16	282	846	b 285	a 3,600	815	2,570	855	775	595	3,740	185	351
17	282	940	b 300	a 5,600	775	2,020	775	738	432	4,530	185	282
18	282	1,220	326	a 3,700	775	1,720	738	700	376	2,900	185	228
19	304	985	376	a 2,400	775	1,620	738	665	432	1,920	185	212
20	304	738	404	a 1,540	775	1,920	738	560	595	1,320	174	198
21	444	630	326	a 1,200	775	8,010	665	851	560	898	145	198
22	351	630	494	a 2,300	898	9,100	665	1,030	404	985	130	185
23	376	775	560	a 2,400	1,220	10,500	700	665	304	2,350	154	185
24	304	855	560	a 2,600	1,520	6,630	665	560	263	2,240	163	198
25	351	940	595	1,820	1,270	4,530	630	560	282	1,520	395	185
26	282	898	527	7,060	4,310	3,500	595	700	351	1,030	463	198
27	228	815	494	20,200	11,300	2,790	595	700	263	815	351	198
28	228	700	a 455	22,000	12,300	2,350	595	775	212	700	376	198
29	228	630	a 420	17,000	----------	2,020	595	815	185	595	304	198
30	244	595	a 395	6,270	----------	1,820	656	1,040	198	494	244	198
31	228	----------	a 380	3,740	----------	1,620	----------	738	----------	432	703	----------
Total	9,365	16,054	12,412	123,730	60,047	118,230	27,345	31,970	16,454	44,029	9,234	7,965
Mean	302	535	400	3,991	2,145	3,814	911	1,031	548	1,420	298	265
(ƒ)	-103	+32.93	+103	+15.20	+26.78	-34.78	-5.10	+0.65	-9.70	+6.20	-35.68	-30.83
(ƒƒ)	+117	+111	+103	+106	+108	+108	+116	+128	+144	+130	+145	+123
Adjusted for diversion and change in reservoir contents												
Mean	316	679	606	4,112	2,280	3,887	1,022	1,160	682	1,556	407	357
Cfsm	0.194	0.417	0.372	2.53	1.40	2.39	0.628	0.713	0.419	0.956	0.250	0.219
In.	0.22	0.47	0.43	2.91	1.46	2.76	0.70	0.82	0.47	1.10	0.29	0.24

		Observed				Adjusted				
Calendar year 1961:	Max	18,500	Min	106	Mean	1,546	Mean	1,670	Cfsm	1.03	In.	13.92
Water year 1961-62:	Max	22,000	Min	130	Mean	1,306	Mean	1,423	Cfsm	0.875	In.	11.87

Peak discharge (base, 8,500 cfs).--Jan. 28 (0700) 22,500 cfs (15.60 ft); Feb. 28 (0430) 13,000 cfs (11.64 ft); Mar. 22 (0330) 11,300 cfs (10.81 ft).

ƒ Change in contents, equivalent in cubic feet per second, in Morse and Geist Reservoirs.
ƒƒ Diversion, equivalent in cubic feet per second, above station for municipal supply; furnished by Indianapolis Water Co.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3531.2 Pleasant Run at Arlington Avenue at Indianapolis, Ind.

Location.--Lat 39°46'33", long 86°03'50", in NW¼ sec. 2, T. 15 N., R. 4 E., on right bank 46 ft upstream from Arlington Avenue Bridge in Indianapolis, and 0.5 mile downstream from unnamed tributary.

Drainage area.--7.67 sq mi.

Records available.--December 1959 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 780.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Extremes.--Maximum discharge during year, 650 cfs Mar. 21 (gage height, 6.86 ft); no flow for many days.
1959-62: Maximum discharge, 1,360 cfs Apr. 25, 1961 (gage height, 9.49 ft); no flow at times during most years.
Flood in May 1956 reached a stage of 16.0 ft, from information by local resident.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1961-62 except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 14				Jan. 15 to Sept. 30			
2.9	0	3.4	7.6	2.9	0	3.4	10
3.0	.2	3.5	11	3.0	.3	3.5	15
3.1	1.0	3.6	16	3.1	1.5	3.7	31
3.2	2.5	3.8	34	3.2	3.8	3.9	58
3.3	4.7	4.0	62	3.3	6.7	5.0	265

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.3	0.2	* 0.5	1.6	4.4	* 9.5	3.0	124	4.8	1.5	0.4	4.0
2	1.0	.1	.4	* 1.6	4.1	6.2	2.8	25	2.1	1.0	.5	2.2
3	.5	* 7.8	.4	1.9	3.9	4.0	2.3	8.0	1.3	34	.4	1.0
4	.4	1.6	6.6	3.2	4.6	2.5	2.1	4.9	1.5	2.0	.5	18
5	.2	.4	4.6	7.0	5.2	2.3	* 2.4	3.0	3.0	.9	.3	1.3
6	* .2	.2	1.6	45	3.4	2.2	3.8	2.3	1.7	.6	20	.8
7	.2	.2	1.4	12	3.3	2.2	2.5	1.7	1.0	* 1.0	2.0	.4
8	.1	.1	1.3	7.0	3.2	6.5	2.8	8.4	1.0	1.0	.9	.3
9	.1	.1	1.8	5.8	3.1	38	8.0	2.3	.9	.5	.6	.4
10	.2	.1	4.4	5.1	3.0	12	2.8	29	.8	.2	.3	.4
11	.1	.1	2.7	4.6	2.8	13	2.3	42	.6	11	.2	.2
12	.2	.1	3.3	4.2	2.7	19	1.7	7.0	.7	5.0	.2	.2
13	1.0	.2	1.6	3.7	3.9	9.3	3.5	4.4	.5	2.0	.3	.2
14	.5	1.7	1.5	4.0	5.5	6.7	1.9	2.5	.5	58	.2	8.6
15	.1	.3	1.5	80	3.3	5.2	1.3	1.9	.5	42	.2	.7
16	0	28	3.0	40	3.0	4.4	1.2	1.5	.4	6.8	.2	.3
17	.1	2.9	10	15	2.5	3.5	1.0	1.5	.3	3.0	.2	.3
18	.1	1.4	5.0	9.0	4.0	3.3	1.0	1.3	.5	1.7	.1	.2
19	1.4	1.3	14	6.8	4.8	5.2	.9	1.0	1.0	1.0	0	.2
20	.5	1.0	6.0	5.2	3.3	22	.8	.8	.4	1.0	0	.3
21	.2	.8	3.5	6.7	6.1	216	.7	30	.6	1.5	.3	.3
22	0	2.7	3.0	45	12	18	1.6	6.9	1.0	4.6	.2	.2
23	0	17	7.5	19	8.0	9.3	1.8	2.1	.7	12	.2	.3
24	.3	3.7	3.5	6.7	5.4	7.3	.7	1.0	.8	2.8	.2	.7
25	3.1	1.6	2.7	5.2	5.0	5.2	.6	3.8	.6	4.5	14	* .4
26	.4	1.3	2.1	* 177	144	4.1	.7	22	.6	2.6	7.8	.3
27	.2	1.0	1.9	18	26	3.3	.7	25	.5	.5	.7	.5
28	0	.8	1.8	8.3	16	2.8	.7	6.4	.3	.6	.4	.5
29	.3	.7	1.8	6.7	--------	2.5	.6	* 3.3	.4	.5	.4	.3
30	2.3	.7	1.7	5.8	--------	3.6	* 6.1	4.1	2.7	.5	* .3	.2
31	.4	----------	1.7	5.1	--------	4.4	----------	9.1	----------	* .5	25	----------
Total	22.4	78.1	102.8	566.2	296.5	453.5	62.3	386.2	31.7	204.8	77.0	43.7
Mean	0.72	2.60	3.32	18.3	10.6	14.6	2.08	12.5	1.06	6.61	2.48	1.46
Cfsm	0.094	0.339	0.433	2.39	1.38	1.90	0.271	1.63	0.138	0.862	0.323	0.190
In.	0.11	0.38	0.50	2.76	1.44	2.19	0.30	1.88	0.15	0.99	0.37	0.21

Calendar year 1961: Max 434 Min 0 Mean 8.29 Cfsm 1.08 In. 14.67
Water year 1961-62: Max 216 Min 0 Mean 6.37 Cfsm 0.831 In. 11.28

Peak discharge (base, 320 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	1000	6.48	565	7-14	0800	5.46	365
2-26	0600	5.82	425				
3-21	1030	6.86	650				
5-1	0130	6.32	525				

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 16, Dec. 27 to Jan. 4, Jan. 8-20, 22, 31, Feb. 3, Feb. 8-13, 24, 25, Mar. 1-3, 5-7.

3-3531.6 Pleasant Run at Brookville Road at Indianapolis, Ind.

Location.--Lat 39°45'52", long 86°05'43", in NW¼ sec. 9, T. 15 N., R. 4 E., on right bank at downstream side of Brookville Road Bridge in Indianapolis, and 2.2 miles downstream from Arlington Avenue.

Drainage area.--10.3 sq mi.

Records available.--November 1959 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 752.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Extremes.--Maximum discharge during year, 670 cfs Mar. 21 (gage height, 5.76 ft); no flow for many days.
1959-62: Maximum discharge, 1,560 cfs Apr. 25, 1961; no flow at times during most years.

Remarks.--Records fair, except those for periods of ice effect and indefinite stage-discharge relation, which are poor.

Rating tables, water year 1961-62, except periods of ice effect and indefinite stage-discharge relation
(gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 27 to Mar. 20, Apr. 13-30)

Oct. 1 to Jan. 26		Jan. 26 to Sept. 30	
2.0	0	2.0	0
2.1	0.9	2.1	0.6
2.2	2.7	2.2	1.4
2.3	6.3	2.3	3.2
2.5	18	2.4	6.1
2.8	45	2.5	11
3.2	92	2.8	36
3.5	137	3.5	121
		4.5	332

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	17	0	* 0.4	b 1.3	e 4.4	* 13	3.6	142	6.0	5.2	0.1	3.6
2	.6	0	.4	b 1.3	e 4.1	9.8	3.4	43	2.0	1.4	.1	2.2
3	0	* 20	.4	b* 1.4	e 4.0	4.0	2.8	16	1.6	54	.1	1.1
4	0	4.1	12	b 3.0	e 4.5	2.8	2.4	e 6.2	1.6	2.8	e .2	24
5	0	.7	7.5	7.8	e 5.1	2.2	* 3.6	e 3.7	4.6	1.2	.3	1.4
6	* 0	.3	1.2	61	e 3.6	3.0	4.8	e 2.6	2.6	.7	29	.8
7	0	.3	.7	20	e 3.3	2.8	3.2	e 1.8	* 1.2	1.2	1.6	.5
8	0	.2	.6	10	e 3.2	10	3.8	19	1.2	.9	.9	.4
9	0	.1	.7	b 5.0	e 3.1	64	11	e 3.5	1.0	.3	.5	.3
10	0	.1	3.5	2.7	e 3.0	17	2.8	45	1.0	0	.2	.4
11	* 0	0	1.5	b 2.4	e 2.8	17	2.4	62	.9	18	.1	.2
12	0	0	2.0	b 2.3	e 2.7	30	2.4	13	.9	7.3	0	0
13	.8	.1	b 1.2	b 2.3	e 3.6	13	3.4	e 4.5	.6	1.8	0	0
14	.3	2.2	.8	b 2.7	e 5.3	7.8	1.8	e 3.0	.4	74	0	12
15	0	.4	.7	b 100	e 3.2	5.1	1.4	e 2.1	.4	52	0	1.0
16	0	60	b 4.5	21	e 3.0	4.2	1.2	e 1.7	.5	5.6	0	.4
17	0	4.2	b 13	b 13	e 2.6	3.4	1.2	e 1.5	.4	2.8	0	.1
18	0	1.5	5.4	b 8.0	e 3.7	3.2	1.2	e 1.3	.4	1.4	0	0
19	2.0	1.2	27	6.8	e 4.7	6.4	1.0	e 1.1	1.2	1.0	0	0
20	.4	1.1	8.8	b 6.2	e 3.5	26	.9	e .9	.5	1.0	0	0
21	0	.8	3.2	7.6	e 5.0	256	.8	41	e .7	1.4	0	0
22	0	3.0	2.7	55	e 17	26	1.2	13	e 1.2	4.7	0	0
23	0	36	12	15	e 7.4	8.2	2.4	4.5	e .9	17	0	0
24	0	4.5	3.2	e 6.2	e 20	4.2	.9	e 1.2	e 1.2	2.2	0	* 0
25	5.8	1.8	2.0	e 5.4	e 12	2.8	.8	9.2	e .7	4.8	19	.1
26	0	1.2	1.7	* 195	157	e 2.7	.7	30	e .7	2.2	11	0
27	0	.9	b 1.6	20	48	e 2.6	.8	33	.6	.6	.7	0
28	0	.7	b 1.5	e 8.5	33	2.6	.9	8.2	3	.4	.3	0
29	.1	.6	b 1.4	e 6.8	---	2.6	.8	* 3.9	.5	.4	0	0
30	3.8	.5	b 1.4	e 5.7	---	4.8	* 8.8	6.7	5.4	.3	.1	0
31	.2	---	b 1.3	e 4.8	---	6.8	---	13	---	* .3	* 34	---
Total	31.0	146.5	124.3	608.2	372.8	564.0	76.4	537.8	41.2	267.1	98.2	48.5
Mean	1.00	4.88	4.01	19.6	13.3	18.2	2.55	17.3	1.37	8.62	3.17	1.62
Cfsm	0.097	0.474	0.389	1.90	1.29	1.77	0.248	1.68	0.133	0.837	0.308	0.157
In.	0.11	0.53	0.45	2.19	1.34	2.04	0.28	1.94	0.15	0.96	0.36	0.18

Calendar year 1961 : Max 560 Min 0 Mean 12.0 Cfsm 1.17 In. 15.83
Water year 1961-62 : Max 256 Min 0 Mean 7.99 Cfsm 0.776 In. 10.53

Peak discharge (base, 380 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	0900	5.38	550	7-14	0800	5.10	476
2-26	0630	4.84	404				
3-21	1030	5.76	670				
5-1	0200	5.15	500				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
e Stage-discharge relation indefinite.

3-3532. Eagle Creek at Zionsville, Ind.

Location.--Lat 39°56'56", long 86°15'22", in NW¼ sec. 1, T. 17 N., R. 2 E., on downstream side of second pier from right bank of bridge on State Highway 334 at Zionsville, and 200 ft upstream from Long Branch.

Drainage area.--102 sq mi.

Records available.--October 1957 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 816.85 ft above mean sea level, datum of 1929. Prior to Oct. 9, 1957, wire-weight gage at same site and datum.

Average discharge.--5 years, 111 cfs.

Extremes.--Maximum discharge during year, 8,700 cfs Jan. 26 (gage height, 13.00 ft); minimum, 1.8 cfs June 30 (gage height, 2.35 ft).
1957-62: Maximum discharge, 9,100 cfs Aug. 2, 1958 (gage height, 13.22 ft); no flow for several days in September 1959.
Flood of June 28, 1957, reached a stage of 19.20 ft, from floodmark.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-30, June 7 to Sept. 4, Sept. 8-13, 15, 18-30)

2.2	1.2	4.0	290
2.3	3.0	4.5	460
2.4	6.7	5.0	660
2.5	13	6.0	1,150
2.7	28	9.0	2,960
3.0	63	11.0	5,100
3.5	157		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	47	49	46	118	170	84	42	36	98	4.5	2.5
2	9.6	35	46	45	100	118	79	59	29	138	4.1	2.3
3	7.8	28	41	44	90	84	69	57	24	* 292	4.8	2.5
4	5.6	67	42	45	99	62	66	44	21	157	4.8	21
5	4.8	63	66	90	181	55	* 65	38	19	68	4.8	16
6	4.4	42	57	719	90	50	65	35	18	38	9.0	9.6
7	3.8	32	49	709	80	48	65	33	15	73	18	6.7
8	3.8	27	* 38	307	71	* 62	62	52	* 11	32	13	5.2
9	3.5	23	35	194	* 64	413	87	63	95	22	10	4.8
10	3.2	* 20	41	138	50	338	66	65	69	15	8.0	4.8
11	3.5	19	45	118	42	267	69	* 341	36	13	6.7	4.1
12	3.5	18	48	* 106	45	651	62	194	26	22	5.6	3.5
13	* 5.2	18	52	92	45	324	60	129	21	12	5.2	3.2
14	10	20	68	80	55	220	59	93	17	395	4.4	8.5
15	13	30	55	330	46	153	50	74	14	290	4.1	20
16	12	323	47	360	42	129	45	63	12	220	3.7	12
17	10	287	65	180	41	107	41	56	9.0	117	3.5	8.4
18	8.4	157	71	120	40	101	41	52	7.8	68	3.8	4.8
19	8.4	115	78	102	63	153	40	47	11	41	3.8	4.1
20	9.6	90	135	89	48	212	37	44	10	31	3.4	3.2
21	10	73	97	78	47	2,370	33	41	7.2	24	3.0	2.8
22	10	69	82	240	126	782	33	40	5.2	22	2.5	2.5
23	9.6	271	159	185	105	443	34	37	4.8	40	2.3	2.5
24	9.6	206	169	138	76	307	31	33	7.2	26	2.5	* 2.5
25	16	139	119	102	68	233	30	30	7.8	24	3.1	3.2
26	21	113	85	*4,380	1,410	169	30	35	4.4	22	17	3.8
27	20	90	71	1,770	561	137	28	77	3.0	18	14	3.8
28	16	74	63	460	270	119	29	119	2.5	15	2.8	3.8
29	15	62	56	307	---	103	29	71	2.1	13	3.2	3.5
30	36	55	51	233	---	92	30	55	2.1	11	3.3	3.2
31	74	---	48	150	---	89	---	40	---	9.6	* 2.5	---
Total	378.3	2,613	2,128	11,957	4,073	8,561	1,519	2,159	547.1	2,366.6	181.4	178.8
Mean	12.2	87.1	68.6	386	145	276	50.6	69.6	18.2	76.3	5.85	5.96
Cfsm	0.120	0.854	0.673	3.78	1.42	2.71	0.496	0.682	0.178	0.748	0.057	0.058
In.	0.14	0.95	0.78	4.36	1.48	3.12	0.55	0.79	0.20	0.86	0.07	0.06

Calendar year 1961: Max 3,040 Min 1.4 Mean 114 Cfsm 1.12 In. 15.12
Water year 1961-62: Max 4,380 Min 2.1 Mean 100 Cfsm 0.980 In. 13.36

Peak discharge (base, 1,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-6	2030	6.80	1,590				
1-26	1800	13.00	8,700				
2-26	1500	8.47	2,570				
3-21	1400	9.55	3,500				

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 10-14, 16-25, Feb. 7-9, Mar. 2-8, July 23 to Aug. 4, Aug. 6-11, 16-25, 28-30. Stage-discharge relation affected by ice Dec. 12-14, 26-31, Jan. 15, Jan. 31 to Feb. 3, Feb. 6, 10, 23, 24, Feb. 28 to Mar. 1.

3-3535. Eagle Creek at Indianapolis, Ind.

Location.--Lat 39°46'33", long 86°15'01", in NE¼ sec. 1, T. 15 N., R. 2 E., on right bank at downstream side of bridge on Lynnhurst Drive, approximately 600 ft south of intersection of West 10th Street and Lynnhurst Drive, 0.5 mile downstream from West 10th Street Bridge, 1.0 mile upstream from Vermont Street Bridge, 2.9 miles upstream from mouth of Little Eagle Creek, and 6.9 miles upstream from mouth.

Drainage area.--179 sq miles.

Records available.--November 1938 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 706.21 ft above mean sea level, datum of 1929. Temporary site during reconstruction of bridge on Lynnhurst, a wire-weight gage on downstream side of 10th Street Bridge, approximately half a mile upstream at same datum Aug. 8, 1957 to June 30, 1958.

Average discharge.--23 years (1939-62) 155 cfs.

Extremes.--Maximum discharge during year, 9,550 cfs Jan. 27 (gage height, 9.46 ft); minimum daily, 5.6 cfs June 29.
1938-62: Maximum discharge, 28,800 cfs June 28, 1957 (gage height, 16.38 ft), from rating curve extended above 9,000 cfs on basis of a combined current-meter measurement and slope-area measurement; no flow for several days in August 1941.
Flood of March 1913 reached a stage of 16.0 ft, from information by local residents.

Remarks.--Records fair except those for periods of no gage-height record, doubtful gage-height record, or ice effect, which are poor.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	50	55	56	210	300	161	165	63	70	g 30	g 26
2	18	35	52	55	190	210	153	134	49	d 205	g 27	g 19
3	16	32	49	54	181	170	138	124	38	d 376	g 25	g 23
4	14	70	49	53	173	148	131	93	35	d 402	g 24	g 77
5	13	60	55	68	255	131	131	70	33	d 245	g 20	g 50
6	12	46	63	403	180	104	134	60	29	d 173	g 57	g 33
7	10	37	56	970	140	96	131	53	26	d 110	g 62	g 25
8	8.8	30	49	382	110	98	124	74	24	d 157	g 42	g 20
9	8.4	28	43	199	96	376	138	104	170	75	g 32	g 19
10	8.4	27	46	146	85	645	153	159	115	40	g 25	g 18
11	7.6	26	g 47	132	79	393	131	720	76	36	g 21	g 16
12	7.2	24	g 53	120	74	882	124	410	* 55	177	g 19	g 15
13	8.0	23	g 61	110	79	560	120	270	41	62	g 19	g* 15
14	10	24	g* 80	100	90	392	114	201	31	d 899	g 17	g 46
15	13	g* 29	61	350	79	* 274	104	145	24	d 840	g 17	g 39
16	12	159	60	* 440	* 70	229	* 90	117	18	d 510	g 16	g 32
17	* 10	290	72	220	70	189	79	* 96	15	d 320	g* 15	g 24
18	9.3	152	81	160	70	169	g 78	d 76	12	d 213	g 14	g 20
19	9.3	117	85	130	90	201	g 77	d 67	20	d* 117	g 14	g 18
20	9.3	94	126	110	93	312	g 70	d 63	17	d 74	g 13	g 16
21	10	74	114	100	81	3,080	g 67	d 65	10	d 56	g 12	g 14
22	11	70	94	169	152	1,810	g 62	d 79	7.4	d 49	g 11	g 14
23	11	145	113	240	180	780	g 60	d 65	7.0	d 63	g 10	g 14
24	10	207	170	140	149	535	g 60	d 54	16	d 67	g 10	g 13
25	15	137	131	120	138	410	g 58	52	20	d 47	g 18	g 14
26	21	114	112	2,550	1,390	325	g 57	61	13	45	g 61	g 13
27	20	99	90	* 5,380	1,180	261	g 55	110	9.0	50	g 30	g 12
28	17	78	76	905	628	225	g 52	210	6.0	g 44	g 23	g 11
29	16	69	68	578	----------	193	g 52	155	5.6	45	g 19	g 11
30	16	63	62	410	----------	177	g 50	110	25	45	g 15	g 11
31	70	---------	59	250	----------	173	---------	83	----------	47	g 24	----------
Total	440.3	2,409	2,332	15,100	6,312	13,848	2,954	4,245	1,010.0	5,659	742	678
Mean	14.2	80.3	75.2	487	225	447	98.5	137	33.7	183	23.9	22.6
Cfsm	0.079	0.449	0.420	2.72	1.26	2.50	0.550	0.765	0.188	1.02	0.134	0.126
In.	0.09	0.50	0.48	3.14	1.31	2.88	0.61	0.88	0.21	1.18	0.15	0.14

Calendar year 1961 : Max 4,610 Min 5.3 Mean 170 Cfsm 0.950 In. 12.90
Water year 1961-62 : Max 5,380 Min 5.6 Mean 153 Cfsm 0.855 In. 11.57

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	0600	9.46	9,550				
2-26	2200	4.74	2,800				
3-21	2100	6.26	4,660				

* Discharge measurement made on this day.
d Doubtful gage-height record.
g Computed from twice-daily wire-weight gage readings.
Note.--No gage-height record Oct. 13-17, 21-28, Oct. 31 to Nov. 5, May 25 to July 1, July 9-11, 13, 26, 27, 29-31. Stage-discharge relation affected by ice Dec. 15, 16, Dec. 27 to Jan. 4, Jan. 11-15, 17-21, 23-25, Jan. 31 to Feb. 2, Feb. 6-10, 23, Mar. 1-4.

3-3536. Little Eagle Creek at Speedway, Ind.

Location.--Lat 39°47'15", long 86°13'41", in NW¼ sec. 32, T. 16 N., R. 3 E., on right bank at downstream side of 16th Street Bridge in Speedway, 0.5 mile east of 500-Mile Track, 0.6 mile upstream from tributary from the right and 2.4 miles upstream from mouth.

Drainage area.--18.6 sq mi.

Records available.--October 1959 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 710.82 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Extremes.--Maximum discharge during year, 992 cfs Jan. 26, Mar. 21; maximum gage height, 5.45 ft Jan. 26; no flow for many days. 1959-62: Maximum discharge, 1,940 cfs Apr. 25, 1961; no flow at times each year.

Remarks.--Records good except for periods of ice effect or discharge below 1.0 cfs, which are poor.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.7	1.5	1.0	5.4	16	30	4.1	56	33	104	2.6	5.6
2	.2	1.0	.9	5.3	14	24	3.3	29	25	34	2.4	2.6
3	.2	2.9	.9	5.3	11	21	2.4	17	18	192	2.0	2.6
4	.4	2.6	2.3	5.4	11	17	2.0	13	36	39	1.5	21
5	.1	2.3	2.6	17	9.8	16	2.6	11	41	15	1.6	3.1
6	.1	1.8	2.3	79	9.2	14	3.1	9.2	22	7.9	10	1.8
7	0	1.5	1.5	71	8.6	13	3.8	8.3	14	4.4	5.3	1.2
8	.1	1.5	1.0	33	8.1	16	7.4	17	8.7	3.6	2.6	.5
9	.1	1.5	1.2	26	7.4	81	14	12	6.7	2.2	1.6	.5
10	.1	1.2	2.6	21	6.9	51	8.3	62	6.3	1.1	1.1	.6
11	.4	1.8	2.9	18	6.2	53	6.3	217	5.6	11	.7	.2
12	a .5	2.3	3.5	17	7.9	163	5.3	58	5.6	45	.6	.1
13	a .6	3.5	3.1	15	9.7	62	7.9	30	5.3	10	.4	* .5
14	a .9	4.1	* 2.6	13	15	42	6.7	18	3.1	358	.2	8.2
15	a .8	* 2.3	2.3	51	9.0	* 33	5.3	13	1.3	231	.3	3.6
16	a .7	49	4.8	55	* 7.9	29	* 5.3	10	1.1	89	.3	1.6
17	* .7	11	9.3	* 13	6.6	24	6.3	* 9.7	* .8	40	* .4	.6
18	.7	4.7	6.9	11	6.9	22	6.7	9.7	3.6	22	.5	.2
19	1.2	2.6	11	11	11	27	6.3	8.3	4.4	* 12	.3	.1
20	.9	2.0	18	10	8.6	32	6.0	7.0	1.6	8.3	.1	.1
21	1.0	1.2	8.6	10	11	* 547	6.3	15	.8	6.7	.1	0
22	1.0	2.5	6.6	36	28	98	7.4	36	.6	7.4	0	0
23	1.0	16	17	26	16	43	7.4	10	.3	12	0	0
24	1.0	8.6	13	20	14	26	6.7	6.7	.2	6.0	0	0
25	2.7	4.7	8.6	17	12	17	6.3	6.3	.1	4.1	5.3	.1
26	1.8	3.5	7.2	464	224	11	6.3	13	0	3.3	12	0
27	1.0	2.3	6.4	107	101	7.9	6.0	54	0	2.6	3.8	.1
28	1.0	1.8	6.1	42	70	6.0	6.0	66	0	2.4	2.0	.1
29	1.2	1.5	5.9	30	--------	5.0	6.0	49	0	2.2	1.2	0
30	1.5	1.0	5.7	24	--------	4.7	11	40	11	2.2	.7	0
31	1.2	--------	5.5	20	--------	4.7	----------	32	----------	2.6	13	----------
Total	23.8	144.2	171.3	1,278.4	666.8	1,540.3	182.5	943.2	256.1	1,281.0	72.6	55.0
Mean	0.768	4.81	5.53	41.2	23.8	49.7	6.08	30.4	8.54	41.3	2.34	1.83
Cfsm	0.041	0.259	0.297	2.22	1.28	2.67	0.327	1.63	0.459	2.22	0.126	0.098
In.	0.05	0.29	0.34	2.56	1.33	3.08	0.36	1.88	0.51	2.56	0.15	0.11

Calendar year 1961: Max 935 Min 0 Mean 21.0 Cfsm 1.13 In. 15.33
Water year 1961-62: Max 547 Min 0 Mean 18.1 Cfsm 0.973 In. 13.22

Peak discharge (base, 450 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	1500	5.45	992				
3-21	1430	5.37	992				
7-14	1330	5.12	870				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 13, Dec. 26 to Jan. 4, Jan. 8-25, Jan. 31 to Feb. 11, Feb. 23-25, Feb. 28 to Mar. 3.

GPO 802-181-7

3-3537. West Fork White Lick Creek at Danville, Ind.

Location.--Lat 39°45'36", long 86°30'47", in NW¼ NE¼ sec. 10, T. 15 N., R. 1 W., on upstream side of U. S. 36 highway bridge, 0.1 mile east of city limits of Danville, 0.5 mile upstream from unnamed tributary from left, and 7 miles west of Avon.

Drainage area.--28.9 sq mi.

Records available.--May 1958 to September 1962.

Gage.--Wire-weight gage read twice daily. Crest-stage gage since Dec. 10, 1959. Datum of the gage is 828.83 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 3,330 cfs July 14 (gage height, 11.32 ft); no flow Oct. 10, Aug. 22-24.
1958-62: Maximum discharge, that of July 14; no flow for many days.
Maximum flood known, 6,660 cfs June 28, 1957 (gage height, 16.0 ft, from contracted-opening measurement).

Remarks.--Records poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 29 to Sept. 30)

0.72	0	1.8	43
.8	.4	2.5	135
.9	1.6	3.0	235
1.0	3.5	4.0	480
1.1	6.2	6.0	1,130
1.3	13	7.0	1,480
1.6	27	8.0	1,850

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.9	0.6	3.5	a 6.6	a 20	54	21	29	3.3	1.1	* 3.3	1.3
2	.2	.7	3.3	a 6.4	a 17	41	19	33	3.0	* 8.7	2.8	.7
3	.2	a 2.0	2.8	a 6.2	16	33	17	22	2.6	28	2.2	18
4	.2	a 2.5	4.0	a 6.0	b 15	23	17	18	2.6	a 10	2.2	129
5	.2	3.5	4.8	* 25	b 14	21	*17	a 14	2.4	3.0	1.9	* 8.1
6	* .1	1.7	3.8	234	b 14	19	17	12	7.4	1.6	4.8	3.3
7	.1	1.3	* 3.3	262	a 13	18	16	10	2.6	1.2	3.8	2.6
8	.2	.9	2.8	41	a 13	* 18	14	30	* 1.7	.8	2.2	1.3
9	.2	.7	3.5	a 25	a 12	95	26	18	2.6	.6	1.9	1.3
10	0	a .6	4.8	a 20	a 11	76	20	36	a 3.0	.4	1.1	1.3
11	.2	.6	a 5.0	a 18	a 10	55	20	166	3.0	.4	a 1.0	.9
12	.1	.7	b 8.0	a 16	10	128	17	72	13	32	a 1.0	.7
13	.6	.9	a 8.0	a 14	* 13	75	19	45	8.7	9.3	.9	.5
14	.2	2.2	a 7.0	a 90	14	47	15	28	3.8	1,790	.5	25
15	.2	1.2	a 6.0	a 60	12	38	14	22	3.0	570	.5	a 10
16	.3	a10	a 6.0	a 45	12	31	12	17	2.0	216	.5	a 6.0
17	.3	a20	b 10	a 35	9.7	25	11	13	1.7	112	.5	a 3.5
18	.2	12	14	a 30	a 11	26	11	11	1.3	49	.5	a 2.5
19	.2	7.8	25	a 25	a 40	38	10	10	2.4	29	.5	a 1.6
20	.2	5.6	23	a 23	16	40	9.3	a 10	1.3	21	.2	a 1.1
21	.2	4.0	16	a 21	14	* 1,050	8.7	9.0	1.2	a 17	.2	a .9
22	.2	5.1	a 16	b 30	33	224	a 10	9.7	.9	a 15	0	a .8
23	.2	a10	38	a 25	20	105	9.3	7.4	.8	a 18	0	.7
24	.4	16	a 20	a 21	25	65	8.1	5.3	.8	a 12	0	.7
25	2.8	11	a 15	a 20	35	51	7.8	5.3	.6	a 9.0	a 9.0	.9
26	1.9	8.4	b 12	1,010	566	38	7.8	7.4	.6	a 7.0	a 5.0	.9
27	1.3	6.8	b 9.0	264	169	a 31	7.1	a 20	.4	a 6.0	1.6	1.9
28	.8	5.1	a 8.0	91	90	27	6.8	7.8	.4	a 5.0	.9	1.9
29	.9	4.5	a 7.5	54	--------	24	6.8	a 6.0	.4	4.8	.2	.7
30	*1.3	4.0	a 7.0	b 35	--------	24	* 11	a 5.0	.3	4.3	.2	.5
31	.8	---------	a 6.8	b 25	--------	22	---------	4.5	--------	3.8	5.6	---------
Total	15.6	150.4	303.9	2,584.2	1,244.7	2,562	405.7	703.4	77.8	2,986.0	55.0	228.6
Mean	0.50	5.01	9.80	83.4	44.5	82.6	13.5	22.7	2.59	96.3	1.77	7.62
Cfsm	0.017	0.173	0.339	2.89	1.54	2.86	0.467	0.785	0.090	3.33	0.061	0.264
In.	0.02	0.19	0.39	3.33	1.60	3.30	0.52	0.90	0.10	3.84	0.07	0.29

Calendar year 1961 : Max 1,330 Min 0 Mean 30.7 Cfsm 1.06 In. 14.40
Water year 1961-62 : Max 1,790 Min 0 Mean 31.0 Cfsm 1.07 In. 14.55

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	1400	7.00	1,480	7-14	1030	11.32	3,330
2-26	1200	4.90	750	9-4	0100	5.49	955
3-21	1200	6.84	1,410				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3538. White Lick Creek at Mooresville, Ind.

Location.--Lat 39°36'28", long 86°22'56", in SE¼ sec. 35, T. 14 N., R. 1 E., on right bank at downstream side of bridge on State Highway 42 at Mooresville, 1.0 mile downstream from McCracken Creek and 2.0 miles upstream from East Fork White Lick Creek.

Drainage area.--212 sq mi.

Records available.--August 1957 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 644.64 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 220 cfs.

Extremes.--Maximum discharge during year, 11,500 cfs July 14 (gage height, 20.47 ft); minimum, 9.8 cfs Oct. 18 (gage height, 8.92 ft).
1957-62: Maximum discharge, 14,100 cfs May 8, 1961 (gage height, 21.56 ft); minimum daily, 2.0 cfs Dec. 24, 25, 1960.
Flood of June 28, 1957 reached a stage of 22.5 ft, from levels to high-water mark by Indiana Flood Control and Water Resources Commission.

Remarks.--Records fair except those for periods of no gage-height record or ice effect, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet and discharge, in cubic feet per second)
(Shifting-control method used Jan. 28-30, Feb. 9-25)

8.9	8.2	11.0	690
9.0	17	13.0	1,800
9.2	45	15.0	3,320
9.5	115	17.0	5,700
10.0	275	19.0	8,530

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	21	42	88	b 190	370	190	646	72	49	47	68
2	17	22	39	84	b 170	258	175	510	68	* 75	45	44
3	15	26	38	82	b 150	222	163	275	61	167	44	41
4	14	39	40	* 82	b 150	205	* 157	178	63	178	40	1,610
5	* 14	47	80	88	b 160	181	151	142	61	82	39	258
6	13	39	* 59	777	b 150	157	154	124	85	51	70	145
7	12	30	49	990	b 140	* 148	148	110	55	39	68	100
8	12	27	42	450	b 130	145	142	142	* 47	40	49	78
9	12	24	39	350	* 121	466	172	148	75	30	39	68
10	12	22	47	240	108	590	160	156	85	26	33	61
11	12	21	57	210	102	450	142	1,440	68	25	33	51
12	11	20	70	190	100	1,320	136	690	72	236	32	47
13	13	22	80	170	115	690	142	410	68	95	30	42
14	13	26	68	160	163	470	130	275	49	7,080	30	882
15	11	29	63	900	121	370	118	193	42	5,130	29	292
16	11	236	61	650	108	310	108	154	39	1,500	27	166
17	11	310	110	500	102	258	105	127	36	690	29	115
18	11	166	163	400	102	240	100	110	42	430	27	88
19	13	102	219	330	121	292	95	100	51	292	26	72
20	15	75	310	300	112	350	92	88	34	193	26	61
21	15	57	222	270	115	7,040	88	365	32	154	25	55
22	14	49	169	250	202	2,030	88	354	30	142	25	51
23	13	187	236	350	208	890	98	139	30	166	22	47
24	13	230	292	300	142	590	85	100	29	133	22	45
25	20	142	187	250	157	470	78	88	26	108	33	44
26	24	105	145	*6,000	*2,630	370	75	151	25	90	75	40
27	30	82	b 120	*3,200	1,430	310	72	268	24	78	* 49	38
28	25	63	110	690	990	240	70	216	22	70	34	34
29	21	53	100	430	--------	222	70	136	22	65	29	33
30	* 20	47	98	350	--------	208	* 75	100	21	* 59	26	32
31	18	----------	94	b 220	--------	199	--------	82	----------	55	95	----------
Total	481	2,319	3,449	19,351	8,489	20,061	3,579	8,017	1,434	17,528	1,198	4,708
Mean	15.5	77.3	111	624	303	647	119	259	47.8	565	38.6	157
Cfsm	0.073	0.365	0.524	2.94	1.43	3.05	0.561	1.22	0.225	2.66	0.182	0.741
In.	0.08	0.41	0.60	3.39	1.49	3.52	0.63	1.41	0.25	3.07	0.21	0.83

Calendar year 1961: Max 9,490 Min 9.1 Mean 240 Cfsm 1.13 In. 15.30
Water year 1961-62: Max 7,080 Min 11 Mean 248 Cfsm 1.17 In. 15.89

Peak discharge (base, 2,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-26	1630	18.78	8,230	7-14	1800	20.47	11,500
2-26	1530	16.14	4,580	9-4	0530	15.81	4,220
3-21	1530	19.17	8,880				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 28 to Jan. 4 and Jan. 9-26.

3-3540. White River near Centerton, Ind.

Location.--Lat 39°30'02", long 86°24'24", in SW¼ sec. 3, T. 12 N., R. 1 E., on right bank three-eighths of a mile downstream from highway bridge, 1 mile south of Centerton, 1 1/8 miles downstream from White Lick Creek, and at mile 202.6.
Drainage area.--2,435 sq mi.
Records available.--October 1930 to March 1932, October 1946 to September 1962. Prior to March 1932, published as West Fork White River at Martinsville and November 1946 to September 1948, published as West Fork White River near Centerton. Monthly discharge only for October 1947, published in WSP 1305. Daily chain-gage readings of gage height from July 1925 to September 1930 are available in the District office.
Gage.--Water-stage recorder. Datum of gage is 595.44 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark), levels by Indianapolis Power and Light Co. Prior to March 1932, chain gage at site 8½ miles downstream at different datum. November 1946 to July 1953, wire-weight gage three-eighths of a mile upstream at same datum.
Average discharge.--17 years (1930-31, 1946-62) 2,396 cfs (unadjusted).
Extremes.--Maximum discharge during year, 26,300 cfs Jan. 29 (gage height, 14.16 ft); minimum, 420 cfs Oct. 29, 30; minimum gage height, 1.34 ft Aug. 23.
1930-32, 1946-62: Maximum discharge, 43,000 cfs Jan. 6 or 7, 1950 (gage height, 17.2 ft, from floodmark, site then in use); minimum, 135 cfs Sept. 27, 1954; minimum gage height, 0.43 ft Oct. 4, 5, 1954.
Flood in March 1913 reached a stage of 22.8 ft at Martinsville site, from information by State Highway Department of Indiana (discharge, 90,000 cfs, estimated).
Remarks.--Records good except those for periods of no gage-height record or ice effect, which are fair. Flow slightly regulated by Morse and Geist Reservoirs. (Combined capacity, 13,800,000,000 gal.)

Rating tables, water year 1961-62 except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Sept. 25-30)

Oct. 1 to Feb. 27

1.6	420	12.0	16,600
2.0	710	14.0	25,000
3.0	1,780	15.0	33,000
8.0	8,600		

Feb. 28 to Sept. 30

1.3	410	4.0	3,140
1.5	560	8.0	8,600
2.0	1,040		

Note.--Same as preceding table above 8.0 ft.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	900	525	900	850	4,900	a 11,000	2,590	2,120	1,340	1,090	990	1,190
2	* 710	525	800	850	3,730	a 6,000	2,370	3,140	1,290	* 1,340	940	790
3	630	560	670	850	3,080	a 4,000	2,150	*2,480	1,140	1,450	840	641
4	595	710	630	* 950	2,690	a 3,300	* 2,040	2,370	1,040	2,150	790	4,870
5	595	560	1,050	1,000	2,690	a 3,000	2,150	2,040	* 1,040	2,260	740	1,940
6	595	630	* 800	1,390	2,950	a 2,700	2,040	1,740	1,240	1,940	1,440	1,190
7	525	710	755	5,030	* 2,690	a* 2,400	1,940	1,540	1,440	1,640	1,540	940
8	525	630	670	5,840	2,170	2,150	1,840	1,540	1,340	1,540	1,040	790
9	525	560	710	b 4,500	2,040	3,140	2,040	1,640	1,140	1,440	940	700
10	595	525	755	b 2,600	1,910	5,980	1,940	1,640	1,190	1,140	840	650
11	630	490	710	b 1,600	1,660	7,100	1,940	5,420	1,540	1,040	740	650
12	670	462	755	1,540	1,430	8,750	1,840	3,740	1,240	1,540	700	614
13	630	490	755	1,540	1,430	9,050	1,740	2,700	1,140	1,240	623	596
14	670	595	755	1,540	1,540	8,000	1,640	2,150	1,340	9,190	605	1,670
15	595	595	710	4,560	1,430	5,700	1,540	1,840	1,340	17,200	569	1,340
16	560	1,160	755	4,900	1,320	4,250	1,540	1,540	1,140	9,100	578	990
17	595	1,780	1,260	5,160	1,260	3,380	1,440	1,440	990	6,680	560	840
18	595	1,780	1,100	4,900	1,210	2,920	1,440	1,290	890	5,160	536	700
19	595	1,660	1,210	3,600	1,260	2,700	1,340	1,240	940	3,500	504	614
20	630	1,380	1,540	2,560	1,260	2,810	1,340	1,140	940	2,590	480	569
21	560	1,160	1,210	2,040	1,260	11,600	1,290	1,140	1,040	2,040	496	* 528
22	710	1,050	1,100	3,210	1,430	18,400	1,190	2,260	940	1,740	473	528
23	595	1,260	1,320	3,080	1,780	15,000	1,290	1,440	840	2,370	445	488
24	630	1,540	1,430	3,340	2,040	12,200	1,240	1,190	740	3,030	473	473
25	630	1,540	1,320	3,080	2,040	7,700	1,190	1,090	700	2,480	528	520
26	630	1,430	1,210	6,090	6,880	5,700	1,140	1,340	740	1,940	1,440	504
27	525	1,320	1,210	15,400	11,200	4,510	1,090	1,640	740	1,640	* 940	480
28	469	1,160	1,050	22,800	14,400	3,740	1,090	1,740	700	1,440	840	473
29	420	1,050	950	25,600	----------	3,260	1,040	1,440	641	1,290	790	480
30	483	1,000	800	19,200	---------	2,920	1,040	1,640	623	* 1,190	650	431
31	* 595	----------	800	7,100	---------	2,810	----------	1,340	----------	1,090	1,090	----------
Total	18,612	28,837	29,690	166,700	83,680	186,170	48,500	59,010	31,404	93,480	24,160	27,189
Mean	600	961	958	5,377	2,989	6,005	1,617	1,904	1,047	3,015	779	906
Cfsm	0.246	0.395	0.393	2.21	1.23	2.47	0.664	0.782	0.430	1.24	0.320	0.372
In.	0.28	0.44	0.45	2.55	1.28	2.85	0.74	0.90	0.48	1.43	0.37	0.42

Calendar year 1961 : Max 38,000 Min 320 Mean 2,591 Cfsm 1.06 In. 14.43
Water year 1961-62 : Max 25,600 Min 420 Mean 2,185 Cfsm 0.897 In. 12.19

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3545. Bean Blossom Creek at Bean Blossom, Ind.

Location.--Lat 39°15'45", long 86°14'55", in NW¼ sec. 31, T. 10 N., R. 3 E., on right bank, 15 ft downstream from bridge on State Highway 135, 0.3 mile south of Bean Blossom, and 2.5 miles upstream from North Fork Bean Blossom Creek.

Drainage area.--14.6 sq mi.

Records available.--October 1951 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 673.65 ft above mean sea level, datum of 1929.

Average discharge.--11 years, 16.2 cfs.

Extremes.--Maximum discharge during year, 1,270 cfs July 15 (gage height, 8.53 ft) from rating curve extended above 2,000 cfs on basis of contracted-opening measurement; no flow on many days.
1951-62: Maximum discharge, 8,140 cfs June 23, 1960 (gage height, 11.78 ft) from curve extended above 2,000 cfs on basis of contracted-opening measurement; no flow on many days.

Remarks.--Records fair.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	0.2	b 3.5	b 8.8	b 35	39	7.1	6.2	0.7	1.4	2.0
2	0	0	.2	b 3.5	b 8.4	b 23	26	16	5.2	.9	1.1	1.1
3	0	.4	.2	b 3.7	b 8.0	20	21	9.3	3.7	.9	1.1	2.1
4	0	.4	2.4	5.2	b 7.2	17	17	7.5	8.5	.9	.9	2.1
5	0	.4	9.7	6.2	b 6.4	16	16	5.9	7.5	.8	.8	1.4
6	0	.3	3.9	23	5.6	14	15	5.2	40	.6	8.5	.8
7	0	.2	3.0	22	5.2	14	12	4.4	27	.5	2.8	.5
8	0	.1	2.3	b 11	4.6	20	12	4.6	12	.5	1.6	.5
9	0	.1	2.5	b 9.0	6.6	108	16	3.7	8.0	.5	1.2	.5
10	0	.1	3.1	b 7.4	7.5	52	12	4.3	5.9	.5	.9	.5
11	0	.1	3.5	b 6.0	6.6	35	12	28	12	.4	.6	.5
12	0	.1	4.2	5.6	6.2	39	12	16	13	.4	.5	.3
13	0	.4	a 4.8	5.9	8.0	27	14	10	8.8	.8	.5	.1
14	0	.5	a 4.2	6.2	9.3	22	13	6.6	5.9	92	* .4	.5
15	0	.5	a 4.0	223	8.4	18	11	4.6	4.4	288	.5	.4
16	0	2.2	a 4.4	b 35	8.4	16	9.8	3.7	3.3	57	.4	.3
17	0	.9	a 12	b 19	7.5	13	9.3	3.0	2.6	26	.4	.1
18	0	.5	* 11	b 12	7.5	11	8.4	2.0	2.1	* 14	.1	.3
19	0	.4	14	*b 9.0	8.8	12	7.5	1.8	* 1.6	8.4	0	* .1
20	0	.3	12	b 9.0	8.0	18	6.2	1.6	1.4	5.6	0	0
21	0	.2	7.0	b 9.0	9.3	212	5.9	* 42	1.2	8.8	0	0
22	0	* .3	5.6	191	15	69	5.6	35	1.2	5.2	0	0
23	* 0	.9	7.0	b 46	* 17	* 39	6.2	12	1.2	9.3	0	0
24	0	.7	6.6	26	31	26	5.6	5.9	1.1	5.6	0	.1
25	0	.6	b 4.5	19	62	19	5.2	9.3	1.0	4.4	.3	.5
26	0	.5	b 4.5	37	286	16	* 4.4	9.3	.9	3.3	1.6	.4
27	0	.4	b 4.5	38	115	13	4.2	66	.8	2.8	.5	.1
28	0	.3	b 4.0	23	92	12	4.2	39	.6	2.3	.1	.1
29	0	.3	b 4.0	17	----------	9.8	3.7	19	.6	3.3	0	0
30	.1	.2	b 3.5	14	----------	16	3.3	14	.6	2.3	0	0
31	.1	----------	b 3.5	b 11	----------	42	----------	9.8	----------	1.6	4.9	----------
Total	0.2	12.3	156.3	856.2	774.3	1,003.8	337.5	406.6	188.3	548.3	31.1	15.3
Mean	0.01	0.41	5.04	27.6	27.7	32.4	11.2	13.1	6.28	17.7	1.00	0.51
Cfsm	0.00068	0.028	0.345	1.89	1.90	2.22	0.767	0.897	0.430	1.21	0.068	0.035
In.	0.0008	0.03	0.40	218	1.98	2.56	0.86	1.03	0.48	1.40	0.08	0.04

Calendar year 1961 : Max 1,080 Min 0 Mean 17.9 Cfsm 1.23 In. 16.60
Water year 1961-62 : Max 288 Min 0 Mean 11.9 Cfsm 0.815 In. 11.04

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-26	0600	7.66	1,000				
7-15	1230	8.53	1,270				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3550. Bear Creek near Trevlac, Ind.

Location.--Lat 39°16'40", long 86°20'45", in NE¼ sec. 30, T. 10 N., R. 2 E., on left bank, 15 ft west of county road at footbridge, 1.1 miles northwest of Trevlac, and 1.3 miles upstream from mouth.

Drainage area.--7.00 sq mi.

Records available.--May 1952 to September 1962.

Gage.--Water-stage recorder. Altitude of gage is 640 ft (from topographic map).

Average discharge.--10 years, 6.78 cfs.

Extremes.--Maximum discharge during year, 278 cfs Feb. 26 (gage height, 3.81 ft); no flow for many days.
1952-62: Maximum discharge, 1,830 cfs June 12, 1957 (gage height, 7.62 ft), from rating curve extended above 290 cfs on basis of slope-area measurement of peak flow at gage height, 6.43 ft; no flow for many days.

Remarks.--Records fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.1	0	1.5	7.9
1.2	.6	1.7	18
1.3	2.3	2.0	45
1.4	4.7	3.0	171

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.4	0.3	0.3	b 1.8	3.9	18	15	2.3	9.0	0.1	0.2	1.0
2	.1	.2	.3	1.7	3.9	12	13	3.6	9.3	.1	.2	.8
3	.1	1.3	.2	2.1	3.6	8.6	10	2.9	5.3	.2	.2	.8
4	0	.8	10	2.1	3.2	7.6	8.6	2.3	6.5	.1	.2	1.0
5	0	.4	7.7	2.5	3.2	6.8	8.2	2.3	5.3	.1	.2	.6
6	0	.3	30	10	2.1	6.5	7.6	1.9	5.3	.1	2.1	.5
7	0	.2	2.1	11	2.1	5.6	6.8	1.5	4.2	.1	.2	.4
8	0	.2	1.5	6.1	1.9	7.3	6.2	1.9	2.9	.1	.2	.3
9	0	.2	1.7	4.4	b 2.1	46	9.3	1.5	1.9	0	.2	.3
10	0	.2	1.9	b 2.6	2.3	25	7.9	4.2	1.7	0	.3	.3
11	0	.2	2.1	b 1.8	2.5	20	7.2	49	1.7	0	.2	.3
12	0	.2	3.2	b 1.5	2.5	33	7.2	14	1.3	0	.1	.2
13	0	.3	2.7	1.2	2.9	22	7.9	8.2	1.0	.4	.1	.3
14	0	.4	2.3	1.8	3.9	14	7.2	5.0	.7	17	* .2	1.2
15	.1	.4	1.5	b 60	3.6	11	6.5	3.4	.5	43	.1	.5
16	.1	3.0	3.4	b 24	3.9	9.0	5.0	2.5	.3	7.6	.1	.4
17	.1	1.0	7.2	b 8.0	3.6	7.2	4.7	1.7	.2	3.4	.1	.3
18	.1	.5	* 6.2	b 5.3	3.6	6.5	4.4	1.2	.2	* 1.9	.1	.2
19	.2	.4	9.5	*b 3.9	3.9	6.5	3.9	.7	* .2	1.2	.1	* .2
20	.2	.4	7.9	b 3.7	3.6	12	3.2	.5	.2	.7	.1	.2
21	.2	.3	5.3	4.2	4.2	138	2.7	* 9.4	.2	2.2	.1	.2
22	.2	* .4	4.2	80	5.6	43	2.9	8.6	.2	1.2	.1	.2
23	* .1	1.5	4.2	25	* 8.2	* 20	4.2	4.2	.2	3.2	0	.2
24	.1	1.0	3.9	10	13	13	3.2	2.3	.3	1.3	0	.3
25	.2	.7	2.9	7.2	22	10	2.9	5.1	.3	1.2	6.9	.4
26	.1	.6	3.2	11	121	7.9	* 2.7	5.9	.2	.7	7.2	.2
27	.1	.5	2.9	11	47	6.5	2.1	34	.1	.5	1.0	.3
28	.1	.4	2.5	8.6	41	5.3	2.1	20	0	.4	.5	.6
29	.1	.3	2.1	6.8	----------	4.7	1.9	7.9	0	1.0	.3	.6
30	.7	.3	b 2.0	5.6	----------	5.6	1.7	5.0	0	.5	.2	.6
31	.5	----------	b 1.9	5.0	----------	13	----------	3.4	----------	.3	2.3	----------
Total	3.8	16.9	136.8	329.9	324.3	551.6	176.2	216.4	59.2	88.6	23.8	13.4
Mean	0.12	0.56	4.41	10.6	11.6	17.8	5.87	6.98	1.97	2.86	0.77	0.45
Cfsm	0.017	0.080	0.630	1.51	1.66	2.54	0.839	0.997	0.281	0.409	0.110	0.064
In.	0.02	0.09	0.73	1.74	1.73	2.93	0.94	1.15	0.31	0.47	0.13	0.07

Calendar year 1961: Max 402 Min 0 Mean 8.48 Cfsm 1.21 In. 16.47
Water year 1961-62: Max 138 Min 0 Mean 5.32 Cfsm 0.760 In. 10.31

Peak discharge (base, 200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-26	0400	3.81	278				
7-15	0900	3.24	197				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

3-3560. Bean Blossom Creek at Dolan, Ind.

Location.--Lat 39°14'30", long 86°29'57", in SW¼ sec. 2, T. 9 N., R. 1 W., on downstream side of pier of highway bridge at Dolan, 17.5 miles upstream from mouth.

Drainage area.--100 sq mi.

Records available.--April 1946 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 576.41 ft above mean sea level, unadjusted. Prior to Sept. 28, 1951, wire-weight gage at same site and datum.

Average discharge.--16 years, 121 cfs (unadjusted).

Extremes.--Maximum discharge during year, 1,620 cfs Feb. 27 (gage height, 12.64 ft); minimum, 4.7 cfs June 21, 22 (gage height, 1.50 ft).
1946-62: Maximum discharge, 9,420 cfs June 2, 1947; maximum gage height, 17.9 ft Jan. 5, 1949; no flow at times during 1946-49, 1953.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated since April 1953 by Lake Lemon (capacity, 4,640,000,000 gal) 8.1 miles upstream.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 15, 16, 22, 24-30, Feb. 24 to Mar. 22, July 14-18, Aug. 25, 26)

1.5	4.3	3.0	89
1.6	5.9	4.0	183
1.8	11	5.0	301
2.0	18	7.0	565
2.3	35	10.0	1,040
2.5	49	12.0	1,450

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	20	16	19	69	*509	173	34	* 43	24	22	28
2	22	19	15	19	57	289	183	* 57	53	22	19	26
3	* 21	21	15	20	51	183	143	48	43	23	18	24
4	21	22	27	22	50	143	124	43	35	22	17	24
5	21	* 21	61	* 23	50	115	106	41	36	21	16	23
6	21	22	33	46	43	106	102	36	36	21	28	22
7	21	34	24	77	44	97	89	34	85	21	20	21
8	21	33	20	45	33	97	81	36	73	21	17	21
9	21	27	20	a 40	36	379	93	34	54	21	16	21
10	21	26	20	a 35	41	482	97	36	36	21	14	21
11	21	22	22	a 33	38	352	89	327	42	21	14	21
12	21	20	28	a 33	36	391	85	173	54	21	13	20
13	21	21	29	a 34	38	339	77	115	29	24	13	20
14	21	16	24	a 37	39	253	81	81	20	316	12	28
15	21	13	21	391	46	194	73	61	16	498	18	25
16	21	30	25	209	46	153	69	38	14	755	21	23
17	21	20	61	a 130	44	124	61	29	13	313	21	22
18	21	17	54	a 85	61	102	55	23	11	153	21	21
19	21	16	61	a 55	48	97	51	19	7.4	85	20	21
20	21	16	65	a 45	41	97	48	16	6.1	53	20	21
21	21	16	42	a 40	61	1,010	51	14	5.2	36	21	21
22	21	16	33	389	65	1,170	41	70	7.4	32	21	21
23	21	21	32	a 260	85	495	41	69	33	55	21	21
24	21	20	30	183	173	277	41	39	32	* 42	21	20
25	21	18	26	143	205	183	38	32	32	33	49	21
26	21	17	24	143	1,170	124	37	46	32	36	135	20
27	21	17	25	229	1,250	102	37	78	31	27	32	20
28	21	* 16	24	183	905	* 93	41	205	* 32	24	25	* 20
29	21	16	22	143	----------	77	34	143	32	43	23	19
30	23	16	21	* 110	----------	69	30	89	32	33	22	19
31	22	---------	20	85	----------	110	---------	61	----------	25	* 26	----------
Total	657	609	940	3,306	4,825	8,212	2,271	2,127	975.1	2,842	756	655
Mean	21.2	20.3	30.3	107	172	265	75.7	68.6	32.5	91.7	24.4	21.8
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
(ℓ)	-20.2	-7.7	+21.1	+79	+12	-8	-8.1	+5.2	-18.8	+13.0	-7.8	-18.8

Calendar year 1961 : Max 5,230 Min 2.8 Mean 128 Cfsm 1.28 In. 17.39 ℓ +2.1
Water year 1961-62 : Max 1,250 Min 5.2 Mean 77.2 Cfsm 0.772 In. 10.48 ℓ +3.5

Peak discharge (base, 1,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-27	0200	12.64	1,620				
3-21	2400	12.24	1,500				

* Discharge measurement made on this day.
a No gage-height record.
ℓ Change in contents, equivalent in cubic feet per second, in Lake Lemon (formerly known as Bloomington Reservoir).

3-3570. White River at Spencer, Ind.

Location.--Lat 39°16'49", long 86°45'42", in sec. 29, T. 10 N., R. 3 W., on right bank at downstream side of highway bridge at Spencer, 3.3 miles upstream from McBrides Creek and at mile 165.9.

Drainage area.--2,980 sq mi.

Records available.--July 1925 to September 1962. Monthly discharge only for some periods, published in WSP 1305. Prior to October 1948, published as West Fork White River at Spencer.

Gage.--Water-stage recorder. Datum of gage is 526.04 ft above mean sea level, datum of 1929. Prior to Dec. 26, 1940, wire-weight gage at same site and datum.

Average discharge.--37 years, 3,057 cfs, (unadjusted).

Extremes.--Maximum discharge during year, 25,000 cfs Jan. 30 (gage height, 19.45 ft); minimum, 545 cfs Oct. 29, Nov. 13, 14; minimum gage height, 2.32 ft Aug. 24.
1925-62: Maximum discharge, 59,400 cfs May 15, 1933, Jan. 16, 1937, (gage height, 23.2 ft); minimum, 133 cfs Sept. 25, 30, 1941; minimum gage height, 0.88 ft Sept. 25, 30, Oct. 1, 1941.
Maximum stage known, 28.5 ft Mar. 26, 1913, from floodmarks (discharge, 100,000 cfs, estimated).

Remarks.--Records good. Flow slightly regulated by three reservoirs above station.

Rating tables, water year 1960-62 except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 11 to July 14, Aug. 28-31, Sept. 2-4)

Oct. 1 to May 11

2.5	520	12.0	8,950
3.0	770	16.0	14,800
5.0	2,200	20.0	27,500
10.0	6,920		

May 12 to Sept. 30

2.4	620	5.0	2,520
3.0	980	10.0	6,920

Note.--Same as preceding table above 10.0 ft.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,000	645	1,120	1,060	10,100	16,700	3,980	2,200	1,800	740	1,480	1,800
2	1,000	595	1,060	1,060	5,980	15,200	3,700	* 4,640	1,960	1,120	1,330	1,400
3	770	645	940	* 1,060	4,740	8,620	* 3,410	3,790	1,640	* 1,190	* 1,190	1,120
4	* 720	720	880	1,120	4,080	5,780	3,120	3,120	* 1,480	1,800	1,120	2,600
5	720	770	* 1,260	1,260	3,790	4,740	2,840	2,840	1,400	2,120	1,050	4,290
6	670	670	1,400	1,470	3,700	* 3,980	2,940	2,380	1,400	2,280	1,960	2,040
7	670	720	1,120	3,700	* 3,700	3,500	2,740	2,020	1,960	1,880	2,280	1,480
8	620	770	940	5,980	3,320	3,120	2,560	1,850	1,880	1,640	1,640	1,190
9	595	720	940	5,880	2,940	3,880	2,650	1,850	1,640	1,560	1,330	1,050
10	595	645	940	4,360	2,740	6,640	2,740	1,770	1,400	1,330	1,190	980
11	595	620	1,000	b 3,000	2,470	8,300	2,560	4,120	1,560	1,120	1,050	860
12	620	570	1,000	b 2,000	2,290	9,520	2,470	6,540	1,880	1,120	980	860
13	620	545	1,060	b 1,900	2,110	10,800	2,380	4,300	1,400	1,560	860	800
14	595	545	1,000	b 1,900	2,200	10,700	2,290	3,320	1,330	3,990	860	2,820
15	595	620	940	b 3,000	2,200	9,060	2,110	2,760	1,480	11,000	800	2,840
16	595	940	940	b 5,000	2,020	6,640	1,930	2,440	1,400	15,700	770	1,640
17	570	1,690	1,470	6,070	1,930	5,310	1,850	2,120	1,190	15,700	770	1,330
18	595	1,850	1,850	5,980	1,850	4,460	1,770	1,880	1,050	8,950	740	1,120
19	595	1,850	1,850	5,120	1,850	3,880	1,690	1,720	980	5,690	710	980
20	645	1,690	2,200	3,880	1,850	3,790	1,610	1,640	980	4,120	650	860
21	645	1,470	2,020	3,030	1,850	8,280	1,540	1,560	980	3,320	650	800
22	620	1,330	1,610	3,880	1,930	15,700	1,470	2,440	980	2,680	620	770
23	770	1,260	1,610	5,310	2,290	20,800	1,470	2,360	920	2,840	590	740
24	670	1,610	1,770	4,260	2,560	18,100	1,540	1,800	860	3,480	560	680
25	670	1,690	1,770	4,260	2,940	13,500	1,400	1,640	770	3,480	680	680
26	720	1,610	1,610	4,360	6,520	8,950	1,400	1,560	710	2,840	1,660	680
27	720	1,540	1,540	9,520	11,800	6,830	1,330	2,200	740	2,360	1,880	680
28	620	1,470	1,470	13,900	14,400	5,690	1,260	2,680	740	2,040	* 1,190	650
29	570	1,330	1,260	19,900	--------	4,840	1,260	2,360	650	2,280	1,120	650
30	595	1,190	1,190	24,600	---------	4,260	1,260	2,120	590	2,040	980	620
31	* 620	----------	1,060	19,600	---------	4,080	----------	2,120	----------	1,640	1,120	----------
Total	20,605	32,320	40,820	177,420	110,150	255,650	65,270	80,140	37,750	113,610	33,810	39,010
Mean	665	1,077	1,317	5,723	3,934	8,247	2,176	2,585	1,258	3,665	1,091	1,300
Cfsm	0.223	0.361	0.442	1.92	1.32	2.77	0.730	0.867	0.422	1.23	0.366	0.436
In.	0.26	0.40	0.51	2.21	1.38	3.19	0.81	1.00	0.47	1.42	0.42	0.49

Calendar year 1961 : Max 45,100 Min 420 Mean 3,331 Cfsm 1.12 In. 15.18
Water year 1961-62 : Max 24,600 Min 545 Mean 2,758 Cfsm 0.926 In. 12.56

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

3-3575. Big Walnut Creek near Reelsville, Ind.

Location.--Lat 39°32'11", long 86°58'35", in NW¼ SE¼ sec. 28, T. 13 N., R. 5 W., on left bank at highway bridge, 1½ miles southwest of Reelsville, and 3 miles upstream from Mill Creek.

Drainage area.--338 sq mi.

Records available.--July 1949 to September 1962. Published as Eel River near Reelsville, October 1952 to September 1956.

Gage.--Water-stage recorder. Datum of gage is 588.24 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Dec. 10, 1949, wire-weight gage at same site and datum.

Average discharge.--13 years, 357 cfs.

Extremes.--Maximum discharge during year, 13,400 cfs Mar. 21 (gage height, 16.59 ft); minimum, 31 cfs Oct. 18, 19; minimum gage height, 3.00 ft July 11, 12.
1949-62: Maximum discharge, 30,700 cfs June 28, 1957 (gage height, 18.63 ft); minimum, 1.2 cfs Sept. 8, 1954 (gage height, 1.56 ft).

Remarks.--Records fair.

(Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 18 to Dec. 12, Dec. 17-26, Jan. 3-5, 8, Jan. 29 to Feb. 3, Feb. 7-25, Aug. 31 to Sept. 13, Sept. 17-30)

Oct. 1 to Feb. 26				Feb. 27 to July 13				July 14 to Sept. 30			
3.3	30	8.0	1,230	3.0	34	9.0	2,050	3.8	52	8.0	1,030
3.5	44	10.0	2,130	3.5	88	12.0	3,920	4.0	67	11.0	2,570
4.0	87	12.0	3,300	4.0	165	15.0	7,800	4.5	117	13.0	4,150
4.5	149	14.0	5,420	4.5	280	16.0	10,900	5.0	184	14.0	5,420
5.0	251	15.0	7,350	5.0	423			6.0	385	15.0	7,350
6.0	535	16.0	10,900								

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	* 64	126	140	475	740	392	* 651	253	48	* 100	80
2	54	64	119	* 140	370	520	* 392	555	205	49	95	192
3	* 52	74	113	149	327	423	350	454	165	67	90	149
4	47	113	* 107	158	300	392	322	322	146	64	85	874
5	43	113	126	197	280	* 336	322	255	138	* 59	85	135
6	42	97	119	773	260	294	322	242	165	50	85	106
7	39	87	113	1,350	251	280	308	218	* 156	45	90	90
8	38	78	107	685	* 251	268	294	230	130	41	100	80
9	36	74	102	400	251	452	520	294	230	38	85	76
10	35	69	113	350	218	940	423	242	146	37	80	72
11	34	64	119	300	197	760	364	1,280	338	35	76	67
12	33	60	149	260	197	1,750	336	900	772	37	72	63
13	34	58	130	230	207	1,100	336	555	195	66	72	59
14	42	60	110	210	218	780	336	392	146	6,460	67	5,940
15	40	69	100	900	218	590	308	294	130	6,000	67	568
16	36	713	90	* 780	207	485	280	242	115	1,440	63	335
17	34	625	251	600	187	392	268	205	108	600	63	244
18	33	301	197	450	177	350	255	185	94	385	63	200
19	32	207	240	350	207	364	242	175	87	292	59	168
20	35	177	385	300	197	526	230	156	85	234	59	148
21	35	149	275	270	207	9,280	218	146	78	200	55	135
22	35	141	229	260	288	* 5,250	205	230	68	184	55	129
23	35	288	301	400	301	1,700	218	175	65	244	52	117
24	38	341	355	320	229	1,260	205	146	61	208	52	112
25	88	229	251	270	385	1,020	195	130	58	168	52	* 112
26	119	187	218	1,600	2,180	820	185	196	55	148	59	106
27	87	167	180	10,100	2,200	660	175	876	51	135	106	95
28	74	149	150	3,710	1,300	555	165	700	49	123	85	90
29	64	133	140	995	---------	485	165	322	44	117	72	85
30	60	126	130	750	---------	485	165	294	43	112	63	85
31	60	--------	130	565	---------	423	--------	255	---------	106	* 114	----------
Total	1,492	5,077	5,275	27,962	12,085	33,680	8,496	11,317	4,376	17,792	2,321	10,712
Mean	48.1	169	170	902	432	1,086	283	365	146	574	74.9	357
Cfsm	0.142	0.500	0.503	2.67	1.28	3.21	0.837	1.08	0.432	1.70	0.222	1.06
In.	0.16	0.56	0.58	3.08	1.33	3.70	0.93	1.24	0.48	1.96	0.26	1.18

Calendar year 1961: Max 13,300 Min 13 Mean 331 Cfsm 0.979 In. 13.28
Water year 1961-62: Max 10,100 Min 32 Mean 385 Cfsm 1.14 In. 15.46

Peak discharge (base, 2,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	0700	16.22	11,700	9-14	1600	16.27	12,100
2-26	2100	12.15	3,460				
3-21	1730	16.59	13,400				
7-14	2030	16.18	11,700				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 13-16, Dec. 27 to Jan. 2, Jan. 9-26, Feb. 4-6. Gage heights from graph based on once-daily telemark readings Jan. 29 to Feb. 8, Feb. 13 to Mar. 5.

3-3580. Mill Creek near Cataract, Ind.

Location.--Lat 39°26', long 86°46', in SE¼ sec. 32, T. 12 N., R. 3 W., on left bank at downstream side of bridge on State Highway 43, 3 miles east of Cataract.

Drainage area.--241 sq mi.

Records available.--July 1949 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 706.40 ft above mean sea level, datum of 1929. Prior to Nov. 8, 1949, wire-weight gage at same site and datum.

Average discharge.--13 years, 271 cfs.

Extremes.--Maximum discharge during year about 6,200 cfs Jan. 27; minimum, 8.5 cfs Oct. 11, 12; minimum gage height, 3.54 ft Aug. 24. 1949-62: Maximum discharge, 11,400 cfs June 24, 1960 (gage height, 22.58 ft); minimum, 0.1 cfs Sept. 3, 6, 7, 28, 29, 1954.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 16, Aug. 9-31)

Oct. 1 to Nov. 16

3.5	7.2	5.0	81
3.6	9.3	6.0	189
4.0	23	7.0	360
4.5	48	8.0	592

Nov. 17 to Feb. 27

4.3	48	8.0	665
4.5	61	11.0	1,730
5.0	104	15.0	3,800
6.0	238		

Feb. 28 to Sept. 30

3.3	7.7	6.0	262
3.5	12	7.0	482
3.7	19	9.0	1,080
4.0	33	12.0	2,220
4.5	69	15.0	3,800
5.0	118	18.0	5,920

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	25	* 17	58	b 90	180	622	192	2,440	102	16	38	86
2	21	15	54	b 88	130	342	170	2,140	78	* 61	33	23
3	17	17	52	b* 86	110	282	* 143	* 710	69	37	31	27
4	* 15	48	64	133	100	230	130	362	61	28	29	1,710
5	13	39	* 270	195	94	200	130	246	57	22	27	1,420
6	12	27	160	820	* 90	* 170	143	185	* 453	17	133	348
7	11	23	104	1,290	b 88	163	136	150	201	14	75	163
8	9.9	21	76	430	b 86	163	124	170	87	13	33	97
9	9.6	19	68	b 240	b 85	721	262	150	129	12	24	69
10	9.3	18	85	b 210	b 84	980	192	118	73	11	22	57
11	9.1	17	115	b 180	b 84	722	150	958	108	9.7	20	46
12	8.9	17	184	b 160	94	1,860	130	362	495	29	20	38
13	9.3	17	b 140	b 150	121	950	136	230	102	29	18	34
14	11	19	b 90	139	174	594	136	156	65	2,060	17	2,880
15	14	22	b 85	1,660	115	434	112	118	51	3,980	17	4,280
16	11	528	b 83	1,000	115	342	97	102	44	5,200	16	2,470
17	9.9	361	415	700	104	262	92	92	38	3,740	16	434
18	9.3	139	346	500	110	230	92	92	66	1,010	15	215
19	9.3	94	537	400	160	262	87	73	184	322	14	143
20	10	76	695	330	133	334	78	65	51	185	14	102
21	11	64	307	280	146	3,120	73	68	36	130	13	78
22	11	61	238	250	346	4,100	73	818	29	112	14	69
23	10	213	449	350	238	1,450	102	192	27	237	13	65
24	11	223	388	310	171	594	87	102	25	140	11	57
25	14	133	223	270	222	410	73	78	22	97	14	61
26	18	99	b 160	1,000	2,260	322	69	348	21	73	20	57
27	18	85	b 130	6,000	2,910	246	69	702	19	57	22	49
28	15	68	b 110	1,000	1,730	215	65	830	17	53	* 15	44
29	13	64	b 100	500	---------	200	65	262	16	52	12	41
30	15	58	b 96	350	---------	185	214	200	15	46	11	38
31	19	----------	b 94	250	---------	192	----------	136	---------	* 41	158	----------
Total	399.6	2,602	5,976	19,361	10,280	20,897	3,622	12,655	2,741	17,833.7	915	15,201
Mean	12.9	86.7	193	624	367	674	121	408	91.4	575	29.5	507
Cfsm	0.054	0.360	0.801	2.59	1.52	2.80	0.502	1.69	0.379	2.39	0.122	2.10
In.	0.06	0.40	0.92	2.99	1.58	3.23	0.56	1.95	0.42	2.76	0.14	2.34

Calendar year 1961: Max 9,800 Min 6.2 Mean 284 Cfsm 1.18 In. 15.99
Water year 1961-62: Max 6,000 Min 8.9 Mean 308 Cfsm 1.28 In. 17.35

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	unknown	unknown	about 6,200	5-1	1930	13.00	2,670
2-27	1100	13.93	3,140	7-16	1030	17.26	5,360
3-22	0800	15.97	4,420	9-15	1130	16.07	4,490

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 16 to Feb. 6.

3-3590. Mill Creek near Manhattan, Ind.

Location.--Lat 39°29', long 86°55', in sec. 11, T. 12 N., R. 5 W., on left bank, 200 ft downstream from Cagles Mill, three-quarters of a mile downstream from Cagles Mill Reservoir, three-quarters of a mile upstream from Deer Creek, and 5 3/4 miles south of Manhattan.
Drainage area.--292 sq mi.
Records available.--May to September 1931 (fragmentary), October 1938 to September 1962. Monthly discharge only for some periods, published in WSP 1305.
Gage.--Water-stage recorder. Datum of gage is 581.83 ft above mean sea level, datum of 1929. May 3 to Sept. 2, 1931, staff gage on upstream side of mill at datum 7 ft higher. May 3 to Sept. 25, 1939, staff gage on upstream side of mill at datum 6 ft higher. Sept. 26, 1939 to May 12, 1941, chain, wire-weight, and tape gages at present site and datum.
Average discharge.--24 years (1938-62), 296 cfs (unadjusted).
Extremes.--Maximum discharge during year, 2,860 cfs Feb. 7 (gage height, 8.62 ft); maximum gage height, 15.08 ft Sept. 14 (backwater from Deer Creek); minimum, 5.5 cfs June 18 (gage height, 1.36 ft).
1931, 1938-62: Maximum discharge, 8,960 cfs Jan. 5, 1950 (gage height, 18.38 ft); no flow Aug. 7, 1953.
Remarks.--Records good. Flow regulated since Dec. 20, 1952 by Cagles Mill Reservoir (capacity, 228,100 acre-ft).

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from Deer Creek Jan. 26-28, Feb. 26, 27, Mar. 12, 21, 22, July 14-16, Sept. 4, 14, 15)

Oct. 1 to Feb. 6				Feb. 6 to Sept. 30			
1.4	6.4	3.0	180	1.3	4.3	3.0	190
1.5	9.0	3.5	294	1.5	9.0	4.0	460
1.6	12	4.0	435	1.7	17	6.0	1,350
1.8	22	5.0	830	1.9	31	8.5	2,800
2.0	41	7.0	1,800	2.4	84		
2.5	98						

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	88	* 32	80	113	121	114	2,140	*140	480	8.5	33	114
2	28	32	58	* 113	121	122	* 2,200	122	480	14	34	114
3	* 15	51	50	113	121	114	2,260	349	480	80	35	114
4	16	66	* 75	113	121	114	2,380	500	460	78	34	109
5	16	100	227	212	121	* 114	2,320	500	460	32	33	626
6	10	92	294	321	1,440	112	2,440	500	*460	* 29	56	* 500
7	7.7	39	171	193	2,800	112	2,440	500	460	19	100	500
8	7.4	19	113	665	*2,800	114	2,260	500	460	17	112	500
9	7.4	19	88	1,450	2,680	114	1,500	500	460	14	112	500
10	8.0	19	94	687	2,620	114	1,960	500	460	8.0	61	500
11	9.0	25	113	137	397	122	2,200	340	460	7.7	20	500
12	10	29	255	267	114	114	2,320	98	216	7.7	11	500
13	9.7	30	234	321	122	106	1,360	98	350	8.2	8.5	382
14	9.7	30	121	240	268	106	114	332	180	71	8.5	163
15	9.3	30	113	130	230	106	114	500	175	114	8.5	130
16	9.3	97	121	137	122	108	222	500	57	114	8.5	130
17	9.0	359	267	137	114	108	140	500	35	98	8.5	484
18	9.0	467	435	137	224	108	106	500	5.9	97	8.5	620
19	10	351	502	145	210	1,170	92	500	73	98	8.2	620
20	18	121	620	137	210	2,140	92	500	221	1,150	8.2	620
		121										
21	21	121	467	137	210	186	92	480	87	2,080	8.0	580
22	16	121	467	137	272	114	92	480	29	1,950	8.0	580
23	9.7	121	467	137	445	114	108	480	29	681	8.5	580
24	16	247	467	137	211	114	114	480	29	1,780	8.5	580
25	28	247	435	137	165	114	114	490	29	1,900	9.3	580
26	31	121	239	137	160	114	114	480	29	2,200	28	580
27	26	121	211	121	130	114	95	386	22	2,260	37	580
28	19	121	145	121	112	114	79	238	12	2,200	37	580
29	13	71	121	121	----------	114	79	500	8.7	1,600	37	580
30	25	60	90	121	----------	114	96	500	8.5	1,060	18	540
31	32	----------	95	121	----------	1,040	----------	480	----------	* 46	87	----------
Total	543.2	3,359	7,235	7,195	16,661	7,584	29,643	12,963	6,716.1	19,822.1	994.7	13,486
Mean	17.5	112	233	232	595	245	988	418	224	639	32.1	450
(ƒ)	-0.3	-1	0	+336	-110	+530	-793	+119	-124	+1	+6.2	+110
Adjusted for change in contents in Cagles Mill Reservoir												
Mean	17.2	111	233	568	485	775	195	537	100	640	38.3	560
Cfsm	0.059	0.380	0.798	1.95	1.66	2.65	0.668	1.84	0.342	2.19	0.131	1.92
In.	0.07	0.42	0.92	2.25	1.72	3.06	0.75	2.12	0.38	2.52	0.15	2.14

	Observed						Adjusted					
Calendar year 1961:	Max	2,690	Min	2.8	Mean	358	Mean	358	Cfsm	1.23	In.	16.67
Water year 1961-62:	Max	2,800	Min	5.9	Mean	346	Mean	355	Cfsm	1.22	In.	16.50

* Discharge measurement made on this day.
ƒ Change in contents, equivalent in cubic feet per second, in Cagles Mill Reservoir, furnished by Corps of Engineers.

3-3595. Deer Creek near Putnamville, Ind.

Location.--Lat 39°34'04", long 86°52'00", in NW¼ sec. 16, T. 13 N., R. 4 W., on left bank on upstream side of bridge on State Highway 243, 0.4 mile southwest of Putnamville, 0.4 mile downstream from small tributary from left and 0.8 mile downstream from Limestone Creek.

Drainage area.--59.0 sq mi.

Records available.--October 1954 to September 1962.

Gage.--Water-stage recorder (since January 1959, wire-weight gage on downstream side of bridge read twice daily, used for gage heights below 1.7 ft). Datum of gage is 630.73 ft above mean sea level, datum of 1929. Prior to July 3, 1957, wire-weight gage at same site and datum.

Average discharge.--8 years, 65.6 cfs.

Extremes.--Maximum discharge during year, 10,500 cfs Sept. 14 (gage height, 15.05 ft); minimum, 1.2 cfs Aug. 24, 25 (gage height, 0.74 ft).
1954-62: Maximum discharge, that of Sept. 14, 1962; no flow Oct. 1-10, 1954.

Remarks.--Records poor.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 15, June 8-11, June 21 to July 13, July 29 to Aug. 5, Aug. 8-30)

Oct. 1 to Sept. 14				Sept. 15-30	
0.8	0.8	2.5	228	0.9	9.2
.9	2.2	3.0	368	1.0	15
1.0	5.2	4.0	710	1.2	28
1.1	11	5.0	1,140	1.6	70
1.4	41	7.0	2,300	2.0	131
1.8	88	9.0	3,730	2.5	231

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.6	4.8	11	23	b 54	111	48	500	40	3.6	* 7.6	22
2	2.3	4.4	9.5	22	b 45	101	44	203	29	5.2	7.1	5.2
3	2.2	6.6	9.5	24	39	77	41	108	25	6.6	6.1	343
4	2.3	14	11	35	37	54	38	85	22	7.1	6.1	*2,060
5	* 2.2	7.1	43	* 41	b 34	51	*37	56	17	5.2	6.1	108
6	2.0	4.4	30	292	b 31	41	39	49	191	* 4.4	19	58
7	1.8	3.3	* 21	173	b 29	41	35	41	* 49	3.6	17	35
8	1.8	2.8	18	101	27	* 39	35	39	19	3.6	7.6	28
9	1.6	2.8	17	b 80	24	182	96	37	26	3.0	6.1	24
10	1.6	2.3	23	b 60	28	177	54	90	16	2.8	3.6	21
11	1.4	2.3	27	b 50	33	260	47	284	155	2.8	3.3	15
12	1.4	2.3	44	b 40	29	483	41	99	142	3.0	2.5	9.5
13	1.8	2.3	b 35	b 35	* 33	193	43	64	47	3.0	2.5	7.1
14	2.8	2.8	b 25	b 30	45	140	41	47	31	2,380	2.2	*3,600
15	2.3	3.3	b 21	b 400	31	111	35	38	24	911	2.2	174
16	2.3	229	18	b 120	29	98	31	35	20	168	2.0	109
17	2.2	62	108	b 70	27	72	31	84	18	80	2.0	73
18	2.3	30	61	b 56	29	60	28	74	14	52	1.8	47
19	2.3	13	115	b 50	39	73	26	27	16	40	1.6	* 32
20	2.8	20	104	b 45	32	182	23	23	12	31	1.5	27
21	4.0	16	56	b 40	36	2,050	22	19	11	30	1.5	22
22	3.3	24	45	b 37	78	255	24	81	9.5	28	1.5	20
23	2.3	85	111	b 56	52	160	37	31	9.5	64	1.4	20
24	4.0	50	64	b 45	62	122	27	17	8.2	30	1.2	19
25	4.0	33	44	b 40	45	101	25	15	7.1	23	1.2	19
26	3.6	27	35	b 1,200	965	73	23	166	5.2	24	2.2	17
27	3.6	20	b 31	259	258	62	19	287	4.8	14	2.3	16
28	3.3	15	b 28	131	223	60	17	110	4.4	12	2.0	14
29	3.3	13	b 26	102	--------	50	17	85	4.4	11	1.5	13
30	* 4.4	13	b 25	b 80	--------	55	*17	196	3.6	9.5	1.5	12
31	4.8	---------	b 24	b 65	--------	51	--------	58	----------	8.2	211	----------
Total	83.6	715.5	1,240.0	3,802	2,394	5,585	1,041	3,048	980.7	3,969.6	335.2	6,969.8
Mean	2.70	23.8	40.0	123	85.5	180	34.7	98.3	32.7	128	10.8	232
Cfsm	0.046	0.403	0.678	2.08	1.45	3.05	0.588	1.67	0.554	2.17	0.183	3.93
In.	0.05	0.45	0.78	2.40	1.51	3.52	0.66	1.92	0.62	2.50	0.21	4.38

Calendar year 1961: Max 3,650 Min 0.7 Mean 67.6 Cfsm 1.15 In. 15.54
Water year 1961-62: Max 3,600 Min 1.2 Mean 82.6 Cfsm 1.40 In. 19.00

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	0900	6.23	1,770	5-1	0200	6.07	1,710
1-26	Unknown	--	About 3,000	6-11	2200	5.50	1,390
				7-14	0600	12.03	6,700
2-26	0730	7.23	2,440	9-4	0300	12.33	7,030
3-11	2400	5.74	1,490	9-14	0600	15.05	10,500
3-21	0230	9.36	4,060				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

3-3600. Eel River at Bowling Green, Ind.

Location.--Lat 39°23'02", long 87°01'12", in NW¼ sec. 24, T. 11 N., R. 6 W., on left bank, 500 ft downstream from bridge on State Highway 46, at Bowling Green, and 0.5 mile downstream from Jordan Creek.

Drainage area.--844 sq mi.

Records available.--January 1931 to September 1962. Prior to October 1934, published as "near Centerpoint."

Gage.--Water-stage recorder. Datum of gage is 548.02 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Jan. 30, 1931, to Nov. 27, 1934, chain gage at site 5½ miles downstream at datum 6.15 ft lower. Nov. 28, 1934, to Nov. 30, 1949, water-stage recorder at site 500 ft upstream from present site at datum 1 ft higher.

Average discharge.--31 years, 860 cfs (unadjusted).

Extremes.--Maximum discharge during the year, 11,600 cfs Mar. 22; maximum gage height, 19.41 ft Mar. 22; minimum discharge, 62 cfs Aug. 25; minimum gage height, 1.20 ft Oct. 19.
1931-62: Maximum discharge, 34,000 cfs Jan. 4, 1950 (gage height, 23.53 ft); minimum, 11 cfs Oct. 7, 8, 1954 (gage height, 0.32 ft).
Maximum stage known, about 30.0 ft in 1875, present datum, from information by Corps of Engineers.

Remarks.--Records good except those for periods of ice effect, which are poor. Flow regulated by Cagles Mill Reservoir (capacity, 228,100 acre-ft).

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 2-25, Oct. 28 to Nov. 3, Nov. 8-15, June 25 to July 13)

1.6	60	6.0	1,360
1.7	75	11.0	3,650
2.0	126	18.0	8,200
3.0	375	19.0	10,100
4.0	675		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	232	113	232	b 330	955	1,360	2,620	3,770	795	115	295	345
2	136	* 115	220	b 330	795	955	2,800	* 2,410	825	126	* 258	220
3	112	143	195	b 340	735	825	* 2,700	1,130	735	170	245	195
4	* 101	270	208	375	735	765	2,800	1,130	* 675	182	220	4,160
5	96	270	* 435	495	765	705	2,800	990	675	* 136	208	1,570
6	91	282	555	1,540	1,170	* 645	2,800	885	795	136	245	855
7	83	195	435	2,700	2,840	615	2,880	855	885	115	245	735
8	77	136	435	1,600	2,980	585	2,800	920	675	115	270	705
9	75	126	270	1,900	* 2,930	1,130	2,660	920	990	105	258	675
10	70	119	245	b 1,350	2,840	1,720	2,520	855	735	96	220	645
11	69	113	208	b 500	1,540	1,320	2,700	2,060	842	93	158	615
12	68	117	b 350	b 500	555	3,470	2,750	1,360	2,650	91	126	615
13	68	115	b 500	b 700	555	2,120	2,520	855	765	101	115	585
14	69	115	b 310	b 700	645	1,400	795	735	765	2,720	106	4,420
15	75	121	b 300	b 2,200	705	1,060	645	920	555	7,700	100	7,830
16	70	839	b 290	1,800	525	885	645	825	295	7,260	96	1,520
17	68	1,400	795	1,130	495	795	615	795	245	1,770	91	1,020
18	66	1,060	955	855	555	705	525	825	195	1,020	88	1,100
19	66	855	1,240	b 740	675	1,150	495	735	195	795	83	990
20	68	435	1,520	b 640	645	2,840	435	705	295	1,100	80	920
21	75	345	1,100	b 580	615	7,430	435	675	270	2,440	77	885
22	75	320	920	735	825	* 10,000	405	765	170	2,390	72	855
23	70	615	1,100	825	955	4,200	435	765	158	1,440	68	825
24	70	765	1,160	705	765	2,030	435	675	170	2,160	64	795
25	98	735	990	585	735	1,600	405	645	146	2,340	66	795
26	208	465	735	2,280	4,120	1,320	375	675	146	2,390	83	765
27	158	375	b 500	7,880	5,030	1,100	345	1,210	136	2,520	122	735
28	124	345	b 400	6,340	2,800	990	308	1,600	126	2,440	* 158	735
29	106	295	b 350	1,940	---	885	295	990	117	2,340	119	705
30	98	232	b 300	1,440	---	855	505	990	115	1,680	103	705
31	113	---	b 300	1,100	---	1,210	---	920	---	488	574	---
Total	2,945	11,431	17,553	45,135	39,485	56,670	43,448	33,590	16,141	46,574	5,013	37,520
Mean	95.0	381	566	1,456	1,410	1,828	1,448	1,084	538	1,502	162	1,251
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
(ƒ)	-0.3	-1	0	+336	-110	+530	-793	+119	-124	+1	+6	+110

Calendar year 1961: Max 20,000 Min 28 Mean 994 Cfsm 1.18 In. 15.98 ƒ 0
Water year 1961-62: Max 10,000 Min 64 Mean 974 Cfsm 1.15 In. 15.67 ƒ +9

* Discharge measurement made on this day.
ƒ Change in contents, equivalent in cubic feet per second, in Cagles Mill Reservoir; furnished by Corps of Engineers.
b Stage-discharge relation affected by ice.

3-3605. White River at Newberry, Ind.

Location.--Lat 38°55'42", long 87°01'00", in sec. 25, T. 6 N., R. 6 W., on right bank, 500 ft upstream from bridge on State Highway 57 at Newberry, 2.3 miles downstream from Doans Creek, at mile 118.0.

Drainage area.--4,696 sq mi.

Records available.--September 1928 to September 1962. Prior to October 1948, published as West Fork White River at Newberry.

Gage.--Water-stage recorder. Datum of gage is 465.59 ft above mean sea level, datum of 1929. Prior to Oct. 21, 1928, staff gage at same site and datum.

Average discharge.--34 years, 4,624 cfs (unadjusted).

Extremes.--Maximum discharge during year, 28,100 cfs Mar. 25 (gage height, 18.10 ft); minimum, 695 cfs Oct. 18,19 (gage height, 1.62 ft).

1928-62: Maximum discharge, 76,900 cfs May 21, 1943 (gage height, 24.19 ft); minimum, 193 cfs Oct. 1, 1941; minimum gage height, 0.29 ft Sept. 30, Oct. 7, 8, 1954.

Maximum stage since at least 1875, 27.5 ft Mar. 27, 1913, from floodmarks by State Highway Department of Indiana (discharge, 130,000 cfs, estimated).

Remarks.--Records fair. Slight regulation by storage in four reservoirs above station.

Rating tables, water year 1960-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 20, 21)

Oct. 1 to Nov. 21		Nov. 22 to Sept. 16				Sept. 17-30	
1.6	695	1.6	920	10.0	10,300	2.3	1,610
3.0	1,680	3.0	1,990	14	17,400	3.0	2,240
5.0	3,530	5.0	4,160	18	27,800	6.0	5,410
						7.0	6,560

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,760	815	1,830	1,700	17,000	20,600	6,800	5,930	3,080	1,130	2,760	1,990
2	1,450	815	1,750	1,700	12,000	20,300	8,240	10,600	2,760	1,200	2,170	2,170
3	1,300	815	1,670	1,700	8,000	19,100	7,760	11,700	2,760	* 1,590	* 1,990	1,670
4	1,080	945	1,590	1,000	6,560	12,700	7,040	7,760	2,460	1,670	1,830	1,430
5	1,010	1,080	1,990	2,000	5,840	7,760	6,800	5,600	* 2,260	2,080	1,750	4,740
6	945	1,080	2,360	2,760	5,480	6,440	* 6,680	4,880	2,360	2,260	1,830	5,480
7	880	1,010	2,360	5,000	5,360	5,600	6,560	4,160	2,460	2,360	2,560	2,860
8	880	1,010	* 1,990	* 7,040	6,560	5,120	6,320	3,680	2,760	2,170	2,560	2,260
9	815	1,010	1,750	7,400	6,800	* 7,040	7,040	3,680	2,560	1,910	2,080	1,990
10	815	945	1,670	7,280	6,680	9,350	7,040	3,560	2,560	1,830	1,830	1,830
11	755	880	1,830	6,000	5,960	10,300	6,320	5,840	3,200	1,670	1,670	1,670
12	755	880	2,170	4,000	* 4,640	12,200	6,200	8,240	6,080	1,510	1,510	1,590
13	755	815	2,560	3,100	3,800	14,100	6,080	7,880	5,480	1,510	1,430	1,590
14	755	815	2,260	3,000	3,560	15,100	5,840	5,720	2,960	5,050	1,350	3,040
15	755	815	1,910	5,000	3,680	13,800	4,400	4,520	2,560	7,110	1,270	6,680
16	755	1,010	1,830	7,000	3,680	11,300	3,800	4,040	2,460	13,600	1,200	7,280
17	755	2,260	3,200	11,000	3,440	8,480	3,440	3,560	2,080	17,600	1,200	5,630
18	725	2,440	4,160	10,000	3,200	6,920	3,320	3,200	1,830	19,600	1,130	3,010
19	755	2,630	4,640	9,000	3,320	6,200	3,200	2,960	1,750	16,500	1,060	2,610
20	755	2,530	5,600	7,000	3,440	5,840	2,960	2,760	1,590	8,000	1,060	2,330
21	820	2,350	5,120	5,000	3,320	10,700	2,760	2,560	1,590	5,720	1,060	2,150
22	820	2,170	4,040	8,000	3,920	16,500	2,660	2,460	1,670	5,720	990	2,060
23	800	2,170	3,560	9,000	4,280	20,800	2,660	3,080	1,590	5,360	990	1,970
24	880	2,660	3,920	7,640	6,560	25,400	2,660	3,080	1,510	4,880	920	1,880
25	880	2,760	3,800	6,200	5,720	27,800	2,660	2,660	4,190	5,480	920	1,790
26	815	2,660	3,440	6,320	9,610	23,700	* 2,560	2,460	1,830	5,600	1,430	* 1,790
27	* 880	2,460	3,200	9,000	14,700	15,100	2,360	2,460	1,430	5,120	1,910	1,700
28	945	2,260	2,860	13,000	18,500	9,220	2,360	3,560	1,350	4,880	1,830	1,700
29	880	2,170	2,400	16,100	---------	7,520	2,260	4,400	1,270	4,640	* 1,430	1,610
30	815	1,990	2,000	20,600	---------	6,680	2,170	3,440	1,200	5,360	1,350	1,610
31	815	----------	1,800	22,000	---------	6,440	----------	3,080	----------	4,160	1,270	----------
Total	27,805	48,250	85,260	225,540	185,610	388,110	140,950	143,510	73,640	167,270	48,340	80,110
Mean	897	1,608	2,750	7,275	6,629	12,520	4,698	4,629	2,455	5,396	1,559	2,670
Cfsm	0.191	0.342	0.586	1.55	1.41	2.67	1.00	0.986	0.523	1.15	0.332	0.569
In.	0.22	0.38	0.68	1.79	1.47	3.08	1.12	1.13	0.58	1.33	0.38	0.63

Calendar year 1961: Max 67,100 Min 538 Mean 5,210 Cfsm 1.11 In. 15.06
Water year 1961-62: Max 27,800 Min 725 Mean 4,423 Cfsm 0.942 In. 12.79

* Discharge measurement made on this day.

Note.--Stage-discharge relation affected by ice Dec. 29 to Jan. 5, Jan. 11-23, 27, 28, Jan. 31 to Feb. 2. Gage heights computed from once-daily readings of wire-weight gage Nov. 4 to Dec. 8, Jan. 17 to Feb. 12.

3-3610. Big Blue River at Carthage, Ind.
(Formerly published as Blue River at Carthage, Ind.)

Location.--Lat 39°46', long 85°34', in sec. 18, T. 15 N., R. 9 E., on right bank, 500 ft upstream from highway bridge, half a mile west of Carthage, and 2½ miles downstream from Three Mile Creek.

Drainage area.--187 sq mi.

Records available.--October 1950 to September 1962. Prior to October 1961, published as Blue River at Carthage, Ind.

Gage.--Water-stage recorder. Datum of gage is 859.33 ft above mean sea level, datum of 1929. Prior to July 19, 1951, wire-weight gage at site 500 ft downstream at same datum.

Average discharge.--12 years, 198 cfs.

Extremes.--Maximum discharge during year, 2,780 cfs Feb. 26 (gage height, 8.62 ft); minimum, 48 cfs Aug. 23, 24 (gage height, 1.64 ft). 1950-62: Maximum discharge, 8,340 cfs Jan. 21, 1959, (gage height, 13.28 ft); minimum, 16 cfs Sept. 18-20, 1955; minimum gage height, 1.26 ft Sept. 13, 1956.

Remarks.--Records good, except those for periods of no gage-height record, which are fair.

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 15		Jan. 16 to Sept. 30	
1.8	50	1.6	44
2.0	70	2.0	94
3.0	235	3.0	290
5.0	760	5.0	900
6.0	1,140	7.0	1,740

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	97	65	71	94	192	390	202	192	80	116	71	93
2	70	65	70	80	162	267	192	172	77	91	68	71
3	62	69	68	80	162	223	172	143	74	167	67	65
4	59	84	88	82	202	192	162	125	74	118	65	237
5	57	72	195	95	223	172	162	109	93	86	65	117
6	55	68	127	226	172	162	162	109	79	142	109	90
7	54	68	101	370	172	152	152	102	72	117	102	77
8	52	67	89	215	143	152	143	117	70	97	76	71
9	52	66	84	a 170	143	790	152	117	70	102	* 70	67
10	52	66	85	a 155	125	925	134	109	68	77	67	67
11	52	66	85	a 150	117	500	134	125	67	70	63	65
12	52	65	87	a 140	117	620	125	109	172	* 185	62	61
13	53	67	81	a 150	125	440	134	102	117	94	61	* 60
14	57	71	* 78	a 200	143	315	125	94	* 88	418	60	61
15	53	68	77	a 900	125	256	125	93	79	940	60	60
16	53	* 127	78	a1,350	* 117	* 223	117	90	72	595	59	57
17	54	135	151	a 400	117	202	117	87	67	365	56	55
18	53	94	143	a* 260	117	192	* 117	* 84	65	223	55	55
19	* 54	84	177	a 230	117	202	109	81	121	152	53	54
20	59	79	235	a 190	109	223	109	77	87	125	52	54
21	56	77	151	a 170	117	1,290	102	76	74	109	52	54
22	55	74	127	550	255	956	102	194	67	102	50	54
23	55	95	127	340	202	470	109	102	65	128	50	53
24	56	108	127	212	152	365	102	98	65	109	50	53
25	61	91	119	182	143	290	102	94	61	102	56	56
26	60	84	108	936	1,640	245	102	110	60	102	109	55
27	57	79	108	1,420	1,630	212	102	117	56	88	71	54
28	56	78	97	530	790	192	102	109	54	91	61	53
29	58	74	103	340	---	182	94	93	54	77	57	53
30	67	72	97	267	---	182	94	88	88	75	55	52
31	69	---	a 90	212	---	192	---	87	---	74	113	---
Total	1,800	2,378	3,424	10,686	7,829	10,954	3,856	3,375	2,326	5,307	2,065	2,064
Mean	58.1	79.3	110	345	280	353	129	109	77.5	171	66.6	68.8
Cfsm	0.311	0.424	0.588	1.84	1.50	1.89	0.690	0.583	0.414	0.914	0.356	0.368
In.	0.36	0.47	0.68	2.12	1.56	2.18	0.77	0.67	0.46	1.05	0.41	0.41

Calendar year 1961: Max 3,800 Min 41 Mean 230 Cfsm 1.23 In. 16.67
Water year 1961-62: Max 1,640 Min 50 Mean 154 Cfsm 0.824 In. 11.14

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-26	2030	8.62	2,780				

* Discharge measurement made on this day.
a No gage-height record.

3-3615. Big Blue River at Shelbyville, Ind.
(Formerly published as Blue River at Shelbyville)

Location.--Lat 39°31'45", long 85°46'55", in SE¼ sec. 31, T. 13 N., R. 7 E., on left bank, a quarter of a mile downstream from bridge on U.S. Highway 421 at Shelbyville and 0.6 mile downstream from Little Blue River.

Drainage area.--425 sq mi.

Records available.--September 1943 to September 1962. Prior to October 1961, published as Blue River at Shelbyville.

Gage.--Water-stage recorder. Datum of gage is 737.67 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1953, wire-weight gage at bridge a quarter of a mile upstream at datum 3.5 ft higher.

Average discharge.--19 years, 469 cfs.

Extremes.--Maximum discharge during year, 4,790 cfs Feb. 28 (gage height, 11.27 ft); minimum, 70 cfs Aug. 24, 25 (gage height, 2.76 ft).
1943-62: Maximum discharge, 14,800 cfs Jan. 5, 1949 (gage height, 17.00 ft, site and datum then in use); minimum, 23 cfs Oct. 2, 1953.
Flood of March 1913 reached a stage of about 20.2 ft, from floodmarks.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 2-9, 14-21)

Oct. 1 to Jan. 15				Jan. 16 to Sept. 30			
2.9	79	5.0	615	2.7	63	5.0	645
3.2	120	7.0	1,650	3.0	100	7.0	1,650
4.0	285			3.5	185	9.0	2,950
				4.0	305	11.0	4,550

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	120	106	128	a 210	495	1,600	565	218	185	153	122	175
2	155	99	120	a 195	410	1,010	530	350	165	122	114	138
3	120	106	120	194	395	770	495	305	156	165	114	114
4	106	113	180	194	410	645	442	268	147	268	107	241
5	106	128	615	215	495	565	425	230	147	175	107	570
6	99	113	575	381	a 450	495	410	206	147	322	130	218
7	92	113	435	1,050	a 400	425	395	206	138	425	242	165
8	91	106	300	950	350	410	365	206	130	395	165	138
9	88	106	250	a 600	320	952	* 365	230	122	268	130	122
10	87	106	226	a 450	292	2,130	335	218	122	206	114	114
11	86	99	226	a 400	268	1,430	305	255	122	156	107	107
12	84	99	226	a 350	268	1,430	305	268	123	190	100	100
13	84	99	215	a 350	268	1,320	305	230	242	230	100	* 100
14	86	99	184	a 500	335	1,010	292	206	165	230	94	100
15	87	106	* 174	1,540	305	815	268	196	138	1,020	94	94
16	84	* 120	174	2,880	280	* 685	268	175	122	1,480	94	94
17	84	226	315	1,840	255	605	255	165	114	* 910	87	87
18	83	194	465	1,010	242	530	255	165	114	605	87	87
19	* 87	164	495	605	* 280	530	242	156	* 114	395	87	81
20	87	146	800	495	280	565	230	147	175	292	* 81	81
21	89	137	615	425	268	2,140	218	147	130	242	81	81
22	88	128	435	1,050	404	3,910	218	* 246	114	218	75	81
23	87	137	405	a 800	605	1,890	242	230	107	206	75	81
24	86	194	435	a 600	425	1,260	230	175	107	230	73	81
25	92	194	375	530	395	910	218	165	100	185	75	81
26	92	174	315	1,040	2,020	725	206	175	94	218	100	81
27	89	155	300	2,670	4,070	605	206	350	94	196	138	81
28	86	146	273	1,950	3,750	530	206	380	87	175	100	81
29	89	137	a 285	* 960	---------	495	196	280	87	156	87	81
30	106	128	a 260	725	---------	460	196	230	104	138	81	81
31	106	---------	a 230	565	---------	495	---------	206	---------	130	114	---------
Total	2,926	3,978	10,151	25,724	18,735	31,342	9,188	6,984	3,912	10,101	3,275	3,736
Mean	94.4	133	327	830	669	1,011	306	225	130	326	106	125
Cfsm	0.222	0.313	0.769	1.95	1.57	2.38	0.720	0.529	0.306	0.767	0.249	0.294
In.	0.26	0.35	0.89	2.25	1.64	2.74	0.80	0.61	0.34	0.88	0.29	0.33

Calendar year 1961: Max 8,280 Min 76 Mean 548 Cfsm 1.29 In. 17.52
Water year 1961-62: Max 4,070 Min 73 Mean 356 Cfsm 0.838 In. 11.38

Peak discharge (base, 3,400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-28	0300	11.27	4,790				
3-22	1130	10.52	4,150				

* Discharge measurement made on this day.
a No gage-height record.

3-3620. Youngs Creek near Edinburg, Ind.

Location.--Lat 39°25'08", long 86°00'18", in SW¼ sec. 5, T. 11 N., R. 5 E., on left bank on upstream side of highway bridge half a mile southwest of Amity, 2 miles upstream from mouth, and 5 miles northwest of Edinburg.

Drainage area.--109 sq mi.

Records available.--October 1942 to September 1962. Prior to December 1942 monthly discharge only, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 670.20 ft above mean sea level, datum of 1929. Prior to June 30, 1955, wire-weight gage at same site and datum.

Average discharge.--20 years, 111 cfs.

Extremes.--Maximum discharge during year, 4,350 cfs July 15 (gage height, 10.37 ft); minimum, 2.8 cfs Oct. 18, 19, 24; minimum gage height, 0.66 ft Oct. 7-12.
1942-62: Maximum discharge, 10,700 cfs Jan. 27, 1952 (gage height, 13.4 ft); minimum, 0.4 cfs Sept. 14, 1954.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1)

Oct. 1 to 1100 Jan. 15

0.6	2.0	1.5	74
.7	4.9	3.0	295
.8	10	4.0	490
1.0	26		

1100 Jan. 15 to Sept. 30

0.8	6.4	4.0	590
.9	14	6.0	1,060
1.0	24	8.0	1,830
1.5	99	9.0	2,530
2.0	180	10.0	3,730

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	5.7	12	28	97	392	131	38	58	16	19	138
2	13	4.6	12	28	72	234	99	50	47	58	17	62
3	12	5.3	10	28	72	172	80	41	40	34	16	42
4	8.9	8.3	49	36	72	131	72	31	38	21	15	95
5	7.1	8.3	191	51	83	110	72	26	50	14	14	117
6	6.1	6.6	85	167	71	98	72	23	37	11	53	58
7	5.7	5.3	46	371	62	78	70	22	29	9.0	96	41
8	4.9	4.9	31	191	62	83	65	24	22	8.3	47	33
9	4.6	4.3	26	96	64	436	70	23	20	7.0	30	29
10	4.6	4.0	27	b 70	54	502	58	30	18	6.4	22	23
11	4.0	4.0	32	b 60	48	392	54	225	18	6.4	18	21
12	4.3	4.3	40	b 50	53	502	53	112	18	8.3	15	19
13	4.0	4.3	36	b 44	59	370	56	68	17	6.4	* 14	18
14	4.3	5.3	28	37	88	252	50	50	15	860	12	17
15	4.3	5.3	25	923	66	189	46	41	13	2,820	11	19
16	3.7	36	27	525	64	155	42	35	13	* 2,550	11	18
17	3.4	56	153	252	58	123	41	33	12	568	16	* 15
18	3.4	24	131	147	58	105	40	29	11	310	11	12
19	3.7	17	* 176	* 107	91	110	38	26	* 11	199	9.7	11
20	4.3	* 15	247	80	* 82	109	37	23	10	123	7.6	10
21	4.3	13	138	66	83	* 1,130	34	24	9.7	82	8.3	9.7
22	3.7	12	96	768	147	939	34	* 70	9.0	66	8.3	8.3
23	3.1	15	131	318	139	458	40	48	9.0	92	8.3	8.3
24	* 3.4	26	138	172	113	310	35	33	9.7	59	8.3	7.6
25	4.9	23	85	123	153	225	* 31	41	11	50	8.3	8.3
26	4.6	19	64	419	1,140	172	31	128	9.7	41	107	8.3
27	3.7	17	58	535	1,030	131	30	217	8.3	34	53	8.3
28	4.0	15	45	270	796	107	29	235	7.0	29	24	7.6
29	4.3	13	39	190	---	93	29	105	6.4	27	18	7.0
30	8.9	12	36	139	---	85	29	168	6.4	24	15	6.4
31	7.1	---	31	99	---	107	---	80	---	22	129	---
Total	176.3	393.5	2,245	6,380	4,977	8,290	1,568	2,099	583.2	9,141.8	831.8	877.8
Mean	5.69	13.1	724	206	178	267	52.3	67.7	19.4	263	26.8	29.3
Cfsm	0.052	0.120	0.664	1.89	1.63	2.45	0.480	0.621	0.178	2.41	0.246	0.269
In.	0.06	0.13	0.77	2.18	1.70	2.82	0.54	0.72	0.20	2.78	0.28	0.30

Calendar year 1961: Max 5,700 Min 2.2 Mean 120 Cfsm 1.10 In. 14.97
Water year 1961-62: Max 2,820 Min 3.1 Mean 100 Cfsm 0.917 In. 12.48

Peak discharge (base, 1,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-27	0130	7.52	1,550				
3-21	2130	7.26	1,450				
7-15	1800	10.37	4,350				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

GPO 802-191-8

3-3625. Sugar Creek near Edinburg, Ind.

Location.--Lat 39°21'39", long 85°59'51", on line between secs. 29 and 32, T. 11 N., R. 5 E., on left bank, 50 ft upstream from highway bridge in Camp Atterbury, 1¼ miles upstream from confluence with Blue River, and 1½ miles northwest of Edinburg.

Drainage area.--462 sq mi.

Records available.--October 1942 to September 1962. Prior to February 1943 monthly discharge only, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 646.23 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1952, wire-weight gage on downstream side of old highway bridge, 100 ft downstream at same datum.

Average discharge.--20 years, 496 cfs.

Extremes.--Maximum discharge during year, 5,620 cfs Mar. 23 (gage height, 11.39 ft); minimum, 29 cfs Oct. 13, 14; minimum gage height, 4.05 ft Aug. 24, 25.
1942-62: Maximum discharge, 27,600 cfs May 29, 1956 (gage height, 18.38 ft); minimum, 8.0 cfs Sept. 18, 1954 (gage height, 3.04 ft).

Remarks.--Records good except for those periods of no gage-height record or ice effect, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 15 to Nov. 16)

Oct. 1 to Jan. 15				Jan. 16 to Sept. 30			
3.9	22	5.0	312	4.0	43	7.0	1,520
4.1	43	7.0	1,360	4.3	96	9.0	3,050
4.3	76	8.0	1,980	4.5	153	11.0	5,100
4.6	161			5.0	363		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	69	76	164	515	2,740	542	188	237	142	110	304
2	54	60	74	158	386	1,200	460	228	216	264	101	196
3	52	62	71	151	363	845	460	282	184	286	96	132
4	44	67	82	161	350	625	358	260	160	410	88	200
5	41	74	312	180	386	542	345	212	181	350	84	542
6	38	78	252	343	410	460	345	188	208	208	115	268
7	38	71	190	1,360	318	386	340	174	164	153	208	178
8	35	63	155	975	304	363	327	170	141	153	208	138
9	33	58	135	560	291	976	322	170	126	167	153	118
10	33	56	129	b 350	260	2,240	314	190	118	141	120	107
11	33	56	135	b 270	220	1,790	291	515	115	118	101	96
12	32	55	151	b 260	224	1,930	282	570	112	112	90	88
13	30	56	151	b 260	224	1,720	273	386	107	104	* 84	84
14	31	58	135	b 280	314	1,200	264	291	115	929	78	84
15	31	58	135	1,410	327	900	242	237	204	2,900	73	86
16	31	88	120	a 2,300	268	735	232	204	150	4,200	69	96
17	32	209	236	a 2,800	246	598	216	184	126	*1,450	73	* 84
18	35	180	336	a 1,400	228	488	212	167	* 110	845	69	76
19	35	126	* 385	a 800	268	488	208	156	101	542	68	71
20	37	100	610	a 600	* 286	488	200	144	94	363	59	68
21	38	* 88	510	a 520	273	* 2,420	192	144	90	291	56	66
22	37	81	360	1,470	363	4,980	188	354	110	237	54	64
23	37	83	336	1,380	515	4,000	200	386	101	264	53	62
24	* 38	112	410	790	435	1,860	204	* 282	104	216	51	59
25	46	151	336	* 570	435	1,200	* 192	242	96	196	53	62
26	48	129	272	977	2,180	900	184	322	86	167	123	62
27	43	109	248	2,960	4,300	680	181	495	82	147	160	61
28	41	100	216	2,480	4,400	570	178	680	74	144	110	59
29	42	88	180	1,520	---------	488	178	435	69	138	86	57
30	56	81	b 175	845	---------	460	170	435	66	123	74	56
31	74	---------	b 170	598	---------	460	---------	309	---------	112	150	---------
Total	1,253	2,666	7,083	28,892	19,089	38,732	8,100	9,000	3,847	15,872	3,017	3,624
Mean	40.4	88.9	228	932	682	1,249	270	290	128	512	97.3	121
Cfsm	0.087	0.192	0.494	2.02	1.48	2.70	0.584	0.628	0.277	1.11	0.211	0.262
In.	0.10	0.21	0.57	2.33	1.54	3.11	0.65	0.72	0.31	1.28	0.24	0.29

Calendar year 1961: Max 14,600 Min 26 Mean 574 Cfsm 1.24 In. 16.86
Water year 1961-62: Max 4,980 Min 30 Mean 387 Cfsm 0.838 In. 11.35

Peak discharge (base, 4,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-28	0230	10.88	4,980				
3-23	0130	11.39	5,620				
7-16	0130	10.87	4,980				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3630. Driftwood River near Edinburg, Ind.

Location.--Lat 39°20'21", long 85°59'11", in sec. 4, T. 10 N., R. 5 E., on left bank just downstream from highway bridge, 0.8 mile downstream from confluence of Blue River and Sugar Creek and 1½ miles southwest of Edinburg.

Drainage area.--1,054 sq mi.

Records available.--October 1940 to September 1962. Prior to July 1941 monthly discharge only, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 636.99 ft above mean sea level, datum of 1929. Prior to Oct. 7, 1941, wire-weight gage at same site and datum.

Average discharge.--22 years, 1,142 cfs.

Extremes.--Maximum discharge during year, 10,600 cfs Mar. 23 (gage height, 13.00 ft); minimum, 176 cfs Oct. 17-19, 24, 25; minimum gage height, 1.97 ft Sept. 30.
1940-62: Maximum discharge, 37,500 cfs May 29, 1956 (gage height, 16.80 ft); minimum observed, 36 cfs Sept. 23, 1941.
Maximum stage known, 20.3 ft in March 1913, from information by local residents.

Remarks.--Records good except those for periods of no gage-height record or ice effect, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 27, 28, Feb. 27 to Mar. 1, Mar. 21-24, 30, 31, Apr. 3 to June 3, July 15, 16, Sept. 8-30)

Oct. 1 to Dec. 4		Dec. 5 to Sept. 30			
2.2	145	2.0	172	7.0	2,910
2.5	255	2.5	355	9.0	4,500
3.0	470	3.0	580	11.0	6,460
		4.0	1,070	13.0	9,600

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	243	224	275	b 510	1,460	7,680	1,510	490	535	315	315	490
2	251	216	275	b 500	1,180	3,500	1,460	580	490	445	315	445
3	255	212	255	b 470	1,070	2,420	1,290	670	422	445	295	335
4	243	224	255	b 500	1,070	1,930	1,120	625	378	670	275	391
5	228	232	770	558	1,120	1,630	1,070	558	400	625	261	970
6	220	243	1,020	845	1,180	1,400	1,020	512	422	445	302	670
7	212	239	870	2,560	920	1,240	1,020	468	378	535	422	468
8	209	228	670	2,560	920	1,180	970	445	335	558	512	400
9	201	224	580	a 1,500	870	1,950	920	468	315	535	400	355
10	198	220	535	a 920	820	4,320	870	512	295	445	335	335
11	190	216	535	a 830	720	4,410	820	870	295	355	295	315
12	190	209	535	b 800	720	3,980	770	970	295	315	268	295
13	186	209	535	b 780	720	3,900	770	720	335	355	* 254	275
14	179	209	512	820	820	3,050	770	625	378	1,400	254	275
15	179	209	490	2,720	870	2,420	720	535	422	4,180	250	272
16	179	247	468	a 5,300	770	1,990	670	468	355	6,460	236	272
17	176	360	625	a 5,400	720	1,750	625	445	315	* 3,120	233	* 258
18	176	448	920	a 4,000	670	1,510	625	400	* 295	1,990	226	244
19	179	360	* 1,070	a 2,500	720	1,400	580	400	295	1,340	219	233
20	183	* 316	1,510	a 1,800	770	1,460	580	378	295	970	208	226
21	179	275	1,570	a 1,300	770	* 4,000	558	355	315	770	202	222
22	183	275	1,180	2,770	870	* 8,880	535	580	295	625	195	219
23	183	275	1,040	a 3,500	1,290	9,170	558	* 720	295	670	188	219
24	* 179	295	1,120	a 2,200	1,240	4,770	558	535	295	580	182	216
25	179	381	1,020	1,690	1,120	3,120	* 535	490	275	535	185	219
26	183	360	870	1,940	3,280	2,420	512	558	264	468	264	219
27	186	316	820	5,400	7,580	1,990	490	820	254	490	315	216
28	186	316	720	5,980	9,420	1,630	490	1,240	240	445	295	208
29	179	295	b 560	* 3,820	---------	1,460	468	920	233	400	244	205
30	205	275	b 540	2,350	---------	1,340	468	820	233	378	222	202
31	228	---------	b 520	1,750	---------	1,340	---------	625	---------	335	316	---------
Total	6,147	8,108	22,665	68,573	43,680	93,240	23,352	18,802	9,949	31,199	8,483	9,669
Mean	198	270	731	2,212	1,560	3,008	778	607	332	1,006	274	322
Cfsm	0.188	0.256	0.694	2.10	1.48	2.85	0.738	0.576	0.315	0.954	0.260	0.306
In.	0.22	0.29	0.80	2.42	1.54	3.29	0.82	0.66	0.35	1.10	0.30	0.34

Calendar year 1961: Max 23,300 Min 152 Mean 1,377 Cfsm 1.31 In. 17.72
Water year 1961-62: Max 9,420 Min 176 Mean 942 Cfsm 0.894 In. 12.13

Peak discharge (base, 7,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-28	0800	12.59	9,600				
3-23	0400	13.00	10,600				
7-16	0400	10.89	7,020				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3635. Flatrock River at St. Paul, Ind.

Location.--Lat 39°25'03", long 85°38'03", in NE¼ sec. 9, T. 11 N., R. 8 E., on right bank 500 ft downstream from highway bridge, 0.8 mile southwest of St. Paul, and 1½ miles downstream from Mill Creek.

Drainage area.--298 sq mi.

Records available.--October 1930 to September 1962. Prior to October 1958, published as Flatrock Creek at St. Paul.

Gage.--Water-stage recorder. Datum of gage is 764.84 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 21, 1938, chain gage at site 500 ft upstream at same datum.

Average discharge.--32 years, 318 cfs.

Extremes.--Maximum discharge during year, 3,700 cfs Feb. 28 (gage height, 5.18 ft); minimum, 14 cfs Aug. 24, 25 (gage height, 0.42 ft).
1930-62: Maximum discharge, 18,500 cfs Jan. 5, 1949 (gage height, 10.60 ft); maximum gage height, 11.34 ft Jan. 21, 22, 1959, from outside floodmarks (present site) 13.0 ft Jan. 15, 1937 (site then in use); minimum, 0.5 cfs Aug. 7, 9, 1931.
Flood in March 1913 reached a stage of approximately 20.5 ft, from information by local residents.

Remarks.--Records good except those for periods of no gage-height record or ice effect, which are poor. Slight diversion occasionally by quarry above gage.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Dec. 4

0.4	13
.5	21
.6	33
.7	48
.9	94
1.1	170

Dec. 5 to Sept. 30

0.4	13	1.1	170
.5	21	1.5	355
.6	33	2.0	670
.7	48	4.0	2,360
.9	94	5.0	3,440

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	56	54	60	b 210	355	1,440	568	150	272	35	48	94
2	91	40	56	b 195	300	810	568	275	245	52	43	81
3	78	39	56	b 190	275	600	475	275	138	57	40	58
4	54	43	62	194	275	475	415	214	112	138	37	45
5	42	54	384	218	328	415	385	182	105	108	33	48
6	35	58	705	415	328	355	355	162	89	68	45	64
7	30	48	445	740	250	328	355	154	94	64	57	50
8	28	43	275	705	b 240	300	328	146	78	62	54	40
9	24	40	214	505	b 238	772	* 300	146	71	50	* 45	37
10	24	37	194	b 300	b 235	1,280	275	138	68	42	37	33
11	22	37	b 185	b 250	b 210	1,280	246	178	66	39	30	32
12	20	36	b 178	b 230	a 205	1,200	234	182	68	* 37	28	29
13	20	36	b 170	b 210	a 205	1,040	234	154	64	37	28	26
14	19	36	b* 165	b 260	b 215	810	226	130	64	78	26	* 30
15	19	37	b 157	1,870	238	635	210	123	* 58	418	26	28
16	19	*46	b 150	1,980	222	535	194	112	54	535	24	26
17	19	111	271	1,980	202	475	186	98	48	568	23	24
18	19	142	415	*1,120	198	415	178	89	46	328	22	22
19	* 20	101	445	635	* 226	415	170	84	54	218	21	20
20	21	84	705	535	260	* 415	162	78	50	158	19	19
21	22	71	600	385	238	2,050	150	71	43	123	17	18
22	22	64	445	1,780	328	2,070	146	* 112	40	105	16	18
23	23	64	385	1,200	505	1,620	154	172	39	105	16	18
24	23	71	385	775	415	960	154	112	40	94	16	18
25	24	94	385	505	385	740	138	94	37	89	16	21
26	24	91	328	568	2,080	600	134	130	33	86	29	20
27	24	84	300	1,200	3,440	475	126	197	29	98	33	18
28	23	78	b 270	1,280	2,760	415	123	300	29	86	30	18
29	22	68	b 220	705	---	385	123	234	26	73	25	17
30	26	62	b 190	535	---	385	123	238	24	62	21	17
31	55	---	b 195	385	---	475	---	190	---	56	68	---
Total	948	1,869	8,995	22,060	15,156	24,170	7,435	4,920	2,184	4,069	973	989
Mean	30.6	62.3	290	712	541	780	248	159	72.8	131	31.4	33.0
Cfsm	0.103	0.209	0.973	2.39	1.82	2.62	0.832	0.534	0.244	0.440	0.105	0.111
In.	0.12	0.23	1.12	2.76	1.90	3.02	0.93	0.62	0.27	0.51	0.12	0.12

Calendar year 1961: Max 7,850 Min 17 Mean 408 Cfsm 1.37 In. 18.61
Water year 1961-62: Max 3,440 Min 16 Mean 257 Cfsm 0.862 In. 11.72

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	1530	4.21	2,560				
2-28	0300	5.18	3,700				
3-21	1830	4.40	2,760				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

3-3640. East Fork White River at Columbus, Ind.

Location.--Lat 39°12', long 86°56', in NW¼ sec. 25, T. 9 N., R. 5 E., on left bank at abutment of abandoned bridge at west end of Second Street in Columbus, 0.6 mile downstream from confluence of Driftwood River and Flatrock River, and 1.4 miles upstream from Haw Creek.

Drainage area.--1,692 sq mi.

Records available.--October 1947 to September 1962. Prior to January 1948 monthly discharge only, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 603.12 ft above mean sea level, datum of 1929. Prior to Oct. 22, 1952, wire-weight gage, 600 ft upstream at same datum.

Average discharge.--15 years, 1,919 cfs.

Extremes.--Maximum discharge during year, 14,000 cfs Feb. 28 (gage height, 7.58 ft); minimum, 255 cfs Oct. 18 (gage height, 1.25 ft). 1947-62: Maximum discharge, 48,700 cfs Jan. 28, 1952 (gage height, 16.00 ft); minimum, 87 cfs Sept. 29, Oct. 7, 1954. Flood in March 1913 reached a stage of 17.9 ft, from floodmarks (discharge, about 100,000 cfs).

Remarks.--Records good, except those for periods of no gage-height record, which are fair.

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Jan. 16

1.2	230
1.6	470
1.9	910
2.4	2,100
3.0	4,120
4.0	7,400

Jan. 17 to Sept. 30

1.2	230	3.0	4,120
1.5	480	4.0	7,400
1.8	870	6.0	11,100
2.0	1,200	8.0	14,800
2.5	2,400		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	346	328	352	910	2,250	12,200	2,900	1,030	1,050	410	629	668
2	364	340	346	825	1,980	6,580	2,730	1,360	1,120	668	590	780
3	394	334	334	825	1,740	3,940	2,400	1,380	1,100	681	557	629
4	382	328	346	825	1,620	3,230	2,100	1,260	855	720	535	535
5	352	334	554	825	1,740	2,730	1,980	1,100	825	998	524	968
6	334	346	1,440	1,100	1,860	2,250	1,860	998	855	780	568	918
7	322	340	1,550	2,920	1,510	1,980	1,740	950	810	735	642	707
8	310	328	1,210	3,760	1,400	1,860	1,620	918	694	780	780	603
9	304	322	1,000	a 3,000	1,400	3,060	1,620	902	629	810	681	546
10	292	310	825	a 2,000	1,320	5,600	* 1,510	1,020	579	681	590	502
11	286	304	825	a 1,250	1,170	6,270	1,400	2,250	579	590	535	450
12	280	304	825	a 1,050	1,150	5,950	1,380	1,620	579	535	491	430
13	280	298	825	a 1,000	1,130	5,600	1,340	1,320	546	* 524	460	410
14	270	298	740	a 1,200	1,200	4,890	1,320	1,120	603	2,000	440	410
15	265	292	* 665	3,760	1,380	3,940	1,240	998	629	5,510	* 420	400
16	265	328	665	7,400	1,280	3,230	1,180	918	579	10,400	390	400
17	260	370	825	a 6,900	1,180	2,730	1,120	855	524	5,600	380	380
18	260	463	1,320	a 6,200	1,120	2,400	1,100	810	* 480	3,400	372	363
19	265	463	1,550	a 5,300	1,170	2,250	1,060	750	450	2,250	354	* 354
20	* 265	421	2,250	a 3,600	1,280	2,250	1,030	720	440	1,620	346	338
21	265	* 388	2,730	a 3,000	* 1,280	5,250	998	694	460	1,320	338	329
22	270	370	2,100	a* 6,200	1,400	* 10,500	982	886	450	1,150	320	320
23	270	364	1,680	a 9,000	1,980	12,000	998	* 1,170	440	1,150	312	320
24	265	364	1,680	a 4,600	2,400	8,080	1,010	982	470	1,050	295	312
25	275	407	1,680	3,230	1,980	4,890	966	886	430	982	312	329
26	275	435	1,440	2,730	5,710	3,940	950	918	410	902	354	320
27	275	421	1,320	5,600	10,400	3,230	934	1,200	380	840	480	312
28	270	394	1,210	7,150	13,200	2,730	918	1,980	363	825	470	304
29	260	382	910	5,950	---------	2,400	918	1,740	346	780	410	288
30	286	364	825	3,760	---------	2,250	918	1,400	338	720	380	282
31	322	---------	825	2,900	---------	2,400	---------	1,260	---------	668	557	---------
Total	9,129	10,740	34,847	108,770	67,230	140,610	42,222	35,395	18,013	50,079	14,512	13,907
Mean	294	358	1,124	3,509	2,401	4,536	1,407	1,142	600	1,615	468	464
Cfsm	0.174	0.212	0.664	2.07	1.42	2.68	0.832	0.675	0.355	0.954	0.277	0.274
In.	0.20	0.24	0.77	2.39	1.48	3.09	0.93	0.78	0.40	1.10	0.32	0.31

Calendar year 1961: Max 42,000 Min 260 Mean 2,171 Cfsm 1.28 In. 17.40
Water year 1961-62: Max 13,200 Min 260 Mean 1,494 Cfsm 0.883 In. 12.01

Peak discharge (base, 10,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-28	2400	7.58	14,000				
3-23	1430	6.76	12,400				
7-16	0730	6.29	11,600				

* Discharge measurement made on this day.
a No gage-height record.

3-3645. Clifty Creek at Hartsville, Ind.

Location.--Lat 39°16'25", long 85°42'10", in NW¼ sec. 36, T. 10 N., R. 7 E., at downstream side of left abutment of highway bridge, a quarter of a mile north of Hartsville and 5 miles upstream from Duck Creek.

Drainage area.--88.8 sq mi.

Records available.--February 1948 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 677.34 ft above mean sea level, datum of 1929. Prior to Sept. 24, 1952, wire-weight gage at same site and datum.

Average discharge.--14 years, 106 cfs.

Extremes.--Maximum discharge during year, 3,090 cfs Jan. 22 (gage height, 8.09 ft, from recorded range in stage); minimum, 0.4 cfs Oct. 17, 18; minimum gage height, 1.28 ft Aug. 24-25.
1948-62: Maximum discharge, 11,300 cfs Jan. 21, 1959 (gage height, 14.29 ft); no flow at times during 1948, 1951-57, 1959, 1961. Flood in 1913 reached a stage of 25.1 ft, from floodmarks.

Remarks.--Records fair except those for periods of no gage-height record or ice effect, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 17, July 10-14, Sept. 15-30)

1.0	0.0	1.7	26
1.1	.5	1.9	54
1.2	1.2	2.2	118
1.3	2.4	2.5	198
1.4	4.2	3.0	382
1.5	7.9	5.0	1,280
1.6	15	7.0	2,400

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2	1.7	8.4	46	b 68	342	221	38	31	9.7	7.9	62
2	27	2.6	7.9	40	60	192	172	73	110	15	6.9	247
3	15	3.5	7.4	38	b 60	151	143	53	54	5.5	6.4	38
4	4.2	3.9	12	39	64	123	118	37	37	4.9	5.5	24
5	2.8	3.3	164	52	77	111	108	30	27	4.6	5.5	16
6	2.0	4.9	113	110	70	90	99	27	22	4.6	10	10
7	1.6	4.4	66	270	54	84	88	24	21	4.6	21	8.4
8	1.4	3.5	42	150	64	93	79	24	18	4.2	22	6.9
9	1.1	3.1	32	85	58	440	75	23	14	3.3	* 11	6.9
10	1.1	2.8	32	50	48	522	* 62	24	12	3.0	6.9	6.9
11	1.0	2.5	46	42	42	362	58	43	14	2.4	5.2	5.9
12	.7	2.5	54	38	50	514	56	37	14	* 2.1	4.6	5.2
13	.7	2.6	44	38	45	322	56	28	14	2.0	4.4	4.9
14	.6	2.8	28	45	67	221	53	22	12	31	4.2	* 4.9
15	.6	2.6	* 30	1,050	66	178	48	19	* 9.6	1,210	3.9	4.6
16	.5	3.3	28	400	58	151	45	17	7.9	397	3.7	4.4
17	.5	30	130	180	54	123	42	15	7.4	186	3.5	3.9
18	.4	32	148	115	54	108	40	14	6.4	123	3.5	3.7
19	.5	19	156	84	* 69	111	38	13	9.0	66	3.5	3.5
20	* .5	14	189	65	73	116	36	12	11	43	3.3	3.1
21	.5	* 11	126	50	73	1,250	33	12	10	32	3.1	3.1
22	.5	10	92	1,400	118	756	32	* 12	6.9	25	2.8	3.1
23	.6	10	90	720	166	* 322	35	21	9.9	32	2.5	3.1
24	.7	17	108	300	248	231	33	16	43	22	2.1	3.1
25	.9	31	84	140	246	181	30	14	5.5	18	2.5	3.1
26	.9	21	67	153	1,830	146	28	13	4.6	14	4.4	3.1
27	.9	16	66	266	790	116	27	20	4.4	11	5.2	3.0
28	.9	14	61	175	1,110	101	26	89	4.2	14	4.4	2.8
29	.9	11	53	* 128	---	90	26	54	4.2	11	3.9	2.8
30	1.2	9.6	b 52	111	---	116	28	52	4.4	9.6	3.9	2.8
31	1.7	---	b 48	81	---	186	---	53	---	9.0	59	---
Total	76.1	295.6	2,184.7	6,461	5,782	7,849	1,935	929	548.4	2,319.5	236.7	500.2
Mean	2.45	9.85	70.5	208	206	253	64.5	30.0	18.3	74.8	7.64	16.7
Cfsm	0.028	0.111	0.794	2.34	2.32	2.85	0.726	0.338	0.206	0.842	0.086	0.188
In.	0.03	0.12	0.92	2.70	2.42	3.29	0.81	0.39	0.23	0.97	0.10	0.21

Calendar year 1961 : Max 4,200 Min 0.0 Mean 107 Cfsm 1.20 In. 16.38
Water year 1961-62 : Max 1,830 Min 0.4 Mean 79.8 Cfsm 0.899 In. 12.19

Peak discharge (base, 1,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	unknown	6.15	1,940	7-15	1200	7.86	2,950
1-22	unknown	8.09	3,090	9-2	1230	5.44	1,490
2-26	1800	7.08	2,460				
3-21	2330	5.67	1,660				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 4-25.

3-3650. Sand Creek near Brewersville, Ind.

Location.--Lat 39°05'05", long 85°39'30", in NW¼ sec. 5, T. 7 N., R. 8 E., on left bank at downstream side of county highway bridge, 2½ miles west of Brewersville, and 5.2 miles upstream from Bear Creek.

Drainage area.--156 sq mi.

Records available.--February 1948 to September 1962.

Gage.--Water-stage recorder. Altitude of gage is 630 ft (by barometer). Prior to Oct. 6, 1952, wire-weight gage at site 1.7 miles upstream at datum approximately 8 ft higher.

Average discharge.--14 years, 181 cfs.

Extremes.--Maximum discharge during year, 6,950 cfs July 15 (gage height, 14.10 ft); minimum, 1.2 cfs Oct. 1 (gage height, 0.65 ft). 1948-62: Maximum discharge, 19,900 cfs Jan. 21, 1959 (gage height, 21.70 ft), from rating curve extended above 6,500 cfs on basis of contracted-opening measurement of peak flow; no flow many times.

Remarks.--Records good except those for periods of doubtful gage-height record, which are fair.

Rating table, 1961-62, except for periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 10 to Nov. 17, Sept. 14-30)

0.5	1.3	1.5	59
.6	2.5	2.0	128
.7	4.5	2.5	230
.8	7.2	3.0	360
.9	11	4.0	675
1.0	16	6.0	1,420
1.2	30	10.0	3,600

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	306	9.4	19	b 60	90	541	405	52	43	25	16	20
2	143	18	18	56	81	274	255	109	36	59	13	27
3	48	15	18	55	80	205	195	128	63	19	12	16
4	27	13	19	60	81	155	155	74	36	50	11	13
5	20	25	246	88	104	155	* 128	56	24	70	11	12
6	13	20	152	388	97	136	120	45	* 21	18	* 15	7.6
7	9.0	15	* 80	479	60	120	111	38	44	16	112	5.6
8	7.2	12	54	214	* 64	140	104	35	50	15	52	4.7
9	* 5.9	* 10	44	b 105	83	1,340	90	34	22	34	26	4.5
10	6.8	9.8	47	b 70	b 95	1,140	90	30	17	18	17	4.2
11	7.2	9.4	93	b 60	b 72	605	76	* 67	18	13	13	3.8
12	7.2	9.0	84	b* 55	67	* 675	71	104	55	9.0	11	3.6
13	7.9	8.6	75	b 56	65	450	71	63	43	* 6.6	9.0	4.0
14	6.2	9.4	48	b 60	81	292	72	47	30	226	8.6	* 5.1
15	4.7	9.4	42	1,840	84	218	65	37	24	3,570	7.9	4.5
16	3.2	15	104	751	76	175	59	30	19	1,730	7.2	4.0
17	2.9	53	359	318	80	145	54	26	14	344	6.8	4.0
18	2.7	46	267	205	74	128	49	23	12	165	6.5	5.1
19	3.4	30	346	b 145	109	111	47	18	10	97	6.2	4.9
20	4.0	26	374	b 105	120	120	45	16	10	67	5.8	4.0
21	4.7	24	175	b 85	119	1,240	43	16	24	50	5.6	3.4
22	8.2	21	128	2,330	292	979	40	18	17	43	5.4	3.2
23	9.4	26	120	597	379	420	39	17	14	76	4.9	2.9
24	10	36	165	268	1,430	268	36	16	200	90	4.2	2.4
25	10	46	120	185	480	205	34	17	144	44	4.7	2.9
26	9.8	35	90	202	3,540	165	30	17	36	32	6.8	2.9
27	9.8	29	90	465	1,620	128	29	20	24	26	6.8	2.5
28	9.8	25	104	236	1,900	111	28	36	20	22	9.4	2.5
29	9.4	24	b 80	155	---------	104	28	66	15	21	9.8	2.4
30	10	20	b 65	136	---------	108	29	46	13	19	7.6	2.9
31	11	---------	b 64	104	---------	352	---------	39	---------	17	11	---------
Total	737.4	649.0	3,690	9,933	11,423	11,205	2,598	1,340	1,098	6,991.6	443.2	185.6
Mean	23.8	21.6	119	320	408	361	86.6	43.2	36.6	226	14.3	6.19
Cfsm	0.153	0.138	0.763	2.05	2.62	2.31	0.555	0.277	0.235	1.45	0.092	0.040
In.	0.18	0.15	0.88	2.36	2.73	2.66	0.62	0.32	0.26	1.67	0.11	0.04

Calendar year 1961: Max 6,730 Min 1.3 Mean 184 Cfsm 1.18 In. 15.99
Water year 1961-62: Max 3,570 Min 2.4 Mean 138 Cfsm 0.885 In. 11.98

Peak discharge (base, 2,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	1330	9.90	3,530				
1-22	1100	11.04	4,300				
2-26	1800	12.05	5,100				
7-15	2200	14.10	6,950				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Doubtful gage-height record Oct. 5-9, Apr. 24, 25, May 29, June 3, 5, 7, 8, 12, 17-23, 29, 30 July 1-4, 7-14.

3-3655. East Fork White River at Seymour, Ind.

Location.--Lat 38°58'57", long 85°53'57", in NW¼ sec. 7, T. 6 N., R. 6 E., on left bank 1,700 ft downstream from highway bridge, 1 mile north of Seymour, 9.6 miles downstream from Sand Creek, and at mile 219.2.

Drainage area.--2,333 sq mi.

Records available.--October 1927 to September 1962. Yearly maximum discharge only for water years 1924-27, published in WSP 1305. Daily gage heights from May 1923 to September 1927 are available in the district office.

Gage.--Water-stage recorder. Datum of gage is 550.67 ft above mean sea level, datum of 1929. Oct. 1, 1927, to July 2, 1931, chain gage 1,700 ft upstream and 500 ft upstream from dam at datum 7.61 ft higher. July 3, 1931, to July 16, 1934, staff gage at site 100 ft downstream at present datum.

Average discharge.--35 years, 2,411 cfs.

Extremes.--Maximum discharge during year, 23,800 cfs July 16 (gage height, 16.31 ft); minimum, 305 cfs Oct. 19 (gage height, 0.69 ft).
1923-62: Maximum discharge, 78,500 cfs Jan. 5, 1949 (gage height, 19.67 ft).
1927-62: Minimum, 84 cfs Sept. 15, 1941.
Maximum stage known, 21.0 ft Mar. 26, 1913, from information by Corps of Engineers and State Highway Department of Indiana (discharge, 120,000 cfs).

Remarks.--Records good. Some regulation of low flow by Seymour Water Co. at dam above station. Records of water temperature for the water year 1962 are given in WSP 1942.

Rating tables, water year 1961-62 (gage height, in feet, and discharge in cubic feet per second)
(Shifting-control method used Sept. 8-30; stage-discharge relation affected by ice Jan. 11-14)

Oct. 1 to Jan. 15		Jan. 16 to Sept. 30			
0.7	305	0.7	348	10.0	7,100
1.0	385	1.0	465	12.0	9,600
2.0	720	2.0	900	14.0	13,800
5.0	2,340	4.0	1,960	15.0	17,000
7.0	3,900	6.0	3,380	16.0	22,000

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	445	357	445	1,100	3,220	18,200	4,180	1,180	1,430	545	945	990
2	605	357	445	1,100	2,790	12,500	3,940	1,480	1,280	720	900	1,180
3	505	385	445	1,040	2,370	6,900	3,380	1,720	1,330	900	855	1,280
4	475	385	445	945	2,230	4,820	* 3,000	1,600	1,180	810	810	900
5	445	385	505	995	2,230	3,940	2,790	1,480	1,180	990	765	* 855
6	415	* 385	1,140	1,200	2,370	3,460	2,580	1,330	1,130	990	810	1,130
7	385	385	1,510	2,550	2,160	3,080	2,440	1,230	1,130	855	855	945
8	385	385	* 1,300	3,560	1,900	* 2,860	2,300	1,180	* 1,040	900	990	810
9	357	385	1,100	3,070	1,960	4,930	2,230	1,130	945	* 900	990	720
10	357	385	945	1,840	1,960	8,380	2,100	1,130	855	900	855	630
11	* 344	385	900	1,300	1,720	8,770	1,960	2,300	855	810	810	585
12	344	357	900	1,150	* 1,600	8,380	1,900	2,300	855	720	720	545
13	344	357	900	1,100	1,600	8,010	1,840	1,840	855	675	720	545
14	330	357	855	1,400	1,600	7,000	1,780	* 1,600	810	1,720	675	505
15	330	357	765	2,730	1,720	5,600	1,720	1,380	810	5,420	630	505
16	330	385	720	8,250	1,720	4,540	1,600	1,230	855	17,500	630	485
17	330	415	900	8,800	1,660	3,860	1,540	1,180	765	17,300	585	485
18	330	475	1,450	7,800	1,540	3,300	1,480	1,080	720	7,090	585	465
19	330	605	1,780	6,300	1,600	3,000	1,430	1,040	675	3,940	545	446
20	330	570	2,080	4,180	1,720	2,930	1,380	990	630	2,860	545	426
21	318	505	2,480	3,220	1,780	5,420	1,380	945	630	2,230	545	406
22	330	475	2,280	6,120	2,100	11,500	1,330	1,040	675	1,840	505	406
23	330	475	1,900	13,500	2,440	13,800	1,280	1,180	630	1,780	505	387
24	330	475	1,780	* 9,270	5,870	12,400	1,280	1,230	957	1,780	485	387
25	330	475	1,780	5,300	4,260	8,010	1,280	1,130	1,660	1,540	485	387
26	330	570	1,610	3,860	7,520	5,600	1,230	1,080	900	1,380	505	387
27	330	570	1,450	4,910	17,800	4,440	1,180	1,180	720	1,230	545	387
28	330	535	1,400	7,320	19,700	3,700	1,180	1,720	630	1,180	585	368
29	330	505	1,100	7,770	----------	3,220	1,130	2,030	585	1,180	585	368
30	330	475	1,040	5,800	----------	3,080	1,130	1,720	545	1,080	545	348
31	344	---------	1,100	4,020	----------	3,620	---------	1,660	---------	* 990	632	---------
Total	11,348	13,117	37,450	131,500	101,140	199,250	57,970	43,315	27,262	82,755	21,142	18,263
Mean	366	437	1,208	4,242	3,612	6,427	1,932	1,397	909	2,670	682	609
Cfsm	0.157	0.187	0.518	1.82	1.55	2.75	0.828	0.599	0.390	1.14	0.292	0.261
In.	0.18	0.21	0.60	2.10	1.61	3.17	0.92	0.69	0.44	1.31	0.34	0.29

Calendar year 1961: Max 52,000 Min 318 Mean 2,757 Cfsm 1.18 In. 16.04
Water year 1961-62: Max 19,700 Min 318 Mean 2,040 Cfsm 0.874 In. 11.86

Peak discharge (base, 12,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-23	unknown	+14.13	14,100				
2-28	1700	15.99	22,000				
3-24	0500	14.08	14,100				
7-16	2100	16.31	23,800				

* Discharge measurement made on this day.
\+ About

3-3660. Graham Creek near Vernon, Ind.

Location.--Lat 38°56', long 85°34', in SE¼ sec. 30, T. 6 N., R. 9 E., on right bank 10 ft upstream from State Highway 7, 4.7 miles southeast of Vernon, and 8.0 miles downstream from Little Graham Creek.

Drainage area.--77.6 sq mi.

Records available.--June 1955 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 677.47 ft above mean sea level, datum of 1929 (unadjusted). Prior to June 10, 1955, wire-weight gage at same site and datum.

Average discharge.--7 years, 100 cfs.

Extremes.--Maximum discharge during year, 5,160 cfs July 15 (gage height, 11.84 ft); minimum, 0.2 cfs Oct. 8-11; minimum gage height, 1.40 ft Oct. 9-11.
1955-62: Maximum discharge, 18,600 cfs June 23, 1960 (gage height, 21.37 ft) from rating curve extended above 6,000 cfs on basis of contracted-opening measurements of peak flow; no flow at times during most years.

Remarks.--Records good.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 6; stage-discharge relation affected by ice Feb. 9)

1.29	0.2	1.8	8.0	3.3	200
1.3	.3	1.9	13	4.0	445
1.4	.9	2.0	20	5.0	925
1.5	1.9	2.1	27	7.0	2,100
1.6	3.1	2.5	58	10.0	3,950
1.7	5.0	2.9	110		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	1.2	10	26	47	232	238	10	19	8.6	* 6.6	21
2	.5	1.2	8.8	24	40	105	134	38	12	364	5.0	26
3	.6	1.5	8.0	23	38	76	80	43	7.6	68	4.1	9.6
4	.4	1.7	12	28	41	65	* 62	30	5.5	* 43	4.1	9.2
5	.5	2.2	449	48	52	86	62	21	5.2	31	4.5	13
6	.4	2.6	129	299	58	75	57	21	4.8	20	4.1	6.9
7	.4	3.2	* 64	433	35	65	46	16	* 47	1,110	3.9	* 5.0
8	.3	* 2.5	43	121	29	91	39	15	29	95	3.1	3.4
9	* .2	2.2	38	68	* 29	* 1,270	38	14	15	71	2.7	2.7
10	.2	2.1	158	49	107	662	40	17	14	52	2.4	2.3
11	.2	2.0	370	38	71	214	36	58	356	29	2.3	2.1
12	.3	1.9	175	* 28	51	855	33	* 57	236	18	2.0	1.9
13	.3	1.9	112	27	43	233	33	37	68	29	1.8	1.6
14	.3	2.6	59	26	49	120	34	26	41	1,140	1.6	1.7
15	.3	2.4	44	1,190	55	84	31	19	27	3,370	1.5	1.7
16	.3	11	41	482	50	66	26	14	18	2,470	1.4	1.6
17	.3	83	487	130	55	55	23	9.7	12	213	1.5	1.7
18	.3	36	289	76	50	47	21	7.2	8.4	80	1.5	1.3
19	.4	21	319	55	57	46	19	5.8	6.3	50	1.4	1.2
20	.5	14	342	43	69	51	18	5.9	5.0	38	1.6	1.1
21	.5	9.2	126	36	53	1,370	16	6.5	4.3	29	1.7	1.1
22	.5	7.6	79	2,830	234	510	15	6.9	3.7	22	1.8	1.4
23	.6	148	91	447	256	160	14	5.5	3.9	21	1.6	1.3
24	.6	135	143	146	1,160	95	13	4.3	353	22	1.5	1.3
25	.9	58	80	94	272	72	12	3.7	181	21	1.6	1.6
26	.9	39	55	103	2,580	58	11	44	48	16	5.1	1.7
27	.9	29	50	374	1,640	49	10	63	27	11	4.5	1.6
28	.8	22	57	138	1,630	42	9.7	76	15	8.4	3.6	1.6
29	.8	16	45	80	----------	38	8.8	47	9.2	16	3.2	1.7
30	.9	12	38	67	----------	38	8.4	28	6.3	16	2.7	1.6
31	1.1	----------	28	56	----------	125	----------	21	----------	9.2	2.8	----------
Total	15.5	672.0	3,949.8	7,585	8,851	7,055	1,187.9	770.5	1,588.2	9,491.2	87.2	129.9
Mean	0.50	22.4	127	245	316	228	39.6	24.9	52.9	306	2.81	4.33
Cfsm	0.0064	0.289	1.64	3.16	4.07	2.94	0.510	0.321	0.682	3.94	0.036	0.056
In.	0.007	0.32	1.89	3.64	4.24	3.39	0.57	0.37	0.76	4.54	0.04	0.06

Calendar year 1961: Max 3,920 Min 0.2 Mean 109 Cfsm 1.40 In. 19.00
Water year 1961-62: Max 3,370 Min 0.2 Mean 113 Cfsm 1.46 In. 19.83

Peak discharge (base, 2,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	1400	7.65	2,460	7-7	0500	9.79	3,820
1-22	1200	11.58	5,020	7-15	1800	11.84	5,160
2-26	1130	10.53	4,280				

* Discharge measurement made on this day.

3-3665. Muscatatuck River near Deputy, Ind.

Location.--Lat 38°48'15", long 85°40'26", in NE¼ sec. 7, T. 4 N., R. 8 E., on left bank at downstream side of highway bridge, 1.4 miles northwest of Deputy, 1.9 miles upstream from Coffee Creek, and 2.4 miles downstream from confluence of Graham Creek and Big Creek.

Drainage area.--296 sq mi.

Records available.--November 1947 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 541.13 ft above mean sea level, datum of 1929 (unadjusted). Prior to June 22, 1955, wire-weight gage at same site and datum.

Average discharge.--14 years (1948-62), 369 cfs.

Extremes.--Maximum discharge during year, 14,600 cfs Jan. 22; maximum gage height, 22.04 ft Jan. 22; minimum, 1.9 cfs Oct. 8-10; minimum gage height, 1.21 ft Aug. 25, 26.
1947-62: Maximum discharge, 52,200 cfs Jan. 21, 1959 (gage height, 33.1 ft, from floodmarks), from rating curve extended above 25,000 cfs on basis of contracted-opening measurement of peak flow; no flow at times in many years.

Remarks.--Records good except those for periods of no gage-height record, which are fair.

Rating table, water year 1961-62 (gage height, in feet, and dishcarge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 10; rate of change of stage used as a factor
Dec. 11, 17, Jan. 6, 7, 15, 16, 22, 27, Feb. 23-28, Mar. 1, 9, 10, 12, 13, 21, 22,
May 11, June 7, 12, July 7, 14-17, Sept. 2)

1.0	1.9	3.0	175
1.1	4.0	4.0	325
1.2	6.8	8.0	1,110
1.3	10	12.0	2,180
1.5	22	15.0	4,010
1.8	45	18.0	7,000
2.0	65	20.0	9,600
2.5	115		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.2	10	45	137	231	1,440	950	71	143	26	* 28	48
2	11	9.0	37	120	203	710	690	148	105	658	21	1,230
3	6.5	10	32	120	189	472	434	155	85	*343	17	155
4	3.8	13	35	125	189	397	* 309	143	70	175	13	120
5	3.2	9.7	554	170	203	491	261	105	105	125	28	80
6	2.6	10	656	921	203	453	245	85	174	90	54	* 56
7	2.0	7.5	277	1,400	189	379	231	70	* 974	672	32	40
8	1.9	* 7.2	* 168	670	143	* 453	217	61	277	309	22	28
9	1.9	6.5	131	a 455	186	3,700	203	58	161	175	14	23
10	1.9	5.9	317	a 325	a 350	2,290	203	61	120	155	12	20
11	* 2.2	5.6	1,200	a 230	a 300	990	203	2,820	413	110	9.3	17
12	2.2	5.3	810	a 175	* 245	1,940	217	674	1,170	70	9.0	14
13	2.0	6.2	550	155	217	1,110	217	309	397	41	8.6	12
14	2.2	16	309	143	231	590	203	* 203	231	450	8.6	14
15	2.2	21	217	2,720	245	434	182	155	155	5,200	8.2	14
16	2.4	153	189	3,960	245	343	161	120	115	7,150	8.2	16
17	2.4	264	997	a1,500	261	293	137	95	90	1,160	8.2	12
18	2.6	175	1,050	a 520	245	245	125	80	70	309	10	9.3
19	3.0	100	870	a 310	277	231	115	65	54	182	8.2	9.3
20	3.5	70	870	a 250	277	245	105	55	44	125	7.9	9.0
21	3.8	46	550	a 210	281	3,280	100	57	34	95	7.9	8.6
22	3.8	34	343	3,750	790	2,080	90	175	28	70	7.9	8.6
23	4.0	221	293	a2,200	1,250	810	90	116	26	57	7.5	8.6
24	4.5	610	472	* 790	5,310	491	80	70	180	46	7.5	8.6
25	6.5	293	379	510	1,340	361	75	49	530	40	7.2	8.2
26	6.8	161	245	543	3,600	309	70	77	261	38	16	8.2
27	7.5	115	231	1,330	7,720	261	65	722	131	29	17	8.2
28	8.6	90	245	730	7,190	231	62	630	80	24	16	7.9
29	9.3	70	a 230	415	---------	203	59	325	51	21	12	7.9
30	9.7	56	a 200	325	---------	203	56	231	33	56	8.6	7.9
31	10	---------	a 170	277	---------	629	---------	203	---------	51	12	---------
Total	140.2	2,600.9	12,672	30,486	37,110	26,064	6,155	8,188	6,307	18,052	446.8	2,009.3
Mean	4.52	86.7	409	983	1,325	841	205	264	210	582	14.4	67.0
Cfsm	0.015	0.293	1.38	3.32	4.48	2.84	0.693	0.892	0.709	1.97	0.049	0.226
In.	0.02	0.33	1.59	3.83	4.66	3.27	0.77	1.03	0.79	2.27	0.06	0.25

Calendar year 1961: Max 20,200 Min 1.9 Mean 430 Cfsm 1.45 In. 19.72
Water year 1961-62: Max 8,750 Min 1.9 Mean 412 Cfsm 1.39 In. 18.87

Peak discharge (base, 7,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-22	1400	-------	14,600	7-15	2300	-------	10,400
	1700	22.04			2400	20.28	
2-26	1200	-------	14,400				
	1430	21.84					

* Discharge measurement made on this day.
a No gage-height record.

3-3670. Muscatatuck River near Austin, Ind.

Location.--Lat 38°46', long 85°49', in sec. 23, T. 4 N., R. 6 E., on right bank 15 ft downstream from bridge on U. S. Highway 31, 2 miles north of Austin, and 4 miles upstream from Stucker Fork.

Drainage area.--365 sq mi.

Records available.--August 1932 to September 1962 (high-water records only since October 1943).

Average discharge.--10 years (1932-35, 1936-43), 387 cfs.

Gage.--Water-stage recorder. Datum of gage is 513.96 ft above mean sea level, datum of 1929. Prior to June 22, 1934, chain gage at same site and datum. Nov. 8 to Dec. 30, 1939, staff gage approximately half a mile upstream at different datum. Aug. 1, 1940, to Sept. 30, 1943, auxiliary gage (for low flows) at Slate-Ford bridge 2¼ miles upstream at different datum.

Extremes.--Maximum discharge during year, 11,000 cfs Jan. 23 (gage height, 23.12 ft).
1932-62: Maximum discharge, 53,900 cfs Jan. 22, 1959 (gage height, 29.20 ft).

Remarks.--Records fair. Daily discharge not computed when gage height is below 13.0 ft.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						6,260	1,140					
2						2,480	885					
3						1,070						
4												
5												
6			865									
7				1,400								
8				1,020								
9						1,810						
10						3,700						
11			985			2,980		1,550				
12			985			2,010		1,910	989			
13						2,210						
14						1,140						
15				845						1,260		
16		865		2,310						2,960		
17		985		2,140						6,160		
18		925	1,160	1,060						3,000		
19		885	925									
20		845	885									
21						1,520						
22				2,090		3,250						
23		865		8,460	918	2,510						
24		965		4,790	2,930	1,030						
25				1,740	4,660							
26				905	4,080							
27				1,400	9,800							
28				1,180	9,500							
29					---							
30					---							
31		---			---		---		---			---
Total	-	-	-	-	-	-	-	-	-	-	-	-
Mean	-	-	-	-	-	-	-	-	-	-	-	-
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1961 : Max 17,000 Min - Mean - Cfsm - In. -
Water year 1961-62 : Max 9,800 Min - Mean - Cfsm - In. -

Peak discharge (base, 5,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-23	1400	23.12	11,000				
2-25	0600	20.62	5,440				
2-27	0900	22.97	10,700				
7-17	1000	21.40	6,900				

3-3680. Brush Creek near Nebraska, Ind.

Location.--Lat 39°04', long 85°29', in NE¼ sec. 11, T. 7 N., R. 9 E., on right bank at downstream side of county road bridge, 1.5 miles northwest of Nebraska, 2.9 miles northeast of Butlerville, and 3.6 miles upstream from Brush Creek Dam.

Drainage area.--11.7 sq mi.

Records available.--May 1955 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 717.17 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Average discharge.--7 years, 14.8 cfs.

Extremes.--Maximum discharge during year, 3,120 cfs July 15 (gage height, 10.90 ft, from rating curve extended above 440 cfs as explained below); no flow for many days.
1955-62: Maximum discharge, that of July 15, 1962, from rating curve extended above 440 cfs on basis of contracted-opening measurement of peak flow at gage height, 9.70 ft; no flow at times in most years.

Remarks.--Records fair below 20 cfs and poor above.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	0.8	0.8	2.9	5.6	19	20	14	1.7	103	0.5	0.2
2	2.0	.7	.7	2.6	5.0	15	12	25	1.2	8.7	* .3	.1
3	.3	1.2	.7	2.9	5.6	10	* 9.0	8.6	1.0	7.7	.3	.1
4	.2	1.8	1.5	4.4	7.9	9.6	7.7	5.6	.9	3.9	.3	.2
5	.1	1.3	14	19	13	11	6.9	4.2	* 1.3	2.4	.3	.1
6	0	1.0	* 4.2	47	5.1	9.0	6.5	3.7	13	* 187	.9	* .1
7	0	.8	2.6	20	3.5	* 9.6	5.8	3.3	4.4	36	1.4	.1
8	.1	.6	1.8	8.8	*b 2.7	30	5.2	3.3	1.4	22	1.0	0
9	0	* .4	1.9	5.6	16	21	5.6	2.6	1.2	12	.6	0
10	0	.3	16	b 3.3	12	58	4.4	2.4	1.4	6.5	.4	.1
11	0	.3	14	*b 1.9	6.5	40	4.4	* 10	1.4	5.0	.3	0
12	* 0	.3	9.0	2.4	5.8	71	4.2	4.7	1.5	4.7	.2	0
13	0	.3	5.0	3.1	6.5	19	4.7	3.3	1.0	6.1	.1	0
14	0	1.5	3.3	2.9	7.7	13	4.2	2.4	.7	216	.1	0
15	0	1.2	2.9	180	6.2	9.6	3.7	1.7	.7	1,370	.1	0
16	0	7.2	11	20	7.7	8.2	3.5	1.3	.3	174	0	0
17	0	2.9	33	12	7.3	6.9	3.3	1.2	.1	29	0	0
18	0	1.3	19	6.2	6.9	5.8	3.3	.9	.1	12	0	0
19	0	1.1	34	5.0	22	6.5	2.7	.8	.1	3.7	0	0
20	0	.9	17	4.2	7.3	11	2.6	.6	.1	2.6	0	0
21	0	.7	8.6	4.5	25	170	2.4	.6	0	2.1	0	0
22	0	.7	6.9	405	35	32	2.4	.8	0	3.5	0	0
23	0	14	13	24	132	16	2.7	.6	0	4.2	0	0
24	0	5.2	9.6	14	68	12	2.4	.3	60	2.1	0	0
25	.1	2.9	5.6	11	39	9.0	2.0	1.0	3.9	1.7	0	0
26	.1	2.0	4.7	56	413	7.3	1.7	75	1.5	1.2	2.5	0
27	0	1.6	6.5	40	276	5.8	1.7	20	.8	1.1	1.3	0
28	0	1.3	5.0	15	83	5.2	1.5	9.0	.4	.9	.5	0
29	0	1.0	3.7	10	---	4.7	1.5	4.2	.2	.9	.1	0
30	.8	.9	3.1	9.4	---	8.4	5.0	3.7	.1	.9	0	0
31	1.2	---	2.7	6.2	---	44	---	2.6	---	.7	.2	---
Total	26.9	56.2	261.8	949.3	1,231.3	697.6	143.0	217.4	100.4	2,231.6	11.4	1.0
Mean	0.87	1.87	8.45	30.6	44.0	22.5	4.77	7.01	3.35	72.0	0.37	0.03
Cfsm	0.074	0.160	0.722	2.62	3.76	1.92	0.408	0.599	0.286	6.15	0.032	0.0026
In.	0.09	0.18	0.83	3.02	3.92	2.21	0.46	0.69	0.32	7.09	0.04	0.003

Calendar year 1961: Max 851 Min 0 Mean 16.4 Cfsm 1.40 In. 18.99
Water year 1961-62: Max 1,370 Min 0 Mean 16.2 Cfsm 1.38 In. 18.85

Peak discharge (base, 950 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-22	0600	8.38	1,660	7-6	2100	8.44	1,660
2-26	0500	8.35	1,660	7-15	0700	10.90	3,120
7-1	1800	7.28	1,150				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

3-3690. Vernon Fork near Butlerville, Ind.

Location.--Lat 39°02'55", long 85°32'40", in SE¼ sec. 17, T. 7 N., R. 9 E., on left bank 0.3 mile downstream from Muscatatuck State School dam, 1¼ miles downstream from Brush Creek, and 2 miles northwest of Butlerville.

Drainage area.--87.3 sq mi.

Records available.--February 1942 to September 1962. Prior to October 1960, published as North Fork of Vernon Fork near Butlerville, Ind.

Gage.--Water-stage recorder and concrete control. Datum of gage is 669.40 ft above mean sea level, datum of 1929. Prior to Aug. 19, 1942, staff gage at same site and datum.

Average discharge.--20 years, 98.7 cfs (unadjusted).

Extremes.--Maximum discharge during year, 7,250 cfs July 15 (gage height, 14.95 ft); minimum, 0.5 cfs Sept. 30 (gage height, 1.65 ft). 1942-62: Maximum discharge, 26,200 cfs Jan. 21, 1959 (gage height, 25.41 ft), from rating curve extended above 10,000 cfs on basis of slope-area measurement of peak flow; no flow at times in most years.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Water supply for the Muscatatuck State School is diverted and the sewage effluent returned above station. Flow regulated by Brush Creek Reservoir (capacity, 668,000,000 gal), 1 3/4 miles upstream. Storage began November 1953.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 29 to Nov. 15)

1.65	0.5	2.1	4.6	3.0	76
1.7	.7	2.3	9.2	3.5	225
1.8	1.2	2.5	17	5.0	900
1.9	2.0	2.6	24	9.0	3,050
2.0	3.1	2.8	42	12.0	5,000

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	91	0.8	6.7	22	48	240	201	38	11	42	4.5	34
2	48	.7	6.0	21	41	130	123	129	8.0	78	4.0	12
3	13	2.0	5.6	21	38	96	* 94	70	8.4	37	3.5	7.2
4	7.4	2.3	7.3	24	41	83	89	42	8.7	28	3.2	6.2
5	4.8	2.2	126	50	61	88	48	32	7.2	14	2.8	37
6	3.5	2.5	49	266	62	78	43	26	* 12	* 155	* 3.1	62
7	2.6	3.2	* 34	226	33	* 66	42	22	21	233	99	* 30
8	1.8	2.8	24	98	* 27	86	39	22	14	55	18	2.3
9	1.6	* 1.9	22	48	37	920	39	20	9.9	36	8.4	1.8
10	1.4	1.5	32	35	62	550	35	16	8.4	18	5.4	1.8
11	6.9	1.3	81	* 25	38	255	32	* 69	9.0	12	3.6	1.4
12	* 1.8	1.2	55	20	36	450	31	52	8.2	8.0	2.9	1.3
13	.9	1.4	43	20	38	201	31	33	6.2	8.9	2.5	1.2
14	.8	2.1	27	20	52	144	30	24	4.8	445	2.3	1.7
15	.7	1.7	23	950	46	101	27	19	3.9	4,230	2.0	1.3
16	.8	5.0	23	330	42	78	25	15	3.1	1,500	1.9	1.1
17	.8	23	250	130	45	64	22	12	2.6	200	2.0	1.2
18	.9	13	159	88	42	53	22	10	2.4	105	1.6	1.2
19	1.0	9.5	247	60	60	52	20	8.7	2.1	64	1.6	1.2
20	.9	7.7	185	41	84	55	18	7.7	1.9	31	1.6	1.1
21	.8	6.7	91	34	64	1,110	17	7.7	1.8	19	1.6	1.0
22	.6	6.0	64	1,980	240	364	17	8.4	1.8	14	1.3	1.0
23	.7	14	82	330	260	172	18	6.2	1.8	15	1.0	.9
24	.6	37	96	140	830	115	18	5.2	153	17	1.0	.9
25	.8	22	55	100	260	86	16	5.8	56	13	1.0	.9
26	.9	15	40	125	2,400	70	15	38	25	9.5	1.5	.9
27	.7	12	42	340	1,030	56	14	59	12	7.5	1.3	.8
28	.8	9.9	48	140	1,060	48	13	52	7.7	6.4	3.9	.6
29	.8	8.4	30	88	----------	43	12	29	5.2	9.5	3.0	.6
30	1.0	7.4	30	74	----------	50	12	20	3.6	8.2	1.9	.5
31	.8	---------	24	60	----------	202	---------	13	----------	5.7	9.5	----------
Total	199.1	224.2	2,007.6	5,906	7,077	6,106	1,163	911.7	420.7	7,424.7	200.9	215.1
Mean	6.42	7.47	64.8	191	253	197	38.8	29.4	14.0	240	6.48	7.17
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
(≠)	+0.29	+2.15	+0.3	0	+2	-1	-1.7	+0.3	-0.7	0	-0.6	-5.14

Calendar year 1961: Max 4,090 Min 0.6 Mean 108 Cfsm 1.24 In. 16.82 ≠ +1
Water year 1961-62: Max 4,230 Min 0.5 Mean 87.3 Cfsm 1.00 In. 13.57 ≠ -0.3

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-22	unknown	13.30	5,910				
2-26	unknown	unknown	about 6,000				
7-15	1000	14.95	7,250				

* Discharge measurement made on this day.
≠ Change in contents, equivalent in cubic feet per second, in Brush Creek Reservoir; furnished by the Indiana Flood Control and Water Resources Commission.
Note.--No gage-height record Jan. 15 to Feb. 7, Feb. 19 to Mar. 12, July 16 to Aug. 5.

3-3695. Vernon Fork at Vernon, Ind.

Location.--Lat 38°57', long 85°37', in sec. 10, T. 6 N., R. 8 E., on right bank just downstream from highway bridge, 1 mile southwest of Vernon and 2 miles downstream from confluence of North and South Forks.

Drainage area.--201 sq mi.

Records available.--October 1939 to September 1962. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 587.30 ft above mean sea level, datum of 1929, supplementary adjustment of 1944 (levels by Indiana Flood Control and Water Resources Commission). Prior to Jan. 14, 1940, staff gage at same site and datum.

Average discharge.--23 years, 228 cfs.

Extremes.--Maximum discharge during year, 14,200 cfs July 15 (gage height, 18.37 ft); minimum, 3.0 cfs Aug. 21-24, 25 (gage height, 0.22 ft).

1939-62: Maximum discharge, 56,800 cfs Jan. 21, 1959 from rating curve extended above 24,000 cfs on basis of slope-area measurement of peak flow (gage height, 32.83 ft from high-water mark). No flow at times in 1940, 1943-44.

Remarks.--Records good. Diversion above station for municipal water supply of North Vernon and Vernon. Part of this diversion returned above gage as sewage effluent by North Vernon Sewage Treatment Plant.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 14 to Nov. 16, Feb. 2-4, 7-9, 12, 13, 16-18, July 4)

0.2	2.7	2.0	155
.3	4.2	3.0	410
.4	6.5	5.0	1,140
.5	9.2	7.0	2,200
.8	21	11.0	5,400
1.0	31	14.0	8,400
1.5	67		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	7.3	22	52	115	625	563	37	34	10	14	20
2	259	6.2	21	49	99	330	318	176	26	365	12	53
3	60	6.8	19	48	90	242	230	158	21	108	* 10	22
4	26	11	20	53	99	205	218	82	19	* 90	9.2	20
5	15	7.3	340	95	134	218	* 129	61	22	54	7.8	17
6	10	5.5	* 198	649	150	192	111	51	30	34	8.1	55
7	7.3	6.5	91	822	79	162	101	45	* 65	1,490	70	* 72
8	6.0	7.0	62	280	64	212	90	43	55	242	47	30
9	* 4.8	* 6.5	54	146	* 105	* 2,530	91	41	36	243	26	11
10	4.4	5.7	171	88	205	1,480	85	56	48	90	16	7.8
11	3.8	5.5	355	68	123	665	75	287	128	48	11	6.2
12	3.7	4.8	242	* 57	101	1,200	72	* 192	206	33	8.7	5.2
13	3.8	5.2	160	52	90	500	69	41	68	31	7.3	4.4
14	4.0	8.4	85	52	115	330	68	62	39	1,580	6.0	4.6
15	4.2	9.5	61	2,560	125	242	64	49	26	7,930	5.2	4.8
16	3.8	26	60	864	111	192	57	41	19	4,190	4.8	4.0
17	3.5	75	675	330	117	155	53	34	15	520	5.5	3.4
18	3.4	56	470	218	111	123	51	28	12	268	4.6	3.2
19	4.0	36	594	145	145	117	48	24	10	160	3.8	3.2
20	4.8	28	685	99	208	125	45	21	8.4	92	3.2	3.4
21	6.2	22	280	82	156	2,380	41	19	7.8	63	3.1	3.7
22	6.0	19	180	5,260	566	1,010	40	26	6.8	51	3.1	3.5
23	5.5	72	172	851	672	425	39	24	6.5	54	3.1	3.5
24	5.2	162	292	355	2,260	292	38	17	334	60	3.1	3.4
25	5.7	80	170	255	665	230	39	14	289	49	3.2	3.4
26	7.6	53	104	321	6,140	180	35	22	92	36	12	3.7
27	8.4	41	96	878	2,820	136	35	253	42	27	11	4.2
28	7.8	34	117	358	2,990	109	32	205	26	22	7.3	4.2
29	7.8	29	79	218	---	96	31	109	18	35	5.7	4.4
30	8.7	24	67	180	---	104	30	63	13	30	6.5	4.4
31	11	---	59	145	---	428	---	46	---	19	7.6	---
Total	527.4	860.2	6,001	15,630	18,655	15,235	2,898	2,327	1,722.5	18,024	345.9	388.6
Mean	17.0	28.7	194	504	666	491	96.6	75.1	57.4	581	11.2	13.0
Cfsm	0.085	0.143	0.965	2.51	3.31	2.44	0.481	0.374	0.286	2.89	0.056	0.065
In.	0.10	0.16	1.11	2.89	3.45	2.81	0.54	0.43	0.32	3.33	0.06	0.07

Calendar year 1961: Max 10,200 Min 1.9 Mean 278 Cfsm 1.38 In. 18.81
Water year 1961-62: Max 7,930 Min 3.1 Mean 226 Cfsm 1.12 In. 15.27

Peak discharge (base, 6,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-22	1230	16.07	10,900				
2-26	1400	16.47	11,400				
7-15	2300	18.37	14,200				

* Discharge measurement made on this day.

3-3715. East Fork White River near Bedford, Ind.

Location.--Lat 38°46'10", long 86°24'30", in NE¼ sec. 21, T. 4 N., R. 1 E., on downstream side of center pier of bridge on county road, 0.4 mile upstream from Mill Creek, 2.9 miles downstream from Sugar Creek, 3.9 miles northeast of Mitchell, and 7.8 miles southeast of Bedford.

Drainage area.--3,870 sq mi.

Records available.--May 1939 to September 1962 (high-water records only October 1943 to September 1957).

Gage.--Water-stage recorder. Datum of gage is 473.59 ft above mean sea level, datum of 1929. Prior to Feb. 6, 1940, wire-weight gage and Feb. 6, 1940 to Sept. 24, 1957, water-stage recorder, at site 9.7 miles downstream at datum 4.39 ft lower. Since Sept. 24, 1957, auxiliary water-stage recorder 9.7 miles downstream from base gage.

Average discharge.--9 years (1939-43, 1957-62), 3,616 cfs.

Extremes.--Maximum discharge during year, 35,400 cfs Mar. 2; maximum gage height, 27.68 ft Mar. 3; minimum, 448 cfs Oct. 18 to Nov. 2; minimum gage height, 2.74 ft Oct. 23, 24.
1939-62: Maximum discharge, 70,900 cfs May 11, 1961; maximum gage height, 35.97 ft May 11, 1961.
Flood in March 1913 reached a stage of 47.5 ft, from floodmark determined by Corps of Engineers (discharge, 155,000 cfs) at former site.

Remarks.--Records good except those for periods of no gage-height record or ice effect, which are fair.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 19-30, Sept. 1, 14-30; fall used as a factor Feb. 27 to Mar. 7, Mar. 13, 14, 25, 26)

Oct. 1 to Jan. 25				Jan. 26 to Sept. 30			
2.7	426	12.0	7,710	2.6	505	12.0	7,980
3.4	755	16.0	11,700	3.0	690	20.0	16,300
4.5	1,380	20.0	16,300	4.0	1,250	24.0	22,700
8.0	3,960			8.0	4,380	29.0	38,400

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	655	448	* 805	b 1,850	9,060	27,900	7,260	1,690	2,520	932	1,620	768
2	655	* 448	755	b 1,900	6,360	35,200	8,340	1,720	2,220	932	1,480	932
3	655	492	705	b* 1,850	4,920	34,000	8,610	1,930	1,930	1,040	1,350	1,410
4	705	492	705	1,770	4,380	28,500	7,620	* 2,300	1,790	960	1,250	2,150
5	* 655	515	805	1,570	* 3,930	22,000	6,360	2,380	1,790	1,540	1,160	1,720
6	655	515	970	1,570	3,750	* 17,700	5,370	2,220	1,790	1,320	1,160	1,320
7	630	515	1,380	2,530	3,570	13,600	4,830	2,000	1,930	1,320	1,100	1,220
8	582	515	1,900	4,300	3,480	10,300	4,470	1,790	2,080	1,250	1,100	1,220
9	560	538	1,830	b 4,520	3,240	9,330	4,200	1,680	2,220	2,000	1,160	1,130
10	538	538	1,640	b 4,400	3,320	9,600	3,930	1,620	1,790	1,860	1,220	1,040
11	515	538	1,770	b 3,400	3,660	10,400	3,750	1,790	2,080	1,480	1,190	960
12	515	515	2,310	2,850	3,660	12,100	3,570	3,230	2,380	1,280	1,100	905
13	492	515	2,680	2,550	3,320	14,100	3,480	5,460	2,920	1,130	1,040	822
14	492	515	2,380	2,700	3,000	14,200	3,320	5,010	2,840	1,040	960	768
15	492	515	1,970	4,600	2,920	12,700	3,160	3,400	2,080	1,250	905	740
16	470	560	1,640	9,000	2,920	11,600	3,000	2,450	1,620	4,290	878	690
17	470	582	1,770	9,100	3,000	9,780	2,840	2,080	1,380	6,990	822	665
18	448	755	2,380	9,000	2,920	7,530	2,680	1,790	1,250	8,880	795	640
19	448	805	3,380	8,900	2,840	6,000	2,520	1,650	1,160	10,700	768	640
20	448	860	4,040	8,600	2,840	5,280	2,380	1,510	1,070	11,700	740	618
21	448	860	4,130	9,200	3,000	5,910	2,300	1,410	1,020	10,500	715	595
22	448	805	4,210	16,000	3,480	7,890	2,220	1,720	960	8,160	690	595
23	448	805	3,790	15,800	4,740	9,870	2,080	2,080	932	5,100	665	572
24	448	805	3,220	15,000	7,890	12,600	2,080	1,860	932	3,240	640	550
25	448	970	2,900	15,200	9,060	16,100	2,000	1,720	* 1,020	2,840	640	550
26	448	1,140	2,980	15,100	12,400	16,100	1,930	1,580	1,540	* 2,520	665	550
27	448	1,080	2,750	14,200	15,100	12,200	1,860	1,540	2,080	2,220	640	528
28	448	970	2,520	13,000	19,100	8,880	1,790	2,000	1,540	2,000	640	528
29	448	915	2,280	12,100	---------	* 6,630	1,720	* 2,840	1,190	1,790	* 665	528
30	448	860	2,000	11,500	---------	5,640	1,680	3,160	1,040	1,720	665	505
31	448	---------	1,800	11,000	---------	5,730	----------	2,920	----------	1,790	850	----------
Total	16,008	20,386	69,359	235,060	151,860	419,370	111,350	70,520	51,094	103,774	29,273	25,859
Mean	516	680	2,205	7,583	5,424	13,530	3,712	2,275	1,703	3,348	944	862
Cfsm	0.133	0.176	0.570	1.96	1.40	3.50	0.959	0.588	0.440	0.865	0.244	0.223
In.	0.15	0.20	0.66	2.26	1.46	4.04	1.07	0.68	0.49	1.00	0.28	0.25

Calendar year 1961: Max 69,200 Min 448 Mean 4,746 Cfsm 1.23 In. 16.65
Water year 1961-62: Max 35,200 Min 448 Mean 3,570 Cfsm 0.922 In. 12.54

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 28-31, Jan. 12-30.

3-3716. South Fork Salt Creek at Kurtz, Ind.

Location.--Lat 38°57'46", long 86°12'12", in SW¼ sec. 9, T. 6 N., R. 3 E., on right bank at downstream side of county road bridge, at the north edge of Kurtz, 0.8 mile upstream from unnamed tributary from the right, and 6.1 miles upstream from Little Salt Creek.

Drainage area.--38.1 sq mi.

Records available.--October 1960 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 568.00 ft above mean sea level, datum of 1929 (unadjusted).

Extremes.--Maximum discharge during year, 4,600 cfs Feb. 26 (gage height, 11.87 ft); no flow at times.
1960-62: Maximum discharge, 5,560 cfs May 7, 1961 (gage height, 12.93 ft); no flow during most years.
Flood of January 1959 reached a stage of approximately 15 ft, from floodmarks.

Remarks.--Records fair.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 12 to June 11, June 13-27, July 1-5, July 13 to Aug. 11, Aug. 31 to Sept. 30; stage-discharge relation affected by ice Jan. 18)

2.22	0	3.0	34
2.3	.6	3.5	88
2.4	2.0	4.0	169
2.5	4.1	5.0	400
2.6	7.4	6.0	720
2.7	12	8.0	1,650

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	* 0	0.3	5.6	* 21	95	149	7.8	58	24	1.2	5.6
2	1.8	0	* .2	5.3	16	63	117	9.5	16	5.3	.8	1.8
3	1.1	0	.1	6.0	17	48	71	* 9.0	4.7	2.4	.7	179
4	.4	0	.8	* 7.8	18	44	55	9.0	3.3	1.8	.6	24
5	* 0	0	20	9.5	18	* 38	48	16	7.4	1.5	.5	* 7.0
6	0	0	5.3	86	12	34	39	11	8.6	1.2	1.8	3.6
7	0	0	2.9	59	8.6	37	32	9.5	10	1.1	1.5	2.4
8	0	0	1.8	32	10	78	26	9.0	4.1	1.1	1.5	1.6
9	0	0	1.8	24	30	534	28	7.8	3.1	.9	.8	1.6
10	0	0	5.9	8.2	32	133	21	7.4	2.9	.7	.7	1.8
11	0	0	16	6.4	24	82	21	55	104	.6	.4	1.3
12	0	0	28	6.0	22	76	21	15	71	.6	.3	1.1
13	0	0	14	6.4	24	57	22	7.8	27	4.4	.3	.7
14	0	0	6.4	9.0	25	48	18	5.0	11	202	.3	1.1
15	0	0	4.7	1,220	21	40	17	3.3	7.0	162	.3	1.3
16	0	0	12	95	21	34	15	2.4	5.0	199	.3	.9
17	0	0	72	58	18	29	13	2.2	3.8	66	.3	.4
18	0	0	50	36	18	26	13	2.0	3.1	12	.2	.3
19	0	0	52	24	27	28	10	1.8	2.7	6.0	.2	.3
20	0	0	34	21	21	50	9.5	1.5	2.5	3.8	.1	.1
21	0	0	21	24	33	495	8.6	1.2	2.4	4.1	0	.1
22	0	0	14	1,430	68	125	8.2	1.2	1.8	2.9	* 0	.1
23	0	0	23	102	415	74	7.8	1.1	1.6	3.1	0	0
24	0	0	28	61	262	55	6.7	.8	2.4	2.9	0	0
25	0	0	16	46	125	44	6.4	.8	* 1.8	* 1.8	0	0
26	0	.7	13	80	1,580	37	6.0	.8	1.8	1.8	0	0
27	0	1.2	16	68	858	* 29	5.6	2.0	1.5	1.6	0	0
28	0	.8	11	41	366	25	5.3	2.2	1.2	1.2	0	0
29	0	.6	7.0	33	----------	22	5.3	* 1.5	.9	2.6	0	0
30	0	.4	6.7	29	----------	65	5.0	19	.9	3.8	0	0
31	0	----------	5.6	21	----------	214	----------	3.3	----------	1.8	91	----------
Total	3.3	3.7	489.5	3,660.2	4,110.6	2,759	810.4	225.9	371.5	724.0	103.8	236.1
Mean	0.11	0.12	15.8	118	147	89.0	27.0	7.29	12.4	23.4	3.35	7.87
Cfsm	0.0029	0.0031	0.415	3.10	3.86	2.34	0.709	0.191	0.325	0.614	0.088	0.207
In.	0.003	0.003	0.48	3.57	4.02	2.70	0.79	0.22	0.36	0.71	0.10	0.23

Calendar year 1961: Max 2,780 Min 0 Mean 57.3 Cfsm 1.50 In. 20.45
Water year 1961-62: Max 1,580 Min 0 Mean 37.0 Cfsm 0.971 In. 13.19

* Discharge measurement made on this day.

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	0700	9.78	2,830	3-9	0700	6.72	1,010
1-22	0800	11.12	3,840	3-21	0300	7.56	1,430
2-23	2130	8.58	2,020	7-14	0900	7.12	1,200
2-26	0830	11.87	4,600	9-3	1500	7.56	1,430

3-3720. North Fork Salt Creek near Belmont, Ind.

Location.--Lat 39°09'00", long 86°20'14", in NW¼ sec. 5, T. 8 N., R. 2 E., on right bank 15 ft downstream from bridge on State Highway 46, 100 ft upstream from Schooner Creek, 0.7 mile northeast of Belmont, 6½ miles upstream from Brummett Creek, and 20 miles upstream from mouth. Records include flow of Schooner Creek.

Drainage area.--120 sq mi, includes that of Schooner Creek.

Records available.--April 1946 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 543.62 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 9, 1951, wire-weight gage at same site and datum.

Average discharge.--16 years, 135 cfs.

Extremes.--Maximum discharge during year, 2,870 cfs July 16; maximum gage height, 17.80 ft July 16; minimum, 0.1 cfs several days in October and November; minimum gage height, 2.64 ft Nov. 8-10.
1946-62: Maximum discharge, 13,300 cfs June 23, 1960 (gage height, 23.10 ft); no flow at times for most years.
Flood in March 1913 reached a stage of 25.7 ft, from information by local residents.

Remarks.--Records good.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 4, Dec. 7-11, 16, Jan. 1-5, 11, 14, Feb. 8, June 27 to July 13, Aug. 31 to Sept. 30; rate of change in stage used as a factor Jan. 15, 16, 22, 23, Feb. 24, Feb. 26 to Mar. 1, Mar. 9, 10, 21, 22, 31, Apr. 1, May 2, 11, 27, July 14-17)

2.4	0.1	3.2	18	10.0	844
2.6	1.8	3.3	22	14.0	1,460
2.8	5.0	3.5	34	17.0	2,290
2.9	7.0	4.0	73		
3.0	9.6	6.0	324		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.4	0.1	3.1	19	* 68	398	449	* 34	68	9.2	18	30
2	1.2	.1	3.0	17	47	* 233	298	385	60	5.6	15	22
3	* 1.0	* .2	2.8	16	49	181	220	194	35	5.0	12	16
4	.9	.4	9.2	18	43	148	181	124	30	5.0	10	22
5	.5	.4	44	* 22	42	136	148	94	30	4.6	9.1	16
6	.4	.4	47	66	35	112	136	73	40	4.1	94	8.3
7	.4	.3	25	181	25	94	118	56	60	3.8	80	6.4
8	.4	.3	17	118	20	103	100	50	45	3.4	40	5.6
9	.4	.3	14	64	32	773	124	45	28	3.3	26	5.2
10	.4	.3	14	49	41	558	106	38	21	2.8	18	5.0
11	.3	.3	16	28	38	324	94	415	28	2.7	14	4.4
12	.3	.4	29	22	37	272	88	252	60	2.5	12	4.1
13	.2	.5	35	21	40	220	94	148	60	3.0	10	3.6
14	.2	.6	29	24	49	181	94	94	41	995	8.8	3.4
15	.2	.6	22	1,440	60	155	88	64	26	1,660	8.3	3.1
16	.2	4.6	26	639	60	136	73	44	19	1,890	7.8	3.0
17	.2	4.7	118	220	55	112	64	48	14	412	7.0	3.0
18	.2	5.8	118	148	51	94	64	46	12	148	6.8	3.0
19	.2	4.8	100	106	60	88	60	30	10	83	6.6	2.8
20	.2	3.8	112	68	64	101	47	25	8.8	55	6.4	2.5
21	.2	3.8	83	56	68	1,340	42	150	7.5	42	6.0	2.4
22	.2	3.9	56	1,730	112	780	41	267	7.0	34	5.8	2.4
23	.2	4.8	50	624	186	363	46	79	6.8	* 37	5.4	2.2
24	.2	4.4	54	246	441	246	40	44	6.4	30	5.0	2.2
25	.2	4.6	41	162	363	194	35	34	6.0	25	5.4	2.5
26	.1	4.6	34	162	2,090	* 155	33	83	5.8	24	6.2	2.5
27	.1	4.4	36	233	1,060	118	32	288	* 5.2	17	6.0	2.8
28	.1	* 4.3	33	168	1,080	100	30	298	4.8	15	5.8	* 2.4
29	.1	3.8	25	130	----------	83	29	134	4.3	113	5.4	1.8
30	.1	3.4	23	106	----------	146	27	100	4.1	50	5.0	1.7
31	.1	----------	22	73	----------	352	---------	* 94	----------	26	* 15	----------
Total	11.8	70.9	1,241.1	6,976	6,316	8,296	3,001	3,830	753.7	5,711.0	480.8	192.3
Mean	0.38	2.36	40.0	225	226	268	100	124	25.1	184	15.5	6.41
Cfsm	0.0032	0.020	0.333	1.88	1.88	2.23	0.833	1.03	0.209	1.53	0.129	0.053
In.	0.004	0.02	0.38	2.17	1.96	2.57	0.93	1.19	0.23	1.76	0.15	0.06

Calendar year 1961: Max 8,040 Min 0.1 Mean 146 Cfsm 1.22 In. 16.45
Water year 1961-62: Max 2,090 Min 0.1 Mean 101 Cfsm 0.842 In. 11.42

* Discharge measurement made on this day.

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-22	1900	--	2,200	7-16	0300		
	2000	16.57	--		to		
2-26	1700	--	2,530		0400	--	2,870
	2000	17.20	--		0500	17.80	--

GPO 802-191-9

3-3725. Salt Creek near Harrodsburg, Ind.

Location.--Lat 39°00'16", long 86°30'31", in NW¼ sec. 34, T. 7 N., R. 1 W., on right bank 1,300 ft downstream from Monroe Reservoir dam site, 0.9 mile upstream from Clear Creek, 2.2 miles southeast of Harrodsburg, and 25.1 miles upstream from mouth.

Drainage area.--441 sq mi.

Records available.--May 1955 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 480.00 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Prior to Oct. 1, 1960, wire-weight gage at site 3,500 ft upstream at datum 2.41 ft higher.

Average discharge.--7 years, 532 cfs.

Extremes.--Maximum discharge during year, 5,200 cfs Mar. 1 (gage height, 26.98 ft); minimum, 0.5 cfs Oct. 16, 17 (gage height, 4.54 ft) 1955-62: Maximum discharge, 22,000 cfs June 25, 1960 (gage height, 32.76 ft, from graph based on gage readings at site and datum then in use); maximum gage height at present site and datum, 35.35 ft May 9, 1961; minimum discharge, 0.3 cfs Oct. 7, 1960 and Sept. 29, 1961.

Remarks.--Records good except those for periods of indefinite stage-discharge relation, no gage-height record or backwater, which are fair.

Rating tables, water year 1961-62, except periods of indefinite stage-discharge relation, no gage-height record and backwater (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 3 to Dec. 4, May 16-22, 24-28, 31, June 1-11, 15-27, July 2-5, 13, 14, July 21 to Aug. 15, Aug. 26-28, 31, Sept. 1-4, 6-17)

Oct. 1 to Dec. 6				Dec. 7 to Sept. 30			
4.5	0.4	5.5	16	5.0	7.0	10.0	540
4.6	1.0	6.0	28	5.5	19	12.0	870
4.7	1.8	6.5	46	6.0	37	16.0	1,710
4.8	2.7	7.0	80	6.5	64	20.0	2,590
4.9	4.0	7.5	132	7.0	102	24.0	3,700
5.0	5.4			8.0	220	27.0	5,200

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.2	a 2.5	*12	90	284	5,140	1,800	* 94	206	11	107	244
2	* 2.5	a 1.0	11	78	* 220	c 2,500	1,970	178	154	22	74	178
3	2.0	* 1.4	10	74	192	c 1,100	1,450	630	236	39	57	94
4	2.0	10	17	* 74	192	c 760	930	444	142	41	46	294
5	1.9	4.1	95	78	178	c* 600	675	284	112	27	39	284
6	1.8	1.8	95	98	166	c 520	570	220	98	20	146	127
7	1.5	1.5	178	271	142	444	476	178	132	16	166	86
8	1.3	1.7	117	585	117	364	412	154	178	14	166	60
9	1.3	1.5	78	380	117	1,100	412	132	132	12	107	46
10	1.1	1.0	64	236	166	2,610	428	122	90	9.8	74	39
11	.9	1.0	68	268	236	2,440	380	517	302	8.0	54	37
12	.6	1.4	107	178	236	1,580	348	1,030	555	7.0	37	33
13	.9	1.5	178	122	220	1,170	316	690	492	9.7	33	29
14	.9	3.6	206	102	220	870	316	396	284	192	27	31
15	.9	4.6	148	1,760	220	675	284	252	176	1,250	23	27
16	.6	23	132	2,830	220	555	252	192	122	2,650	20	24
17	.5	13	364	3,060	206	460	220	148	90	3,210	18	22
18	.6	10	630	2,050	192	380	206	117	68	3,090	16	20
19	.8	8.2	615	645	192	332	192	132	54	1,160	13	18
20	3.2	9.0	540	412	206	316	166	86	46	252	12	15
21	2.8	8.8	444	332	236	1,610	148	68	39	166	12	* 14
22	2.0	11	316	2,850	284	3,160	132	103	35	122	11	12
23	1.4	21	236	3,860	542	3,160	127	300	31	107	10	11
24	1.1	22	220	4,100	1,860	1,900	127	148	43	* 98	10	12
25	6.1	16	220	3,140	2,440	950	117	90	54	94	11	12
26	a 10	14	192	1,320	3,080	* 645	107	71	27	82	46	13
27	a 9.0	12	166	816	4,050	508	98	86	* 23	68	31	14
28	6.2	12	148	780	4,750	396	94	325	19	57	33	e 12
29	4.6	12	122	570	----------	332	90	460	16	67	17	e 9.0
30	5.3	12	132	444	----------	380	86	252	14	290	* 13	e 8.5
31	a 6.0	----------	112	348	----------	930	----------	166	----------	192	25	----------
Total	87.0	242.6	5,973	31,951	21,164	37,887	12,929	8,065	3,972	13,383.5	1,454	1,825.5
Mean	2.81	8.09	193	1,031	756	1,222	431	260	132	432	46.9	60.8
Cfsm	0.0064	0.018	0.438	2.34	1.71	2.77	0.977	0.590	0.299	0.980	0.106	0.138
In.	0.007	0.02	0.50	2.70	1.78	3.19	1.09	0.68	0.33	1.13	0.12	0.15

Calendar year 1961: Max 18,400 Min 0.4 Mean 557 Cfsm 1.26 In. 17.14
Water year 1961-62: Max 5,140 Min 0.5 Mean 381 Cfsm 0.864 In. 11.70

Peak discharge (base, 4,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-1	1800	26.98	5,200				

* Discharge measurement made on this day.
a No gage-height record.
c Backwater from return of overbank flow.
e Stage-discharge relation indefinite.

3-3727. Clear Creek at Harrodsburg, Ind.

Location.--Lat 39°02'03", long 86°34'01", in NW¼ sec. 19, T. 7 N., R. 1 W., on left bank at downstream side of county road bridge, 1.9 miles northwest of Harrodsburg, 3.9 miles upstream from Little Clear Creek, and 5.1 miles upstream from mouth.

Drainage area.--55.2 sq mi, of which 6.4 sq mi does not contribute directly to surface runoff.

Records available.--September 1960 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 517.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 3,400 cfs July 15 (gage height, 10.01 ft); minimum, 6.6 cfs Oct. 9 (gage height, 3.23 ft).
1960-62: Maximum discharge, 6,190 cfs May 8, 1961 (gage height, 12.89 ft); minimum, 6.4 cfs Sept. 18, 1960; minimum gage height, 3.20 ft Oct. 3, 1960.
Flood of June 1960 reached a stage of 16.47 ft, from floodmarks (discharge, 10,200 cfs on basis of contracted-opening measurement).

Remarks.--Records good. Low flow partly regulated by effluent from the sewage treatment plant of the city of Bloomington and possibly by pumpage from several rock quarries.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 26 to Nov. 3; stage-discharge relation affected by ice Jan. 11-13)

3.2	6.8	5.0	200
3.4	11	5.5	330
3.7	24	6.0	525
4.0	48	7.0	1,090
4.5	114	8.0	1,800

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	36	10	13	30	*66	245	136	*38	20	15	20	64
2	10	9.8	12	29	56	170	152	37	19	15	18	33
3	10	*23	12	30	52	136	129	32	18	19	17	24
4	*9.5	21	43	36	48	122	107	30	23	16	16	24
5	9.2	13	94	*35	45	100	100	29	22	13	14	21
6	9.0	11	40	62	37	90	96	29	27	14	149	18
7	9.2	11	29	92	37	80	85	29	25	13	47	17
8	8.5	11	24	75	36	82	76	37	24	12	27	16
9	7.8	10	22	55	53	480	107	30	22	12	22	16
10	8.8	10	32	43	47	245	82	44	22	12	20	16
11	9.5	11	41	33	39	190	76	284	83	12	17	16
12	9.2	10	75	30	39	245	73	90	164	13	14	14
13	10	13	52	33	39	190	76	60	48	74	13	15
14	10	16	37	52	38	152	65	46	31	169	14	29
15	9.0	13	30	714	37	129	59	37	26	570	14	18
16	8.0	77	62	224	39	114	55	32	22	358	13	13
17	9.5	28	152	136	35	96	52	29	19	136	13	12
18	10	18	114	100	36	83	50	25	18	72	12	12
19	13	14	129	85	44	85	46	23	18	47	11	12
20	12	13	114	67	37	96	42	20	18	36	10	12
21	10	13	83	72	45	818	39	20	18	37	12	*11
22	10	14	67	1,180	67	365	37	23	18	27	12	11
23	8.3	44	70	258	140	220	45	19	22	36	12	11
24	10	28	64	161	258	161	36	18	46	*25	11	11
25	22	19	54	122	210	129	34	26	50	23	31	18
26	8.8	16	49	122	950	*114	34	30	24	21	142	12
27	8.3	14	52	129	559	94	33	51	*20	18	36	12
28	9.0	14	46	114	*514	83	32	34	18	17	21	12
29	8.2	*13	44	99	---	73	30	19	18	100	18	11
30	12	14	37	87	---	89	30	*21	16	38	*16	10
31	12	---	36	71	---	129	---	18	---	24	68	---
Total	336.8	531.8	1,729	4,376	3,603	5,405	2,014	1,260	919	1,994	860	521
Mean	10.9	17.7	55.8	141	129	174	67.1	40.6	30.6	64.3	27.7	17.4
Cfsm	0.197	0.321	1.01	2.55	2.34	3.15	1.22	0.736	0.554	1.16	0.502	0.315
In.	0.23	0.36	1.16	2.94	2.44	3.63	1.36	0.85	0.62	1.34	0.58	0.35

Calendar year 1961: Max 3,860 Min 7.3 Mean 85.0 Cfsm 1.54 In. 20.93
Water year 1961-62: Max 1,180 Min 7.8 Mean 64.5 Cfsm 1.17 In. 15.86

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	0430	7.24	1,230	7-15	2230	10.01	3,400
1-22	0530	9.49	3,000				
2-26	0600	8.51	2,200				
3-21	1100	7.24	1,230				

* Discharge measurement made on this day.

3-3730. Salt Creek near Peerless, Ind.

Location.--Lat 38°56'35", long 86°30'38", in NW¼ sec. 22, T. 6 N., R. 1 W., on downstream side near center of Monon Railroad bridge, 3,400 ft downstream from Little Salt Creek, 1.5 miles north of Peerless, and 18.6 miles upstream from mouth.

Drainage area.--582 sq mi.

Records available.--February 1939 to September 1950, February 1957 to September 1962.

Gage.--Wire-weight gage read twice daily. Datum of gage is 476.02 ft above mean sea level, datum of 1929. Feb. 1-10, 1939, chain gage and Feb. 11, 1939 to Sept. 30, 1950, water-stage recorder, at same site and datum.

Average discharge.--16 years, 688 cfs.

Extremes.--Maximum daily discharge during year, 5,500 cfs Mar. 1; maximum gage height, 24.95 ft Mar. 2; minimum, 6.5 cfs Nov. 11; minimum gage height, 1.67 ft Oct. 12, 19, Sept. 30.
1939-50, 1957-62: Maximum discharge, 25,100 cfs May 10, 1961 (gage height, 35.33 ft, from graph based on gage readings); minimum, 0.7 cfs Aug. 18, 1940.
Flood of January 1937 reached a stage of 34.3 ft (information by Corps of Engineers).

Remarks.--Records fair. Stage-discharge relation affected at times by backwater from East Fork White River or return flow from overbank storage.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	39	16	27	178	c 440	c 5,500	2,230	114	238	24	190	370
2	* 34	* 12	* 26	142	c 360	c 5,000	2,660	202	250	57	109	396
3	20	12	24	126	310	c 3,300	2,090	637	286	52	70	190
4	18	25	25	* 120	286	c 2,000	1,430	* 603	202	70	52	296
5	19	18	238	120	* 274	c 1,100	1,060	382	136	43	43	603
6	18	12	202	196	250	c 800	858	298	114	31	214	262
7	18	9.0	250	370	214	c 640	705	250	120	28	310	142
8	17	8.7	214	790	178	c 560	586	214	214	24	334	87
9	16	9.0	142	654	178	1,480	569	178	166	21	202	65
10	14	8.5	109	396	262	3,170	569	166	104	19	109	51
11	14	7.6	142	424	322	3,410	536	684	720	17	70	43
12	14	8.7	238	358	334	2,470	488	1,230	911	16	50	40
13	14	8.7	334	274	310	c 1,700	456	1,060	739	42	40	37
14	14	10	334	238	310	c 1,250	424	603	504	410	35	53
15	13	11	286	2,260	286	c 1,000	396	370	322	1,380	31	58
16	13	14	238	3,710	310	c 840	358	274	226	3,170	31	35
17	12	76	654	3,820	298	c 700	334	202	154	3,710	26	33
18	12	34	875	3,140	286	c 600	298	148	120	3,990	25	31
19	12	25	1,000	1,260	274	504	274	178	98	2,290	23	27
20	12	23	875	654	286	472	262	98	76	c 570	20	23
21	17	20	705	552	310	1,930	226	70	61	c 250	19	* 21
22	14	20	504	3,760	396	3,820	202	58	56	c 180	19	20
23	13	32	382	4,870	797	4,190	202	370	56	c 160	18	19
24	12	61	358	4,910	c 2,000	3,040	190	238	61	c 140	17	18
25	13	40	346	4,690	c 3,000	c 1,450	178	92	214	131	16	19
26	13	31	322	2,770	c 3,600	c 960	154	82	131	* 120	120	22
27	12	28	286	c 1,350	c 4,700	c* 720	142	87	* 49	87	76	19
28	11	24	250	c 1,050	c* 5,200	c 580	126	298	40	70	61	17
29	12	22	250	c 850	---	536	120	603	29	82	46	17
30	13	22	262	c 670	---	654	104	* 358	28	346	* 37	16
31	14	---	238	c 520	---	1,270	---	226	---	410	166	---
Total	487	648.2	10,136	45,222	25,771	55,646	18,227	10,373	6,425	17,940	2,579	3,030
Mean	15.7	21.6	327	1,459	920	1,795	608	335	214	579	83.2	101
Cfsm	0.027	0.037	0.562	2.51	1.58	3.08	1.04	0.576	0.368	0.995	0.143	0.174
In.	0.03	0.04	0.65	2.89	1.64	3.55	1.16	0.66	0.41	1.15	0.16	0.19

Calendar year 1961 : Max 24,900 Min 7.6 Mean 748 Cfsm 1.29 In. 17.45
Water year 1961-62 : Max 5,500 Min 7.6 Mean 538 Cfsm 0.924 In. 12.53

* Discharge measurement made on this day.
c The stage-discharge relation is affected by backwater from the East Fork White River or from return of overbank flow.

3-3732. Indian Creek near Springville, Ind.

Location.--Lat 38°57'01", long 86°40'30", in SW¼ sec. 18, T. 6 N., R. 2 W., on left bank at downstream side of State Highway 54 bridge, ¼ mile downstream from Popcorn Creek, and 4 miles northwest of Springville.
Drainage area.--60.9 sq mi.
Records available.--September 1961 to September 1962.
Gage.--Water-stage recorder. Datum of gage is 580.00 ft above mean sea level, datum of 1929, unadjusted.
Extremes.--Maximum discharge during period Sept. 27, 1961 to Sept. 30, 1962, 4,800 cfs June 24 (gage height, 11.23 ft from floodmark); minimum, 0.1 cfs Sept. 27-29, Oct. 9-19, 1961.
Flood of Spring 1950 or 1951 reached a stage of 18.4 ft from information by local resident.
Remarks.--Records good except those for periods of no gage-height record, which are fair.

Rating table, Sept. 27, 1961 to Sept. 30, 1962, (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 19 to Nov. 16, Sept. 25-27)

1.45	0.1	2.4	45
1.5	.2	2.7	90
1.6	.7	3.0	155
1.7	1.7	3.5	320
1.8	3.6	4.0	520
1.9	6.0	5.0	930
2.0	10	6.0	1,380
2.2	25	8.0	2,500

Discharge in cubic feet per second, 1961

Sept. 27	0.1
28	0.1
29	0.1
30	1.0

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	* 3.6	* 1.1	3.6	17	38	155	180	12	5.6	5.3	3.4	33
2	2.0	1.1	3.4	16	31	102	178	21	6.4	5.5	2.9	9.2
3	1.2	2.0	3.1	* 16	30	80	112	* 17	8.3	5.5	2.9	6.0
4	.7	3.4	29	23	30	70	83	14	11	5.3	8.5	5.3
5	.4	3.4	76	26	30	63	73	14	15	5.5	7.2	4.7
6	.3	2.5	26	36	23	52	67	18	170	4.2	199	3.6
7	.2	1.7	16	58	19	49	59	26	115	3.8	23	3.1
8	.2	1.3	10	42	19	65	53	23	55	3.4	9.6	2.9
9	.1	1.1	10	31	36	433	117	19	18	2.9	6.4	2.9
10	.1	1.0	16	23	48	210	78	16	12	2.5	5.3	2.9
11	.1	.9	34	19	38	148	69	120	55	2.2	4.5	2.9
12	.1	1.0	80	18	34	224	62	70	60	2.2	4.5	2.5
13	* .1	1.3	48	17	34	134	52	45	48	147	4.2	2.4
14	.1	1.4	26	22	35	102	45	40	40	104	4.0	99
15	.1	1.6	19	975	30	83	45	35	32	98	3.8	21
16	.1	18	89	184	31	69	40	28	24	181	3.6	8.8
17	.1	16	177	90	29	56	34	21	17	37	3.6	5.5
18	.1	6.0	106	60	27	51	31	16	13	22	3.4	4.7
19	.1	4.0	121	49	30	51	29	14	11	14	2.9	4.0
20	.2	3.6	90	40	28	111	25	11	9.0	11	2.7	3.6
21	.2	2.7	59	45	31	720	23	180	7.4	12	2.4	3.4
22	.2	3.1	45	* 1,820	69	236	21	150	6.8	8.4	2.5	3.1
23	.2	9.0	55	* 207	255	137	20	55	6.8	8.4	2.5	2.9
24	.2	12	59	114	315	96	19	25	2,000	7.2	2.5	2.7
25	.8	7.6	42	82	178	76	18	10	110	* 5.8	13	2.7
26	.9	5.8	34	102	* 1,010	63	16	9.0	* 41	5.3	57	2.5
27	1.1	4.7	36	123	* 568	* 51	15	280	21	4.7	7.4	* 2.1
28	.8	4.0	33	76	420	45	14	170	10	4.5	3.8	2.0
29	.6	* 3.8	25	62	----------	40	13	6.0	7.2	4.2	* 2.7	1.8
30	1.2	3.8	22	* 53	----------	75	12	* 5.5	5.8	4.0	2.5	1.7
31	1.1	---------	19	42	----------	173	---------	5.5	----------	3.8	9.1	---------
Total	17.2	128.9	1,412.1	4,488	3,466	4,020	1,603	1,476.0	2,941.3	730.6	410.8	252.9
Mean	0.55	4.30	45.6	145	124	130	53.4	47.6	98.0	23.6	13.3	8.43
Cfsm	0.0090	0.071	0.749	2.38	2.04	2.13	0.877	0.782	1.61	0.388	0.218	0.138
In.	0.01	0.08	0.86	2.74	2.12	2.46	0.98	0.90	1.80	0.45	0.25	0.15

Calendar year 1961: Max - Min - Mean - Cfsm - In. -
Water year 1961-62: Max 2,000 Min 0.1 Mean 57.4 Cfsm 0.943 In. 12.80

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	0800	6.88	1,840	8-6	0600	6.10	1,430
1-22	0500	10.28	4,080				
2-26	0500	8.19	2,620				
6-24	Unknown	11.23	4,800				

* Discharge measurement made on this day.
Note.--No gage-height record Apr. 10 to June 25, June 28-30, July 2.

3-3735. East Fork White River at Shoals, Ind.

Location.--Lat 38°40'02", long 86°47'32", in sec. 30, T. 3 N., R. 3 W., in first pier from left bank on highway bridge at Shoals, 400 ft upstream from Baltimore and Ohio Railroad bridge, 1 mile upstream from Beaver Creek, and at mile 107.6.

Drainage area.--4,954 sq mi.

Records available.--June 1903 to July 1906, October 1908 to September 1916, June 1923 to September 1962. Monthly discharge only for some periods, published in WSP 1305. Published as East Branch White River at Shoals, 1903-6, 1908-16. Gage-height records collected at same site since May 1908 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 442.25 ft above mean sea level, datum of 1929. Prior to Jan. 1, 1909, chain gage at same site at datum 61.00 ft lower. Jan. 1, 1909 to July 26, 1927 and Dec. 10, 1929 to Oct. 26, 1932, chain gage at present site and datum.

Average discharge.--48 years (1903-5, 1906-16, 1923-62), 5,434 cfs.

Extremes.--Maximum discharge during year, 36,100 cfs Mar. 5 (gage height, 23.21 ft); minimum, 393 cfs Nov. 2 (gage height, 2.14 ft). 1903-6, 1908-16, 1923-62: Maximum discharge, 160,000 cfs Mar. 28, 1913 (gage height, 42.2 ft), from rating curve extended above 100,000 cfs by logarithmic plotting; minimum, 44 cfs Oct. 6, 1935, as a result of filling Williams Reservoir.

Remarks.--Records good.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)

2.1	365	5.0	4,470
2.2	435	7.0	8,900
2.3	510	13.0	18,900
2.7	850	21.0	31,300
3.5	1,800	23.0	35,600

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	628	510	1,060	2,100	12,400	28,000	9,290	2,260	3,310	1,060	2,260	2,950
2	805	428	760	* 2,100	9,290	29,900	11,400	2,600	2,950	1,120	1,950	1,800
3	850	510	805	2,100	6,440	33,000	12,400	2,600	2,600	1,280	1,660	1,660
4	805	548	900	2,100	5,310	35,400	11,400	3,130	2,430	1,400	1,460	1,950
5	805	670	1,060	2,260	4,680	35,600	9,290	3,310	2,260	1,660	1,400	2,600
6	805	628	1,460	2,100	4,470	31,900	7,630	3,130	2,260	1,730	1,340	2,430
7	805	585	1,730	2,260	4,070	24,600	6,680	2,770	2,260	1,530	1,730	1,730
8	760	585	1,880	3,690	4,070	16,900	5,980	2,600	2,260	1,460	1,530	1,530
9	715	585	2,430	5,530	3,880	13,600	5,530	2,260	2,430	1,400	1,400	1,340
10	670	510	2,430	5,980	3,690	14,500	5,310	2,260	2,430	1,950	1,340	1,120
11	628	548	2,260	4,470	4,070	15,000	5,100	2,950	2,950	1,950	1,340	1,170
12	628	585	2,600	3,690	4,270	16,000	4,890	3,690	5,100	1,600	1,280	1,060
13	628	585	3,310	3,130	4,070	16,700	4,470	5,530	4,470	1,340	1,170	1,000
14	585	585	3,500	2,950	3,880	16,900	4,270	6,440	4,070	1,460	1,060	1,280
15	548	585	3,130	5,310	3,690	16,400	4,070	5,310	3,500	1,880	1,000	1,600
16	548	715	2,600	12,200	3,500	15,400	3,880	3,880	2,600	3,830	950	1,060
17	548	715	2,770	11,600	3,500	13,600	3,690	2,950	2,100	8,500	900	900
18	510	805	3,500	11,400	3,500	10,800	3,500	2,430	1,730	10,800	850	760
19	510	900	4,070	11,400	3,500	8,070	3,310	2,260	1,600	12,700	850	850
20	510	950	5,100	10,800	3,310	6,680	3,130	1,950	1,400	13,400	805	760
21	548	1,000	5,530	10,800	3,310	7,400	2,950	1,800	1,280	12,900	805	715
22	548	1,000	5,310	16,900	3,690	11,400	2,770	1,730	1,220	10,700	760	715
23	510	1,060	5,100	21,900	4,890	13,400	2,600	2,100	1,170	7,630	760	670
24	510	1,280	4,470	20,200	10,100	15,700	2,600	2,600	1,120	4,680	715	670
25	510	1,170	4,070	18,600	13,300	17,500	2,430	2,260	1,800	3,500	850	670
26	510	1,170	3,690	20,100	18,200	18,000	2,430	2,100	* 1,880	3,130	585	670
27	510	1,340	3,690	19,900	* 23,700	17,300	2,260	1,880	1,950	* 2,770	715	* 628
28	510	1,340	3,500	18,000	26,400	13,600	2,260	* 1,950	2,260	2,600	760	628
29	435	1,220	3,130	15,700	----------	9,290	2,260	2,770	1,800	2,260	* 715	670
30	* 472	* 1,170	2,600	14,500	---------	* 7,400	* 2,100	3,880	1,400	2,100	715	628
31	472	----------	2,260	* 14,000	---------	7,630	----------	3,880	----------	2,100	1,950	----------
Total	18,826	24,282	90,705	297,770	199,180	537,570	149,880	91,260	70,590	126,420	35,605	36,214
Mean	607	809	2,926	9,605	7,114	17,340	4,996	2,944	2,353	4,078	1,149	1,207
Cfsm	0.123	0.163	0.591	1.94	1.44	3.50	1.01	0.594	0.475	0.823	0.232	0.244
In.	0.14	0.18	0.68	2.24	1.50	4.04	1.13	0.68	0.53	0.95	0.27	0.27

Calendar year 1961 : Max 76,200 Min 428 Mean 6,310 Cfsm 1.27 In. 17.29
Water year 1961-62 : Max 35,600 Min 428 Mean 4,598 Cfsm 0.93 In. 12.61

* Discharge measurement made on this day.
Note.--Mean daily gage-heights computed from twice-daily readings of wire-weight gage Jan. 11-27.

3-3740. White River at Petersburg, Ind.

Location.--Lat 38°30'39", long 87°17'22", in SW¼ sec. 15, T. 1 N., R. 8 W., on left bank, 300 ft downstream from bridge on State Highway 61, three-eighths of a mile upstream from Prides Creek, 1 mile north of Petersburg, and at mile 47.7.

Drainage area.--11,139 sq mi.

Records available.--October 1927 to September 1962. Monthly discharges only for some periods, published in WSP 1305. Published as "at Hazleton" October 1927 to September 1938. Records published for both sites October 1937 to September 1938. Gage-height records collected at present site and datum since January 1935 are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 400.00 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1937, water-stage recorder at bridge, 29 miles downstream at datum 16.77 ft lower. Oct. 1, 1937, to Apr. 1, 1941, wire-weight gage at site 300 ft upstream at present datum.

Average discharge.--35 years, 11,570 cfs.

Extremes.--Maximum discharge during year, 55,900 cfs Mar. 5 (gage height, 21.72 ft); minimum, 1,430 cfs Nov. 2, 3 (gage height, 1.64 ft).

1927-62: Maximum discharge, 183,000 cfs Jan. 22, 1937 (gage height, 28.3 ft, present datum, 31.58 ft site and datum then in use); minimum, 553 cfs Oct. 2, 1941 (gage height, 0.05 ft).

Maximum stage known, 29.5 ft (present site and datum) in March 1913, from floodmarks, by Corps of Engineers (discharge, 235,000 cfs, estimated).

Remarks.--Records good.

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 16; stage-discharge relation affected by ice Jan. 10-13)

Oct. 1 to Jan. 15		Jan. 16 to Sept. 30			
1.7	1,540	1.8	2,330	16.0	30,000
4.0	4,630	4.0	5,480	20.0	46,000
8.0	11,300	10.0	15,800	22.0	58,000

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,020	1,540	3,160	4,630	31,200	a 47,000	19,600	5,960	7,730	3,650	7,400	4,230
2	2,890	1,540	2,890	4,320	32,400	a 50,000	20,200	8,920	7,560	3,240	6,440	5,320
3	2,760	1,540	2,630	4,170	33,000	a 54,000	22,300	12,600	6,760	3,110	5,480	4,840
4	2,630	1,540	2,500	4,170	29,400	a 55,000	22,800	14,400	6,440	3,370	4,840	4,230
5	2,370	1,650	2,890	4,170	19,200	*a 55,000	20,900	14,200	5,960	3,930	4,380	* 3,930
6	2,240	1,650	3,020	4,470	13,500	53,900	18,400	11,500	5,800	4,680	4,380	5,480
7	2,120	1,760	3,720	4,950	11,800	49,700	16,500	9,600	6,280	4,530	* 4,380	7,560
8	2,000	1,880	4,020	6,390	11,000	45,500	15,300	8,750	6,120	4,530	4,840	5,800
9	2,000	1,760	4,020	9,100	11,500	37,800	15,300	7,900	5,960	* 4,230	4,840	4,680
10	1,880	1,760	4,320	10,000	12,200	30,600	14,900	7,400	5,960	3,930	4,530	4,230
11	1,760	1,760	4,320	8,800	11,800	28,500	14,700	11,100	6,440	4,230	4,080	3,650
12	1,760	1,650	4,470	7,000	11,800	29,400	14,000	14,900	8,070	4,230	3,790	3,510
13	1,650	1,650	5,110	6,000	11,300	30,300	13,300	14,000	10,800	3,790	3,650	3,370
14	1,650	1,650	5,910	5,910	9,940	31,800	12,600	14,900	11,000	3,790	3,370	3,790
15	1,650	1,650	5,910	9,270	9,090	33,000	12,000	14,000	8,920	5,320	3,240	5,480
16	1,540	1,760	5,270	16,700	8,750	33,000	10,800	11,500	7,400	7,900	3,110	7,400
17	1,540	2,000	5,590	21,800	8,580	31,800	9,770	9,600	6,280	12,600	2,980	8,070
18	1,540	2,500	6,720	22,600	8,410	27,600	9,090	8,240	5,480	18,200	2,850	7,560
19	1,540	3,300	8,590	22,600	8,240	21,300	8,580	7,240	4,840	22,600	2,720	5,480
20	1,540	* 3,580	9,440	20,000	8,070	17,200	8,070	6,600	4,530	26,100	2,590	4,230
21	1,540	3,580	10,500	18,200	8,240	19,000	7,730	6,120	4,080	26,700	2,590	3,790
22	1,540	3,440	10,500	26,900	9,260	21,100	7,240	5,800	3,790	21,300	2,460	3,510
23	1,540	3,300	9,780	34,200	10,100	25,900	7,080	5,320	3,930	17,400	2,460	3,240
24	* 1,540	3,160	8,930	37,000	17,800	30,300	* 6,760	5,800	3,790	14,400	2,330	3,110
25	1,540	3,440	8,590	36,600	21,100	34,600	6,600	6,440	3,650	11,300	2,330	3,110
26	1,540	3,720	7,910	32,700	29,400	40,600	6,440	6,120	5,320	9,940	2,460	2,980
27	1,540	3,720	7,570	32,100	37,000	* 45,500	6,280	5,800	5,320	9,600	2,460	2,850
28	1,540	3,720	* 7,060	32,400	*a 44,000	45,000	6,120	5,640	4,380	8,920	2,850	2,850
29	1,540	3,580	6,720	32,400	----------	37,000	5,960	* 6,120	4,380	8,240	3,110	2,720
30	1,650	3,300	6,230	31,200	----------	25,600	5,640	7,240	3,930	7,730	2,850	2,590
31	1,540	----------	5,430	* 30,600	----------	20,400	----------	7,900	----------	7,730	2,850	----------
Total	57,130	73,080	183,720	541,350	478,080	1,107,400	364,960	281,610	180,900	291,220	112,640	133,590
Mean	1,843	2,436	5,926	17,460	17,070	35,720	12,170	9,084	6,030	9,394	3,634	4,453
Cfsm	0.165	0.219	0.532	1.57	1.53	3.21	1.09	0.816	0.541	0.843	0.326	0.400
In.	0.19	0.24	0.61	1.81	1.59	3.70	1.22	0.94	0.60	0.97	0.38	0.45

Calendar year 1961: Max 132,000 Min 1,540 Mean 13,070 Cfsm 1.17 In. 15.89
Water year 1961-62: Max 55,000 Min 1,540 Mean 10,430 Cfsm 0.936 In. 12.70

* Discharge measurement made on this day.
a No gage-height record.

3-3745. Patoka River near Ellsworth, Ind.

Location.--Lat 38°26'29", long 86°43'31", in SE¼ sec. 10, T. 1 S., R. 3 W., on right bank, 200 ft upstream from county road bridge (revised), 1.0 mile northwest of Ellsworth, 2.9 miles upstream from Dillon Creek, and 4 miles east of Dubois.

Drainage area.--171 sq mi.

Records available.--June 1961 to September 1962. Discharge measurements only during May 1961.

Gage.--Water-stage recorder. Prior to Oct. 1, 1961, wire-weight gage on downstream side of bridge, 200 ft downstream at same datum. Datum of gage is 477.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Extremes.--Maximum discharge during year, 4,990 cfs Feb. 28 (gage height, 15.81 ft); minimum, 0.3 cfs Aug. 24, 25 (gage height, 1.65 ft).

1961-62: Maximum discharge, 16,400 cfs May 8, 1961 (gage height, 18.9 ft, from floodmarks at wire-weight site); minimum, that of Aug. 24, 25, 1962.

Flood of March 1913 reached a stage of 19.1 ft (discharge about 18,000 cfs) according to information by local resident.

Remarks.--Records fair.

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 11 to Nov. 15; stage-discharge relation affected by backwater Jan. 26)

Oct. 1 to June 6

1.6	0.7	3.0	197
1.7	1.8	4.0	390
1.8	3.9	12.0	1,570
1.9	7.9	13.0	1,900
2.0	14	14.0	2,620
2.2	35	15.0	3,700
2.4	66	16.0	5,400

June 7 to Sept. 30

1.65	0.3	2.1	14
1.7	0.5	2.3	37
1.8	1.4	3.0	178
1.9	3.3	4.0	379
2.0	7.0	6.0	670

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	1.8	16	64	150	3,810	1,320	51	61	4.2	3.9	4.8
2	10	1.8	14	61	132	1,900	896	120	39	3.9	2.8	34
3	4.2	2.3	13	58	120	917	446	162	36	3.3	2.2	59
4	2.7	3.4	20	59	109	342	324	123	35	3.9	2.0	44
5	2.1	4.5	231	64	101	264	253	87	162	42	1.8	* 29
6	1.6	4.5	162	127	89	220	220	68	982	42	2.0	20
7	1.4	* 3.4	118	197	70	197	186	54	563	28	2.4	15
8	1.3	2.3	72	208	63	197	162	* 46	178	22	* 3.3	9.2
9	1.2	2.0	70	162	242	757	162	38	115	20	3.0	7.7
10	1.0	1.4	324	120	446	835	* 141	33	105	* 8.5	2.4	5.2
11	1.0	1.3	* 432	* 90	342	516	150	231	143	5.6	1.8	4.5
12	* .9	1.3	418	76	242	460	162	418	305	4.5	1.7	3.9
13	.8	1.6	285	66	197	359	150	186	* 189	3.9	1.4	3.3
14	.8	8.4	174	74	* 174	* 264	132	112	121	4.8	1.2	5.6
15	.7	16	116	1,280	143	208	116	72	80	5.6	1.0	7.0
16	.7	70	101	* 1,590	127	174	101	51	58	21	.8	6.0
17	.7	70	432	* 1,330	116	150	91	38	49	14	.8	3.9
18	.7	46	488	423	107	134	85	29	32	9.2	.7	* 2.8
19	.9	41	446	208	123	129	77	24	24	7.0	.6	2.4
20	1.0	* 28	375	174	120	150	70	20	20	4.8	.5	1.7
21	1.0	19	* 253	162	116	* 892	63	45	16	4.2	.4	1.3
22	1.3	17	174	2,440	116	880	58	59	12	3.3	.4	.9
23	1.3	38	150	* 3,010	320	446	54	* 28	11	3.9	.4	.8
24	1.3	56	141	* 3,120	1,390	305	51	17	14	* 3.9	.3	.7
25	1.5	48	123	* 1,680	1,280	242	48	13	15	4.2	.4	.7
26	1.5	49	105	* 462	1,950	231	45	12	12	6.0	17	.6
27	1.5	36	101	* 474	* 3,010	208	43	20	* 9.9	5.6	4.8	.7
28	1.5	28	101	390	4,280	174	41	43	8.5	4.2	2.4	.6
29	1.5	23	79	264	----------	150	38	30	5.6	9.2	1.8	.6
30	1.6	19	79	* 220	----------	407	35	134	4.8	18	1.7	.6
31	1.6	--------	70	174	----------	1,140	--------	118	--------	6.5	2.8	----------
Total	77.3	644.0	5,683	18,827	15,675	16,058	5,720	2,482	3,405.8	327.2	68.7	276.5
Mean	2.49	21.5	183	607	560	518	191	80.1	114	10.6	2.22	9.22
Cfsm	0.015	0.126	1.07	3.55	3.27	3.03	1.12	0.468	0.667	0.062	0.013	0.054
In.	0.02	0.14	1.23	4.09	3.40	3.49	1.25	0.54	0.74	0.07	0.01	0.06

Calendar year 1961 : Max -- Min -- Mean -- Cfsm -- In. --
Water year 1961-62 : Max 4,280 Min 0.3 Mean 190 Cfsm 1.11 In. 15.04

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-15	2300	12.50	1,690	3-31	2300	10.61	1,360
1-24	0300	14.84	3,460	6-6	1700	9.82	1,240
2-28	0400	15.81	4,990				

* Discharge measurement made on this day.

3-3755. Patoka River at Jasper, Ind.

Location.--Lat 38°24'49", long 86°52'36", in SE¼ sec. 20, T. 1 S., R. 4 W., on left bank 0.3 mile upstream from unnamed outlet of Jasper Lake, 1.0 mile downstream from Coon Seitz bridge, 1.2 miles downstream from Beaver Creek, and 3.3 miles northeast of Jasper.

Drainage area.--257 sq mi.

Records available.--November 1947 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 446.19 ft above mean sea level, datum of 1929. Prior to Sept. 18, 1956, wire-weight gage at bridge 5.6 miles downstream at datum 0.34 ft lower (now used as a supplementary gage for high-water periods in excess of 1,460 cfs).

Average discharge.--14 years (1948-62), 381 cfs.

Extremes.--Maximum discharge during year, 5,280 cfs Mar. 1; maximum gage height, 16.28 ft Mar. 1; 11.73 ft Mar. 1 at supplementary gage; minimum, 1.3 cfs Oct. 23, 24, 28, 29; minimum gage height, 3.10 ft Aug. 19, 20, 22, 23.
1947-62: Maximum discharge, 13,700 cfs May 10, 1961; maximum gage height, present site and datum, 20.62 ft May 10, 1961; maximum gage height at supplementary gage, 14.96 ft May 10, 1961; no flow at times during 1948, 1952-56.
Maximum stage known, 15.9 ft (at former site) in March 1913, from floodmark furnished by local residents (discharge, 16,000 cfs).

Remarks.--Records fair except those below 10 cfs and those for periods of ice effect, which are poor. Flow slightly regulated by Beaver Creek Reservoir, whose outlet enters the Patoka River 1.2 miles above the gage. Records prior to Oct. 18, 1956, when gage was relocated, affected by diversion of about 0.7 million gallons a day by City of Jasper for municipal supply.

Rating tables, water year 1961-62 except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second) (Shifting-control method used Oct. 1 to Nov. 16, Nov. 22, Nov. 30 to Dec. 4, July 29 to Aug. 31, Sept. 22-30)

Periods below 1,460 cfs				Periods above 1,460 cfs	
2.8	0.9	4.0	37	6.6	1,460
3.0	2.2	4.5	69	8.0	1,880
3.2	4.7	6.0	210	10.0	3,340
3.5	12	14.0	1,460	12.0	5,700
3.7	20				

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	3.5	18	106	221	5,140	1,180	69	106	13	14	46
2	2.5	6.3	14	96	188	5,140	1,280	110	62	12	9.1	34
3	4.4	3.9	13	96	168	4,520	1,360	158	49	11	6.5	13
4	6.5	2.2	17	96	158	3,540	1,140	178	49	9.4	5.1	43
5	3.6	2.0	64	92	148	1,380	585	128	46	12	4.4	46
6	2.6	2.0	210	76	119	849	390	92	375	69	3.9	* 32
7	2.4	4.6	168	159	92	403	313	72	917	46	3.4	22
8	2.3	* 4.9	119	232	80	313	265	62	557	40	* 3.1	18
9	2.4	2.8	80	b 220	127	764	243	* 55	178	26	2.5	16
10	2.4	3.0	126	b 160	465	1,050	* 221	49	119	* 28	2.3	14
11	* 2.3	3.2	* 404	b 120	570	1,090	210	120	188	20	2.1	10
12	2.1	3.3	540	b 110	429	917	232	330	311	14	2.2	8.1
13	2.3	3.4	469	b 100	325	664	221	416	* 351	11	2.3	6.1
14	2.8	7.7	313	96	* 265	* 483	199	210	210	10	2.2	9.0
15	2.8	8.3	188	842	232	364	168	119	114	19	2.0	25
16	2.8	11	128	1,160	199	301	148	80	76	35	2.0	12
17	4.6	37	275	1,280	178	243	128	62	55	20	1.9	7.8
18	8.3	62	600	1,410	168	210	114	52	46	20	1.8	6.3
19	2.9	40	696	1,580	168	188	106	43	37	16	1.7	5.6
20	1.6	34	632	1,670	158	203	96	37	32	12	5.7	4.9
21	1.4	27	455	1,670	138	713	88	32	29	10	3.2	3.9
22	1.4	22	313	1,200	178	1,050	92	43	24	8.8	1.9	3.3
23	1.3	27	232	* 1,410	326	1,100	80	55	24	9.4	1.7	3.0
24	5.6	26	199	2,190	1,090	764	72	37	19	14	2.3	2.8
25	7.1	43	168	3,340	1,210	429	66	29	22	10	4.1	2.8
26	3.0	40	128	3,850	1,920	338	62	30	25	7.8	4.7	2.8
27	1.6	43	119	3,440	3,240	301	58	37	23	7.8	6.2	2.8
28	1.3	36	148	1,390	4,640	254	55	33	20	7.5	12	2.6
29	1.3	27	128	985	----------	221	52	43	18	8.3	6.8	3.0
30	4.3	22	110	483	---------	426	49	40	16	6.5	4.9	2.6
31	6.9	----------	114	301	----------	968	----------	124	----------	9.1	16	----------
Total	99.6	558.1	7,188	29,960	17,200	34,326	9,273	2,945	4,098	542.6	142.0	408.4
Mean	3.21	18.6	232	966	614	1,107	309	95.0	137	17.5	4.58	13.6
Cfsm	0.012	0.072	0.903	3.76	2.39	4.31	1.20	0.370	0.533	0.068	0.018	0.053
In.	0.01	0.08	1.04	4.34	2.49	4.97	1.34	0.43	0.59	0.08	0.02	0.06

Calendar year 1961: Max 13,100 Min 1.3 Mean 433 Cfsm 1.68 In. 22.86
Water year 1961-62: Max 5,140 Min 1.3 Mean 292 Cfsm 1.14 In. 15.45

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

3-3765. Patoka River near Princeton, Ind.

Location.--Lat 38°23'30", long 87°32'55", in NE¼ NW¼ sec. 32, T. 1 S., R. 10 W., on left bank 75 ft upstream from dam of Princeton Water and Lighting Co., 270 ft upstream from bridge on State Highway 65, half a mile downstream from Indian Creek, and 2 miles northeast of Princeton.

Drainage area.--815 sq mi.

Records available.--August 1934 to September 1962. Published as "at Patoka" August 1934 to September 1940. Records published for both sites October 1939 to September 1940 (monthly discharge only at present site, for October, November 1939, published in WSP 1305).

Gage.--Water-stage recorder and concrete control. Datum of gage is 394.09 ft above mean sea level, datum of 1929, Parkersburg-Uniontown supplementary adjustment of 1944 (levels by Indiana Flood Control and Water Resources Commission). Aug. 29, 1934, to Sept. 30, 1940, chain gage at site 3 miles downstream at datum 387.15 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Dec. 1, 1939, to Jan. 21, 1941, staff gage at present site and datum.

Average discharge.--28 years, 1,019 cfs.

Extremes.--Maximum discharge during year, 5,720 cfs Mar. 7 (gage height, 16.83 ft); minimum, 6.2 cfs Oct. 17, Aug. 22-24; minimum gage height, 0.72 ft Aug. 22, 24.
1934-62: Maximum discharge, 18,700 cfs Jan. 26, 1937 (gage height, 26.80 ft, site and datum then in use); no flow Aug. 29 to Sept. 12, 1936.

Remarks.--Records fair.

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 2				Feb. 3 to Sept. 30			
0.7	5.1	3.0	610	0.7	5.1	4.0	840
0.8	14	5.0	980	0.8	14	10.0	2,220
1.0	56	11.0	2,450	1.0	56	14.0	3,600
2.0	366	14.0	3,600	1.5	211	16.0	4,880
				2.0	397	17.0	5,970

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	22	66	252	3,420	3,710	1,920	226	128	101	58	45
2	38	20	61	236	3,420	4,300	1,940	328	338	92	61	72
3	28	26	54	236	3,420	4,810	2,000	346	503	131	43	214
4	26	47	71	236	3,380	5,250	2,020	328	454	134	26	380
5	34	45	190	236	3,260	5,600	2,040	309	328	101	22	*309
6	34	26	164	252	3,100	5,600	2,040	309	306	169	109	238
7	28	20	252	302	2,940	5,720	2,040	290	681	617	236	168
8	22	22	286	318	2,700	5,600	2,020	250	860	800	*186	115
9	18	*22	286	350	2,460	5,600	2,070	196	920	595	90	89
10	16	14	366	366	2,200	5,340	2,070	*160	940	284	56	84
11	14	13	496	335	1,920	5,070	2,020	401	880	154	43	81
12	*14	11	690	420	1,720	4,730	1,900	681	940	99	30	68
13	14	9.6	764	366	*1,600	4,370	1,640	781	*1,100	*71	22	58
14	14	13	*800	302	1,500	4,050	1,320	742	1,160	61	16	602
15	12	22	782	1,240	1,370	*3,820	1,060	660	1,080	61	14	800
16	9.6	44	746	1,330	1,200	3,510	*800	527	840	61	12	479
17	8.6	103	782	1,330	980	3,260	639	328	454	98	13	335
18	6.9	71	800	1,400	762	3,060	479	234	270	140	11	196
19	8.6	89	926	1,520	595	2,870	380	160	181	112	8.6	114
20	8.6	98	980	1,600	503	2,730	346	124	134	71	7.7	78
21	9.6	87	1,020	1,700	503	2,840	309	103	103	49	6.9	61
22	9.6	87	1,060	2,870	550	2,640	270	84	87	38	6.9	47
23	8.6	132	1,060	2,760	800	2,520	250	71	348	92	6.2	41
24	8.6	132	962	2,840	1,520	2,430	242	64	681	92	6.2	36
25	8.6	112	782	2,980	1,520	2,370	227	54	397	52	9.6	34
26	8.6	121	568	3,100	2,460	2,300	211	89	427	56	22	34
27	11	106	420	3,220	2,640	2,240	196	309	346	49	24	30
28	14	84	335	3,260	3,180	2,170	181	309	193	36	22	28
29	16	74	302	3,340	----------	2,100	178	380	115	38	66	26
30	16	68	269	3,380	----------	1,970	167	364	78	74	54	22
31	18	----------	252	3,380	----------	1,920	----------	223	----------	41	36	----------
Total	500.9	1,740.6	16,592	45,457	55,623	114,500	32,975	9,430	15,272	4,569	1,324.1	4,884
Mean	16.2	58.0	535	1,466	1,987	3,694	1,099	304	509	147	42.7	163
Cfsm	0.020	0.071	0.656	1.80	2.44	4.53	1.35	0.373	0.625	0.180	0.052	0.200
In.	0.02	0.08	0.76	2.08	2.54	5.22	1.51	0.43	0.70	0.21	0.06	0.22

Calendar year 1961 : Max 12,900 Min 6.9 Mean 1,244 Cfsm 1.53 In. 20.72
Water year 1961-62 : Max 5,720 Min 6.2 Mean 830 Cfsm 1.02 In. 14.37

* Discharge measurement made on this day.

3-3775. Wabash River at Mount Carmel, Ill.

Location.--Lat 38°24'07", long 87°45'10", in sec. 28, T. 1 S., R. 12 W., on right bank on downstream side of Southern Railway bridge at Mount Carmel, Wabash County, and 0.1 mile downstream from Patoka River.

Drainage area.--28,600 sq mi, approximately.

Records available.--January 1908 to September 1913 (gage heights only), October 1927 to September 1962. Gage-height records collected in this vicinity November 1874 to December 1878, are contained in files of Louisville office of the Corps of Engineers and since June 1884 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 371.46 ft above mean sea level, datum of 1929. Prior to Dec. 21, 1928, staff gage at same site and datum. Oct. 1, 1933, to Feb. 8, 1935, chain gage and Feb. 9, 1934, to Sept. 30, 1949, water-stage recorder, at New York Central Railroad bridge 3.0 miles downstream at datum 0.17 ft higher.

Average discharge.--35 years, 26,980 cfs.

Extremes.--Maximum discharge during year, 123,000 cfs Mar. 29 (gage height, 22.15 ft); minimum, 5,440 cfs Oct. 23 (gage height, 1.18 ft).

1927-62: Maximum discharge, 305,000 cfs May 25, 1943 (gage height, 27.54 ft, present site and datum); minimum, 1,620 cfs Sept. 27, 28, 30, 1941.

Maximum stage known, 31.0 ft Mar. 30, 1913, present site and datum (discharge, 428,000 cfs, from rating curve extended above 310,000 cfs).

Remarks.--Records good.

Rating table, water year 1961-62 (gage height, in feet and discharge, in cubic feet per second)

1.2	5,500	15.0	63,000
5.0	19,000	20.0	93,000
10.0	39,000	22.1	122,000

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9,900	7,140	14,600	12,500	74,100	77,700	93,000	16,000	18,500	9,240	19,200	7,200
2	9,760	7,420	13,400	11,300	76,800	83,400	81,700	27,000	18,200	8,780	17,400	8,360
3	9,440	7,590	12,400	11,000	80,100	89,400	72,300	34,200	17,700	8,920	15,400	8,640
4	9,020	7,450	11,700	11,300	82,800	96,500	64,400	36,800	16,400	8,460	13,700	8,360
5	8,640	7,620	11,300	12,000	82,800	102,000	56,600	35,900	15,500	10,700	12,500	8,220
6	8,120	8,640	11,500	14,800	76,400	107,000	50,000	32,300	14,400	19,200	11,600	8,920
7	7,660	8,920	11,500	23,600	69,200	108,000	44,000	28,000	14,200	22,200	13,900	9,970
8	7,280	9,160	11,800	29,400	64,100	102,000	40,600	25,500	15,400	20,500	14,400	10,700
9	6,920	8,990	12,400	34,000	61,000	91,600	39,800	23,000	17,300	17,500	14,900	9,520
10	6,640	8,500	12,500	38,300	59,000	80,600	40,700	22,000	19,100	14,700	13,400	8,570
11	* 6,440	8,040	12,800	42,200	56,600	72,200	39,400	24,700	20,000	12,700	11,700	* 7,700
12	6,130	7,660	*13,400	40,200	53,100	69,000	37,400	34,900	24,600	11,800	10,600	7,170
13	5,950	7,280	15,600	31,000	46,600	70,400	35,200	40,500	30,700	11,100	9,900	7,170
14	5,680	7,030	17,600	23,800	39,300	72,200	33,100	42,100	34,000	10,500	9,060	7,560
15	5,650	* 6,890	16,600	23,900	34,400	73,500	31,200	41,800	31,200	13,100	8,430	10,600
16	5,620	7,480	15,300	29,600	32,100	74,300	29,100	37,600	25,600	24,200	7,870	14,400
17	5,680	7,900	16,100	37,400	30,900	74,400	* 26,700	31,800	21,500	34,000	7,450	16,000
18	5,860	9,100	18,800	40,400	30,000	74,000	24,800	26,700	19,200	42,200	7,100	14,300
19	5,950	10,400	21,000	41,100	28,600	71,500	23,400	23,000	17,200	49,600	6,820	12,300
20	5,860	11,900	22,800	40,200	28,200	* 68,000	22,200	20,400	15,200	54,500	6,580	9,900
21	5,740	14,500	24,500	37,800	29,100	68,600	21,000	18,600	13,700	57,300	6,340	8,680
22	5,650	15,300	25,200	46,000	30,600	70,700	20,000	* 17,400	12,200	54,500	6,190	8,150
23	5,530	14,700	23,900	55,000	32,800	72,800	19,100	16,300	14,200	43,900	6,040	7,620
24	5,530	15,000	22,800	55,900	39,500	77,600	18,400	15,400	15,200	36,700	5,950	7,310
25	5,650	15,400	22,900	* 55,200	46,800	83,900	17,700	15,300	12,600	35,100	6,040	7,100
26	5,650	16,300	22,100	55,000	53,800	93,800	17,200	15,300	* 11,600	35,400	5,890	6,890
27	5,770	17,700	20,400	57,500	62,800	106,000	16,600	14,900	12,000	36,000	6,100	6,470
28	6,190	18,100	19,200	65,400	71,200	116,000	16,000	14,700	11,600	35,400	6,470	6,160
29	6,190	17,400	18,000	69,400	---	122,000	15,500	15,700	10,700	30,700	6,890	6,040
30	6,220	16,000	16,400	71,400	---	120,000	15,200	17,600	10,100	24,800	7,100	5,890
31	6,540	---	14,400	72,500	---	109,000	---	18,300	---	* 21,200	6,960	---
Total	206,860	325,510	522,900	1,189,100	1,472,700	2,698,100	1,062,300	783,700	529,800	814,900	301,880	265,870
Mean	6,673	10,850	16,870	38,360	52,600	87,040	35,410	25,280	17,660	26,290	9,738	8,862
Cfsm	0.233	0.379	0.590	1.34	1.84	3.04	1.24	0.884	0.617	0.919	0.340	0.310
In.	0.27	0.42	0.68	1.55	1.92	3.51	1.38	1.02	0.69	1.06	0.39	0.35

Calendar year 1961: Max 248,000 Min 4,330 Mean 30,810 Cfsm 1.08 In. 14.64
Water year 1961-62: Max 122,000 Min 5,530 Mean 27,870 Cfsm 0.974 In. 13.24

* Discharge measurement made on this day.

3-3780. Bonpas Creek at Browns, Ill.

Location.--Lat 38°22'50", long 87°58'35", in SW¼SE¼ sec. 33, T. 1 S., R. 14 W., at Browns, on left bank 30 ft upstream from concrete dam of Albion municipal water plant, 100 ft upstream from Nigger Creek, 300 ft upstream from bridge on Browns Road, and a quarter of a mile upstream from Southern Railway bridge.

Drainage area.--235 sq mi.

Records available.--October 1940 to September 1962.

Gage.--Water-stage recorder and concrete dam. Datum of gage is 374.92 ft above mean sea level, datum of 1929. Auxiliary wire-weight gage near mouth on Wabash River at Grayville read twice daily.

Average discharge.--22 years, 234 cfs.

Extremes.--Maximum discharge during year, 2,720 cfs Jan. 22 (gage height, 15.81 ft); no flow for many days.
1940-62: Maximum discharge, 7,500 cfs May 9, 1961 (gage height, 24.04 ft); no flow at times for most years.

Remarks.--Records good except those for periods of backwater from Wabash River or no gage-height record, which are fair. Albion municipal waterplant diverts about 0.1 cfs at gage; diversion not included in record.

Rating table, water year 1961-62, except periods of backwater from Wabash River
(gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 20 to Feb. 9, Feb. 26 to Apr. 8, June 3, 4)

1.0	0	1.5	37	6.0	477
1.1	1.2	1.6	55	10.0	1,030
1.2	5.1	1.7	79	13.0	1,740
1.3	12	2.0	139	16.0	2,790
1.4	23	3.0	248		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	0	4.5	37	179	1,840	c 396	119	153	10	0.2	17
2	.2	0	4.0	30	136	1,400	c 385	280	281	8.2	.2	6.1
3	2.8	0	3.6	30	116	900	278	185	24	7.5	.1	129
4	1.8	0	12	52	122	c 384	167	88	9.1	23	0	19
5	.6	0	178	198	134	c 156	122	34	9.6	58	0	6.8
6	.3	0	60	763	129	c 94	97	24	8.9	10	8.7	7.5
7	.2	0	23	929	* 60	*c 71	84	21	7.5	6.8	36	8.9
8	.1	0	15	929	21	c 106	108	18	6.8	5.1	179	5.1
9	0	0	13	698	321	c 673	529	15	60	4.0	103	3.6
10	0	0	161	303	477	c 741	529	17	264	3.6	20	3.2
11	0	0	348	174	329	629	357	315	163	3.2	8.2	2.4
12	0	0	668	82	248	681	248	248	289	2.8	5.1	1.5
13	0	* 0	540	41	228	668	202	137	147	2.4	3.2	1.2
14	0	0	272	54	208	479	157	33	51	2.4	2.8	128
15	0	0	121	988	185	234	120	20	18	2.1	1.8	116
16	0	262	184	1,010	163	148	81	15	9.6	3.6	1.2	27
17	0	290	865	945	144	102	55	11	6.8	15	1.0	16
18	* 0	100	1,080	865	140	60	46	8.9	5.5	6.2	.8	5.6
19	0	21	1,140	532	224	62	37	7.5	31	4.5	.6	2.8
20	0	11	979	234	240	281	27	5.6	18	3.6	.4	2.1
21	0	6.8	* 593	191	331	1,370	21	6.2	21	2.8	.2	1.5
22	0	24	276	2,430	762	1,680	19	4.5	10	2.4	.1	.8
23	0	309	426	* 2,650	981	1,780	18	3.6	289	26	* 0	.4
24	0	267	434	a 2,500	1,560	1,320	16	* 2.8	616	10	0	.2
25	0	137	308	a 2,200	1,530	812	* 15	2.8	694	* 2.1	1.0	.2
26	0	34	232	a 2,000	2,220	c 334	12	17	630	.6	4.5	.1
27	0	19	272	a 1,700	2,160	c 180	6.8	234	228	.2	2.1	* 0
28	0	10	264	1,420	2,200	c 91	9.6	301	* 34	.4	1.2	0
29	0	8.2	185	1,090	---------	c 65	12	121	21	.6	.6	0
30	0	5.6	150	612	---------	c 115	12	26	14	.4	.2	0
31	0	----------	70	270	---------	c 282	----------	18	----------	.3	.4	----------
Total	6.0	1,504.6	9,881.1	25,957	15,548	17,738	4,166.4	2,338.9	4,119.8	227.8	382.6	512.0
Mean	0.19	50.2	319	837	555	572	139	75.4	137	7.35	12.3	17.1
Cfsm	0.00081	0.214	1.36	3.56	2.36	2.43	0.591	0.321	0.583	0.031	0.052	0.073
In.	0.0009	0.24	1.56	4.11	2.46	2.81	0.66	0.37	0.65	0.04	0.06	0.08

Calendar year 1961 : Max 7,410 Min 0 Mean 337 Cfsm 1.43 In. 19.43
Water year 1961-62 : Max 2,650 Min 0 Mean 226 Cfsm 0.962 In. 13.04

* Discharge measurement or observation of no flow made on this day.
a No gage-height record.
c Backwater from Wabash River.

3-3815. Little Wabash River at Carmi, Ill.

Location.--Lat 38°03'40", long 88°09'35", near center of E½ sec. 25, T. 5 S., R. 9 E., on right bank at upstream side of Possum Bridge, 2.3 miles south of Main Street Bridge in Carmi and 7-3/4 miles downstream from Skillet Fork.

Drainage area.--3,090 sq mi, approximately.

Records available.--October 1908 to December 1912 (gage heights only), October 1939 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 339.91 ft above mean sea level, datum of 1929. October 1908 to December 1912, chain gage at site 3.1 miles upstream at datum 0.4 foot higher. Oct. 1 to Nov. 8, 1939, wire-weight gage at present site and datum. Since Nov. 14, 1939, auxiliary water-stage recorder 3.1 miles upstream.

Average discharge.--23 years, 2,616 cfs.

Extremes.--Maximum discharge during year, 11,300 cfs Mar. 4; maximum gage height, 26.92 ft Mar. 9; minimum discharge, 35 cfs Sept. 30.
1939-62: Maximum discharge, 46,900 cfs May 12, 1961; maximum gage height, 36.70 ft May 13, 1961; no flow Sept. 15-17, 1952, result of temporary dam upstream; minimum unregulated discharge, 0.6 cfs Sept. 9, 1953, July 31, 1954.

Remarks.--Records good. At extremely high stages, there is diversion six miles above the gage through McHenry Slough to the Wabash River.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	587	58	415	1,120	9,580	11,100	10,200	1,080	1,570	3,980	137	144
2	524	81	322	880	9,250	11,100	9,800	1,530	1,940	2,750	112	212
3	347	134	263	732	8,970	11,200	8,890	1,530	1,750	1,210	94	672
4	204	126	420	676	8,720	11,300	7,740	1,350	1,050	614	87	1,050
5	138	114	1,310	785	8,420	11,100	6,540	1,260	715	399	98	1,080
6	104	126	1,280	2,570	8,100	10,900	5,250	1,150	550	324	114	775
7	90	222	979	4,430	* 7,660	* 10,400	3,290	963	495	322	483	517
8	85	769	621	4,960	7,050	10,000	1,760	711	410	469	638	314
9	80	1,010	560	5,220	6,970	9,860	2,700	524	1,010	464	1,290	311
10	73	788	1,130	5,250	7,340	9,460	3,590	419	1,130	543	1,770	363
11	68	524	2,120	5,020	7,360	8,990	3,750	811	1,170	422	1,990	263
12	61	339	3,680	4,780	6,950	8,670	3,450	1,230	1,180	550	1,860	169
13	59	* 248	3,730	4,400	6,630	8,570	2,900	2,010	2,880	992	1,370	124
14	53	199	3,140	4,510	5,860	8,440	2,330	2,790	4,050	1,230	758	664
15	47	183	2,800	6,050	4,800	7,780	1,750	2,560	3,830	1,510	377	1,870
16	44	1,190	2,850	6,600	3,700	7,780	1,330	1,730	3,100	1,310	226	2,140
17	42	1,210	4,560	6,620	2,690	7,250	1,050	1,150	2,520	2,040	164	1,460
18	* 41	829	5,450	6,680	2,230	6,540	906	732	1,670	1,880	129	741
19	41	594	5,880	6,220	2,180	5,800	* 780	481	1,670	1,140	109	328
20	38	888	* 5,830	5,710	2,520	5,150	684	349	3,160	635	96	190
21	36	998	5,510	5,150	2,760	6,390	588	365	3,800	358	85	128
22	36	888	5,150	8,000	3,500	6,840	583	430	4,030	261	* 71	100
23	36	1,640	5,020	9,240	4,780	7,100	518	473	4,050	205	65	81
24	36	1,960	4,990	* 9,220	6,590	7,490	456	377	3,520	155	80	73
25	38	1,620	4,950	9,130	7,130	7,860	396	275	3,530	* 125	289	67
26	36	1,320	4,740	9,400	8,540	8,600	384	822	4,160	113	128	53
27	36	1,120	4,360	9,950	9,890	9,290	384	1,020	* 4,400	138	85	* 45
28	36	963	3,820	10,000	10,900	9,890	384	1,330	4,460	248	70	40
29	38	765	3,200	9,980	---------	10,100	379	1,350	4,500	255	59	36
30	46	550	2,420	9,890	---------	10,300	473	975	4,410	201	55	35
31	48	----------	1,560	9,720	---------	10,400	----------	1,300	----------	161	66	----------
Total	3,148	21,456	93,060	182,893	181,070	275,980	83,235	33,077	76,710	25,004	12,955	14,045
Mean	102	715	3,002	5,900	6,467	8,903	2,774	1,067	2,557	807	418	468
Cfsm	0.033	0.231	0.972	1.91	2.09	2.88	0.898	0.345	0.828	0.261	0.135	0.151
In.	0.04	0.26	1.12	2.20	2.18	3.32	1.00	0.40	0.92	0.30	0.16	0.17

	Observed			Adjusted ≠		
Calendar year 1961:	Max 46,000	Min 36	Mean 3,532	Mean 3,621	Cfsm 1.17	In. 15.92
Water year 1961-62:	Max 11,300	Min 35	Mean 2,747	Mean 2,747	Cfsm 0.889	In. 12.07

* Discharge measurement made on this day.
≠ Adjusted for diversion through McHenry Slough.

4-0875. Hart ditch at Munster, Ind.

Location.--Lat 41°33'40", long 87°28'50", in N½ sec. 20, T. 36 N., R. 9 W., on left bank at city limits of Munster, a quarter of a mile downstream from U. S. Highway 6 and 0.4 mile upstream from mouth.

Drainage area.--69.2 sq mi.

Records available.--September 1942 to September 1962.

Gage.--Water-stage recorder and concrete control. Datum of gage is 591.27 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Since Sept. 11, 1959, auxiliary water-stage recorder 1,200 ft upstream from base gage.

Average discharge.--20 years, 57.5 cfs.

Extremes.--Maximum discharge during year, 715 cfs Mar. 12 (gage height, 3.10 ft); minimum, 3.3 cfs Sept. 12; minimum gage height, 0.51 ft Aug. 19, Sept. 10, 12, 23.
1942-62: Maximum discharge, 2,670 cfs Apr. 28, 1958; maximum gage height, 7.83 ft Oct. 11, 1954; minimum discharge, 1.2 cfs July 29, 1946; minimum gage height, 0.47 ft July 29, 1946, Sept. 2, 1948.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow from this ditch discharges into Little Calumet River near Munster. Practically all of this flow discharges into the Calumet Sag Canal or Grand Calumet River.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	3.9	1.5	192
.6	12	2.0	348
.8	35	4.0	1,030
1.0	70		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	114	62	41	b 17	37	66	72	55	12	8.0	8.0	5.4
2	93	51	37	17	33	47	55	53	12	19	8.0	4.8
3	76	140	32	18	31	42	48	40	16	17	7.2	3.9
4	62	222	49	22	105	37	43	31	14	10	7.2	3.9
5	53	116	109	57	280	33	51	28	14	8.0	6.4	5.8
6	43	85	74	268	180	29	74	26	16	8.0	19	5.1
7	37	70	55	332	97	41	68	27	14	7.2	12	4.5
8	32	59	38	207	66	80	57	151	22	6.4	9.6	4.5
9	29	49	b 35	110	43	93	60	80	30	5.8	8.7	3.9
10	26	45	34	74	37	164	51	64	64	5.8	8.0	3.9
11	26	41	31	53	31	268	45	72	70	16	7.2	5.1
12	24	45	b 60	40	37	645	43	142	41	12	6.4	6.4
13	37	43	b 49	35	46	544	72	141	30	13	* 6.4	6.4
14	31	45	b 40	32	53	284	64	74	24	17	7.2	6.4
15	25	40	b 33	31	56	189	49	51	19	19	6.4	6.4
16	22	85	31	30	73	128	41	38	17	20	6.4	5.8
17	21	100	30	28	85	128	38	32	14	17	7.2	5.8
18	19	70	38	27	82	252	38	25	* 13	* 15	6.4	6.4
19	70	55	38	27	70	478	35	22	10	14	6.4	* 7.2
20	167	55	* 35	25	* 62	478	32	20	10	19	6.4	10
21	114	49	32	24	55	412	30	* 24	10	16	7.2	7.2
22	76	66	32	24	51	544	29	20	9.6	29	7.2	6.4
23	59	* 172	34	* 24	39	332	26	17	23	24	7.2	5.1
24	53	131	35	22	37	222	* 26	14	31	17	9.6	5.8
25	45	93	29	22	37	175	24	13	17	13	15	7.2
26	* 38	74	b 28	30	107	138	22	16	13	9.6	7.2	7.2
27	35	62	b 27	43	265	* 109	20	20	10	8.7	6.4	7.2
28	32	53	b 26	59	115	100	20	18	10	8.7	6.3	6.4
29	48	48	b 24	68	--------	91	21	16	10	8.7	6.0	5.8
30	87	45	b 21	56	--------	112	59	13	9.6	8.7	5.6	5.8
31	80	---------	b 19	44	--------	96	---------	12	---------	8.0	5.6	---------
Total	1,674	2,271	1,196	1,866	2,210	6,357	1,313	1,355	605.2	408.6	243.8	175.7
Mean	54.0	75.7	38.6	60.2	78.9	205	43.8	43.7	20.2	13.2	7.86	5.86
Cfsm	0.780	1.09	0.558	0.870	1.14	2.96	0.633	0.632	0.292	0.191	0.114	0.085
In.	0.90	1.22	0.64	1.00	1.19	3.41	0.71	0.73	0.33	0.22	0.13	0.09

Calendar year 1961: Max 925 Min 3.0 Mean 55.7 Cfsm 0.805 In. 10.91
Water year 1961-62: Max 645 Min 3.9 Mean 53.9 Cfsm 0.779 In. 10.57

Peak discharge (base, 800 cfs).--No peak above base.

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 2-4, 9-22, Jan. 27 to Mar. 7, Aug. 28 to Sept. 4.

4-0876. Little Calumet River at Munster, Ind.

Location.--Lat 41°34'07", long 87°31'18", in NW¼ sec. 13, T. 36 N., R. 10 W., on left bank 200 ft upstream from Hohman Street Bridge, a quarter of a mile south of intersection of Hohman Street and 173rd Street, 0.4 mile upstream from Indiana-Illinois State line, 1 mile north of intersection of Hohman Street and Ridge Road, and 4.6 miles upstream from mouth of Thorn Creek.

Drainage area.--Indeterminate.

Records available.--June 1958 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 580.72 ft above mean sea level, datum of 1929.

Extremes.--Maximum daily discharge, 600 cfs Mar. 12; minimum, 4.0 cfs Sept. 3 (gage height, 3.10 ft).
1958-62: Maximum discharge, 1,510 cfs Apr. 28, 1959 (gage height, 13.67 ft); minimum, that of Sept. 3, 1962; minimum gage height, 2.91 ft Sept. 10, 1960.

Remarks.--Records poor.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 16-18, 22-27, Dec. 5-7, 19-24, Mar. 28-31, May 8, 12, 13; stage-discharge relation affected by ice Dec. 9, 12; stage-discharge relation indefinite Oct. 1, 2)

3.1	4.0
3.4	12
4.0	29
4.5	50
5.0	78
6.0	158
8.0	379
10.0	670

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	150	75	45	19	40	70	88	78	14	10	14	7.2
2	140	63	43	19	36	50	72	58	12	35	12	6.0
3	123	157	41	20	35	45	60	45	17	26	13	4.7
4	100	267	52	24	110	40	55	35	17	15	12	6.5
5	82	167	107	82	270	36	63	29	16	11	11	8.0
6	66	107	88	245	180	32	82	29	23	11	37	6.7
7	58	85	68	360	105	43	78	30	15	10	18	6.0
8	48	68	50	210	70	83	66	149	28	9.6	12	6.0
9	43	60	46	135	49	98	68	100	45	7.2	12	4.7
10	39	52	43	84	45	160	60	72	66	7.5	10	4.9
11	39	45	39	57	34	260	50	72	82	22	9.3	6.0
12	33	50	63	43	45	600	48	154	48	21	8.0	6.7
13	50	48	52	38	49	500	72	194	35	20	* 8.0	7.2
14	41	50	44	35	56	280	72	107	24	31	8.8	7.0
15	33	45	36	34	60	190	55	60	21	27	8.8	6.5
16	29	92	34	33	82	135	45	43	19	26	8.5	5.1
17	27	107	33	31	100	130	43	37	16	23	8.8	5.1
18	26	75	42	29	86	250	41	31	* 15	18	8.8	7.0
19	110	63	43	29	74	465	37	27	12	* 15	8.0	* 7.2
20	214	60	* 41	27	* 66	465	35	24	12	34	8.3	14
21	158	55	35	26	58	400	35	* 35	11	27	8.5	9.1
22	96	75	35	26	54	520	33	27	11	61	7.8	8.3
23	75	* 158	39	* 26	42	330	31	21	37	73	7.5	6.0
24	66	140	41	24	40	230	* 29	18	35	31	13	6.5
25	55	96	37	24	40	200	29	16	21	24	30	8.8
26	* 45	78	35	33	100	170	27	21	16	18	13	8.3
27	41	66	32	36	260	* 150	27	29	13	16	8.5	11
28	39	60	30	63	140	131	27	24	12	15	8.5	9.6
29	63	52	27	72	----------	115	29	20	12	12	8.0	9.3
30	115	50	24	60	----------	131	65	17	12	12	7.5	8.3
31	96	----------	21	57	----------	115	----------	14	----------	13	7.5	----------
Total	2,300	2,566	1,366	2,001	2,326	6,424	1,522	1,616	717	681.3	356.1	217.7
Mean	74.2	85.5	44.1	64.5	83.1	207	50.7	52.1	23.9	22.0	11.5	7.26
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1961 : Max 688 Min 4.6 Mean 59.2 Cfsm - In. -
Water year 1961-62 : Max 600 Min 4.7 Mean 60.5 Cfsm - In. -

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 13-18, Dec. 25 to Jan. 4, Jan. 7 to Feb. 15, Feb. 18 to Mar. 27.

4-905. Thorn Creek at Thornton, Ill.

Location.--Lat 41°34'05", long 87°36'30", near center of N½ sec. 34, T. 36 N., R. 14 E., on right bank at downstream side of Ridge Road Bridge in Thornton, 1 mile downstream from North Creek and 1½ miles upstream from Grand Trunk Railway.

Drainage area.--104 sq mi.

Records available.--May 1948 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 586.43 ft above mean sea level, datum of 1929. Prior to Dec. 18, 1948, wire-weight gage at same site and datum.

Average discharge.--14 years, 91.7 cfs.

Extremes.--Maximum discharge during year, 1,100 cfs Mar. 12 (gage height, 8.77 ft); minimum daily, 16 cfs Sept. 2.
1948-62: Maximum discharge, 4,700 cfs July 13, 1957 (gage height, 16.00 ft); minimum daily, 4.4 cfs Sept. 11, 1949.
Flood of Apr. 5, 1947, reached a stage of 14.34 ft, from floodmark (discharge, 4,200 cfs).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Some diurnal fluctuation caused by pumping operations above station. Figures of discharge include about 9 cfs pumped from ground-water sources for municipal supply of Chicago Heights and undetermined amount of ground-water pumpage for industrial use above station.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 13 to May 8)

Oct. 1 to Feb. 4				Feb. 5 to Sept. 30					
2.3	30	4.0	297	2.0	12	2.5	60	5.0	450
2.5	56	5.0	436	2.1	17	3.0	155	7.0	753
3.0	146	5.5	511	2.3	33	4.0	317	8.5	1,040

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	a 240	111	69	b 33	61	155	115	76	34	38	27	20
2	a 180	91	64	34	54	102	111	74	33	70	26	16
3	a 130	305	58	37	50	89	106	* 58	30	50	26	17
4	* 111	351	74	39	181	82	94	47	28	36	25	25
5	100	200	91	89	450	71	92	41	34	* 33	21	24
6	87	122	87	387	330	65	104	36	* 44	35	55	22
7	77	100	* 72	451	213	82	98	35	35	34	30	22
8	69	89	61	310	100	187	85	432	31	29	26	20
9	61	79	54	172	82	247	98	228	47	a 28	22	19
10	58	74	53	118	71	408	91	172	54	a 28	* 24	26
11	61	67	52	b 90	60	495	* 76	157	55	a 35	22	24
12	56	58	94	62	77	1,040	65	339	49	a 50	18	25
13	94	59	80	41	100	823	100	369	43	a 45	22	* 28
14	58	* 62	67	46	115	450	80	187	38	74	22	26
15	54	59	54	56	119	* 276	65	111	35	a 80	23	24
16	53	130	50	52	* 133	185	57	91	32	54	23	19
17	54	128	61	* 52	147	191	52	82	30	41	25	24
18	52	94	58	48	149	369	50	73	28	35	23	28
19	180	80	54	47	137	732	47	67	28	30	21	26
20	365	79	52	44	111	777	43	55	28	73	26	26
21	264	72	50	44	107	611	40	68	28	54	26	27
22	152	98	52	42	100	805	38	67	28	56	26	24
23	109	245	52	42	80	506	43	62	126	67	26	21
24	94	200	50	42	74	356	46	49	62	40	40	28
25	82	128	46	42	73	304	44	42	50	33	55	33
26	72	102	48	80	373	245	44	65	40	29	25	32
27	59	91	b 47	93	506	191	42	69	34	27	23	34
28	56	80	b 44	89	330	166	38	60	33	26	26	33
29	82	77	b 40	100	----------	155	35	47	34	24	24	30
30	179	70	b 38	86	----------	163	46	38	39	24	25	25
31	159	----------	b 36	62	----------	135	----------	35	---------	26	25	----------
Total	3,448	3,501	1,808	2,930	4,383	10,463	2,045	3,332	1,210	1,304	828	748
Mean	111	117	58.3	94.5	157	338	68.2	107	40.3	42.1	26.7	24.9
Cfsm	1.07	1.12	0.561	0.909	1.51	3.25	0.656	1.03	0.387	0.405	0.257	0.239
In.	1.23	1.25	0.65	1.05	1.57	3.74	0.73	1.19	0.43	0.47	0.30	0.27

Calendar year 1961: Max 2,230 Min 14 Mean 101 Cfsm 0.971 In. 13.24
Water year 1961-62: Max 1,040 Min 16 Mean 98.6 Cfsm 0.948 In. 12.88

Peak discharge (base, 900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-12	1930	8.77	1,100				
3-20	0400	8.10	955				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

4-910. Little Calumet River at South Holland, Ill.

Location.--Lat 41°36'05", long 87°34'38", in SW¼SW¼ sec. 13, T. 36 N., R. 14 E., on right bank at downstream side of bridge on U.S. Highway 6, 0.6 mile downstream from Thorn Creek, 1.6 miles east of South Holland, and 4.1 miles upstream from former gaging station at Harvey.

Records available.--October 1947 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 575.00 ft above mean sea level. Prior to Oct. 27, 1947, wire-weight gage at same site and datum. Auxiliary water-stage recorder at Dixmoor, 6.1 miles downstream; prior to Nov. 17, 1947, auxiliary wire-weight gage at same site read twice daily.

Average discharge.--15 years, 165 cfs.

Extremes.--Maximum discharge during year, 1,280 cfs Mar. 12 (gage height, 12.55 ft); minimum daily, 23 cfs Sept. 3, 24.
1947-62: Maximum discharge, 4,440 cfs July 14, 1957 (gage height, 20.11 ft); minimum daily, 7.9 cfs Oct. 6, 1950.
Flood of Apr. 6, 1947, reached a stage of 19.24 ft, from floodmark (discharge, 4,760 cfs).

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor. Flow from about 330 sq mi of upper Little Calumet River basin above a point in Gary, Ind., is diverted to Lake Michigan by Burns ditch. Calumet Sag Channel, 8 miles below station, usually diverts the entire low flow to the Mississippi River basin.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	460	a 180	128	b 76	152	340	250	180	72	59	42	30
2	362	a 170	124	b 80	121	256	220	158	68	84	42	25
3	282	a 400	116	b 90	110	196	196	* 135	63	104	41	23
4	238	a 500	129	b 100	243	174	185	114	70	* 77	40	26
5	202	385	185	162	660	158	190	101	74	75	39	40
6	* 174	a 260	* 190	437	580	146	226	99	* 87	75	67	38
7	146	214	158	640	535	152	226	95	69	75	59	31
8	138	a 180	126	520	340	282	202	409	72	75	* 42	29
9	123	a 160	117	b 400	214	378	220	348	125	73	38	24
10	a 110	a 150	111	b 260	163	535	208	250	131	69	37	24
11	a 115	a 145	105	b 190	141	619	* 180	244	140	67	36	27
12	a 110	136	174	b 140	146	1,100	163	384	114	80	33	* 26
13	a 170	a 130	180	b 100	202	1,130	214	521	95	76	30	28
14	132	* 146	168	b 90	214	* 760	180	310	80	82	34	31
15	110	127	128	b 84	* 220	505	152	190	72	98	32	27
16	101	232	112	b 80	244	400	128	146	66	91	32	24
17	99	269	123	b 72	269	348	120	128	61	82	34	24
18	95	202	126	b 68	276	490	117	114	61	69	34	27
19	220	168	124	b* 68	262	850	115	105	65	61	32	27
20	490	a 160	119	70	220	1,020	108	98	61	81	31	28
21	415	152	111	b 70	226	860	102	110	61	132	36	29
22	276	180	109	b 68	208	1,020	103	117	61	86	32	27
23	214	355	119	b 68	174	800	98	96	106	141	33	25
24	a 190	370	116	b 80	163	580	98	85	114	77	34	23
25	a 170	262	105	b 105	158	505	95	79	83	59	75	30
26	a 150	208	105	150	417	430	91	88	69	51	44	29
27	a 125	190	b 105	220	660	370	89	108	61	46	30	31
28	a 120	163	b 100	185	528	325	89	106	54	44	31	32
29	152	146	b 90	190		302	91	89	55	44	31	29
30	a 260	134	b 85	185	---------	310	111	80	58	41	29	26
31	a 210	---------	b 82	158	---------	288	---------	72	---------	42	29	---------
Total	6,159	6,474	3,870	5,206	7,846	15,629	4,567	5,159	2,368	2,316	1,179	840
Mean	199	216	125	168	280	504	152	166	78.9	74.7	38.0	28.0
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1961 : Max 2,380 Min 27 Mean 166 Cfsm - In. -
Water year 1961-62 : Max 1,130 Min 23 Mean 169 Cfsm - In. -

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

GPO 802-181-10

4-0930. Deep River at Lake George Outlet at Hobart, Ind.

Location.--Lat 41°32'10", long 87°15'25", in NW¼ sec. 32, T. 36 N., R. 7 W., on left bank at upstream side of highway bridge, 300 ft upstream from Duck Creek and 400 ft downstream from Lake George Dam.

Drainage area.--125 sq mi.

Records available.--April 1947 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 588.17 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to July 29, 1952, staff gage, and July 30, 1952 to July 20, 1955, water-stage recorder at site 400 ft upstream at 11.80 ft higher.

Average discharge.--15 years, 97.0 cfs.

Extremes.--Maximum discharge during year, 900 cfs Mar. 13 (gage height, 9.63 ft); minimum, 4.2 cfs Aug. 1; minimum gage height, 3.70 ft Aug. 14.
1947-62: Maximum discharge, 3,880 cfs Oct. 11, 1954 (gage height, 19.48 ft, present datum, site then in use); minimum, 2.0 cfs (regulated) Oct. 8, 1956; minimum gage height, 3.35 ft Sept. 21, 1956.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor.

Rating table, water year 1961-62, except for periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 12-24)

3.7	3.6
3.8	6.4
3.9	11
4.2	32
5.0	110
7.0	563
9.0	760

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	288	78	73	b 36	77	170	184	68	18	8.0	5.3	10
2	273	78	68	b 36	72	120	156	73	15	19	5.3	8.9
3	213	94	64	39	70	100	132	65	15	31	5.6	9.9
4	163	163	78	43	78	b 88	116	60	20	30	4.4	9.4
5	132	170	121	63	288	78	110	46	23	20	5.3	6.8
6	110	138	126	228	410	73	116	38	26	13	23	7.2
7	94	110	104	423	300	83	116	35	26	12	24	8.0
8	83	94	83	350	220	243	110	66	23	10	21	7.2
9	73	83	73	285	155	288	110	104	42	5.6	12	9.9
10	63	73	68	220	119	439	94	99	83	6.4	11	12
11	60	68	62	170	94	472	88	94	104	8.9	11	6.0
12	50	68	104	141	84	760	83	126	83	14	11	7.2
13	51	67	b 110	114	90	850	88	213	67	16	8.4	9.9
14	62	68	b 98	94	109	640	88	170	52	21	* 9.4	5.6
15	61	68	b 88	87	105	472	78	121	45	26	12	7.6
16	54	104	78	74	119	340	73	94	40	26	8.9	8.0
17	50	184	73	62	137	280	68	73	34	* 23	8.9	9.4
18	44	170	73	55	159	325	63	59	30	16	8.0	* 8.4
19	63	132	* 73	54	146	440	56	52	* 18	12	10	6.0
20	99	110	73	52	130	601	56	45	16	15	8.4	14
21	116	94	65	50	* 121	640	56	42	18	17	8.0	14
22	104	* 94	61	48	116	700	54	* 47	16	28	8.4	13
23	94	132	68	47	94	640	44	46	26	46	8.9	14
24	83	184	65	46	83	507	46	32	30	42	12	16
25	78	156	58	* 42	78	408	* 42	22	26	24	19	15
26	64	126	59	55	110	333	37	26	18	12	21	14
27	* 57	110	59	78	273	273	34	34	14	9.9	20	12
28	56	99	50	110	288	* 228	32	38	12	7.2	16	11
29	60	88	b 46	121	---	213	34	39	12	7.2	14	13
30	78	78	b 42	110	---	213	48	34	8.9	7.6	12	13
31	88	---	b 38	88	---	213	---	29	---	5.6	11	---
Total	2,964	3,281	2,301	3,421	4,125	11,230	2,412	2,090	960.9	539.4	363.2	306.4
Mean	95.6	109	74.2	110	147	362	80.4	67.4	32.0	17.4	11.7	10.2
Cfsm	0.765	0.872	0.594	0.880	1.18	2.90	0.643	0.539	0.256	0.139	0.094	0.082
In.	0.88	0.97	0.68	1.02	1.23	3.34	0.72	0.62	0.29	0.16	0.11	0.09

Calendar year 1961: Max 1,150 Min 7.5 Mean 105 Cfsm 0.840 In. 11.45
Water year 1961-62: Max 850 Min 4.4 Mean 93.1 Cfsm 0.745 In. 10.11

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-13	0130	9.63	900				
3-22	2130	8.78	720				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Jan. 8-24, Jan. 31 to Feb. 3, Feb. 6-20, Mar. 2, 3, 16-19.

4-0932. Little Calumet River at Gary, Ind.

Location.--Lat 41°34'19", long 87°19'13", in SE¼ sec. 15, T. 36 N., R. 8 W., on right bank at upstream side of Pennsylvania Railroad bridge at Gary, 1.3 miles downstream from bridge on State Highway 53 and 1.5 miles upstream from confluence with Deep River.

Drainage area.--Indeterminate.

Records available.--June 1958 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 580.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 159 cfs Mar. 13 (gage height, 9.21 ft); no flow for many days.
1958-62: Maximum discharge, 196 cfs May 1, 1959 (gage height, 9.63 ft); no flow at times during each year.
Flood in October 1954 reached a stage of 13.09 ft, from floodmark.

Remarks.--Records fair. During times of flood, the flow passing the gage may be either east or west, depending on the stages in Hart ditch and in Deep River.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 14 to Dec. 11, Dec. 18, 19, Mar. 23-27, May 14 to June 8)

6.06	0
6.1	0.4
6.2	1.6
6.5	6.9
6.7	12
7.0	22
7.5	41
8.0	67
9.0	141

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	117	26	17	5.4	7.7	23	39	15	0.8	0	6.2	
2	94	26	15	5.3	7.2	18	35	24	1.3	6.6	5.2	
3	80	31	14	5.3	7.1	14	31	26	.9	5.6	5.4	
4	67	31	17	5.4	9.0	11	29	24	.5	2.2	4.6	
5	58	29	17	11	32	9.5	29	19	.3	1.8	3.9	
6	50	27	16	20	54	8.4	27	17	.6	1.5	8.0	
7	43	27	14	30	42	9.8	26	14	.5	1.3	3.2	
8	39	26	9.3	44	32	26	26	24	.8	1.3	2.7	
9	35	24	8.9	36	24	35	26	20	8.9	1.1	2.1	
10	31	24	8.5	30	19	41	22	21	12	.2	1.6	
11	27	22	8.1	23	15	50	21	22	7.6	8.6	1.3	
12	26	22	11	18	13	80	20	34	6.0	6.0	.9	
13	27	21	15	14	14	141	22	39	5.6	4.8	* .6	
14	26	20	15	11	15	109	21	24	4.5	6.0	0	
15	24	19	14	8.6	16	76	18	20	3.4	5.4	0	
16	21	24	14	6.7	19	60	15	15	2.4	5.0	0	
17	19	24	13	5.9	25	55	14	12	1.8	4.8	0	
18	17	22	13	5.6	23	53	12	8.6	1.5	4.6	0	
19	24	21	* 14	5.5	20	55	8.8	6.3	* .6	* 4.5	0	(*)
20	24	20	12	5.4	18	58	7.1	9.6	.4	7.8	0	
21	24	19	11	5.2	* 17	73	6.9	5.6	.5	5.8	0	
22	23	* 20	10	5.1	15	84	7.1	* 4.3	.3	11	0	
23	22	22	8.1	* 5.0	13	87	6.0	1.3	4.6	18	0	
24	21	22	7.6	4.9	13	94	* 5.6	.6	1.0	16	0	
25	20	22	7.5	4.8	11	84	5.2	0	.2	14	3.7	
26	* 20	22	7.4	6.1	20	70	5.2	1.4	0	11	0	
27	19	21	6.9	9.0	40	* 63	4.6	2.8	0	8.6	0	
28	20	20	6.4	13	31	52	5.0	1.8	0	6.7	0	
29	22	18	6.0	12	----------	48	5.0	1.9	0	5.6	0	
30	27	17	5.7	10	----------	48	9.7	1.8	0	5.6	0	
31	27	----------	5.5	9.0	----------	43	----------	1.5	----------	6.0	0	----------
Total	1,094	689	347.9	380.2	572.0	1,678.7	509.2	417.5	67.0	187.4	49.4	0
Mean	35.3	23.0	11.2	12.3	20.4	54.2	17.0	13.5	2.23	6.05	1.59	0
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1961: Max 159 Min 0.8 Mean 19.2 Cfsm - In. -
Water year 1961-62: Max 141 Min 0 Mean 16.4 Cfsm - In. -

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 9, 10, 24, Jan. 3-6, Feb. 16, 17, 26, 27, Mar. 7, 8, 16-18. No gage-height record Oct. 22-25, Dec. 12-17, Dec. 25 to Jan. 2, Jan. 7 to Feb. 15, Feb. 18-25, Feb. 28 to Mar. 6, July 30 to Aug. 6.

4-0935. Burns ditch at Gary, Ind.

Location.--Lat 41°34'30", long 87°17'20", in N½ sec. 13, T. 36 N., R. 8 W., on left bank on downstream side of bridge on Central Avenue, 0.4 mile east of Gary and 0.4 mile downstream from confluence of Deep River and Little Calumet River.

Drainage area.--About 160 sq mi.

Records available.--October 1943 to September 1962 (October 1950 to September 1955, high-water records only).

Gage.--Water-stage recorder. Datum of gage is 577.04 ft above mean sea level, datum of 1929. Prior to July 28, 1955, wire-weight gage at same site and datum.

Average discharge.--14 years (1943-50, 1955-62), 137 cfs.

Extremes.--Maximum discharge during year, 1,100 cfs Mar. 13 (gage height, 9.28 ft); minimum, 9 cfs Aug. 22, Sept. 6, 14, 15; minimum gage height, 3.30 ft Aug. 22.
1943-62: Maximum discharge, 3,430 cfs Oct. 11, 1954; maximum gage height, 16.44 ft Mar. 16, 1944, from graph based on gage readings; minimum discharge determined, 1.8 cfs, Oct. 14, 1946.

Remarks.--Records good except those for periods of ice effect, which are fair. Burns ditch is an artificial channel which reverses the direction of flow of part of Little Calumet River and flows into Lake Michigan at Wickliffe.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.3	6.9
3.6	21
3.8	35
4.0	57
5.0	203
7.0	563
9.0	1,020

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	484	128	120	55	120	250	267	98	29	17	19	16
2	446	120	113	56	110	175	234	106	25	41	18	14
3	372	143	106	57	106	145	188	96	24	52	18	13
4	284	203	113	65	150	113	166	94	26	45	17	15
5	234	234	158	96	354	98	158	77	31	36	15	11
6	203	203	180	267	543	89	166	73	32	27	40	9.4
7	166	173	166	446	460	98	166	61	33	25	32	13
8	143	150	128	523	330	203	150	106	30	24	28	13
9	120	128	113	450	230	301	158	128	59	20	21	13
10	106	120	106	330	170	465	143	143	106	18	17	14
11	106	106	98	265	137	543	128	128	136	36	15	13
12	94	113	143	215	128	755	120	166	120	36	14	10
13	98	113	159	173	136	995	136	267	90	31	13	12
14	113	113	145	143	166	970	128	234	68	44	* 12	12
15	106	113	131	136	158	687	120	173	55	44	14	9.8
16	94	158	120	113	188	484	106	128	44	43	14	11
17	86	234	113	94	218	372	98	98	38	40	12	12
18	77	250	106	82	234	354	92	79	33	32	12	12
19	143	203	* 106	82	218	484	86	70	* 26	29	12	* 12
20	173	173	106	79	170	709	82	59	24	* 28	12	17
21	173	150	98	75	* 148	826	80	53	23	43	10	18
22	166	* 150	95	73	144	874	79	* 61	24	54	9.8	18
23	143	180	98	72	142	874	68	58	34	106	9.8	18
24	136	234	98	* 70	130	732	* 65	44	37	90	12	20
25	120	234	92	68	113	583	61	34	32	68	27	21
26	* 106	203	88	98	166	484	57	35	27	51	22	20
27	94	188	89	136	267	* 390	51	43	24	44	22	15
28	89	158	82	166	336	336	49	50	20	38	19	13
29	98	143	75	188	---	301	50	49	19	35	16	14
30	113	128	67	180	---	301	69	45	19	32	16	14
31	128	---	58	150	---	301	---	38	---	24	15	---
Total	5,014	4,946	3,470	5,003	5,772	14,292	3,521	2,894	1,288	1,253	533.6	423.2
Mean	162	165	112	161	206	461	117	93.4	42.9	40.4	17.2	14.1
Cfsm	1.01	1.03	0.700	1.01	1.29	2.88	0.731	0.584	0.268	0.252	0.108	0.088
In.	1.16	1.15	0.81	1.16	1.34	3.32	0.82	0.67	0.30	0.29	0.12	0.10

Calendar year 1961: Max 1,420 Min 15 Mean 153 Cfsm 0.956 In. 12.94
Water year 1961-62: Max 995 Min 9.4 Mean 133 Cfsm 0.831 In. 11.24

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 13-15, Jan. 9-12, 22, Jan. 31 to Feb. 2, Feb. 7-11, 20-24, Mar. 1-4.

4-0940. Little Calumet River at Porter, Ind.

Location.--Lat 41°37'18" long 87°05'13", in NE¼ sec. 34, T. 37 N., R. 6 W., near center of span on downstream side of highway bridge, three-quarters of a mile northwest of Porter and 4.5 miles upstream from Salt Creek.

Drainage area.--62.9 sq mi.

Records available.--May 1945 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 603.48 ft above mean sea level, datum of 1929. Prior to June 26, 1952, wire-weight gage at same site and datum.

Average discharge.--17 years, 70.9 cfs.

Extremes.--Maximum discharge during year, 710 cfs Mar. 12 (gage height, 7.28 ft); minimum, 20 cfs Sept. 16, 18; minimum gage height, 2.50 ft Aug. 23, 24.
1945-62: Maximum discharge, 3,110 cfs Oct. 10, 1954 (gage height, 11.66 ft); minimum, 15 cfs Dec. 6, 1958, result of freezeup; minimum gage height, 2.14 ft Aug. 22, 1949.

Remarks.--Records good except for periods of no gage-height record, or ice effect, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 11 to Dec. 12, July 12-20, Aug. 14 to Sept. 30)

2.2	19	4.5	110
2.5	25	5.0	162
3.0	37	6.0	320
3.5	53	7.0	590
4.0	76		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	130	66	53	28	46	60	82	172	33	28	27	25
2	120	61	53	29	45	56	76	136	33	34	27	24
3	82	82	50	31	61	53	71	76	33	40	27	23
4	66	140	57	50	80	53	66	61	34	33	27	24
5	57	102	88	71	258	50	71	53	37	32	27	24
6	53	76	71	162	300	50	88	50	34	31	33	23
7	50	66	61	300	195	60	82	46	34	29	32	22
8	46	61	53	185	120	130	76	71	33	29	29	22
9	43	57	50	a 135	92	140	82	66	68	28	27	22
10	43	53	50	a 105	71	264	71	57	95	28	26	23
11	43	50	50	a 85	64	264	66	57	71	33	26	23
12	43	57	87	a 69	61	567	61	71	50	43	25	22
13	60	57	a 72	a 57	61	550	88	110	43	34	25	22
14	76	61	a 61	a 47	61	320	102	71	38	37	* 25	22
15	76	57	a 55	a 40	61	200	82	53	36	38	25	21
16	61	84	a 52	a 36	61	150	71	46	34	40	26	21
17	57	140	a 58	a 34	66	130	66	43	33	* 40	25	21
18	50	95	61	a 35	71	186	61	40	32	36	25	* 20
19	88	76	* 61	35	71	299	57	40	29	33	24	21
20	102	66	61	35	61	460	57	38	* 29	35	24	23
21	82	* 61	57	35	* 61	320	53	38	29	43	24	23
22	66	66	57	34	61	340	53	* 43	31	35	24	23
23	61	102	57	34	57	230	53	38	37	57	23	23
24	61	102	57	* 52	57	174	50	36	36	40	23	23
25	* 57	82	57	61	53	150	* 50	34	32	33	34	24
26	53	71	57	71	66	130	46	36	29	31	32	24
27	50	61	53	110	82	102	46	40	29	28	27	24
28	50	57	46	120	76	* 95	43	43	29	28	25	24
29	57	57	39	110	----------	95	50	40	28	29	25	24
30	82	53	33	88	----------	102	54	37	28	29	24	24
31	76	----------	29	49	----------	95	---------	36	----------	28	23	---------
Total	2041	2219	1746	2333	2419	5875	1974	1778	1137	1062	816	684
Mean	65.8	74.0	56.3	75.3	86.4	190	65.8	57.4	37.9	34.3	26.3	22.8
Cfsm	1.05	1.18	0.895	1.20	1.37	3.02	1.05	0.913	0.603	0.545	0.418	0.362
In.	1.21	1.32	1.03	1.38	1.43	3.48	1.17	1.05	0.67	0.63	0.48	0.40

Calendar year 1961: Max 698 Min 25 Mean 72.9 Cfsm 1.16 In. 15.75
Water year 1961-62: Max 567 Min 20 Mean 66.0 Cfsm 1.05 In. 14.25

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-12	1700	7.28	710				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 29 to Jan. 3, Jan. 8, 19-25, Jan. 31 to Feb. 3, Feb. 6-11, Mar. 2.

4-0945. Salt Creek near McCool, Ind.

Location.--Lat 41°35'48", long 87°08'40", in SE¼ sec. 6, T. 36 N., R. 6 W., on left bank on downstream side of highway bridge, 50 ft downstream from New York Central Railroad bridge, 1¼ miles north of McCool and 1.5 miles upstream from Little Calumet River.

Drainage area.--78.7 sq mi.

Records available.--May 1945 to September 1962.

Gage.--Water-stag recorder. Datum of gage is 594.10 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to July 25, 1955, wire-weight gage at same site and datum.

Average discharge.--17 years, 70.5 cfs.

Extremes.--Maximum discharge during year, 578 cfs Mar. 12 (gage height, 8.32 ft); minimum, 24 cfs Aug. 23, 25 (gage height, 2.67 ft). 1945-62: Maximum discharge, 3,180 cfs Oct. 11, 1954 (gage height, 14.12 ft); minimum, 6.3 cfs Aug. 24, 1955 (gage height, 2.31 ft).

Remarks.--Records fair except those for periods of ice effect or no gage-height record, which are poor.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 22-29, Oct. 31 to Nov. 3, Nov. 7-15, 21, Nov. 27 to Dec. 4, Dec. 7-11, 16-28, Jan. 5, June 18-22)

Oct. 1 to Feb. 15		Feb. 16 to Sept. 30	
2.8	24	2.6	24
2.9	28	3.0	32
3.5	53	3.5	55
4.5	114	4.0	86
6.0	266	6.0	266
9.0	700	8.0	530

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	123	56	53	b 26	b 44	61	93	100	31	26	a 25	28
2	92	50	53	b 27	b 43	b 57	79	76	31	32	a 25	28
3	74	97	50	b 28	60	b 54	73	61	31	42	a 25	26
4	63	149	63	b 40	77	52	70	52	32	32	a 25	26
5	58	92	122	83	302	50	76	50	40	31	a 25	26
6	53	71	83	199	a 223	47	93	47	40	29	a 32	26
7	48	63	66	302	a 162	80	90	44	34	29	a 31	26
8	48	56	53	a 210	a 112	175	79	73	32	28	a 28	26
9	46	50	50	a 153	a 81	175	82	67	50	26	a 26	26
10	46	50	50	a 111	a 64	290	76	58	79	26	a 26	31
11	46	48	48	a 89	a 58	255	67	58	64	26	a 26	28
12	48	53	130	a 70	a 59	432	64	89	44	28	a 26	26
13	56	53	b 104	a 59	a 61	474	76	157	38	28	a 26	26
14	74	60	b 71	a 48	a 70	266	79	93	36	31	* 26	26
15	83	58	b 53	41	a 66	157	70	64	34	32	26	26
16	66	118	50	36	67	123	64	50	32	34	26	26
17	58	159	56	33	79	115	61	44	29	* 32	25	26
18	53	106	58	34	76	166	61	40	28	29	25	* 26
19	71	77	* 56	a 34	70	266	58	42	26	28	25	26
20	99	68	53	a 34	64	380	55	40	* 26	29	25	28
21	74	* 63	50	a 33	* 67	315	55	38	* 26	34	25	28
22	60	71	48	a 33	64	367	55	* 50	26	32	25	26
23	56	122	53	a 33	58	278	52	40	38	50	25	26
24	58	106	50	*a 46	55	195	52	34	38	32	25	28
25	* 53	83	48	56	55	157	* 50	34	31	a 30	34	28
26	48	71	48	66	82	131	47	36	29	a 28	32	28
27	46	66	48	114	107	115	47	42	29	a 26	26	29
28	46	60	38	99	82	* 107	44	44	28	a 26	26	29
29	56	58	b 34	80	---	100	50	38	28	a 27	26	29
30	74	56	b 31	74	---	123	55	36	28	a 27	26	29
31	63	---	b 27	b 48	---	115	---	32	---	a 26	26	---
Total	1,939	2,290	1,797	2,339	2,408	5,678	1,973	1,729	1,058	936	820	813
Mean	62.5	76.3	58.0	75.5	86.0	183	65.8	55.8	35.3	30.2	26.5	27.1
Cfsm	0.794	0.970	0.737	0.959	1.09	2.33	0.836	0.709	0.449	0.384	0.337	0.344
In.	0.92	1.08	0.85	1.11	1.14	2.69	0.93	0.82	0.50	0.44	0.39	0.38

Calendar year 1961: Max 628 Min 24 Mean 68.8 Cfsm 0.874 In. 11.87
Water year 1961-62: Max 474 Min 25 Mean 65.2 Cfsm 0.828 In. 11.25

Peak discharge (base, 600 cfs).--No peak above base.

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

4-985. Fawn River near White Pigeon, Mich.

Location.--Lat 41°47'00", long 85°35'00", in SW¼ sec. 10, T. 8 S., R. 11 W., on right bank a quarter of a mile downstream from bridge on county highway, 3.1 miles east of White Pigeon, and 3½ miles upstream from outlet of Klinger Lake.

Drainage area.--191 sq mi.

Records available.--July 1903 to July 1904 (gage height and discharge measurements only), October 1957 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 805.4 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 154 cfs.

Extremes.--Maximum discharge during year, 488 cfs Mar. 15 (gage height, 4.37 ft); minimum, 50 cfs Aug. 21, 22 (gage height, 2.00 ft). 1957-62: Maximum discharge, that of Mar. 15, 1962; minimum, 47 cfs Sept. 17, 1959 (gage height, 1.92 ft).

Remarks.--Records good except those for periods of ice effect, which are fair. Small diurnal fluctuation caused by powerplants above station.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 1 to June 8)

1.9	47
2.5	118
3.0	202
4.0	403
4.3	472

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	137	114	129	100	110	175	308	166	132	86	73	60
2	128	121	121	100	122	148	294	184	131	*95	71	69
3	*125	117	124	100	115	140	288	197	119	121	68	68
4	128	110	134	100	120	140	292	213	124	119	67	69
5	126	101	*134	105	130	140	282	215	114	121	66	65
6	126	105	131	110	*160	150	278	225	117	114	*70	61
7	122	*109	140	130	146	150	280	221	124	112	66	61
8	118	100	132	120	140	150	270	215	115	101	66	60
9	110	101	122	*100	140	162	262	210	120	98	70	67
10	115	106	124	110	140	189	264	197	153	92	69	*66
11	114	100	131	120	138	221	262	195	*150	91	73	69
12	110	98	134	118	126	262	260	191	134	89	66	67
13	114	105	110	112	135	330	258	184	128	89	62	67
14	113	101	109	106	134	408	260	179	129	94	62	67
15	108	109	118	110	137	454	246	175	125	89	66	64
16	103	117	113	119	125	412	240	*168	117	91	65	61
17	108	119	129	115	129	354	*229	162	112	92	64	60
18	112	140	129	115	122	304	213	150	109	88	61	64
19	106	146	124	115	121	290	204	137	94	85	59	64
20	105	148	124	101	124	296	189	135	94	83	59	59
21	99	138	131	100	122	*318	168	121	94	93	54	59
22	97	138	117	99	126	348	177	115	95	92	52	62
23	99	146	118	98	118	350	180	114	95	91	59	58
24	106	143	126	110	97	344	170	109	103	85	56	62
25	113	146	117	109	110	340	153	101	100	85	61	64
26	118	148	110	110	135	332	152	106	104	83	65	56
27	124	145	122	129	173	334	150	114	101	83	71	60
28	106	138	99	143	184	328	138	117	95	85	70	58
29	104	138	97	138	---	316	140	114	86	89	66	56
30	114	131	87	140	---	312	150	115	87	85	67	55
31	112	---	100	132	---	306	---	118	---	82	60	---
Total	3,520	3,678	3,736	3,514	3,679	8,503	6,757	4,963	3,401	2,903	2,004	1,878
Mean	114	123	121	113	131	274	225	160	113	93.6	64.6	62.6
Cfsm	0.597	0.644	0.634	0.592	0.686	1.43	1.18	0.838	0.592	0.490	0.338	0.328
In.	0.69	0.72	0.73	0.68	0.72	1.66	1.32	0.97	0.66	0.57	0.39	0.37

Calendar year 1961 : Max 470 Min 80 Mean 153 Cfsm 0.801 In. 10.89
Water year 1961-62 : Max 454 Min 52 Mean 133 Cfsm 0.696 In. 9.48

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Jan. 1-11, Feb. 4-6, 9, 10, 25, Mar. 3-8.

4-990. St. Joseph River at Mottville, Mich.

Location.--Lat 41°48'05", long 85°45'15", in SW¼ sec. 6, T. 8 S., R. 12 W., Michigan meridian, on right bank 500 ft upstream from bridge on U. S. Highway 112 at Mottville, 0.4 mile downstream from Michigan Gas and Electric Co. hydroelectric plant, 4 miles upstream from Pigeon River, and at mile 96.

Drainage area.--1,860 sq mi, approximately.

Records available.--October 1923 to September 1962. Monthly discharge only for some periods, published in WSP 1307.

Gage.--Water-stage recorder. Datum of gage is 755.3 ft above mean sea level, (Michigan Gas and Electric Co. benchmark). Prior to Oct. 1, 1951, at site 0.4 mile upstream at datum 4.2 ft higher.

Average discharge.--39 years, 1,514 cfs.

Extremes.--Maximum discharge during year, 5,120 cfs Mar. 24 (gage height, 6.87 ft); minimum, 38 cfs June 28, July 2; minimum daily, 246 cfs Aug. 25.
1923-62: Maximum discharge, 10,700 cfs Apr. 27, 1950 (gage height, 6.56 ft, site and datum then in use); minimum daily, 44 cfs Oct. 17, 1937.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by powerplant above station.

Rating table, water year 1961-62, except period of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 29 to July 5)

1.7	225	3.0	1,040
2.0	355	6.0	4,010
2.4	585	7.0	5,300

Discharge, in cubic feet per second water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,670	1,160	1,350	943	1,100	1,360	3,810	1,540	1,470	729	a 750	312
2	1,890	1,170	1,350	1,280	1,100	1,130	3,460	1,920	970	738	a 700	331
3	* 1,400	1,340	1,030	1,060	1,100	1,190	3,280	1,790	1,550	*845	a 750	479
4	1,360	1,260	1,420	1,070	1,100	1,220	3,180	1,920	1,030	606	a 350	808
5	1,640	1,190	1,370	1,220	1,200	1,370	2,800	2,260	1,000	976	a 400	700
6	1,530	1,170	* 1,410	957	*1,200	1,280	2,660	2,300	873	805	a* 900	618
7	1,240	* 1,110	a 1,500	1,460	1,200	1,320	2,910	2,540	951	410	*892	608
8	1,250	1,200	a 1,500	1,490	1,200	1,430	2,810	2,440	958	724	888	386
9	1,200	1,130	a 1,600	* 1,200	1,300	1,280	2,640	2,180	1,010	1,010	913	519
10	1,370	1,120	1,450	1,000	1,300	1,320	2,520	2,060	1,330	855	920	* 1,180
11	1,200	1,210	1,280	1,100	1,300	1,460	2,490	1,810	1,450	820	514	1,210
12	1,150	722	1,300	1,400	1,300	2,030	2,440	1,780	* 1,450	760	490	773
13	1,230	1,220	1,250	1,000	1,300	2,850	2,590	1,780	1,180	758	931	526
14	1,120	1,150	1,350	1,300	1,300	3,270	2,540	1,870	1,170	351	816	646
15	1,180	1,150	1,320	1,200	1,300	3,470	2,460	1,780	1,190	559	658	399
16	985	1,270	1,210	1,200	1,150	3,570	2,430	* 1,460	859	952	654	585
17	894	1,120	1,210	1,200	1,190	3,680	* 2,370	1,300	859	746	827	790
18	1,070	1,380	1,300	1,200	988	3,670	2,370	1,520	1,070	711	299	578
19	1,100	1,130	1,280	1,200	1,460	3,590	2,360	1,130	1,000	695	270	580
20	1,170	1,390	1,230	1,100	1,120	* 3,980	2,260	1,210	899	777	886	680
21	1,180	1,430	1,260	1,200	1,230	4,150	1,770	1,560	1,000	859	716	656
22	548	1,590	1,330	1,200	1,210	4,620	2,020	1,040	651	935	640	482
23	933	1,540	1,190	1,100	1,100	4,800	1,990	1,110	772	1,090	632	701
24	964	1,500	1,110	1,000	939	5,020	1,970	1,210	454	975	628	537
25	1,200	1,180	1,180	900	1,020	4,960	1,810	1,220	1,020	975	246	566
26	1,120	1,570	1,320	950	1,350	4,820	1,780	1,140	944	949	345	589
27	890	1,510	1,190	900	1,180	4,720	1,820	1,120	932	979	645	646
28	1,120	1,340	1,080	1,200	1,140	4,540	1,640	1,000	530	790	575	590
29	1,240	1,340	937	1,300	---	4,300	1,640	1,040	850	725	610	515
30	1,130	1,430	330	1,100	---	4,060	1,720	683	492	945	617	632
31	1,320	---	1,320	1,100	---	3,940	---	1,090	---	a 850	612	---
Total	37,294	39,022	38,957	35,530	33,377	94,400	72,540	48,803	29,914	24,899	20,074	18,622
Mean	1,203	1,267	1,257	1,146	1,192	3,045	2,418	1,574	997	803	648	621
Cfsm	0.647	0.681	0.676	0.616	0.641	1.64	1.30	0.846	0.536	0.432	0.348	0.334
In.	0.75	0.76	0.78	0.71	0.67	1.89	1.45	0.98	0.60	0.50	0.40	0.37

Calendar year 1961: Max 4,960 Min 125 Mean 1,332 Cfsm 0.716 In. 9.73
Water year 1961-62: Max 5,020 Min 246 Mean 1,349 Cfsm 0.725 In. 9.86

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Jan. 9 to Feb. 15.

4-995. Pigeon Creek at Hogback Lake Outlet, near Angola, Ind.

Location.--Lat 41°37'24", long 85°05'44", in NE¼ NW¼ sec. 36, T. 37 N., R. 12 E., on right bank 200 ft north of lake outlet, 2 miles southeast of Flint, and 5.1 miles west of Angola.

Drainage area.--102 sq mi.

Records available.--October 1945 to September 1962. Prior to October 1947, published as "near Flint."

Gage.--Water-stage recorder. Datum of gage is 940.00 ft above mean sea level, datum of 1929. Prior to October 1947, wire-weight gage at site 1½ miles downstream at different datum. October 1947 to Aug. 3, 1953, staff gage at site 600 ft downstream at same datum.

Average discharge.--17 years, 79.0 cfs.

Extremes.--Maximum discharge during year, 411 cfs Mar. 23, 24 (gage height, 12.46 ft); minimum, 7.0 cfs Sept. 29, 30 (gage height, 7.70 ft).
1945-62: Maximum discharge, 744 cfs Apr. 8, 1950 (gage height, 14.95 ft); minimum, 5.2 cfs Oct. 19-25, 1953; minimum gage height, 7.24 ft Sept. 9, 10, 1953.

Remarks.--Records good.

Rating tables, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 2, Nov. 18 to Dec. 20, May 28 to June 14, July 12 to Aug. 4)

Oct. 1 to Nov. 2

7.6	13
7.7	16
8.0	23

Nov. 3 to Sept. 30

7.6	6.1	10.0	132
7.8	9.3	12.0	351
8.0	14	13.0	476
9.0	55		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	20	42	26	80	84	232	42	42	23	* 15	11
2	23	22	39	24	76	100	210	44	49	23	15	11
3	23	22	36	24	68	104	188	52	55	28	15	11
4	22	22	36	24	61	96	158	61	58	28	15	11
5	22	22	* 34	24	64	88	149	72	61	32	15	* 10
6	22	22	34	24	84	* 76	132	80	* 58	34	16	9.8
7	22	21	34	28	100	68	124	84	55	36	17	9.6
8	20	* 21	34	32	108	64	124	88	52	36	17	9.1
9	20	21	34	34	108	68	116	88	49	32	17	9.6
10	19	21	34	36	104	80	* 108	88	46	32	17	9.6
11	* 19	21	34	36	92	100	108	84	46	28	16	9.1
12	19	21	34	36	80	140	104	76	44	26	16	9.0
13	20	20	32	34	* 68	210	100	72	42	24	16	9.0
14	19	20	32	32	58	279	96	68	39	24	15	9.3
15	19	19	32	34	52	303	92	* 61	36	23	15	9.3
16	19	23	30	34	46	315	88	58	34	22	15	9.3
17	19	26	30	36	42	303	80	55	32	22	14	9.1
18	19	30	30	* 39	39	291	76	52	32	20	13	8.6
19	19	36	30	39	36	291	72	46	30	19	13	8.4
20	19	42	30	39	34	315	68	44	28	19	13	7.9
21	19	44	30	36	34	351	61	42	28	20	12	7.8
22	19	46	30	34	32	387	58	39	26	19	12	7.8
23	19	46	30	34	30	399	58	36	26	20	12	7.8
24	19	46	30	32	30	411	55	34	26	19	11	7.8
25	19	46	30	30	28	399	52	32	26	19	11	7.8
26	19	46	30	30	28	375	49	32	* 26	18	11	7.6
27	19	46	30	34	34	351	46	32	26	18	11	7.4
28	19	46	30	46	55	327	44	32	26	17	11	7.3
29	19	44	28	61	---	303	42	30	24	17	11	7.2
30	20	42	26	76	---	279	39	32	24	16	11	7.0
31	20	---	26	80	---	255	---	32	---	15	11	---
Total	618	924	991	1,128	1,671	7,212	2,929	1,688	1,146	729	429	266.2
Mean	19.9	30.8	32.0	36.4	59.7	233	97.6	54.5	38.2	23.5	13.8	8.87
Cfsm	0.195	0.302	0.314	0.357	0.585	2.28	0.957	0.534	0.375	0.230	0.135	0.087
In.	0.22	0.34	0.36	0.41	0.61	2.63	1.07	0.62	0.42	0.27	0.16	0.10

Calendar year 1961: Max 502 Min 14 Mean 64.4 Cfsm 0.631 In. 8.56
Water year 1961-62: Max 411 Min 7.0 Mean 54.1 Cfsm 0.530 In. 7.21

* Discharge measurement made on this day.

4-1002.2 North Branch Elkhart River near Cosperville, Ind.

Location.--Lat 41°29'32", long 85°26'54", in SW¼ NE¼ sec. 14, T. 35 N., R. 9 E., at downstream side of county road bridge over outlet of Waldron Lake at extreme west end of lake, 1.5 miles northeast of Cosperville, and 6.6 miles northwest of Albion.

Drainage area.--133 sq mi.

Records available.--October 1950 to September 1962.

Gage.--Wire-weight gage read twice daily. Datum of gage is 880.00 ft above mean sea level, datum of 1929. Prior to Aug. 7, 1956, staff gage at same site and datum.

Average discharge.--12 years, 119 cfs.

Extremes.--Maximum discharge during year, 494 cfs Mar. 21 (gage height, 8.09 ft); minimum, 5.3 cfs Aug. 24, 25, Sept. 30 (gage height, 4.62 ft).
1950-62: Maximum discharge observed, 717 cfs May 13, 1956 (gage height, 8.78 ft); minimum, 2.2 cfs Sept. 17, 18, 21, 1959; minimum gage height, 4.50 ft Oct. 3, 1953.

Remarks.--Records fair.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 18 to Dec. 12, Jan. 7 to Mar. 12, Mar. 18, Mar. 25 to May 23, May 31 to June 2, June 6-14, July 3-10)

4.5	1.6
4.6	8.0
4.7	15
4.8	23
5.0	41
5.5	99
6.0	165
8.0	494

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	74	45	74	58	132	179	318	74	68	38	21	12
2	74	43	70	56	125	172	301	99	67	43	* 18	12
3	73	44	69	53	118	165	269	118	64	80	18	11
4	70	47	67	52	112	151	253	125	59	112	14	14
5	66	47	* 69	52	151	144	238	118	* 66	112	15	*15
6	62	45	70	61	179	* 132	223	125	74	106	19	14
7	60	43	69	69	193	118	208	125	80	99	21	13
8	55	*41	69	80	193	132	208	132	74	86	23	12
9	53	39	69	86	172	144	193	132	72	80	22	14
10	51	39	67	80	158	172	* 193	132	74	69	20	14
11	* 49	39	67	80	151	223	179	132	74	61	17	13
12	47	39	66	80	138	369	172	125	74	56	15	12
13	50	39	66	80	* 132	458	172	125	74	53	14	12
14	53	42	66	74	118	494	165	118	68	55	12	14
15	54	45	63	80	112	494	158	*112	63	53	11	14
16	51	52	61	86	99	476	151	112	58	51	12	15
17	47	60	62	86	92	458	144	106	53	50	11	14
18	46	70	62	* 86	86	476	132	99	50	46	9.4	12
19	45	74	62	86	86	476	125	92	46	44	9.4	11
20	47	70	62	80	86	476	118	86	43	44	8.0	9.4
21	45	69	62	74	86	494	112	80	40	45	6.6	8.0
22	45	70	62	74	80	494	106	74	37	46	6.6	8.0
23	43	74	62	72	80	494	99	70	36	46	5.9	7.2
24	42	86	61	70	80	476	92	66	46	45	5.3	6.6
25	43	86	61	69	80	458	86	61	49	43	6.6	6.6
26	45	86	61	74	92	440	80	59	* 49	42	12	6.6
27	46	86	60	106	144	404	74	59	47	37	12	5.9
28	47	86	58	158	179	386	74	58	45	36	12	6.6
29	48	80	59	158	---	369	70	55	42	30	11	6.6
30	47	74	59	144	---	352	67	63	39	27	11	5.3
31	45	---	58	138	---	335	---	67	---	24	9.4	---
Total	1,623	1,760	1,993	2,602	3,454	10,611	4,780	2,999	1,731	1,759	408.2	324.8
Mean	52.4	58.7	64.3	83.9	123	342	159	96.7	57.7	56.7	13.2	10.8
Cfsm	0.394	0.441	0.483	0.631	0.925	2.57	1.20	0.727	0.434	0.426	0.099	0.081
In.	0.45	0.49	0.56	0.73	0.96	2.96	1.34	0.84	0.48	0.49	0.11	0.09

Calendar year 1961: Max 458 Min 21 Mean 91.2 Cfsm 0.686 In. 9.29
Water year 1961-62: Max 494 Min 5.3 Mean 93.3 Cfsm 0.702 In. 9.50

* Discharge measurement made on this day.

4-1005. Elkhart River at Goshen, Ind.

Location.--Lat 41°35', long 85°50', near line between secs. 8 and 9, T. 36 N., R. 6 E., on right bank 20 ft downstream from River Avenue Bridge at Goshen and half a mile upstream from Rock Run.

Drainage area.--580 sq mi.

Records available.--April 1931 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 769.43 ft above mean sea level, datum of 1929. Prior to Nov. 20, 1931, chain gage at same site and datum.

Average discharge.--31 years, 509 cfs.

Extremes.--Maximum discharge during year, 3,330 cfs Mar. 12 (gage height, 7.90 ft); minimum, 92 cfs Aug. 27, 28 (gage height, 2.10 ft). 1931-62: Maximum discharge, 5,440 cfs Apr. 4, 1950 (gage height, 10.15 ft); maximum gage height, 10.33 ft July 10, 1951; minimum daily, 11 cfs Oct. 15, 1953.

Remarks.--Records fair. Flow regulated by three powerplants above station.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-4, June 1-9, June 18 to Sept. 30)

Oct. 1 to Jan. 7 June 10 to Sept. 30		Jan. 8 to June 9	
1.9	88	2.2	230
2.3	195	2.5	335
2.5	265	3.0	530
3.0	478	5.0	1,540
4.0	995	8.0	3,400

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	365	221	455	265	b540	690	1,100	450	318	183	225	144
2	410	195	410	265	b530	b 670	995	470	300	265	*164	141
3	410	205	387	239	b520	b 660	940	530	265	503	144	141
4	387	221	387	243	b520	650	885	570	248	553	150	147
5	387	246	455	261	1,440	650	830	570	282	478	150	144
6	365	221	503	455	1,320	610	830	570	300	455	186	*132
7	302	212	432	778	830	610	780	570	300	410	208	213
8	302	228	432	885	b740	735	780	570	300	387	221	235
9	284	205	410	610	b690	780	735	610	282	365	202	232
10	254	212	410	470	b640	1,270	690	610	322	322	183	284
11	254	189	410	b 425	b600	1,540	690	570	365	302	180	302
12	246	208	* 432	b 390	570	2,700	650	570	* 343	284	173	284
13	284	195	387	b 380	530	*2,980	735	570	343	250	155	265
14	265	* 232	284	b 380	510	2,200	780	530	302	250	138	221
15	265	284	410	450	490	1,820	690	* 530	302	265	141	176
16	302	343	387	b* 560	470	1,660	690	510	284	284	138	167
17	265	410	387	b 520	450	1,600	* 650	470	265	265	138	158
18	243	455	410	b 480	450	1,820	650	450	202	246	141	125
19	* 261	432	387	b 450	430	2,100	610	450	212	228	141	97
20	228	455	410	b 420	410	2,200	570	410	212	239	138	97
21	228	432	365	410	*390	2,100	530	410	205	235	138	103
22	218	432	365	410	410	2,150	510	410	202	235	135	101
23	232	528	365	b 390	370	1,980	490	370	228	250	132	101
24	212	628	343	b 370	335	1,760	490	370	258	243	130	101
25	218	603	b 315	370	352	1,660	470	335	225	228	130	112
26	225	528	b 290	450	490	1,600	470	352	212	243	128	108
27	212	503	b 260	1,050	1,100	1,490	450	370	202	221	101	108
28	215	503	b 240	1,050	1,050	1,380	450	352	* 186	202	101	110
29	218	478	b 220	690	----------	1,320	430	335	186	202	144	112
30	235	478	b 220	610	----------	1,320	430	335	186	212	135	110
31	198	----------	221	b 560	----------	1,220	---------	318	----------	221	141	----------
Total	8,490	10,482	11,389	15,286	17,177	45,925	20,000	14,537	7,837	9,026	4,731	4,771
Mean	274	349	367	493	613	1,481	667	469	261	291	153	159
Cfsm	0.472	0.602	0.633	0.850	1.06	2.55	1.15	0.809	0.450	0.502	0.264	0.274
In.	0.54	0.67	0.73	0.98	1.10	2.94	1.28	0.93	0.50	0.58	0.30	0.31

Calendar year 1961 : Max 2,910 Min 150 Mean 471 Cfsm 0.812 In. 11.02
Water year 1961-62 : Max 2,980 Min 97 Mean 465 Cfsm 0.802 In. 10.86

Peak discharge (base, 1,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-12	2300	7.90	3,330				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

4-1010. St. Joseph River at Elkhart, Ind.

Location.--Lat 41°41'30", long 85°58'25", in NE¼ sec. 5, T. 37 N., R. 5 E., on left bank 100 ft downstream from Elkhart River, 200 ft upstream from Main Street Bridge in Elkhart, and 1,900 ft downstream from Christiana Creek.

Drainage area.--3,339 sq mi.

Records available.--August 1947 to September 1962. Gage heights at site three-quarters of a mile downstream at different datum for September 1924 to March 1926 are available in the district office.

Gage.--Water-stage recorder. Datum of gage is 700.00 ft above mean sea level, datum of 1929.

Average discharge.--15 years, 3,117 cfs.

Extremes.--Maximum discharge during year, 9,920 cfs Mar. 23 (gage height, 23.48 ft); minimum daily, 830 cfs Aug. 26.
1947-62: Maximum discharge, 18,400 cfs Apr. 5, 1950 (gage height, 27.82 ft); minimum daily, 564 cfs Nov. 1, 5, 1956.

Remarks.--Records good. Flow regulated by Elkhart Hydroelectric Plant, 2,400 ft upstream, and by hydroelectric plant on Elkhart River at Goshen.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)

17.7	780
18.0	1,090
19.0	2,350
21.0	5,540
24.0	10,800

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,930	2,210	2,630	2,490	2,630	3,090	6,900	3,090	2,350	1,810	1,790	890
2	3,250	2,210	2,780	2,070	2,780	2,930	6,560	3,410	2,350	1,990	*1,570	880
3	3,090	2,350	2,490	2,490	2,490	2,630	6,050	3,570	2,490	2,630	1,510	1,090
4	2,210	2,350	2,630	2,210	2,780	2,930	5,880	3,570	2,630	2,350	1,040	1,580
5	2,930	2,490	2,900	2,490	4,050	3,090	5,880	4,050	2,070	2,630	1,040	1,010
6	2,780	1,900	3,050	2,780	4,050	2,930	4,650	4,210	2,350	2,210	1,940	* 1,320
7	2,490	2,350	3,090	3,410	3,410	2,930	5,370	4,210	2,210	1,680	1,700	1,090
8	2,350	2,070	3,000	3,250	3,250	3,250	5,370	4,370	2,210	2,070	1,790	1,040
9	2,350	2,210	2,930	2,630	2,930	3,250	5,030	4,050	2,210	2,350	1,750	1,140
10	2,240	2,070	2,930	2,350	2,930	3,890	4,860	3,890	2,630	2,020	1,720	1,850
11	2,210	2,210	2,780	2,630	3,090	4,690	4,690	3,730	3,090	2,000	1,380	1,820
12	2,210	1,810	*2,490	2,780	2,930	7,240	4,690	3,570	* 2,910	1,800	1,140	1,680
13	2,350	2,140	2,490	2,930	2,780	* 9,660	4,860	3,410	2,780	1,770	1,500	1,140
14	2,210	*2,180	2,350	2,630	2,780	7,940	4,860	3,570	2,490	1,280	1,560	1,130
15	2,350	2,260	2,490	2,780	2,630	7,410	4,690	* 3,410	2,490	1,680	1,440	1,040
16	2,070	2,410	2,630	* 2,930	2,630	7,240	4,530	3,090	2,070	1,970	1,330	1,200
17	1,940	2,630	2,630	2,930	2,630	7,070	* 4,530	2,630	2,070	1,920	1,320	1,500
18	1,810	2,350	2,630	2,780	2,490	7,580	4,370	2,780	2,350	1,680	1,140	1,130
19	* 2,070	2,630	2,630	2,780	2,780	7,940	4,370	2,630	2,070	1,640	930	1,090
20	2,070	2,630	2,630	2,630	2,490	8,300	4,210	2,490	1,810	1,600	1,320	1,090
21	2,350	2,630	2,630	2,490	*2,490	9,660	3,570	2,630	1,810	1,680	1,520	1,240
22	1,680	2,920	2,630	2,490	2,630	9,840	3,730	2,350	2,070	2,210	1,090	1,040
23	1,860	3,090	2,490	2,350	2,350	9,020	3,570	2,210	1,460	2,210	1,460	1,320
24	1,900	3,090	2,490	2,350	2,070	9,020	3,730	2,210	1,560	2,070	1,040	1,300
25	2,040	2,630	2,490	2,350	2,350	9,660	3,570	2,350	1,880	2,070	930	1,140
26	2,350	3,090	2,350	2,210	2,490	9,660	3,410	2,350	2,120	1,940	830	1,200
27	1,810	2,930	2,490	2,930	3,410	9,300	3,410	2,350	1,810	1,980	1,310	1,200
28	1,810	2,930	1,980	3,570	3,410	7,940	3,090	2,350	* 1,910	1,680	1,200	1,170
29	2,930	2,780	1,560	3,250	----------	7,760	2,930	2,070	1,640	1,680	1,240	880
30	2,490	2,780	1,260	2,930	----------	7,760	3,250	1,810	1,380	1,830	1,210	1,320
31	2,390	----------	1,560	2,630	----------	6,740	----------	2,490	----------	1,880	1,220	----------
Total	71,520	74,330	78,110	83,520	79,730	196,350	136,610	94,900	65,270	60,310	41,950	36,520
Mean	2,307	2,478	2,520	2,694	2,848	6,334	4,554	3,061	2,176	1,945	1,353	1,217
Cfsm	0.691	0.742	0.755	0.807	0.853	1.90	1.36	0.917	0.652	0.583	0.405	0.364
In.	0.80	0.83	0.87	0.93	0.89	2.19	1.52	1.06	0.73	0.67	0.47	0.41

Calendar year 1961: Max 10,000 Min 838 Mean 2,863 Cfsm 0.857 In. 11.62
Water year 1961-62: Max 9,020 Min 830 Mean 2,792 Cfsm 0.836 In. 11.37

* Discharge measurement made on this day.

4-1015. St. Joseph River at Niles, Mich.

Location.--Lat 41°49'45", long 86°15'35", in SW¼ sec. 26, T. 7 S., R. 17 W., on right bank 100 ft upstream from Main Street Bridge at Niles, 0.6 mile downstream from dam of French Paper Co., 1 mile upstream from Dowagiac River, and at mile 44.

Drainage area.--3,620 sq mi, approximately.

Records available.--October 1930 to September 1962. Monthly discharge only for some periods, published in WSP 1307.

Gage.--Water-stage recorder. Datum of gage is 635.02 ft above mean sea level, datum of 1929. Oct. 1, 1930 to Feb. 11, 1931, tape gage on Main Street Bridge, and Feb. 12 to June 30, 1931, staff gage 50 ft upstream from present site (gage heights referred to mean sea level). Since Oct. 1, 1943, auxiliary gage is headwater gage at hydroelectric plant at Buchanan Dam, 8 miles downstream.

Average discharge.--32 years, 3,123 cfs.

Extremes.--Maximum discharge during year, 10,600 cfs Mar. 13 (gage height, 8.33 ft); minimum daily discharge, 865 cfs Sept. 16.
1930-62: Maximum discharge, 20,200 cfs Apr. 5, 1950 (gage height, 13.10 ft); minimum daily, 420 cfs Aug. 30, 1931.

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by powerplants above station.

Cooperation.--Gage-height record at auxiliary gage furnished by Indiana and Michigan Electric Co.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.860	2.130	2.430	2.200	b 2.600	3.260	7.240	3.350	2.630	1.490	1.850	1.450
2	3.090	2.240	2.460	2.200	b 2.500	2.940	6.860	3.330	2.920	2.150	1.970	946
3	2.860	2.180	2.420	2.310	2.300	2.810	5.910	3.710	1.480	2.800	1.590	1.180
4	* 2.530	2.060	2.050	2.260	2.560	2.900	5.940	3.770	2.480	* 2.460	1.570	1.550
5	2.590	2.000	2.740	2.350	3.920	2.900	6.020	4.080	2.280	2.400	1.170	1.510
6	2.700	2.030	* 2.570	2.750	b 4.000	3.120	4.930	4.650	2.290	2.620	1.800	1.600
7	2.620	1.660	2.810	3.320	b 3.500	3.020	5.200	3.550	1.890	1.980	* 2.040	1.310
8	2.320	* 1.910	2.620	3.470	b* 3.200	3.260	5.440	4.250	2.210	2.010	1.770	1.240
9	2.410	2.060	2.790	3.060	b 3.000	3.300	5.190	4.220	2.270	2.120	1.980	1.150
10	2.410	1.920	2.620	b 2.300	3.870	3.840	4.880	3.930	2.570	2.110	1.830	2.020
11	2.870	2.070	2.770	b 2.600	2.960	4.780	4.840	3.780	3.020	2.010	1.430	1.850
12	2.330	2.000	2.630	b 2.800	2.950	7.690	4.560	3.510	* 2.940	2.180	1.460	* 1.870
13	2.520	1.850	2.380	b 2.800	2.860	10.100	5.040	3.630	2.570	1.860	1.610	1.690
14	2.320	2.370	2.290	b 2.700	2.780	8.580	5.300	3.260	2.870	1.890	1.470	1.520
15	2.050	1.880	2.540	b 2.500	2.780	7.950	4.770	3.420	2.100	1.430	1.590	1.330
16	2.150	2.190	2.370	b 2.500	2.840	7.620	4.900	3.270	1.970	1.930	1.610	865
17	1.980	2.580	2.860	b 2.700	2.490	7.230	4.530	*2.900	2.140	2.140	1.370	1.670
18	1.840	1.910	2.400	b 2.700	2.740	7.620	* 4.520	2.950	2.040	2.030	1.410	1.660
19	1.930	2.620	2.540	b 2.700	2.600	8.750	4.420	2.540	2.340	1.700	1.090	1.490
20	2.080	2.060	2.510	b 2.500	2.790	9.300	4.670	2.550	2.270	2.050	1.270	1.260
21	1.980	2.540	2.510	b 2.300	2.480	* 9.180	3.490	2.610	1.980	1.850	1.610	1.460
22	2.010	2.390	2.510	b 2.300	2.730	9.330	3.330	2.560	2.130	1.970	1.500	1.370
23	1.630	2.830	2.310	b 2.300	2.540	9.620	4.100	2.140	1.550	2.120	1.240	1.090
24	1.690	2.710	2.370	2.380	2.320	9.300	3.290	2.160	1.680	2.180	1.490	1.600
25	1.790	2.750	2.020	2.370	2.300	9.110	3.690	2.530	1.510	2.160	1.050	1.590
26	2.390	2.350	2.130	2.500	2.640	8.770	3.290	2.280	1.440	2.070	1.190	1.310
27	1.970	2.690	2.530	2.850	3.330	8.580	3.210	2.200	1.860	2.050	1.280	1.380
28	1.730	2.660	2.260	3.180	3.610	8.230	3.370	2.090	1.850	1.850	1.460	1.330
29	2.510	2.500	2.100	3.320	---	7.910	3.690	2.320	1.490	1.520	1.310	1.210
30	2.290	2.670	1.990	3.220	---	7.590	2.620	2.090	1.770	1.760	1.370	1.220
31	2.470	---	1.510	2.860	---	7.340	---	2.120	---	1.780	1.410	---
Total	70.920	67.810	75.040	82.300	81.190	205.930	139.240	95.750	64.540	62.670	46.790	42.721
Mean	2,288	2,260	2,421	2,655	2,900	6,643	4,641	3,089	2,151	2,022	1,509	1,424
Cfsm	0.632	0.624	0.669	0.733	0.801	1.84	1.28	0.853	0.594	0.559	0.417	0.393
In.	0.73	0.70	0.77	0.85	0.83	2.12	1.43	0.98	0.66	0.64	0.48	0.44

Calendar year 1961: Max 10,600 Min 1,280 Mean 2,877 Cfsm 0.795 In. 10.79
Water year 1961-62: Max 10,100 Min 865 Mean 2,835 Cfsm 0.783 In. 10.63

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

4-1780. St. Joseph River near Newville, Ind.

Location.--Lat 41°23'10", long 84°48'05", in Ohio, in SW¼ sec. 18, T. 5 N., R. 1 E., on left bank 20 ft downstream from bridge on Ohio State Highway 249 and 3½ miles northeast of Newville.

Drainage area.--614 sq mi.

Records available.--October 1946 to September 1962. Monthly discharge only for some periods, published in WSP 1307.

Gage.--Water-stage recorder. Datum of gage 795.40 ft above mean sea level, datum of 1929. Prior to Oct. 22, 1947, wire-weight gage at same site and datum.

Average discharge.--16 years, 539 cfs.

Extremes.--Maximum discharge during year, 4,390 cfs Mar. 22 (gage height, 13.76 ft); minimum, 26 cfs Aug. 23-25 (gage height, 1.66 ft). 1946-62: Maximum discharge, 9,710 cfs Apr. 6, 1950 (gage height, 17.05 ft); minimum, 16 cfs Sept. 30, 1953 (gage height, 1.45 ft).

Remarks.--Records good except those for periods of no gage-height record, or ice effect, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.6	22
1.9	43
2.5	95
3.0	150
4.0	295
6.0	675
8.0	1,190
10.0	1,840
12.0	2,890
14.0	4,590

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	263	120	231	b 131	595	a 1,600	1,400	215	* 138	55	* 51	37
2	475	* 115	215	b 131	495	a 1,330	1,190	279	202	55	49	37
3	* 495	110	202	b 131	403	a 1,120	995	* 515	176	95	46	35
4	331	110	189	b* 131	399	a 920	*820	635	138	279	43	39
5	247	110	231	b 131	1,120	a 760	695	635	126	263	41	46
6	202	115	331	176	1,460	a 590	675	555	126	176	41	47
7	163	120	367	439	a 1,240	a 520	770	615	126	120	43	41
8	144	115	313	595	a 1,040	a 780	795	770	126	100	46	37
9	126	105	247	555	a 900	a 1,070	870	695	110	90	49	36
10	115	100	215	457	a 740	a 1,360	970	515	105	80	46	35
11	110	95	202	349	a 500	a 1,500	970	421	100	67	41	33
12	105	95	b 185	279	a 390	2,320	820	367	100	63	39	34
13	110	95	b 170	231	a 320	3,030	675	313	132	59	42	34
14	120	100	b 155	215	a 310	3,490	595	295	110	63	38	42
15	120	95	b 160	344	295	3,740	555	263	95	67	36	45
16	110	184	b 180	720	295	3,650	515	231	85	67	34	48
17	105	770	b 195	695	279	3,100	457	202	75	63	32	51
18	100	1,020	215	595	295	2,750	403	189	71	63	32	45
19	95	1,040	215	457	313	2,750	385	176	63	59	32	38
20	95	845	215	367	313	2,890	385	163	67	55	31	34
21	95	575	202	295	295	3,490	349	144	63	81	31	32
22	95	439	189	279	295	4,190	331	138	63	132	31	32
23	95	457	176	295	295	4,190	313	126	63	163	26	32
24	95	615	b 165	279	279	3,830	313	120	124	215	26	32
25	100	595	b 153	247	279	3,330	295	110	144	138	26	32
26	120	515	b 142	449	537	2,750	263	110	100	110	38	32
27	150	403	b 140	1,310	1,490	2,270	247	110	* 80	90	39	32
28	156	* 349	b 139	1,520	1,840	2,000	231	115	67	75	44	32
29	163	295	b 137	1,400	----------	1,800	215	120	59	63	44	36
30	132	263	b 136	1,130	----------	1,680	202	120	55	59	* 41	36
31	120	----------	b 133	845	----------	1,550	----------	126	----------	55	37	----------
Total	4,952	9,965	6,145	15,178	17,012	70,350	17,699	9,388	3,089	3,120	1,195	1,122
Mean	160	332	198	490	608	2,269	590	303	103	101	38.5	37.4
Cfsm	0.261	0.541	0.322	0.798	0.990	3.70	0.961	0.493	0.168	0.164	0.063	0.061
In.	0.30	0.60	0.37	0.92	1.03	4.27	1.07	0.57	0.19	0.19	0.07	0.07

Calendar year 1961: Max 3,700 Min 44 Mean 438 Cfsm 0.713 In. 9.68
Water year 1961-62: Max 4,190 Min 26 Mean 436 Cfsm 0.710 In. 9.65

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

4-1790. St. Joseph River at Cedarville, Ind.

Location.--Lat 41°12', long 85°01', in SE¼ sec. 28, T. 32 N., R. 13 E., on left bank 500 ft upstream from highway bridge, 0.4 mile south of Cedarville, 2,700 ft downstream from Cedarville Dam, and 0.5 mile upstream from mouth of Cedar Creek.

Drainage area.--783 sq mi.

Records available.--January 1931 to May 1932, October 1955 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 757.94 ft above mean sea level, datum of 1929. Jan. 1, 1931 to May 31, 1932, tape gage on downstream side of highway bridge 500 ft downstream from present site at datum approximately 20 ft lower.

Average discharge.--7 years (1955-62), 608 cfs. Figure published in Surface Water Records of Indiana 1961 is in error.

Extremes.--Maximum daily discharge during year, 4,200 cfs Mar. 24; minimum daily, 24 cfs Aug. 26, 27.
1931-32, 1955-62: Maximum discharge, 10,100 cfs May 1, 1956 (gage height, 18.07 ft, from floodmarks); minimum daily, 1.6 cfs May 22, 27, 1958.

Remarks.--Records good, except those for periods of no gage-height record, which are fair. Flow regulated by reservoir above station.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 30 to Dec. 6; discharge of Cedar Creek near Cedarville used as a factor Jan. 26-31, Feb. 4-9, Feb. 26 to Mar. 4, Mar. 9-20, Mar. 25 to Apr. 3, Apr. 9-12; indefinite stage-discharge relation Mar. 8)

1.4	19	3.0	305
1.6	37	4.0	640
2.0	92	6.0	1,630
2.5	190	11.0	5,080

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	281	168	258	158	895	1,890	1,680	258	190	79	66	58
2	598	158	246	* 158	640	1,680	*1,410	* 281	158	80	66	54
3	* 680	148	246	158	461	1,500	1,100	428	201	148	66	49
4	494	138	235	158	460	1,160	1,040	640	235	138	66	52
5	395	129	348	158	856	850	990	760	201	344	42	52
6	244	128	318	206	1,790	640	895	720	138	318	42	49
7	212	132	412	720	1,400	566	850	640	123	212	62	53
8	212	138	428	805	1,120	770	1,040	710	138	138	62	57
9	168	138	363	760	881	1,080	879	990	158	105	49	56
10	158	129	246	990	760	1,390	1,000	805	179	89	36	53
11	148	120	258	680	494	1,540	1,020	602	138	66	49	42
12	123	113	235	379	379	2,370	938	395	158	82	61	42
13	121	111	212	348	332	2,520	940	428	148	87	62	43
14	138	110	195	281	270	2,890	805	390	138	82	54	87
15	158	115	179	463	258	3,110	720	305	138	82	49	72
16	190	114	201	1,040	246	3,200	640	323	127	82	49	59
17	168	220	281	990	224	3,240	566	235	106	82	49	58
18	125	800	258	760	281	3,030	530	281	101	82	49	58
19	114	1,300	246	566	305	2,940	494	235	96	76	49	59
20	121	1,400	246	428	270	3,030	428	148	89	72	61	49
21	120	1,150	246	305	270	3,200	348	168	73	78	103	62
22	118	840	235	281	258	3,500	412	179	65	104	43	65
23	114	620	235	305	258	3,900	412	148	66	179	43	45
24	114	640	201	270	235	4,200	395	148	81	186	48	53
25	116	880	168	258	224	4,000	348	123	129	258	48	69
26	120	800	179	660	706	3,800	270	129	* 158	169	24	65
27	138	670	212	2,120	2,200	2,980	332	158	138	92	24	57
28	179	520	190	2,020	* 2,120	2,560	281	158	97	105	31	49
29	190	* 390	170	1,650		2,320	281	* 148	66	99	31	50
30	179	318	158	*1,280	---------	2,100	270	148	79	84	* 34	53
31	168	----------	158	867	---------	1,860	----------	168	----------	* 73	37	----------
Total	6,404	12,637	7,563	20,222	18,593	73,816	21,314	11,249	3,912	3,871	1,555	1,670
Mean	207	421	244	652	664	2,381	710	363	130	125	50.2	55.7
Cfsm	0.264	0.538	0.312	0.833	0.848	3.04	0.907	0.464	0.166	0.160	0.064	0.071
In.	0.30	0.60	0.36	0.96	0.88	3.50	1.01	0.53	0.19	0.18	0.07	0.08

Calendar year 1961 : Max 5,400 Min 45 Mean 528 Cfsm 0.674 In. 9.16
Water year 1961-62 : Max 4,200 Min 24 Mean 501 Cfsm 0.640 In. 8.66

* Discharge measurement made on this day.
Note.--No gage-height record Nov. 4-29, Mar. 21-25.
Note.--Discharge for Jan. 26-31, Feb. 4-9 and Feb. 26 to Mar. 4 computed on basis of estimated record for Cedar Creek near Cedarville. Discharge for Mar. 9-20, Mar. 25 to Apr. 3, Apr. 9-12 computed on basis of discharge for Cedar Creek at Cedarville.

4-1795. Cedar Creek at Auburn, Ind.

Location.--Lat 41°21', long 85°03', in SW¼ sec. 29, T. 34 N., R. 13 E., near center of span on upstream side of Ninth Street Bridge in Auburn, 2 miles upstream from Peckhart ditch.

Drainage area.--93 sq mi, approximately.

Records available.--July 1943 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 847.14 ft above mean sea level (City of Auburn benchmark). Prior to Aug. 28, 1946, staff gage, and Aug. 28, 1946, to Sept. 30, 1953, wire-weight gage at same site and datum.

Average discharge.--19 years, 70.9 cfs.

Extremes.--Maximum discharge during year, 665 cfs Mar. 12 (gage height, 7.03 ft); minimum, 0.8 cfs Aug. 19, 20, Sept. 23, 29, 30 (gage height, 0.65 ft).

1943-62: Maximum discharge, 1,520 cfs Apr. 5, 1950 (gage height, 9.90 ft); minimum, 0.5 cfs Nov. 12, 1953; minimum gage height, that of Aug. 19, 20, Sept. 23, 29, 30, 1962.

Revisions.--The minimum discharge for the water year 1961 has been revised to 1.2 cfs superseding figure published in Surface Water Records of Indiana - 1961.

_.--Records good except those for periods of ice effect, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 16)

0.65	0.8	1.0	12
.7	1.7	1.2	21
.8	4.2	2.0	85
.9	7.5	6.0	540

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	16	32	15	*b 60	160	94	30	* 54	8.7	* 4.5	2.8
2	62	* 16	28	16	b 50	103	80	47	40	48	3.9	1.7
3	* 42	16	26	* 16	40	72	67	80	25	121	3.6	4.4
4	32	16	31	15	72	56	* 62	* 62	20	98	2.4	6.4
5	25	15	55	15	444	40	58	47	27	56	1.7	6.1
6	20	16	52	39	228	35	72	51	29	35	4.6	4.8
7	16	16	42	140	140	72	76	62	23	22	4.5	4.2
8	14	16	35	103	103	216	67	76	18	16	4.2	3.1
9	13	14	30	58	67	204	85	76	15	14	3.6	3.6
10	13	14	28	41	51	276	80	67	14	12	3.4	5.1
11	11	12	26	35	38	396	67	62	15	9.5	2.6	4.2
12	10	9.9	b 25	30	32	528	58	54	13	9.1	5.1	4.8
13	16	12	b 22	25	28	528	58	48	12	7.9	3.1	6.9
14	14	12	b 20	22	25	372	58	43	11	10	2.8	3.9
15	12	12	b 19	82	22	252	51	38	10	7.9	2.6	1.7
16	12	174	19	126	20	182	45	32	9.1	8.3	2.6	1.3
17	12	228	22	80	23	182	40	27	7.9	7.9	2.6	2.8
18	11	140	23	51	38	312	40	23	8.3	7.5	1.7	2.8
19	11	103	23	35	31	396	40	21	7.9	6.4	1.2	2.8
20	10	76	22	29	24	408	36	19	7.5	12	1.9	3.1
21	9.1	62	20	25	b 19	432	33	17	7.5	34	2.4	3.4
22	7.5	55	b 19	29	b 17	384	33	16	7.1	24	2.4	2.8
23	7.9	112	b 18	32	16	264	36	15	12	15	2.1	1.0
24	9.5	108	b 17	30	b 16	216	35	14	33	12	2.1	3.1
25	24	80	b 17	25	17	193	32	12	19	10	5.4	3.9
26	28	62	b 16	135	178	160	29	15	* 15	8.7	6.1	3.9
27	22	52	b 16	360	*396	140	28	14	12	6.8	15	3.6
28	20	* 43	b 16	252	300	130	26	13	11	5.7	7.5	3.9
29	18	39	b 16	160	----------	121	25	14	9.1	4.2	5.4	1.3
30	18	35	b 15	103	----------	121	25	75	7.5	5.1	3.9	.8
31	17	---------	b 15	b 80	----------	108	---------	62	----------	5.1	* 5.7	----------
Total	609.0	1,581.9	765	2,204	2,495	7,059	1,536	1,232	499.9	647.8	120.6	104.2
Mean	19.6	52.7	24.7	71.1	89.1	228	51.2	39.7	16.7	20.9	3.89	3.47
Cfsm	0.211	0.567	0.266	0.765	0.958	2.45	0.551	0.427	0.180	0.225	0.042	0.037
In.	0.24	0.63	0.31	0.88	1.00	2.82	0.61	0.49	0.20	0.26	0.05	0.04

Calendar year 1961: Max 562 Min 3.5 Mean 53.8 Cfsm 0.578 In. 7.85
Water year 1961-62: Max 528 Min 0.8 Mean 51.7 Cfsm 0.556 In. 7.53

Peak discharge (base, 700 cfs).--No peaks above the base.

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.

4-1800. Cedar Creek near Cedarville, Ind.

Location.--Lat 41°13', long 85°05', in NW¼ sec. 19, T. 32 N., R. 13 E., on left bank at downstream side of bridge on State Highway 427, 2 3/4 miles northwest of Cedarville and 4 miles upstream from mouth.

Drainage area.--279 sq mi.

Records available.--October 1946 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 780.09 ft above mean sea level, datum of 1929. Prior to Nov. 4, 1947, wire-weight gage at same site and datum.

Average discharge.--16 years, 250 cfs.

Extremes.--Maximum discharge during year, 2,580 cfs Mar. 13 (gage height, 7.99 ft); minimum, 23 cfs Aug. 21, 23, 25, Sept. 17, 18, 24; minimum gage height, 1.28 ft Aug. 21, 23, 25.
1946-62: Maximum discharge, 4,870 cfs Apr. 5, 1950 (gage height, 11.67 ft); minimum, 12 cfs Oct. 3, 1949; minimum gage height, that of Aug. 21, 23, 25, 1962.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.3	21
1.4	31
1.6	60
2.0	138
3.0	469
5.0	1,260
7.0	2,120
8.0	2,580

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	134	57	112	58	205	* 540	329	98	108	38	30	31
2	156	55	106	57	175	340	* 280	* 127	102	44	29	28
3	* 120	55	100	* 56	145	245	246	296	83	168	29	27
4	102	58	102	b 57	215	188	217	230	74	194	29	36
5	87	60	174	60	1,500	143	204	171	80	120	28	34
6	73	58	187	98	730	129	230	151	98	92	29	30
7	67	57	154	469	460	215	263	167	85	76	34	28
8	62	57	127	414	340	700	223	174	71	64	30	27
9	55	54	110	200	280	740	263	214	71	54	28	28
10	54	52	106	145	175	1,060	296	177	62	49	28	29
11	52	50	100	125	135	1,180	230	184	62	46	27	27
12	50	49	100	115	120	2,120	204	161	89	44	26	27
13	58	47	100	100	108	2,340	217	159	67	41	32	27
14	98	47	b 94	90	100	1,380	223	143	57	43	28	47
15	74	47	b 90	200	91	860	197	125	54	44	27	31
16	62	270	85	370	85	620	167	114	49	41	27	26
17	60	700	82	265	94	506	154	104	46	40	26	24
18	54	450	92	175	135	940	143	98	41	38	26	24
19	50	312	91	128	118	1,180	138	92	43	36	25	24
20	52	230	87	112	97	1,380	129	87	41	38	25	24
21	50	187	82	100	82	1,300	120	80	40	60	24	24
22	46	164	80	112	77	1,420	116	76	39	58	25	25
23	43	329	b 77	120	72	900	120	73	40	55	24	25
24	46	395	b 74	115	72	700	116	69	74	47	24	24
25	55	280	b 70	100	76	620	110	62	69	41	27	28
26	83	223	b 68	410	540	543	104	64	* 54	38	40	26
27	82	180	b 65	1,200	1,300	488	98	76	46	36	36	27
28	73	* 151	b 62	830	1,250	432	96	67	41	35	34	25
29	67	134	b 61	530	----------	395	92	* 65	40	34	30	25
30	64	120	60	340	----------	414	89	105	40	31	* 28	24
31	* 60	---------	59	270	----------	395	---------	148	----------	* 31	29	----------
Total	2,189	4,928	2,957	7,421	8,777	24,413	5,414	3,957	1,866	1,776	884	832
Mean	70.6	164	95.4	239	313	788	180	128	62.2	57.3	28.5	27.7
Cfsm	0.253	0.588	0.342	0.857	1.12	2.82	0.645	0.459	0.223	0.205	0.102	0.099
In.	0.29	0.66	0.39	0.99	1.17	3.25	0.72	0.53	0.25	0.24	0.12	0.11

Calendar year 1961 : Max 1,660 Min 27 Mean 181 Cfsm 0.649 In. 8.79
Water year 1961-62 : Max 2,340 Min 24 Mean 179 Cfsm 0.642 In. 8.72

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-13	0230	7.99	2,580				

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 30 to Jan. 3, Jan. 9 to Mar. 7.

GPO 802-181-11

4-1815. St. Marys River at Decatur, Ind.

Location.--Lat 40°51', long 84°56', in SW¼ sec. 27, T. 28 N., R. 14 E., on right bank 10 ft downstream from bridge on U. S. Highway 27, half a mile north of city limits of Decatur, and half a mile upstream from Holthouse ditch.

Drainage area.--615 sq mi.

Records available.--October 1946 to September 1962. Monthly discharge only for some periods, published in WSP 1307. Gage-height records collected at site half a mile upstream January 1932 to November 1954, and at present site thereafter are contained in reports of U. S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 760.44 ft above mean sea level, datum of 1929. Prior to July 27, 1948, wire-weight gage at same site and datum.

Average discharge.--16 years, 527 cfs.

Extremes.--Maximum discharge during year, 5,510 cfs Jan. 27 (gage height, 20.00 ft); minimum, 11 cfs Aug. 21 (gage height, 1.84 ft). 1946-62: Maximum discharge, 11,300 cfs Feb. 10, 11, 1959; maximum gage height, 24.22 ft Feb. 10, 1959 (ice jam); minimum, 4.7 cfs Oct. 19, 1960; minimum gage height, 1.73 ft Sept. 12, 1955.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair. Flow regulated by Grand Lake Reservoir. Slight diversion from or into Wabash River and into Miami and Erie Canal.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.8	9.8	7.0	585
2.1	18	9.0	1,030
2.4	31	11.0	1,520
3.0	64	15.0	2,690
4.0	146	19.0	4,550
5.0	260		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	64	a 38	* 71	b 39	a 2.500	2.720	260	* 55	55	55	21	19
2	55	a 34	64	b 39	a 1.800	a 2.800	221	352	78	52	17	20
3	44	* 32	58	b 40	a 1.300	2.240	185	549	61	32	15	20
4	41	32	58	* 55	a 1.100	1.630	* 165	290	49	31	14	22
5	36	33	68	87	2.120	1.030	165	195	92	35	12	21
6	* 34	30	61	1.150	1.340	690	155	175	365	29	20	18
7	34	26	55	2.120	892	495	146	155	234	24	15	16
8	34	24	46	1.240	b 640	531	137	146	137	27	16	15
9	33	23	44	690	b 500	1.610	137	165	106	27	14	15
10	32	23	b 43	b 520	395	2.300	128	137	97	41	13	15
11	32	23	b 42	b 420	290	1.680	110	128	89	28	12	15
12	30	23	b 41	b 360	221	2.450	101	119	347	24	12	16
13	36	24	b 40	b 320	175	2.330	110	128	350	21	13	17
14	39	39	b 40	275	175	2.060	110	119	165	20	14	44
15	32	55	b 39	1.070	165	2.060	93	97	106	18	14	55
16	30	670	39	1.940	175	1.740	82	81	74	20	14	55
17	33	938	46	1.220	165	1.200	74	71	61	20	14	128
18	34	320	58	846	165	892	74	64	55	20	14	137
19	36	165	55	778	195	734	71	61	49	19	13	97
20	39	146	55	756	175	734	64	58	44	24	12	61
21	41	137	55	778	185	2.430	58	64	39	61	11	39
22	44	128	55	1.130	247	3.370	58	61	33	78	12	27
23	44	348	55	1.400	b 270	2.660	61	58	32	49	13	21
24	41	513	48	846	b 310	2.270	61	49	34	36	13	18
25	71	260	b 46	756	350	1.970	55	44	* 39	30	21	18
26	74	175	b 45	2.240	1.380	1.470	49	49	30	28	35	17
27	55	137	b 44	a 3.900	* 3.650	1.080	46	55	26	39	64	a 17
28	a 46	106	b 42	a 4.200	3.370	800	46	58	23	44	* 39	a 16
29	a 40	93	b 41	a 4.300	----------	585	49	* 52	21	41	26	a 15
30	a 38	82	b 40	a 3.800	----------	461	49	49	26	* 33	20	a 14
31	a 38	----------	b 40	*a 3.200	----------	335	---------	49	----------	26	20	----------
Total	1.280	4.677	1.534	40.515	24.250	49.357	3.120	3.733	2.917	1.032	563	1.008
Mean	41.3	156	49.5	1,307	866	1,592	104	120	97.2	33.3	18.2	33.6
Cfsm	0.067	0.254	0.080	2.13	1.41	2.59	0.169	0.195	0.158	0.054	0.030	0.055
In.	0.08	0.28	0.09	2.46	1.47	2.99	0.19	0.22	0.18	0.06	0.03	0.06

Calendar year 1961: Max 7,650 Min 16 Mean 485 Cfsm 0.789 In. 10.70
Water year 1961-62: Max 4,300 Min 11 Mean 367 Cfsm 0.597 In. 8.11

Peak discharge (base, 2,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	2400	20.00	5,510				
2-27	2000	17.64	3,700				
3-22	0700	16.96	3,450				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

4-1820. St. Marys River near Fort Wayne, Ind.

Location.--Lat 41°00', long 85°07', in NE¼ sec. 12, T. 29 N., R. 12 E., on left bank, 130 ft downstream from highway bridge, 4 miles south of Fort Wayne, and 12 miles upstream from confluence with St. Joseph River.

Drainage area.--753 sq mi.

Records available.--October 1930 to September 1962. Monthly discharge only for some periods published in WSP 1307. Fragmentary gage-height records for period November 1924 to October 1927 are available in the District office.

Gage.--Water-stage recorder. Datum of gage is 748.61 ft above mean sea level, unadjusted. Prior to Apr. 13, 1939, chain gage on highway bridge at same datum.

Average discharge.--32 years, 566 cfs.

Extremes.--Maximum discharge during year, 6,070 cfs Jan. 28 (gage height, 14.00 ft); minimum, 10 cfs Aug. 21-23 (gage height, 0.50 ft).
1930-62: Maximum discharge, 13,600 cfs Feb. 11, 1959; maximum gage height, 19.42 ft Feb. 11, 1959 (ice jam); minimum observed, 3.4 cfs Oct. 19, 1934 (gage height, 0.28 ft).

Remarks.--Records good except those for periods of ice effect, which are fair. Flow regulated by Grand Lake. Slight diversion from or into Wabash River basin and into Miami and Erie Canal.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.5	10	3.0	375
.6	15	5.0	1,020
.8	28	8.0	2,220
1.0	43	13.0	5,160
1.5	93	14.0	6,070
2.0	164		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	70	* 54	105	58	3,600	3,870	400	68	52	33	26	20
2	* 72	50	93	58	3,000	2,780	* 325	* 142	57	72	21	19
3	61	47	82	* 58	1,740	2,880	260	700	82	67	19	19
4	51	47	77	62	1,500	2,370	220	485	64	45	17	24
5	45	48	99	99	2,830	1,620	210	290	60	40	16	26
6	40	48	99	1,020	2,320	1,120	210	230	233	45	14	26
7	38	45	88	2,830	1,380	980	210	200	350	38	18	22
8	36	41	72	2,320	870	1,220	191	191	220	34	23	18
9	36	37	62	1,120	700	1,860	230	191	140	34	17	18
10	35	34	60	700	560	3,050	210	191	112	36	16	17
11	35	33	60	600	410	2,620	164	164	105	47	14	16
12	35	33	59	500	320	3,660	148	156	131	41	14	16
13	38	34	58	450	250	3,360	164	148	485	34	13	16
14	44	39	58	400	250	2,370	182	148	280	30	12	20
15	48	72	57	1,200	240	2,180	156	125	156	26	14	40
16	41	773	56	2,370	250	2,000	125	112	105	24	14	58
17	37	1,500	66	2,000	240	1,500	112	93	82	22	14	69
18	37	700	77	1,340	240	1,160	105	82	68	23	14	140
19	40	325	82	1,120	280	1,020	99	72	60	23	14	132
20	42	240	77	1,080	250	1,020	88	68	55	24	12	99
21	44	220	72	1,080	270	2,290	82	66	49	29	11	67
22	45	210	72	1,220	350	3,750	77	71	43	70	11	47
23	49	452	77	1,820	450	3,510	77	70	39	82	11	34
24	52	735	77	1,420	480	2,670	77	65	37	53	12	26
25	58	515	70	1,080	545	2,320	77	54	* 37	37	15	24
26	99	300	66	2,510	1,660	1,860	69	52	42	29	23	22
27	93	230	64	5,400	4,350	1,380	64	60	35	27	42	21
28	70	173	62	5,870	4,530	1,050	62	67	30	34	70	19
29	58	* 140	60	5,970	----------	805	62	* 64	27	42	* 45	17
30	54	118	59	5,400	----------	665	62	60	24	* 39	30	15
31	55	---------	58	4,800	----------	515	---------	54	----------	32	22	----------
Total	1,558	7,293	2,224	55,955	33,865	63,395	4,518	4,539	3,260	1,212	614	1,107
Mean	50.3	243	71.7	1,805	1,209	2,045	151	146	109	39.1	19.8	36.9
Cfsm	0.067	0.323	0.095	2.40	1.61	2.72	0.201	0.194	0.145	0.052	0.026	0.049
In.	0.08	0.36	0.11	2.77	1.68	3.14	0.22	0.22	0.16	0.06	0.03	0.05

Calendar year 1961: Max 7,970 Min 18 Mean 560 Cfsm 0.744 In. 10.12
Water year 1961-62: Max 5,970 Min 11 Mean 492 Cfsm 0.653 In. 8.88

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-28	2330	14.00	6,070	3-12	Unknown	Unknown	About 4,250
2-28	0600	12.23	4,590				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 10-16, Dec. 25 to Jan. 4, Jan. 10-14, Feb. 8-24, Mar. 12, 13.

4-1830. Maumee River at New Haven, Ind.

Location.--Lat 41°05', long 85°01', in SW¼ sec. 1, T. 30 N., R. 13 E., in center of span on downstream side of county road bridge, a quarter of a mile upstream from Wabash Railroad bridge, half a mile north of New Haven, and 6 miles downstream from confluence of St. Marys and St. Joseph Rivers.

Drainage area.--1,940 sq mi.

Records available.--December 1946 to September 1956 (high-water records only), October 1956 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 724.51 ft above mean sea level, datum of 1929. Prior to Sept. 7, 1956, wire-weight gage at same site and datum.

Average discharge.--6 years (1956-62), 1,613 cfs.

Extremes.--Maximum discharge during year, 9,730 cfs Mar. 23 (gage height, 15.34 ft); minimum daily, 54 cfs Aug. 11; minimum gage height, 2.13 ft Aug. 19.
1946-62: Maximum discharge, 19,100 cfs Feb. 16, 1950 (gage height, 21.4 ft); minimum daily since Sept. 7, 1956, that of Aug. 11, 1962.

Remarks.--Records good except those for periods of no gage-height record, which are fair. Flow regulated at low stage by powerplant above station. Flow slightly regulated by upstream reservoirs.

Rating table, water year 1961-62 (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 12, 20-23, Nov. 7, 13, Apr. 4-9, Apr. 11 to May 19, May 30, 31, June 4, 5, 7-10, 17-26, June 28 to July 2, July 9-20, 22, July 27 to Aug. 25)

2.0	52	3.0	270	8.0	3,360
2.1	70	3.5	440	11.0	5,620
2.2	90	4.0	660	16.0	10,400
2.4	130	4.5	970		
2.8	220	6.0	1,960		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	460	270	570	285	3,850	6,210	2,730	565	* 382	182	104	106
2	551	270	326	270	2,920	4,600	2,310	775	365	184	132	120
3	840	285	460	285	2,450	3,300	* 1,960	* 1,360	353	348	80	* 122
4	* 775	270	679	* 300	1,750	2,500	1,680	1,620	520	400	130	148
5	565	220	736	348	4,420	1,800	1,680	1,420	688	400	65	150
6	460	220	689	1,080	4,950	1,360	1,560	1,360	454	500	82	130
7	300	* 208	508	3,640	3,850	1,420	1,490	1,230	715	400	124	112
8	270	232	660	2,920	3,020	2,800	1,620	1,230	565	304	121	120
9	258	245	588	2,530	2,640	3,360	1,620	1,490	480	239	96	163
10	232	232	500	1,690	2,060	5,300	1,890	1,490	520	163	68	139
11	365	208	440	1,370	1,390	5,220	1,820	1,160	365	163	54	100
12	144	208	440	990	990	7,430	1,680	970	440	196	109	98
13	265	185	348	835	840	8,930	1,680	905	632	152	78	100
14	258	245	330	740	740	7,630	1,420	905	565	173	108	163
15	258	258	348	1,190	640	6,300	1,300	688	480	132	70	185
16	258	1,480	365	2,830	590	6,030	1,160	635	315	132	59	143
17	270	3,080	400	3,380	540	5,460	1,100	520	256	181	57	163
18	232	2,660	480	3,100	394	5,300	970	628	226	123	56	174
19	208	1,750	440	2,350	540	5,380	970	633	174	116	110	245
20	196	1,820	420	1,780	640	5,700	840	365	189	167	80	208
21	213	1,560	420	1,290	690	6,840	688	330	174	314	63	185
22	196	1,040	400	1,190	740	9,430	715	382	174	160	* 66	152
23	196	1,560	382	1,300	790	9,630	775	348	141	315	61	126
24	208	2,030	365	1,580	890	8,830	688	300	163	305	56	124
25	276	1,820	330	1,300	990	7,830	635	285	208	300	129	126
26	245	1,420	330	3,400	3,620	6,750	542	462	266	300	262	110
27	300	1,160	382	7,930	7,330	5,460	542	348	* 245	206	118	108
28	300	* 840	330	7,330	* 7,530	4,340	542	285	163	156	134	102
29	315	925	282	6,930	----------	3,780	520	174	163	189	* 152	94
30	330	597	315	6,120	----------	3,500	500	623	180	173	128	84
31	300	----------	300	5,250	----------	3,150	----------	480	----------	* 130	120	----------
Total	10,044	27,298	13,563	75,533	61,794	165,570	37,627	23,966	10,561	7,203	3,072	4,100
Mean	324	910	438	2,437	2,207	5,341	1,254	773	352	232	99.1	137
Cfsm	0.167	0.469	0.226	1.26	1.14	2.75	0.646	0.398	0.181	0.120	0.051	0.071
In.	0.19	0.52	0.26	1.45	1.19	3.17	0.72	0.46	0.20	0.14	0.06	0.08

Calendar year 1961: Max 13,600 Min 87 Mean 1,438 Cfsm 0.741 In. 10.05
Water year 1961-62: Max 9,630 Min 54 Mean 1,206 Cfsm 0.622 In. 8.44

Peak discharge (base, 9,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-23	0200	15.34	9,730				

* Discharge measurement made on this day.

Note.--No gage-height record Dec. 31, Jan. 8-25, Jan. 31 to Feb. 3, Feb. 6-17, 19-25, Mar. 2-6.

4-1835. Maumee River at Antwerp, Ohio

Location.--Lat 41°11'56", long 84°44'40", in sec. 22, T. 3 N., R. 1 E., on left bank 425 ft downstream from bridge on State Highway 49, 1 mile north of Antwerp, Paulding County, 7 miles downstream from Indiana State line, and 10 miles upstream from Marie DeLarme Creek.

Drainage area.--2,049 sq mi.

Records available.--September 1921 to December 1935, April 1939 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 694.86 ft above mean sea level, adjustment of 1929. Prior to Sept. 13, 1925, chain gage at site 400 ft upstream at same datum.

Average discharge.--37 years, 1,684 cfs.

Extremes.--Maximum discharge during year, 9,690 cfs Mar. 23 (gage height, 13.10 ft); maximum gage height, 17.08 ft Feb. 27 (ice jam); minimum, 69 cfs Aug. 17-19, 20, 23 (gage height, 0.70 ft).
1921-35, 1939-62: Maximum discharge, 26,200 cfs May 20, 1943 (gage height, 20.29 ft); minimum, 24 cfs Oct. 17, 1930, June 21, 22, 1933 (gage height, 0.32 ft).
Flood of Mar. 27, 1913, estimated as 40,000 cfs.

Remarks.--Records good except those for periods of ice effect, which are poor. Low flow slightly regulated by powerplant at Fort Wayne, Indiana and by upstream reservoirs.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

0.7	69	4.0	1,430
1.0	136	7.0	3,470
1.5	271	11.0	7,140
2.0	440	14.0	11,000

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	460	* 329	542	360	4.000	7.400	2,870	565	* 476	178	175	11
2	516	306	524	350	3.000	6.800	2,450	696	388	226	122	10
3	691	306	360	340	2.500	5.000	2.090	1.000	367	247	153	*10
4	890	326	508	* 360	2.000	3.500	* 1.800	1,530	374	384	111	11
5	780	306	825	* 360	4.600	2.800	1.560	1.430	655	426	136	13
6	606	265	715	500	5.200	2.000	1.520	1.320	730	433	111	13
7	492	244	* 642	3.000	4.200	1,700	1.450	1.210	538	496	89	12
8	360	244	588	3.500	3.100	2.000	1.410	1.160	646	422	138	11
9	333	265	637	2.700	2.700	3.000	1.720	* 1.230	542	339	* 115	11
10	306	271	588	1.800	2.100	6.650	1.900	1.420	492	281	136	14
11	293	256	476	1.500	1.400	5.970	1.830	1.300	468	198	95	14
12	388	241	448	1.100	1.000	7.670	1.680	1.060	394	* 198	78	11
13	215	238	464	900	850	9.240	1.660	895	430	215	87	10
14	320	224	405	750	750	* 8.760	1.490	850	686	204	120	18
15	316	271	390	1.200	650	6.780	1.310	790	574	196	104	21
16	300	623	420	2.900	600	6.130	1.160	668	472	185	113	19
17	303	2.640	496	3.600	550	5.660	1.080	642	350	180	76	14
18	306	2,990	534	3.200	500	5.290	990	524	287	190	69	15
19	313	2.070	610	2.400	550	5.390	920	686	253	143	69	16
20	247	1.740	516	1.800	650	5.710	890	538	* 215	165	73	24
21	256	1.650	464	1.300	700	6.360	780	394	221	204	120	23
22	244	1.350	460	1.200	750	8.760	686	380	209	303	* 84	19
23	232	1.170	452	1.300	800	9,610	730	402	212	209	71	16
24	226	1.880	450	1.600	900	9.230	735	363	201	336	76	13
25	250	1.940	430	2.000	1.000	8.110	673	333	204	310	78	13
26	310	1.590	512	2.800	2.000	7.130	637	323	235	329	135	*13
27	277	1.280	422	6.000	7.200	5.930	556	512	* 265	316	271	13
28	326	1.010	472	9,000	* 7.600	4.640	583	402	262	241	136	12
29	339	840	422	7.000	----------	3.930	556	333	207	160	118	11
30	343	705	380	6.500	----------	3.510	520	196	170	212	138	11
31	360	---------	360	5.500	----------	3.310	---------	583	----------	193	134	----------
Total	11.598	27.570	15.512	75.820	61.850	177.970	38.236	23.735	11.523	8.119	3.531	4.368
Mean	374	919	500	2,446	2,209	5,741	1,275	766	384	262	114	146
Cfsm	0.183	0.449	0.244	1.19	1.08	2.80	0.622	0.374	0.187	0.128	0.056	0.071
In.	0.21	0.50	0.28	1.37	1.12	3.23	0.69	0.43	0.21	0.15	0.06	0.08

Calendar year 1961 : Max 14,500 Min 100 Mean 1,493 Cfsm 0.729 In. 9.89
Water year 1961-62 : Max 9,610 Min 69 Mean 1,260 Cfsm 0.615 In. 8.33

Peak discharge (base, 8,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-27	unknown	-	≠ 8,800	3-13	2400	12.95	9,480
2-27	unknown	-	≠ 9,100	3-23	1300	13.10	9,690

* Discharge measurement made on this day.
≠ About.
Note.--Stage-discharge relation affected by ice Dec. 15, 16, 24-26, Dec. 30 to Mar. 9.

5-5150. Kankakee River near North Liberty, Ind.

Location.--Lat 41°33'50", long 86°29'50", on line between secs. 14 and 23, T. 36 N., R. 1 W., on left bank at downstream side of bridge on St. Joseph County highway named "New Road," 4 miles northwest of North Liberty.

Drainage area.--152 sq mi.

Records available.--January 1951 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 680.04 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to June 26, 1956, wire-weight gage at same site and datum.

Average discharge.--11 years, 142 cfs.

Extremes.--Maximum discharge during year, 430 cfs Mar. 20 (gage height, 6.94 ft); minimum, 52 cfs Aug. 29, 30 (gage height, 2.08 ft). 1951-62: Maximum discharge, 686 cfs Oct. 10, 1954; maximum gage height, 8.64 ft Oct. 12, 1954 (backwater from return of overbank flow); minimum, 52 cfs Sept. 9-11, 1959, Aug. 29, 30, 1962; minimum gage height, 1.60 ft Aug. 19, 1957.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 29, Mar. 31 to Apr. 24,
May 7 to June 9, Sept. 16-30)

2.2	56
3.0	89
5.0	240
7.0	442

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	150	127	107	89	101	113	231	134	95	95	64	84
2	150	127	107	89	101	107	214	134	95	107	68	80
3	134	127	107	89	101	107	206	134	89	174	68	72
4	127	142	113	89	101	101	198	127	89	166	72	* 72
5	120	142	142	95	174	101	198	127	120	142	72	72
6	120	134	142	127	150	95	222	127	113	127	95	68
7	113	127	134	166	a 135	107	222	120	107	120	* 101	68
8	113	127	127	158	120	150	206	127	101	113	95	68
9	107	120	120	150	113	158	206	120	174	107	89	72
10	107	120	120	a 140	107	214	198	127	267	* 89	80	89
11	113	113	* 113	a 130	107	222	190	134	* 258	89	68	89
12	107	113	120	a 117	101	371	182	127	214	101	68	84
13	113	113	127	a 110	101	* 371	198	127	190	95	72	80
14	120	113	120	a 104	101	294	214	120	166	101	72	80
15	120	* 113	113	b 100	101	* 258	206	113	158	95	72	80
16	120	120	113	b 98	101	231	190	*107	142	95	72	80
17	113	134	113	*b 96	101	222	182	107	134	95	80	80
18	* 113	127	107	b 94	101	267	* 182	107	127	89	72	80
19	113	127	107	b 94	101	350	174	101	113	84	64	80
20	113	120	107	95	* 101	418	166	101	107	84	64	80
21	107	120	107	95	101	394	158	101	101	101	60	80
22	107	120	107	95	101	406	158	107	107	95	56	80
23	107	134	107	95	95	360	150	101	120	95	56	80
24	107	134	107	95	95	330	142	101	113	89	56	80
25	113	134	101	95	95	312	142	101	107	89	60	80
26	113	127	101	101	107	285	134	101	95	84	64	84
27	113	120	101	120	127	267	127	101	84	84	60	84
28	120	113	101	113	120	258	127	101	84	80	56	84
29	120	113	b 100	113	---	249	127	101	84	80	56	84
30	127	113	a 97	107	---	258	127	101	89	80	56	84
31	127	---	95	101	---	249	---	95	---	72	72	---
Total	3,647	3,714	3,483	3,360	3,060	7,625	5,377	3,532	3,843	3,117	2,160	2,378
Mean	118	124	112	108	109	246	179	114	128	101	69.7	79.3
Cfsm	0.776	0.816	0.737	0.711	0.717	1.62	1.18	0.750	0.842	0.664	0.459	0.522
In.	0.89	0.91	0.85	0.82	0.75	1.87	1.32	0.86	0.94	0.77	0.53	0.58

Calendar year 1961: Max 505 Min 78 Mean 124 Cfsm 0.816 In. 11.11
Water year 1961-62: Max 418 Min 56 Mean 124 Cfsm 0.816 In. 11.09

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

5-5155. Kankakee River at Davis, Ind.

Location.--Lat 41°24', long 86°42', in sec. 13, T. 34 N., R. 3 W., on left bank at downstream side of bridge on U. S. Highway 30 at Davis, half a mile downstream from Mill Creek and 4 miles east of Hanna.

Drainage area.--508 sq mi.

Records available.--July 1905 to July 1906 and October 1924 to September 1962. Monthly discharge only for some periods, published in WSP 1308.

Gage.--Water-stage recorder. Datum of gage is 664.68 ft above mean sea level, datum of 1929. July 13, 1905 to July 21, 1906, staff gage at site, 50 ft downstream at different datum. July 28, 1925 to May 18, 1929, chain gage on bridge half a mile downstream at different datum. Apr. 19, 1931 to Mar. 11, 1942, chain gage at present site and datum. Mar. 12, 1942 to Nov. 3, 1953, wire-weight gage at present site and datum.

Average discharge.--38 years (1924-62), 480 cfs.

Extremes.--Maximum discharge during year, 1,240 cfs Mar. 23-25; maximum gage height, 10.90 ft Mar. 23-25; minimum discharge, 210 cfs Aug. 24, 30 (gage height, 4.78 ft).
1905-6, 1924-62: Maximum discharge observed, about 1,700 cfs Dec. 15, 1927 (gage height, 9.50 ft, site and datum then in use), from rating curve extended above 520 cfs; maximum gage height at present site and datum, 11.76 ft Oct. 16-18, 1954; minimum discharge observed, 154 cfs Aug. 30 to Sept. 3, 1941; minimum gage height observed, 2.97 ft Aug. 14, 1934.

Remarks.--Records good except those for periods of ice effect, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 10-22, 25-28, Mar. 4-9)

4.8	210
8.0	630
10.0	1,010
11.0	1,270

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	518	420	420	330	385	525	1,030	518	392	312	264	276
2	518	420	406	330	380	485	968	532	378	324	252	276
3	504	434	406	330	380	465	924	518	378	392	252	252
4	476	462	434	335	406	462	862	518	378	406	252	252
5	448	472	518	364	630	462	842	504	406	392	252	* 240
6	434	462	532	532	580	448	862	490	434	378	300	240
7	420	448	504	728	550	462	862	490	406	364	* 336	240
8	406	448	476	728	515	574	842	490	392	350	312	230
9	392	434	462	630	485	630	822	504	434	336	300	252
10	392	420	448	600	476	782	782	504	616	* 324	288	312
11	378	406	434	570	462	842	764	504	728	312	264	324
12	378	406	462	535	462	1,080	728	518	* 694	312	252	300
13	406	406	* 462	500	462	1,130	710	518	602	312	252	288
14	462	406	450	470	462	* 1,100	728	518	560	312	252	276
15	490	*420	434	450	448	1,060	710	490	518	324	252	264
16	476	462	420	430	448	1,030	694	*462	476	324	252	264
17	462	504	420	* 425	448	990	662	434	448	324	252	252
18	* 434	504	420	415	448	990	* 646	434	434	312	240	252
19	420	476	420	405	462	1,060	630	434	420	300	230	252
20	434	462	406	395	462	1,150	602	420	392	300	230	252
21	420	448	406	390	448	1,180	588	420	378	324	230	252
22	406	462	406	385	* 448	1,210	574	420	364	324	220	252
23	406	504	406	378	425	1,240	574	420	378	336	220	252
24	406	546	406	392	420	1,240	560	406	420	324	210	252
25	406	518	392	378	434	1,240	546	406	392	312	220	252
26	406	490	392	392	462	1,210	532	406	378	300	230	252
27	406	476	392	504	574	1,180	518	420	350	288	230	252
28	406	462	378	518	588	1,150	518	420	336	288	220	252
29	420	448	350	476	---	1,100	518	420	324	288	220	252
30	420	434	340	448	---	1,080	504	406	324	276	210	252
31	420	---	330	400	---	1,060	---	406	---	276	220	---
Total	13,370	13,660	13,132	14,163	13,150	28,617	21,102	14,350	13,130	10,046	7,714	7,814
Mean	431	455	424	457	470	923	703	463	438	324	249	260
Cfsm	0.848	0.896	0.835	0.900	0.925	1.82	1.38	0.911	0.862	0.638	0.490	0.512
In.	0.98	1.00	0.96	1.04	0.96	2.10	1.54	1.05	0.96	0.74	0.56	0.57

Calendar year 1961 : Max 1,240 Min 200 Mean 463 Cfsm 0.911 In. 12.34
Water year 1961-62 : Max 1,240 Min 210 Mean 466 Cfsm 0.917 In. 12.46

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 14, Dec. 29 to Jan. 4, Jan. 10-22, Jan. 31 to Feb. 3, Feb. 6-9, 23, 24, Mar. 1-3.

5-5160. Yellow River near Bremen, Ind.

Location.--Lat 41°25', long 86°10', on line between secs. 3 and 10, T. 34 N., R. 3 E., on left bank at downstream side of bridge, 0.5 mile downstream from Bunch ditch, 2 miles southwest of Bremen, and 4 miles upstream from Dausman ditch.

Drainage area.--132 sq mi.

Records available.--August 1955 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 784.63 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Average discharge.--7 years, 97.5 cfs.

Extremes.--Maximum discharge during year, 1,200 cfs Mar. 12 (gage height, 12.94 ft); minimum, 8.0 cfs Sept. 6, 7, 8; minimum gage height, 1.45 ft Aug. 25.
1955-62: Maximum discharge, 1,380 cfs May 13, 1956; maximum gage height, 13.07 ft Mar. 30, 1960; minimum, 6.2 cfs Aug. 23 and Oct. 11, 12, 13, 1957; minimum gage height, 0.81 ft Sept. 10, 1955.

Remarks.--Records good except those for periods of no gage-height record and ice effect, which are poor.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 17 to June 9, Aug. 29 to Sept. 30)

Oct. 1 to Nov. 16		Nov. 17 to Sept. 30	
1.7	21	1.3	6.9
2.0	36	1.7	18
3.0	102	2.0	30
4.0	187	3.0	92
		6.0	389
		13.0	1,210

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	88	32	54	31	69	100	170	54	25	17	12	10
2	84	31	51	30	65	72	140	54	23	19	11	8.7
3	70	35	48	29	61	56	113	54	22	36	11	8.4
4	60	45	78	29	200	47	106	48	22	33	11	* 8.7
5	54	45	210	85	717	* 45	106	45	* 25	24	11	8.4
6	45	37	*121	455	420	40	200	42	27	20	25	8.2
7	42	34	92	633	250	58	200	40	24	18	21	8.2
8	38	* 32	75	430	150	220	150	54	22	17	14	8.2
9	34	30	66	280	90	266	* 160	54	38	16	* 12	9.1
10	* 33	29	63	185	64	609	140	51	99	* 15	12	8.9
11	33	28	60	125	51	609	106	57	140	14	12	8.7
12	33	27	78	90	* 45	1,150	99	54	85	14	11	8.7
13	40	29	66	73	45	1,160	210	60	60	14	11	8.7
14	54	60	56	66	42	861	220	51	45	14	11	9.1
15	48	60	51	92	42	543	150	45	39	14	11	8.9
16	42	166	48	135	51	389	113	* 42	34	14	11	8.9
17	38	200	57	* 70	48	334	99	37	31	14	11	8.9
18	35	113	60	55	75	657	88	34	30	13	11	8.9
19	33	85	54	48	63	909	78	31	27	13	11	8.9
20	33	75	48	44	48	957	66	28	25	16	11	9.1
21	31	66	45	41	45	897	63	34	24	15	11	8.9
22	29	78	45	39	45	957	60	38	22	14	10	9.1
23	29	240	45	37	38	681	57	32	24	14	9.9	8.9
24	29	200	42	36	38	532	51	27	26	13	9.9	8.9
25	29	121	40	35	38	444	51	25	21	13	10	8.9
26	30	99	40	130	182	356	48	28	19	12	11	8.9
27	30	85	40	400	466	290	45	35	19	12	9.9	8.9
28	31	72	37	270	260	250	48	35	18	12	9.1	8.7
29	32	66	36	165	--------	210	48	29	18	12	8.7	8.7
30	32	57	33	110	--------	240	48	29	18	12	8.4	8.4
31	32	---------	32	80	--------	220	--------	27	--------	12	8.7	----------
Total	1,271	2,277	1,871	4,328	3,708	14,159	3,233	1,274	1,052	496	357.6	263.9
Mean	41.0	75.9	60.4	140	132	457	108	41.1	35.1	16.0	11.5	8.80
Cfsm	0.311	0.575	0.458	1.06	1.00	3.46	0.818	0.311	0.266	0.121	0.087	0.067
In.	0.36	0.64	0.53	1.22	1.04	3.99	0.91	0.36	0.30	0.14	0.10	0.07

Calendar year 1961: Max 1,170 Min 15 Mean 112 Cfsm 0.848 In. 11.57
Water year 1961-62: Max 1,160 Min 8.2 Mean 93.9 Cfsm 0.711 In. 9.66

Peak discharge (base, 800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-5	1000	9.65	801				
3-12	2400	12.94	1,200				
3-22	0300	11.46	1,030				

* Discharge measurement made on this day.
Note.--No gage-height record Jan. 8-26, Jan. 28 to Feb. 4, Feb. 6-11. Stage-discharge relation affected by ice Dec. 13, 14, Dec. 28 to Jan. 2, Feb. 24, Mar. 1-4.

5-5165. Yellow River at Plymouth, Ind.

Location.--Lat 41°20'25", long 86°18'16", in NW¼ sec. 13, T. 33 N., R. 2 E., on left bank 50 ft upstream from LaPorte Street footbridge in Plymouth, 1.1 miles downstream from Elmer Seltenright (formerly Baker) ditch and 8.1 miles upstream from Wolf Creek.

Drainage area.--284 sq mi.

Records available.--July 1948 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 764.78 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Aug. 27, 1959, wire-weight gage at same site and datum.

Average discharge.--14 years, 250 cfs.

Extremes.--Maximum discharge during year, 2,340 cfs Mar. 14 (gage height, 12.75 ft, from graph based on gage readings); minimum, 20 cfs Sept. 30 (gage height, 3.94 ft).
1948-62: Maximum discharge, 5,390 cfs Oct. 12, 13, 1954 (gage height, 17.13 ft); minimum, 18 cfs Oct. 24, 1953; minimum gage height observed, 3.49 ft Jan. 11, 14, 1954.

Remarks.--Records fair except those for periods of no gage-height record or ice effect, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 21-29, June 9 to Sept. 30)

3.7	21
4.0	40
4.5	95
5.0	167
9.0	1,050
13.0	2,430

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	243	86	160	b 74	178	278	404	116	67	51	33	33
2	235	81	152	b 73	167	b 175	318	116	64	56	32	31
3	210	85	144	b 75	158	144	278	116	60	70	32	28
4	175	102	160	88	400	130	238	110	60	81	31	32
5	160	116	404	143	1,200	116	238	106	91	69	30	*32
6	144	109	360	672	830	102	338	103	92	60	66	27
7	123	95	258	1,100	580	131	404	100	71	51	72	25
8	110	90	205	1,130	298	404	318	122	62	45	54	25
9	95	83	170	649	210	470	318	122	92	* 43	*44	31
10	88	80	158	b 465	160	954	318	118	183	44	41	32
11	88	77	* 152	b 350	137	1,130	248	129	* 298	45	39	27
12	88	76	175	278	130	* 1,660	219	126	192	45	39	25
13	94	* 81	b 162	200	123	2,200	318	150	130	44	38	25
14	123	152	b 150	160	109	2,200	448	*127	109	44	38	25
15	115	200	b 140	210	109	1,770	338	109	92	45	38	25
16	107	288	137	b 260	116	1,210	* 258	95	82	45	37	24
17	* 100	558	144	b 185	116	787	219	87	76	43	36	24
18	92	360	160	152	160	954	200	82	71	41	34	24
19	86	258	152	130	152	1,290	183	75	69	39	34	24
20	86	219	137	116	* 116	1,560	160	72	67	48	34	23
21	82	200	130	109	116	1,700	144	70	63	67	34	23
22	78	200	123	109	116	1,700	144	81	63	56	34	23
23	76	470	123	90	102	1,630	137	75	80	51	33	23
24	76	580	123	95	b 95	1,320	123	67	86	48	32	23
25	75	404	116	95	109	1,050	116	63	76	46	33	24
26	85	318	116	216	278	834	109	67	66	44	35	24
27	94	258	116	787	858	649	102	78	61	39	35	23
28	91	210	80	787	672	536	106	77	57	36	33	23
29	91	192	b 78	382	---	492	106	74	56	35	32	22
30	91	167	b 75	248	---	492	105	74	53	34	31	21
31	92	---	b 74	200	---	492	---	70	---	34	31	---
Total	3,493	6,195	4,834	9,628	7,795	28,560	6,955	2,977	2,689	1,499	1,165	771
Mean	113	206	156	311	278	921	232	96.0	89.6	48.4	37.6	25.7
Cfsm	0.398	0.725	0.549	1.10	0.979	3.24	0.817	0.338	0.315	0.170	0.132	0.090
In.	0.46	0.81	0.63	1.27	1.02	3.74	0.91	0.39	0.35	0.20	0.15	0.10

Calendar year 1961: Max 2,160 Min 41 Mean 266 Cfsm 0.937 In. 12.70
Water year 1961-62: Max 2,200 Min 21 Mean 210 Cfsm 0.739 In. 10.03

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Oct. 1, 2, 8-12, 15-17, 21-24, Dec. 8-10, Jan. 31 to Feb. 6, Apr. 27-30, May 2-14, May 30 to June 4, June 7, 8. Discharge computed from twice-daily wire-weight gage readings Feb. 14 to Mar. 14.

5-5170. Yellow River at Knox, Ind.

Location.--Lat 41°18', long 86°37', in sec. 14, T. 33 N., R. 2 W., on right bank 40 ft upstream from bridge on U. S. Highway 35 in Knox, 1½ miles downstream from Eagle Creek, and 9 miles upstream from mouth.

Drainage area.--425 sq mi.

Records available.--August 1905 to July 1906, August 1943 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 679.93 ft above mean sea level, datum of 1929, Lafayette supplementary adjustment of 1951 (levels by Indiana Flood Control and Water Resources Commission). August 1905 to July 1906, chain gage at same site at different datum. August 1943 to July 17, 1952, wire-weight gage at same site and datum.

Average discharge.--19 years (1943-62), 390 cfs.

Extremes.--Maximum discharge during year, 2,700 cfs Mar. 15 (gage height, 9.16 ft); maximum gage height, 9.23 ft Jan. 9 (backwater from ice); minimum discharge, 92 cfs Sept. 18-24, 28-30; minimum gage height, 4.75 ft Sept. 19-21.
1905-6, 1943-62: Maximum discharge, 5,660 cfs Oct. 15, 16, 1954 (gage height, 13.75 ft); minimum, 39 cfs Jan. 11, 1957, result of freezeup; minimum gage height, 4.26 ft Jan. 12, 1954.

Remarks.--Records good except those for periods of ice effect and missing gage-height record, which are poor. Low flow is affected by pumpage at times.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 6-16)

Oct. 1 to Feb. 5				Feb. 6 to Sept. 30			
5.2	140	6.5	550	4.7	87	6.5	520
5.5	200	7.0	780	5.0	122	7.0	780
6.0	355	8.0	1,500	5.5	200	8.0	1,500
				6.0	330	9.0	2,500

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	410	215	355	b 180	b 335	a 645	780	288	190	142	116	103
2	450	215	338	b 180	b 315	a 455	660	300	180	150	109	103
3	450	215	320	b 190	b 300	a 385	585	300	172	158	116	103
4	390	215	320	230	355	345	585	300	172	165	116	103
5	355	230	390	245	730	300	520	275	180	172	109	* 103
6	320	230	550	450	1,100	288	540	262	180	165	135	103
7	305	215	510	900	a 650	275	635	262	172	158	165	97
8	275	200	450	1,100	a 420	420	635	275	172	142	* 150	97
9	260	188	390	b 1,200	a 315	635	585	300	180	135	128	103
10	260	176	355	a 1,100	a 275	900	585	300	275	135	122	103
11	245	176	338	a 800	a 250	1,170	540	300	360	* 128	116	103
12	230	176	338	a 610	a 230	1,600	480	315	400	135	109	97
13	230	176	b 315	a 450	a 225	* 2,000	480	315	* 315	135	109	97
14	260	215	*b 300	a 365	a 230	* 2,300	585	315	262	135	109	97
15	275	290	b 300	a 380	a 240	2,500	635	288	225	135	103	97
16	290	* 355	b 300	b 415	a 250	2,200	540	* 262	200	135	103	97
17	*275	490	305	b 450	a 260	1,600	480	250	190	135	103	97
18	245	635	320	* 410	a 360	1,170	440	225	180	128	103	92
19	230	550	338	355	a 450	1,250	* 400	225	172	128	103	92
20	230	450	320	320	a 370	1,500	360	212	172	128	103	92
21	230	410	305	305	a 320	1,800	345	212	165	135	97	92
22	215	410	290	290	*a 280	2,100	330	212	158	150	97	92
23	215	510	290	b 280	262	2,100	315	212	165	150	103	92
24	200	680	290	275	250	2,000	315	200	180	135	97	92
25	200	680	290	260	238	1,700	300	190	172	128	103	97
26	200	590	275	290	300	1,410	288	190	165	122	116	97
27	215	510	275	550	750	1,170	288	200	158	122	116	97
28	230	450	260	780	1,030	960	275	200	150	122	109	92
29	230	410	188	840	---	840	275	200	150	122	103	92
30	230	390	b 185	590	---	840	262	200	150	116	103	92
31	215	---	b 180	b 420	---	780	---	190	---	116	97	---
Total	8,365	10,652	9,980	15,210	11,090	37,638	14,043	7,775	5,962	4,262	3,468	2,914
Mean	270	355	322	491	396	1,214	468	251	199	137	112	97.1
Cfsm	0.635	0.835	0.758	1.16	0.932	2.86	1.10	0.591	0.468	0.322	0.264	0.228
In.	0.73	0.93	0.87	1.34	0.97	3.30	1.23	0.68	0.52	0.37	0.30	0.25

Calendar year 1961: Max 2,500 Min 108 Mean 418 Cfsm 0.984 In. 13.37
Water year 1961-62: Max 2,500 Min 92 Mean 360 Cfsm 0.847 In. 11.49

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

5-5175. Kankakee River at Dunns Bridge, Ind.

Location.--Lat 41°13'17", long 86°57'52", in sec. 15, T. 32 N., R. 5 W., on left bank at downstream side of county highway bridge at Dunns Bridge, 1.8 miles north of Tefft, and 3.5 miles upstream from Davis ditch.

Drainage area.--1,308 sq mi.

Records available.--July 1948 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 649.65 ft above mean sea level, datum of 1929, Lafayette supplementary adjustment of 1951 (levels by Indiana Flood Control and Water Resources Commission). Prior to July 17, 1956, wire-weight gage at same site and datum.

Average discharge.--14 years, 1,277 cfs.

Extremes.--Maximum discharge during year, 3,900 cfs Mar. 25 (gage height, 11.36 ft); minimum, 377 cfs Aug. 31 (gage height, 2.10 ft). 1948-62: Maximum discharge, 5,300 cfs Oct. 22, 1954 (gage height, 13.20 ft); minimum observed, 290 cfs Jan. 14, 1954 (revised), result of freezeup; minimum gage height, 2.00 ft Sept. 17, 1959.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Dec. 12, June 16 to Aug. 6)

2.1	377
2.7	545
5.0	1,210
8.0	2,360
11.0	3,700
11.6	4,000

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,460	909	1,180	900	1,040	1,590	3,330	1,280	965	713	517	461
2	1,420	909	1,120	900	960	1,480	3,190	1,280	909	713	489	517
3	1,420	965	1,080	910	930	1,360	3,050	1,280	909	741	489	489
4	1,350	1,020	1,080	940	1,210	1,250	2,910	1,240	881	769	489	461
5	1,240	1,020	1,180	1,020	1,580	1,200	2,760	1,210	965	769	461	461
6	1,140	1,020	1,280	1,280	1,850	1,260	2,680	1,180	1,020	769	517	433
7	1,120	995	1,320	1,840	1,600	1,310	2,640	1,140	1,020	741	657	433
8	1,060	965	1,280	2,120	1,450	1,410	2,600	1,210	965	713	685	405
9	995	965	1,210	1,950	1,310	1,520	2,560	1,210	965	685	629	433
10	937	937	1,140	1,760	1,220	1,900	2,480	1,210	1,240	629	573	489
11	909	909	1,120	1,640	1,180	2,240	2,400	1,210	1,730	629	545	545
12	881	909	1,120	1,520	1,160	2,640	2,320	1,240	1,840	629	517	517
13	881	909	1,230	1,400	1,150	2,950	2,240	1,320	1,760	629	489	489
14	937	909	1,260	1,200	1,140	* 3,140	2,160	1,320	1,580	657	489	489
15	1,060	937	1,250	1,080	1,100	3,330	2,160	1,240	1,380	657	489	461
16	1,080	1,020	1,210	1,060	1,100	3,420	2,080	1,180	1,210	657	489	461
17	1,060	1,140	1,210	1,060	1,100	3,470	2,000	1,140	1,120	657	*461	433
18	1,020	1,240	1,210	1,040	1,110	3,420	1,920	1,080	1,020	629	461	405
19	995	1,320	1,210	1,010	1,130	3,420	1,800	1,080	937	601	461	405
20	965	* 1,280	1,180	970	1,170	3,470	1,730	1,060	* 909	601	433	405
21	937	1,210	* 1,140	930	1,180	3,560	1,650	1,020	*853	629	433	* 405
22	909	1,210	1,120	905	*1,150	3,660	1,580	1,020	825	657	405	405
23	909	1,280	1,140	900	1,140	3,750	1,540	* 1,020	825	657	391	405
24	* 909	1,420	1,140	900	1,120	3,800	1,460	995	853	657	391	405
25	909	1,500	1,120	*1,140	1,080	3,850	1,420	965	853	601	391	405
26	881	1,540	1,080	1,330	1,140	3,850	* 1,350	965	797	*573	433	405
27	853	1,500	1,080	1,610	1,420	3,800	1,320	995	769	573	461	405
28	881	1,420	1,020	1,800	1,690	3,700	1,320	1,020	741	545	433	405
29	881	1,280	937	1,760	---	* 3,610	1,280	1,020	741	545	405	405
30	909	1,210	910	1,690	---	3,520	1,280	995	741	545	391	405
31	909	---	900	1,220	---	3,420	---	965	---	517	391	---
Total	31,817	33,848	35,457	39,785	34,410	86,300	63,210	35,090	31,323	20,087	14,865	13,242
Mean	1,026	1,128	1,144	1,283	1,229	2,784	2,107	1,132	1,044	648	480	441
Cfsm	0.784	0.862	0.875	0.981	0.940	2.13	1.61	0.865	0.798	0.495	0.367	0.337
In.	0.90	0.96	1.01	1.13	0.98	2.46	1.80	1.00	0.89	0.57	0.42	0.38

Calendar year 1961: Max 3,950 Min 385 Mean 1,265 Cfsm 0.967 In. 13.15
Water year 1961-62: Max 3,850 Min 391 Mean 1,204 Cfsm 0.920 In. 12.50

* Discharge measurement made on this day.

Note.--No gage-height record Jan. 9-24, Jan. 31 to Feb. 4, Feb. 6-22, Mar. 1-10. Stage-discharge relation affected by ice Dec. 13-15, Dec. 30 to Jan. 4, Jan. 24-27.

5-5180. Kankakee River at Shelby, Ind.

Location.--Lat 41°11', long 87°21', in NE¼ sec. 33, T. 32 N., R. 8 W., on left bank 25 ft downstream from Monon Railroad bridge, 1 mile south of Shelby and 9 miles upstream from Beaver Lake Creek.

Drainage area.--1,753 sq mi.

Records available.--October 1922 to September 1962. Monthly discharge only for some periods, published in WSP 1308.

Gage.--Water-stage recorder. Datum of gage is 628.13 ft above mean sea level, datum of 1929. Prior to Dec. 19, 1934, chain gage at highway bridge about 400 ft upstream at same datum.

Average discharge.--40 years, 1,528 cfs.

Extremes.--Maximum discharge during year, 4,840 cfs Mar. 23 (gage height, 10.37 ft); minimum, 455 cfs Aug. 31 (gage height, 2.22 ft). 1922-62: Maximum discharge, 7,200 cfs Dec. 21, 1927 (gage height, 11.40 ft, present datum, site then in use), from rating curve extended above 3,000 cfs by gage-height relation study with that of present site; minimum daily, 260 cfs Jan. 13-15, 1954, result of freezeup; minimum gage height, 0.80 ft (present datum, site then in use) Aug. 4, 5, 1934.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

2.3	480
5.0	1,310
7.0	2,260
10.0	4,440
11.0	5,520

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,920	1,280	1,620	b 1,210	1,400	2,100	4,340	1,530	1,140	925	715	595
2	1,820	1,240	1,580	b 1,210	1,300	1,880	4,160	1,580	1,110	925	685	625
3	1,770	1,310	1,530	b 1,240	1,260	1,750	4,080	1,530	1,080	925	655	625
4	1,720	1,420	1,490	b 1,300	1,490	1,600	3,920	1,530	1,040	955	655	595
5	1,620	1,450	1,580	b 1,400	1,900	1,600	3,760	1,450	1,140	985	655	565
6	1,530	1,450	1,720	b 1,650	2,300	1,630	3,760	1,450	1,240	985	655	535
7	1,450	1,450	1,720	2,260	2,110	1,710	3,620	1,380	1,210	925	745	535
8	1,420	1,380	1,720	2,550	1,900	1,800	3,550	1,420	1,170	925	805	505
9	1,340	1,340	1,670	2,480	1,780	1,920	3,480	1,450	1,170	895	775	535
10	1,310	1,310	1,620	2,310	1,690	2,260	3,340	1,450	1,380	865	745	565
11	1,240	1,310	1,530	2,150	1,590	2,640	3,200	1,450	1,770	835	685	625
12	1,210	1,280	1,620	2,040	1,520	3,410	3,130	1,450	1,980	835	655	625
13	1,210	1,280	1,620	1,800	1,520	3,840	2,990	1,580	1,980	835	625	595
14	1,240	1,240	1,620	1,600	1,500	3,920	2,920	1,580	1,870	865	595	565
15	1,340	1,280	1,620	1,410	1,480	3,920	2,780	1,530	1,670	895	595	565
16	1,420	1,340	1,580	1,390	1,480	3,920	2,640	1,450	1,490	925	595	535
17	* 1,420	1,580	1,530	1,390	1,490	3,920	2,500	1,380	1,380	925	* 565	535
18	1,380	1,670	1,530	1,380	1,500	4,000	* 2,440	1,340	1,310	895	565	535
19	1,380	1,720	* 1,490	1,320	1,510	4,160	2,320	1,340	1,240	835	565	505
20	1,340	1,720	1,450	1,290	* 1,580	* 4,440	2,260	1,310	1,170	835	535	* 480
21	1,340	1,720	1,450	1,250	1,580	4,540	2,090	1,240	* 1,140	865	505	480
22	1,310	1,670	1,420	1,210	1,550	4,740	1,980	1,240	1,080	865	505	480
23	1,310	1,770	1,420	1,210	1,500	4,840	1,920	1,240	1,080	865	505	480
24	1,310	1,870	1,380	1,230	1,450	4,740	1,820	1,210	1,080	865	480	480
25	1,280	1,920	1,380	b 1,500	1,460	4,740	1,770	* 1,170	1,080	* 865	480	480
26	1,280	1,920	1,380	b 1,800	1,550	4,740	1,670	1,170	1,040	805	505	505
27	1,240	* 1,920	1,340	b 2,100	1,750	4,740	1,620	1,210	1,020	775	535	505
28	1,240	1,870	1,310	b 2,300	2,150	4,640	1,580	1,240	985	775	535	505
29	1,240	1,820	b 1,290	b 2,240	----------	* 4,640	1,580	1,230	955	745	505	480
30	1,280	1,720	1,250	b 2,050	----------	4,540	1,580	1,200	955	745	480	480
31	1,280	----------	1,220	1,600	----------	4,540	----------	1,170	----------	715	480	----------
Total	43,190	46,250	46,680	51,870	45,290	107,860	82,800	42,500	37,955	26,875	18,585	16,120
Mean	1,393	1,542	1,506	1,673	1,618	3,479	2,760	1,371	1,265	867	600	537
Cfsm	0.795	0.880	0.859	0.954	0.923	1.98	1.57	0.782	0.722	0.495	0.342	0.306
In.	0.92	0.98	0.99	1.10	0.96	2.28	1.75	0.90	0.81	0.57	0.39	0.34

Calendar year 1961 : Max 4,640 Min 460 Mean 1,619 Cfsm 0.924 In. 12.55
Water year 1961-62 : Max 4,840 Min 480 Mean 1,551 Cfsm 0.885 In. 11.99

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--No gage-height record Dec. 30, 31, Jan. 8-24, Jan. 31 to Feb. 19, Feb. 22 to Mar. 8, May 28-30.

5-5190. Singleton ditch at Schneider, Ind.

Location.--Lat 41°12'44", long 87°26'44", on line between NE¼ sec. 21 and NW¼ sec. 22, T. 32 N., R. 9 W., on left bank 15 ft upstream from bridge on Ackerman Avenue (revised), half a mile upstream from Bruce ditch, 1½ miles downstream from Cedar Creek, and 1 2/3 miles north of Schneider.

Drainage area.--122 sq mi.

Records available.--July 1948 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 623.67 ft above mean sea level, datum of 1929. Prior to Oct. 1, 1949, wire-weight gage at same site at datum 2.00 ft higher. Oct. 1, 1949, to Aug. 13, 1951, wire-weight gage at same site and datum.

Average discharge.--14 years, 95.8 cfs.

Extremes.--Maximum discharge during year, 1,020 cfs Mar. 21 (gage height, 9.47 ft); minimum, 6.8 cfs Aug. 24; minimum gage height, 1.30 ft Sept. 18-20.
1948-62: Maximum discharge 1,120 cfs (revised) Feb. 14, 1959 (gage height, 10.45 ft); minimum, that of Aug. 24, 1962; minimum gage height, 1.14 ft Sept. 13, 1957, result of unusual regulation.

Remarks.--Records good except those for periods of ice effect, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

1.2	5.0
1.4	11
2.0	41
2.5	68
3.0	110
10.0	1,100

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	228	75	79	62	103	109	200	75	43	26	24	11
2	174	72	75	62	96	93	174	72	41	32	24	9.7
3	138	132	72	62	92	84	150	65	41	43	24	9.4
4	119	200	79	66	100	79	150	59	41	36	22	10
5	106	150	119	83	340	73	150	54	68	32	22	9.7
6	92	128	110	307	250	68	174	51	65	28	38	9.4
7	79	110	96	564	190	92	162	51	56	26	32	9.4
8	72	96	75	410	153	256	150	68	51	26	26	9.7
9	65	88	75	245	136	200	150	72	75	24	22	14
10	62	75	72	170	119	396	128	65	119	24	22	14
11	59	72	68	142	106	494	119	65	119	30	20	13
12	56	72	138	118	92	948	110	65	88	34	19	12
13	59	72	123	103	83	738	114	110	68	32	18	11
14	68	72	115	92	88	*536	110	83	62	38	16	11
15	68	72	108	94	96	396	101	65	56	46	*16	11
16	65	142	101	86	114	326	92	59	51	54	17	11
17	*62	200	94	80	138	340	*88	54	46	49	17	11
18	59	150	*88	80	128	508	83	54	43	43	16	11
19	62	119	83	79	*119	*708	75	54	41	38	14	11
20	101	106	75	78	101	738	72	51	38	38	13	*12
21	96	96	72	77	106	828	68	51	*38	38	11	12
22	83	114	72	75	106	843	72	54	36	36	9.4	13
23	79	242	72	73	79	620	68	51	41	36	8.7	13
24	72	*200	72	71	78	508	62	46	38	*35	7.4	14
25	68	162	68	72	79	438	62	*43	35	32	13	15
26	65	138	66	111	119	368	59	43	33	29	11	15
27	62	119	65	168	242	312	59	49	32	28	9.7	15
28	59	101	64	242	174	284	59	49	31	26	9.7	15
29	72	96	63	228	----------	256	59	46	30	26	9.0	14
30	83	88	62	186	----------	270	59	46	28	26	8.7	15
31	83	----------	62	150	----------	242	----------	46	----------	24	9.0	----------
Total	2,616	3,559	2,583	4,436	3,627	12,151	3,179	1,816	1,554	1,035	528.6	361.3
Mean	84.4	119	83.3	143	130	392	106	58.6	51.8	33.4	17.1	12.0
Cfsm	0.692	0.975	0.683	1.17	1.07	3.21	0.869	0.480	0.425	0.274	0.140	0.098
In.	0.80	1.09	0.79	1.35	1.11	3.70	0.97	0.55	0.47	0.32	0.16	0.11

Calendar year 1961: Max 1,010 Min 10 Mean 93.9 Cfsm 0.770 In. 10.45
Water year 1961-62: Max 948 Min 7.4 Mean 103 Cfsm 0.844 In. 11.42

Peak discharge (base, 730 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-12	0400	9.39	1,010				
3-21	2000	9.47	1,020				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 13-17, Dec. 26 to Jan. 4, Jan. 9-27, Feb. 1-4, 6-11, 24, Mar. 1-5.

5-5195. West Creek near Schneider, Ind.

Location.--Lat 41°12'52", long 87°29'36", in NW¼ NE¼ sec. 19, T. 32 N., R. 9 W., on left bank at downstream side of county highway bridge, 1.2 miles upstream from Singleton ditch and 2 3/4 miles northwest of Schneider.

Drainage area.--54.5 sq mi.

Records available.--July 1948 to December 1951, January 1954 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 627.86 ft above mean sea level, datum of 1929 (levels by Soil Conservation Service). Prior to Mar. 17, 1950, staff gage 75 ft below bridge at same datum. Mar. 17, 1950 to Dec. 31, 1951, Jan. 1, 1954 to June 10, 1956, wire-weight gage at same site and datum.

Average discharge.--11 years, 41.1 cfs.

Extremes.--Maximum discharge during year, 950 cfs Mar. 12 (gage height, 5.60 ft); minimum, 6.4 cfs Sept. 11 (gage height, 0.75 ft). 1948-51, 1954-62: Maximum discharge, 1,840 cfs Oct. 10, 11, 1954 (gage height, 8.06 ft, from graph based on gage readings); minimum, 1.3 cfs Feb. 17, 1957 (gage height, 0.32 ft), result of freezeup.

Remarks.--Records good except those for periods of ice effect and no gage-height record, which are poor.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 3)

Oct. 1 to Nov. 3		Nov. 4 to Mar. 21		Mar. 22 to Sept. 30	
0.9	14	0.9	22	0.7	5.0
1.4	38	1.5	66	1.0	15
2.0	81	2.0	121	1.4	35
		3.0	285	1.8	69
		5.0	762	2.5	155
				3.0	228
				3.7	390

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	23	31	22	36	45	69	26	13	10	9.3	8.6
2	50	22	30	22	34	37	59	24	13	15	9.3	7.9
3	40	68	28	22	32	32	53	22	13	18	9.6	7.9
4	34	96	31	24	31	30	49	20	13	14	9.3	8.2
5	30	66	52	31	188	28	50	19	15	12	8.9	7.9
6	27	53	46	217	a 130	27	58	19	18	11	36	7.6
7	24	46	38	285	a 88	44	56	18	15	10	26	7.9
8	22	40	33	172	a 71	108	50	36	14	10	15	7.9
9	20	36	30	a104	a 59	91	50	40	18	9.6	12	9.6
10	19	34	28	a 68	a 51	213	45	34	27	9.9	11	8.9
11	19	32	25	a 50	a 44	350	41	35	36	10	9.9	7.3
12	18	31	48	a 41	a 39	666	38	37	26	8.6	9.6	7.9
13	18	31	45	a 35	37	364	41	58	20	8.6	9.3	8.9
14	18	31	40	a 32	43	204	41	40	17	25	8.9	7.6
15	17	30	37	* 33	47	142	37	30	a 16	23	* 8.9	7.6
16	16	51	35	29	55	114	34	24	a 14	20	8.9	7.9
17	* 16	62	32	28	66	180	* 31	22	a 13	16	8.6	7.9
18	15	47	* 31	28	62	272	30	20	a 13	14	8.6	7.9
19	19	42	30	28	* 52	* 500	28	19	a 12	12	8.6	8.2
20	34	38	28	28	42	344	27	17	a 12	12	8.6	* 7.6
21	32	35	26	27	45	* 522	26	17	a 11	12	7.9	7.9
22	27	47	26	27	41	390	26	17	* 11	12	7.9	8.6
23	24	102	27	26	33	211	25	16	14	* 11	7.9	8.2
24	23	* 75	25	25	32	162	24	* 14	14	11	7.9	8.6
25	21	57	24	25	31	134	22	14	13	11	11	9.3
26	19	49	24	36	79	115	22	14	12	10	9.6	9.3
27	18	42	23	59	150	97	21	15	11	9.6	8.9	9.3
28	18	38	23	80	85	86	22	17	11	9.6	8.6	8.9
29	20	35	22	70	---	80	22	15	11	9.6	8.2	9.6
30	25	32	22	55	---	97	22	14	10	9.6	7.9	8.2
31	25	---	22	41	---	86	---	14	---	9.6	8.2	---
Total	776	1,391	962	1,770	1,703	5,771	1,119	727	456	383.7	330.3	249.1
Mean	25.0	46.4	31.0	57.1	60.8	186	37.3	23.5	15.2	12.4	10.7	8.30
Cfsm	0.459	0.851	0.569	1.05	1.12	3.41	0.684	0.431	0.279	0.228	0.196	0.152
In.	0.53	0.95	0.66	1.21	1.17	3.93	0.76	0.50	0.31	0.26	0.23	0.17

Calendar year 1961: Max 626 Min 4.7 Mean 38.3 Cfsm 0.703 In. 9.58
Water year 1961-62: Max 666 Min 7.3 Mean 42.8 Cfsm 0.785 In. 10.68

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-12	0200	5.60	950				
3-21	2000	4.80	706				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 8, 13-17, Dec. 25 to Jan. 3, Jan. 15-27, Jan. 31 to Feb. 4, Feb. 24, Mar. 1-5.

5-5200. Singleton ditch at Illinoi, Ill.

Location.--Lat 41°11'20", long 87°31'35", in SW¼ NW¼ sec. 8, T. 31 N., R. 15 E., on left bank 50 ft downstream from county highway bridge at Illinoi, beside the Cleveland, Cincinnati, Chicago and St. Louis Railway, and at Indiana-Illinois State line.

Drainage area.--219 sq mi.

Records available.--October 1944 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 620.33 ft above mean sea level, datum of 1929. Prior to Aug. 28, 1953, wire-weight gage at same site and datum.

Average discharge.--17 years, 170 cfs.

Extremes.--Maximum discharge during year, 1,860 cfs Mar. 12 (gage height, 9.26 ft); minimum, 23 cfs Sept. 21 (gage height, 1.43 ft). 1944-62: Maximum discharge, 2,040 cfs Feb. 14, 23, 1959; maximum gage height, 9.94 ft Feb. 23, 1959; minimum, 14 cfs Oct. 1, 1953, Sept. 29, Oct. 6, 8, 25, 1956; minimum gage height, 0.71 ft Oct. 21, 1948.

Remarks.--Records good except those for periods of ice effect and no gage-height record, which are poor.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 19 to June 8)

Oct. 1 to Mar. 21		Mar. 22 to Sept. 30	
2.2	111	1.3	18
3.0	246	1.9	68
5.0	670	2.5	138
9.0	1,770	4.0	444
		8.0	1,470
		9.0	1,770

Discharge in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	346	151	157	114	190	241	400	138	64	56	52	34
2	286	141	149	114	178	192	334	138	59	64	51	32
3	246	200	141	114	170	170	312	124	59	83	50	30
4	209	375	149	123	180	159	270	118	59	73	47	32
5	191	315	218	218	745	152	270	105	88	68	46	32
6	174	255	200	532	554	149	312	105	94	64	84	29
7	149	218	174	920	355	141	312	99	88	59	73	29
8	141	198	160	695	295	306	291	138	78	58	56	29
9	134	172	149	465	252	366	291	153	111	55	51	37
10	126	156	141	340	221	468	260	138	178	54	48	35
11	118	143	134	280	200	670	228	146	197	59	46	31
12	111	141	224	232	179	1,300	218	138	146	73	44	30
13	111	140	212	202	158	1,470	218	207	124	68	41	29
14	126	140	202	176	171	* 945	207	161	105	83	40	27
15	126	142	192	177	200	646	197	131	94	94	* 40	26
16	118	240	182	165	218	532	178	111	88	111	42	26
17	* 111	380	173	153	256	554	* 161	99	83	99	41	26
18	126	308	* 164	150	256	870	161	94	78	88	40	26
19	134	250	157	149	* 227	*1,290	153	88	73	78	39	26
20	166	215	141	149	191	1,290	146	83	68	73	37	* 25
21	200	190	134	148	209	1,440	138	83	* 68	73	35	24
22	209	212	134	144	191	1,530	138	83	64	73	35	26
23	182	400	134	139	166	1,100	131	78	73	73	33	26
24	169	* 362	134	136	166	895	124	* 73	73	* 68	32	26
25	152	286	128	135	160	745	124	68	64	68	41	29
26	138	246	125	192	182	646	118	68	64	64	39	28
27	127	218	122	280	426	554	111	73	64	59	35	29
28	118	191	120	426	366	488	118	78	59	56	33	29
29	135	174	118	375	---	444	118	73	57	57	32	29
30	157	166	117	305	---	466	118	68	57	55	31	29
31	161	---	114	235	---	444	---	68	---	54	31	---
Total	4,997	6,725	4,799	7,983	7,062	20,663	6,157	3,327	2,577	2,160	1,345	866
Mean	161	224	155	258	252	667	205	107	85.9	69.7	43.4	28.9
Cfsm	0.735	1.02	0.708	1.18	1.15	3.05	0.936	0.489	0.392	0.318	0.198	0.132
In.	0.85	1.14	0.82	1.36	1.20	3.52	1.04	0.56	0.44	0.37	0.23	0.15

Calendar year 1961: Max 1,720 Min 18 Mean 174 Cfsm 0.795 In. 10.79
Water year 1961-62: Max 1,530 Min 24 Mean 188 Cfsm 0.858 In. 11.68

Peak discharge (base, 1,100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-12	2200	9.26	1,860				
3-21	2100	9.14	1,800				

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 8, 13-18, Dec. 25 to Jan. 4, Jan. 9-27, Jan. 29 to Feb. 4, Feb. 7-14, 25, Mar. 1-5. No gage-height record Oct. 24 to Nov. 24.

5-5205. Kankakee River at Momence, Ill.

Location.--Lat 41°09'36", long 87°40'07", in NE¼ sec. 24, T. 31 N., R. 13 E., on right bank a quarter of a mile downstream from highway bridge in Momence and 1¼ miles upstream from Tower Creek.

Drainage area.--2,340 sq mi, approximately.

Records available.--February to December 1905, February to July 1906, December 1914 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 610.18 ft above mean sea level, datum of 1929. Prior to Aug. 1, 1938, chain gage at bridge a quarter of a mile upstream at same datum.

Average discharge.--47 years (1915-62), 1,841 cfs.

Extremes.--Maximum discharge during year, 7,180 cfs Mar. 22 (gage height, 3.87 ft); maximum gage height, 5.71 ft Jan. 10 (ice jam); minimum discharge, 506 cfs Sept. 29.
1905-6, 1914-62: Maximum discharge, 10,100 cfs Apr. 25, 1950 (gage height, 5.06 ft); maximum gage height observed, 8.09 ft Jan. 25, 1930, site then in use (ice jam); minimum discharge observed, 306 cfs Sept. 1, 16, 17, 1919.

Remarks.--Records good except those for periods of ice effect, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 2 to Sept. 30)

-0.1	500	1.0	1,620
0	560	2.0	3,320
.5	940	4.0	7,400

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,230	1,760	2,440	1,600	1,900	2,440	5,260	2,220	1,420	1,030	816	614
2	3,050	1,750	2,360	1,600	1,800	2,610	4,960	2,200	1,380	1,250	792	662
3	2,870	1,910	2,250	1,600	1,800	2,610	4,760	2,120	1,360	1,530	776	669
4	2,700	2,250	2,200	1,700	2,200	2,520	4,660	2,050	1,320	1,350	753	669
5	2,520	2,180	2,240	2,500	* 3,000	2,240	4,560	1,990	1,380	1,280	760	641
6	2,440	2,130	2,270	3,000	3,100	2,020	4,560	1,920	1,460	1,220	1,060	614
7	2,270	2,100	2,270	3,300	3,100	* 1,960	4,460	1,880	1,520	1,170	* 962	596
8	2,130	2,020	2,270	3,800	2,800	2,270	4,360	1,960	1,530	1,090	930	584
9	2,000	1,920	2,270	4,000	2,500	2,520	4,260	1,970	1,590	1,040	910	608
10	1,910	1,880	2,270	3,700	2,300	2,960	* 4,160	2,250	1,800	973	870	614
11	1,800	1,800	2,220	3,200	2,100	4,070	3,980	2,440	2,040	* 1,020	816	627
12	1,720	1,760	* 2,250	2,700	2,000	5,670	3,880	2,360	2,170	1,180	760	641
13	1,670	1,730	2,400	2,500	2,100	5,670	3,780	2,270	* 2,360	1,170	739	641
14	1,670	1,720	2,600	2,400	2,300	5,670	3,690	2,250	2,360	1,220	718	614
15	1,670	1,680	2,360	2,300	2,400	5,460	3,500	2,170	2,360	1,410	697	602
16	1,730	1,830	2,200	2,100	2,200	5,260	3,410	* 2,050	2,200	1,580	690	596
17	*1,800	2,130	2,170	2,000	2,000	5,060	3,320	1,960	2,000	1,520	676	578
18	1,800	2,240	2,150	2,000	2,000	5,670	3,140	1,860	1,810	1,380	662	566
19	1,840	2,360	2,100	1,900	2,000	6,300	3,050	1,800	1,670	1,240	655	566
20	1,960	2,360	2,040	1,900	2,200	6,300	2,960	1,760	1,560	1,190	641	548
21	1,990	* 2,360	1,970	1,850	2,120	6,520	2,870	1,720	1,500	1,150	627	536
22	1,920	2,440	1,940	1,800	2,080	6,960	2,780	1,680	1,410	1,150	602	536
23	1,880	2,780	1,850	1,750	2,020	6,520	2,610	1,640	1,400	1,130	590	536
24	1,830	2,780	1,850	* 1,700	1,890	6,300	2,520	1,560	1,360	1,120	584	536
25	1,800	2,780	1,800	1,700	1,880	6,090	2,440	1,520	1,310	1,050	608	536
26	1,720	2,780	1,750	1,800	1,970	5,670	2,360	1,480	1,250	995	608	536
27	1,680	2,700	1,700	1,900	2,360	5,670	2,270	1,520	1,210	984	596	536
28	1,640	2,700	1,500	2,100	2,440	5,460	2,270	1,530	1,140	910	596	536
29	1,650	2,610	1,350	2,400	---------	5,260	2,220	1,530	1,100	910	* 596	506
30	1,730	2,520	1,500	2,300	---------	5,260	2,200	1,530	1,040	880	572	536
31	1,750	----------	1,550	2,100	---------	5,260	----------	1,480	----------	840	566	----------
Total	62,370	65,960	64,090	71,200	62,560	144,250	105,250	58,670	48,010	35,962	22,228	17,580
Mean	2,012	2,199	2,067	2,297	2,234	4,653	3,508	1,893	1,600	1,160	717	586
Cfsm	0.860	0.940	0.883	0.982	0.955	1.99	1.50	0.809	0.684	0.496	0.306	0.250
In.	0.99	1.05	1.02	1.13	0.99	2.29	1.67	0.93	0.76	0.57	0.35	0.28

Calendar year 1961 : Max 6,520 Min 550 Mean 1,998 Cfsm 0.854 In. 11.59
Water year 1961-62 : Max 6,960 Min 506 Mean 2,077 Cfsm 0.888 In. 12.03

* Discharge measurement made on this day.
Note.--Stage-discharge relation affected by ice Dec. 13, 14, Dec. 23 to Feb. 19 (no gage-height record Jan. 11-21, Jan. 31 to Feb. 4).

5-5210. Iroquois River at Rosebud, Ind.

Location.--Lat 41°02', long 87°11', in SW¼ sec. 24, T. 30 N., R. 7 W., 100 ft downstream from bridge on county road, half a mile north of Rosebud, half a mile downstream from confluence of Swain and Dexter ditches, 1.5 miles upstream from Davidson ditch, and 2 miles east of Parr.

Drainage area.--30.3 sq mi.

Records available.--July 1948 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 661.47 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 1, 1953, wire-weight gage on downstream side of county bridge at same datum.

Average discharge.--14 years, 24.9 cfs.

Extremes.--Maximum discharge during year, 197 cfs Jan. 7, Mar. 21; maximum gage height, 5.97 ft Mar. 21; minimum discharge, 3.3 cfs Sept. 23 (gage height, 1.05 ft).
1948-62: Maximum discharge, 422 cfs Apr. 4, 1950; maximum gage height, 8.86 ft Feb. 10, 1959; minimum discharge, 1.5 cfs Dec. 30, 1955 (gage height, 0.68 ft), result of freezeup.

Remarks.--Records fair except those for periods of ice effect or no gage-height record, which are poor.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

Oct. 1 to Feb. 10		Feb. 11 to Sept. 30	
1.4	9.3	1.1	3.9
3.0	54	1.5	9.7
5.0	138	2.0	20
6.0	197	3.0	51
		6.0	197

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30	17	28	26	32	45	55	30	15	7.2	9.7	6.2
2	26	18	27	24	30	38	45	28	13	17	9.2	5.2
3	20	28	27	24	29	33	42	25	12	55	8.6	4.7
4	17	42	36	22	140	28	42	22	12	25	8.4	4.8
5	14	34	54	43	110	25	47	20	12	16	8.1	4.9
6	13	28	42	138	78	23	63	20	12	12	11	4.8
7	12	26	36	179	45	45	59	19	11	11	9.1	4.4
8	11	22	32	118	40	80	51	62	10	10	8.1	4.3
9	11	21	30	80	35	70	51	63	13	8.7	7.6	5.3
10	10	22	28	58	30	110	47	59	47	8.0	7.4	4.9
11	10	21	27	48	27	100	42	83	43	23	7.2	4.6
12	9.9	20	48	40	25	140	38	63	28	45	7.0	4.4
13	13	20	45	36	23	* 120	42	47	21	24	6.9	4.3
14	14	21	33	37	27	94	40	37	18	24	6.9	4.9
15	13	21	30	38	30	67	36	31	16	40	6.9	4.7
16	12	54	27	39	35	55	32	26	14	49	6.9	4.4
17	11	62	28	38	33	51	32	24	13	32	6.8	4.3
18	10	* 42	30	37	52	63	32	24	12	24	6.6	4.0
19	11	36	30	36	45	95	31	26	11	19	6.5	4.0
20	14	33	27	34	50	103	28	26	11	20	6.3	4.2
21	14	28	27	34	45	* 161	26	22	10	43	6.2	4.2
22	13	56	* 27	32	* 37	167	26	21	10	26	* 5.6	4.2
23	13	94	32	30	31	123	* 24	* 20	9.9	21	5.2	3.9
24	* 13	70	28	27	35	103	22	19	9.5	* 19	5.3	4.2
25	13	51	28	26	30	87	21	15	8.9	16	5.8	4.4
26	12	45	28	* 40	100	75	21	16	8.4	13	5.5	4.3
27	11	39	28	70	80	67	20	20	* 8.0	11	4.9	4.2
28	12	34	27	51	60	59	20	22	7.8	11	4.7	* 4.3
29	17	32	27	42	---	59	28	22	7.6	11	4.7	4.4
30	18	30	26	38	---	* 75	25	20	7.6	11	4.4	4.9
31	18	---	26	34	---	67	---	18	---	10	4.8	---
Total	435.9	1,067	969	1,519	1,334	2,428	1,088	950	431.7	661.9	212.3	136.3
Mean	14.1	35.6	31.3	49.0	47.6	78.3	36.3	30.6	14.4	21.4	6.85	4.54
Cfsm	0.465	1.17	1.03	1.62	1.57	2.58	1.20	1.01	0.475	0.706	0.226	0.150
In.	0.54	1.30	1.19	1.87	1.64	2.97	1.34	1.16	0.53	0.81	0.26	0.17

Calendar year 1961: Max 191 Min 3.0 Mean 21.2 Cfsm 0.700 In. 9.50
Water year 1961-62: Max 179 Min 3.9 Mean 30.8 Cfsm 1.02 In. 13.78

Peak discharge (base, 150 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-7	0130	5.96	197	About 3-12	Unknown	Unknown	About 180
About 2-4	Unknown	5.34	155	3-21	1930	5.97	197

* Discharge measurement made on this day.
Note.--No gage-height record Dec. 15, Feb. 2 to Mar. 14. Stage-discharge relation affected by ice Dec. 25-29, Jan. 9-20, 22-26, Jan. 30 to Feb. 1.

GPO 802-181

5-5220. Iroquois River near North Marion, Ind.

Location.--Lat 40°58', long 87°07', in S½ sec. 9, T. 29 N., R. 6 W., on left bank at upstream side of county highway bridge, 1¼ miles upstream from Ryan ditch, 2 miles east of North Marion, and 3½ miles northeast of Rensselaer.

Drainage area.--134 sq mi.

Records available.--December 1948 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 646.68 ft above mean sea level, datum of 1929. Prior to Sept. 6, 1955, wire-weight gage at same site and datum.

Average discharge.--13 years (1949-62) 119 cfs.

Extremes.--Maximum discharge during year, 806 cfs Mar. 22 (gage height, 10.78 ft); minimum, 9.2 cfs Aug. 24 (gage height, 1.34 ft). 1948-62: Maximum discharge, 2,040 cfs June 10, 1958 (gage height, 15.09 ft); minimum, 1.8 cfs Nov. 28, 1956, result of freezeup.

Remarks.--Records good except those for periods of ice effect, which are fair. Water is diverted from Oliver ditch, a tributary, into Ryan ditch. Ryan ditch enters the Iroquois River 1½ miles below this station.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 16 to May 6)

Oct. 1 to Jan. 17 Apr. 21 to Sept. 30		Jan. 18 to Apr. 20	
1.3	8.3	3.2	105
1.6	16	4.0	160
1.8	24	6.0	320
2.0	33	11.0	830
3.0	84		
6.0	320		
10.0	710		

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	195	96	139	b 96	b 140	272	320	110	54	18	19	20
2	195	96	124	b 94	b 130	208	280	103	47	36	18	20
3	147	131	117	b 92	b 120	184	232	96	44	139	19	23
4	110	219	124	b 110	216	160	216	90	42	78	16	24
5	96	179	284	163	500	124	232	84	54	52	18	17
6	84	139	275	437	500	111	272	75	57	40	37	16
7	72	117	219	677	347	240	338	70	47	33	37	14
8	67	103	155	710	232	419	312	163	47	27	28	13
9	62	103	147	b 500	184	392	296	211	54	23	24	18
10	57	90	131	b 350	168	530	264	179	147	16	22	20
11	57	84	124	b 250	160	560	248	219	259	33	18	16
12	57	84	227	b 200	124	666	200	203	171	171	19	16
13	62	84	267	b 170	124	* 710	208	171	110	96	17	15
14	78	139	211	b 150	145	611	200	124	84	75	11	19
15	96	131	139	b 150	160	473	192	110	70	96	12	15
16	90	227	124	b* 160	176	347	168	90	60	131	12	14
17	78	329	130	b 160	192	280	145	84	54	103	12	12
18	* 70	275	147	b 150	176	304	* 160	84	47	75	15	14
19	70	211	131	b 140	272	401	145	117	40	60	15	13
20	96	* 187	* 124	138	* 240	* 530	131	96	27	63	13	13
21	96	171	124	b 130	240	677	124	78	26	139	9.9	13
22	84	211	* 124	b 120	208	794	117	90	28	103	* 9.9	14
23	78	410	124	b 120	160	770	117	* 84	35	75	10	13
24	78	437	124	b 120	176	688	103	72	47	62	9.9	11
25	78	374	b 120	b 110	152	580	96	57	35	* 52	14	14
26	75	293	b 120	b 150	272	482	103	72	21	44	18	13
27	67	235	b 110	383	482	392	90	84	* 19	33	18	13
28	72	187	110	356	410	329	84	90	17	28	16	* 12
29	90	163	b 100	280	---	296	96	84	15	31	13	12
30	103	147	b 100	224	---	320	96	72	16	28	11	12
31	110	---	b 98	b 170	---	374	---	62	---	23	12	---
Total	2,770	5,652	4,593	7,060	6,406	13,224	5,585	3,324	1,774	1,983	523.7	459
Mean	89.4	188	148	228	229	427	186	107	59.1	64.0	16.9	15.3
Cfsm	0.667	1.40	1.10	1.70	1.71	3.19	1.39	0.799	0.441	0.478	0.126	0.114
In.	0.77	1.56	1.27	1.96	1.78	3.68	1.55	0.92	0.49	0.55	0.15	0.13

Calendar year 1961: Max 895 Min 10 Mean 120 Cfsm 0.896 In. 12.13
Water year 1961-62: Max 794 Min 9.9 Mean 146 Cfsm 1.09 In. 14.81

* Discharge measurement made on this day.
b Stage-discharge relation affected by ice.
Note.--Computed from twice-daily staff-gage readings Oct. 1-17 and from twice-daily wire-weight gage readings Oct. 18 to June 13.

5-5225. Iroquois River at Rensselaer, Ind.

Location.--Lat 40°56', long 87°08', in NE¼ NW¼ SE¼ sec. 29, T. 29 N., R. 6 W., on right bank, 20 ft downstream from bridge on State Highway 114, three-quarters of a mile east of Rensselaer, 1.5 miles downstream from Ryan ditch and 5.5 miles upstream from Big Slough Creek.

Drainage area.--194 sq mi.

Records available.--July 1948 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 642.29 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to July 8, 1949, wire-weight gage at same site and datum.

Average discharge.--14 years, 159 cfs.

Extremes.--Maximum discharge during year, 1,170 cfs Mar. 22 (gage height, 11.90 ft); minimum, 11 cfs Aug. 31 (gage height, 3.20 ft). 1948-62: Maximum discharge, 2,550 cfs June 10, 1958 (gage height, 16.54 ft); minimum, 4.9 cfs Oct. 24, 1956; minimum gage height, 2.73 ft Sept. 15, 1948.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are fair.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)

3.2	11
3.7	32
4.3	69
5.0	119
6.0	235
8.0	495
11.0	990
12.0	1,190

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	222	119	183	b 94	b 140	339	417	111	72	20	21	23
2	222	111	158	b 90	b 130	235	* 339	111	62	35	19	21
3	170	147	158	b 90	b 120	183	274	104	59	147	20	23
4	137	261	* 193	b 115	293	158	248	97	* 59	90	18	30
5	111	235	391	b 150	704	137	287	90	66	56	19	22
6	104	* 170	378	656	*a 620	* 119	404	86	69	43	38	19
7	90	147	300	990	a 400	299	443	80	62	35	43	17
8	83	128	b 200	* 990	a 270	551	391	* 191	56	28	29	15
9	* 76	119	b 180	a 800	196	523	365	261	66	24	25	19
10	72	111	170	a 500	158	704	326	222	186	19	22	24
11	69	104	158	a 350	137	752	261	274	313	25	21	19
12	66	104	289	a 250	119	950	235	248	209	186	20	18
13	72	111	b 300	a 190	119	970	235	196	128	117	19	17
14	86	209	b 220	a 160	147	* 818	235	158	97	86	14	21
15	104	196	b 160	b 150	170	610	209	128	83	104	14	18
16	104	305	147	b 160	183	443	183	111	69	147	14	16
17	90	443	b 150	b 160	196	365	170	97	62	119	15	14
18	83	378	b 160	b 150	196	378	158	104	56	86	17	15
19	83	287	b 160	b 140	352	523	147	137	47	66	18	14
20	104	248	b 150	b 130	300	672	128	111	31	66	16	14
21	119	209	b 140	b 120	261	970	119	97	28	158	13	15
22	104	316	b 140	b 120	235	1,170	119	104	30	119	* 12	15
23	97	565	b 130	b 120	183	1,090	119	97	33	90	13	15
24	97	580	b 130	b 120	148	950	104	86	53	72	13	14
25	104	495	b 120	119	170	784	104	69	39	* 59	17	15
26	97	404	b 120	188	373	640	104	104	25	50	21	* 15
27	83	326	b 110	391	672	509	97	119	* 20	36	21	15
28	83	261	b 110	378	565	430	90	128	21	30	18	14
29	104	222	b 110	300	---	378	104	111	19	30	15	13
30	119	196	b 100	b 230	---	417	104	97	20	30	13	13
31	128	---	b 100	b 170	---	469	---	83	---	24	14	---
Total	3,283	7,507	5,515	9,571	7,557	17,536	6,519	4,012	2,140	2,197	592	523
Mean	106	250	178	276	270	566	217	129	71.3	70.9	19.1	17.4
Cfsm	0.546	1.29	0.918	1.42	1.39	2.92	1.12	0.665	0.368	0.365	0.098	0.090
In.	0.63	1.44	1.06	1.64	1.45	3.37	1.25	0.77	0.41	0.42	0.11	0.10

Calendar year 1961: Max 1,330 Min 15 Mean 165 Cfsm 0.851 In. 11.54
Water year 1961-62: Max 1,170 Min 12 Mean 181 Cfsm 0.933 In. 12.65

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

5-5230. Bice ditch near South Marion, Ind.

Location.--Lat 40°52', long 87°06', on line between secs. 15 and 22, T. 28 N., R. 6 W., on left bank at upstream side of bridge on State Highway 16, 2 miles upstream from Big Slough Creek, 3 miles southeast of South Marion, and 5 miles southeast of Rensselaer.

Drainage area.--22.6 sq mi.

Records available.--December 1948 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 653.30 ft above mean sea level, datum of 1929. Prior to Aug. 5, 1955, wire-weight gage at same site and datum.

Average discharge.--13 years (1949-62), 18.1 cfs.

Extremes.--Maximum discharge during year, 418 cfs Mar. 21 (gage height, 9.21 ft); minimum daily, 0.2 cfs Sept. 21-23, 28-30. 1948-62: Maximum discharge, 780 cfs June 13, 1958 (gage height, 12.02 ft); no flow at times during September 1952 and August 1955.

Remarks.--Records poor.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.2	15	11	1.6	a 6.0	b 19	24	20	14	3.3	1.4	0.4
2	3.3	13	7.7	2.5	a 4.0	b 12	* 19	15	13	22	1.3	.3
3	2.2	26	8.6	3.8	4.2	b 7.0	17	12	12	95	1.2	.3
4	1.6	26	* 20	5.3	94	5.6	18	10	12	50	1.1	.3
5	1.5	15	32	53	134	* 4.8	24	8.0	* 16	30	1.0	.4
6	2.2	* 9.4	18	188	*b 31	4.6	42	7.0	17	10	2.4	.3
7	2.3	7.4	9.0	156	a 14	31	32	6.0	13	7.0	2.2	.3
8	2.7	6.5	4.2	* 86	a 7.0	40	24	* 25	11	5.0	1.9	.3
9	* 2.3	9.7	5.3	a 40	a 5.0	63	33	19	14	3.5	1.6	.4
10	3.5	12	4.8	a 17	4.5	82	23	45	15	6.0	1.3	.4
11	6.2	15	7.7	a 8.0	4.2	86	18	100	18	13	1.0	.3
12	7.7	19	33	a 4.0	5.0	114	16	50	10	28	.8	.3
13	8.3	21	14	a 2.5	7.7	66	19	35	6.0	15	.7	.4
14	8.6	23	4.8	a 2.0	11	* 46	15	25	5.0	32	.6	.4
15	7.4	14	2.3	a 14	10	33	13	20	4.0	56	.5	.3
16	7.7	53	2.2	a 8.0	10	28	11	15	2.5	58	.5	.3
17	11	37	3.5	a 5.0	10	26	11	10	1.6	45	.4	.3
18	12	20	6.5	a 3.5	15	30	11	9.0	1.1	31	.4	.3
19	13	15	6.8	a 3.1	b 26	58	10	10	.8	22	.4	.3
20	13	12	7.4	2.7	17	58	9.0	9.0	.8	15	.4	.3
21	13	8.0	9.0	2.5	b 17	324	8.0	8.0	.8	21	* .3	.2
22	15	52	10	3.3	b 14	171	7.6	7.0	.8	14	.3	.2
23	16	94	12	2.9	b 8.0	94	7.4	6.0	.8	10	.3	.2
24	18	54	10	3.1	b 5.0	74	7.0	5.0	.8	7.0	.3	.3
25	23	33	9.7	3.5	8.0	58	6.6	4.6	.8	4.0	.4	.3
26	20	23	11	66	135	46	6.0	15	* .8	* 2.8	.4	.3
27	20	15	9.0	98	82	40	6.0	25	.7	2.4	.4	.3
28	21	9.7	8.0	a 50	b 32	35	8.0	28	.7	2.2	.4	* .2
29	21	7.7	7.7	a 30	--------	30	10	22	1.0	2.0	.3	.2
30	20	6.5	3.5	b 14	--------	42	13	18	3.3	1.8	.3	.2
31	19	--------	2.0	a 7.0	--------	32	--------	16	--------	1.6	.3	--------
Total	328.7	671.9	300.7	886.3	720.6	1,760.0	468.6	604.6	197.3	615.6	24.8	9.0
Mean	10.6	22.4	9.70	28.6	25.7	56.8	15.6	19.5	6.58	19.9	0.80	0.30
Cfsm	0.469	0.991	0.429	1.27	1.14	2.51	0.690	0.863	0.291	0.881	0.035	0.013
In.	0.54	1.11	0.49	1.46	1.19	2.89	0.77	0.99	0.32	1.02	0.04	0.01

Calendar year 1961 : Max 204 Min 0.2 Mean 13.5 Cfsm 0.597 In. 8.13
Water year 1961-62 : Max 324 Min 0.2 Mean 18.0 Cfsm 0.796 In. 10.83

Peak discharge (base, 340 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-21	1230	9.21	418				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.
Note.--Stage-discharge relation indefinite due to beaver activity Apr. 19 to Sept. 30.

5-5235. Big Slough Creek near Collegeville, Ind.

Location.--Lat 40°52', long 87°09', in SW¼ NW¼ sec. 7, T. 28 N., R. 6 W., on right bank on downstream side of bridge on State Highway 53, 1½ miles south of Collegeville, 2½ miles upstream from mouth, and 2 3/4 miles downstream from Bice ditch.

Drainage area.--84.1 sq mi.

Records available.--July 1948 to December 1951, October 1952 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 634.75 ft above mean sea level, datum of 1929. Prior to Aug. 5, 1955, wire-weight gage and Aug. 5, 1955, to Oct. 8, 1958, water-stage recorder, at same site at datum 3.00 ft higher.

Average discharge.--13 years, 67.7 cfs.

Extremes.--Maximum daily discharge during year, 1,400 cfs Mar. 21; maximum gage height, 11.88 ft Mar. 22 (backwater from Iroquois River); minimum, 4.0 cfs Sept. 27-30 (gage height, 3.81 ft).
1948-51, 1952-62: Maximum discharge, 2,030 cfs June 13, 1958 (gage height, 13.7 ft, from graph based on gage readings); minimum, 1.0 cfs Oct. 15, 23, 1953.

Remarks.--Records fair except those above 150 cfs and for periods of no gage-height record, ice effect or backwater from Iroquois River, which are poor.

Rating table, water year 1961-62, except periods of ice effect and backwater from Iroquois River
(gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 22-25)

Oct. 1 to Mar. 21

3.9	16	7.0	390
4.0	20	8.0	560
4.4	43	9.0	760
5.0	110	10.0	1,010
6.0	250	11.0	1,400

Mar. 22 to Sept. 30

3.8	3.7	4.6	40	7.0	385
4.0	9.3	5.0	90	8.0	560
4.3	22				

Note.--Same as preceding table above 8.0 ft.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	65	37	60	b 42	b 80	c 160	c 95	132	27	11	10	6.6
2	53	33	54	b 41	b 66	b 110	c 90	111	24	31	10	5.8
3	42	62	49	b 41	b 60	b 90	90	75	23	c 120	9.7	5.5
4	35	110	90	79	c 250	b 77	90	47	21	c 80	9.0	5.8
5	30	69	236	200	c 600	b 67	125	36	24	c 55	8.7	6.3
6	26	51	166	628	c 520	b 58	230	31	24	38	14	5.8
7	24	44	117	c 640	c 250	159	202	28	23	28	12	5.3
8	22	39	b 70	c 470	b 140	236	146	134	20	23	10	5.3
9	21	34	60	a 320	b 90	305	174	139	47	20	8.7	6.3
10	20	31	58	a 240	b 62	c 380	111	153	58	17	8.1	6.0
11	20	29	55	a 180	b 59	c 500	80	c 250	57	22	7.8	5.3
12	19	34	152	a 140	79	c 600	68	c 170	37	70	7.5	5.0
13	20	47	b 180	b 110	82	c 300	90	c 120	28	37	7.2	5.8
14	21	110	b 90	b 100	73	c* 170	73	c 80	23	62	7.2	7.5
15	22	82	b 70	b 120	56	c* 140	54	60	20	c 95	7.2	5.5
16	20	194	b 67	b 110	57	c 140	43	40	18	c 120	7.2	5.0
17	19	208	b 72	b 95	58	c 130	42	32	16	c 85	6.9	4.7
18	18	c* 96	* 61	b 83	71	c 120	39	31	15	63	6.6	4.7
19	20	c 84	59	b 73	152	c 180	36	38	14	37	6.3	4.5
20	24	c 74	57	b 67	152	c 300	32	31	14	29	6.0	4.5
21	24	68	56	b 61	90	*1,400	30	26	13	37	5.8	4.2
22	22	c 140	b 53	b 56	b* 77	c1,200	31	22	13	29	* 5.5	4.2
23	* 22	c 300	b 51	b 52	b 75	c1,000	31	20	13	28	5.5	4.2
24	22	c 240	b 50	b 48	b 74	c 600	29	* 18	12	23	5.5	4.7
25	30	c 190	b 48	b 45	b 74	c 320	28	19	12	* 19	7.2	5.3
26	29	c 150	b 47	b* 100	c 300	c* 200	* 25	65	12	16	7.8	* 4.7
27	24	c 110	b 46	c 330	c 360	c 160	24	82	* 11	15	6.9	4.2
28	25	90	b 45	c 280	c 290	c 140	25	97	11	13	6.0	4.2
29	35	73	b 44	c 200	---	c 120	28	65	11	13	5.8	4.2
30	40	64	b 43	c 130	---	c 110	62	42	12	12	5.5	4.0
31	45	---	b 43	b 100	---	c 100	---	32	---	11	5.8	---
Total	859	2893	2349	5181	4297	9572	2223	2226	653	1259	237.4	155.1
Mean	27.7	96.4	75.8	167	153	309	74.1	71.8	21.8	40.6	7.66	5.17
Cfsm	0.329	1.15	0.901	1.99	1.82	3.67	0.881	0.854	0.259	0.483	0.091	0.061
In.	0.38	1.28	1.04	2.29	1.90	4.23	0.98	0.98	0.29	0.56	0.10	0.07

Calendar year 1961 : Max 718 Min 4.1 Mean 61.2 Cfsm 0.728 In. 9.87
Water year 1961-62 : Max 1,400 Min 4.0 Mean 87.4 Cfsm 1.04 In. 14.10

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.
c Backwater from Iroquois River.

5-5240. Carpenter Creek at Egypt, Ind.

Location.--Lat 40°52', long 87°12', on line between SW¼ sec. 15 and NW¼ sec. 22, T. 28 N., R. 7 W., on left bank on downstream side of bridge on State Highway 16, 0.5 mile north of Egypt, 2 3/4 miles upstream from mouth and 4 miles southwest of Collegeville.

Drainage area.--48.1 sq mi.

Records available.--July 1948 to December 1951, October 1952 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 641.79 ft above mean sea level, datum of 1929. Prior to Sept. 6, 1955, wire-weight gage at same site and datum.

Average discharge.--13 years, 38.5 cfs.

Extremes.--Maximum discharge during year, 1,040 cfs Mar. 21 (gage height, 9.87 ft); minimum, 0.1 cfs Sept. 20 (gage height, 1.57 ft). 1948-51, 1952-62: Maximum discharge, 3,720 cfs June 10, 1958 (gage height, 11.66 ft); no flow at times during 1953, 1955-56, 1959.

Remarks.--Records fair except those for periods of ice effect and no gage-height record, which are poor.

Rating table, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-11, Nov. 17-21, May 23-27)

1.6	0.2	3.5	40
1.7	.5	4.0	57
1.8	1.0	5.0	104
2.0	2.6	7.0	238
2.2	5.2	8.0	340
2.5	11	9.0	616
3.0	25	10.0	1,100

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	6.6	19	b 7.2	b 50	a 60	57	28	19	3.1	2.5	0.6
2	11	5.8	17	b 7.2	b 40	a 40	44	25	15	24	2.2	.5
3	7.4	18	14	b 7.2	b 38	a 30	37	22	13	256	2.1	.3
4	5.2	31	34	b 10	181	a 25	37	17	12	119	2.0	.4
5	3.9	20	51	68	a 600	a 22	44	14	12	57	1.6	.6
6	2.9	13	36	360	a 300	a 20	74	13	13	32	2.5	.5
7	2.3	10	28	a 250	a 160	55	69	11	13	20	2.3	.4
8	2.0	8.1	17	a 180	a 100	116	57	33	8.9	14	1.7	.3
9	1.7	6.5	b 15	a 120	a 70	103	61	36	11	8.9	1.1	.4
10	1.6	5.2	b 14	a 90	a 45	222	48	126	30	6.1	.9	.5
11	1.9	4.6	14	a 70	a 44	191	42	592	42	15	.7	.3
12	2.2	5.4	50	a 50	51	294	36	230	22	61	.7	.2
13	4.4	22	b 30	a 40	53	170	36	144	16	26	.5	.3
14	4.6	22	b 20	a 35	44	* 89	28	99	12	43	.5	.6
15	4.0	18	b 17	a 45	53	57	25	69	9.6	113	.5	.3
16	2.7	61	b 16	a 38	49	42	20	51	8.1	144	.4	.3
17	2.7	49	b 20	a 33	37	36	20	40	6.8	84	.4	.2
18	2.2	* 30	26	a 28	32	44	20	34	5.8	94	.4	.2
19	2.7	22	22	a 25	86	100	18	30	5.2	46	.3	.2
20	3.9	17	18	a 22	47	120	15	24	4.6	28	.3	.2
21	3.8	13	*b 15	a 20	b 33	745	15	19	4.4	40	* .3	.2
22	3.2	73	b 14	*a 18	b 23	441	14	16	3.8	30	.2	.2
23	* 2.9	150	b 13	b 18	*b 20	247	14	13	3.5	25	.2	.2
24	2.6	89	b 12	b 20	a 19	191	12	* 11	2.9	16	.2	.2
25	2.9	57	b 11	b 30	a 19	150	12	9.3	2.4	12	.5	.3
26	2.7	46	b 10	119	a 400	*114	11	35	* 2.2	* 8.5	1.0	* .3
27	1.7	36	b 9.5	380	a 200	94	*10	40	2.2	6.5	.4	.3
28	2.0	30	b 9.0	a 220	a 100	84	11	57	1.8	5.6	.3	.2
29	5.0	25	b 8.3	a 160	---	69	13	42	1.7	4.8	.3	.2
30	7.0	22	b 7.8	b 100	---	84	12	31	2.2	3.8	.3	.2
31	8.9	---	b 7.4	b 70	---	74	---	24	---	3.2	.3	---
Total	128.0	916.2	595.0	2640.6	2894	4.129	912	1935.3	306.1	1349.5	27.6	9.6
Mean	4.13	30.5	19.2	85.2	103	133	30.4	62.4	10.2	43.5	0.89	0.32
Cfsm	0.086	0.634	0.399	1.77	2.14	2.76	0.632	1.30	0.212	0.904	0.019	0.0066
In.	0.10	0.71	0.46	2.04	2.23	3.18	0.71	1.50	0.24	1.04	0.02	0.007

Calendar year 1961: Max 431 Min 0.2 Mean 31.1 Cfsm 0.647 In. 8.71
Water year 1961-62: Max 745 Min 0.2 Mean 43.4 Cfsm 0.902 In. 12.24

Peak discharge (base, 600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-5	0500	9.50	834				
2-26	Unknown	9.00	616				
3-21	1600	9.87	1,040				
5-11	0330	9.68	934				

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

5-5245. Iroquois River near Foresman, Ind.

Location.--Lat 40°52', long 87°18', on line between secs. 14 and 15, T. 28 N., R. 8 W., on right bank at downstream side of bridge on State Highway 55, a quarter of a mile north of intersection of Highways 16 and 55, 0.6 mile west of Foresman, and 3 miles east of Brook.

Drainage area.--452 sq mi.

Records available.--December 1948 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 624.00 ft above mean sea level, datum of 1929. Prior to Sept. 7, 1955, wire-weight gage 2.5 miles upstream at datum 3.54 ft higher.

Average discharge.--13 years (1949-62), 359 cfs.

Extremes.--Maximum discharge during year, 2,700 cfs Mar. 22; maximum gage height, 18.57 ft Mar. 23; minimum, 23 cfs Aug. 23-25; minimum gage height, 3.89 ft Aug. 24.
1948-62: Maximum discharge, 5,930 cfs June 14, 1958 (gage height, 24.42 ft); minimum discharge, 7.6 cfs Oct. 12, 1956; minimum gage height, 2.92 ft Sept. 27-29, 1956.

Remarks.--Records poor.

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	360	275	438	b 220	542	1,150	1,040	284	245	43	49	30
2	389	258	389	b 210	418	902	922	332	189	176	43	37
3	333	342	336	b 210	343	612	779	303	157	1,000	41	35
4	267	533	394	b 210	720	443	677	257	142	943	39	34
5	209	539	689	440	1,670	305	657	209	135	697	35	45
6	165	483	724	1,320	a 1,500	235	809	184	161	462	49	47
7	134	404	745	2,030	a 900	450	902	157	157	269	64	37
8	120	343	554	a 2,000	a 600	877	868	354	134	148	64	32
9	107	292	473	a 1,500	a 450	1,070	850	554	165	96	54	30
10	100	258	401	a 1,000	a 350	1,420	778	758	424	70	45	32
11	93	231	347	a 800	a 300	1,680	679	1,430	643	98	39	35
12	93	224	534	a 600	a 270	2,070	651	1,380	588	443	37	35
13	94	231	641	a 450	a 270	1,980	533	1,240	458	418	35	30
14	115	374	578	a 380	a 320	1,760	508	1,040	328	416	34	32
15	136	434	463	a 360	b 380	* 1,520	439	802	235	638	30	35
16	152	622	381	a 370	b 410	1,300	392	650	172	840	29	34
17	142	* 803	354	b 360	425	1,110	337	483	139	778	28	29
18	* 127	800	377	b 350	450	1,020	* 314	368	112	612	28	28
19	121	711	* 377	b 320	703	1,120	295	344	99	426	28	28
20	139	628	347	b 300	* 682	* 1,250	262	325	81	314	29	26
21	181	541	332	273	641	2,670	243	268	70	475	* 28	26
22	177	660	321	b 250	578	2,660	225	233	66	439	26	26
23	159	1,090	b 310	227	475	2,540	215	* 213	64	350	23	28
24	152	1,220	b 300	b 220	354	2,340	203	193	69	249	23	28
25	163	1,200	b 290	231	358	2,060	184	157	70	170	24	29
26	179	1,090	b 280	380	889	1,810	177	277	* 61	* 122	28	29
27	159	919	b 270	874	1,450	1,530	168	418	49	92	32	29
28	143	747	b 260	1,030	1,410	1,360	159	534	45	73	32	* 28
29	177	628	b 250	994	---	1,210	179	502	43	64	30	26
30	231	522	b 240	855	---	1,180	186	418	41	61	28	26
31	276	---	b 230	653	---	1,120	---	312	---	56	26	---
Total	5,393	17,402	12,625	19,417	17,858	42,754	14,631	14,979	5,342	11,038	1,100	946
Mean	174	580	407	626	638	1,379	488	483	178	356	35.5	31.5
Cfsm	0.385	1.28	0.900	1.38	1.41	3.05	1.08	1.07	0.394	0.788	0.079	0.070
In.	0.44	1.43	1.04	1.59	1.47	3.52	1.20	1.23	0.44	0.91	0.09	0.08

Calendar year 1961: Max 2,150 Min 19 Mean 347 Cfsm 0.768 In. 10.44
Water year 1961-62: Max 2,670 Min 23 Mean 448 Cfsm 0.941 In. 13.44

* Discharge measurement made on this day.
a No gage-height record.
b Stage-discharge relation affected by ice.

5-5250. Iroquois River at Iroquois, Ill.

Location.--Lat 40°49'25", long 87°34'55", in SE¼ sec. 15, T. 27 N., R. 11 W., on left bank at upstream side of bridge on U. S. Highway 52 at Iroquois, 500 ft upstream from Cleveland, Cincinnati, Chicago & St. Louis Railway bridge and 4½ miles downstream from Indiana-Illinois State line.

Drainage area.--682 sq mi.

Records available.--October 1944 to September 1962.

Gage.--Water-stage recorder. Datum of gage is 614.34 ft above mean sea level, datum of 1929. Prior to Aug. 5, 1945, chain gage at same site and datum.

Average discharge.--18 years, 529 cfs.

Extremes.--Maximum discharge during year, 4,000 cfs Mar. 23 (gage height, 19.29 ft); minimum, 25 cfs Sept. 23, 24.
1944-62: Maximum discharge, 10,400 cfs June 13, 1958 (gage height, 26.31 ft); minimum, 8.2 cfs Oct. 10, 1956.

Remarks.--Records good except those for periods of ice effect or no gage-height record, which are poor.

Rating table, water year 1961-62, except periods of ice effect
(gage height, in feet, and discharge, in cubic feet per second)

2.8	22	7.0	396
3.0	30	11.0	1,050
4.0	85	14.0	1,800
5.0	166	20.0	4,350

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	505	320	710	310	700	1,500	1,350	320	477	81	113	a 35
2	491	332	611	320	600	1,100	1,210	396	383	106	99	a 45
3	491	370	535	330	520	800	1,070	422	320	766	90	a 43
4	435	595	505	340	900	600	942	396	272	1,170	81	a 40
5	370	676	693	450	1,700	500	852	357	250	1,130	75	* 61
6	320	676	659	1,200	2,100	a 400	834	320	256	942	* 90	76
7	266	611	888	1,900	1,700	* 370	924	290	266	659	110	66
8	234	535	834	2,300	1,000	816	978	332	283	435	113	50
9	206	463	762	2,000	700	1,050	* 978	491	762	290	102	44
10	186	396	643	1,200	520	1,620	960	676	960	* 206	84	42
11	176	357	* 550	800	460	1,940	906	1,350	1,070	186	73	42
12	161	332	595	550	410	2,510	798	1,770	* 978	521	65	45
13	156	320	720	470	450	2,670	710	1,800	852	611	59	44
14	156	332	800	430	* 520	2,590	627	1,680	676	611	54	40
15	166	491	760	430	600	2,390	580	1,400	520	727	52	40
16	* 186	595	640	400	540	2,040	535	* 1,130	409	978	47	44
17	201	852	560	380	500	1,680	477	870	332	1,030	43	42
18	196	942	520	370	480	1,400	435	659	272	a 960	40	36
19	186	960	500	360	834	1,380	409	595	239	a 800	38	31
20	181	* 906	470	350	942	1,480	393	535	206	a 600	38	28
21	191	816	450	330	942	2,590	357	463	181	a 520	39	27
22	217	852	440	320	852	3,670	332	396	152	627	38	26
23	228	1,170	430	310	762	3,950	320	357	138	a 540	34	25
24	217	1,320	420	300	643	3,950	308	320	129	a 450	30	25
25	212	1,400	400	300	535	3,720	290	290	125	370	30	26
26	206	1,380	390	450	961	3,360	272	357	129	290	30	26
27	212	1,300	370	800	a 1,600	2,910	261	595	113	228	a 40	28
28	212	1,150	350	1,100	a 1,800	2,470	261	762	99	186	a 38	29
29	206	1,010	320	1,300	---	2,010	256	744	86	156	a 35	28
30	228	852	310	1,100	---	1,710	261	710	82	134	a 33	26
31	278	---	310	900	---	1,500	---	595	---	125	a 33	---
Total	7,676	22,311	17,145	22,100	24,271	60,676	18,876	21,378	11,017	16,435	1,846	1,160
Mean	248	744	553	713	867	1,957	629	690	367	530	59.5	38.7
Cfsm	0.364	1.09	0.811	1.05	1.27	2.87	0.922	1.01	0.538	0.777	0.087	0.057
In.	0.42	1.22	0.93	1.21	1.32	3.31	1.03	1.17	0.60	0.90	0.10	0.06

Calendar year 1961 : Max 2,720 Min 25 Mean 483 Cfsm 0.708 In. 9.63
Water year 1961-62 : Max 3,950 Min 25 Mean 616 Cfsm 0.903 In. 12.27

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 13 to Feb. 18, Mar. 1-5 (no gage-height record Jan. 8-13, 15, 16, 18-20, 22, 23, Jan. 29 to Feb. 10, Feb. 12, 13, Mar. 1-3, 5).

5-5255. Sugar Creek at Milford, Ill.

Location.--Lat 40°37'50", long 87°43'25", in N½ sec. 16, T. 25 N., R. 12 W., near right bank on downstream side of highway bridge, 200 ft downstream from Mud Creek and 1 mile west of Milford.

Drainage area.--430 sq mi.

Records available.--July 1948 to September 1962.

Gage.--Wire-weight gage read twice daily, and crest-stage gage. Datum of gage is 622.00 ft above mean sea level, datum of 1929.

Average discharge.--14 years, 348 cfs.

Extremes.--Maximum discharge during year, 7,020 cfs Mar. 22 (gage height, 19.15 ft, from graph based on gage readings); minimum, 14 cfs Oct. 16-19.
1948-62: Maximum discharge, 22,900 cfs Feb. 21, 1951 (gage height, 20.90 ft), from rating curve extended above 8,200 cfs; maximum gage height, 23.74 ft Feb. 10, 1959 (ice jam); minimum discharge observed, 2.8 cfs Dec. 14, 1952, result of freezeup.

Remarks.--Records fair except those for periods of ice effect or no gage-height record, which are poor.

Rating tables, water year 1961-62, except periods of ice effect (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 23 to May 11, June 11 to July 15)

Oct. 1 to Mar. 25				Mar. 26 to Sept. 30			
1.7	13	9.0	830	1.7	14	7.0	530
2.0	22	13.0	1,860	2.0	26	11.0	1,280
3.0	68	16.0	3,140	3.0	83	15.0	2,600
4.0	136	18.0	5,200	4.0	165		
6.0	346	19.0	6,700				

Discharge, in cubic feet per second, water year October 1961 to September 1962

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	218	113	90	360	1,200	753	788	560	165	138	27
2	36	198	106	* 90	330	800	702	970	459	366	121	27
3	32	179	99	90	320	500	653	753	405	1,680	97	26
4	a 29	170	92	100	1,100	400	590	590	248	2,200	83	28
5	a 25	144	86	220	1,600	320	621	545	341	1,650	80	* 41
6	22	a 120	74	1,500	1,100	220	719	530	445	1,230	* 156	48
7	20	a 100	66	2,200	850	188	719	590	473	806	215	41
8	a 19	a 90	58	1,700	550	179	669	653	392	487	156	36
9	a 18	a 75	53	800	350	414	* 637	1,090	501	248	121	32
10	18	a 65	56	410	300	1,300	590	1,520	1,030	* 147	105	41
11	17	a 55	* 66	320	270	1,950	530	2,190	1,230	147	86	48
12	16	a 48	74	260	240	2,280	487	2,600	* 1,010	316	76	51
13	16	a 42	86	210	310	2,120	445	2,120	669	669	60	57
14	15	a 43	80	190	500	* 1,380	392	1,470	445	1,280	54	63
15	15	46	77	170	560	932	341	1,030	305	1,950	48	72
16	* 14	63	68	150	450	649	317	702	259	1,950	46	57
17	14	80	113	140	350	458	305	* 445	226	1,330	44	38
18	14	99	161	130	300	386	293	501	195	1,050	41	28
19	14	92	140	120	450	615	281	545	165	685	38	24
20	17	* 86	110	115	700	1,060	270	445	138	431	35	22
21	18	80	88	110	520	4,010	259	329	121	281	33	21
22	17	239	110	105	400	* 5,760	248	281	113	a 1,000	31	20
23	18	666	140	100	360	2,670	237	270	101	a 700	30	19
24	22	615	170	100	340	1,680	226	259	90	a 500	28	18
25	21	372	200	100	772	1,360	226	248	80	a 400	26	18
26	20	272	170	200	2,060	1,180	215	270	72	341	32	19
27	19	239	150	700	* 3,020	1,110	215	392	63	270	36	18
28	22	188	130	1,200	2,040	1,050	205	575	57	215	33	18
29	50	152	110	900	----------	970	205	788	51	101	31	17
30	99	128	95	650	----------	896	304	860	46	113	28	16
31	188	----------	90	450	----------	824	----------	685	----------	129	28	----------
Total	903	4,964	3,231	13,620	20,502	38,861	12,654	25,034	10,290	22,837	2,136	991
Mean	29.1	165	104	439	732	1,254	422	808	343	737	68.9	33.0
Cfsm	0.068	0.384	0.242	1.02	1.70	2.92	0.981	1.88	0.798	1.71	0.160	0.077
In.	0.08	0.43	0.28	1.18	1.77	3.36	1.09	2.17	0.89	1.98	0.18	0.09

Calendar year 1961: Max 2,740 Min 10 Mean 294 Cfsm 0.684 In. 9.28
Water year 1961-62: Max 5,760 Min 14 Mean 427 Cfsm 0.993 In. 13.50

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-27	0200	16.60	3,640	5-11	2400	15.51	2,840
3-12	2100	15.10	2,640	7-3	2000	15.87	2,560
3-22	0200	19.15	7,020				

* Discharge measurement made on this day.
a No gage-height record.
Note.--Stage-discharge relation affected by ice Dec. 19 to Feb. 24, Mar. 1-6 (no gage-height record Jan. 28 to Feb. 4).

GPO 802-191-11

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or flow-flow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations and miscellaneous sites are presented in two tables. The first is a table of discharge measurements at low-flow partial-record stations. Discharge measurements made at miscellaneous sites for both low flow and high flow are given in the second table.

Low-flow partial-record stations

Measurements of streamflow in the area covered by this report made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from ground-water storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1962

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		3-Miami River Basin				
2748.00	Martindale Creek near Cambridge City, Ind.	Lat 39°49', long 85°09', on line between secs. 13 and 24, T. 16 N., R. 12 E., 1¼ miles upstream from U.S. Highway 40, and 1 3/4 miles northeast of Cambridge City.	a 57	1960-62	10-16-61 7-10-62 9-13-62	8.34 14.2 7.18
2752.00	Salt Creek near Metamora, Ind.	Lat 39°26'45", long 85°11'01", in SW¼ sec. 34, T. 12 N., R. 12 E., three-tenths of a mile south of U.S. Highway 52 and 2 3/4 miles west of Metamora.	a 118	1954 1960-62	10-18-61 7-11-62 9-12-62	1.78 7.82 2.82
2757.00	Silver Creek near Liberty, Ind.	Lat 39°39'36", long 84°55'39", on line between sec. 31, T. 12 N., R. 1 W., and sec. 36, T. 12 N., R. 2 W., at bridge on U.S. Highway 27, 1½ miles north of Liberty.	a 9	1960-62	10-17-61 7-10-62 9-11-62	0.13 0.60 0.10
		Laughery Creek Basin				
2767.50	Laughery Creek near Ballstown, Ind.	Lat 39°14'42", long 85°14'52", in SW¼ NE¼ sec. 12, T. 9 N., R. 11 E., at bridge on State Highway 229, six-tenths of a mile south of Ballstown.	a 37	1961-62	10-10-61	0.13
		Big Indian Kentuck Creek Basin				
2918.00	Indian Kentuck Creek at Manville, Ind.	Lat 38°47'10", long 85°16'58", in SE¼ sec. 15, T. 4 N., R. 11 E., at Manville, below mouth of West Fork Indian Kentuck Creek.	a 121	1954 1961-62	10-10-61	2.02
		Fourteenmile Creek Basin				
2924.00	Fourteenmile Creek near Charlestown, Ind	Lat 38°27'58", long 85°37'04", in SE¼ SE¼ of lot 120 of Clark Military Grant, at bridge on State Highway 62, 2 miles northeast of Charlestown.	a 97	1954 1962	8-1-62	0.58
		Indian Creek Basin				
3026.00	Little Indian Creek near Corydon, Ind.	Lat 38°11'59", long 86°05'44", in NE¼ sec. 5, T. 4 S., R. 4 E., at bridge on county highway, two-tenths of a mile south of State Highway 62, 1 3/4 miles east of Corydon, and 2.4 miles upstream from mouth.	a 32.5	1960-62	7-11-62 8-9-62	1.27 0.77

Discharge measurements made at low-flow partial-record stations during water year 1962---Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Blue River Basin				
3029.00	Spring Creek near White Cloud, Ind.	Lat 38°14'20", long 86°13'45", in SE¼ sec. 19, T. 3 S., R. 3 E., at county highway bridge, north of White Cloud and at mouth of Harrison Spring.		1951-52 1954-62	10-10-61 11-7-61 12-13-61 2-15-62 3-13-62 4-10-62 5-7-62 6-12-62 7-11-62 8-9-62 9-7-62	14.4 17.2 195 144 211 148 78.7 157 22.5 21.8 54.5
		Little Pigeon Creek Basin				
3040.00	Little Pigeon Creek near Tennyson, Ind.	Lat 38°02'45", long 87°07'05", in NE¼ sec. 31, T. 5 S., R. 6 W., at county highway bridge, 1½ miles downstream from East Fork, and 2½ miles south of Tennyson.		≠ 1944-47 1961-62	10-24-61	0.00
		Pigeon Creek Basin				
3220.50	Pigeon Creek near Buckskin, Ind.	Lat 38°11'44", long 87°25'42", at corner of secs. 4, 5, 8, and 9, T. 4 S., R. 9 W., at bridge on State Highway 68 at Rosebud, 3 miles south of Buckskin, and 8.3 miles west of Lynnville.	a 184	1961-62	10-24-61	1.97
		Wabash River Basin				
3228.00	Bear Creek near Bryant, Ind.	Lat 40°31', long 84°58', on line secs. 19 and 20, T. 24 N., R. 14 E., at bridge on U.S. Highway 27, 5 miles north of Portland, 1¼ miles south of Bryant.	a 14	1957 1961-62	10-5-61 8-24-62	0.01 0.00
3232.00	Rock Creek near Markle, Ind.	Lat 40°47'47", long 85°21'28", in NE¼ sec. 14, T. 27 N., R. 10 E., at bridge on State Highway 3, 2¼ miles southwest of Markle.	a 92	1954 1960-62	10-6-61 10-30-61 8-14-62	2.80 7.43 1.66
3238.00	Eight Mile Creek at Zanesville, Ind.	Lat 40°55', long 85°17', in sec. 4, T. 28 N., R. 11 E., at bridge on State Highway 3, 0.7 mile southwest of Zanesville.	a 46	1954 1961-62	10-6-61 10-30-61 8-14-62	0.94 2.43 0.39
3261.00	Lick Creek near Wheeling, Ind.	Lat 40°23', long 85°27', in NE¼ sec.12 T. 22 N., R. 9 E., at county highway bridge, 3/8 mile upstream from mouth and 1¼ miles northeast of Wheeling.	a 83	1954 1961-62	10-5-61 10-30-61 8-14-62	5.49 4.43 8.96
3275.20	Pipe Creek near Bunker Hill, Ind.	Lat 40°40'06", long 86°05'44", in SE¼ sec. 29, T. 26 N., R. 4 E., at bridge on county highway, ½ mile northeast of Bunker Hill.	a 168	1953-54 1960-62	10-6-61 11-1-61 8-15-62	9.36 20.6 25.2
3277.70	Blue River near Columbia City, Ind.	Lat 41°10'52", long 85°27'24", in SW¼ sec. 35, T. 32 N., R. 9 E., at county highway bridge, 0.6 mile east of State Highway 9, 2¼ miles northeast of Columbia City and 2.5 miles downstream from Thorn Creek.	a 60	1961-62	10-6-61 11-1-61 8-15-62	8.18 8.76 4.24
3293.00	Rock Creek at Rockfield, Ind.	Lat 40°39'10", long 86°33'30", in SE¼ sec. 32, T. 26 N., R. 1 W., at bridge on State Highway 25, 1¼ miles northeast of Rockfield.	a 81	1954 1960-62	10-10-61 11-1-61 7-9-62 8-14-62 9-4-62	6.01 46.5 15.3 5.61 5.89
3296.00	Bachelor Run near Flora, Ind.	Lat 40°32'50", long 86°29'30", on line between secs. 2 and 11, T. 24 N., R. 1 W., at bridge on State Highway 18, 1¼ miles east of Flora.	a 13	1960-62	10-10-61 7-9-62 8-14-62 9-4-62	0.87 3.32 1.03 0.92

Discharge measurements made at low-flow partial-record stations during water year 1962---Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Wabash River Basin--Continued				
3314.30	Mud Creek near Bruce Lake, Ind.	Lat 41°03'10", long 86°19'39", on line between secs. 8 and 17, T. 30 N., R. 2 E., at bridge on State Highway 14, 4½ miles east of Bruce Lake, and 5½ miles west of Rochester.	a 69	1960-62	10-10-61 7-10-62 9-5-62	29.6 9.18 5.58
3334.00	Mud Creek near Windfall, Ind.	Lat 40°24'23", long 85°54'18", in NW¼ NE¼ sec. 34, T. 23 N., R. 5 E., at bridge on east-west county road along Tipton-Howard county line ½ mile east of State Road 213, ½ mile downstream from Turkey Creek, and 3 miles north of Windfall.	a 75	1960-62	8-15-62	5.24
3343.00	Kilmore Creek at Kilmore, Ind.	Lat 40°21', long 86°30', in SW¼ sec. 14, T. 22 N., R. 1 W., at county highway bridge, 0.7 mile upstream from State Highway 75, at south edge of Kilmore.	a 62	1954 1960-62	10-10-61 8-10-62	0.95 10.6
3356.70	Big Wea Creek near Lafayette, Ind.	Lat 40°21'46", long 86°54'17", in SE¼ sec. 7, T. 22 N., R. 4 W., at bridge on State Highway 43, 2 3/4 miles south of Lafayette.	a 103	1960-62	10-10-61 8-15-62	16.8 19.0
3391.00	Coal Creek near Veedersburg, Ind.	Lat 40°08'33", long 87°15'00", on line between secs. 30 and 31, T. 20 N., R. 7 W., at bridge on county road, 2.2 miles northeast of Veedersburg.	a 76	1962	10-4-61 8-15-62	10.4 20.3
3392.00	Sugar Creek near Kirklin, Ind.	Lat 40°12', long 86°22', in SE¼NW¼ sec. 1, T. 20 N., R. 1 E., at bridge on U.S. Highway 421, 1 mile north of Kirklin.	a 41	1960-62	10-10-61 8-10-62	2.38 3.48
3414.50	Otter Creek at Burnett, Ind.	Lat 39°32'17", long 87°17'44", on line between secs. 27 and 28, T. 13 N., R. 8 W., at county highway bridge, 0.3 mile south of Burnett.	a 69	1961-62	10-2-61	11.8
3416.00	Honey Creek near Prairieton, Ind.	Lat 39°23'51", long 87°27'07", at center of sec. 18, T. 11 N., R. 9 W., at bridge on State Highway 63, 2.4 miles northeast of Prairieton.	a 86	1960-62	10-4-61 10-26-61	9.31 11.1
3418.00	Prairie Creek at Prairie Creek, Ind.	Lat 39°16'50", long 87°29'54", on line between secs. 26 and 27, T. 10 N., R. 10 W., at bridge on State Highway 63, ½ mile north of Prairie Creek.	a 24	1960 1962	10-4-61 10-26-61	1.07 0.37
3419.50	Turmans Creek near Fairbanks, Ind.	Lat 39°09'18", long 87°31'22", in NW¼ NE¼ sec. 9, T. 8 N., R. 10 W., at bridge on State Highway 63, 4.6 miles south of Fairbanks.	a 69	1954 1961-62	10-4-61 10-26-61	0.98 5.06
3427.00	Maria Creek near Emison, Ind.	Lat 38°46'25", long 87°28'21", in N½ sec. 24, T. 4 N., R. 10 W., at bridge on U.S. Highway 41, 2 miles south of Emison.	a 88	1954 1960-62	10-23-61	3.12
3467.00	White River near Harrisville, Ind.	Lat 40°11', long 84°53', in sec. 19, T. 20 N., R. 15 E., at bridge on State Highway 32, 1 mile west of Harrisville.	a 19	1961-62	10-5-61 8-9-62 8-24-62	2.98 3.26 1.93
3481.00	Killbuck Creek near Anderson, Ind.	Lat 40°08'20", long 85°39'41", in SW¼ sec. 31, T. 20 N., R. 8 E., at county highway bridge 300 ft upstream from bridge on State Highway 109 and State Highway 9 by-pass, 1½ miles upstream from mouth and 2¼ miles northeast of center of Anderson.	a 96	1944 1954 1960-62	10-5-61 11-2-61 6-28-62 8-14-62	21.1 18.2 25.3 26.6
3483.00	Pipe Creek near Alexandria, Ind.	Lat 40°16'40", long 85°38'34", on line between secs. 8 and 17, T. 21 N., R. 8 E., at bridge on State Highway 28, 1½ miles east of State Highway 9, and 2 miles northeast of Alexandria.	a 38	1960-62	10-5-61 10-30-61 6-28-62 8-14-62	4.04 4.00 6.75 7.31

Discharge measurements made at low-flow partial-record stations during water year 1962---Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Wabash River Basin--Continued				
3507.00	Stoney Creek near Noblesville, Ind.	Lat 40°01'44", long 85°59'42", in NE¼ NE¼ sec. 7, T. 18 N., R. 5 E., at bridge on State Highway 37, 1.4 miles southeast of Post Office in Noblesville, and 1.4 miles upstream from mouth.	a 51	1946 1960-62	10-5-61 11-2-61 6-28-62 8-15-62	10.6 9.63 9.34 5.50
3513.00	Crooked Creek at Augusta, Ind.	Lat 39°53'43", long 86°12'53", in NE¼ NW¼ sec. 29, T. 17 N., R. 3 E., at bridge on U.S. Highway 421, 0.4 mile north of Augusta.	a 7.22	1960-62	9-27-62	0.05
3519.00	Indian Creek at Oaklandon, Ind.	Lat 39°51'51", long 85°58'07", in SW¼ NW¼ sec. 3, T. 16 N., R. 5 E., at bridge on old State Highway 67, 0.2 mile northeast of State Highway 67 and Sunnyside Road intersection, and 1 mile southwest of Oaklandon.	a 18	1960-62	10-4-61 11-2-61 6-28-62 9-28-62	0.04 0.14 0.10 0.19
3536.30	Little Buck Creek at Southport, Ind.	Lat 39°39'55", long 86°06'06", on line between secs. 8 and 17, T. 14 N., R. 4 E., at bridge on Southport Road, 200 ft east of Sherman Drive - Southport Road intersection and ½ mile east of Southport.	a 9	1960-62	6-27-62	0.00
3536.50	Pleasant Run Creek at Greenwood, Ind.	Lat 39°37'53", long 86°06'58", in NW¼ sec. 29, T. 14 N., R. 4 E., at bridge on State Highway 431, 0.2 mile south of Marion-Johnson County line, and 0.5 mile north of Greenwood.	a 5	1960-62	10-25-61 6-27-62	0.00 0.03
3536.70	White Lick Creek near Brownsburg, Ind.	Lat 39°51'56", long 86°23'42", on line between sec. 2, T. 16 N., R. 1 E., and sec. 34, T. 17 N., R. 1 E., at bridge on county highway, 350 ft west of State Highway 267, and 1½ miles north of Brownsburg.	a 30	1960-62	10-6-61 8-10-62	0.56 0.13
3541.00	Sycamore Creek near Centerton, Ind.	Lat 39°30'49", long 86°25'55", on line between sec. 33, T. 13 N., R. 1 E., and sec. 4, T. 12 N., R. 1 E., at county highway bridge, 2 miles west of Centerton.	a 17.2	1960-62	10-6-61	0.93
3542.00	Indian Creek near Morgantown, Ind.	Lat 39°22'08", long 86°13'50", in NW¼ sec. 29, T. 11 N., R. 3 E., at bridge on county highway, 100 ft upstream from Barnes Creek, 1.6 miles east of Morgantown.	a 20	1961-62	10-23-61	0.15
3571.00	Rattlesnake Creek near Spencer, Ind.	Lat 39°15'36", long 86°48'20", in S½ sec. 36, T. 10 N., R. 4 W., at county highway bridge, 400 ft upstream from State Highway 67 and U.S. Highway 231 bridge, and 2½ miles southwest of Spencer.	a 25	1960-62	10-6-61 11-2-61	1.36 2.50
3573.00	Big Walnut Creek near Barnard, Ind.	Lat 39°49'50", long 86°41'12", in NW¼ sec. 18, T. 16 N., R. 2 W., at bridge on Putnam-Hendricks County line.	a 120	1961-62	10-6-61 8-10-62	18.4 19.8
3602.00	Lattas Creek at Switz City, Ind.	Lat 39°02'40", long 87°02'38", in SE¼ sec. 14, T. 7 N., R. 6 W., at bridge on State Highway 67, 0.9 mile north of Switz City.	a 32	1954 1960-62	10-24-61	0.00
3603.00	Richland Creek near Bloomfield, Ind.	Lat 39°01'38", long 86°55'05", in SE¼ SE¼ sec. 24, T. 7 N., R. 5 W., at bridge on State Highway 54, 1.9 miles east of Bloomfield.	a 96	1960-62	10-24-61	3.36
3607.00	Black Creek near Sandborn, Ind.	Lat 38°52'38", long 87°11'12", at intersection of secs. 9, 10, 15, 16, T. 5 N., R. 7 W., at bridge on State Highway 58, 1.3 miles south of Sandborn.	a 101	1960-62	10-24-61 8-30-62	17.3 14.3

Discharge measurements made at low-flow partial-record stations during water year 1962---Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Wabash River Basin--Continued				
3608.00	Prairie Creek near Washington, Ind.	Lat 38°43'01", long 87°10'00", in SW¼ SW¼ sec. 2, T. 3 N., R. 7 W., at bridge on State Highway 57, 4 miles north of Washington.	a 117	1954 1960-62	10-24-61	0.88
3614.00	Little Blue River near Rays Crossing, Ind.	Lat 39°33'16", long 85°43'08", on line between secs. 23 and 26, T. 13 N., R. 7 E., at county highway bridge, 2.8 miles west of Rays Crossing.	a 94	1960-62	10-23-61 8-20-62 9-13-62	4.72 3.47 10.2
3616.00	Brandywine Creek near Maxwell, Ind.	Lat 39°51'30", long 85°44'17" on line between secs. 3 and 10, T. 16 N., R. 7 E., at county highway bridge, 1.6 miles east of Maxwell and 4.5 miles northeast of Greenfield.	a 25	1960-62	10-16-61 6-28-62 9-28-62	0.29 0.43 0.62
3617.00	Sugar Creek near Pleasant View, Ind.	Lat 39°38'49", long 85°55'09", in E½ sec. 24, T. 14 N., R. 5 E., at bridge on Interstate Highway 74, 1 3/4 miles southeast of Pleasant View.	a 121	1954 1960-62	10-25-61 6-27-62 9-28-62	11.8 18.7 13.7
3618.00	Buck Creek near New Bethel, Ind.	Lat 39°43'34", long 85°48'20", on line between secs. 21 and 28, T. 15 N., R. 5 E., at bridge on E. Troy Ave., 7.7 miles east of corporate limits of Indianapolis.	a 49.5	1960-62	10-25-61 6-27-62 9-28-62	2.10 5.31 4.62
3619.00	Hurricane Creek at Franklin, Ind.	Lat 38°29'53", long 86°01'34", on line between sec. 7, T. 12 N., R. 5 E., and sec. 12, T. 12 N., R. 4 E., at county highway bridge, 1.0 mile northeast of Franklin.	a 13	1960-62	10-24-61 6-7-62 8-14-62 9-19-62	0.00 0.24 0.54 1.37
3632.00	Flatrock River at Lewisville, Ind.	Lat 39°48'24", long 85°21'29", in NW¼ SE¼ sec. 25, T. 16 N., R. 10 E., at bridge on U.S. Highway 40 at Lewisville.	a 49	1954 1960-62	10-16-61 9-13-62	7.99 9.24
3643.00	Haw Creek near Columbus, Ind.	Lat 39°14'44", long 85°52'51", in W½ SE¼ sec. 5, T. 9 N., R. 6 E., at county highway bridge, 1.1 miles north of corporate limits of Columbus.	a 50	1960-62	10-23-61 8-15-62 9-18-62	0.50 7.12 5.09
3648.00	Sand Creek near Greensburg, Ind.	Lat 39°20'55", long 85°26'51", in NE¼ sec. 6, T. 10 N., R. 10 E., at county highway bridge, 1½ miles northeast of Greensburg.	a 9	1960-62	10-23-61 8-20-62	0.07 0.05
3656.00	White Creek near Cortland, Ind.	Lat 38°58'46", long 86°00'58", on line between secs. 6 and 7, T. 6 N., R. 5 E., at bridge on State Highway 258, 3 miles west of Cortland.	a 94	1954 1961-62	10-11-61 8-15-62	0.11 0.58
3663.00	Big Creek near Volga, Ind.	Lat 38°46'47", long 85°32'57", in NE¼ NW¼ sec. 20, T. 4 N., R. 9 E., at county highway bridge, 1.7 miles west of Volga, and 5.5 miles east of Deputy.	a 96	1954 1961-62	10-10-61	0.51
3673.00	Stucker Fork at Scottsburg, Ind.	Lat 38°41'41", long 85°45'24", on line between secs. 16 and 17, T. 3 N., R. 7 E., at county highway bridge, 0.6 mile north of State Highway 56, and 1 mile east of Scottsburg.	a 74	1961-62	10-10-61	0.77
3715.50	Middle Fork Salt Creek at Story, Ind.	Lat 39°05'37", long 86°12'29", in SE¼ SE¼ sec. 29, T. 8 N., R. 3 E., at bridge on State Highway 135, 0.5 mile southeast of Story.	a 37	1954 1961-62	10-5-61 8-14-62	0.18 1.44
3733.00	Indian Creek at Trinity Springs, Ind.	Lat 38°45'20", long 86°45'25", in NW¼ NW¼ sec. 28, T. 4 N., R. 3 W., at bridge on State Highway 450, ¼ mile east of Trinity Springs.	a 230	1954 1960-62	10-4-61 9-27-62	11.5 8.18
3736.00	Lick Creek near Paoli, Ind.	Lat 38°32'42", long 86°26'56", in SW¼ sec. 6, T. 1 N., R. 1 E., at bridge on county road, 1.3 miles southeast of Paoli.	a 16	1954 1962	10-13-61 10-31-61 11-29-61	1.20 0.62 3.45
3786.00	Big Creek at Solitude, Ind.	Lat 38°01'06", long 87°54'01", in SW¼ sec. 8, T. 6 S., R. 13 W., at bridge on State Highway 69 at Solitude.	a 204	1954 1960-62	10-24-61	0.00

Discharge measurements made at low-flow partial-record stations during water year 1962---Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		4-Streams Tributary to Lake Michigan				
0984.00	Fawn River near Howe, Ind.	Lat 41°44'55", long 85°25'05", in SW¼ sec. 18, T. 38 N., R. 10 E., at county highway bridge, 1½ miles north of Howe.	a 161	1960-62	10-12-61 8-2-62	106 18.4
1004.90	Turkey Creek at New Paris, Ind.	Lat 41°30'00", long 85°50'40", in SW¼ sec. 9, T. 35 N., R. 6 E., at county highway bridge, 0.4 mile west of New Paris.	a 160	1960-62	10-12-61 7-11-62 8-15-62 9-5-62	66.0 47.9 43.3 41.2
		Streams Tributary to Lake Erie				
1826.00	Fairfield ditch at Fort Wayne, Ind.	Lat 41°00'59", long 85°11'18", at intersection of secs. 28, 29, 32 and 33, T. 30 N., R. 12 E., at bridge on lower Huntington Road, at Fort Wayne, 0.7 mile downstream from State Highway 3 and 2.5 miles upstream from mouth.	a 184	1961-62	10-2-61 11-1-61 11-9-61 1-3-62 2-20-62 4-3-62 5-3-62 6-1-62 6-25-62 8-1-62	2.68 2.34 b 1.36 2.62 b 1.63 9.14 11.0 b 8.84 1.73 0.86
		5-Illinois River Basin				
5151.00	Little Kankakee River near Mill Creek, Ind.	Lat 41°34', long 86°35', in sec. 18, T. 36 N., R. 1 W., at bridge on State Highway 4, 2½ miles west of Mill Creek.	a 39	1961-62	10-18-61 9-4-62	36.1 28.9
5163.00	Dausman ditch near Bremen, Ind.	Lat 41°22'58", long 86°07'02" at section line on east side of sec. 24, T. 34 N., on range line between R. 3 E., and R. 4 E., at bridge on State Highway 331, 4½ miles southeast of Bremen.	a 48	1956 1961-62	10-10-61 8-9-62 9-4-62	17.8 4.90 4.19
5175.50	Reeves ditch near La Crosse, Ind.	Lat 41°19'03", long 86°55'49", on line between secs. 12 and 13, T. 33 N., R. 5 W., at bridge on State Highway 8, 2.0 miles west of La Crosse.	a 44	1961-62	10-24-61 9-5-62	26.4 14.6

a About
b Furnished by the Indiana Flood Control and Water Resources Commission
/ Operated as a continuous-record gaging station

Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*); measurements of field estimates by (**). Measurements designated by the symbol (a) were made by the Indiana Flood Control and Water Resources Commission.

Discharge measurements made at miscellaneous sites during water year 1962

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Wabash River basin						
Raccoon Creek	Wabash River	Lat 39°42'55", long 87°04'10", in NE¼ sec. 28, T. 15 N., R. 6 W., 500 ft downstream from the crest of the dam at Mansfield Reservoir near Ferndale, Ind.		1961	10-3-61	416
White River	.....do.....	Lat 39°52'35", long 86°08'18", in W½ sec. 36, T. 17 N., R. 3 E., at State Highway 431 bridge, at Indianapolis, Ind.		1958	1-28-62	a13,400
.....do.....	.....do.....	Lat 39°52'16", long 86°09'22", in SW¼ sec. 35, T. 17 N., R. 3 E., at bridge on U.S. Highway 31, at Indianapolis, Ind.			1-28-62 1-29-62 1-30-62 1-31-62	a18,700 a13,500 a 4,050 a 2,720
.....do.....	.....do.....	Lat 39°47'20", long 86°11'53", in NE¼ sec. 33, T. 16 N., R. 3 E., at West 16th Street bridge, at Indianapolis, Ind.		1959	1-28-62 1-29-62 1-30-62	a18,000 a14,300 a 4,600
Fall Creek	White River	Lat 39°59'27", long 85°45'22", in SE¼ sec. 20, T. 18 N., R. 7 E., at Idlewold Country Club, 0.6 mile southwest of Pendleton, Ind.			10-11-61 10-19-61 11-1-61	* 26.9 * 27.1 * 31.0
Eagle Creek	.....do.....	Lat 39°51'08",long 86°18'15", on line between secs. 3 and 10, T. 16 N., R. 2 E., at bridge on West 56th Street, 2½ miles northeast of Clermont, Ind.	155	1957	1-27-62 1-27-62	a 4,490 a 1,470
Dry Run	Little Eagle Creek	Lat 39°48'00", long 86°14'48", in SW¼ sec. 30, T. 16 N., R. 3 E., at Allison Street bridge in Speedway, Ind.		1956	1-26-62	a 107
.....do.....	.....do.....	Lat 39°47'16", long 86°14'01", in W½ sec. 32, T. 16 N., R. 3 E., at West 16th Street bridge, at Speedway, Ind.		1956	1-26-62	a 185
Muscatatuck River	East Fork White River	Lat 86°06'13", long 38°45'56", in SW¼ sec. 20, T. 4 N., R. 4 E., at bridge on State Highway 135, about 0.1 mile north of Millport, Ind.		1961	2-27-62 2-28-62 3-1-62 3-5-62	a 8,840 a12,100 a16,000 a 9,550
Straight River	Patoka River	Lat 38°21'20", long 86°53'34", in SE¼ sec. 7, T. 2 S., R. 4 W., at bridge on Highway 162, 3.3 miles southeast of Jasper, Ind.	62.4	1959	5-24-62 6-27-62 7-11-62 7-24-62 9-18-62	**a 0.5 **a 2.2 *a 0.62 *a 0.80 *a 1.10
Patoka River	Wabash River	Lat 87°13'02", long 38°22'10", in SW¼ sec. 32, T. 1 S., R. 7 W., at bridge on State Highway 61, 0.2 mile south of the post office at Winslow, Ind.		1961	10-10-61 11-20-61 12-20-61 1-23-62 1-24-62 2-21-62 3-6-62 3-13-62 3-15-62 3-17-62 3-19-62 3-20-62 4-19-62 5-23-62 6-27-62 7-24-62 8-28-62 9-5-62 9-6-62 9-16-62	*a 10.2 a 74.4 a 955 a 2,480 a 2,590 a 324 a 5,120 a 2,430 a 2,060 a 1,530 a 719 a 484 a 234 a 47.0 a 133 a 30.0 a 76.7 a 214 a 153 a 132

Discharge measurements made at miscellaneous sites during water year 1962--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured Previously (water years)	Measurements	
					Date	Discharge (cfs)
Wabash River basin--Continued						
Patoka River	Wabash River	Lat 38°22'58", long 87°20'17", in SE¼ sec. 31, T. 1 S., R. 8 W., at county road bridge 0.3 mile west of State Highway 57, 2.8 miles north of Oakland City, Ind.			1-25-62 3-16-62 5-22-62	a 3,040 a 2,380 a 46.2
Streams Tributary to Lake Erie						
Flatrock Creek	Auglaize River	Lat 40°58'45", long 84°52'01", on line between sec. 7 and 18, T. 29 N., R. 15 E., at bridge on Monroeville Road, 0.1 mile east of Monroeville, Ind.			6-25-62	* 0.22

For several years records of the water-surface elevations of many of the lakes in Indiana have been collected by the Geological Survey under cooperative agreement with the Indiana Department of Conservation, Division of Water Resources. Basic data for a few selected lakes have been published in WSP 1363, entitled "Hydrology of Indiana Lakes." Records which have not been published are available in the files of the District Office of the Geological Survey in Indianapolis, Indiana. In general, the records are based on once-daily readings of a staff gage by a local observer and consist of daily, monthly, and yearly mean water-surface elevations as well as graphs showing the fluctuation in elevation. Discharge measurements, made at the outflow, are also available in some instances.

The lakes for which records have been collected are listed in the following table. The established level, sometimes referred to as the legal level, is that elevation set by the courts to which the average level of the lake is to be held; it is normally set at about the average level that has prevailed for a number of years prior to the establishment of the level.

Lakes in the Ohio River basin for which records are available

Lake	County	Drainage area (square miles)	Surface area (acres)	Established level**	Records available
Bayou drain basin					
Hovey Lake near Mt. Vernon	Posey	6.34	253	-	1949-62
Wabash River basin					
Banning Lake near North Webster	Kosciusko	0.53	12	837.50	1945-62
Baugher Lake near Washington Center	Noble	36.4	32	878.52	1945-50
Beaver Dam Lake near Silver Lake	Kosciusko	1.89	146	868.95	1947-52
Big Barbee Lake near North Webster a/	Kosciusko	41.4	249	837.50	1945-62
Big Lake near Wolflake	Noble	6.77	228	897.83	1943-62
Blue Lake near Churubusco	Whitley	3.47	239	850.28	1945-62
Bruce Lake at Lake Bruce	Pulaski	5.19	245	723.69	1943-52
Carr Lake near Claypool	Kosciusko	2.56	79	848.88	1947-52
Cedar Lake at Tri-Lake	Whitley	1.62	131	901.90	1942-49
Center Lake at Warsaw	Kosciusko	0.75	120	-	1945-62
Chapman Lake near Warsaw	Kosciusko	4.59	414	827.75	1945-62
Crooked Lake near Wolflake	Noble	1.32	206	905.69	1943-52
Crystal Lake near Atwood	Kosciusko	0.38	76	789.69	1945-51
Diamond Lake near Silver Lake	Kosciusko	5.35	79	-	1954-62
Everett Lake near Levert	Allen	2.13	43	-	1945-62
Fish Lake near Warsaw	Kosciusko	3.59	15	845.52	1950-62
Fletcher Lake at Fletcher	Fulton	0.62	45	783.20	1945-53
Gilbert Lake near Washington Center	Noble	0.39	28	-	1954-62
Goose Lake near Lorane	Whitley	1.42	84	910.96	1945-52
Hawks Lake near Culver	Marshall	10.2	40	732.00	1954-62
Hill Lake near Silver Lake	Kosciusko	.56	67	871.50	1952-62
Hoffman Lake at Atwood	Kosciusko	7.14	180	785.85	1945-52
Horseshoe Lake near Washington Center	Noble	1.39	18	901.80	1945-62
Irish Lake near North Webster	Kosciusko	45.7	135	837.50	1945-62
Johnson Lake near Pierceton	Kosciusko	5.42	12	-	1954-62
Kuhn Lake near North Webster	Kosciusko	3.88	121	837.50	1945-62
Lake Manitou at Rochester	Fulton	38.1	713	778.41	1942-62
Langenbaum Lake near Monterey	Starke	0.98	48	-	1954-62
Little Barbee Lake near North Webster	Kosciusko	44.0	56	837.50	1945-62
Little Chapman Lake near Warsaw	Kosciusko	7.78	120	827.75	1945-62
Little Wilson Lake near Larwill	Whitley	0.59	8	865.39	1945-52
Long Lake at Laketon	Wabash	0.64	48	751.19	1945-51 1959-62
Loon Lake at Ormas	Whitley	11.2	222	895.14	1942-62
Loon Lake near Silver Lake	Kosciusko	2.70	40	865.74	1947-52
Lukens Lake near Disko	Wabash	0.99	46	-	1948-49 1959-62
McClures Lake near Silver Lake	Kosciusko	0.45	32	865.85	1945-52
Maxinkuckee Lake at Culver	Marshall	9.48	1,854	733.12	1942-62
Muskelonge Lake near Warsaw	Kosciusko	11.1	32	842.67	1943-52 1959-62
New Lake near Etna	Whitley	0.49	50	903.91	1945-52
North Little Lake at Silver Lake	Kosciusko	2.81	12	861.73	1947-62
Nyona Lake near Greenoak	Fulton	6.47	104	793.91	1945-62
Ogle Lake near Nashville	Brown	1.03	20	-	1954-62
Old Lake near Etna	Whitley	3.13	32	898.07	1949-62
Palestine Lake at Palestine	Kosciusko	29.9	269	-	1954-62
Pike Lake at Warsaw	Kosciusko	40.4	203	-	1954-62
Rider Lake at Wilmot	Noble	39.7	10	-	1945-51
Ridinger Lake near Pierceton	Kosciusko	32.5	136	843.12	1943-62
Robinson Lake near Pierceton	Kosciusko	4.07	59	851.09	1945-50
Rock Lake near Akron	Kosciusko	1.78	56	847.29	1949-62
Round Lake at Tri-Lakes	Whitley	0.83	131	901.90	1946-52
Sawmill Lake near North Webster	Kosciusko	46.5	23	837.50	1945-62

Lakes in the Ohio River basin for which records are available--Continued

Lake	County	Drainage area (square miles)	Surface area (acres)	Established level**	Records available
Wabash River basin--Continued					
Sechrist Lake near North Webster	Kosciusko	0.69	81	837.50	1945-62
Shoe Lake near Oswego	Kosciusko	0.18	40	841.57	1945-52
Shriner Lake at Tri-Lakes	Whitley	1.12	120	907.04	1942-62
Silver Lake at Silver Lake	Kosciusko	4.47	102	861.73	1947-62
Smalley Lake near Washington Center	Noble	32.6	61	-	1943-62
South Mud Lake near Fulton	Fulton	4.74	94	793.42	1945-62
Starve Hollow Lake near Vallonia	Jackson	6.14	145	-	1945-61
Tippecanoe Lake at Oswego	Kosciusko	118.0	974	836.40	1942-62
Town Lake near Akron	Fulton	1.74	5	-	1949-50
Troy Cedar Lake near Lorane	Whitley	5.62	93	905.41	1945-52
Versailles Lake near Versailles b/	Ripley	165.0	232	-	1957-62
Webster Lake at North Webster	Kosciusko	54.0	585	852.75	1942-62
Wilson Lake near Larwill	Whitley	0.59	29	865.39	1945-52
Winona Lake at Warsaw	Kosciusko	32.0	529	811.06	1943-62
Yellow Creek Lake near Silver Lake	Kosciusko	8.50	151	860.50	1945-52
Zink Lake near Rochester	Fulton	0.26	19	810.68	1952-54
Lakes in the St. Lawrence River basin for which records are available					
Streams tributary to Lake Michigan					
Adams Lake near Wolcottville	LaGrange	5.69	293	953.59	1945-62
Attwood Lake near Wolcottville c/	LaGrange	1.31	170	899.99	1947-52
Ball Lake near Hamilton	Steuben	11.5	87	-	1961-62
Bass Lake near Angola	Steuben	0.60	56	-	1954-62
Bear Lake at Wolflake	Noble	6.12	136	894.60	1942-62
Big Long Lake near Stroh	LaGrange	4.13	366	-	1954-62
Big Otter Lake near Fremont	Steuben	19.8	69	965.18	1945-52
Big Turkey Lake at Stroh	LaGrange	34.6	450	926.61	1945-62
Bixler Lake at Kendallville	Noble	3.63	120	963.65	1945-62
Blackman Lake near Wolcottville	LaGrange	1.4	67	974.20	1953-59
Bower Lake near Pleasant Lake	Steuben	87.5	25	948.50	1945-62
Cedar Lake near Ontario	LaGrange	1.66	120	871.90	1948-51
Cedar Lake near Waterloo	DeKalb	21.8	28	896.76	1943-55
Cree Lake near Kendallville	Noble	4.90	58	945.23	1949-62
Crooked Lake at Crooked Lake	Steuben	11.9	802	988.17	1945-62
Dallas Lake near Wolcottville	LaGrange	39.4	283	897.36	1945-62
Dewart Lake near Leesburg	Kosciusko	7.88	476	867.70	1945-62
Diamond Lake near Wawaka	Noble	2.82	105	-	1945-62
Druely Lake near Cromwell d/	Noble	11.0	21	876.68	1952-62
Eagle Lake near Kimmel	Noble	1.77	81	-	1945-48
Emma Lake near Emma	LaGrange	14.8	42	-	1954-62
Engle Lake near Ligonier	Noble	3.22	48	-	1955-62
Fish Lake near Plato	LaGrange	10.8	100	936.50	1945-62
Fish Lake near Scott	LaGrange	6.14	139	-	1954-62
Fox Lake near Angola	Steuben	1.13	142	1,018.83	1945-52
Golden Lake near Pleasant Lake	Steuben	92.4	119	948.50	1945-62
Gordy Lake near Cromwell	Noble	8.82	31	876.68	1952-62
Hackenburg Lake near Wolcottville	LaGrange	54.8	42	897.36	1945-62
Harper Lake near Washington Center	Noble	2.67	11	878.25	1945-62
Heaton Lake near Elkhart	Elkhart	8.78	87	767.30	1945-52
High Lake near Wolflake	Noble	4.75	* 123	-	1961-62
Hindman Lake near Washington Center	Noble	8.00	13	878.25	1945-62
Hogback Lake near Angola	Steuben	102.0	146	948.50	1945-62
Howard Lake near Angola	Steuben	3.94	34	-	1954-62
Hudson Lake at Hudson Lake	LaPorte	3.06	432	763.09	1945-62
Hunter Lake near Middlebury	Elkhart	0.72	99	856.90	1945-52
Indian Lake near Corunna	DeKalb	3.50	54	-	1957
Indiana Lake near Bristol	Elkhart	0.53	122	759.73	1945-52
Jimerson Lake at Nevada Mills	Steuben	47.0	203	964.66	1945-62
Knapp Lake near Washington Center	Noble	5.64	88	878.25	1945-62
Lake Gage at Panama	Steuben	17.2	327	954.25	1945-62
Lake George at Hobart	Lake	125.0	282	602.23	1946-62
Lake George at Jamestown	Steuben	12.3	509	985.28	1945-62
Lake James at Lake James	Steuben	43.0	1,318	964.96	1942-49
Lake of the Woods near Helmer	LaGrange	5.36	136	951.09	1951-62
Lake Pleasant near Nevada Mills	Steuben	2.51	424	-	1954-62
Latta Lake near Rome City	Noble	4.37	42	-	1954-62
Lime Lake at Panama	Steuben	17.4	-	954.25	1945-62
Little Long Lake at Kendallville	Noble	4.34	71	-	1954-62

Lakes in the St. Lawrence River basin for which records are available--Continued

Lake	County	Drainage area (square miles)	Surface area (acres)	Established level**	Records available
Streams tributary to Lake Michigan--Continued					
Little Otter Lake near Fremont	Steuben	19.8	34	965.18	1945-52
Little Turkey Lake at Elmira	LaGrange	56.0	135	925.72	1945-62
Long Lake near Burr Oak	Noble	11.5	40	-	1954-62
Long Lake at Moonlight	Steuben	70.8	92	-	1945-62
Loon Lake near Angola	Steuben	2.73	138	-	1954-62
Lower Long Lake near Albion	Noble	3.96	66	889.81	1945-52
McClish Lake near Helmer	LaGrange	1.31	35	-	1951-62
Martin Lake near Valentine	LaGrange	5.36	22	899.45	1945-62
Messick Lake near Wolcottville	LaGrange	55.8	68	897.36	1945-62
Moss Lake near Washington Center	Noble	5.90	9	878.25	1945-62
Mud Lake near Orland	Steuben	1.64	25	-	1956-62
Muncie Lake near Burr Oak	Noble	43.4	47	-	1954-62
North Twin Lake near Howe	LaGrange	1.99	135	843.56	1953-62
Olin Lake near Valentine	LaGrange	6.12	95	899.45	1945-62
Oliver Lake near Valentine	LaGrange	11.3	371	899.45	1945-62
Otter Lake near Flint	Steuben	6.82	118	-	1954-62
Pigeon Lake near Angola	Steuben	30.6	61	-	1954-62
Pleasant Lake at Pleasant Lake	Steuben	0.94	53	963.52	1945-62
Pleasant Lake near Wolflake	Noble	0.30	20	-	1951-53
Pretty Lake near Stroh	LaGrange	2.91	184	965.50	1949-52
Rider Lake near Cromwell	Noble	9.73	5	876.68	1952-62
Rivir Lake near Burr Oak e/	Noble	18.7	24	-	1954-62
Round Lake at Kendallville	Noble	3.60	99	-	1954-62
Royer Lake near Plato	LaGrange	4.91	69	936.50	1952-62
Sacarider Lake near Kendallville f/	Noble	2.42	* 33	-	1954-62
Sand Lake near Burr Oak	Noble	15.0	47	893.56	1945-51
Sanford Lake near Cosperville g/	Noble	104.0	114	-	1947-62
Saugany Lake near Rolling Prairie	LaPorte	0.82	74	781.21	1945-50
Shipshewana Lake near Shipshewana	LaGrange	4.00	202	852.04	1951-62
Silver Lake near Angola	Steuben	3.72	238	959.40	1945-52
Silver Lake near Rolling Prairie	LaPorte	0.82	54	795.20	1945-62
Silver Lake near Wolflake	Noble	0.32	* 43	-	1952-62
Simonton Lake near Elkhart	Elkhart	4.37	282	772.19	1945-62
Skinner Lake near Albion	Noble	13.8	125	927.74	1945-62
Snow Lake near Lake James	Steuben	36.3	-	964.96	1942-49
South Twin Lake near Howe	LaGrange	3.13	116	843.56	1953-62
Sparta Lake at Kimmel	Noble	0.26	31	888.50	1945-51
Steinbarger Lake near Cosperville	Noble	25.3	73	-	1947-62
Stone Lake near Scott	LaGrange	1.32	152	-	1954-62
Story Lake near Hudson	DeKalb	2.48	77	942.20	1946, 1954-62
Sylvan Lake at Rome City	Noble	31.5	630	916.20	1942-62
Syracuse Lake at Syracuse	Kosciusko	37.3	367	858.87	1943-62
Tamarack Lake near Cosperville	Noble	15.1	50	-	1947-62
Upper Long Lake near Wolflake	Noble	2.03	86	-	1955-62
Village Lake near Cromwell	Noble	11.6	12	876.68	1952-62
Wabee Lake near Milford	Kosciusko	13.4	187	829.79	1945-52
Waldron Lake near Cosperville	Noble	131.0	216	-	1947-62
Wall Lake near Orland	LaGrange	1.43	141	942.25	1953-55
Wawasee Lake near Wawasee	Kosciusko	36.1	2,620	858.89	1942-62
Westler Lake near Wolcottville	LaGrange	37.3	88	897.36	1945-62
Witmer Lake near Wolcottville	LaGrange	35.8	204	897.36	1945-62
Wolf Lake near Goshen	Elkhart	0.87	100	813.00	1947-57
Wolf Lake at Hammond	Lake	5.72	999	-	1946-48
Streams tributary to Lake Erie					
Clear Lake at Clear Lake	Steuben	7.25	800	1,037.38	1943-62
Hamilton Lake at Hamilton	Steuben	12.8	802	898.83	1943-62
Long Lake near Ray	Steuben	2.29	145	-	1961-62
Round Lake at Clear Lake	Steuben	7.25	30	1,037.38	1943-62
Lakes in the Upper Mississippi River basin for which records are available					
Illinois River basin					
Bass Lake at Bass Lake	Starke	3.66	1,405	713.65	1942-62
Cedar Lake at Cedar Lake	Lake	8.05	781	-	1943-62
Clear Lake at LaPorte	LaPorte	0.35	106	798.20	1945-49, 1952-62
Dalecarlia Lake near Creston	Lake	19.4	193	-	1947-52
Eagle Lake near Ober	Starke	26.2	24	713.25	1945-52

Lakes in the Upper Mississippi River basin for which records are available--Continued

Lake	County	Drainage area (square miles)	Surface area (acres)	Established levels**	Records available
Illinois River basin--Continued					
Eliza Lake near Beatrice	Porter	2.69	45	-	1954-62
Flint Lake near Valparaiso	Porter	2.88	86	-	1946-62
J. C. Murphy Lake near Morocco	Newton	16.7	1,515	-	1951-60
Koontz Lake at Koontz Lake	Starke	* 6.46	346	714.56	1942-62
Lake of the Woods near Bremen	Marshall	11.6	416	803.85	1945-62
Long Lake near Valparaiso	Porter	.89	65	797.66	1946-53
Lower Fish Lake near Stillwell	LaPorte	10.3	134	688.22	1945-52
Mill Pond Lake and Kreighbaum Lake near Twin Lakes	Marshall	4.86	168	767.75	1945-52
Myers Lake near Twin Lakes	Marshall	1.66	96	768.69	1945-52
North Chain Lake at Lydick	St. Joseph	4.50	88	721.17	1945-53
Pine Lake at LaPorte	LaPorte	5.88	564	796.20	1945-62
Pretty Lake near Plymouth	Marshall	1.92	* 97	-	1954-62
Riddles Lake near Lakeville	St. Joseph	13.5	77	817.50	1945-62
Ringneck Lake near Medaryville	Jasper	-	1,400	-	1949-55
Skitz Lake near Knox	Starke	-	1,000	-	1949-53
South Chain Lake at Westfield	St. Joseph	6.00	90	717.04	1945-52
Spectacle (Loomis) Lake near Valparaiso	Porter	0.89	62	-	1946-52
Stone Lake at LaPorte	LaPorte	5.88	140	796.20	1945-62
Upper Fish Lake near Stillwell	LaPorte	10.3	139	688.22	1945-52
Wauhob Lake near Valparaiso	Porter	0.29	19	-	1946-62
Wharton Lake near South Bend	St. Joseph	-	-	-	1960-62

* Revised.
** Elevation, in feet, above mean sea level.
a Formerly published as Barbee Lake near North Webster.
b Formerly published as Versailles Lake at Versailles State Park.
c Formerly published as Atwood Lake near Cromwell.
d Formerly published as Duley Lake near Cromwell and Druley Lake near Cromwell.
e Formerly published as River Lake near Burr Oak.
f Formerly published as Sackrider Lake near Kendallville.
g Formerly published as Sandford Lake near Cosperville.

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