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

WATER RESOURCES DATA FOR INDIANA

1967

Part 1. Surface Water Records

Prepared in cooperation with

Indiana Department of Natural Resources
Indiana State Board of Health
Indiana State Highway Commission
Corps of Engineers, U. S. Army

Copies of this report may be obtained from
District Chief, Water Resources Division
U. S. Geological Survey
Room 516, 611 North Park Avenue
Indianapolis, Indiana 46204

1968

CALENDAR FOR WATER YEAR 1967

OCTOBER 1966

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 1966

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 1966

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 1967

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 1967

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 1967

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 1967

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 1967

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 1967

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 1967

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 1967

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 1967

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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Part 1. Surface Water Records

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WATER RESOURCES DATA FOR INDIANA, 1967

Part 1. Surface Water Records

INTRODUCTION

The surface-water records for the 1967 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 chief, Water Resources Division.

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 have been released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these basic-data reports is limited and primarily for local needs. Records will be published in Geological Survey water-supply papers at 5-year intervals.

SURFACE WATER RECORDS, 1967

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 Natural Resources, John E. Mitchell, director, through Bureau of Water and Mineral Resources, W. J. Andrews, deputy director; State Highway Commission, Robert F. Whitehead, chairman, Martin L. Hayes, 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.

Assistance in the form of funds or services was given by the Corps of Engineers, U. S. Army, in collecting records for 67 gaging stations published in this report.

The following organizations aided in collecting records:

The 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.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimes will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

DEFINITION OF TERMS AND ABBREVIATIONS

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.

SURFACE WATER RECORDS, 1967

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 8-digit number for each station, such as 03-3355.00, includes the part number "03" and a six-digit station number. In this report, the nonessential zeros are not shown. For example, the complete number 03-3355.00 would appear as 3-3355, 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 from a water-stage

EXPLANATION OF DATA

recorder that gives a continuous chart of the fluctuations (for digital recorders, a tape punched at 15-, 30-, or 60-minute intervals) 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 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 1967 water year is shown on page II 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 nonrecording 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."

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 digital recorders, the daily mean discharge is always the average of the discharges at each punched reading. 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 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. The line headed "Max" gives the discharge of the maximum day. The line headed "Min" gives the discharge of the minimum day. 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 corresponding figures are listed for the calendar year and the water year.

Peak discharges and their times of occurrence and corresponding gage heights for most stations are listed below the table of the yearly summary. 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 local standard time, for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330.

In a general footnote, introduced by the word "Note", certain periods are indicated for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage are indicated

only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions 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 under "Remarks" states the degree of accuracy of the records. "Excellent" indicates that about 95 percent of the daily discharges are within 5 percent; "good," within 10 percent; "fair," within 15 percent. "Poor," means that daily discharges have less than fair accuracy.

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.

At most digital recorder stations mean daily discharges are listed to the nearest hundredth of a cfs below 1 cfs. This has been done for convenience in the computer program and is not indicative of accuracy greater than that used in the past.

OTHER DATA AVAILABLE

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.

OTHER DATA AVAILABLE

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); and through September 1960 has been published as Water-Supply Papers 1725 (3A), 1727 (4), and 1728 (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.

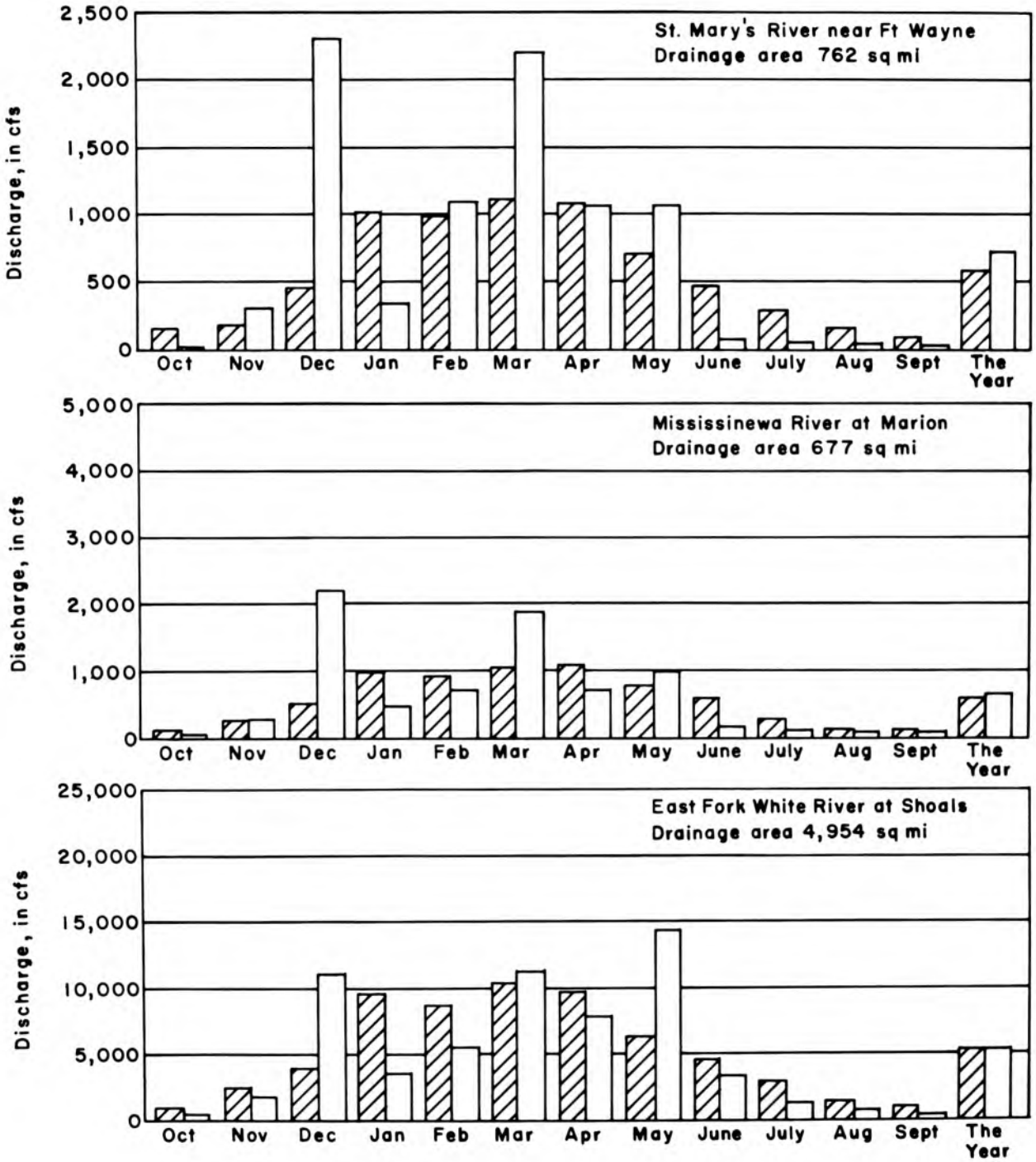
Information of a more detailed nature than that published for most of the gaging stations is on file in the district office, such as discharge measurements and recorder charts or nonrecording-gage readings. Most gaging-station records in the State through 1966 have been analyzed with an electronic computer 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.

At or near some gaging stations, water-quality records also are collected. Data are obtained on the chemical quality of the stream water, on water temperature, on suspended-sediment concentration, and on the particle-size distribution of suspended sediment and bed material. These data are given in Part 2 of this report. Under the "Remarks" paragraph of the gaging-station description, reference is made to water-quality records collected on a regular basis.

HYDROLOGIC CONDITIONS

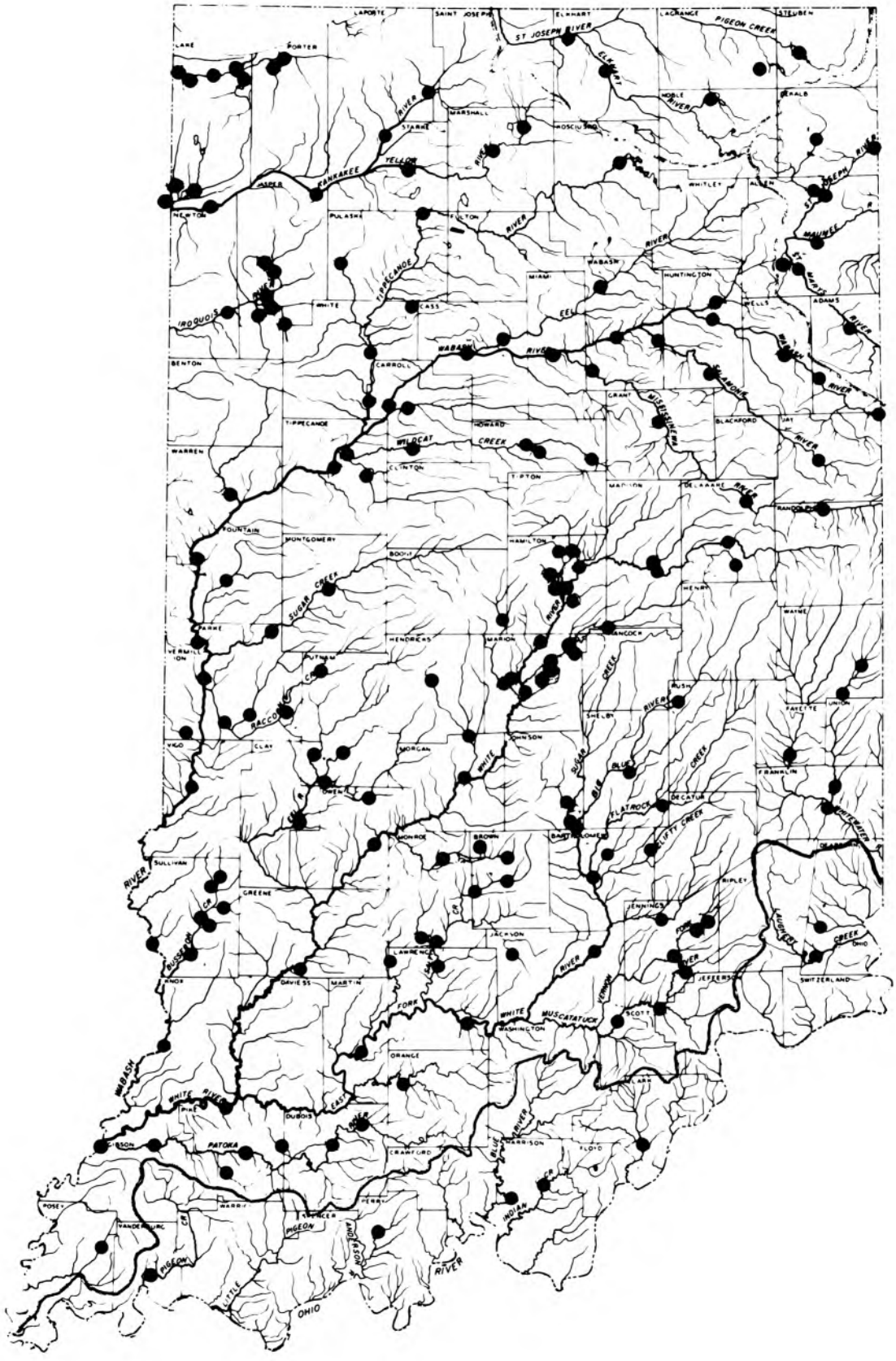
Precipitation was scattered throughout the year by area and time. Heavy rains the first half of December caused minor flooding in Wabash and Maumee River basins. Lack of late summer showers left the central and southern parts three to nine inches below average rainfall.

Deficient streamflow in October was relieved in the south by mid November and in the north by the end of the month. Excessive to near excessive streamflow existed in the first part of December with near record streamflow in the upper Wabash River and Maumee River basins. Near normal streamflow existed from January to May with generally bank-full stages in March and May. Deficient conditions existed in the north and central parts from June to September and in the south from July to September.



Comparison of discharge at three long-term representative gaging stations during 1967 water year with median discharge for period 1931-60

MAP SHOWING LOCATION OF GAGING STATIONS IN INDIANA



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.--529 sq mi.

Records available.--October 1928 to September 1967. Prior to October 1936, published as West Fork Whitewater River near Alpine.

Gage.--Digital water-stage recorder. Datum of gage is 750.19 ft above mean sea level, datum of 1929. Prior to Nov. 9, 1928, staff gage, and Nov. 9, 1928 to Oct. 29, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--39 years, 528 cfs.

Extremes.--Maximum discharge during year, 10,200 cfs Dec. 9 (gage height, 11.91 ft); minimum daily, 68 cfs Oct. 9.
1928-67: Maximum discharge, 37,100 cfs Jan. 14, 1937 (gage height, 16.61 ft); minimum, 14 cfs Sept. 22, 1931; minimum daily, 30 cfs Aug. 6, 1934.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	82	77	680	354	650	329	940	520	763	651	207	112
2	80	82	569	354	2,540	378	808	2,390	683	494	168	112
3	79	90	438	362	2,700	639	749	1,440	754	394	153	105
4	77	84	372	358	1,270	703	668	1,050	654	351	150	100
5	74	88	425	350	896	3,000	1,560	830	583	326	142	100
6	71	89	1,830	334	727	6,030	2,920	1,540	533	294	142	96
7	69	115	3,760	445	581	2,610	1,760	8,040	505	273	142	94
8	69	323	4,640	615	539	2,060	1,310	5,100	459	262	153	90
9	68	596	9,030	398	497	1,510	1,090	2,440	461	248	156	122
10	89	670	8,900	354	483	1,630	928	1,700	404	259	142	105
11	99	1,500	5,080	330	470	1,630	784	4,030	374	256	132	98
12	99	847	2,220	320	422	1,440	705	2,560	356	245	130	96
13	90	570	1,520	312	410	1,200	706	1,650	337	207	130	102
14	84	435	1,190	306	406	1,290	702	1,820	312	186	125	105
15	100	362	980	280	410	1,270	642	2,530	294	180	125	96
16	98	312	847	250	445	1,080	567	1,980	284	168	125	90
17	98	281	744	230	451	960	567	1,580	273	168	112	86
18	97	254	666	220	420	777	514	1,370	276	180	118	90
19	96	236	610	230	402	709	446	1,180	270	180	125	90
20	94	218	575	240	401	987	405	1,010	266	174	118	86
21	92	209	525	247	390	4,670	466	906	284	165	115	90
22	87	200	480	254	360	2,420	1,200	845	332	150	115	100
23	80	195	445	267	340	1,570	1,210	788	298	165	115	92
24	80	188	420	271	320	1,250	974	745	266	174	125	90
25	80	188	402	276	300	1,230	779	702	259	165	125	90
26	80	192	382	305	300	1,220	706	848	252	148	125	90
27	80	3,850	370	1,170	310	1,030	642	684	245	153	122	90
28	80	3,310	406	1,330	342	1,700	544	664	248	162	125	90
29	78	1,280	430	796	------	2,410	475	1,950	3,280	174	125	90
30	77	839	374	649	------	1,470	468	1,150	955	168	122	90
31	76	------	358	596	------	1,150	------	895	------	168	112	------
TOTAL	2,603	17,680	49,668	12,803	17,782	50,352	26,235	54,937	15,260	7,288	4,121	2,887
MEAN	84.0	589	1,602	413	635	1,624	875	1,772	509	235	133	96.2
MAX	100	3,850	9,030	1,330	2,700	6,030	2,920	8,040	3,280	651	207	122
MIN	68	77	358	220	300	329	405	520	245	148	112	86
CFSM	.16	1.11	3.03	.78	1.20	3.07	1.65	3.35	.96	.44	.25	.18
IN.	.18	1.24	3.49	.90	1.25	3.54	1.84	3.86	1.07	.51	.29	.20

CAL YR 1966: TOTAL 143,702 MEAN 394 MAX 9,030 MIN 53 CFSM .74 IN 10.10
WAT YR 1967: TOTAL 261,616 MEAN 717 MAX 9,030 MIN 68 CFSM 1.35 IN 18.39

Peak discharge (base, 6,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-27	2245	10.45	7,280	5-7	1645	11.45	9,310
12-9	1715	11.91	10,200	6-29	0645	10.58	7,740
3-6	0530	10.55	7,690				

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

Location.--Lat 39°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.--121 sq mi.

Records available.--April 1949 to September 1967.

Gage.--Digital 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, and July 27, 1949 to Aug. 1, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--18 years, 116 cfs.

Extremes.--Maximum discharge during year, 5,060 cfs May 7 (gage height, 8.58 ft); minimum, 8.5 cfs Sept. 8 (gage height, 0.33 ft).
1949-1967: 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 good. 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.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	30	23	257	79	152	48	164	136	125	103	36	16
2	27	28	225	82	688	78	144	832	112	76	28	16
3	26	29	186	93	465	271	133	334	114	56	25	15
4	25	28	168	89	277	231	120	211	98	54	24	16
5	24	34	252	80	226	1,380	652	160	94	44	22	15
6	25	34	911	72	177	1,300	628	693	81	44	22	15
7	25	194	1,540	92	114	479	305	3,120	76	41	25	15
8	23	391	1,300	125	103	358	208	835	78	44	24	14
9	34	364	2,440	83	92	277	176	448	72	41	22	47
10	93	813	2,480	70	91	429	155	312	63	56	21	19
11	49	517	799	60	91	413	129	1,000	58	44	21	16
12	34	197	467	58	74	292	114	428	53	39	21	17
13	28	120	349	57	69	241	131	286	46	35	21	17
14	25	89	301	57	68	271	118	268	48	33	21	17
15	85	74	288	56	76	253	106	391	45	33	21	17
16	83	67	267	51	118	199	96	309	44	32	22	16
17	45	57	229	42	103	178	103	247	53	48	22	15
18	36	50	201	37	82	144	88	205	96	29	22	16
19	33	45	180	37	72	129	81	178	60	34	25	16
20	30	41	159	39	72	230	67	152	49	28	22	17
21	27	39	136	41	67	1,110	114	135	73	26	21	17
22	25	36	125	45	61	404	307	130	74	25	21	16
23	25	34	114	55	59	259	198	116	53	25	20	15
24	26	32	105	59	44	206	162	112	53	25	19	15
25	25	33	98	62	39	340	130	105	44	25	19	16
26	25	75	90	110	43	248	125	98	40	24	20	16
27	24	1,270	85	353	43	192	112	92	38	23	19	20
28	24	532	100	269	56	627	92	337	114	23	19	20
29	23	329	103	167	------	468	85	545	528	60	17	17
30	23	277	84	131	------	264	89	220	168	54	17	17
31	24	------	78	118	------	199	------	162	------	134	17	------
TOTAL	1,051	5,852	14,157	2,769	3,622	11,518	5,132	12,597	2,650	1,398	676	521
MEAN	33.9	195	457	89.3	129	372	171	406	88.3	45.1	21.8	17.4
MAX	93	1,270	2,480	353	688	1,380	652	3,120	528	134	36	47
MIN	23	23	78	37	39	48	67	92	38	23	17	14
CFSM	.28	1.61	3.77	.74	1.07	3.07	1.41	3.36	.73	.37	.18	.14
IN.	.32	1.80	4.35	.85	1.11	3.54	1.58	3.87	.81	.43	.21	.16

CAL YR 1966: TOTAL 38,036.7 MEAN 104 MAX 2,480 MIN 7.4 CFSM .86 IN 11.69
WAT YR 1967: TOTAL 61,943 MEAN 170 MAX 3,120 MIN 14 CFSM 1.40 IN 19.04

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-7	1700	5.72	2,460				
12-9	0245	7.82	4,190				
3-5	2100	5.31	2,180				
5-7	0900	8.58	5,060				

3-2756. East Fork Whitewater River at Abington, Ind.

Location.--Lat 39°43'57", long 84°57'35", in SW¼ sec. 2, T. 12 N., R. 2 W., at downstream side of center pier of bridge on county road at Abington, 3 miles downstream from Elkhorn Creek, and 8 miles southwest of Richmond, Ind.

Drainage area.--198 sq mi.

Records available.--October 1965 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 791.00 ft above mean sea level, datum of 1929. Prior to May 4, 1966, graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 6,300 cfs May 7 (gage height, 13.54 ft); minimum, 24 cfs Sept. 3; minimum gage height 2.14 ft Oct. 8, 9.
1965-67: Maximum discharge, 6,300 cfs May 7, 1967 (gage height, 13.54 ft); minimum discharge, 19 cfs Aug. 7, 8, 1966 (gage height, 1.94 ft).

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	73	44	288	134	226	120	285	219	235	204	98	29
2	52	55	249	135	1,160	185	259	1,650	207	154	70	29
3	46	63	201	146	775	388	246	542	227	122	63	26
4	44	60	182	137	395	340	224	341	189	116	58	27
5	41	84	298	129	299	2,260	894	276	175	100	50	27
6	38	94	1,100	120	253	2,830	1,080	1,350	162	88	45	28
7	38	248	2,210	172	195	921	509	4,850	154	82	46	28
8	37	708	1,770	181	185	621	347	1,470	149	80	53	28
9	41	682	3,920	136	178	491	290	748	145	70	48	73
10	145	1,090	4,240	122	177	753	259	516	131	102	43	41
11	93	856	1,470	108	170	762	229	1,920	118	90	39	32
12	64	389	705	109	149	519	209	844	111	74	37	32
13	54	273	500	112	149	425	235	528	102	65	35	33
14	49	220	401	115	150	502	221	525	103	61	36	33
15	150	184	338	110	155	437	203	892	97	61	36	31
16	179	162	309	96	191	368	185	628	93	58	36	29
17	103	143	278	88	170	330	197	486	97	89	36	27
18	82	128	255	82	154	282	178	396	148	86	36	29
19	72	113	237	82	145	261	167	347	116	97	44	30
20	64	103	228	83	149	442	159	292	100	83	36	33
21	59	101	207	86	140	2,160	199	260	136	63	35	34
22	54	96	193	103	135	700	459	248	147	57	35	31
23	51	91	177	113	131	429	305	226	113	54	34	29
24	49	86	165	117	115	348	280	214	105	53	32	27
25	49	87	152	122	110	438	233	201	110	51	33	28
26	47	105	141	175	108	370	229	192	85	48	34	28
27	46	1,710	136	460	118	313	212	178	80	47	33	30
28	45	663	164	375	120	1,030	187	456	444	53	33	44
29	45	385	166	245	------	813	175	982	1,080	89	31	32
30	41	311	136	208	------	428	178	391	331	428	30	30
31	42	------	129	194	------	332	------	288	------	561	31	------
TOTAL	1,993	9,334	20,945	4,595	6,402	20,598	8,833	22,456	5,490	3,386	1,306	958
MEAN	64.3	311	676	148	229	664	294	724	183	109	42.1	31.9
MAX	179	1,710	4,240	460	1,160	2,830	1,080	4,850	1,080	561	98	73
MIN	37	44	129	82	108	120	159	178	80	47	30	26
CFSM	.32	1.57	3.41	.75	1.15	3.36	1.49	3.66	.92	.55	.21	.16
IN.	.37	1.75	3.93	.86	1.20	3.87	1.66	4.22	1.03	.64	.25	.18

CAL YR 1966: TOTAL 63,816 MEAN 175 MAX 4,240 MIN 21 CFSM .88 IN 11.99
WAT YR 1967: TOTAL 106,296 MEAN 291 MAX 4,850 MIN 26 CFSM 1.47 IN 19.97

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-7	1830	10.21	3,590	5-7	1245	13.54	6,300
12-9	0615	12.61	5,410	5-11	1015	10.60	3,300
3-6	0415	11.02	4,150	6-28	2315	10.69	3,360
3-21	0730	9.32	3,010				

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

Location.--Lat 39°26'02", long 85°00'12", in NE¼NE¼ sec. 20, T. 9 N., R. 2 W., on right bank, 100 ft upstream from bridge on State Highway 101, 1.4 miles northeast of Brookville, and 1.8 miles upstream from mouth.

Drainage area.--380 sq mi.

Records available.--March 1954 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 621.76 ft above mean sea level, datum of 1929. Prior to May 22, 1954, wire-weight gage at site 100 ft downstream at datum 2.00 ft higher. May 22, 1954 to Aug. 20, 1965, graphic water-stage recorder at site 165 ft downstream at datum 2.00 ft higher. Aug. 20, 1965 to May 24, 1966, graphic water-stage recorder at present site and datum.

Average discharge.--13 years, 360 cfs.

Extremes.--Maximum discharge during year, 14,000 cfs June 29 (gage height, 11.37 ft); minimum 38 cfs Sept. 25, 26; minimum gage height, 2.01 ft Oct. 8, 9.
1954-67: Maximum discharge, 36,100 cfs Jan. 21, 1959 (gage height, 16.50 ft, site and datum then in use); minimum discharge, 15 cfs Sept. 10, 1964.

Remarks.--Record good. Record of suspended sediment loads for the water year 1967 is published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	87	54	447	238	303	200	546	355	447	467	213	46
2	87	62	394	243	1,290	275	483	1,950	389	341	142	46
3	72	74	308	248	1,470	669	449	1,260	489	269	117	44
4	65	75	278	238	763	634	405	741	406	235	104	42
5	60	80	358	231	551	2,540	1,070	557	347	216	92	40
6	56	112	1,320	216	455	4,890	1,870	1,110	316	192	82	40
7	54	178	2,500	262	350	1,990	1,060	6,960	296	179	75	40
8	53	792	2,890	309	325	1,350	724	4,900	270	172	75	40
9	52	994	4,730	247	321	1,090	589	1,960	263	161	76	44
10	72	1,580	6,830	221	307	1,380	506	1,260	240	224	72	76
11	123	1,780	3,600	203	302	1,420	443	2,900	220	220	68	56
12	91	786	1,530	198	253	1,050	400	2,050	203	173	65	48
13	77	495	1,080	197	253	806	410	1,180	193	150	62	48
14	66	375	832	200	256	805	418	1,740	183	138	60	60
15	77	307	666	195	260	818	379	3,470	176	132	60	50
16	184	263	578	172	291	687	344	1,980	169	126	58	46
17	142	235	516	160	278	585	358	1,400	162	122	58	42
18	111	209	471	150	254	484	337	1,090	187	151	60	40
19	98	185	426	150	243	441	301	842	194	148	60	42
20	88	167	401	150	249	879	288	657	172	160	67	46
21	81	159	362	155	236	3,170	354	553	169	147	60	46
22	74	151	332	165	220	1,630	826	498	274	123	56	50
23	70	145	302	175	219	1,010	631	457	209	112	56	46
24	66	138	286	180	205	746	585	426	175	107	54	42
25	64	136	263	190	185	741	467	396	177	103	52	40
26	63	140	249	190	180	718	432	744	156	98	54	38
27	61	1,220	240	393	190	575	410	401	145	119	62	42
28	59	1,300	271	564	200	1,110	358	509	148	256	56	48
29	58	674	313	371	------	1,590	330	1,840	5,840	121	50	56
30	57	491	249	316	------	912	341	834	858	149	50	48
31	55	------	237	293	------	671	------	558	------	394	46	------
TOTAL	2,423	13,357	33,259	7,220	10,409	35,866	16,114	45,578	13,473	5,705	2,262	1,392
MEAN	78.2	445	1,073	233	372	1,157	537	1,470	449	184	73.0	46.4
MAX	184	1,780	6,830	564	1,470	4,890	1,870	6,960	5,840	467	213	76
MIN	52	54	237	150	180	200	288	355	145	98	46	38
CFSM	.21	1.17	2.82	.61	.98	3.04	1.41	3.87	1.18	.48	.19	.12
IN.	.24	1.31	3.26	.71	1.02	3.51	1.58	4.46	1.32	.56	.22	.14

CAL YR 1966: TOTAL 112,712 MEAN 309 MAX 6,830 MIN 29 CFSM .81 IN 11.03
WAT YR 1967: TOTAL 187,058 MEAN 512 MAX 6,960 MIN 38 CFSM 1.35 IN 18.31

Peak discharge (base, 4,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0830	8.55	7,300	5-15	0745	7.39	5,100
3-6	0530	7.87	5,970	6-29	0945	11.37	14,000
5-8	0345	9.07	8,350				

3-2765. Whitewater River at Brookville, Ind.

Location.--Lat 39°24'24", long 85°00'46", 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 Whitewater River, and 1.1 miles south of Brookville.

Drainage area.--1,224 sq mi.

Records available.--June 1915 to September 1917, October 1917 to May 1920 (gage heights only), and July 1923 to September 1967. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Digital water-stage recorder. Datum of gage is 595.71 ft above mean sea level, datum of 1929. Prior to July 1923, chain gage at same site at datum 1.5 ft higher. July 1923 to Sept. 27, 1928, chain gage and Sept. 27, 1928 to Dec. 21, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--46 years (1915-17, 1923-67), 1,244 cfs.

Extremes.--Maximum discharge during year, 23,400 cfs May 7 (gage height, 14.35 ft); minimum, 120 cfs Oct. 24, 25; minimum gage-height, 0.75 ft Sept. 26, 27.
1915-20, 1923-67: 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.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	216	130	1,290	780	1,060	617	1,890	1,290	1,470	1,260	510	167
2	219	154	1,140	772	4,400	751	1,660	6,590	1,260	945	389	165
3	205	179	933	761	5,250	1,930	1,490	3,590	1,430	775	338	161
4	184	178	831	737	2,850	1,910	1,310	2,430	1,350	689	312	157
5	177	192	922	724	2,080	6,220	2,430	1,960	1,120	624	292	153
6	167	244	2,750	676	1,710	13,100	4,500	2,790	1,020	572	275	153
7	161	405	5,720	755	1,300	5,590	3,120	18,200	969	533	262	151
8	158	1,120	7,340	1,100	1,100	4,080	2,410	12,400	894	506	258	149
9	158	1,600	12,500	859	1,020	3,360	2,010	5,500	859	479	265	158
10	174	3,330	20,300	739	976	3,780	1,760	3,830	807	534	256	200
11	252	2,780	10,800	669	952	3,540	1,520	5,840	750	524	240	172
12	202	1,590	4,840	640	808	3,040	1,330	5,430	702	463	237	156
13	174	1,090	3,550	629	784	2,570	1,260	3,390	666	423	230	160
14	157	853	2,790	625	768	2,450	1,270	4,800	632	398	219	184
15	195	728	2,250	613	784	2,780	1,180	9,780	601	383	218	163
16	317	650	1,920	540	856	2,380	1,070	5,230	574	368	217	152
17	284	595	1,690	500	840	1,980	1,110	4,250	556	355	214	145
18	241	550	1,510	470	787	1,630	1,100	3,470	567	400	221	139
19	220	509	1,340	460	747	1,430	969	2,770	560	516	227	138
20	204	475	1,270	460	754	2,920	903	2,240	534	739	232	147
21	189	453	1,170	486	725	8,490	1,110	1,920	576	435	214	148
22	178	437	1,070	518	676	5,030	3,740	1,710	809	384	207	152
23	166	422	990	560	671	3,260	2,470	1,530	671	342	201	147
24	152	407	922	585	619	2,540	2,250	1,420	559	324	195	137
25	152	400	846	589	551	2,300	1,790	1,330	525	314	200	132
26	149	412	799	600	546	2,170	1,570	1,620	491	301	194	129
27	145	1,960	754	1,270	591	1,800	1,430	1,280	467	302	201	133
28	141	4,860	853	2,140	624	3,040	1,200	1,230	474	506	195	143
29	139	2,470	1,270	1,430	------	4,310	1,080	3,320	7,100	348	189	157
30	135	1,670	872	1,170	------	2,920	1,120	2,400	2,050	446	181	149
31	130	------	798	1,040	------	2,310	------	1,780	------	1,010	172	------
TOTAL	5,741	30,843	96,030	23,897	34,829	104,228	52,052	125,320	31,043	16,202	7,561	4,597
MEAN	185	1,028	3,098	771	1,244	3,362	1,735	4,043	1,035	523	244	153
MAX	317	4,860	20,300	2,140	5,250	13,100	4,500	18,200	7,100	1,260	510	200
MIN	130	130	754	460	546	617	903	1,230	467	301	172	129
CFSM	.15	.84	2.53	.63	1.02	2.75	1.42	3.30	.85	.43	.20	.13
IN.	.17	.94	2.92	.73	1.06	3.17	1.58	3.81	.94	.49	.23	.14

CAL YR 1966: TOTAL 347,982 MEAN 953 MAX 20,300 MIN 88 CFSM .78 IN 10.57
WAT YR 1967: TOTAL 532,343 MEAN 1,458 MAX 20,300 MIN 129 CFSM 1.19 IN 16.17

Peak discharge (base, 12,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1100	14.28	23,200	5-15	1030	11.07	15,400
3-6	1000	11.56	16,500	6-29	1100	10.91	15,000
5-7	1300	14.35	23,400				

3-2767. South Hogan Creek near Dillsboro, Ind.
Hydrologic Bench-mark Station

Location.--Lat 39°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 1967. Occasional low-flow measurements, water year 1960.

Gage.--Digital water-stage recorder. Datum of gage is 571.00 ft above mean sea level, datum of 1929. Prior to Aug. 15, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--6 years, 32.8 cfs.

Extremes.--Maximum discharge during year, 2,460 cfs May 7 (gage height, 6.75 ft); no flow for many days.
1961-67: Maximum discharge, 8,630 cfs Mar. 4, 1963 (gage height, 10.82 ft); no flow at times each year.
Flood of Jan. 21, 1959, reached a stage of 14.00 ft (discharge, 16,300 cfs, computed from contracted-opening).

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	.20	.20	6.0	15	13	16	22	56	4.5	.04	.47	0
2	.10	.90	5.6	13	230	24	18	436	4.1	.01	.26	0
3	.20	2.0	3.9	15	99	68	20	94	11	0	.18	0
4	.40	2.9	3.3	13	41	94	20	50	11	0	.10	0
5	.30	3.6	4.3	9.4	27	161	17	37	5.8	0	.04	0
6	.20	5.2	26	7.6	23	467	16	86	3.9	0	0	0
7	.10	7.1	98	12	17	131	13	730	6.0	0	0	0
8	.10	23	63	15	13	100	11	139	4.9	0	0	0
9	.10	34	303	16	10	153	11	70	3.2	0	0	0
10	.10	208	667	12	9.0	186	12	46	2.3	.12	0	0
11	0	46	92	8.0	8.5	88	10	43	1.6	.07	0	0
12	0	12	42	6.7	8.2	55	8.5	35	1.2	.04	0	0
13	0	7.1	28	6.6	8.1	42	9.2	28	.81	.01	0	0
14	0	4.7	21	7.2	8.1	180	9.3	138	.58	0	0	0
15	.10	3.6	16	6.8	8.5	337	8.3	625	.36	0	0	0
16	.20	3.1	14	4.6	11	92	7.4	116	.22	0	0	0
17	.20	2.7	13	3.5	8.7	52	37	111	.15	0	0	0
18	.20	2.3	12	3.0	7.2	34	40	61	.11	0	0	0
19	.40	2.0	11	2.5	6.9	29	21	40	.08	0	0	0
20	.50	1.8	10	2.5	7.7	54	16	28	.05	0	0	0
21	.40	1.6	9.2	4.0	7.5	283	236	22	.12	0	0	0
22	.40	1.2	8.3	6.1	6.6	68	422	18	.74	0	0	0
23	.30	1.1	7.2	7.5	6.0	42	76	14	1.7	0	0	0
24	.20	1.3	6.1	8.5	5.0	27	80	12	1.1	0	0	0
25	.20	2.3	5.6	8.6	4.0	27	51	10	.60	0	0	0
26	.20	3.9	4.9	8.2	3.8	23	45	7.7	.30	0	.10	0
27	.20	5.0	4.4	26	5.3	19	43	6.2	.20	0	.10	0
28	.10	7.8	84	31	8.8	144	31	5.1	.20	9.6	0	0
29	.10	9.4	105	16	------	79	26	4.6	.20	7.2	0	0
30	.10	6.9	47	13	------	40	35	4.4	.10	2.3	0	0
31	.10	------	24	13	------	28	------	4.3	------	1.1	0	------
TOTAL	5.70	412.70	1,744.8	321.3	611.9	3,143	1,371.7	3,077.3	67.12	20.49	1.25	0
MEAN	.18	13.8	56.3	10.4	21.9	101	45.7	99.3	2.24	.66	.040	0
MAX	.50	208	667	31	230	467	422	730	11	9.6	.47	0
MIN	0	.20	3.3	2.5	3.8	16	7.4	4.3	.05	0	0	0
CFSM	.005	.36	1.47	.27	.57	2.65	1.20	2.60	.06	.02	.001	0
IN.	.006	.40	1.70	.31	.60	3.06	1.34	3.00	.07	.02	.001	0

CAL YR 1966: TOTAL 12,639.90 MEAN 34.6 MAX 1,180 MIN 0 CFSM .91 IN 12.31
WAT YR 1967: TOTAL 10,777.26 MEAN 29.5 MAX 730 MIN 0 CFSM .77 IN 10.49

Peak discharge (base, 2,500 cfs)--No peak above base.

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

Location.--Lat 38°57'08", long 85°04'15", in sec. 2, T. 4 N., R. 3 W., on right bank, 2.4 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 528.54 ft above mean sea level, datum of 1929 (levels by Indiana Department of Natural Resources). Prior to Apr. 16, 1941, staff gage, and Apr. 16, 1941 to Aug. 24, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--27 years, 269 cfs.

Extremes.--Maximum discharge during year, 7,010 cfs May 7 (gage height, 9.92 ft); minimum discharge, 0.03 cfs Sept. 7, 8, 18 (gage height, 0.25 ft).
1940-67: 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.--Record good. Some regulation at low flow by mill above the station.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	32	12	95	137	120	63	260	305	66	9.2	29	.22
2	35	16	81	107	674	85	210	2,860	55	7.9	19	.50
3	29	31	65	93	2,230	225	183	2,040	56	6.8	13	.98
4	25	48	60	82	640	621	165	571	57	8.5	9.1	.62
5	24	40	63	77	342	933	147	370	106	8.2	6.6	.26
6	19	66	135	70	250	2,890	136	392	83	6.1	4.7	.10
7	17	101	538	73	184	1,590	133	3,400	60	5.5	3.8	.05
8	15	102	1,140	80	141	780	113	2,320	63	4.4	3.2	.04
9	14	203	1,900	94	127	790	96	713	64	3.6	3.0	.07
10	15	1,380	5,280	86	110	1,050	93	465	45	5.2	2.8	.12
11	15	1,660	2,800	74	96	758	86	356	33	5.4	2.0	.07
12	16	428	711	65	84	505	76	338	26	3.3	1.5	.06
13	14	179	389	59	77	381	76	279	21	3.4	1.2	.09
14	12	118	265	55	74	460	73	388	17	3.0	1.0	.10
15	14	89	196	53	71	1,260	68	3,060	14	3.3	.76	.08
16	21	74	160	46	77	892	70	2,500	12	3.2	.58	.08
17	34	63	138	40	76	478	484	846	11	3.8	.76	.06
18	47	56	126	35	74	329	348	822	8.8	4.1	2.2	.04
19	39	50	114	30	73	255	268	442	7.5	2.5	1.5	.05
20	29	44	104	30	70	255	168	304	6.6	2.0	1.0	.08
21	22	40	92	32	66	1,710	293	210	6.9	1.5	.67	.15
22	18	36	85	36	61	1,130	2,800	161	25	1.2	.49	.15
23	16	32	76	40	68	509	1,370	129	121	1.1	.40	.13
24	15	29	67	44	65	361	570	108	112	.84	.26	.15
25	13	30	57	54	60	289	551	91	56	.85	.26	.24
26	12	44	59	69	49	254	380	78	35	.68	.49	.19
27	10	51	59	102	52	225	340	66	23	3.5	.58	.21
28	8.8	91	271	417	57	505	297	56	18	6.2	.26	.43
29	9.4	127	389	272	------	1,010	227	49	14	12	.25	.36
30	9.4	116	441	158	------	520	225	48	11	86	.91	.27
31	9.5	------	206	129	------	340	------	75	------	50	.44	------
TOTAL	609.1	5,356	16,162	2,739	6,068	21,453	10,306	23,842	1,233.8	263.27	111.71	5.95
MEAN	19.6	179	521	88.4	217	692	344	769	41.1	8.49	3.60	.20
MAX	47	1,660	5,280	417	2,230	2,890	2,800	3,400	121	86	29	.98
MIN	8.8	12	57	30	49	63	68	48	6.6	.68	.25	.04
CFSM	.08	.72	2.10	.36	.87	2.79	1.39	3.10	.17	.03	.01	.0007
IN.	.09	.80	2.42	.41	.91	3.22	1.55	3.58	.19	.04	.02	.0008

CAL YR 1966: TOTAL 99,966.80 MEAN 274 MAX 5,360 MIN .10 CFSM 1.10 IN 14.99
WAT YR 1967: TOTAL 88,149.83 MEAN 242 MAX 5,280 MIN .04 CFSM .97 IN 13.22

Peak discharge (base, 6,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0430	8.66	6,190				
5-7	0415	9.92	7,010				

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 1967.

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.--13 years, 209 cfs.

Extremes.--Maximum discharge during year, 3,160 cfs May 2 (gage height, 16.28 ft); minimum, 1.6 cfs July 5,9, Aug. 8; minimum gage height, 3.80 ft July 5, 9.
1954-67: 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 in most years.

Remarks.--Record fair.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	10	38	136	104	63	161	1,800	47	5.6	5.0	31
2	12	20	31	120	508	68	127	2,970	68	4.0	4.0	20
3	8.2	24	26	104	786	84	120	1,680	58	3.1	4.6	12
4	5.3	25	26	90	367	84	127	511	178	1.7	5.9	11
5	3.8	34	40	78	265	537	112	321	58	1.6	5.9	10
6	3.3	46	127	69	215	1,400	97	522	39	2.6	3.8	7.0
7	2.1	55	255	78	161	1,340	97	2,120	27	2.9	2.4	4.4
8	2.1	71	459	97	120	758	84	877	22	2.1	1.8	3.6
9	2.1	54	1,640	72	104	674	72	485	19	1.6	56	2.9
10	5.1	266	2,750	57	90	1,370	84	286	14	1.8	72	5.6
11	8.2	413	1,230	55	80	1,150	112	225	12	7.9	59	5.3
12	6.1	120	436	48	73	1,400	84	178	11	12	10	4.0
13	5.3	63	275	48	68	1,430	72	152	8.2	9.6	7.9	3.3
14	3.8	42	215	48	69	990	72	712	7.0	4.4	7.0	3.6
15	4.9	40	170	55	69	2,620	72	1,070	6.7	4.4	5.9	3.6
16	16	38	152	44	65	1,100	61	646	5.9	4.2	4.4	2.9
17	7.9	31	144	33	55	537	236	413	5.9	3.3	5.3	3.3
18	5.9	25	112	25	52	321	321	298	6.7	3.3	11	5.1
19	5.3	20	97	21	51	255	144	205	24	3.3	10	8.2
20	3.6	19	90	21	50	235	97	152	16	4.0	11	6.1
21	3.6	14	84	27	48	590	180	120	10	3.8	6.4	5.6
22	3.6	14	72	34	46	390	390	97	9.6	3.8	5.9	4.0
23	3.3	14	62	40	45	286	275	84	9.2	3.5	5.3	4.4
24	2.2	14	52	40	35	298	200	72	7.3	2.9	4.0	3.6
25	3.6	14	48	39	25	215	150	64	6.1	6.1	4.4	2.6
26	5.1	21	46	53	23	178	200	55	5.6	19	195	2.2
27	9.6	31	44	273	33	161	250	48	4.0	14	41	2.0
28	13	46	396	298	48	186	190	36	5.1	7.0	19	3.6
29	13	64	563	186		436	150	32	16	10	14	6.1
30	12	52	195	144	- - - - -	255	600	31	12	8.2	20	4.6
31	8.9	- - - - -	144	120	- - - - -	195	- - - - -	31	- - - - -	7.3	34	- - - - -
Total	198.9	1,700	10,019	2,553	3,655	19,606	4,937	16,293	718.3	169.0	641.9	191.6
Mean	6.42	5.67	323	82.4	131	632	165	526	23.9	5.45	20.7	6.39
Max	16	413	2,750	298	786	2,620	600	2,970	178	19	195	31
Min	2.1	10	26	21	23	63	61	31	4.0	1.6	1.8	2.0
Cfsm	0.034	0.302	1.72	0.438	0.697	3.36	0.878	2.80	0.127	0.029	0.110	0.034
In.	0.04	0.34	1.98	0.51	0.72	3.87	0.98	3.23	0.14	0.03	0.13	0.04

Cal yr 1966: Total 87,369.1 Mean 239 Max 6,000 Min 0.4 Cfsm 1.27 In. 17.30
Wtr yr 1967: Total 60,682.7 Mean 166 Max 2,970 Min 1.6 Cfsm 0.883 In. 12.01

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1500	15.78	2,990				
3-15	1300	16.25	3,120				
5-2	1800	16.28	3,160				

3-3025. 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 1967. Prior to October 1961, published as Big Indian Creek near Corydon.

Gage.--Digital 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, and Dec. 9, 1948 to Oct. 22, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--24 years, 166 cfs.

Extremes.--Maximum discharge during year, 2,840 cfs Dec. 10 (gage height, 11.10 ft); minimum, 1.8 cfs July 5, 6; minimum gage height, 4.10 ft Aug. 7, 8, 9.
1943-67: Maximum discharge, 26,700 cfs Mar. 5, 1964 (gage height, 22.64 ft); no flow at times during 1943-44, 1951-54, 1959, 1965, minimum gage height, 4.07 ft Aug. 26, 1965.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	8.2	10	48	115	122	80	116	750	33	7.9	11	42
2	10	18	40	101	284	98	107	1,190	37	5.3	8.2	16
3	12	26	34	86	500	111	101	807	33	3.8	6.3	9.2
4	14	35	27	75	325	100	100	459	29	2.7	5.1	6.4
5	14	41	40	67	235	99	90	298	28	2.1	4.0	4.9
6	14	58	228	62	190	511	85	230	23	2.7	3.2	4.1
7	14	69	258	62	144	614	77	1,200	19	3.2	2.8	3.8
8	12	81	279	80	114	439	68	596	16	6.0	2.6	4.1
9	10	67	960	63	109	360	63	379	15	14	229	9.7
10	9.1	293	2,030	58	108	715	66	260	12	8.2	114	13
11	9.1	255	736	53	96	713	74	205	9.9	11	35	11
12	8.2	121	411	50	80	804	62	162	8.2	33	18	9.9
13	7.0	83	276	53	70	718	60	134	7.0	12	12	7.8
14	5.1	63	208	52	68	452	58	487	6.1	6.6	8.4	6.1
15	16	50	168	50	64	957	53	631	6.6	4.7	6.3	6.0
16	23	42	141	41	61	564	47	449	6.3	3.4	5.0	6.8
17	32	36	121	32	56	381	50	341	7.3	2.8	4.1	7.9
18	14	31	107	28	53	259	74	260	7.5	2.8	3.5	6.7
19	10	27	95	25	51	209	55	205	17	2.6	3.8	6.6
20	8.0	24	86	25	51	186	47	158	20	3.8	3.7	6.7
21	7.2	22	77	29	48	278	57	126	16	10	3.5	8.8
22	5.7	21	68	34	45	249	244	107	15	21	3.5	8.7
23	8.3	19	59	35	40	213	170	90	15	12	3.7	7.1
24	11	18	52	32	35	185	147	77	12	6.9	4.4	5.6
25	9.0	19	47	29	32	164	120	66	7.5	5.5	4.5	5.0
26	7.5	23	41	34	30	145	157	56	5.3	4.3	117	4.8
27	7.2	36	37	310	35	130	194	46	4.9	13	46	5.2
28	7.1	44	188	331	45	140	148	39	18	36	19	7.0
29	5.3	59	290	209	------	170	120	34	18	45	11	6.4
30	4.9	57	158	168	------	145	344	32	13	32	7.4	5.7
31	6.6	------	134	141	------	130	------	31	------	17	80	------
TOTAL	329.5	1,748	7,444	2,530	3,091	10,319	3,154	9,905	465.6	341.3	786.0	253.0
MEAN	10.6	58.3	240	81.6	110	333	105	320	15.5	11.0	25.4	8.43
MAX	32	293	2,030	331	500	957	344	1,200	37	45	229	42
MIN	4.9	10	27	25	30	80	47	31	4.9	2.1	2.6	3.8
CFSM	.08	.45	1.86	.63	.86	2.58	.81	2.48	.12	.09	.20	.07
IN.	.09	.50	2.15	.73	.89	2.97	.91	2.86	.13	.10	.23	.07

CAL YR 1966: TOTAL 64,986.0 MEAN 178 MAX 5,320 MIN 1.4 CFSM 1.38 IN 18.74
WAT YR 1967: TOTAL 40,366.4 MEAN 111 MAX 2,030 MIN 2.1 CFSM .86 IN 11.64

Peak discharge (base, 4,500 cfs).--Dec. 10 (1145) 2,840 cfs (11.10 ft).

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 1967. Monthly figures only for some periods, published in WSP 1305.

Gage.--Digital water-stage recorder. Datum of gage is 434.26 ft (revised) above mean sea level, datum of 1929 (levels by Indiana Department of Natural Resources from adjusted elevation of U.S. Coast and Geodetic Survey bench mark). Prior to Nov. 16, 1938, staff gage, and Nov. 16, 1938 to Apr. 21, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--37 years, 599 cfs.

Extremes.--Maximum discharge, 8,480 cfs May 2 (gage height, 11.19 ft); minimum, 23 cfs Oct. 30, 31; minimum gage height, 1.70 ft Sept. 20.
1930-67: Maximum discharge, 28,500 cfs Jan. 22, 1959 (gage height, 23.07 ft); minimum, 9.0 cfs Oct. 17, 1964; minimum gage height, 1.40 ft Sept. 20, 1940, Sept. 30, 1941.

Remarks.--Record good, except for period of no gage-height record, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	40	28	207	435	600	306	538	2,800	335	147	99	98
2	50	33	175	393	1,500	326	493	6,640	323	119	79	94
3	58	48	148	356	2,300	338	465	5,570	340	100	130	62
4	65	54	130	321	2,000	336	441	2,480	293	89	127	51
5	65	58	146	295	1,200	366	436	1,630	278	80	80	45
6	65	75	306	273	900	1,360	418	1,240	273	77	63	41
7	65	107	482	280	700	2,870	398	3,550	241	81	53	39
8	55	136	781	280	550	1,870	367	3,420	219	78	47	37
9	47	156	1,190	304	520	1,500	345	2,080	202	75	346	37
10	45	356	3,670	291	500	2,100	344	1,420	188	88	1,010	57
11	43	756	3,230	266	450	2,400	341	1,120	173	89	405	63
12	40	512	1,530	254	400	2,340	338	916	159	136	225	45
13	31	311	1,040	248	350	3,200	323	743	147	115	141	43
14	25	239	794	250	320	2,110	314	1,050	136	91	106	40
15	45	199	650	247	300	2,960	307	1,980	127	74	87	37
16	110	165	550	235	290	3,100	293	2,310	135	64	74	35
17	120	142	478	170	270	1,890	299	1,640	118	59	65	33
18	95	125	430	150	250	1,350	535	1,370	118	55	59	32
19	73	112	390	135	260	1,050	554	1,120	110	52	55	31
20	50	101	358	130	260	892	415	906	121	54	54	30
21	40	93	332	140	250	1,080	399	734	172	60	71	32
22	38	86	305	160	230	1,340	580	640	193	65	61	35
23	35	82	280	170	210	1,100	949	569	286	66	53	32
24	31	77	260	170	190	937	712	510	203	61	48	31
25	29	77	245	160	170	814	665	462	157	57	46	28
26	26	84	226	170	160	727	686	421	145	56	47	27
27	25	93	206	1,500	170	656	1,150	384	133	137	381	28
28	25	133	383	1,600	220	619	906	353	121	169	201	30
29	26	179	725	1,000	------	640	707	335	139	179	122	35
30	24	221	680	800	------	658	1,580	347	161	137	99	33
31	24	------	488	700	------	590	------	339	------	112	101	------
TOTAL	1,510	4,838	20,815	11,883	15,520	41,825	16,298	49,079	5,746	2,822	4,535	1,261
MEAN	48.7	161	671	383	554	1,349	543	1,583	192	91.0	146	42.0
MAX	120	756	3,670	1,600	2,300	3,200	1,580	6,640	340	179	1,010	98
MIN	24	28	130	130	160	306	293	335	110	52	46	27
CFSM	.11	.35	1.46	.83	1.20	2.93	1.18	3.43	.42	.20	.32	.09
IN.	.12	.39	1.68	.96	1.25	3.37	1.31	3.96	.46	.23	.37	.10

CAL YR 1966: TOTAL 226,835 MEAN 621 MAX 10,200 MIN 24 CFSM 1.35 IN 18.30
WAT YR 1967: TOTAL 176,132 MEAN 483 MAX 6,640 MIN 24 CFSM 1.05 IN 14.21

Peak discharge (base, 7,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
5-2	2330	11.19	8,480				

Note.--No gage-height record Jan. 23 to Feb. 28.

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., on left bank at downstream side of 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 395.00 ft above mean sea level, datum of 1929. Prior to Nov. 20, 1962, graphic water-stage recorder, at same site and datum.

Average discharge.--6 years, 43.2 cfs.

Extremes.--Maximum discharge during year, 2,340 cfs April 30 (gage height, 16.40 ft); no flow many days.
1961-67: Maximum discharge, 6,360 cfs Mar. 9, 1964; maximum gage height, 19.33 ft Mar. 4, 1964; no flow on 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.

Remarks.--Record fair. Records of suspended sediment loads for water year 1967 are published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	.90	.60	12	30	25	75	22	932	5.0	8.3	.54	0
2	.60	1.6	9.6	26	225	55	21	1,400	2.9	5.0	.36	0
3	.52	2.7	8.0	21	183	46	19	216	2.3	3.1	.10	0
4	.52	1.7	7.0	17	78	36	18	96	2.0	2.1	.26	0
5	.50	2.7	33	16	54	34	17	57	1.4	1.4	.26	0
6	.44	4.5	159	14	42	363	16	44	.90	1.3	.05	0
7	.42	4.3	161	22	30	191	15	338	.50	1.1	.01	0
8	.40	7.5	83	25	23	131	13	107	.33	.94	0	0
9	.80	5.3	675	18	22	157	12	67	.23	.70	184	0
10	1.0	87	1,070	16	22	296	21	38	.16	1.1	13	0
11	.35	37	170	13	20	160	25	33	.14	2.5	6.2	0
12	.30	19	71	12	16	717	18	29	.10	1.4	3.6	0
13	.28	12	47	13	15	233	17	24	.08	.86	2.0	0
14	.32	9.6	35	14	16	205	16	974	.06	.42	.94	0
15	30	7.8	28	13	15	830	14	520	.05	.21	.94	0
16	.35	6.8	24	9.9	14	145	12	146	.04	.10	.54	0
17	.21	6.0	21	9.0	14	84	14	121	.07	.04	.36	0
18	.22	5.0	19	7.5	13	56	12	75	178	.02	.21	0
19	.22	4.3	17	6.5	14	46	7.5	47	21	.04	.31	0
20	.18	3.8	15	6.5	16	50	6.3	38	5.8	.04	.26	0
21	.15	3.3	14	7.5	18	205	16	21	3.1	.04	.13	0
22	.15	3.1	12	9.3	15	91	37	17	4.2	.02	.05	0
23	.14	2.9	11	10	16	64	27	14	3.4	.02	.02	0
24	.17	2.7	9.6	9.9	13	50	26	11	2.0	.04	.01	0
25	.14	3.1	8.5	9.0	10	42	22	9.3	1.3	.10	.01	0
26	.14	4.0	7.8	13	9.0	36	82	9.3	.86	.10	.02	0
27	.13	11	7.3	94	24	32	66	8.5	.42	.05	.02	0
28	.14	28	176	55	97	34	39	7.0	4.0	1.7	0	0
29	.17	21	91	38	------	34	31	6.5	39	5.2	0	0
30	.20	15	39	33	------	29	1,250	6.5	16	2.6	0	0
31	.30	------	32	28	------	25	------	6.8	------	1.0	0	------
TOTAL	40.36	323.30	3,072.8	616.1	1,059.0	4,552	1,911.8	5,418.9	295.34	41.54	214.20	0
MEAN	1.30	10.8	99.1	19.9	37.8	147	63.7	175	9.84	1.34	6.91	0
MAX	30	87	1,070	94	225	830	1,250	1,400	178	8.3	184	0
MIN	.13	.60	7.0	6.5	9.0	25	6.3	6.5	.04	.02	0	0
CFSM	.03	.26	2.37	.47	.90	3.50	1.52	4.17	.23	.03	.16	0
IN.	.04	.29	2.73	.55	.94	4.04	1.70	4.81	.26	.04	.19	0

CAL YR 1966: TOTAL 21,275.86 MEAN 58.3 MAX 1,550 MIN 0 CFSM 1.39 IN 18.88
WAT YR 1967: TOTAL 17,545.34 MEAN 48.1 MAX 1,400 MIN 0 CFSM 1.15 IN 15.57

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
Apr. 30	1730	16.40	2340				
May 2	0300	16.10	2080				

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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 352.24 ft above mean sea level, datum of 1929. Prior to Apr. 7, 1964, graphic water-stage recorder at same site and datum. Auxiliary digital water-stage recorder 1.3 miles downstream at same datum. Prior to Apr. 8, 1964, graphic water-stage recorder at same auxiliary site and datum.

Average discharge.--6 years, 230 cfs.

Extremes.--Maximum discharge during year, 2,900 cfs July 13; maximum gage height, 20.84 ft Mar. 16; minimum daily discharge (unaffected by backwater), 3.0 cfs Oct. 23, 24; zero or reverse flow may have occurred during extreme stages on the Ohio River.
1960-67: Maximum discharge, 12,100 cfs May 10, 1961 (gage height, 27.94 ft); minimum daily (unaffected by backwater), 1 cfs Aug. 30 to Sept. 1, Oct. 11, 12, 21, 22, 26, 1964; zero or reverse flow occurs at times due to extreme stages on the Ohio River.

Remarks.--Record poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.0	6.0	33	168	100	242	68	1,060	34	182	249	20
2	5.0	7.0	21	139	350	237	66	1,730	30	110	173	20
3	4.0	9.0	17	118	700	217	64	1,570	29	48	115	19
4	6.0	9.0	14	93	650	192	62	1,700	29	21	108	16
5	8.0	11	38	71	350	168	61	1,590	27	15	136	14
6	8.0	11	103	60	220	604	49	1,100	24	14	89	14
7	8.0	13	528	120	170	1,010	47	625	23	12	60	14
8	6.0	14	683	236	130	1,010	40	885	22	25	67	14
9	5.0	14	892	206	100	612	34	1,020	22	142	72	14
10	8.0	50	1,490	120	90	264	46	1,020	20	1,200	235	14
11	10	64	1,150	62	85	18	71	712	21	2,750	186	14
12	11	114	900	61	80	1,200	85	143	32	2,640	96	14
13	10	58	400	52	75	1,520	66	69	42	2,870	56	13
14	10	25	165	49	70	1,700	60	722	21	2,720	41	11
15	40	13	0	49	67	1,650	61	1,090	16	2,060	37	10
16	27	8.0	180	40	66	1,600	59	978	18	964	29	11
17	82	6.0	150	31	64	920	50	500	15	278	27	13
18	36	5.0	130	17	62	136	38	270	122	290	50	14
19	13	5.0	110	19	60	0	43	160	707	376	37	14
20	7.0	4.0	90	14	60	17	34	130	253	422	49	14
21	5.0	4.0	80	14	59	272	43	110	108	731	68	26
22	4.0	4.0	67	14	58	247	47	90	264	541	43	12
23	3.0	4.0	57	19	52	212	48	80	179	618	32	15
24	3.0	4.0	48	22	34	126	52	70	101	838	28	15
25	4.0	5.0	38	22	40	110	44	60	65	538	27	12
26	4.0	5.0	31	38	27	100	409	53	50	312	27	10
27	4.0	41	28	275	60	92	358	49	46	257	27	10
28	4.0	30	374	436	142	85	235	44	35	233	26	10
29	5.0	40	651	298		80	142	39	49	594	26	10
30	5.0	48	505	173	- - - - -	75	455	34	280	773	26	10
31	5.0	- - - - -	260	128	- - - - -	70	- - - - -	35	- - - - -	446	24	- - - - -
Total	357.0	631.0	9,233	3,164	4,021	14,786	2,937	17,738	2,684	23,020	2,266	417
Mean	11.5	21.0	298	102	144	477	97.9	572	89.5	743	73.1	13.9
Max	82	114	1,490	436	700	1,700	455	1,730	707	2,870	249	26
Min	3.0	4.0	0	14	27	0	34	34	15	12	24	10
Cfsm	.035	.064	.914	.312	.442	1.46	.300	1.75	.274	2.28	.224	.043
In.	.04	.07	1.05	.36	.46	1.68	.33	2.02	.31	2.63	.26	.05

Cal yr 1966: Total 69,721.4 Mean 191 Max 2,430 Min 0 Cfsm .586 In. 7.95
Wtr yr 1967: Total 81,254.0 Mean 223 Max 2,870 Min 0 Cfsm .684 In. 9.26

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.--262 sq mi.

Records available.--April 1951 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 830.10 ft above mean sea level, datum of 1929. Prior to June 24, 1953, wire-weight gage, and June 24, 1953 to Aug. 25, 1964, graphic water-stage recorder, at same site and datum.

Average discharge.--16 years, 176 cfs.

Extremes.--Maximum discharge during year, 4,420 cfs Mar. 28 (gage height, 18.05 ft); minimum, 2.8 cfs Oct. 4 (gage height, 6.72 ft). 1951-67: 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.--Record fair except for period of no gage-height record and for winter period, which is poor. Flow slightly affected by regulation of Grand Lake Reservoir, diversion from or into St. Marys River basin, and into Miami and Erie Canal.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	6.8	12	136	22	740	36	635	70	93	53	11	8.0
2	7.6	14	89	21	1,810	44	496	121	81	56	10	6.8
3	5.2	18	56	21	1,350	210	417	107	72	84	9.2	6.4
4	3.2	20	49	20	461	263	370	79	62	49	9.6	6.4
5	4.8	22	143	20	228	329	483	63	55	40	8.0	5.6
6	5.6	26	1,190	20	119	1,780	1,030	70	52	33	7.6	5.2
7	6.0	40	1,500	19	93	793	895	1,790	49	31	7.6	5.6
8	5.2	344	2,330	19	78	504	625	2,420	46	28	7.6	6.4
9	3.6	283	3,350	19	67	309	498	1,090	48	24	8.0	7.6
10	4.0	208	3,800	18	63	1,160	434	562	50	22	6.4	10
11	3.6	392	2,620	18	62	2,310	383	1,860	50	25	7.2	9.6
12	7.2	145	1,200	18	61	1,240	357	1,890	45	24	7.6	6.4
13	8.0	61	563	18	60	643	421	889	39	22	7.6	6.4
14	8.4	36	310	18	61	2,010	554	566	34	21	7.6	6.0
15	8.8	25	208	17	133	1,090	448	486	30	22	6.0	6.4
16	17	20	158	17	299	566	385	640	29	21	5.6	6.4
17	19	18	124	17	179	369	348	498	29	21	5.6	6.4
18	14	15	103	17	96	340	279	401	29	27	7.6	6.0
19	14	13	82	18	78	334	246	366	28	42	44	5.6
20	15	11	73	19	61	493	231	333	28	113	35	8.8
21	15	11	62	21	61	2,620	181	320	32	35	23	9.6
22	14	9.6	51	32	49	1,540	290	305	63	17	13	12
23	13	8.6	43	30	43	843	287	290	69	12	8.8	9.2
24	10	9.0	38	33	38	579	237	275	44	8.4	8.0	6.4
25	8.8	8.0	34	39	34	483	267	250	39	8.8	7.6	6.4
26	11	8.6	30	92	30	429	205	220	31	9.2	8.4	5.2
27	13	395	25	1,720	30	387	199	190	29	9.6	10	4.8
28	13	497	24	1,350	31	2,590	145	165	34	25	13	8.8
29	13	192	23	483	------	3,220	79	145	112	21	8.4	15
30	13	110	23	256	------	1,640	69	125	70	14	8.0	11
31	13	------	22	238	------	863	------	110	------	12	8.8	------
TOTAL	303.8	2,971.8	18,459	4,670	6,415	30,017	11,494	16,696	1,472	930.0	335.8	224.4
MEAN	9.80	99.1	595	151	229	968	383	539	49.1	30.0	10.8	7.48
MAX	19	497	3,800	1,720	1,810	3,220	1,030	2,420	112	113	44	15
MIN	3.2	8.0	22	17	30	36	69	63	28	8.4	5.6	4.8
CFSM	.04	.38	2.27	.57	.87	3.70	1.46	2.06	.19	.11	.04	.03
IN.	.04	.42	2.62	.66	.91	4.26	1.63	2.37	.21	.13	.05	.03

CAL YR 1966: TOTAL 35,055.5 MEAN 96.0 MAX 3,800 MIN 1.4 CFSM .37 IN 4.98
WAT YR 1967: TOTAL 93,988.8 MEAN 258 MAX 3,800 MIN 3.2 CFSM .98 IN 13.34

Note.--No gage-height record May 21 to June 20.

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1830	17.87	4,190	5-7	2000	17.12	3,220
3-11	0130	16.46	2,660	5-11	1800	16.71	2,910
3-21	0930	16.76	2,960				
3-28	2330	18.05	4,420				

3-3229. Wabash River at Linn Grove, Ind.

Location.--Lat 40°39'22", long 85°01'58", in SE¼SE¼ sec. 34, T. 26 N., R. 13 E., on right bank 10 ft downstream from bridge on State Highway 118, 800 ft downstream from Shoemaker ditch, 0.8 mile north of Linn Grove and 2.2 miles upstream from Rice ditch.

Drainage area.--454 sq mi.

Records available.--September 1964 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 808.00 ft above mean sea level, datum of 1929. Sept. 23, 1964 to May 17, 1966, graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 6,620 cfs Dec. 11 (gage height, 13.01 ft); minimum, 6.5 cfs Sept. 8, 9, 17 (gage height, 3.26 ft).

1964-67: Maximum discharge, 6,620 cfs Dec. 11, 1966 (gage height, 13.01 ft); minimum discharge, 4.0 cfs Oct. 7, 1964 (gage height, 3.17 ft).

Flood of April 1964 reached a stage of 13.13 ft, from floodmark (discharge, about 6,900 cfs, revised).

Remarks.--Record good except for winter period, which is fair. Flow slightly affected by regulation of Grand Lake Reservoir, diversion from or into St. Marys River basin, and into Miami and Erie Canal.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	9.9	15	299	59	995	54	1,910	115	90	76	14	8.9
2	10	17	274	56	1,600	57	1,180	143	78	54	12	8.5
3	10	19	188	55	1,880	160	822	179	71	48	12	8.5
4	11	19	175	53	2,130	368	598	151	63	91	11	7.8
5	10	21	171	51	1,560	432	636	116	58	64	11	7.5
6	9.2	21	948	50	779	914	1,070	103	55	44	9.9	7.2
7	9.2	32	1,610	48	418	1,280	1,350	776	52	32	9.2	6.9
8	9.9	121	2,380	46	311	970	1,240	1,710	50	25	9.2	6.5
9	12	403	3,970	45	284	790	918	2,530	47	22	9.6	7.2
10	13	423	6,370	43	264	1,050	659	2,130	48	20	9.2	7.5
11	12	443	6,340	42	254	1,740	520	2,040	52	18	8.9	7.5
12	13	418	4,620	40	235	2,440	434	2,120	44	16	8.2	7.8
13	15	213	3,210	39	220	2,440	515	2,380	37	16	8.2	8.2
14	16	105	2,170	38	206	2,170	680	1,840	32	15	12	7.8
15	19	63	1,290	37	335	2,030	662	1,160	29	14	11	7.2
16	18	44	700	35	630	1,880	551	820	26	13	9.9	6.9
17	17	36	491	34	466	1,280	453	720	24	14	9.9	6.9
18	19	32	384	32	287	702	384	570	24	13	9.9	6.9
19	21	28	289	32	192	478	314	438	23	13	11	7.5
20	19	24	234	31	158	609	274	368	21	394	17	8.2
21	17	22	199	30	133	1,660	266	326	21	365	36	7.8
22	16	20	164	35	112	2,360	291	293	28	123	30	8.2
23	16	19	134	44	90	2,500	354	269	49	43	18	8.5
24	16	18	114	54	80	1,820	335	258	65	21	13	8.9
25	16	18	98	71	65	1,160	283	251	46	13	10	8.5
26	15	19	93	116	55	1,020	262	240	31	9.9	9.9	7.5
27	14	205	80	1,110	55	599	245	217	25	9.2	9.9	7.2
28	13	833	72	1,470	55	1,820	229	189	22	9.2	9.9	6.9
29	13	686	70	1,840	------	2,870	181	176	50	11	11	7.2
30	14	364	65	1,530	------	3,690	128	138	103	18	11	7.2
31	15	------	62	797	------	2,860	------	110	------	16	9.9	------
TOTAL	438.2	4,701	37,264	7,963	13,849	44,203	17,744	22,876	1,364	1,640.3	381.7	229.3
MEAN	14.1	157	1,202	257	495	1,426	591	738	45.5	52.9	12.3	7.64
MAX	21	833	6,370	1,840	2,130	3,690	1,910	2,530	103	394	36	8.9
MIN	9.2	15	62	30	55	54	128	103	21	9.2	8.2	6.5
CFSM	.03	.35	2.65	.57	1.09	3.14	1.30	1.63	.10	.12	.03	.02
IN.	.04	.39	3.05	.65	1.13	3.62	1.45	1.87	.11	.13	.03	.02

CAL YR 1966: TOTAL 69,329.9 MEAN 190 MAX 6,370 MIN 5.3 CFSM .42 IN 5.68
WAT YR 1967: TOTAL 152,653.5 MEAN 418 MAX 6,370 MIN 6.5 CFSM .92 IN 12.50

Peak discharge (base, 1,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-11	0130	13.01	6,620	3-23	0100	9.82	2,680
1-29	2000	8.46	1,900	3-30	0415	11.67	3,840
2-4	0800	9.03	2,220	5-9	1330	9.63	2,560
3-12	2000	9.70	2,610				

3-3230. Wabash River at Bluffton, Ind.

Location.--Lat 40°44'30", long 85°10'19", 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 1967. 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.--37 years. 386 cfs.

Extremes.--Maximum discharge during year, 7,980 cfs Dec. 11 (gage height, 13.78 ft); minimum, 6.2 cfs Oct. 31 (gage height, 0.89 ft).
1930-67: Maximum discharge, 11,800 cfs Feb. 15, 1950 (gage height, 16.07 ft); minimum, 3.9 cfs July 18, 1936; minimum gage height, 0.83 ft Sept. 13, 14, 1964.
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.--Record good except for winter period, which is fair. Occasional regulation by Grand Lake Reservoir, diversion from or into St. Marys River basin, and into Miami and Erie Canal.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	8.0	302	88	1,100	72	2,750	156	129	144	20	9.0
2	11	8.2	284	81	2,180	87	1,560	177	111	100	12	8.0
3	11	9.2	220	80	2,110	171	1,030	202	103	75	12	8.0
4	11	11	213	77	2,070	358	718	200	94	105	13	7.8
5	11	11	211	75	2,040	436	714	165	85	113	13	8.0
6	10	12	734	72	1,050	835	1,350	156	80	76	12	7.2
7	9.8	19	2,000	70	487	1,270	1,780	1,030	78	55	12	6.8
8	9.5	54	3,270	68	375	1,500	1,510	1,950	75	43	11	6.8
9	10	248	4,300	66	270	1,170	1,190	2,460	81	35	11	7.0
10	9.5	406	6,540	63	207	1,210	894	2,630	82	32	10	7.2
11	9.0	370	7,790	62	190	2,410	627	2,890	80	30	9.8	7.6
12	9.2	390	6,200	60	180	2,600	484	2,670	72	28	9.8	7.6
13	9.0	264	4,500	59	170	2,850	633	2,560	61	25	9.5	7.8
14	8.5	152	3,100	58	167	2,960	966	2,360	54	24	9.5	7.8
15	8.8	90	1,720	56	460	2,420	814	1,580	46	23	8.8	7.8
16	9.2	60	866	56	1,060	2,210	638	1,150	43	23	8.5	7.6
17	9.0	42	550	54	722	1,700	504	842	40	25	8.7	7.2
18	9.2	35	430	54	433	950	418	662	40	23	9.3	7.2
19	9.5	30	338	53	295	567	348	490	37	24	11	8.0
20	12	26	279	53	253	666	297	390	35	178	11	8.2
21	11	22	244	55	226	2,490	290	342	35	483	17	9.6
22	11	21	215	58	200	2,470	372	309	41	237	34	9.0
23	9.5	19	184	61	177	2,830	370	288	48	111	25	8.2
24	8.8	150	160	70	125	2,430	382	275	88	54	15	8.4
25	8.0	19	146	85	105	1,530	323	266	98	32	12	8.4
26	7.5	14	140	163	90	954	297	257	64	24	10	8.2
27	7.8	18	123	1,170	75	686	277	242	49	18	9.6	8.4
28	7.8	624	119	1,560	62	2,610	259	220	87	21	9.6	8.0
29	8.0	694	105	1,600		3,120	235	207	107	16	8.4	8.0
30	7.0	403	100	1,740	- - - - -	3,890	186	184	127	19	9.6	8.0
31	7.2	- - - - -	95	1,100	- - - - -	3,990	- - - - -	150	- - - - -	26	10	- - - - -
Total	291.8	4,229.4	45,478	8,967	16,879	53,442	22,216	27,460	2,170	2,222	382.1	236.8
Mean	9.41	141	1,467	289	603	1,724	740	886	72.3	71.7	12.3	7.89
Max	12	694	7,790	1,740	2,180	3,990	2,750	2,890	129	483	34	9.6
Min	7.0	8.0	95	53	62	72	186	150	35	16	8.4	6.8
Cfsm	0.019	0.279	2.90	0.571	1.19	3.41	1.46	1.75	0.143	0.142	0.024	0.016
In.	0.02	0.31	3.34	0.66	1.24	3.93	1.63	2.02	0.16	0.16	0.03	0.02

Cal yr 1966 : Total 82,493.2 Mean 226 Max 7,790 Min 7.0 Cfsm 0.447 In. 6.08
Wtr yr 1967 : Total 183,974.1 Mean 504 Max 7,790 Min 6.8 Cfsm 0.996 In. 13.52

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-11	0600	13.78	7,980				
3-14	1230	8.81	3,050				
3-30	2330	10.92	4,340				
5-11	1600	8.96	3,140				

3-3235. Wabash River at Huntington, Ind.

Location.--Lat 40°51'20", long 85°29'53", in SW¼NE¼ sec. 27, T. 28 N., R. 9 e., on right bank at the Huntington Water and Light Co. Plant, 2 miles south of Huntington, 3½ miles upstream from Little River, and at mile 409.

Drainage area.--710 sq mi.

Records available.--January 1951 to September 1967.

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.--16 years, 555 cfs.

Extremes.--Maximum discharge during year, 8,500 cfs Dec. 12 (gage height, 16.85 ft); minimum, 12 cfs Sept. 11-14 (gage height, 9.08 ft).
1951-67: Maximum discharge, 14,900 cfs Feb. 10, 1959; maximum gage height, 23.20 ft Feb. 10, 1959 (backwater from ice); minimum discharge, 2.3 cfs Oct. 28, 1964 (gage height, 8.87 ft).
Flood in March 1913 reached a stage of 22.7 ft (from high-water mark by Corps of Engineers).

Remarks.--Record fair except for winter period, which is poor. Record of water temperatures for the water year 1967 is published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	29	33	506	142	1,340	145	4,650	307	212	202	40	23
2	29	42	422	138	3,360	146	3,080	261	186	181	40	20
3	25	44	375	135	4,140	207	1,470	261	160	146	40	21
4	21	47	335	133	3,280	370	1,110	287	146	122	40	21
5	20	64	328	132	2,790	726	910	287	141	122	38	18
6	20	69	794	132	1,500	991	1,460	268	127	127	36	15
7	21	77	2,590	132	800	1,340	2,190	1,010	114	110	31	15
8	20	79	4,880	132	540	1,640	2,200	2,730	106	82	31	15
9	21	102	6,320	136	380	1,560	1,670	2,980	102	69	27	15
10	23	430	7,150	151	320	1,110	1,480	3,240	165	62	25	16
11	20	618	7,820	160	275	3,500	1,110	3,700	268	59	23	15
12	20	672	8,410	156	260	4,400	820	4,160	196	54	23	12
13	21	515	8,450	151	260	4,300	790	3,670	127	52	21	12
14	23	385	7,940	122	287	4,200	1,610	3,400	102	47	20	13
15	25	106	6,670	106	481	4,000	1,420	2,540	94	44	18	13
16	25	86	3,340	72	1,550	3,100	1,070	1,830	82	44	18	13
17	23	74	1,110	66	1,430	2,800	850	1,270	77	42	18	15
18	23	72	890	60	920	2,200	690	1,050	69	44	18	15
19	25	72	726	57	645	960	566	860	67	44	20	18
20	31	67	600	58	532	1,050	481	690	64	40	21	21
21	29	64	515	60	481	2,900	447	574	62	98	20	21
22	31	62	430	65	341	4,120	627	515	62	415	21	25
23	33	62	370	74	236	3,810	681	456	62	223	23	25
24	33	62	328	90	200	3,560	627	438	62	132	27	23
25	29	59	255	110	170	2,500	583	408	79	86	31	21
26	36	59	220	156	155	1,560	506	385	114	62	36	18
27	36	196	190	1,345	145	1,120	472	370	82	52	38	15
28	38	726	170	2,500	142	2,040	415	341	72	49	33	18
29	38	890	160	2,150		4,200	392	335	335	47	33	18
30	38	735	152	2,130	- - - - -	2,250	355	307	268	44	29	20
31	40	- - - - -	148	1,770	- - - - -	4,770	- - - - -	255	- - - - -	40	29	- - - - -
Total	846	6,569	72,594	12,821	26,960	71,575	34,732	39,185	3,803	2,941	868	530
Mean	27.3	219	2,342	414	963	2,309	1,158	1,264	127	94.9	28.0	17.7
Max	38	890	8,450	2,500	4,140	4,770	4,650	4,160	335	415	40	25
Min	20	33	148	57	142	145	355	261	62	40	18	12
Cfsm	0.038	0.308	3.30	0.583	1.36	3.25	1.63	1.78	0.179	0.134	0.039	0.025
In.	0.04	0.34	3.80	0.67	1.42	3.75	1.82	2.05	0.20	0.15	0.04	0.03

Cal yr 1966 : Total 130,298.3 Mean 357 Max 8,450 Min 7.9 Cfsm 0.503 In. 6.82
Wtr yr 1967 : Total 273,424 Mean 749 Max 8,450 Min 12 Cfsm 1.05 In. 14.32

Peak discharge (base, 5,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-12	2200	16.85	8,500				

3-3240. Little River near Huntington, Ind.

Location.--Lat 40°54'14", long 85°24'22", in NE¼NW¼ 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 1967. 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.--Digital 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, and Sept. 6, 1950 to Mar. 20, 1963, graphic water-stage recorder at present site and datum.

Average discharge.--24 years, 220 cfs.

Extremes.--Maximum discharge during year, 4,400 cfs Dec. 9 (gage height, 18.07 ft); minimum, 5.4 cfs Sept. 16, 17 (gage height, 1.53 ft).
1943-67: 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.--Record good except for winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	12	15	215	74	272	76	235	104	58	38	15	9.6
2	12	16	190	71	1,640	98	253	96	53	32	12	8.7
3	11	17	170	68	1,810	262	239	84	51	28	12	8.8
4	10	21	161	66	846	403	185	75	49	28	11	8.3
5	11	24	324	65	382	228	171	71	46	28	9.7	8.1
6	10	24	1,130	65	235	185	212	105	44	25	11	7.2
7	10	47	2,050	194	180	160	372	955	45	23	9.4	7.2
8	10	128	3,640	160	130	139	268	1,420	46	22	11	7.2
9	11	486	4,300	120	115	134	213	699	45	22	11	7.2
10	13	1,050	4,210	94	105	605	1,180	336	297	22	10	8.0
11	15	1,010	3,630	72	96	1,770	650	1,390	160	22	9.7	7.8
12	13	384	2,890	64	92	1,650	322	1,630	96	20	8.9	6.8
13	14	202	2,140	57	83	1,060	498	696	66	19	7.9	6.5
14	15	131	1,930	52	132	1,110	1,250	373	51	18	7.7	7.0
15	20	90	871	50	1,240	762	814	384	44	17	7.4	6.6
16	26	77	655	47	2,350	483	433	326	40	16	7.3	5.8
17	21	66	536	45	2,290	393	308	263	42	16	7.8	6.6
18	17	57	496	44	2,290	288	249	223	45	17	8.4	7.5
19	17	46	372	45	1,670	241	180	180	39	23	13	7.4
20	16	42	316	46	376	534	147	139	35	24	19	8.3
21	17	39	260	51	273	2,560	144	114	34	20	17	9.4
22	17	35	222	59	197	2,260	485	101	35	17	12	11
23	16	34	191	82	151	1,470	432	90	32	16	11	11
24	15	32	174	97	125	706	240	86	30	15	9.1	9.9
25	14	32	146	151	105	467	181	79	60	16	8.1	9.1
26	15	33	125	188	94	354	153	76	70	17	10	8.2
27	15	157	110	712	82	290	137	69	44	14	20	9.6
28	15	741	95	799	75	893	113	65	39	16	17	13
29	14	387	87	357	------	964	103	101	42	14	13	13
30	15	253	82	228	------	480	103	93	42	14	13	12
31	15	------	77	190	------	299	------	70	------	14	12	------
TOTAL	452	5,676	31,295	4,413	17,441	21,324	10,270	10,493	1,780	633	351.4	256.8
MEAN	14.6	189	1,010	142	623	688	342	338	59.3	20.4	11.3	8.56
MAX	26	1,050	4,300	799	2,350	2,560	1,250	1,630	297	38	20	13
MIN	10	15	77	44	75	76	103	65	30	14	7.3	5.8
CFSM	.05	.71	3.80	.54	2.34	2.59	1.29	1.27	.22	.08	.04	.03
IN.	.06	.79	4.38	.62	2.44	2.98	1.44	1.47	.25	.09	.05	.04

CAL YR 1966: TOTAL 61,076.2 MEAN 167 MAX 4,300 MIN 6.2 CFSM .63 IN 8.54
WAT YR 1967: TOTAL 104,385.2 MEAN 286 MAX 4,300 MIN 5.8 CFSM 1.08 IN 14.59

Peak discharge (base, 2,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1815	18.07	4,400				

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 1967.

Gage.--Water-stage recorder. 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.

Average discharge.--8 years, 61.8 cfs.

Extremes.--Maximum discharge during year, 2,440 cfs Dec. 9 (gage height, 14.19 ft); minimum, 0.6 cfs Sept. 3, (gage height, 1.42 ft). 1959-67: Maximum discharge, 3,460 cfs Mar. 5, 1963 (gage height, 16.96 ft); minimum, 0.2 cfs Sept. 27, 1965; minimum gage height, 1.30 ft Oct. 31, 1960.

Remarks.--Record good except for winter period, which is fair.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.2	5.1	70	12	364	18	66	22	9.6	4.8	4.6	2.0
2	1.9	7.4	54	13	1,200	32	54	55	8.3	29	3.6	1.7
3	1.9	6.8	47	13	432	114	45	45	10	34	34	.9
4	2.6	6.5	46	12	119	67	35	26	8.0	9.6	31	1.0
5	3.0	10	132	12	73	472	113	21	7.4	5.4	8.0	1.2
6	3.0	9.6	659	11	63	642	343	49	7.4	3.2	4.8	2.0
7	2.6	36	960	41	46	230	244	1,350	7.1	3.4	3.2	1.9
8	1.3	342	1,380	38	34	154	128	804	6.8	2.8	3.4	2.4
9	2.4	118	2,350	25	29	96	70	189	6.2	2.6	3.0	3.8
10	3.6	150	2,280	11	25	474	65	102	6.8	2.6	2.6	1.9
11	3.2	203	795	7.7	22	798	51	788	6.2	3.0	2.6	1.3
12	3.6	152	232	4.6	21	340	38	353	5.1	3.0	2.4	2.0
13	3.0	30	126	4.0	20	172	48	112	4.8	2.2	1.7	2.2
14	3.4	17	90	3.6	21	548	78	78	4.6	2.2	1.7	2.4
15	6.8	13	68	3.4	45	304	61	78	3.8	2.8	2.2	1.9
16	4.8	10	65	3.2	135	124	44	101	3.6	2.2	2.6	1.9
17	2.4	9.0	63	3.0	46	97	39	68	3.6	2.0	2.6	1.2
18	4.6	7.7	51	2.9	26	63	31	47	3.6	2.6	2.6	1.2
19	5.1	6.8	46	2.8	26	50	24	36	3.0	2.6	4.1	4.6
20	4.1	5.9	43	2.8	26	93	20	25	2.8	19	10	2.8
21	3.8	4.1	35	2.8	24	751	25	20	4.8	9.3	11	2.6
22	3.8	4.1	30	3.2	21	303	130	17	7.1	3.8	6.5	2.4
23	3.6	4.6	25	5.6	17	138	88	16	6.5	2.6	4.1	1.9
24	3.2	5.6	21	12	15	87	58	15	5.6	2.2	3.2	1.3
25	4.1	6.2	17	28	14	99	46	14	5.9	2.8	3.0	1.0
26	4.6	14	15	262	14	81	37	12	3.2	2.4	2.6	1.7
27	4.4	499	14	1,120	15	62	33	10	3.0	5.1	3.6	2.0
28	4.6	374	17	191	16	178	26	11	7.7	39	3.0	4.1
29	4.1	108	20	48		1,030	22	21	14	25	2.4	2.8
30	3.8	92	20	86	- - - - -	177	20	18	7.4	5.1	3.0	2.2
31	3.6	- - - - -	21	108	- - - - -	97	- - - - -	12	- - - - -	5.6	2.2	- - - - -
Total	110.1	2,257.4	9,792	2,092.6	2,909	7,891	2,082	4,515	183.9	241.9	175.3	62.3
Mean	3.55	75.2	316	67.5	104	255	69.4	146	6.13	7.80	5.65	2.08
Max	6.8	499	2,350	1,120	1,200	1,030	343	1,350	14	39	34	4.6
Min	1.3	4.1	14	2.8	14	18	20	10	2.8	2.0	1.7	0.9
Cfsm	0.041	0.874	3.67	0.785	1.21	2.97	0.807	1.70	0.071	0.091	0.066	0.024
In.	0.05	0.98	4.23	0.90	1.26	3.42	0.90	1.96	0.08	0.10	0.08	0.03

Cal yr 1966: Total 20,009.1 Mean 54.8 Max 2,350 Min 0.6 Cfsm 0.637 In. 8.64
Wtr yr 1967: Total 32,312.5 Mean 88.5 Max 2,350 Min 0.9 Cfsm 1.03 In. 13.99

Peak discharge (base, 1,400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1200	14.19	2,440	3-28	1930	14.07	2,400
2-2	1800	11.10	1,520	5-7	1800	12.71	1,940
3-21	1200	11.08	1,520				

3-3243. Salamonie River near Warren, Ind.

Location.--Lat 40°42'45", long 85°27'13", in SE¼ 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 1967.

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.--10 years, 351 cfs.

Extremes.--Maximum discharge during year, 7,410 cfs Dec. 11 (gage height, 13.59 ft); minimum daily, 6.3 cfs July 17-19; minimum gage height, 5.52 ft Sept. 10, 11.
1957-67: Maximum discharge, 13,200 cfs Feb. 10, 1959 (gage height, 17.05 ft); minimum, 5.0 cfs Sept. 18, 19, 1959; minimum gage height, 5.01 ft Sept. 5, 1966.

Remarks.--Record good above 70 cfs and fair below, except for winter period, which is poor. Record of suspended sediment loads for the water year 1967 is published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	16	275	78	1,310	68	722	128	76	87	35	12
2	10	19	220	76	3,570	80	437	146	63	66	27	12
3	10	24	180	74	3,300	195	437	205	57	47	27	10
4	10	25	151	72	2,550	512	311	180	54	57	22	10
5	10	27	280	74	800	469	600	137	52	95	16	10
6	10	27	1,390	76	405	1,250	1,650	128	50	60	20	10
7	10	33	3,020	132	253	1,900	1,500	1,910	52	40	37	9.7
8	10	54	5,370	220	210	890	920	3,520	54	25	27	9.7
9	10	270	6,420	180	180	575	503	3,430	56	22	23	8.9
10	10	342	6,800	128	165	1,330	530	1,720	150	18	18	8.9
11	10	323	7,000	103	155	3,600	342	2,930	220	15	15	8.9
12	9.7	356	5,780	91	146	3,350	1,140	3,200	111	14	14	8.9
13	9.7	161	3,420	80	151	2,300	627	1,940	76	11	11	9.7
14	9.7	103	1,160	70	165	2,380	1,150	722	54	8.9	11	10
15	10	76	712	60	742	2,090	629	521	47	8.2	10	10
16	11	63	548	54	1,200	1,020	384	453	42	6.9	10	9.7
17	12	54	469	51	602	656	281	370	37	6.3	10	9.7
18	14	50	405	49	335	437	215	287	35	6.3	10	9.7
19	15	44	335	47	242	311	170	231	31	6.3	10	10
20	18	42	293	47	231	591	137	195	25	6.9	11	12
21	20	40	248	47	200	3,730	137	151	27	7.5	11	16
22	20	40	210	52	145	3,340	242	128	42	7.5	12	15
23	20	40	180	66	120	2,420	293	115	40	11	15	14
24	20	37	156	80	100	850	299	107	44	19	20	14
25	20	40	132	115	92	810	220	103	60	16	22	14
26	22	42	115	249	82	703	210	99	72	11	20	12
27	22	85	103	2,290	74	477	190	99	57	8.9	19	12
28	20	1,150	95	2,660	66	3,330	161	83	72	8.9	18	14
29	19	790	90	2,070		4,350	142	83	87	8.9	16	14
30	16	349	85	674	- - - - -	4,270	132	83	91	8.9	15	12
31	16	- - - - -	82	469	- - - - -	2,580	- - 900 - -	87	- - - - -	24	15	- - - - -
Total	435.1	4,722	45,724	10,534	17,591	50,864	14,711	23,491	1,934	738.4	547	336.8
Mean	14.0	157	1,475	340	628	1,641	490	758	64.5	23.8	17.6	11.2
Max	22	1,150	7,000	2,660	3,570	4,350	1,650	3,520	220	95	37	16
Min	9.7	16	82	47	66	68	132	83	25	6.3	10	8.9
Cfsm	0.033	0.372	3.50	0.806	1.49	3.89	1.16	1.80	0.153	0.056	0.042	0.026
In.	0.04	0.42	4.04	0.93	1.55	4.48	1.29	2.08	0.17	0.06	0.05	0.03

Cal yr 1966: Total 86,745.1 Mean 238 Max 7,000 Min 9.7 Cfsm 0.564 In. 7.67
Wtr yr 1967: Total 171,628.3 Mean 470 Max 7,000 Min 6.3 Cfsm 1.11 In. 15.14

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-11	0130	13.59	7,410	3-28	2330	11.33	4,860
2-2	2000	10.49	3,970	5-8	1100	10.14	3,570
3-11	1430	10.28	3,750	5-11	1930	10.41	3,870
3-21	1500	10.52	3,960				

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 1967. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Digital 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). Oct. 9, 1961 to Apr. 19, 1966 graphic water-stage recorder at present site and datum.

Average discharge.--43 years (1924-67), 494 cfs.

Extremes.--Maximum discharge during year, 7,690 cfs Dec. 24 (gage height, 12.03 ft); minimum, 0.34 cfs July 18 (gage height, 2.04 ft). 1923-67: 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, 0.34 cfs July 18, 1967 (gage height, 2.04 ft).

Remarks.--Record good. Flow is regulated at times at Corps of Engineers dam about ½ mile upstream.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	33	30	450	191	918	137	3,330	11	76	93	11	15
2	30	36	409	188	2,730	137	3,190	6.9	71	95	12	15
3	29	39	360	158	3,400	161	1,530	5.8	64	95	12	15
4	28	37	302	134	3,450	323	450	5.3	55	95	12	16
5	27	39	408	126	3,240	680	490	4.8	48	95	13	524
6	26	43	1,330	155	605	792	1,160	8.1	48	97	13	836
7	25	64	2,730	191	362	1,170	1,430	18	51	97	13	873
8	25	71	32	271	309	1,740	1,530	11	54	97	13	941
9	26	129	346	281	386	1,060	1,060	6.9	57	84	13	950
10	29	560	1,030	257	302	745	914	4.8	95	50	24	940
11	28	525	1,080	188	260	1,020	640	21	191	24	14	997
12	28	530	1,120	158	236	1,370	376	7.5	200	21	14	1,170
13	27	417	1,130	173	221	1,940	587	5.8	200	9.5	15	1,280
14	29	230	1,140	149	227	2,170	1,770	8.8	200	9.5	15	1,120
15	34	155	918	102	876	2,410	1,130	9.5	128	10	15	1,130
16	37	114	176	86	1,340	3,070	596	6.3	58	10	15	1,000
17	31	90	1,270	68	1,460	3,490	254	6.3	60	10	15	992
18	31	76	3,170	70	1,110	3,230	19	5.8	60	5.3	16	922
19	31	65	3,370	70	442	1,150	17	5.3	58	9.5	17	638
20	30	57	3,450	71	354	419	15	4.8	42	9.5	15	587
21	31	53	5,590	76	306	374	14	4.4	25	10	15	587
22	30	50	6,370	80	260	505	15	16	28	10	15	585
23	31	47	6,630	88	245	1,700	10	52	27	10	15	581
24	32	45	7,010	118	167	3,010	11	15	26	10	15	577
25	32	47	2,780	140	86	3,710	14	16	25	11	16	572
26	34	45	264	251	90	3,530	15	16	24	11	16	569
27	29	82	146	1,700	110	2,380	14	209	24	11	16	567
28	29	588	63	2,970	125	1,730	13	221	28	11	14	562
29	29	1,610	140	2,820	------	1,890	13	76	50	11	15	559
30	29	734	188	1,540	------	2,680	14	76	84	11	15	554
31	29	------	188	645	------	3,460	------	76	------	11	15	------
TOTAL	919	6,608	54,090	13,515	23,617	52,183	20,621	941.1	2,157	1,133.3	454	20,674
MEAN	29.6	220	1,745	436	843	1,683	687	30.4	71.9	36.6	14.6	689
MAX	37	1,610	7,010	2,970	3,450	3,710	3,330	221	200	97	24	1,280
MIN	25	30	32	68	86	137	10	4.4	24	5.3	11	15
CFSM	.05	.40	3.16	.79	1.53	3.04	1.24	.05	.13	.07	.03	1.25
IN.	.06	.44	3.64	.91	1.59	3.51	1.39	.06	.15	.08	.03	1.39

CAL YR 1966: TOTAL 564,237 MEAN 1,546 MAX 7,010 MIN 20 CFSM 2.80 IN 37.95
WAT YR 1967: TOTAL 196,912.4 MEAN 539 MAX 7,010 MIN 4.4 CFSM .98 IN 13.24

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-7	2030	8.11	4,090				
12-24	1300	12.03	7,690				

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 1967. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Digital water-stage recorder. Datum of gage is 642.66 ft above mean sea level, datum of 1929. Prior to Jan. 16, 1934, chain gage, Jan. 16, 1934, to Sept. 30, 1954, wire-weight gage, and Oct. 1, 1954, to Nov. 15, 1965, graphic water-stage recorder, at same site and datum.

Average discharge.--44 years, 1,436 cfs.

Extremes.--Maximum discharge during year, 15,700 cfs Dec. 9 (gage height, 17.44 ft); minimum 50 cfs Aug. 17; minimum gage height, 2.04 ft Oct. 7-9, 12-14.
1923-67: 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.--Record good except for winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	76	60	1,180	390	2,500	510	7,990	489	424	431	90	64
2	70	64	1,000	380	6,000	537	7,060	435	375	368	85	60
3	68	70	818	370	7,330	710	4,380	403	334	351	85	58
4	64	75	638	372	8,340	954	2,140	400	307	310	84	55
5	60	76	630	368	6,930	1,700	1,970	396	280	289	79	259
6	58	103	2,500	375	3,280	1,850	2,990	424	268	292	75	800
7	54	128	6,000	513	1,770	2,390	4,150	3,300	256	289	72	870
8	54	188	14,000	765	1,230	3,380	4,610	4,640	256	265	70	920
9	55	351	14,300	650	930	3,020	3,600	4,210	259	238	68	950
10	56	1,550	13,300	561	780	3,160	4,350	3,870	414	183	64	950
11	56	1,300	13,000	449	690	6,290	3,410	6,020	865	137	61	1,000
12	54	1,100	12,400	414	660	7,280	2,060	6,620	695	128	59	1,040
13	54	870	11,700	407	660	7,110	2,480	5,090	545	111	58	1,220
14	54	610	10,500	340	740	7,500	5,430	3,970	469	100	55	1,090
15	60	513	8,800	290	1,510	7,140	4,630	3,540	417	97	54	1,150
16	73	386	5,530	245	7,650	6,760	2,940	2,640	262	95	53	1,010
17	68	310	3,130	225	5,720	6,640	1,930	1,920	238	91	52	1,000
18	70	265	4,740	215	3,820	5,700	1,240	1,500	229	93	54	971
19	69	229	4,840	215	1,970	3,190	982	1,240	226	102	68	745
20	65	198	4,910	220	1,580	2,150	810	987	201	98	76	610
21	64	186	6,420	226	1,340	7,730	715	795	163	95	67	610
22	64	173	7,400	241	1,040	7,680	835	690	163	217	65	601
23	63	163	7,720	277	885	7,430	895	670	161	372	65	601
24	64	157	7,960	337	720	7,450	895	570	157	244	61	597
25	64	157	4,670	414	630	7,430	885	529	173	183	64	592
26	65	154	750	635	560	6,060	790	509	209	137	72	588
27	67	226	579	2,500	520	4,690	715	665	244	113	78	601
28	63	700	445	5,800	510	4,640	630	640	229	102	81	597
29	61	1,900	430	5,400	------	7,230	561	570	304	95	75	588
30	61	1,650	415	4,500	------	7,210	533	565	588	90	75	583
31	60	------	406	3,000	------	8,060	------	489	------	90	69	------
TOTAL	1,934	13,912	171,105	31,094	70,295	153,581	78,606	58,786	9,711	5,806	2,134	20,780
MEAN	62.4	464	5,520	1,003	2,511	4,954	2,554	1,896	324	187	68.8	693
MAX	76	1,900	14,300	5,800	8,340	8,060	7,990	6,620	865	431	90	1,220
MIN	54	60	406	215	510	510	533	396	157	90	52	55
CFSM	.04	.27	3.18	.58	1.45	2.86	1.47	1.09	.19	.11	.04	.40
IN.	.04	.30	3.67	.67	1.51	3.30	1.64	1.26	.21	.12	.05	.45

CAL YR 1966: TOTAL 323,736 MEAN 887 MAX 14,300 MIN 33 CFSM .51 IN 6.95
WAT YR 1967: TOTAL 615,744 MEAN 1,687 MAX 14,300 MIN 52 CFSM .97 IN 13.22

Peak discharge (base, 11,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0200	17.44	15,700				

3-3255. Mississinewa River near Ridgeville, Ind.

Location.--Lat 40°16' 49", long 84°59'44", 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 1967.

Gage.--Digital 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. 5, 1950, wire-weight gage, and Oct. 5, 1950 to Apr. 24, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--21 years, 125 cfs.

Extremes.--Maximum discharge during year, 3,510 cfs Dec. 10 (gage height, 11.89 ft); minimum, 1.6 cfs Sept. 26, 27 (gage height, 2.04 ft).
1946-67: 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.--Record fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	8.0	9.0	203	35	386	27	132	47	21	45	7.1	3.3
2	9.0	17	155	34	1,090	32	104	141	19	33	7.7	3.3
3	7.2	16	122	36	527	172	86	79	20	26	16	3.1
4	5.8	5.2	101	35	221	143	69	57	20	23	8.9	2.2
5	6.1	7.6	429	32	140	423	846	49	17	18	6.5	2.0
6	5.8	18	1,180	27	101	1,080	745	133	16	15	5.3	2.6
7	5.8	284	1,530	55	98	450	307	1,270	16	13	4.4	3.3
8	5.2	470	1,490	57	76	355	185	631	15	13	5.0	2.6
9	5.1	270	2,940	34	66	236	143	271	15	11	5.6	4.7
10	7.8	486	3,160	32	65	688	115	160	14	11	5.3	5.0
11	9.4	375	1,650	27	67	766	89	1,080	13	11	5.0	2.8
12	7.3	177	527	27	60	395	76	448	11	10	4.4	1.9
13	6.7	119	324	26	47	230	79	194	10	9.2	4.4	2.8
14	6.1	91	227	26	49	401	86	141	9.8	8.6	3.3	3.1
15	7.1	72	163	22	80	232	79	208	9.2	8.6	3.1	2.8
16	12	62	145	19	148	156	64	184	9.2	8.0	4.1	2.8
17	5.8	52	131	18	87	132	63	124	9.2	8.0	3.8	2.8
18	5.8	44	116	15	66	99	52	98	9.2	8.0	4.4	2.4
19	6.5	35	99	15	55	85	43	82	8.9	8.3	8.3	2.8
20	5.7	29	94	16	39	199	40	61	9.2	7.7	5.6	4.1
21	4.3	26	75	19	32	1,360	45	51	22	6.8	4.1	4.4
22	3.4	25	66	20	29	489	172	46	124	5.9	3.8	5.0
23	4.4	23	58	23	26	230	94	42	71	6.2	4.1	4.4
24	3.4	22	57	29	24	159	88	40	38	5.6	3.3	3.8
25	2.6	22	53	41	23	201	69	36	28	5.9	3.3	2.6
26	3.6	25	51	111	23	148	63	32	19	5.9	3.8	1.9
27	3.6	688	51	1,110	23	118	60	30	16	8.3	5.3	3.3
28	7.0	444	51	421	25	1,590	48	29	30	13	5.3	7.1
29	7.1	234	49	192	------	1,320	44	32	197	8.0	3.1	5.6
30	6.1	204	40	140	------	464	44	27	83	6.5	3.6	4.1
31	5.5	------	34	194	------	238	------	23	------	7.1	3.3	------
TOTAL	189.2	4,351.8	15,371	2,888	3,673	12,618	4,130	5,846	899.7	374.6	161.2	101.5
MEAN	6.10	145	496	93.2	131	407	138	189	30.0	12.1	5.20	3.38
MAX	12	688	3,160	1,110	1,090	1,590	846	1,270	197	45	16	7.1
MIN	2.6	5.2	34	15	23	27	40	23	8.9	5.6	3.1	1.9
CFSM	.05	1.12	3.81	.72	1.01	3.13	1.06	1.45	.23	.09	.04	.03
IN.	.05	1.24	4.40	.83	1.05	3.61	1.18	1.67	.26	.11	.05	.03

CAL YR 1966: TOTAL 35,320.6 MEAN 96.8 MAX 3,160 MIN 1.2 CFSM .74 IN 10.10
WAT YR 1967: TOTAL 50,604.0 MEAN 139 MAX 3,160 MIN 1.9 CFSM 1.07 IN 14.48

Peak discharge (base, 2,400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1245	11.89	3,510				
3-28	1545	11.65	2,920				

3-3260. Mississinewa River near Eaton, Ind.

Location.--Lat 40°19'08", long 85°19'10", 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 1967.

Gage.--Digital 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, and Sept. 25, 1954 to Nov. 23, 1965, graphic water-stage recorder, at same site and datum.

Average discharge.--15 years, 268 cfs.

Extremes.--Maximum discharge during year, 6,710 cfs Dec. 10 (gage height, 13.41 ft); minimum, 4.7 cfs Sept. 12 (gage height, 2.49 ft).
1952-67: 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.--Record good except for winter period which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	14	19	409	91	1,070	83	426	108	59	173	14	7.5
2	12	22	364	82	2,020	88	328	134	52	88	12	6.3
3	10	27	237	74	2,910	295	277	258	50	52	12	6.0
4	10	25	304	68	1,200	440	209	142	49	50	12	5.4
5	12	28	340	66	482	564	925	110	49	36	15	5.2
6	11	35	1,750	64	328	2,010	2,610	144	47	33	14	5.2
7	9.7	58	3,060	150	220	2,160	1,700	1,520	44	27	11	5.2
8	9.3	510	4,200	180	190	1,050	745	2,890	42	24	9.5	5.2
9	9.3	710	5,920	130	170	654	471	1,600	39	22	9.1	6.0
10	10	447	6,560	96	156	1,280	371	654	38	21	8.1	6.0
11	11	827	5,410	82	158	2,130	310	1,210	39	21	7.2	5.7
12	11	577	2,730	70	173	1,680	241	2,250	33	20	7.2	4.9
13	10	250	895	60	124	860	225	975	29	19	7.2	6.0
14	10	157	560	60	104	885	251	468	26	18	6.6	7.2
15	14	116	457	55	120	860	251	391	25	17	6.3	6.6
16	18	94	373	52	271	532	212	503	24	16	6.3	6.0
17	17	80	353	49	304	384	167	364	23	16	6.3	5.7
18	18	70	328	45	170	313	152	292	22	16	6.0	5.7
19	25	61	290	44	132	241	122	228	21	17	6.6	6.0
20	19	52	258	42	116	331	100	173	21	16	8.8	6.3
21	18	45	125	41	100	2,240	100	130	23	16	10	6.9
22	16	42	115	45	90	2,660	290	110	36	16	11	6.6
23	16	39	105	50	82	950	408	100	251	15	9.5	6.3
24	16	38	98	58	76	524	261	92	136	13	7.8	5.4
25	16	38	92	84	72	658	228	84	74	12	6.9	5.2
26	15	38	88	219	75	540	170	78	48	12	6.9	5.2
27	16	307	84	1,800	76	376	152	70	38	13	11	5.7
28	15	1,420	81	2,460	79	2,260	132	67	32	16	10	6.6
29	17	868	80	1,040	------	4,450	108	84	56	14	8.1	6.0
30	17	440	84	461	------	2,150	102	86	362	17	8.8	5.7
31	18	------	92	391	------	699	------	69	------	16	8.4	------
TOTAL	440.3	7,440	35,862	8,209	11,068	34,367	12,044	15,384	1,788	862	283.6	177.7
MEAN	14.2	248	1,157	265	395	1,109	401	496	59.6	27.8	9.15	5.92
MAX	25	1,420	6,580	2,460	2,910	4,450	2,610	2,890	362	173	15	7.5
MIN	9.3	19	80	41	72	83	100	67	21	12	6.0	4.9
CFSM	.05	.82	3.81	.87	1.30	3.65	1.32	1.63	.20	.09	.03	.02
IN.	.05	.91	4.39	1.00	1.35	4.20	1.47	1.88	.22	.11	.03	.02

CAL YR 1966: TOTAL 79,855.7 MEAN 219 MAX 6,580 MIN 3.0 CFSM .72 IN 9.77
WAT YR 1967: TOTAL 127,925.0 MEAN 350 MAX 6,580 MIN 4.9 CFSM 1.15 IN 15.65

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0615	13.41	6,710				
2-3	1445	9.03	3,060				
3-29	1330	11.15	4,760				
5-8	1600	9.11	3,130				

3-3265. Mississinewa River at Marion, Ind.

Location.--Lat 40°34'34", long 85°39'34", 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 1967. 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.--44 years, 625 cfs.

Extremes.--Maximum discharge during year, 12,200 cfs Dec. 10 (gage height, 11.66 ft); minimum, 4.0 cfs June 23, 30 (gage height, 0.53 ft), caused by taintor gates above gage being temporarily closed.
1923-67: 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.--Record good except for winter period, which is fair. Flow periodically regulated by dam above station.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	44	40	640	213	1,220	205	1,080	204	159	188	51	44
2	47	45	580	195	3,520	210	792	231	141	179	59	42
3	47	51	460	187	3,860	340	640	275	134	130	55	44
4	45	51	340	185	2,620	550	520	444	130	105	51	44
5	44	61	490	175	1,220	670	647	165	127	218	47	40
6	44	59	1,570	171	730	1,940	2,790	260	124	88	45	40
7	45	85	4,020	240	490	2,380	2,790	2,720	120	80	45	40
8	49	114	8,550	430	400	1,780	1,500	4,530	114	75	49	40
9	51	490	10,400	352	360	1,160	890	3,280	152	70	49	47
10	49	670	11,700	295	325	1,440	700	1,510	167	68	45	40
11	47	520	10,900	218	300	3,740	520	2,700	167	55	42	39
12	49	730	7,200	190	270	2,970	490	3,170	120	6.0	40	39
13	53	460	2,700	175	260	1,940	645	2,360	108	9.5	40	40
14	51	255	1,430	163	260	1,720	792	1,160	99	49	40	42
15	59	191	1,080	155	330	1,580	580	890	93	51	40	42
16	42	148	967	145	610	1,220	490	792	85	53	40	42
17	40	124	760	135	550	890	394	857	82	51	40	39
18	49	105	700	125	460	670	320	585	199	55	42	40
19	47	96	610	115	358	550	275	374	110	63	53	51
20	45	85	550	108	285	710	226	400	75	57	45	65
21	44	80	490	105	240	3,280	222	340	85	57	44	63
22	45	75	430	108	200	3,500	280	300	60	53	49	38
23	42	70	364	120	175	2,310	430	275	5.6	53	45	34
24	40	65	290	141	170	1,220	460	390	125	51	44	33
25	40	65	240	171	170	1,360	346	245	183	49	45	32
26	40	72	210	325	175	1,300	310	146	277	47	47	30
27	40	163	198	2,260	185	955	280	155	111	49	51	36
28	44	1,080	190	3,070	190	3,620	330	200	145	49	49	32
29	40	1,440	190	2,230		6,450	218	200	113	47	49	29
30	42	825	195	1,080	- - - - -	5,100	204	204	9.2	55	53	29
31	40	- - - - -	215	760	- - - - -	1,860	- - - - -	183	- - - - -	59	47	- - - - -
Total	1,404	8,315	68,659	14,342	19,933	57,620	20,161	29,545	3,619.8	2,219.5	1,441	1,216
Mean	45.3	277	2,215	463	712	1,859	672	953	121	71.6	46.5	40.5
Max	59	1,440	11,700	3,070	3,860	6,450	2,790	4,530	277	188	59	65
Min	40	40	190	105	170	205	204	146	5.6	6.0	40	29
Cfsm	0.067	0.409	3.27	0.684	1.05	2.75	0.993	1.41	0.179	0.106	0.069	0.060
In.	0.08	0.46	3.77	0.79	1.09	3.17	1.11	1.63	0.20	0.12	0.08	0.07

Cal yr 1966: Total 147,149 Mean 403 Max 11,700 Min 14 Cfsm 0.595 In. 8.10
Wtr yr 1967: Total 228,475.3 Mean 626 Max 11,700 Min 5.6 Cfsm 0.925 In. 12.57

Peak discharge (base, 5,600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	2130	11.66	12,200				
3-29	0200	8.18	6,600				
5-8	1100	7.62	5,700				

3-3270. Mississinewa River at Peoria, Ind.

Location.--Lat 40°43'24", long 85°57'27", in SW¼ sec. 3, T. 26 N., R. 5 E., on right bank, at Peoria, 3,000 ft downstream from flood control dam, 5½ miles upstream from mouth and 6½ miles southeast of Peru.

Drainage area.--810 sq mi.

Records available.--October 1952 to September 1967.

Gage.--Digital 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, 2,500 ft upstream and Oct. 7, 1954 to Sept. 30, 1962, graphic water-stage recorder on right bank at site 2,500 ft upstream all at same datum. Oct. 1, 1962 to Apr. 19, 1966, graphic water-stage recorder at present site and datum.

Average discharge.--15 years, 671 cfs.

Extremes.--Maximum discharge during year, 9,250 cfs Dec. 20 (gage height, 10.86 ft); minimum, 10 cfs Mar. 3 (gage height, 0.29 ft). 1952-67: Maximum discharge, 28,000 cfs June 11, 1958 (gage height, 19.26 ft, site then in use); minimum, 10 cfs Mar. 3, 1967 (gage height, 0.29 ft); minimum daily, 24 cfs Mar. 14, 1960.

Remarks.--Record good except for winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	75	64	738	250	1,130	215	3,370	344	262	114	91	69
2	71	66	555	245	2,880	248	1,400	335	240	168	88	65
3	69	73	461	235	4,440	310	981	357	225	234	92	61
4	67	81	347	230	4,400	545	804	435	213	195	101	58
5	70	83	401	230	3,220	717	826	428	204	171	82	57
6	67	87	941	239	1,360	1,100	2,180	252	199	277	76	57
7	65	102	2,680	290	757	2,380	3,480	1,230	198	146	72	57
8	64	124	5,600	428	500	2,600	3,080	4,010	192	131	71	58
9	63	150	5,220	465	450	1,730	1,740	4,600	188	123	74	59
10	66	644	885	370	400	1,450	1,280	3,870	232	117	75	61
11	65	739	156	261	375	3,170	977	3,100	326	114	73	63
12	64	607	162	240	355	4,180	758	3,940	254	111	70	56
13	63	734	166	220	370	3,730	848	3,700	205	85	67	58
14	64	451	392	205	407	3,010	1,560	2,530	182	53	65	59
15	71	273	3,080	190	640	2,350	1,180	1,320	165	53	63	60
16	79	226	8,590	175	1,100	1,820	876	1,020	154	91	64	58
17	89	190	8,480	168	839	1,280	719	930	147	92	63	58
18	70	168	8,420	160	679	953	602	925	141	84	64	57
19	71	151	8,450	150	539	747	502	670	211	99	73	62
20	79	138	8,600	150	456	782	442	469	195	107	75	82
21	76	129	7,740	155	370	2,860	409	471	136	98	80	102
22	74	121	4,320	165	300	4,230	575	403	141	93	68	86
23	72	117	1,190	178	235	4,200	597	361	141	89	69	71
24	71	111	518	194	202	2,910	692	332	96	86	70	64
25	68	108	449	229	198	1,680	619	427	131	86	67	62
26	67	107	386	334	198	1,640	521	296	246	85	67	57
27	68	139	331	1,850	198	1,360	480	223	337	82	70	60
28	67	495	310	3,500	262	2,410	427	217	211	81	71	66
29	67	1,350	290	3,480	------	5,050	383	416	238	81	69	70
30	66	1,300	275	2,330	------	5,980	362	309	203	78	69	66
31	64	------	265	1,140	------	5,360	------	286	------	77	69	------
TOTAL	2,152	9,148	80,198	18,456	27,200	70,997	32,670	38,206	6,013	3,501	2,268	1,919
MEAN	69.4	305	2,587	595	971	2,290	1,089	1,232	200	113	73.2	64.0
MAX	89	1,350	8,600	3,500	4,440	5,980	3,480	4,600	337	277	101	102
MIN	63	64	156	150	198	215	362	217	96	53	63	56
CFSM	.09	.38	3.19	.74	1.20	2.83	1.34	1.52	.25	.14	.09	.08
IN.	.10	.42	3.68	.85	1.25	3.26	1.50	1.75	.28	.16	.10	.09

CAL YR 1966: TOTAL 174,208 MEAN 477 MAX 8,600 MIN 50 CFSM .59 IN 8.00
WAT YR 1967: TOTAL 292,728 MEAN 802 MAX 8,600 MIN 53 CFSM .99 IN 13.44

Peak discharge (base, 6,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1515	10.54	8,690				
12-20	1700	10.86	9,250				

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 1967. 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.--24 years, 2,286 cfs.

Extremes.--Maximum discharge during year, 22,300 cfs Dec. 9 (gage height, 15.02 ft); minimum, 132 cfs Aug. 17, 18 (gage height, 1.93 ft).
1943-67: 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.--Record good except for winter period, which is poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	190	149	2,310	800	3,770	870	11,500	1,070	895	690	202	178
2	178	152	1,830	770	9,220	874	9,500	1,020	804	545	234	170
3	163	163	1,490	750	13,900	978	6,500	994	720	672	218	163
4	163	174	1,180	740	12,800	1,910	3,580	994	678	594	210	156
5	163	186	1,190	727	10,500	2,460	3,200	1,010	584	528	190	152
6	163	186	3,200	720	6,580	2,970	4,750	895	506	567	170	572
7	160	238	10,400	853	3,360	4,520	7,040	2,600	490	512	160	853
8	160	290	18,700	1,280	2,310	5,860	7,940	8,300	475	455	152	923
9	160	440	20,500	1,320	1,800	5,100	5,700	9,100	478	415	149	986
10	166	1,680	14,200	1,100	1,500	4,640	5,400	7,760	496	375	149	1,000
11	166	3,190	12,800	930	1,320	8,900	4,810	9,500	1,170	326	149	1,000
12	178	2,390	12,400	790	1,260	11,300	3,230	10,900	1,030	295	142	1,080
13	178	2,090	11,500	811	1,250	11,100	3,260	9,300	853	268	135	1,250
14	202	1,430	8,740	660	1,310	10,900	6,680	7,040	720	218	135	1,250
15	214	970	9,640	560	4,100	9,700	6,180	5,550	648	190	135	1,160
16	214	930	14,200	490	9,300	8,700	4,430	4,050	528	202	135	1,110
17	238	584	10,700	450	7,220	8,120	3,250	3,250	440	222	132	1,070
18	234	501	12,000	440	4,950	7,400	2,330	2,830	415	230	149	1,070
19	230	430	12,600	440	2,440	4,790	1,940	2,310	415	234	186	954
20	234	385	12,400	450	2,390	3,230	1,610	1,780	523	250	186	714
21	226	350	13,300	460	2,060	10,200	1,420	1,560	420	242	182	741
22	198	326	11,700	501	1,710	12,200	1,560	1,370	395	226	174	734
23	174	313	8,900	534	1,560	11,700	2,370	1,300	385	420	166	714
24	166	304	8,120	600	1,070	11,500	2,070	1,110	360	415	170	702
25	160	300	6,020	708	940	9,700	1,840	1,150	331	345	174	690
26	160	295	1,610	986	910	8,300	1,660	1,010	460	282	190	678
27	163	375	1,160	4,280	890	6,860	1,490	946	624	246	198	702
28	160	1,080	940	9,100	870	6,340	1,340	946	518	222	198	714
29	160	3,590	900	8,900		12,000	1,200	1,260	556	214	198	714
30	156	3,530	860	6,860	- - - - -	13,100	1,150	1,090	720	206	198	702
31	152	- - - - -	820	4,290	- - - - -	13,700	- - - - -	1,000	- - - - -	194	186	- - - - -
Total	5,629	27,021	246,310	52,300	111,290	229,922	118,930	102,995	17,637	10,800	5,352	22,902
Mean	182	901	7,945	1,687	3,975	7,417	3,964	3,322	588	348	173	763
Max	238	3,590	20,500	9,100	13,900	13,700	11,500	10,900	1,170	690	234	1250
Min	152	149	820	440	870	870	1,150	895	331	190	132	152
Cfsm	0.068	0.339	2.99	0.635	1.50	2.79	1.49	1.25	0.221	0.131	0.065	0.287
In.	0.08	0.38	3.45	0.73	1.56	3.22	1.66	1.44	0.25	0.15	0.07	0.32

Cal yr 1966: Total 533,297 Mean 1,461 Max 20,500 Min 102 Cfsm 0.550 In. 7.47
Wtr yr 1967: Total 951,088 Mean 2,607 Max 20,500 Min 132 Cfsm 0.982 In. 13.31

Peak discharge (base, 18,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0900	15.02	22,300				

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

Location.--Lat 40°59'55", long 85°45'50", 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 1967. Prior to April 1930, monthly discharge only, published in WSP 1305. Gage-height records since October 1924 are available in the district office.

Gage.--Digital water-stage recorder. Datum of gage is 738.00 ft above mean sea level, datum of 1929. Prior to July 24, 1953, wire-weight gage or chain gage on downstream side of Second Street Bridge, 700 ft upstream at same datum. July 24, 1953 to November 14, 1965, graphic water-stage recorder, at present site and datum.

Average discharge.--38 years, 343 cfs.

Extremes.--Maximum discharge during year, 7,750 cfs Dec. 8 (gage height, 13.68 ft); minimum, 56 cfs Oct. 24, 25; minimum gage height, 1.10 ft Aug. 17, 18.
1929-67: Maximum discharge, 7,750 cfs Dec. 8, 1966 (gage height, 13.68 ft); maximum gage height, 14.00 ft Feb. 27, 1936; minimum not determined, occurred Oct. 7, 1957, due to unusual regulation; minimum daily, 16 cfs Oct. 19, 1956.

Remarks.--Record fair. Diurnal fluctuation caused by grist mill above station.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	75	73	600	210	203	222	491	243	148	127	103	83
2	75	76	490	200	705	201	1,090	222	145	144	93	82
3	68	85	420	190	1,040	400	885	203	142	127	88	80
4	68	85	364	185	677	849	633	190	138	129	85	79
5	68	88	632	180	470	508	529	182	136	118	80	79
6	62	90	1,820	182	410	340	547	224	138	109	76	79
7	63	97	2,930	211	285	268	519	749	143	107	72	80
8	67	110	7,220	215	230	228	431	997	140	106	72	81
9	70	1,380	6,920	187	210	215	417	689	136	103	76	84
10	73	2,100	5,030	178	200	597	1,210	456	136	102	78	86
11	76	1,940	4,310	178	190	1,890	789	1,310	144	103	79	86
12	76	1,310	3,710	172	182	1,980	522	1,700	133	115	79	87
13	82	800	3,150	165	180	1,640	717	1,080	128	114	81	87
14	87	551	2,620	162	191	1,600	1,630	693	126	105	80	87
15	87	412	2,130	158	809	1,420	1,240	597	123	103	87	87
16	83	326	1,840	152	2,730	1,100	853	498	125	102	81	87
17	76	270	1,290	150	2,340	900	681	400	154	99	81	87
18	78	226	1,180	145	1,600	720	593	331	139	100	81	86
19	80	190	1,020	142	993	720	452	283	130	107	107	95
20	80	166	897	140	550	1,300	368	233	125	119	99	102
21	78	150	789	140	425	3,500	428	206	125	104	77	105
22	78	140	697	159	350	2,710	833	192	138	101	72	107
23	71	131	605	168	290	2,250	761	182	127	100	72	107
24	57	121	533	186	250	1,630	550	178	122	105	72	108
25	59	119	463	220	230	1,210	477	171	186	104	72	108
26	62	121	396	253	275	981	410	167	194	102	76	107
27	65	650	337	268	280	825	354	162	161	102	102	110
28	67	1,700	316	262	265	701	298	157	149	105	90	116
29	71	1,100	270	218	------	593	262	169	144	103	94	112
30	71	757	240	198	------	508	253	163	134	101	86	113
31	71	------	220	190	------	442	------	154	------	112	86	------
TOTAL	2,244	15,364	53,239	5,764	16,560	32,448	19,223	13,181	4,209	3,378	2,577	2,797
MEAN	72.4	512	1,717	186	591	1,047	641	425	140	109	83.1	93.2
MAX	87	2,100	7,220	268	2,730	3,500	1,630	1,700	194	144	107	116
MIN	57	73	220	140	180	201	253	154	122	99	72	79
CFSM	.17	1.23	4.13	.45	1.42	2.52	1.54	1.02	.34	.26	.20	.22
IN.	.20	1.37	4.76	.52	1.48	2.90	1.72	1.18	.38	.30	.23	.25

CAL YR 1966: TOTAL 128,630 MEAN 352 MAX 7,220 MIN 31 CFSM .85 IN 11.50
WAT YR 1967: TOTAL 170,984 MEAN 468 MAX 7,220 MIN 57 CFSM 1.12 IN 15.29

Peak discharge (base, 2,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	1730	13.68	7,750				
2-16	1415	8.81	2,890				
3-21	1700	9.10	3,050				

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 1967. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Digital 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, and Aug. 16, 1956 to Sept. 30, 1964, graphic water-stage recorder, at same site and datum.

Average discharge.--24 years, 689 cfs.

Extremes.--Maximum discharge during year, 14,200 cfs Dec. 9 (gage height, 12.20 ft); minimum, 101 cfs Oct. 5, 6 (gage height, 2.92 ft).

1943-67: Maximum discharge, 14,200 cfs Dec. 9, 1966 (gage height, 12.20 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.--Record good except for winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	109	114	1,010	490	494	600	880	655	405	296	207	139
2	108	114	830	480	1,010	530	1,190	616	375	277	231	141
3	107	118	650	460	1,900	655	1,530	566	352	329	183	137
4	104	119	582	440	1,430	1,240	1,230	524	343	304	168	134
5	102	126	704	425	1,050	1,160	1,110	494	325	277	160	132
6	102	128	1,810	395	700	830	1,150	536	312	263	155	132
7	103	134	4,290	488	540	676	1,060	970	316	242	153	130
8	106	148	10,400	548	500	590	963	2,080	329	231	150	130
9	107	228	13,800	470	460	548	888	1,830	316	224	153	130
10	109	2,060	11,700	415	435	948	1,350	1,290	304	221	148	128
11	107	2,470	8,180	400	425	2,570	1,640	2,400	300	214	146	126
12	107	1,990	6,080	385	415	3,080	1,150	3,790	312	207	141	124
13	106	1,380	4,840	365	430	2,670	1,270	2,560	280	207	139	124
14	107	950	3,860	350	518	2,550	2,840	1,680	266	217	137	126
15	116	706	3,080	340	1,510	2,290	2,470	1,410	252	201	134	124
16	120	565	2,510	330	4,380	1,800	1,750	1,270	245	198	139	124
17	120	477	2,010	320	4,220	1,440	1,350	1,060	245	192	134	122
18	122	412	1,730	292	2,900	1,190	1,200	925	304	201	141	124
19	120	360	1,560	300	1,870	1,020	1,020	830	280	201	168	144
20	117	320	1,390	305	1,550	1,130	873	718	252	201	186	137
21	116	294	1,240	310	1,300	3,930	809	623	240	217	210	128
22	115	272	1,110	308	1,050	5,000	1,020	572	256	201	173	130
23	113	257	1,020	320	820	3,780	1,310	536	263	186	150	130
24	111	245	918	365	630	2,840	1,110	512	256	178	144	128
25	113	240	830	432	488	2,250	963	482	256	195	139	126
26	112	233	746	542	580	1,780	903	454	352	204	148	124
27	112	335	680	697	640	1,520	844	426	454	189	180	132
28	112	1,550	630	760	640	1,330	753	432	390	180	192	134
29	113	1,990	590	669	------	1,190	690	536	352	180	178	134
30	112	1,320	550	572	------	1,050	655	554	329	175	160	139
31	114	------	520	488	------	940	------	470	------	170	153	------
TOTAL	3,442	19,655	89,840	13,461	32,885	53,127	35,971	31,801	9,270	6,778	5,000	3,913
MEAN	111	655	2,898	434	1,174	1,714	1,199	1,026	309	219	161	130
MAX	122	2,470	13,800	760	4,380	5,000	2,840	3,790	454	329	231	144
MIN	102	114	520	292	415	530	655	426	245	170	134	122
CFSM	.14	.83	3.66	.55	1.48	2.17	1.52	1.30	.39	.28	.20	.16
IN.	.16	.92	4.22	.63	1.55	2.50	1.69	1.50	.44	.32	.24	.18

CAL YR 1966: TOTAL 212,106 MEAN 581 MAX 13,800 MIN 92 CFSM .73 IN 9.97
WAT YR 1967: TOTAL 305,143 MEAN 836 MAX 13,800 MIN 102 CFSM 1.06 IN 14.35

Peak discharge (base, 5,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1515	12.20	14,200				
3-22	0300	8.25	5,290				

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 1967. 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.--Digital 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. Oct. 1, 1927 to Oct. 6, 1965, graphic water-stage recorder at present site and datum.

Average discharge.--44 years (1923-67), 3,188 cfs.

Extremes.--Maximum discharge during year, 41,900 cfs Dec. 9 (gage height, 14.31 ft); minimum, 275 cfs Oct. 5, 6, 7, 13, 14 (gage height, 2.70 ft).
1903-6, 1923-67: 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.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	340	295	3,520	1,330	4,480	1,120	13,800	1,750	1,430	1,180	414	356
2	321	301	2,770	1,290	9,810	1,220	11,200	1,630	1,310	975	488	350
3	308	314	2,190	1,240	17,600	1,730	8,850	1,500	1,240	1,010	485	333
4	295	321	1,700	1,200	16,300	2,850	5,350	1,460	1,180	1,040	435	321
5	288	354	1,850	1,170	12,900	3,620	4,560	1,550	1,140	910	423	311
6	288	368	4,290	1,220	7,980	3,730	6,210	1,470	1,070	886	391	387
7	288	382	14,100	1,380	4,090	4,860	9,200	3,270	1,040	923	373	945
8	288	499	32,600	1,730	2,870	6,490	9,810	11,000	1,010	802	367	979
9	295	660	40,700	1,870	2,510	6,000	7,560	12,200	1,000	735	362	1,050
10	295	2,550	31,100	1,660	2,100	5,740	7,540	10,100	1,000	677	356	1,060
11	295	5,430	24,600	1,440	1,900	12,100	7,710	13,300	1,320	629	346	1,050
12	288	4,560	21,300	1,320	1,800	16,200	5,140	16,500	1,570	569	338	1,080
13	288	3,370	19,100	1,260	1,800	15,300	4,880	13,300	1,340	539	328	1,210
14	282	2,510	16,800	1,050	1,800	15,100	10,700	10,000	1,180	508	317	1,300
15	314	1,700	15,800	930	4,110	13,400	10,600	7,740	1,070	448	311	1,180
16	340	1,280	18,700	840	14,200	11,700	7,230	6,080	1,000	427	308	1,200
17	327	1,050	14,300	800	12,900	10,400	5,400	4,800	838	454	302	1,100
18	354	910	14,800	780	9,040	9,010	3,940	4,070	826	469	342	1,100
19	334	802	15,300	780	5,580	6,710	3,170	3,410	814	515	464	1,140
20	321	724	14,800	780	4,130	4,650	2,630	2,730	850	612	488	975
21	321	670	15,800	800	3,730	14,900	2,370	2,330	814	527	445	851
22	314	620	14,100	830	3,010	19,400	2,650	2,020	724	490	409	847
23	301	590	11,100	949	2,530	17,200	3,810	1,840	702	512	359	814
24	295	571	9,620	1,000	1,610	15,000	3,410	1,730	713	698	342	796
25	295	562	8,520	1,170	1,170	13,200	2,990	1,680	680	666	339	783
26	295	553	3,150	1,440	1,120	11,200	2,670	1,580	746	567	385	777
27	295	708	2,090	4,410	1,100	9,300	2,410	1,470	1,040	517	427	814
28	295	2,000	1,770	10,600	1,100	8,400	2,150	1,530	1,070	532	415	817
29	301	5,040	1,530	11,000	------	14,400	1,930	1,800	988	465	409	799
30	295	5,190	1,450	8,850	------	15,100	1,820	1,730	1,070	433	390	804
31	295	------	1,400	5,580	------	15,500	------	1,580	------	415	370	------
TOTAL	9,451	44,944	380,850	70,699	153,270	305,530	171,690	147,150	30,775	20,130	11,928	25,529
MEAN	305	1,498	12,290	2,281	5,474	9,856	5,723	4,747	1,026	649	385	851
MAX	354	5,430	40,700	11,000	17,600	19,400	13,800	16,500	1,570	1,180	488	1,300
MIN	282	295	1,400	780	1,100	1,120	1,820	1,460	680	415	302	311
CFSM	.08	.40	3.28	.61	1.46	2.63	1.53	1.27	.27	.17	.10	.23
IN.	.09	.45	3.78	.70	1.52	3.03	1.70	1.46	.31	.20	.12	.25

CAL YR 1966: TOTAL 813,412 MEAN 2,229 MAX 40,700 MIN 176 CFSM .59 IN 8.06
WAT YR 1967: TOTAL 1,371,946 MEAN 3,759 MAX 40,700 MIN 282 CFSM 1.00 IN 13.60

Peak discharge (base, 22,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1715	14.31	41,900				

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 1967. Prior to January 1940 monthly discharge only, published in WSP 1305.

Gage.--Digital 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 20, 1942, wire-weight gage, and July 20, 1942 to May 18, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--28 years, 3,283 cfs.

Extremes.--Maximum discharge during year, 44,700 cfs Dec. 10 (gage height, 22.28 ft); minimum, 256 cfs Oct. 11 (gage height, 1.09 ft).

1939-67: 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.--Record good except for winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	360	285	3,840	1,650	4,730	1,220	13,400	2,100	1,620	1,190	470	410
2	340	285	2,850	1,580	7,390	1,300	11,400	2,000	1,480	1,140	490	395
3	320	295	2,460	1,530	15,400	1,700	9,560	1,840	1,380	945	530	385
4	295	310	1,950	1,480	15,800	2,250	6,520	1,750	1,280	1,090	525	370
5	280	330	2,230	1,420	13,100	3,380	5,210	1,770	1,230	1,010	475	355
6	275	360	2,850	1,390	9,710	3,620	6,660	1,880	1,150	917	460	345
7	270	365	9,450	1,470	5,070	4,290	8,990	2,590	1,110	917	435	535
8	270	415	27,300	1,780	3,510	5,830	9,710	9,230	1,110	889	425	973
9	270	580	39,300	1,980	2,880	6,130	8,380	12,500	1,090	798	420	1,040
10	280	1,140	39,400	1,960	2,400	5,610	7,450	10,600	1,100	762	400	1,090
11	265	4,200	28,400	1,960	2,140	9,950	8,250	11,300	1,090	726	390	1,090
12	275	4,720	22,400	1,880	2,000	14,900	6,030	16,200	1,710	665	385	1,100
13	275	3,480	19,300	1,590	2,000	14,900	4,930	14,100	1,600	610	375	1,170
14	280	2,770	16,900	1,370	2,110	14,500	9,400	11,000	1,390	585	365	1,320
15	295	2,030	15,000	1,200	3,350	13,600	11,600	8,500	1,230	555	355	1,340
16	320	1,550	16,600	1,050	11,300	11,900	8,680	6,810	1,120	510	350	1,230
17	325	1,270	14,600	940	13,600	10,500	6,340	5,350	1,020	495	345	1,190
18	325	1,060	13,500	900	10,100	9,240	4,780	4,480	903	530	350	1,160
19	355	924	14,000	900	6,810	7,480	3,720	3,880	903	540	475	1,230
20	335	822	13,700	900	4,610	5,410	3,110	3,230	868	595	560	1,260
21	320	750	14,000	920	4,140	12,200	2,770	2,670	952	643	515	987
22	315	698	13,500	940	3,480	18,800	2,770	2,380	882	575	480	903
23	310	654	11,200	990	2,500	17,400	3,640	2,150	798	535	445	882
24	300	627	9,320	1,060	1,800	15,300	3,860	2,050	810	627	395	840
25	295	621	8,910	1,200	1,300	13,700	3,340	1,900	804	726	385	828
26	295	610	4,750	1,500	1,200	12,000	3,030	1,890	756	671	415	810
27	295	875	2,450	3,140	1,200	10,000	2,770	1,700	917	605	590	861
28	290	1,370	2,160	9,000	1,200	8,200	2,530	1,700	1,140	590	490	868
29	290	3,660	1,870	10,900	------	12,400	2,300	1,810	1,050	580	470	834
30	290	5,140	1,800	9,210	------	14,300	2,180	1,990	1,040	505	465	828
31	285	------	1,700	6,430	------	14,400	------	1,790	------	490	430	------
TOTAL	9,295	42,196	377,690	74,220	154,830	296,410	183,300	153,140	33,533	22,016	13,660	26,629
MEAN	300	1,407	12,180	2,394	5,530	9,562	6,110	4,940	1,118	710	441	888
MAX	360	5,140	39,400	10,900	15,800	18,800	13,400	16,200	1,710	1,190	590	1,340
MIN	265	285	1,700	900	1,200	1,220	2,180	1,700	756	490	345	345
CFSM	.07	.35	3.02	.59	1.37	2.37	1.52	1.23	.28	.18	.11	.22
IN.	.09	.39	3.48	.68	1.43	2.73	1.69	1.41	.31	.20	.13	.25

CAL YR 1966: TOTAL 821,161 MEAN 2,250 MAX 39,400 MIN 211 CFSM .56 IN 7.57
WAT YR 1967: TOTAL 1,386,919 MEAN 3,800 MAX 39,400 MIN 265 CFSM .94 IN 12.79

Peak discharge (base, 24,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0215	22.28	44,700				

3-3297. Deer Creek near Delphi, Ind.

Location.--Lat 40°35'25", long 86°37'15", 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 1967. Prior to March 1944 monthly discharge only published in WSP 1305.

Gage.--Digital water-stage recorder. Datum of gage 553.81 ft above mean sea level (revised) (Corps of Engineers bench mark, levels by Indiana Department of Natural Resources). Prior to Apr. 29, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--24 years, 226 cfs.

Extremes.--Maximum discharge during year, 3,100 cfs Dec. 9 (gage height, 7.88 ft); minimum, 14 cfs Sept. 15-19 (gage height, 2.13 ft).
1943-67: 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.--Record good except for winter period, which is poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	16	32	58	90	408	108	428	162	97	61	23	18
2	15	33	47	87	1,240	127	355	150	90	51	23	17
3	15	35	45	84	1,560	201	331	132	87	45	30	17
4	15	36	47	80	954	234	312	120	84	45	27	16
5	15	38	59	78	639	222	780	116	82	42	24	16
6	15	39	88	79	455	255	1,560	137	77	39	24	15
7	15	42	517	104	385	255	995	440	76	37	22	15
8	15	46	2,120	112	320	213	628	1,130	74	36	22	15
9	15	49	3,000	110	260	199	508	920	73	34	22	16
10	17	66	2,820	104	220	507	584	584	77	34	20	15
11	18	56	1,700	93	190	1,410	540	840	77	33	19	14
12	19	49	1,170	83	180	1,360	412	1,080	124	31	18	15
13	20	38	871	74	180	1,050	464	644	120	31	17	15
14	23	31	676	66	198	928	1,020	488	92	29	17	15
15	31	27	529	60	467	800	935	404	77	28	16	14
16	36	25	457	54	913	625	665	331	68	28	16	14
17	35	23	423	52	695	530	496	285	62	27	16	14
18	36	22	381	52	460	416	373	255	59	28	16	14
19	35	22	327	54	328	332	294	244	54	27	26	23
20	35	21	298	59	250	630	252	211	51	26	31	28
21	32	20	251	64	195	2,130	241	181	53	42	27	25
22	31	20	212	70	160	1,560	235	167	56	50	25	28
23	30	21	181	74	127	930	232	155	54	41	22	25
24	30	21	165	74	105	660	227	148	51	34	20	21
25	31	24	148	81	100	687	201	141	51	29	19	19
26	31	25	133	141	100	632	193	130	49	25	20	18
27	31	81	122	927	102	512	188	122	47	25	29	24
28	31	123	112	1,220	104	656	169	116	49	27	24	24
29	31	101	104	772	------	1,290	160	118	53	24	20	21
30	31	73	98	499	------	875	162	114	73	24	20	20
31	31	------	93	385	------	576	------	106	------	24	19	------
TOTAL	781	1,239	17,252	5,882	11,295	20,910	13,940	10,171	2,137	1,057	674	551
MEAN	25.2	41.3	557	190	403	675	465	328	71.2	34.1	21.7	18.4
MAX	36	123	3,000	1,220	1,560	2,130	1,560	1,130	124	61	31	28
MIN	15	20	45	52	100	108	160	106	47	24	16	14
CFSM	.09	.15	2.00	.68	1.45	2.43	1.67	1.18	.26	.12	.08	.07
IN.	.10	.17	2.31	.79	1.51	2.80	1.86	1.36	.29	.14	.09	.07

CAL YR 1966: TOTAL 38,598.6 MEAN 106 MAX 3,000 MIN 8.0 CFSM .39 IN 5.16
WAT YR 1967: TOTAL 85,889 MEAN 235 MAX 3,000 MIN 14 CFSM .85 IN 11.49

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0430	7.88	3,100				
3-21	1445	6.83	2,270				

3-3305. Tippecanoe River at Oswego, Ind.

Location.--Lat 41°19'14", long 85°47'21", in NE¼NE¼ 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 830.00 ft above mean sea level, datum of 1929. Prior to Aug. 12, 1953, staff gage, and Aug. 12, 1953 to Nov. 15, 1965, graphic water-stage recorder, at same site and datum.

Average discharge.--18 years, 96.8 cfs.

Extremes.--Maximum discharge during year, 478 cfs Dec. 15 (gage height, 8.25 ft); minimum, 0.08 cfs Aug. 4, 5 (gage height 4.25 ft). 1949-67: Maximum discharge, 700 cfs Oct. 17, 1954 (gage height, 8.64); minimum, 0.08 cfs Aug. 4, 5, 1967 (gage height, 4.25 ft).

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	8.9	4.5	53	218	107	160	220	111	38	68	9.3	.28
2	9.2	4.5	55	205	115	156	216	108	37	66	8.5	.31
3	8.6	4.5	55	192	116	149	211	102	37	50	6.2	.31
4	7.8	4.5	54	180	117	145	205	89	38	40	.08	.31
5	7.8	4.7	53	170	123	140	197	85	37	41	.08	.31
6	7.8	4.7	70	159	127	136	190	78	27	41	.09	.31
7	7.8	4.5	164	149	127	131	182	67	27	41	.12	.34
8	3.8	6.3	232	143	126	127	179	56	27	32	.68	.31
9	2.2	42	270	136	126	123	179	35	27	19	.73	.31
10	3.2	126	307	130	122	122	178	37	27	19	.64	.28
11	3.5	129	348	122	118	124	172	41	27	19	.52	.28
12	3.6	130	395	114	113	132	165	57	27	19	.15	.31
13	4.7	131	434	109	109	144	161	112	28	20	.15	.28
14	5.6	129	461	102	105	155	158	119	28	21	.28	.46
15	8.6	125	474	98	104	166	159	118	28	21	.52	.73
16	73	119	476	94	113	176	159	121	28	21	.60	.68
17	103	114	474	87	120	186	154	126	29	21	.60	.49
18	91	107	466	84	131	185	153	124	29	21	1.0	.46
19	80	97	448	80	150	192	148	121	29	21	1.2	.49
20	69	85	429	76	168	200	146	118	29	18	.34	.40
21	58	79	415	73	182	213	145	111	28	9.8	.34	.52
22	53	73	399	70	191	218	144	96	29	9.5	.28	.73
23	33	68	378	69	196	224	144	84	29	9.5	.28	.64
24	23	53	356	70	190	230	143	56	29	9.3	.28	.49
25	19	43	333	74	185	238	139	52	30	9.0	.28	.31
26	5.0	43	314	80	180	243	136	35	31	8.8	.28	.31
27	4.5	50	299	88	170	244	132	35	32	8.5	.28	.37
28	4.5	51	279	90	165	244	126	37	37	8.3	.28	.34
29	4.7	50	260	97	------	241	121	37	52	8.0	.28	.31
30	4.7	52	247	101	------	230	116	38	68	8.3	.28	.40
31	4.5	------	232	104	------	221	------	38	------	9.3	.28	------
TOTAL	723.0	1,934.2	9,230	3,564	3,896	5,595	4,878	2,444	969	717.3	34.92	12.07
MEAN	23.3	64.5	298	115	139	180	163	78.8	32.3	23.1	1.13	.40
MAX	103	131	476	218	196	244	220	126	68	68	9.3	.73
MIN	2.2	4.5	53	69	104	122	116	35	27	8.0	.08	.28
CFSM	.20	.56	2.59	1.00	1.21	1.57	1.41	.69	.28	.20	.01	.003
IN.	.23	.63	2.98	1.15	1.26	1.81	1.58	.79	.31	.23	.01	.004

CAL YR 1966: TOTAL 31,517.1 MEAN 86.3 MAX 476 MIN 1.3 CFSM .75 IN 10.19
WAT YR 1967: TOTAL 33,997.49 MEAN 93.1 MAX 476 MIN .08 CFSM .81 IN 10.99

Peak discharge (base, 200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-15	2330	8.25	478				
3-28	0800	7.48	243				

3-3315. Tippecanoe River near Ora, Ind.

Location.--Lat 41°09'26", long 86°33'49", in SE¼ sec. 6, T. 31 N., R. 1 W., on right bank at downstream side of highway bridge, 1.0 mile upstream from Bartee ditch and 1.3 miles southwest of Ora.

Drainage area.--839 sq mi.

Records available.--September 1943 to September 1967. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Digital water-stage recorder. Altitude of gage is 694 ft (by barometer). Prior to July 30, 1956, wire-weight gage on upstream side of old highway bridge, 120 ft downstream from present gage. July 31, 1956 to Dec. 20, 1964, graphic water-stage recorder on right bank at downstream side of old highway bridge and Dec. 21, 1964 to Aug. 19, 1965, staff gage on right bank 500 ft downstream from present site. All gages at same datum.

Average discharge.--24 years, 768 cfs.

Extremes.--Maximum discharge during year, 6,680 cfs Dec. 10 (gage height, 13.99 ft); minimum, 104 cfs Oct. 5 (gage height, 4.51 ft). 1943-67: Maximum discharge, 7,800 cfs Apr. 5, 1950 (gage height, 14.40 ft site then in use); minimum, 86 cfs Sept. 14, 1966; minimum gage height, 4.15 ft Aug. 14, 1944, Oct. 16, 17, 1946.

Remarks.--Record fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	109	122	1,130	1,100	804	1,300	1,620	1,270	708	564	223	169
2	109	120	1,010	1,040	909	1,300	1,870	1,240	672	510	213	164
3	109	126	894	1,000	1,120	1,280	2,160	1,180	648	486	205	160
4	106	121	810	960	1,120	1,260	2,140	1,110	627	492	202	154
5	104	122	783	920	1,070	1,260	2,020	1,040	615	475	191	151
6	109	124	1,180	890	975	1,140	1,920	1,070	618	441	182	149
7	110	127	1,760	860	950	1,060	1,830	1,250	645	418	180	146
8	111	145	2,600	840	940	984	1,690	1,450	711	397	177	145
9	111	602	4,640	810	920	930	1,590	1,470	675	379	174	145
10	113	1,350	6,440	790	910	984	1,700	1,380	651	363	169	144
11	109	1,480	6,450	760	910	1,490	1,790	1,390	612	358	164	142
12	110	1,310	5,800	740	910	1,920	1,670	1,790	567	342	163	140
13	116	1,100	4,890	756	903	1,980	1,570	1,900	540	373	158	139
14	127	937	4,010	732	930	1,930	1,790	1,680	603	329	156	139
15	139	819	3,510	702	969	1,930	2,060	1,530	597	298	153	138
16	148	725	3,170	672	1,640	1,880	2,070	1,460	633	285	151	137
17	145	654	2,890	640	2,370	1,750	2,100	1,370	1,410	275	149	137
18	148	589	2,680	630	2,390	1,620	2,100	1,290	1,800	288	149	137
19	150	537	2,500	630	2,050	1,490	1,900	1,210	1,290	290	163	138
20	187	497	2,330	630	1,840	1,470	1,670	1,110	927	275	169	143
21	206	468	2,190	640	1,650	1,830	1,550	1,010	759	262	164	148
22	201	446	2,050	640	1,550	2,520	1,600	960	816	249	163	150
23	191	424	1,920	663	1,350	2,790	1,720	918	762	241	160	151
24	183	403	1,750	696	1,200	2,670	1,660	894	675	238	154	150
25	176	387	1,620	783	1,150	2,500	1,590	867	714	243	153	148
26	167	377	1,500	888	1,100	2,340	1,560	825	756	269	156	146
27	157	559	1,400	915	1,100	2,220	1,500	795	687	293	178	148
28	148	1,210	1,320	903	1,050	2,070	1,420	759	627	285	185	153
29	139	1,410	1,260	867	------	1,920	1,340	792	642	259	178	151
30	129	1,270	1,200	819	------	1,790	1,310	798	600	238	178	154
31	125	------	1,140	804	------	1,670	------	750	------	223	175	------
TOTAL	4,292	18,561	76,827	24,720	34,780	53,278	52,510	36,558	22,587	10,438	5,335	4,416
MEAN	138	619	2,478	797	1,242	1,719	1,750	1,179	753	337	172	147
MAX	206	1,480	6,450	1,100	2,390	2,790	2,160	1,900	1,800	564	223	169
MIN	104	120	783	630	804	930	1,310	750	540	223	149	137
CFSM	.17	.74	2.95	.95	1.48	2.05	2.09	1.41	.90	.40	.21	.18
IN.	.19	.82	3.41	1.10	1.54	2.36	2.33	1.62	1.00	.46	.24	.20

CAL YR 1966: TOTAL 259,708 MEAN 712 MAX 6,450 MIN 87 CFSM .85 IN 11.51
WAT YR 1967: TOTAL 344,302 MEAN 943 MAX 6,450 MIN 104 CFSM 1.12 IN 15.26

Peak discharge (base, 2,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1900	13.99	6,680				
2-17	2315	10.89	2,510				
3-23	1300	11.31	2,810				

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

Location.--Lat 40°52'53", long 86°35'26", 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 692.73 ft above mean sea level, datum of 1929. Prior to Nov. 22, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--8 years, 22.3 cfs.

Extremes.--Maximum discharge during year, 337 cfs Dec. 8 (gage height, 5.99 ft); minimum, 1.5 cfs Oct. 11, 12, Nov. 3, Aug. 11; minimum gage height, 0.80 ft, Oct. 5, 6, 11, 12.
1959-67: Maximum discharge, about 500 cfs Mar. 5, 1963 (gage height, unknown); minimum daily, 0.5 cfs Dec. 17-22, 1963; 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.--Record fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.8	1.7	11	12	18	11	44	40	17	11	15	2.7
2	1.8	1.6	10	11	62	10	71	47	15	10	4.8	2.4
3	1.7	1.8	9.6	11	55	20	51	38	15	10	3.1	2.4
4	1.7	2.0	7.5	10	35	18	41	34	14	10	2.4	2.4
5	1.6	3.0	24	9.8	27	17	58	32	13	10	1.8	2.0
6	1.6	2.5	43	9.6	23	16	76	49	14	12	1.8	2.0
7	1.7	2.7	142	11	20	14	52	135	13	10	1.8	2.0
8	1.7	3.8	307	11	17	12	41	154	13	9.6	1.5	2.4
9	1.7	11	319	10	15	16	41	104	15	8.7	1.8	2.4
10	1.7	14	242	9.6	14	58	38	77	18	7.8	1.5	2.4
11	1.5	7.6	182	9.0	13	84	33	214	19	7.3	1.5	2.0
12	1.5	4.2	126	8.4	12	61	30	202	20	6.0	1.5	2.0
13	1.6	3.0	88	8.2	10	54	41	134	22	5.2	1.5	2.4
14	1.6	2.7	65	7.8	33	81	61	102	25	4.8	1.5	2.7
15	2.7	2.7	52	8.0	185	59	61	92	25	3.8	1.8	2.7
16	2.7	2.5	46	8.2	140	45	46	78	27	3.8	1.8	2.7
17	1.9	2.5	42	8.4	100	35	70	63	29	3.1	2.0	2.7
18	1.9	2.5	39	8.8	66	31	58	55	25	3.8	2.4	3.1
19	2.0	2.3	35	9.2	46	29	41	48	26	3.1	5.2	4.1
20	2.0	2.3	32	9.6	34	82	36	40	26	2.4	4.5	5.2
21	1.9	2.7	28	10	24	250	36	35	24	2.0	2.4	4.5
22	1.8	2.7	26	11	19	184	62	32	24	2.4	2.4	3.4
23	1.7	2.7	24	8.6	15	119	47	29	20	2.7	2.4	2.7
24	1.7	2.7	22	9.6	16	93	47	27	18	2.7	2.4	2.7
25	1.7	3.2	19	20	18	105	48	25	19	6.4	2.4	2.4
26	1.7	3.1	18	19	18	77	46	23	15	3.8	4.8	2.4
27	1.7	30	16	30	18	61	45	21	14	3.1	9.6	4.5
28	1.8	34	15	24	16	50	39	22	13	2.7	4.8	4.1
29	1.7	15	14	19	------	43	37	30	13	2.4	3.4	3.1
30	1.7	10	13	16	------	38	39	24	13	2.0	4.5	2.7
31	1.6	------	12	16	------	33	------	20	------	7.3	3.4	------
TOTAL	55.4	182.5	2,031.1	373.8	1,069	1,806	1,436	2,026	564	179.9	101.7	85.2
MEAN	1.79	6.08	65.5	12.1	38.2	58.3	47.9	65.4	18.8	5.80	3.28	2.84
MAX	2.7	34	319	30	185	250	76	214	29	12	15	5.2
MIN	1.5	1.6	7.5	7.8	10	10	30	20	13	2.0	1.5	2.0
CFSM	.05	.17	1.87	.34	1.09	1.66	1.37	1.87	.54	.17	.09	.08
IN.	.06	.19	2.16	.40	1.14	1.92	1.53	2.15	.60	.19	.11	.09

CAL YR 1966: TOTAL 7,342.4 MEAN 20.1 MAX 319 MIN 1.5 CFSM .57 IN 7.80
WAT YR 1967: TOTAL 9,910.6 MEAN 27.2 MAX 319 MIN 1.5 CFSM .78 IN 10.53

Peak discharge (base, 250 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	2400	5.99	337				
2-16	0215	5.25	266				
3-21	0800	5.20	264				
5-11	1430	4.92	260				

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

Location.--Lat 40°59'03", long 86°51'43", 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 653.17 ft above mean sea level, datum of 1929. Prior to Sept. 23, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--8 years, 126 cfs.

Extremes.--Maximum discharge during year, 2,020 cfs Dec. 9 (gage height, 15.80 ft); minimum, 9.8 cfs Nov. 11; minimum gage height, 1.29 ft Aug. 17.
1959-67: Maximum discharge, 2,750 cfs Dec. 25, 1965 (gage height, 15.14 ft, from floodmarks); minimum discharge 4.0 cfs Oct. 3, 1964 (gage height, 1.17 ft).
Maximum stage known, about 18.60 ft in Spring of 1957, from information by local residents.

Remarks.--Record good except for winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	16	15	200	120	150	200	408	295	122	75	28	34
2	17	16	170	120	237	260	1,030	328	109	71	24	29
3	16	15	160	115	210	352	643	259	98	68	24	27
4	16	15	160	110	180	388	432	203	91	63	24	26
5	16	16	180	110	160	236	427	184	86	65	23	24
6	16	16	410	110	150	167	415	294	94	63	22	25
7	17	15	1,080	115	130	144	330	518	91	56	23	24
8	16	22	1,900	115	120	131	268	471	82	52	23	24
9	16	340	1,570	110	110	136	402	352	77	50	23	24
10	17	430	1,200	100	110	340	508	270	73	51	22	23
11	15	301	1,000	95	110	523	338	875	77	49	21	22
12	15	197	625	90	110	412	266	631	81	44	21	22
13	16	156	482	85	120	380	502	408	71	41	19	22
14	19	138	398	85	140	390	600	327	74	41	17	21
15	18	123	343	80	628	354	680	289	60	39	18	21
16	18	115	326	80	892	307	620	239	61	38	19	20
17	17	111	308	80	515	302	489	203	199	37	16	18
18	18	99	296	80	334	256	350	182	179	41	21	18
19	18	90	270	80	250	228	290	163	142	38	33	22
20	18	93	255	80	190	417	246	144	126	37	46	23
21	19	89	230	85	160	1,090	268	139	124	34	33	25
22	17	92	210	90	140	712	336	133	205	32	41	27
23	17	88	190	95	130	510	272	129	157	31	28	23
24	16	81	180	100	120	462	265	126	133	31	26	21
25	15	82	160	105	120	504	247	116	149	29	24	21
26	15	84	150	120	130	412	236	109	126	27	31	20
27	15	358	140	140	150	398	244	103	106	27	49	23
28	16	614	130	200	170	354	205	102	111	27	49	24
29	16	414	130	250	------	294	196	244	106	26	37	22
30	16	312	120	200	------	250	312	186	91	25	33	22
31	15	------	120	160	------	215	------	145	------	24	32	------
TOTAL	512	4,537	13,093	3,505	5,966	11,124	11,825	8,167	3,301	1,332	850	697
MEAN	16.5	151	422	113	213	359	394	263	110	43.0	27.4	23.2
MAX	19	614	1,900	250	892	1,090	1,030	875	205	75	49	34
MIN	15	15	120	80	110	131	196	102	60	24	16	18
CFSM	.11	1.04	2.91	.78	1.47	2.47	2.72	1.82	.76	.30	.19	.16
IN.	.13	1.16	3.36	.90	1.53	2.85	3.03	2.09	.85	.34	.22	.18

CAL YR 1966: TOTAL 52,582 MEAN 144 MAX 1,900 MIN 11 CFSM .99 IN 13.49
WAT YR 1967: TOTAL 64,909 MEAN 178 MAX 1,900 MIN 15 CFSM 1.23 IN 16.65

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0600	15.80	2,020				
2-16	0145	11.04	1,250				
3-21	1200	11.25	1,280				
4-2	1130	10.83	1,210				
5-11	1600	10.19	1,110				

3-3325. Tippecanoe River near Monticello, Ind.

Location.--Lat 40°46'48", long 86°45'36", 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 1967.

Average discharge.--36 years, 1,432 cfs.

Extremes.--Maximum daily discharge during year, 11,400 cfs Dec. 9; minimum daily, 131 cfs Oct. 4.
1931-67: 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.--Record of daily discharge furnished by Northern Indiana Public Service Co.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	239	261	2,020	2,080	1,510	1,810	2,950	2,630	1,270	1,100	388	391
2	229	326	1,730	1,580	2,120	1,960	4,870	2,700	1,200	1,060	581	413
3	196	261	1,300	1,550	2,250	2,210	4,240	2,460	1,180	916	371	483
4	131	215	1,440	1,540	2,200	2,320	3,820	1,920	1,080	916	484	391
5	326	347	1,950	1,520	2,060	2,210	3,880	2,100	1,000	916	412	304
6	196	215	1,860	1,480	1,440	2,100	4,160	2,310	1,050	725	430	369
7	196	304	4,720	1,570	1,170	1,690	3,760	3,820	1,070	885	581	218
8	196	344	10,300	1,500	1,000	1,620	3,060	4,780	1,130	841	202	369
9	348	1,270	11,400	1,300	1,110	1,590	3,100	3,890	1,330	561	379	304
10	218	2,100	9,850	1,400	1,570	2,250	3,570	3,060	1,200	841	348	261
11	239	2,310	10,000	1,200	1,540	3,430	3,210	5,680	981	666	326	348
12	239	2,020	9,630	1,250	1,260	3,640	2,880	5,890	1,090	566	326	304
13	218	1,720	8,700	1,370	1,280	3,640	3,690	4,460	784	506	413	261
14	283	1,640	7,440	1,240	1,740	3,620	5,640	3,880	916	651	348	304
15	304	1,280	5,440	1,130	4,170	4,000	5,850	3,730	916	456	326	240
16	304	1,220	5,610	850	6,260	3,810	4,630	3,060	959	618	304	326
17	304	1,040	4,140	812	4,660	3,550	5,030	2,730	3,000	602	348	248
18	239	1,010	4,480	605	3,880	3,060	4,350	2,500	2,660	549	369	283
19	326	916	4,140	519	4,040	2,580	3,710	2,360	2,700	489	506	283
20	304	834	3,770	916	3,690	3,620	3,540	1,910	1,850	586	414	348
21	261	834	3,640	1,030	3,260	7,810	3,110	1,790	1,590	642	355	261
22	369	768	3,320	1,230	2,670	5,750	3,450	1,700	1,810	388	369	348
23	326	817	3,030	1,280	2,120	5,710	3,060	1,510	1,470	581	391	196
24	369	669	2,840	1,190	1,490	5,560	3,160	1,520	1,550	581	369	391
25	304	784	2,620	1,370	1,200	5,610	3,250	1,440	1,400	581	348	261
26	370	719	2,290	1,750	1,240	5,010	2,990	1,380	1,440	485	441	269
27	261	1,530	2,050	1,590	1,540	4,500	3,060	1,270	1,210	581	537	369
28	364	2,750	2,180	1,560	1,620	4,080	2,620	1,300	1,360	484	391	261
29	261	2,380	1,920	1,450		3,640	2,620	2,030	1,360	581	321	283
30	209	2,390	1,570	1,650	- - - - -	3,230	2,500	1,620	1,030	581	486	283
31	348	- - - - -	1,870	1,590	- - - - -	3,060	- - - - -	1,570	- - - - -	436	283	- - - - -
Total	8,477	33,274	138,250	41,102	64,090	108,670	109,760	83,000	41,586	20,371	12,147	9,370
Mean	273	1,109	4,460	1,326	2,289	3,505	3,659	2,677	1,386	657	392	312
Max	370	2,750	11,400	2,080	4,660	7,810	5,850	5,890	3,000	1,100	581	483
Min	131	215	1,300	519	1,000	1,590	2,500	1,270	784	388	202	196
Cfsm	0.160	0.648	2.61	0.775	1.34	2.05	2.14	1.56	0.810	0.384	0.229	0.182
In.	0.18	0.72	3.01	0.89	1.40	2.36	2.39	1.80	0.90	0.44	0.26	0.21

Cal yr 1966 : Total 503,125 Mean 1,378 Max 11,400 Min 131 Cfsm 0.806 In. 10.94
Wtr yr 1967 : Total 670,097 Mean 1,836 Max 11,400 Min 131 Cfsm 1.07 In. 14.56

3-3330. Tippecanoe River near Delphi, Ind.

Location.--Lat 40°37'02", long 86°45'39", 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 1967. Published as "at Springboro" 1903.

Gage.--Digital 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. June 23, 1939 to Nov. 28, 1962, graphic water-stage recorder at present site and datum.

Average discharge.--28 years (1939-67), 1,547 cfs.

Extremes.--Maximum discharge during year, 12,100 cfs Dec. 8 (gage height, 10.83 ft); minimum 190 cfs Aug. 11, 12 (gage height, 2.50 ft).
1903-6, 1908, 1939-67: 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.--Record good. Flow regulated by powerplant above station.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	270	218	2,110	2,330	1,590	1,990	3,020	2,810	1,370	1,120	401	244
2	270	320	1,720	1,700	2,380	2,150	4,780	2,840	1,340	1,080	639	596
3	256	318	1,570	1,550	2,500	2,180	4,320	2,840	1,150	979	405	251
4	237	222	1,400	1,700	2,370	2,330	3,760	1,930	1,150	841	508	561
5	382	420	2,190	1,350	2,130	2,370	4,190	2,280	1,120	865	418	248
6	232	225	1,840	1,650	1,650	2,130	4,240	2,400	1,050	793	733	436
7	230	394	5,150	1,550	1,430	1,860	3,740	4,030	1,170	873	862	253
8	229	462	10,600	1,500	1,230	1,760	3,220	5,270	1,200	588	499	480
9	403	1,250	11,700	1,400	1,260	1,630	3,160	4,100	1,320	542	199	247
10	231	2,210	9,460	1,500	1,620	2,440	3,760	3,350	1,350	849	199	248
11	233	2,440	9,810	1,150	1,730	3,600	3,130	6,230	1,090	684	196	397
12	333	2,190	9,120	1,200	1,390	3,590	3,030	5,990	1,050	556	193	306
13	233	1,790	8,100	1,400	1,370	3,720	3,570	4,700	988	638	511	393
14	336	1,730	7,300	1,250	1,790	3,750	5,720	4,220	971	738	316	298
15	240	1,320	6,130	1,100	4,280	4,100	5,670	3,960	962	479	369	249
16	651	1,230	5,470	940	6,820	3,710	4,600	3,300	962	777	288	389
17	228	1,190	4,710	950	4,640	3,610	5,230	2,850	2,750	493	381	298
18	226	1,030	4,510	738	3,990	3,120	4,420	2,620	2,510	545	365	252
19	468	1,040	4,060	588	4,260	2,820	3,690	2,590	2,830	578	706	310
20	351	884	3,760	978	3,700	3,580	3,670	2,100	1,990	715	454	446
21	289	863	3,560	1,210	3,460	8,310	3,050	1,780	1,430	638	446	310
22	370	936	3,290	1,250	2,920	6,190	3,590	1,890	1,740	366	447	251
23	349	764	2,990	1,270	2,210	5,710	3,140	1,800	1,740	593	448	243
24	505	1,010	2,900	1,280	1,550	5,540	3,400	1,600	1,420	473	446	456
25	349	762	2,580	1,490	1,460	5,800	3,470	1,760	1,420	535	392	234
26	466	690	2,380	1,970	1,280	5,150	3,150	1,400	1,390	466	559	233
27	268	1,930	2,150	1,870	1,720	4,330	2,750	1,450	1,350	571	900	485
28	426	2,850	2,380	1,540	1,770	4,130	3,050	1,310	1,400	543	366	326
29	248	2,570	2,040	1,830	------	3,720	2,600	2,150	1,350	546	452	233
30	241	2,540	1,530	1,740	------	3,440	2,630	1,760	1,040	686	830	233
31	452	------	1,950	1,600	------	3,020	------	1,680	------	398	290	------
TOTAL	10,002	35,798	138,460	43,574	68,500	111,780	111,750	88,990	42,603	20,552	14,218	9,906
MEAN	323	1,193	4,466	1,406	2,446	3,606	3,725	2,871	1,420	676	459	330
MAX	651	2,850	11,700	2,330	6,820	8,310	5,720	6,230	2,830	1,120	900	596
MIN	226	218	1,400	588	1,230	1,630	2,600	1,310	962	366	193	233
CFSM	.17	.64	2.41	.76	1.32	1.94	2.01	1.55	.76	.36	.25	.18
IN.	.20	.72	2.77	.87	1.37	2.24	2.24	1.78	.85	.42	.28	.20

CAL YR 1966: TOTAL 540,006 MEAN 1,479 MAX 11,700 MIN 194 CFSM .80 IN 10.81
WAT YR 1967: TOTAL 696,533 MEAN 1,908 MAX 11,700 MIN 193 CFSM 1.03 IN 13.95

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 1967.

Gage.--Digital water-stage recorder. Datum of the gage is 820.00 ft above mean sea level, datum of 1929 (unadjusted). Prior to Aug. 3, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--6 years, 98.6 cfs.

Extremes.--Maximum discharge during year, 2,540 cfs Dec. 9 (gage height, 9.32 ft); minimum, 0.9 cfs Oct. 12; minimum gage height, 1.44 ft Sept 12.
1961-67: Maximum discharge, 4,160 cfs Apr. 20, 1964; maximum gage height, 11.98 ft Jan. 26, 1962; minimum, that of Oct. 12, 1966.
Maximum stage known, about 18 ft March 1913, from information by local residents.

Remarks.--Record fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.7	2.0	22	53	284	25	272	63	36	20	6.2	3.2
2	1.6	2.5	16	49	927	36	202	60	34	18	5.9	3.0
3	1.5	3.2	13	46	1,090	122	161	50	33	16	5.9	3.0
4	1.4	2.5	11	40	569	111	121	46	32	17	5.8	3.0
5	1.8	3.0	23	39	316	117	339	44	30	16	5.2	3.0
6	1.6	3.2	99	35	185	348	782	51	29	14	5.0	3.0
7	1.5	8.0	489	98	130	247	535	500	29	12	5.0	2.9
8	1.4	8.2	1,690	123	91	162	363	926	28	12	5.3	3.1
9	1.3	7.3	2,280	65	68	129	267	554	27	12	5.2	4.0
10	1.1	12	1,970	53	60	324	227	337	33	12	5.0	3.7
11	1.1	12	1,450	45	54	833	186	469	46	12	4.6	3.0
12	1.1	8.4	901	39	50	768	149	484	35	11	4.5	2.9
13	1.5	6.1	625	33	49	550	168	309	27	10	4.4	3.0
14	1.6	4.6	463	28	51	490	299	232	23	9.7	4.4	3.0
15	2.0	3.8	342	24	95	406	273	196	21	8.8	4.6	3.0
16	2.2	3.3	291	22	169	300	214	157	20	8.8	4.4	3.0
17	2.1	2.9	257	20	142	254	176	129	20	8.8	4.5	3.1
18	2.1	2.7	227	19	108	185	134	114	19	8.8	4.5	3.2
19	2.2	2.5	195	19	85	145	100	106	18	9.7	4.8	3.2
20	2.0	2.3	180	20	68	269	85	87	17	19	8.0	2.9
21	1.9	2.2	146	21	54	1,220	87	71	18	25	4.7	2.9
22	1.8	2.2	123	23	45	938	91	65	19	18	3.9	2.6
23	1.7	2.2	104	25	35	556	82	61	18	13	3.7	2.2
24	1.8	2.1	99	29	29	384	83	63	18	11	3.4	1.9
25	1.8	2.3	88	33	25	428	77	58	22	9.7	3.4	1.7
26	1.9	2.5	72	110	24	377	77	53	21	8.4	3.7	1.7
27	1.9	7.4	62	1,170	24	288	73	50	18	8.4	4.2	1.9
28	1.9	30	71	1,160	24	1,010	62	48	24	9.2	3.9	2.1
29	1.9	50	78	553	------	1,180	59	51	40	8.8	3.7	1.8
30	1.9	30	60	276	------	673	62	45	26	6.9	3.7	1.8
31	2.0	------	52	206	------	417	------	41	------	6.9	3.4	------
TOTAL	53.3	231.4	12,699	4,476	4,851	13,292	5,806	5,520	781	380.9	144.9	82.8
MEAN	1.72	7.71	410	144	173	429	194	178	26.0	12.3	4.67	2.76
MAX	2.2	50	2,280	1,170	1,090	1,220	782	926	46	25	8.0	4.0
MIN	1.1	2.0	11	19	24	25	59	41	17	6.9	3.4	1.7
CFSM	.01	.05	2.77	.98	1.17	2.90	1.31	1.20	.18	.08	.03	.02
IN.	.01	.06	3.19	1.12	1.22	3.34	1.46	1.39	.20	.10	.04	.02

CAL YR 1966: TOTAL 27,754.2 MEAN 76.0 MAX 2,280 MIN 1.1 CFSM .51 IN 6.97
WAT YR 1967: TOTAL 48,318.3 MEAN 132 MAX 2,280 MIN 1.1 CFSM .89 IN 12.14

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0415	9.32	2,540	3-21	1415	7.71	1,380
1-27	1800	7.37	1,540	3-28	2200	7.95	1,480
2-3	0130	7.02	1,300				

3-3336. Kokomo Creek near Kokomo, Ind.

Location.--Lat 40°26'28", long 86°05'20", in 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 807.68 ft above mean sea level, datum of 1929 (unadjusted). Prior to Aug. 30, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--8 years, 16.4 cfs.

Extremes.--Maximum discharge during year, 483 cfs Dec. 8 (gage height, 7.19 ft); minimum, 0.16 cfs Sept. 27, minimum gage height, 1.42 ft Aug. 10-16.
1959-67: Maximum discharge, 1,040 cfs Apr. 20, 1964 (gage height, 9.88 ft); minimum, that of Sept. 27, 1967; minimum gage height, 1.30 ft Aug. 12, 27, 1959.

Remarks.--Record fair from 10 cfs to 200 cfs, poor above and below and for winter period.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	.77	.60	8.8	9.5	69	12	52	15	6.8	3.1	.83	.51
2	.77	.60	7.4	8.5	202	18	45	13	6.3	2.7	.70	.50
3	.77	.77	5.5	8.2	131	31	37	11	6.0	2.6	.68	.55
4	.68	.68	5.0	7.4	69	28	33	11	5.7	2.7	.66	.50
5	.60	1.1	13	7.4	49	33	113	10	5.5	2.4	.59	.54
6	.68	.98	37	6.8	34	53	147	13	5.3	2.2	.58	.54
7	.60	1.9	180	23	30	39	80	155	4.9	2.2	.54	.55
8	.60	2.3	366	16	25	32	55	137	4.7	2.1	.55	.58
9	.60	3.5	340	10	23	31	48	73	4.8	2.1	.54	.86
10	.60	15	231	8.8	20	76	54	46	16	2.0	.49	.51
11	.87	8.2	155	7.7	19	149	46	110	26	1.9	.48	.51
12	.77	4.8	103	6.2	18	114	37	80	13	1.6	.46	.50
13	.87	3.3	76	5.3	18	83	67	49	8.1	1.5	.47	.53
14	.87	2.8	56	4.5	22	74	97	38	6.2	1.2	.47	.55
15	1.4	2.3	44	4.0	43	61	70	34	5.2	1.2	.47	.54
16	1.5	2.2	41	3.5	59	50	52	28	4.6	1.2	.48	.51
17	1.1	2.2	38	3.3	42	46	43	24	4.4	1.2	.54	.51
18	1.2	2.0	34	3.1	33	36	33	21	4.0	1.2	1.0	.58
19	1.4	1.9	31	3.1	28	31	27	19	3.6	1.6	1.3	.89
20	1.2	1.9	28	3.5	24	85	24	15	3.4	1.6	.57	.52
21	1.1	1.8	23	3.8	18	241	24	13	3.6	2.7	.49	.51
22	.98	1.8	20	4.4	15	130	24	12	3.6	2.3	.48	.54
23	.98	1.9	17	5.2	12	84	21	11	2.9	1.5	.48	.52
24	.87	1.9	16	6.5	11	65	21	10	3.6	1.2	.52	.46
25	.87	2.0	15	7.7	11	78	20	9.8	5.0	1.1	.63	.37
26	.77	2.0	12	40	11	64	20	8.8	3.4	.96	.83	.33
27	.77	15	11	226	11	53	18	8.5	3.0	.89	.64	.25
28	.77	29	13	132	12	240	15	8.5	3.4	1.0	.57	.37
29	.60	16	12	70	------	181	15	9.5	5.6	.84	.77	.37
30	.68	10	9.8	49	------	101	16	8.2	4.0	1.0	.68	.24
31	.60	------	9.1	49	------	69	------	7.4	------	1.0	.60	------
TOTAL	26.84	140.43	1,957.6	743.4	1,059	2,388	1,354	1,008.7	182.6	52.79	19.09	15.24
MEAN	.87	4.68	63.1	24.0	37.8	77.0	45.1	32.5	6.09	1.70	.62	.51
MAX	1.5	29	366	226	202	241	147	155	26	3.1	1.3	.89
MIN	.60	.60	5.0	3.1	11	12	15	7.4	2.9	.84	.46	.24
CFSM	.04	.19	2.60	.99	1.56	3.17	1.86	1.34	.25	.07	.03	.02
IN.	.04	.21	3.00	1.14	1.62	3.65	2.07	1.54	.28	.08	.03	.02

CAL YR 1966: TOTAL 4,632.27 MEAN 12.7 MAX 366 MIN .40 CFSM .52 IN 7.09
WAT YR 1967: TOTAL 8,947.69 MEAN 24.5 MAX 366 MIN .24 CFSM 1.01 IN 13.69

Peak discharge (base, 260 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	2015	7.19	483				
3-21	0545	5.06	269				
3-28	1500	5.31	300				

3-3337. Wildcat Creek at Kokomo, Ind.

Location.--Lat 40°28'24", long 86°09'26", 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 775.62 ft, levels by Indiana Department of Natural Resources. Prior to Apr. 13, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--12 years, 203 cfs.

Extremes.--Maximum discharge during year, 3,670 cfs Dec. 8 (gage height, 8.21 ft); minimum, 7.9 cfs Nov. 1 (gage height, 0.90 ft). 1955-67: Maximum discharge, 8,100 cfs Feb. 10, 1959 (gage height, 10.83 ft); minimum, 5.0 cfs Sept. 30, 1956; minimum gage height, that of Nov. 1, 1966.

Remarks.--Record fair except for period of no gage-height record or the winter period, which is poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	26	20	36	92	468	88	532	78	84	42	29	21
2	23	21	33	89	1,110	116	404	74	67	38	29	16
3	29	28	29	89	1,420	168	336	69	57	46	28	13
4	25	26	26	81	860	217	283	67	52	43	28	14
5	23	31	80	79	560	252	662	71	58	40	26	20
6	23	18	93	76	345	361	1,250	123	59	40	25	23
7	23	81	532	151	284	396	994	828	59	40	24	23
8	21	42	2,500	175	217	310	683	1,510	59	37	26	24
9	19	32	3,250	136	190	258	552	1,050	104	35	29	31
10	25	118	2,750	99	170	406	532	653	223	38	31	17
11	21	34	2,290	78	150	996	440	856	178	36	31	22
12	17	23	1,480	68	132	1,180	364	925	106	36	31	18
13	19	17	938	62	130	860	465	649	76	35	30	23
14	19	20	700	56	144	721	615	522	62	34	30	23
15	47	21	560	52	239	634	582	452	53	33	28	22
16	18	21	476	48	367	520	483	389	48	32	27	19
17	22	21	432	46	322	448	387	335	45	36	26	15
18	26	22	384	43	255	358	342	303	44	42	25	29
19	24	19	345	41	200	287	274	265	47	60	28	32
20	22	16	306	43	170	493	225	242	41	38	30	32
21	22	21	271	42	138	1,560	239	188	45	36	32	26
22	22	21	217	45	120	1,730	236	168	43	35	30	22
23	17	20	168	57	96	995	234	144	40	32	27	19
24	22	18	154	64	80	698	213	136	75	33	26	17
25	19	29	144	70	72	649	200	124	44	39	25	21
26	23	23	130	284	70	630	194	114	41	50	24	21
27	19	154	110	1,130	70	521	172	99	40	33	23	41
28	21	79	136	1,510	72	1,530	150	103	73	38	23	20
29	19	52	128	860	------	2,050	78	110	46	29	23	20
30	17	44	107	524	------	1,300	75	97	44	28	23	18
31	19	------	94	400	------	753	------	88	------	34	24	------
TOTAL	692	1,092	18,899	6,590	8,451	21,485	12,196	10,832	2,013	1,168	841	662
MEAN	22.3	36.4	610	213	302	693	407	349	67.1	37.7	27.1	22.1
MAX	47	154	3,250	1,510	1,420	2,050	1,250	1,510	223	60	32	41
MIN	17	16	26	41	70	88	75	67	40	28	23	13
CFSM	.09	.15	2.49	.87	1.23	2.83	1.66	1.43	.27	.15	.11	.09
IN.	.11	.17	2.87	1.00	1.28	3.26	1.85	1.64	.31	.18	.13	.10

CAL YR 1966: TOTAL 47,499 MEAN 130 MAX 3,250 MIN 15 CFSM .53 IN 7.21
WAT YR 1967: TOTAL 84,921 MEAN 233 MAX 3,250 MIN 13 CFSM .95 IN 12.89

Peak discharge (base, 2,100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	1630	8.21	3,670				
3-29	0715	6.07	2,150				

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., 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 1967. Prior to March 1944, monthly discharge only, published in WSP 1305.

Gage.--Digital 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. Oct. 1, 1950 to Apr. 27, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--24 years, 351 cfs.

Extremes.--Maximum discharge during year, 5,480 cfs Dec. 10 (gage height, 9.40 ft); minimum, 25 cfs Sept. 6, 7, 19 (gage height, 0.97 ft).
1943-67: 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 of May 18, 1943, reached a stage of 14.0 ft, from floodmarks.

Remarks.--Record fair, except for the winter period and that of no gage height record, which is poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	36	32	106	199	733	148	1,090	196	162	82	43	36
2	35	31	88	190	1,280	171	794	188	154	72	46	31
3	33	32	78	185	1,770	276	630	175	136	64	43	34
4	31	36	82	174	1,710	337	520	162	122	63	42	31
5	29	38	99	163	1,210	382	887	158	110	76	38	28
6	31	43	188	154	790	516	1,620	173	108	62	36	26
7	32	56	466	187	518	621	1,620	575	110	61	35	25
8	32	101	1,760	279	420	420	1,300	1,520	108	66	33	27
9	32	81	3,340	258	350	476	964	1,710	115	60	34	30
10	32	94	5,030	224	300	575	887	1,340	177	56	36	34
11	31	157	3,700	184	270	1,080	821	1,140	316	54	35	41
12	30	85	2,790	172	260	1,480	665	1,380	275	56	34	32
13	31	61	1,910	155	255	1,520	645	1,200	196	54	33	30
14	32	50	1,350	135	287	1,270	1,020	876	154	51	32	31
15	34	43	1,050	122	404	1,090	1,070	710	132	50	29	34
16	43	43	856	111	614	931	887	605	110	47	27	32
17	54	43	723	100	663	777	715	510	96	50	32	31
18	37	41	640	97	521	660	570	437	87	50	32	30
19	36	43	568	96	412	530	485	390	80	45	38	30
20	40	45	504	97	363	645	402	340	80	50	49	36
21	38	44	445	102	300	1,500	363	308	80	90	63	43
22	36	38	389	104	220	1,930	390	269	80	70	46	35
23	34	37	338	111	175	1,950	374	257	90	57	40	36
24	34	40	296	129	152	1,370	355	234	84	56	43	32
25	33	41	275	145	142	1,110	333	226	108	51	38	31
26	31	40	256	204	140	1,040	319	215	115	45	36	28
27	32	94	237	996	140	936	312	203	77	45	35	30
28	33	299	236	1,630	142	1,100	288	182	76	52	36	34
29	34	217	260	1,660	------	2,050	269	182	110	46	36	53
30	33	137	237	1,170	------	2,220	213	191	96	48	34	40
31	33	------	217	786	------	1,640	------	177	------	46	32	------
TOTAL	1,062	2,142	28,514	10,319	14,541	30,751	20,808	16,229	3,744	1,775	1,166	991
MEAN	34.3	71.4	920	333	519	992	694	524	125	57.3	37.6	33.0
MAX	54	299	5,030	1,660	1,770	2,220	1,620	1,710	316	90	63	53
MIN	29	31	78	96	140	148	213	158	76	45	27	25
CFSM	.09	.18	2.36	.85	1.33	2.54	1.78	1.34	.32	.15	.10	.08
IN.	.10	.20	2.72	.98	1.39	2.93	1.98	1.55	.36	.17	.11	.09

CAL YR 1966: TOTAL 74,783 MEAN 205 MAX 5,030 MIN 29 CFSM .53 IN 7.13
WAT YR 1967: TOTAL 132,042 MEAN 362 MAX 5,030 MIN 25 CFSM .93 IN 12.59

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0815	9.40	5,480				

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

Location.--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 1967. Prior to March 1944 monthly discharge only, published in WSP 1305.

Gage.--Digital 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; July 29, 1954 to Aug. 10, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--24 years, 225 cfs.

Extremes.--Maximum discharge during year, 5,000 cfs Dec. 9 (gage height, 10.98 ft); minimum, 19 cfs Aug. 15-18; minimum gage height, 1.37 ft Sept. 5, 6, 8.
1943-67: 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.--Record good except for the winter period, which is poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	23	26	92	130	451	115	411	163	108	62	25	24
2	23	26	74	115	1,170	144	336	153	101	61	25	23
3	22	28	71	110	1,240	237	298	135	95	54	24	23
4	21	28	88	100	866	242	260	124	94	51	24	22
5	22	31	98	90	597	252	372	120	90	51	24	22
6	22	32	165	94	426	525	642	146	90	47	24	21
7	22	40	751	116	309	419	520	706	88	47	22	22
8	23	57	2,800	165	270	317	381	1,150	87	46	23	22
9	22	47	4,060	145	230	275	327	782	104	45	25	24
10	22	71	2,150	130	200	425	404	527	143	44	23	29
11	23	92	1,560	115	175	873	369	513	108	42	22	26
12	25	55	1,210	105	170	867	298	506	94	41	21	23
13	24	43	983	95	168	692	318	394	87	39	20	24
14	24	36	794	86	200	612	538	336	82	38	21	24
15	27	32	632	78	225	536	516	303	76	36	20	24
16	31	31	540	70	309	448	387	270	71	36	20	24
17	34	29	460	65	308	400	330	243	68	36	20	24
18	28	28	400	64	259	336	280	228	67	36	21	25
19	27	27	350	64	226	286	240	213	64	36	26	27
20	28	26	320	65	211	591	215	193	61	56	29	28
21	27	26	290	66	173	1,560	208	170	62	53	29	28
22	27	25	250	70	150	1,140	233	160	70	40	24	27
23	26	25	220	78	120	762	235	150	68	46	23	27
24	25	25	190	83	106	554	225	146	62	39	24	25
25	25	26	175	93	104	467	210	141	103	32	23	25
26	25	27	160	218	102	425	200	135	92	30	24	23
27	26	120	155	1,210	100	369	198	126	76	28	25	28
28	26	336	160	1,090	100	910	175	120	70	28	30	34
29	26	198	170	731	------	1,180	163	137	71	28	25	39
30	26	123	150	493	------	802	165	124	68	27	24	33
31	26	------	140	392	------	558	------	118	------	26	24	------
TOTAL	778	1,716	19,648	6,526	8,965	17,319	9,454	8,732	2,520	1,281	734	770
MEAN	25.1	57.2	634	211	320	559	315	282	84.0	41.3	23.7	25.7
MAX	34	336	4,060	1,210	1,240	1,560	642	1,150	143	62	30	39
MIN	21	25	71	64	100	115	163	118	61	26	20	21
CFSM	.10	.23	2.58	.86	1.30	2.27	1.28	1.15	.34	.17	.10	.10
IN.	.12	.26	2.97	.99	1.36	2.62	1.43	1.32	.38	.19	.11	.12

CAL YR 1966: TOTAL 51,083 MEAN 140 MAX 4,060 MIN 18 CFSM .57 IN 7.72
WAT YR 1967: TOTAL 78,443 MEAN 215 MAX 4,060 MIN 20 CFSM .87 IN 11.86

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0500	10.98	5,000				

3-3350. Wildcat Creek near Lafayette, Ind.

Location.--Lat 40°26'26", long 86°49'46", on line between north half of secs. 13 and 14, T. 23 N., R. 4 W., 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 1967.

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.--13 years, 689 cfs.

Extremes.--Maximum discharge during year, 9,700 cfs Dec. 9 (gage height, 13.54 ft); minimum discharge, 58 cfs Oct. 5, 6 (gage height, 2.30 ft).
1954-67: 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, Sept. 6, 7, 1964; minimum gage height, 2.22 ft Sept. 3, 4, 1966.

Remarks.--Record fair.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	80	78	260	395	1,200	270	1,860	445	320	186	111	80
2	78	76	190	380	3,300	305	1,390	422	305	192	109	83
3	76	80	170	380	4,000	450	1,080	380	290	169	109	76
4	61	80	175	355	3,200	640	920	360	275	164	106	78
5	58	88	215	340	2,130	720	1,140	340	260	161	101	76
6	58	88	360	325	1,120	1,140	2,700	360	245	167	96	70
7	63	103	1,080	395	840	1,140	2,700	1,320	245	153	93	68
8	70	140	5,700	560	720	1,020	2,040	3,300	245	150	93	66
9	66	180	9,040	510	650	920	1,530	3,100	245	150	111	68
10	63	192	8,160	460	570	1,080	1,460	2,310	320	145	122	78
11	63	260	7,170	410	530	2,310	1,460	1,950	400	140	119	83
12	63	230	5,600	360	470	2,800	1,200	2,310	445	137	116	83
13	63	161	4,200	320	460	2,700	1,020	2,040	320	132	114	76
14	68	129	2,900	275	520	2,220	1,690	1,530	275	124	114	73
15	80	114	2,130	245	630	1,860	2,130	1,200	245	122	109	73
16	80	101	1,690	220	1,020	1,530	1,690	1,080	230	122	105	76
17	119	101	1,460	200	1,020	1,320	1,320	920	215	124	98	73
18	106	93	1,260	190	870	1,140	1,080	820	215	127	90	73
19	86	88	1,080	190	770	970	870	770	194	114	106	76
20	86	88	1,020	190	660	1,460	770	670	189	132	111	78
21	90	90	870	195	540	4,200	720	580	197	230	122	88
22	88	86	770	210	405	4,200	670	535	197	158	124	90
23	80	76	670	225	320	3,700	720	490	197	145	101	80
24	80	76	580	245	285	2,600	670	468	197	145	98	80
25	78	88	535	275	270	1,950	625	445	215	132	98	76
26	76	88	485	422	260	1,770	625	422	245	116	88	68
27	73	200	465	2,700	260	1,610	580	400	200	114	88	80
28	78	580	465	3,300	265	2,700	558	380	192	135	90	80
29	78	535	505	2,800		4,200	512	380	186	119	88	93
30	80	340	460	1,950	- - - - -	4,000	490	380	215	124	86	103
31	80	- - - - -	425	1,260	- - - - -	3,000	- - - - -	360	- - - - -	116	80	- - - - -
Total	2,368	4,629	60,090	20,282	27,285	59,925	35,220	30,467	7,519	4,445	3,197	2,345
Mean	76.4	154	1,938	654	974	1,933	1,207	983	251	143	103	78.2
Max	119	580	9,040	3,300	4,000	4,200	2,700	3,300	445	230	124	103
Min	58	76	170	190	260	270	490	340	186	114	80	66
Cfsm	0.097	0.195	2.45	0.827	1.23	2.44	1.53	1.24	0.317	0.181	0.130	0.099
In.	0.11	0.22	2.82	0.95	1.28	2.81	1.71	1.43	0.35	0.21	0.15	0.11

Cal yr 1966 : Total 155,316 Mean 426 Max 9,040 Min 51 Cfsm 0.539 In. 7.31
Wtr yr 1967 : Total 258,772 Mean 709 Max 9,040 Min 58 Cfsm 0.896 In. 12.15

Peak discharge (base, 6,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0900	13.54	9,700				

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 1967. 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.--44 years (1923-67), 6,167 cfs.

Extremes.--Maximum discharge during year, 64,900 cfs Dec. 10 (gage height, 21.81 ft); minimum, 526 cfs Nov. 3; minimum gage height, 0.73 ft Oct. 11, 12.

1901-3, 1923-67: 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.--Record good. Flow regulated at low stages by powerplants upstream. Record of suspended sediment loads for water year 1967 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	815	730	6890	4.850	8530	5.000	21.500	6250	4.400	2820	1.240	815
2	770	540	5.300	4.400	11.600	5.300	19.200	6250	4.100	2950	1.240	770
3	770	610	4.550	4.100	21.500	5.450	17.800	5930	3800	2560	1.450	1.040
4	730	610	3.650	3950	25.000	6.090	13.400	5.610	3.510	2560	1.240	730
5	690	575	4.250	3800	21.800	6890	11.900	4.700	3.230	2430	1.240	950
6	815	770	4.550	3.650	15.800	7.850	14.200	5.300	3.090	2430	1.190	690
7	650	610	10.600	3800	11.000	8.190	16.400	7.530	3.090	2.170	1.400	815
8	650	860	32.000	4.250	7800	9.210	16.600	15.600	3.090	2430	1.560	1.240
9	650	1.090	53.700	4.400	6800	9.720	15.600	21.500	3.090	2.170	950	1.680
10	815	3.090	64.100	4.250	5930	10.100	13800	19.000	3.230	1.920	815	1.450
11	650	5.450	58.300	3.510	5.400	12.800	14.200	18.200	3.230	2.040	815	1.560
12	610	7.370	49.500	3.370	5.200	22.300	12.100	25.500	3.370	1.800	770	1.680
13	730	5.770	41.500	3.510	5.000	24.100	10.600	25.300	3.650	1.680	730	1.560
14	650	5.000	35.200	3.510	5.000	23.500	15.200	20.500	3.370	1.680	995	1.920
15	815	3800	30.000	2950	7.050	22.600	21.000	16.000	3.090	1.680	905	1.800
16	690	3.230	27.200	2820	15.600	20.000	18.500	13.000	2950	1.340	815	1.680
17	1.090	2690	26.200	2.430	22.300	17.500	14.400	10.900	3.510	1.560	815	1.800
18	690	2.300	22.300	1.240	18.200	15.400	12.500	9.550	4.850	1.450	860	1.680
19	690	2.170	21.800	1.800	13.800	13.000	9.890	8.530	4.100	1.450	1.040	1.680
20	995	2.040	21.200	2.300	10.700	11.400	8870	7.370	4.100	1.450	1.450	1.920
21	730	1.560	20.800	2820	9.380	20.800	7.850	6.570	3.510	1.800	1.190	1.800
22	730	1.800	20.500	3.090	8.190	32.000	7.850	5.930	3.230	1.680	1.140	1.400
23	815	1.450	17.500	2950	7.300	32.800	8.530	5.610	3.230	1.340	1.090	1.340
24	650	1.680	14.600	2820	5.500	29.600	8870	5.300	3.090	1.680	995	1.340
25	860	1.450	13.400	2820	4.600	25.600	8.700	5.000	2950	1.450	950	1.400
26	730	1.450	10.200	3.650	4.500	22.900	8.020	4.850	3.090	1.680	905	1.240
27	770	2.430	9.090	7.210	4.800	19.000	7.370	4.550	2690	1.450	1.560	1.340
28	575	4.100	5.610	12.600	5.000	16.400	7.050	4.250	3.090	1.560	1.190	1.560
29	730	5.930	5.150	16.000		19.800	6.730	4.250	3.230	1.450	1.040	1.340
30	575	7.850	4.550	14.600	- - - - -	24.100	6.410	5.150	2.820	1.400	1.090	1.290
31	575	- - - - -	4.550	11.400	- - - - -	23.500	- - - - -	4.850	- - - - -	1.560	1.340	- - - - -
Total	22.705	79.005	645.740	148.850	293.280	522.900	375.040	309.830	101.780	57.620	34.010	41.510
Mean	732	2,634	20,830	4,802	10,470	16,870	12,500	9,995	3,393	1,859	1,097	1,384
Max	1,090	7,850	64,100	16,000	25,000	32,800	21,500	26,500	4,850	2,950	1,560	1,920
Min	575	540	3,650	1,240	4,500	5,000	6,410	4,250	2,690	1,340	730	690
Cfsm	.101	.363	2.87	.663	1.44	2.33	1.72	1.38	.468	.257	.151	.191
In.	.12	.40	3.31	.76	1.50	2.69	1.92	1.59	.52	.30	.17	.21

Cal yr 1966 : Total 1,642,580 Mean 4,500 Max 64,100 Min 505 Cfsm .621 In. 8.42
Wtr yr 1967 : Total 2,632,270 Mean 7,212 Max 64,100 Min 540 Cfsm .995 In. 13.49

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

Location (revised).--Lat 40°19'03", long 87°17'26", 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 1967.

Gage.--Stevens Type-F water-stage recorder, wire-weight gage, and crest-stage gage. Wire-weight gage read twice daily. Datum of gage is 511.68 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to May 19, 1967, wire-weight gage at same site and datum.

Average discharge.--12 years, 234 cfs.

Extremes.--Maximum discharge during year, 3,510 cfs Mar. 21 (gage height, 9.34 ft, from graph based on gage reading); minimum daily, 6.5 cfs Oct. 5-8; minimum gage height, 2.94 ft Sept. 6, 8.
1955-67: 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 contract-opening measurement; minimum daily 6.5 cfs Oct. 5-8, 1966.

Remarks.--Record poor prior to May 19 and thereafter good above 100 cfs and poor below.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	7.5	20	23	115	558	170	360	264	123	42	19	12
2	7.5	19	23	110	820	205	320	300	111	42	62	12
3	7.5	17	23	100	770	248	320	268	102	42	64	9.8
4	7.5	16	60	95	720	194	400	609	100	40	36	9.8
5	7.0	14	177	90	625	184	535	870	98	38	30	9.2
6	6.5	40	216	85	520	212	580	1,170	98	36	20	8.5
7	6.5	180	882	108	410	280	535	1,340	98	34	18	9.8
8	6.5	276	2,190	102	320	320	512	1,170	90	32	14	9.2
9	8.5	300	2,310	94	280	445	445	1,020	299	31	22	14
10	8.5	280	1,560	90	250	490	340	720	350	32	31	9.8
11	7.0	208	1,020	90	230	558	320	1,120	205	31	28	9.8
12	7.0	114	720	90	230	580	320	870	132	32	18	10
13	12	62	512	90	230	580	300	580	105	30	14	11
14	17	32	422	90	250	535	445	535	85	28	12	12
15	16	24	320	85	400	512	490	512	78	25	12	12
16	15	21	305	78	770	535	535	445	70	24	12	13
17	14	17	290	73	720	580	580	400	72	25	11	13
18	18	16	270	68	558	670	535	360	66	48	9.8	14
19	21	15	250	65	422	1,020	490	320	52	36	16	14
20	21	15	240	60	360	1,770	422	272	52	31	45	14
21	19	15	225	58	305	2,840	360	248	60	25	36	16
22	17	15	210	57	265	2,320	340	230	68	31	23	15
23	16	15	200	56	220	1,280	320	219	58	44	18	12
24	17	15	185	72	180	920	300	208	56	100	15	10
25	19	15	175	90	160	720	280	194	56	76	14	10
26	22	38	170	129	140	580	300	177	52	40	15	11
27	22	134	160	264	140	512	300	163	50	34	18	16
28	23	127	150	580	140	490	300	160	48	28	17	21
29	24	28	140	558		468	280	166	48	25	15	17
30	23	23	130	400	- - - - -	445	280	160	46	23	14	15
31	22	- - - - -	125	320	- - - - -	400	- - - - -	142	- - - - -	21	13	- - - - -
Total	445.5	2,111	13,683	4,362	10,993	21,063	11,844	15,212	2,928	1,126	691.8	369.9
Mean	14.4	70.4	441	141	393	679	395	491	97.6	36.3	22.3	12.3
Max	24	300	2,310	580	820	2,840	580	1,340	350	100	64	21
Min	6.5	14	23	56	140	170	280	142	46	21	9.8	8.5
Cfsm	0.044	0.214	1.34	0.429	1.19	2.06	1.20	1.49	0.297	0.110	0.068	0.037
In.	0.05	0.24	1.54	0.49	1.24	2.38	1.34	1.72	0.33	0.13	0.08	0.04

Cal yr 1966: Total 62,296.8 Mean 171 Max 2,310 Min 6.5 Cfsm 0.520 In. 7.03
Wtr yr 1967: Total 84,829.2 Mean 232 Max 2,840 Min 6.5 Cfsm 0.705 In. 9.58

Peak discharge (base, 2,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0200	8.55	2,800				
3-21	2200	9.34	3,510				

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 1967. 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.--28 years, 6,851 cfs.

Extremes.--Maximum discharge during year, 56,800 cfs Dec. 11 (gage height, 25.25 ft); minimum daily 850 cfs Nov. 2-5.
1939-67: 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.--Record good.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	960	885	7,760	5,300	12,400	5,750	24,800	6,960	5,300	2,800	1,480	1,000
2	960	850	6,500	5,170	12,800	5,170	23,200	6,800	4,650	2,800	1,400	960
3	960	850	5,600	5,500	17,000	5,170	21,600	6,650	4,390	2,690	1,400	1,300
4	960	850	4,520	5,200	22,200	5,750	19,000	6,500	4,000	2,690	1,570	920
5	960	850	4,390	4,700	24,800	6,350	15,300	5,900	3,760	2,690	1,480	1,150
6	920	885	5,040	4,500	23,600	8,400	15,000	5,600	3,640	2,580	1,400	920
7	920	1,080	7,920	4,300	17,000	8,400	17,000	8,570	3,640	2,580	1,400	1,000
8	885	1,080	21,600	4,100	12,600	8,240	18,200	13,300	3,640	2,250	1,400	1,200
9	885	1,240	31,400	4,400	8,240	8,740	18,000	19,800	3,760	2,250	1,320	1,500
10	885	1,750	43,500	4,800	7,280	11,000	15,600	22,200	3,880	2,150	1,100	1,700
11	920	3,160	55,700	4,900	6,800	12,300	15,700	21,800	3,760	2,150	950	1,580
12	920	5,600	54,300	4,800	6,350	18,600	15,500	22,200	3,760	2,050	930	1,700
13	885	6,960	47,900	4,300	6,050	22,200	13,300	25,100	3,880	2,050	870	1,600
14	850	5,600	41,800	3,900	5,900	23,900	13,000	26,100	3,880	2,050	940	1,800
15	885	4,780	37,000	4,000	7,920	24,100	19,000	23,900	3,640	1,850	1,140	2,000
16	960	4,000	32,900	3,600	12,300	23,900	21,800	19,200	3,400	1,660	1,010	1,700
17	920	3,880	31,100	3,300	18,800	22,000	20,000	15,300	3,040	1,570	980	2,000
18	920	3,520	28,700	2,200	21,800	20,000	16,800	12,300	3,040	1,570	950	1,800
19	920	2,690	25,800	1,500	18,800	18,000	13,900	10,800	2,920	1,660	1,030	1,700
20	920	2,580	24,100	2,300	14,800	15,300	11,700	9,590	3,160	1,660	1,300	2,000
21	920	2,360	22,500	3,000	11,500	17,400	9,930	8,240	4,000	1,660	1,600	1,800
22	960	2,050	22,000	3,500	10,100	23,200	9,080	7,120	3,520	1,570	1,500	1,650
23	1,000	1,950	21,600	3,800	8,740	27,800	9,250	6,500	3,520	1,660	1,380	1,580
24	960	1,950	19,800	3,300	7,120	30,800	9,760	6,050	3,280	1,750	1,300	1,480
25	960	1,950	15,900	3,400	5,450	30,200	10,100	5,040	3,160	1,750	1,220	1,520
26	920	1,950	14,400	3,700	4,780	28,100	9,930	4,650	3,040	1,750	1,160	1,400
27	920	2,360	11,500	7,120	4,520	25,600	8,740	4,650	2,920	1,660	1,400	1,500
28	920	3,640	7,760	11,700	5,300	21,100	7,760	4,520	2,800	1,660	1,700	1,700
29	920	5,040	6,960	16,100		18,400	7,760	4,520	2,800	1,660	1,200	1,400
30	885	6,800	5,750	17,400	- - - - -	20,300	7,440	5,300	2,800	1,570	1,100	1,380
31	885	- - - - -	5,600	15,900	- - - - -	22,500	- - - - -	5,600	- - - - -	1,570	1,400	- - - - -
Total	28,645	83,140	671,300	171,690	334,950	538,670	439,150	350,760	106,980	62,010	39,010	44,940
Mean	924	2,771	21,660	5,538	11,960	17,380	14,640	11,320	3,566	2,000	1,258	1,498
Max	1,000	6,960	55,700	17,400	24,800	30,800	24,800	26,100	5,300	2,800	1,700	2,000
Min	885	850	4,390	1,500	4,520	5,170	7,440	4,520	2,800	1,570	870	920
Cfsm	.113	.338	2.64	.675	1.46	2.12	1.78	1.38	.434	.244	.153	.183
In.	0.13	0.38	3.04	0.78	1.52	2.44	1.99	1.59	0.48	0.28	0.18	0.20

Cal yr 1966 : Total 1,830,265 Mean 5,014 Max 55,700 Min 660 Cfsm .611 In. 8.28
Wtr yr 1967 : Total 2,871,245 Mean 7,866 Max 55,700 Min 850 Cfsm .958 In. 13.01

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 2.5 miles southeast of Danville.

Drainage area.--1,279 sq mi.

Records available.--October 1914 to September 1921, June 1928 to September 1967. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Digital 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. Jan. 9, 1935, to Apr. 22, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--46 years, 877 cfs.

Extremes.--Maximum discharge during year, 16,600 cfs Dec. 9 (gage height, 20.00 ft); minimum, 43 cfs Sept. 5.
1914-21, 1928-67: 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 winter periods, which are poor. Flow regulated at times by storage at Lake Vermilion on North Fork Vermilion River, 4.5 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 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	73	66	372	400	1,820	486	1,140	624	762	189	76	61
2	69	67	272	380	3,300	488	997	714	642	168	81	60
3	63	69	163	350	3,890	511	953	828	540	157	112	58
4	83	67	216	310	3,420	639	836	642	475	133	99	57
5	72	73	736	300	2,500	875	1,060	552	404	120	89	56
6	66	73	1,770	324	2,000	956	1,390	684	404	115	86	56
7	67	75	3,360	405	1,500	825	1,380	4,270	386	108	84	56
8	69	79	10,800	381	1,200	632	1,130	6,270	372	113	79	55
9	68	92	15,300	289	1,100	585	990	5,220	2,200	122	88	56
10	80	120	10,800	307	1,060	751	939	3,020	1,790	123	91	56
11	78	118	5,310	278	1,110	1,310	756	2,580	974	119	106	56
12	79	152	2,900	327	1,060	1,980	615	3,580	672	112	106	55
13	78	120	2,350	330	970	2,170	654	2,980	535	102	79	54
14	70	99	2,010	305	999	2,010	875	2,150	502	95	75	54
15	78	89	1,730	250	1,800	1,840	1,380	1,710	409	92	73	53
16	69	84	1,530	200	2,850	1,480	1,350	1,550	360	88	70	55
17	74	81	1,380	190	2,650	1,140	1,210	1,370	328	85	69	55
18	92	79	1,270	170	1,880	1,090	1,120	1,120	307	82	70	87
19	78	76	1,130	213	1,230	1,040	998	910	289	87	67	84
20	74	73	1,060	181	850	1,240	779	847	268	91	69	70
21	80	73	950	207	700	3,210	688	762	275	132	74	
22	75	71	837	237	600	3,800	716	672	299	99	88	83
23	81	71	700	254	500	3,050	675	582	334	93	77	64
24	72	71	600	256	450	2,210	653	588	296	91	71	63
25	70	78	550	270	400	1,890	607	600	264	82	70	61
26	67	78	500	1,410	400	1,840	603	558	243	104	74	60
27	64	318	450	5,270	450	1,510	603	520	226	89	76	60
28	67	1,200	480	4,770	498	1,380	589	525	229	79	69	61
29	65	1,000	450	3,280		1,440	548	612	225	78	70	60
30	66	564	400	1,990	- - - - -	1,280	583	636	214	75	67	62
31	66	- - - - -	400	2,040	- - - - -	1,170	- - - - -	732	- - - - -	75	63	- - - - -
Total	2,253	5,276	70,776	25,874	41,187	44,828	26,817	48,408	15,224	3,298	2,468	1,841
Mean	72.7	176	2,283	835	1,471	1,446	894	1,562	507	106	79.6	61.4
Max	92	1,200	15,300	5,270	3,890	3,800	1,390	6,270	2,200	189	112	87
Min	63	66	163	170	400	486	548	520	214	75	63	53
Cfsm	.06	.14	1.79	.65	1.15	1.13	.70	1.22	.40	.08	.06	.05
In.	.07	.15	2.06	.75	1.20	1.30	.78	1.41	.44	.10	.07	.05

Cal yr 1966: Total 237,770 Mean 651 Max 15,300 Min 47 Cfsm .51 In. 6.91
Wtr yr 1967: Total 288,250 Mean 790 Max 15,300 Min 53 Cfsm .62 In. 8.38

Peak discharge (base, 6,000 cfs).--Dec. 9 (0730) 20.00 ft, 16,600 cfs; May 8 (1800) 11.20 ft, 6,380 cfs.

3-3391.2 Coal Creek at Coal Creek, Ind.

Location.--Lat 40°01'42", long 87°22'30", in SW¼ sec. 6, T. 18 N., R. 9 W., on downstream side of county road bridge, 3,500 ft southeast of Coal Creek.

Drainage area.--214 sq mi.

Records available.--October 1964 to September 1967.

Gage.--Wire-weight gage read twice daily, crest-stage gage and type-A recorder. Datum of gage is 505.96 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Extremes.--Maximum discharge during year, 9,220 cfs Dec. 8 (gage height, 16.80 ft), minimum, 8.8 cfs Oct. 13, 14 (gage height, 1.00 ft).
1966-67: Maximum discharge, that of Dec. 8, 1966, minimum, 6.0 cfs Sept. 12, 13, 1966 (gage height, 0.85 ft).

Remarks.--Record poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	10	122	110	490	91	156	110	80	31	16	10
2	13	10	74	103	1,650	110	156	165	62	31	24	9.0
3	12	10	72	103	600	130	148	156	55	31	111	9.2
4	11	10	90	96	350	105	140	117	54	31	65	9.2
5	9.1	21	325	90	280	100	300	122	52	29	38	9.2
6	9.1	20	600	86	230	150	425	848	52	28	28	9.2
7	9.1	20	3,380	81	200	350	300	2,060	52	28	24	10
8	9.2	36	7,550	105	160	325	220	985	53	27	22	11
9	8.9	35	5,770	100	145	325	200	480	82	27	20	14
10	8.9	68	1,620	95	130	300	200	325	83	27	20	11
11	8.9	123	1,010	90	128	300	210	600	77	27	17	11
12	8.9	71	670	90	127	325	165	510	71	26	14	12
13	8.8	50	540	89	138	325	156	325	62	26	12	11
14	8.8	39	425	88	154	325	182	280	55	26	11	10
15	34	32	375	88	240	375	350	200	55	26	11	10
16	24	28	325	83	400	400	300	230	51	26	10	11
17	20	24	280	78	360	375	210	191	51	26	10	13
18	20	23	280	73	280	375	182	175	50	44	14	16
19	20	22	260	68	230	350	174	160	50	35	20	15
20	17	20	250	65	180	425	148	143	54	28	17	15
21	14	20	230	60	140	570	140	130	53	145	16	17
22	12	19	210	56	120	450	140	120	49	160	14	15
23	12	18	174	54	105	300	140	110	49	39	13	14
24	12	18	156	54	90	260	140	100	42	80	11	13
25	11	18	148	110	80	240	132	94	40	38	10	11
26	11	23	140	846	74	220	132	91	40	29	11	11
27	11	636	140	1,540	74	210	122	87	38	28	13	11
28	11	1,080	132	845	81	210	122	110	36	23	13	16
29	12	425	122	400		240	117	182	36	20	13	15
30	12	200	122	325	- - - - -	191	117	122	32	18	11	14
31	10	- - - - -	110	280	- - - - -	165	- - - - -	95	- - - - -	17	10	- - - - -
Total	402.7	3,129	25,702	6,351	7,236	8,617	5,624	9,423	1,616	1,177	639	362.8
Mean	13.0	104	829	205	258	278	187	304	53.9	38.0	20.6	12.1
Max	34	1,080	7,550	1,540	1,650	570	425	2,060	83	160	111	17
Min	8.8	10	72	54	74	91	117	87	32	17	10	9.0
Cfsm	0.061	0.486	3.87	0.958	1.21	1.30	0.874	1.42	0.252	0.178	0.096	0.057
In.	0.07	0.54	4.46	1.10	1.26	1.50	0.98	1.64	0.28	0.21	0.11	0.06

Cal yr 1966: Total 49,402.7 Mean 135 Max 7,550 Min 6.0 Cfsm 0.631 In. 8.57
Wtr yr 1967: Total 70,279.5 Mean 193 Max 7,550 Min 8.8 Cfsm 0.902 In. 12.21

Peak discharge (base, 2,600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	0400	16.80	9,220				

3-3391.5 Little Vermilion River near Newport, Ind.

Location.--Lat 39°53'32", long 87°25'42", in NW¼ sec. 27,T. 17 N., R. 9 W., on downstream side of bridge on State Road 63, 1.2 miles northwest of Newport, and 6 miles upstream from mouth.

Drainage area.--240 sq mi.

Records available.--October 1964 to September 1967.

Gage.--Wire-weight gage read twice daily, crest-stage gage and type-A recorder. Datum of gage is 489.78 ft above mean sea level, datum of 1929 (Indiana State Highway Commission bench mark, levels by Corps of Engineers).

Extremes.--Maximum discharge during year, 6,520 cfs Dec. 8 (gage height, 11.54 ft); minimum observed, 0.36 cfs Sept. 12; minimum gage height, 0.74 ft Oct. 9.
1965-67: Maximum discharge, that of Dec. 8, 1966; no flow Oct. 3-6, 1964.

Remarks.--Record poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.8	2.1	177	168	472	100	190	133	107	47	10	1.6
2	2.4	2.1	140	168	1,260	105	175	140	107	45	11	1.2
3	1.6	1.8	122	154	1,400	110	175	114	95	41	12	1.0
4	1.4	1.6	100	147	975	120	161	101	90	38	12	.73
5	1.0	2.1	270	147	800	158	175	95	79	34	9.6	.90
6	.94	2.4	590	133	730	395	206	218	79	33	9.3	.73
7	.94	4.9	2,400	130	530	323	190	1,430	74	31	8.9	.68
8	.94	5.6	5,200	127	446	260	154	1,320	107	31	8.9	.53
9	.85	6.7	5,850	122	323	223	154	870	3,050	29	9.3	.53
10	1.0	30	3,800	116	301	301	161	530	2,820	29	8.6	.48
11	1.0	29	1,820	106	260	370	140	560	940	28	7.5	.44
12	1.2	31	1,360	96	223	446	126	590	590	26	7.2	.40
13	1.5	23	1,080	89	206	446	133	446	472	23	7.2	.40
14	1.2	15	835	77	206	370	161	395	500	20	6.9	.40
15	3.9	12	695	70	206	301	260	346	346	18	6.6	.40
16	3.4	10	625	67	206	260	370	280	260	18	6.4	.44
17	6.8	9.5	560	65	175	223	280	241	206	16	6.4	.40
18	5.9	9.2	500	63	182	206	223	223	175	16	6.1	6.9
19	3.6	8.8	446	61	168	182	182	206	147	16	16	5.3
20	2.6	6.9	420	60	161	256	161	175	133	15	8.6	4.8
21	1.9	6.2	370	60	154	625	161	154	147	16	6.6	3.0
22	1.5	5.6	323	60	120	590	182	147	206	16	4.4	2.1
23	1.6	5.6	280	60	110	446	154	140	133	15	12	1.4
24	1.8	5.1	260	62	100	370	147	133	101	18	8.0	1.2
25	1.8	10	230	120	95	346	133	126	90	16	6.1	1.2
26	2.1	8.8	210	411	90	301	133	114	79	14	6.1	1.3
27	2.8	353	190	1,290	90	280	140	107	64	15	5.8	6.0
28	2.8	544	185	1,260	95	260	120	114	64	13	3.4	3.4
29	2.4	386	180	835		260	114	161	64	12	3.0	3.3
30	2.1	245	175	560	- - - - -	241	120	120	55	15	2.5	3.8
31	2.1	- - - - -	168	500	- - - - -	223	- - - - -	120	- - - - -	11	2.1	- - - - -
Total	67.87	1,783	29,561	7,384	10,084	9,097	5,181	9,849	11,380	715	238.5	54.96
Mean	2.19	59.4	954	238	360	293	173	318	379	23.1	7.69	1.83
Max	6.8	544	5,850	1,290	1,400	625	370	1,430	3,050	47	12	6.9
Min	.85	1.6	100	60	90	100	114	95	55	11	2.1	.40
Cfsm	0.0091	0.248	3.98	0.992	1.50	1.22	0.721	1.32	1.58	0.096	0.032	0.0076
In.	0.01	0.28	4.59	1.14	1.56	1.41	0.80	1.52	1.76	0.11	0.04	0.008

Cal yr 1966: Total 54,910.17 Mean 150 Max 5,850 Min .20 Cfsm 0.625 In. 8.52
Wtr yr 1967: Total 85,395.33 Mean 234 Max 5,850 Min .40 Cfsm 0.975 In. 13.23

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	2400	11.54	6,520				
6-9	2100	10.92	5,200				

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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 657.77 ft above mean sea level, datum of 1929. Prior to July 16, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--29 years, 456 cfs.

Extremes.--Maximum discharge during year, 11,100 cfs Dec. 9 (gage height, 9.28 ft); minimum, 11 cfs Sept. 26, 27 (gage height, 1.04 ft).
1938-67: Maximum discharge, 26,300 cfs June 28, 1957 (gage height, 14.48 ft), no flow part of Oct. 19, 1965 (unusual regulation).
Maximum stage known, 17.3 ft in March 1913, from information by local resident (discharge, about 36,000 cfs).

Remarks.--Record fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	32	19	200	216	956	180	711	260	168	62	44	16
2	32	19	133	204	2,930	192	572	244	152	57	44	15
3	32	18	101	200	2,930	268	491	220	144	54	57	15
4	32	18	111	164	1,560	268	404	200	144	54	49	15
5	30	18	196	176	1,010	416	882	192	136	51	41	15
6	30	18	452	160	660	1,340	1,740	256	129	49	39	13
7	30	49	2,740	498	440	882	1,700	2,580	126	46	37	13
8	30	65	7,290	644	428	636	1,230	3,250	118	46	37	13
9	30	60	10,200	288	398	512	870	1,860	126	44	37	19
10	30	115	7,050	240	362	982	744	1,130	192	44	37	18
11	28	156	4,530	184	315	2,150	580	1,420	208	44	37	13
12	28	98	2,820	212	244	1,750	464	1,420	240	41	32	12
13	28	73	2,020	196	260	1,230	491	943	172	39	30	12
14	28	57	1,500	184	256	995	636	755	136	35	28	11
15	23	46	1,170	156	272	799	722	652	118	35	25	11
16	23	41	1,010	108	288	620	596	540	104	35	25	11
17	23	39	882	129	280	564	505	458	98	35	23	11
18	23	37	777	95	268	452	416	410	95	46	23	11
19	23	32	644	108	252	392	335	374	89	32	23	11
20	23	30	580	111	240	930	300	320	85	35	23	13
21	21	30	477	122	216	3,090	305	276	82	62	23	18
22	21	30	404	144	208	2,300	368	260	92	54	23	21
23	21	30	340	160	164	1,440	340	244	89	57	23	19
24	21	30	310	168	129	1,020	335	240	82	51	21	15
25	21	32	276	196	168	846	310	228	82	41	21	12
26	21	35	240	564	172	722	305	208	82	37	28	12
27	21	200	228	3,180	172	596	296	196	70	39	37	12
28	19	628	268	2,400	188	1,810	268	192	68	92	25	15
29	19	477	284	1,260	------	2,680	256	212	65	82	23	15
30	19	276	224	822	------	1,570	260	208	65	57	19	16
31	19	------	232	676	------	1,020	------	188	------	49	18	------
TOTAL	781	2,776	47,689	13,965	15,766	32,652	17,432	19,936	3,557	1,505	952	423
MEAN	25.2	92.5	1,538	450	563	1,053	581	643	119	48.5	30.7	14.1
MAX	32	628	10,200	3,180	2,930	3,090	1,740	3,250	240	92	57	21
MIN	19	18	101	95	129	180	256	188	65	32	18	11
CFSM	.05	.18	3.02	.89	1.11	2.07	1.14	1.26	.23	.10	.06	.03
IN.	.06	.20	3.48	1.02	1.15	2.39	1.27	1.46	.26	.11	.07	.03

CAL YR 1966: TOTAL 102,387.5 MEAN 281 MAX 10,200 MIN 6.5 CFSM .55 IN 7.48
WAT YR 1967: TOTAL 157,434 MEAN 431 MAX 10,200 MIN 11 CFSM .85 IN 11.50

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0600	9.28	11,100				

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 1967.

Gage.--Digital 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, and Nov. 18, 1941 to July 30, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--27 years, 618 cfs.

Extremes.--Maximum discharge during year, 15,800 cfs Dec. 9 (gage height, 15.20 ft); minimum, 25 cfs Sept. 8 (gage height, 1.79 ft). 1940-67: Maximum discharge, 32,200 cfs June 28, 1957 (gage height, 22.98 ft); minimum observed, 12 cfs Sept. 21, 1941; minimum gage height, 1.69 ft Sept. 12, 13, 1966.

Remarks.--Record good except that for the winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	39	33	331	307	1,080	250	924	360	249	87	75	31
2	37	34	242	289	3,440	296	745	359	227	81	77	30
3	35	36	169	278	3,710	330	673	333	212	79	384	29
4	34	37	187	245	1,980	358	564	282	203	76	137	27
5	32	44	400	251	1,280	476	1,060	267	196	73	84	27
6	33	47	732	231	924	1,460	2,070	337	189	71	64	27
7	31	101	5,300	453	620	1,180	1,840	3,450	183	71	53	26
8	30	129	10,900	834	547	866	1,550	4,350	178	71	52	26
9	32	116	12,700	462	564	715	1,100	2,440	175	67	52	41
10	36	246	9,250	367	519	1,070	982	1,460	210	68	47	47
11	33	234	5,770	276	469	2,230	809	1,670	244	67	44	35
12	30	174	3,440	300	358	2,110	657	1,860	282	80	40	31
13	30	124	2,400	304	375	1,490	673	1,240	249	64	37	30
14	32	97	1,810	273	373	1,180	839	1,010	197	59	35	30
15	43	80	1,410	249	371	991	1,080	893	169	58	34	29
16	49	71	1,210	170	395	802	872	762	152	58	34	28
17	40	65	1,080	218	372	722	759	650	141	60	33	28
18	50	62	978	146	358	621	637	581	133	61	35	30
19	48	58	840	150	340	532	516	526	128	55	49	33
20	42	55	764	160	322	789	452	465	121	52	44	33
21	40	53	661	170	299	3,200	433	399	121	58	38	39
22	40	52	579	200	273	2,850	490	362	119	74	38	40
23	39	52	486	225	245	1,710	508	350	120	78	37	35
24	37	51	431	247	191	1,230	486	345	119	93	34	31
25	36	60	401	281	230	1,020	463	338	114	74	33	29
26	36	61	367	681	240	896	437	316	112	62	50	28
27	36	671	323	3,810	250	766	432	281	102	109	77	34
28	36	982	387	3,020	260	1,880	406	280	96	243	51	40
29	36	861	456	1,600	------	3,230	373	349	92	133	40	34
30	35	489	345	1,060	------	1,950	360	303	90	101	38	33
31	34	------	453	881	------	1,270	------	279	------	87	33	------
TOTAL	1,141	5,175	64,802	10,138	20,385	38,470	23,190	26,897	4,923	2,470	1,879	961
MEAN	36.8	173	2,090	585	728	1,241	773	868	164	79.7	60.6	32.0
MAX	50	982	12,700	3,810	3,710	3,230	2,070	4,350	282	243	384	47
MIN	30	33	169	146	191	250	360	267	90	52	33	26
CFSM	.06	.26	3.13	.88	1.09	1.86	1.16	1.30	.25	.12	.09	.05
IN.	.06	.29	3.61	1.01	1.13	2.14	1.29	1.50	.27	.14	.10	.05

CAL YR 1966: TOTAL 142,085 MEAN 389 MAX 12,700 MIN 17 CFSM .58 IN 7.91
WAT YR 1967: TOTAL 208,431 MEAN 571 MAX 12,700 MIN 26 CFSM .85 IN 11.60

Peak discharge (base, 6,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0030	15.20	15,800				

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 1967. July 1924 to September 1927 (gage heights only) in reports of Indiana Department of Conservation.

Gage.--Digital 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, Sept. 12, 1934 to July 12, 1950, wire-weight gage, and July 13, 1950 to Dec. 12, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--40 years, 9,163 cfs.

Extremes.--Maximum discharge during year, 60,200 cfs Dec. 12 (gage height, 25.74 ft from floodmark); minimum, 927 cfs Oct. 14, Nov. 4 (gage height, 1.69 ft).
1927-67: Maximum discharge, 184,000 cfs May 20, 1943 (gage height, 32.83 ft); minimum observed, 560 cfs Sept. 24, 1941; 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.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1,290	992	9,400	8,040	18,400	7,020	26,300	8,840	6,800	3,720	1,990	1,520
2	1,170	966	8,790	8,100	20,600	6,760	26,100	8,900	6,270	3,540	1,910	1,510
3	1,120	1,080	6,750	7,860	26,300	7,020	25,000	8,700	5,670	3,460	2,130	1,280
4	1,060	953	5,870	7,160	27,300	7,260	22,900	8,400	5,320	3,370	2,360	1,260
5	1,020	1,060	6,420	6,650	27,700	8,300	20,300	7,680	5,030	3,230	2,090	1,340
6	992	1,120	8,550	6,140	28,000	11,600	19,900	7,380	4,860	3,110	1,880	1,230
7	953	1,190	15,300	6,030	25,400	12,400	20,500	18,100	4,550	3,070	1,810	1,300
8	1,020	1,400	36,200	6,700	18,000	11,900	21,300	26,000	4,940	2,950	1,810	1,170
9	992	1,400	49,000	6,520	13,200	12,000	20,900	27,200	10,500	2,880	1,930	1,280
10	979	1,520	56,600	6,200	11,500	13,400	20,000	27,600	9,660	2,870	1,890	1,590
11	966	2,850	58,000	5,980	10,800	15,300	18,500	27,400	6,380	2,730	1,530	1,760
12	1,060	4,780	59,600	5,620	9,960	19,600	17,800	27,600	4,720	2,730	1,440	1,720
13	992	7,110	57,500	5,420	8,820	23,600	16,500	28,100	5,460	2,530	1,400	1,760
14	953	6,890	53,100	5,320	8,420	25,200	15,300	29,000	5,500	2,330	1,350	1,840
15	1,120	5,970	48,300	5,220	8,540	25,900	18,900	29,000	5,020	2,270	1,330	1,820
16	1,060	5,170	43,900	4,760	11,800	26,100	22,600	26,300	4,260	2,280	1,450	1,950
17	1,110	4,280	40,000	4,280	18,400	25,400	23,200	21,100	4,420	2,180	1,390	1,900
18	1,120	3,720	36,600	3,320	22,200	23,300	20,700	17,100	4,300	2,630	1,340	1,920
19	1,330	3,280	33,700	3,190	22,000	20,500	17,900	14,500	5,000	2,200	1,450	2,110
20	1,140	2,960	30,500	3,370	18,700	18,900	14,800	12,800	5,100	2,080	1,410	1,960
21	1,080	2,750	28,400	3,740	14,900	22,300	12,900	11,300	5,100	2,100	1,620	1,940
22	1,290	2,620	26,400	4,430	12,800	27,000	11,900	9,820	4,670	2,290	1,700	1,960
23	1,140	2,360	24,700	5,130	11,300	28,800	11,400	9,040	4,260	2,280	1,590	1,860
24	1,080	2,410	22,600	4,720	9,220	30,400	11,600	8,380	4,190	2,350	1,550	1,750
25	1,150	2,250	19,500	4,660	7,340	31,800	11,800	7,760	4,130	2,220	1,490	1,680
26	1,070	2,600	17,300	5,540	6,630	32,200	11,600	7,240	3,950	2,160	1,480	1,700
27	1,160	4,010	15,100	16,200	6,400	31,600	11,000	6,840	3,840	2,180	1,630	1,680
28	1,120	8,060	11,400	20,700	7,100	30,900	10,200	6,610	3,700	2,680	1,460	1,680
29	1,150	8,280	10,200	21,600	------	29,100	9,640	7,160	3,740	2,220	1,850	1,690
30	1,030	8,700	9,340	21,600	------	26,700	9,300	6,540	3,800	2,050	1,530	1,690
31	1,100	------	8,400	20,300	------	26,100	------	7,100	------	2,030	1,440	------
TOTAL	33,817	103,171	857,820	244,500	431,730	638,360	520,740	469,490	155,140	80,760	51,230	49,850
MEAN	1,091	3,439	27,670	7,887	15,420	20,590	17,360	15,140	5,171	2,605	1,653	1,662
MAX	1,330	8,700	59,600	21,600	28,000	32,200	26,300	29,000	10,500	3,720	2,360	2,110
MIN	953	953	5,870	3,190	6,400	6,760	9,300	6,540	3,700	2,030	1,330	1,170
CFSM	.10	.31	2.49	.71	1.39	1.86	1.56	1.36	.47	.23	.15	.15
IN.	.11	.35	2.87	.82	1.45	2.14	1.74	1.57	.52	.27	.17	.17

Cal yr 1966: Total 2,382,428 Mean 6,527 Max 59,600 Min 810 Cfsm .59 In. 7.98
Wtr yr 1967: Total 3,636,608 Mean 9,963 Max 59,600 Min 953 Cfsm .90 In. 12.18

3-3408. Big 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 1967. Prior to October 1963, published as Raccoon Creek near Fincastle.

Gage.--Digital water-stage recorder. Datum of the gage is 686.03 ft above mean sea level, datum of 1929. Prior to Feb. 16, 1967 graphic water-stage recorder at same site and datum.

Average discharge.--10 years, 115 cfs.

Extremes.--Maximum discharge during year, 2,840 cfs Dec. 9 (gage height, 10.32 ft); minimum discharge, 2.2 cfs Oct. 8, 9; minimum gage-height, 1.72 ft Oct. 4.
1957-67: Maximum discharge, 15,100 cfs Jan. 26, 1962; maximum gage height, 15.68 ft Jan. 26, 1962 (ice jam); minimum discharge, 1.6 cfs Oct. 5, 1964.
Maximum flood known, 39,900 cfs June 28, 1957 (gage height, 19.10 ft), from slope-area measurement.

Remarks.--Record good. Records of water temperature and suspended sediment loads for the water year 1967 are published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	4.9	3.7	41	43	211	43	162	62	52	9.8	19	5.1
2	3.8	4.2	28	42	922	47	137	58	43	9.6	29	4.9
3	3.7	4.7	21	41	551	75	127	46	39	8.8	190	4.7
4	3.1	4.9	21	40	300	69	110	41	38	8.4	75	4.5
5	3.1	5.6	56	40	218	106	264	40	35	8.0	33	4.5
6	2.7	5.6	113	40	155	333	496	74	33	8.0	21	4.3
7	2.6	7.8	612	160	127	224	287	1,560	32	7.8	16	4.2
8	2.3	10	1,680	144	110	190	214	946	30	7.4	13	4.0
9	2.6	9.1	2,160	80	95	166	178	465	29	7.4	15	4.9
10	2.8	15	1,440	42	80	323	150	296	28	7.6	12	5.8
11	2.7	15	743	34	72	443	125	658	27	7.4	9.1	5.1
12	2.6	11	440	32	70	300	105	504	24	8.2	8.0	4.5
13	2.6	7.2	320	30	71	229	109	298	21	6.8	7.4	4.1
14	2.8	6.2	250	29	70	186	112	264	18	6.1	6.9	3.9
15	3.2	5.3	204	27	71	158	153	262	17	6.2	6.6	3.8
16	3.6	5.4	183	26	72	131	133	222	15	5.8	6.3	3.6
17	3.4	4.9	168	26	64	124	139	200	14	5.7	6.1	3.6
18	3.1	4.5	155	26	62	103	109	167	13	5.9	6.3	4.4
19	3.1	4.0	137	26	62	97	84	136	13	5.6	8.8	4.1
20	3.0	3.8	129	26	59	158	74	105	12	5.8	8.1	4.1
21	3.0	3.7	110	26	53	555	76	88	13	6.0	6.9	4.2
22	2.7	3.6	97	30	47	338	104	79	13	5.4	6.2	4.1
23	2.6	3.6	84	35	46	235	86	71	13	5.8	5.9	3.9
24	2.8	3.4	76	45	45	185	83	68	13	8.4	5.7	3.5
25	2.8	6.0	68	64	37	168	73	62	14	7.1	6.1	3.4
26	3.1	8.3	62	178	35	148	74	56	12	5.7	5.9	3.2
27	3.4	34	57	952	40	137	73	52	11	184	5.4	3.5
28	3.7	68	53	418	44	561	63	49	11	187	5.4	3.8
29	3.7	85	50	242	------	543	59	77	11	51	5.2	3.5
30	3.7	58	47	180	------	310	61	67	10	27	5.0	3.5
31	3.7	------	45	169	------	215	------	65	------	22	4.9	------
TOTAL	96.9	411.5	9,650	3,293	3,789	6,900	4,020	7,138	654	655.7	559.2	124.7
MEAN	3.13	13.7	311	106	135	223	134	230	21.8	21.2	18.0	4.16
MAX	4.9	85	2,160	952	922	561	496	1,560	52	187	190	5.8
MIN	2.3	3.4	21	26	35	43	59	40	10	5.4	4.9	3.2
CFSM	0.024	0.104	2.36	0.803	1.02	1.69	1.02	1.74	0.165	0.161	0.136	0.032
IN.	0.03	0.12	2.72	0.93	1.06	1.95	1.14	2.01	0.18	0.19	0.16	0.04

CAL YR 1966: TOTAL 22,969.9 MEAN 62.9 MAX 2,160 MIN 2.3 Cfsm 0.477 In. 6.47
WAT YR 1967: TOTAL 37,292.0 MEAN 102 MAX 2,160 MIN 2.3 Cfsm 0.773 In. 10.53

Peak discharge (base, 1,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0600	10.32	2,840				
5-7	1745	9.17	2,260				

3-3409. Big 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 1967. Prior to October 1963, published as Raccoon Creek at Ferndale.

Gage.--Digital water-stage recorder. Datum of gage is 582.36 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark). Prior to Feb. 17, 1967, graphic water-stage recorder at same site and datum.

Average discharge.--11 years, 203 cfs (adjusted for change in contents).

Extremes.--Maximum discharge during year, 1,710 cfs Dec. 28 (gage height, 7.07 ft); minimum daily, 13 cfs Oct. 8; minimum gage height, 1.31 ft Oct. 3-9.
1956-67: Maximum discharge, 40,500 cfs June 28, 1957 (gage height, 19.87 ft) from rating extended above 5,000 cfs on basis of records for station at Mansfield; minimum daily, 2.7 cfs Oct. 11, 1956.

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	15	180	81	1,540	510	69	95	28	127	19	36	19
2	15	187	64	1,580	163	77	95	26	93	19	79	19
3	14	193	37	1,580	100	77	95	26	68	19	128	19
4	14	193	21	1,390	95	99	509	26	68	19	463	19
5	14	191	66	643	94	120	795	25	68	19	478	121
6	14	189	200	86	90	281	793	54	56	19	169	175
7	14	205	235	115	89	535	681	174	45	19	64	177
8	13	212	198	210	650	421	332	44	44	19	64	179
9	15	235	112	200	1,210	198	27	36	44	19	36	193
10	16	265	130	116	1,180	86	24	31	44	19	21	205
11	16	336	100	115	732	84	23	28	44	19	20	211
12	15	368	94	115	156	84	22	25	44	19	19	216
13	16	285	94	113	89	84	23	25	44	19	19	218
14	17	233	93	113	89	83	24	31	40	19	19	218
15	19	233	91	85	110	83	30	59	31	19	19	218
16	18	207	90	60	119	83	25	94	27	19	19	218
17	124	196	90	45	116	83	29	95	21	21	19	218
18	189	194	90	45	116	83	26	94	20	21	20	223
19	189	193	90	45	116	709	25	94	20	21	21	221
20	189	193	90	44	101	834	25	94	20	20	19	220
21	189	191	90	43	110	765	27	94	20	19	19	221
22	187	189	89	43	85	91	35	528	20	19	19	189
23	186	189	89	44	62	89	28	716	19	22	19	221
24	186	189	89	80	57	89	29	179	19	21	19	223
25	186	220	322	100	64	89	27	97	19	20	19	196
26	184	235	1,060	113	50	89	31	93	19	19	19	170
27	184	247	985	121	41	90	29	69	19	22	19	139
28	182	318	1,200	604	51	137	27	60	19	49	19	184
29	182	403	1,650	755	------	100	27	91	19	87	19	186
30	182	246	1,620	750	------	97	29	107	19	60	19	184
31	180	------	1,580	740	------	95	------	112	------	36	19	------
TOTAL	2,964	6,915	10,830	11,633	6,445	5,404	3,987	3,255	1,160	761	1,941	5,220
MEAN	95.6	231	349	375	230	174	133	105	38.7	24.5	62.6	174
MAX	189	403	1,650	1,580	1,210	834	795	716	127	87	478	223
MIN	13	180	21	43	41	69	22	25	19	19	19	19
(ƒ)	-89.4	-182	+190	-180	-9	+177	+94	+270	-8.4	+4.9	-9.8	-170
Adjusted for change in contents in Mansfield Reservoir												
Mean	6.2	49	539	195	221	351	227	375	30.3	29.4	52.8	4
Cfsm	.029	.228	2.51	.907	1.03	1.63	1.06	1.74	.141	.137	.246	.019
In.	.03	.25	2.89	1.05	1.07	1.88	1.18	2.01	.16	.16	.28	.02

	Observed			Adjusted			
Calendar year 1966 :	Max 1,650	Min 11	Mean 92.6	Mean 75.3	Cfsm .350	In. 6.91	ƒ -17.3
Water year 1967 :	Max 1,650	Min 13	Mean 166	Mean 158	Cfsm .735	In. 10.98	ƒ -8

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 mouth.

Drainage area.--133 sq mi.

Records available.--December 1956 to September 1967 (fragmentary prior to October 1957).

Gage.--Digital 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). Prior to Feb. 16, 1967, graphic water-stage recorder at same site and datum.

Average discharge.--10 years (1957-1967), 111 cfs.

Extremes.--Maximum discharge during year, 5,810 cfs Dec. 9 (gage height, 13.78 ft); minimum, 4.2 cfs Oct. 6, 7, 8; minimum gage height, 1.00 ft Sept. 25-27, 29, 30.
1956-67: 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 daily, 4.1 cfs Dec. 22, 1963; minimum gage height, 1.00 ft Sept. 25-27, 29, 30, 1967.

Remarks.--Record good except for the winter period and below 20 cfs, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	6.4	6.0	59	76	197	64	151	84	66	18	30	11
2	6.0	6.0	49	70	1,140	74	134	78	57	17	25	10
3	5.8	6.0	39	64	432	98	126	69	53	17	672	10
4	5.2	6.0	44	61	279	83	112	64	50	16	129	10
5	4.9	6.7	220	60	225	168	201	62	46	16	66	9.9
6	4.5	7.1	282	59	176	315	252	164	45	15	44	9.6
7	4.5	26	1,660	142	143	203	168	2,360	43	15	34	9.4
8	4.5	32	2,650	102	132	201	134	693	43	15	30	9.2
9	5.2	26	2,700	76	117	176	126	396	48	15	28	10
10	7.1	186	1,430	66	102	309	115	276	50	15	27	9.5
11	6.4	76	699	59	96	299	102	308	47	15	26	8.9
12	5.2	41	464	53	89	242	95	245	39	14	23	8.9
13	4.9	28	338	54	88	198	108	199	34	13	22	8.7
14	5.2	23	264	54	92	165	122	252	34	13	21	8.5
15	8.7	20	219	48	96	143	171	233	32	13	19	8.3
16	10	18	199	44	94	119	132	193	30	13	18	8.4
17	7.8	16	182	40	83	112	147	191	29	12	17	8.2
18	7.5	15	167	38	80	96	117	169	28	42	18	10
19	7.5	14	150	36	80	94	98	145	26	16	25	10
20	7.1	13	144	36	78	266	90	120	25	13	21	9.2
21	6.7	12	125	38	74	468	96	107	26	13	17	9.1
22	6.4	12	113	47	71	247	139	99	25	13	16	8.6
23	6.4	12	103	58	69	192	105	92	24	14	15	8.3
24	6.0	12	95	63	67	165	109	82	23	16	14	8.0
25	6.0	16	87	71	71	155	95	76	22	14	13	7.7
26	6.0	20	80	286	65	140	110	68	21	13	20	7.5
27	6.0	453	73	1,020	63	135	101	61	20	382	16	8.2
28	6.0	275	104	325	65	649	90	60	20	685	14	8.3
29	6.0	112	125	225	------	363	84	115	19	93	13	7.8
30	6.0	75	85	182	------	243	87	84	19	47	12	7.5
31	6.0	------	78	177	------	188	------	83	------	35	11	------
TOTAL	191.7	1,570.8	13,027	3,730	4,364	6,370	3,717	7,228	1,044	1,648	1,456	268.7
MEAN	6.18	52.4	420	120	156	205	124	233	34.8	53.2	47.0	8.96
MAX	10	453	2,700	1,020	1,140	649	252	2,360	66	685	672	11
MIN	4.5	6.0	39	36	63	64	84	60	19	12	11	7.5
Cfsm	.046	.394	3.16	.902	1.17	1.54	.932	1.75	.262	.400	.353	.067
In.	.05	.44	3.64	1.04	1.22	1.78	1.04	2.02	.29	.46	.41	.07

CAL YR 1966: TOTAL 30,521.4 MEAN 83.6 MAX 2,700 MIN 4.2 Cfsm .629 In. 8.53
WAT YR 1967: TOTAL 44,615.2 MEAN 122 MAX 2,700 MIN 4.5 Cfsm .917 In. 12.46

Peak discharge (base, 1,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-7	2300	12.60	3,340	2-2	1100	9.30	1,940
12-9	0500	13.78	5,810	5-7	1230	12.57	3,310
12-10	0630	9.26	1,930	7-28	0045	10.03	2,160

3-3413. Big 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 1967. Prior to October 1963, published as Raccoon Creek at Coxville.

Gage.--Digital 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). Prior Feb. 16, 1967, graphic water-stage recorder at present site and datum.

Average discharge.--11 years, 422 cfs (adjusted for change in contents).

Extremes.--Maximum discharge during year, 7,900 cfs Dec. 9 (gage height, 13.47 ft); minimum discharge, 30 cfs Oct. 7, 8 (gage height, 1.80 ft).
1956-67: 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.--Record good. Flow regulated since October 1960 by Mansfield Reservoir, (capacity, 132,840 acre-ft).

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	38	200	250	1,680	960	154	403	205	275	68	100	48
2	36	204	180	1,680	2,080	177	363	186	248	67	91	48
3	34	213	150	1,720	961	221	345	165	194	66	904	47
4	34	213	126	1,650	600	204	410	154	182	65	380	46
5	33	219	330	1,210	492	335	981	149	174	65	562	46
6	32	215	555	390	410	828	1,110	332	167	64	342	141
7	31	227	2,140	440	330	771	1,010	3,830	148	64	172	167
8	30	278	4,230	430	400	879	767	1,400	142	63	145	175
9	34	274	5,500	405	1,230	618	383	786	146	63	134	187
10	35	555	2,590	298	1,290	600	300	558	143	64	100	199
11	36	425	1,180	248	1,210	564	257	558	140	62	86	202
12	34	422	730	247	466	498	232	472	127	60	78	212
13	33	405	621	240	308	435	240	393	121	59	73	214
14	33	298	515	234	273	370	257	552	116	59	69	215
15	36	272	458	218	270	325	348	523	107	59	66	216
16	41	257	422	180	285	283	281	470	100	58	63	217
17	41	229	308	158	255	265	313	460	93	57	61	216
18	132	221	372	140	244	238	270	423	89	95	61	227
19	175	217	342	128	240	425	222	375	86	68	74	229
20	186	214	325	122	231	1,400	204	323	83	65	69	225
21	190	210	298	118	217	1,570	210	295	84	61	61	229
22	190	208	272	118	208	633	322	323	84	59	58	213
23	194	206	252	122	179	483	253	1,030	80	59	56	215
24	196	204	238	140	275	418	245	495	78	71	54	224
25	198	221	237	204	425	398	215	300	77	63	53	221
26	198	261	764	488	273	360	244	261	75	58	59	183
27	198	819	1,100	1,760	143	350	238	231	74	184	57	172
28	200	759	905	1,050	143	1,440	207	203	72	927	54	181
29	200	579	1,740	1,020	------	858	192	280	71	204	52	191
30	200	482	1,720	978	------	579	198	280	70	158	50	189
31	202	------	1,700	969	------	468	------	303	------	116	49	------
TOTAL	3,250	9,507	30,480	18,750	14,412	17,147	11,020	16,315	3,646	3,251	4,233	5,295
MEAN	105	317	983	605	515	553	367	526	122	105	137	177
MAX	202	819	5,500	1,760	2,080	1,570	1,110	3,830	275	927	904	229
MIN	30	200	126	118	143	154	192	149	70	57	49	46
(ℓ)	-89	-182	+190	-180	-9	+177	+94	+270	-8	+5	-10	-170
Adjusted for change in contents in Mansfield Reservoir												
Mean	16	135	1,173	425	504	730	461	796	114	110	127	7
Cfsm	.036	.307	2.67	.966	1.15	1.66	1.05	1.81	.259	.250	.289	.016
In.	.04	.34	3.08	1.11	1.20	1.91	1.17	2.09	.29	.29	.33	.02

	Observed			Adjusted			
Calendar year 1966 :	Max 5,500	Min 28	Mean 231	Mean 214	Cfsm .486	In. 7.62	ℓ -17
Water year 1967 :	Max 5,500	Min 30	Mean 376	Mean 368	Cfsm .836	In. 11.87	ℓ -8

ℓ Change in contents, equivalent in cubic feet per second, in Mansfield Reservoir, furnished by Corps of Engineers.

3-3414.2. Brouilletts Creek near Universal, Ind.

Location.--Lat 39°37'09", long 87°26'08", in sec. 32, T. 14 N., R. 9 W., on downstream side of bridge on State Road 63, 0.7 mile east of Universal.

Drainage area.--331 sq mi.

Records available.--July 1966 to September 1967.

Gage.--Wire-weight gage read twice daily. Datum of the gage is 466.78 ft above mean sea level, datum of 1929. Auxiliary wire-weight gage 2.0 miles downstream from base gage at datum 11.16 ft lower.

Extremes.--Maximum discharge during period, 13,600 cfs Dec. 8 (gage height, 17.08 ft, from floodmark); minimum daily, 1.6 cfs Sept. 12, 13, 16, 17 (gage height, 1.34 ft).
1966-67: Maximum discharge, that of Dec. 8, 1966; minimum observed, 1.0 cfs Sept. 7, 1966 (gage height, 1.46 ft).

Remarks.--Record fair except for the winter period, which is poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	12	474	180	576	104	237	172	164	34	7.0	2.2
2	31	12	358	172	2,000	119	220	220	134	31	6.1	2.2
3	29	12	294	156	1,520	141	220	172	119	29	6.1	2.2
4	23	10	274	134	926	119	188	141	112	27	6.1	1.9
5	19	12	808	134	686	201	204	126	106	26	5.7	1.9
6	17	13	1,380	126	550	576	204	340	99	24	6.1	1.9
7	14	34	3,050	148	380	426	188	3,260	99	22	5.7	1.9
8	13	57	11,500	196	358	426	164	2,220	92	21	7.0	2.2
9	14	74	10,400	141	336	380	164	1,180	156	20	9.2	2.8
10	18	514	5,220	122	255	576	164	804	172	21	7.0	2.2
11	21	336	2,700	110	220	576	141	744	220	20	6.1	1.9
12	15	201	1,350	100	172	630	134	576	180	19	5.3	1.6
13	13	144	1,010	96	180	576	141	450	164	16	4.5	1.6
14	12	115	900	92	180	450	148	658	156	14	4.5	1.9
15	64	95	700	89	180	380	237	630	119	13	4.0	1.9
16	82	88	680	86	164	294	220	499	106	12	4.0	1.6
17	46	80	600	83	134	274	255	426	92	12	3.6	1.6
18	38	70	540	81	141	220	204	358	80	12	3.2	3.6
19	34	59	500	79	141	204	164	315	71	11	6.6	4.5
20	31	55	450	77	141	759	148	255	65	9.7	4.9	4.5
21	24	50	403	77	119	1,450	156	220	66	9.7	4.0	3.6
22	23	48	358	78	104	864	204	204	72	15	4.0	3.2
23	23	46	294	82	93	603	188	188	59	12	3.6	2.2
24	20	43	274	126	90	474	188	180	51	11	3.2	2.2
25	18	62	237	156	87	403	156	164	48	11	3.2	2.2
26	17	88	220	516	86	358	148 180	141	44	8.8	3.6	1.9
27	15	1,780	196	1,760	87	336	188	134	41	8.4	2.8	2.2
28	15	2,170	255	1,020	91	501	156	119	39	7.4	2.8	3.6
29	14	1,080	274	658		358	148	148	39	7.0	2.5	4.0
30	13	658	164	499	- - - - -	315	156	148	37	7.4	2.5	2.8
31	13	- - - - -	172	499	- - - - -	274	- - - - -	148	- - - - -	7.0	2.2	- - - - -
Total	762	8,018	46,105	7,873	9,997	13,367	5,465	15,340	3,002	506.0	147.1	74.0
Mean	24.6	267	1,487	254	357	431	182	495	100	16.3	4.75	2.47
Max	82	2,170	11,500	1,760	2,000	1,450	255	3,260	220	34	9.2	4.5
Min	12	10	164	77	86	104	134	119	37	7.0	2.2	1.6
Cfsm	0.074	0.807	4.49	.767	1.08	1.30	0.550	1.50	0.302	0.049	0.014	0.0075
In.	0.09	0.90	5.18	.88	1.12	1.50	0.61	1.73	0.34	0.06	0.02	0.008

Cal yr 1966 : Total -- Mean - Max - Min - Cfsm - In. -
Wtr yr 1967 : Total 110,656.1 Mean 303 Max 11,500 Min 1.6 Cfsm 0.915 In. 12.44

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 1967. 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 power house 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.--40 years (1927-67), 10,100 cfs.

Extremes.--Maximum discharge during year, 68,100 cfs Dec. 13 (gage height, 23.41 ft); minimum, 1,080 cfs Oct. 8 (gage height, 3.34 ft).
1927-67: 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.--Record good. Water for municipal supply for Terre Haute diverted above gage, most of which is returned below.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,370	1,300	9,800	9,780	20,300	9,060	27,800	10,100	8,520	4,280	2,430	1,640
2	1,370	1,160	10,000	9,780	21,500	8,700	27,500	9,960	7,980	4,120	2,430	1,780
3	1,230	1,230	8,400	9,600	27,200	7,980	26,900	9,960	7,440	3,960	2,430	1,640
4	1,160	1,230	6,670	9,060	28,100	8,160	25,400	9,600	6,900	3,960	3,180	1,500
5	1,160	1,230	7,050	8,520	28,700	8,700	22,700	9,240	6,540	3,640	2,880	1,500
6	1,100	1,300	9,600	7,800	29,000	12,500	21,100	8,880	6,200	3,640	2,730	1,500
7	1,100	1,370	14,800	7,440	28,700	13,900	20,900	17,000	5,720	3,480	2,430	1,570
8	1,100	1,510	31,700	7,800	23,300	13,700	21,500	27,500	5,400	3,330	2,280	1,570
9	1,100	1,650	49,000	7,800	17,100	13,300	21,500	28,100	8,160	3,180	2,280	1,570
10	1,160	2,420	63,700	7,440	14,100	14,100	20,900	28,700	10,500	3,330	2,430	1,710
11	1,160	3,040	65,900	7,080	12,700	15,300	19,700	28,700	9,600	3,180	1,990	2,130
12	1,160	4,120	67,000	6,720	11,900	18,100	18,700	28,700	7,620	3,030	1,780	2,130
13	1,230	6,480	68,000	6,540	10,700	21,700	17,900	28,700	6,540	3,030	1,710	2,130
14	1,160	7,240	65,000	6,360	9,960	24,500	15,500	30,100	6,200	2,730	1,640	2,130
15	1,230	6,290	60,000	6,200	9,600	25,700	17,500	31,300	6,040	2,730	1,570	2,280
16	1,300	5,560	54,600	5,880	10,900	26,300	20,900	30,500	5,560	2,580	1,640	2,280
17	1,230	4,660	49,700	5,400	15,500	26,300	23,000	26,300	5,240	2,580	1,640	2,280
18	1,300	3,940	44,900	4,120	20,300	25,100	22,100	20,900	4,920	2,730	1,640	2,280
19	1,370	3,400	41,300	3,330	21,900	22,400	19,900	17,700	5,240	2,880	1,710	2,430
20	1,440	3,040	38,000	3,480	20,700	21,500	17,300	15,300	5,880	2,430	1,710	2,430
21	1,370	2,700	34,500	4,120	17,300	25,100	14,900	13,700	5,560	2,430	1,710	2,280
22	1,370	2,560	31,700	4,600	14,500	26,900	13,700	12,100	5,400	2,580	1,990	2,280
23	1,440	2,420	28,700	5,720	13,100	28,700	12,900	10,900	5,080	2,730	1,920	2,280
24	1,300	2,420	26,300	5,720	11,300	30,100	12,500	10,500	4,920	2,730	1,850	2,130
25	1,300	2,420	23,000	5,560	8,520	31,700	12,300	9,600	4,760	2,730	1,780	1,990
26	1,370	2,420	20,100	6,040	6,720	32,900	12,300	9,060	4,600	2,580	1,780	1,990
27	1,300	4,990	18,100	13,900	6,540	33,700	12,300	8,520	4,280	2,580	1,850	1,990
28	1,300	10,000	15,100	20,700	7,080	34,100	11,700	8,160	4,280	3,180	1,850	1,990
29	1,300	10,000	12,500	21,700		33,700	10,900	8,520	4,120	3,180	1,850	1,990
30	1,300	9,600	11,500	22,100	- - - - -	30,900	10,500	8,340	4,280	2,730	1,990	2,130
31	1,230	- - - - -	10,500	21,700	- - - - -	28,700	- - - - -	8,340	- - - - -	2,580	1,710	- - - - -
Total	39,010	111,700	997,120	271,990	467,220	673,500	553,700	524,980	183,480	94,850	62,810	59,530
Mean	1,258	3,723	32,160	8,774	16,690	21,730	18,460	16,940	6,116	3,060	2,026	1,984
Max	1,440	10,000	68,000	22,100	29,000	34,100	27,800	31,300	10,500	4,280	3,180	2,430
Min	1,100	1,160	6,670	3,330	6,540	7,980	10,500	8,160	4,120	2,430	1,570	1,500
Cfsm	.103	.305	2.64	.719	1.37	1.78	1.51	1.39	.501	.251	.166	.163
In.	.12	.34	3.04	.83	1.43	2.05	1.68	1.60	.56	.29	.19	.18

Cal yr 1966 : Total 2,704,130 Mean 7,409 Max 68,000 Min 910 Cfsm .607 In. 8.26
Wtr yr 1967 : Total 4,039,890 Mean 11,070 Max 68,000 Min 1,100 Cfsm .907 In. 12.31

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 1967. 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.--29 years, 10,840 cfs.

Extremes.--Maximum discharge during year, 77,800 cfs Dec. 15 (gage height, 21.69 ft); minimum daily, 1,420 cfs Oct. 11, 12; minimum gage height observed, 0.94 ft Oct. 11, 12.
1938-67: 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.--Record good.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,790	1,600	9,640	10,800	21,900	7,150	33,500	11,600	10,000	4,520	2,750	1,860
2	1,790	1,600	9,820	10,200	24,300	8,650	31,600	11,000	9,250	4,520	2,630	1,760
3	1,690	1,690	9,640	9,800	27,600	8,500	30,400	10,400	8,200	4,260	2,630	1,860
4	1,690	1,690	8,200	9,600	27,900	8,200	29,200	10,000	7,450	4,260	2,870	1,760
5	1,600	1,690	7,540	8,950	28,200	8,800	27,900	9,600	7,000	4,130	3,230	1,660
6	1,600	1,690	10,400	8,500	28,500	15,000	26,100	9,250	6,550	4,000	2,990	1,660
7	1,510	1,690	15,200	8,200	28,800	16,600	23,700	16,000	6,250	3,870	2,870	1,760
8	1,510	1,790	26,000	8,200	28,500	16,200	22,800	25,500	6,250	3,740	2,630	1,760
9	1,510	1,890	36,000	8,050	25,200	15,000	22,800	27,300	6,850	3,610	2,630	1,760
10	1,510	2,670	42,500	7,750	18,800	14,400	22,500	27,600	9,600	3,610	2,510	1,760
11	1,420	4,320	50,800	7,450	15,200	15,200	21,600	28,200	11,200	3,610	2,510	1,760
12	1,420	3,760	63,300	7,000	13,200	16,800	20,400	28,800	9,400	3,480	2,280	1,960
13	1,510	4,320	71,400	6,850	12,000	20,000	19,600	29,200	7,900	3,230	2,060	2,170
14	1,510	6,100	76,500	6,550	10,600	22,500	18,400	31,200	7,000	3,230	1,960	2,170
15	1,510	6,740	77,800	6,400	9,800	25,500	17,400	33,000	6,700	3,110	1,960	2,170
16	1,600	6,100	75,200	6,250	9,600	26,100	19,000	33,000	6,400	2,990	1,960	2,170
17	1,600	5,480	71,400	5,800	11,600	26,400	21,900	33,000	5,950	2,990	1,960	2,280
18	1,890	4,740	65,700	5,210	16,600	26,400	24,300	31,600	5,500	2,990	1,960	2,390
19	1,990	4,180	60,800	4,260	20,200	26,100	23,400	27,000	5,210	2,990	2,390	2,390
20	1,890	3,760	55,400	3,870	21,400	26,100	20,600	20,600	5,800	3,350	2,060	2,390
21	1,790	3,340	50,000	3,870	20,200	30,400	18,000	17,000	6,100	2,990	1,960	2,390
22	1,690	3,200	45,200	4,260	17,000	31,200	17,600	14,200	6,100	2,870	1,960	2,390
23	1,510	3,060	40,400	4,790	14,400	30,400	15,400	12,400	5,800	2,750	2,060	2,390
24	1,690	2,800	35,900	5,650	12,600	30,000	14,200	11,200	5,350	3,230	2,060	2,390
25	1,890	2,800	32,000	5,800	10,400	30,400	13,600	10,400	5,210	3,110	1,960	2,170
26	1,790	2,930	27,900	5,950	7,750	30,800	13,600	9,400	5,070	2,990	1,960	2,060
27	1,690	5,330	23,100	10,800	6,400	32,000	13,400	8,950	4,790	2,750	1,960	2,060
28	1,690	12,200	19,800	17,800	6,400	33,500	12,800	8,500	4,650	2,990	1,960	2,060
29	1,690	12,000	16,600	20,800		35,200	11,800	8,200	4,520	3,350	1,960	2,060
30	1,600	10,400	13,800	21,900	- - - - -	35,900	11,600	8,650	4,520	3,230	1,960	2,060
31	1,600	- - - - -	12,200	22,500	- - - - -	35,200	- - - - -	8,500	- - - - -	2,870	2,060	- - - - -
Total	51,170	125,560	1,160,140	273,810	495,050	704,600	619,100	571,250	200,570	105,620	70,700	61,480
Mean	1,651	4,185	37,420	8,833	17,680	22,730	20,640	18,430	6,686	3,407	2,281	2,049
Max	1,990	12,200	77,800	22,500	28,800	35,900	33,500	33,000	11,200	4,520	3,230	2,390
Min	1,420	1,600	7,540	3,870	6,400	7,150	11,600	8,200	4,520	2,750	1,960	1,660
Cfsm	.126	.319	2.86	.674	1.35	1.74	1.58	1.41	.510	.260	.174	.156
In.	.15	.36	3.30	.78	1.41	2.01	1.76	1.63	.57	.30	.20	.17

Cal yr 1966 : Total 2,997,490 Mean 8,212 Max 77,800 Min 1180 Cfsm .627 In. 8.54
Wtr yr 1967 : Total 4,439,050 Mean 12,160 Max 77,800 Min 1420 Cfsm .928 In. 12.64

3-3421. Busseron Creek near Hymera, Ind.

Location.--Lat 39°12'54", long 87°18'41", in NW¼ sec. 21, T. 9 N., R. 8 W., on right bank at downstream side of county road 900 North bridge, 1.9 miles northwest of Hymera.

Drainage area.--16.7 sq mi.

Records available.--June 1966 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 480.00 ft above mean sea level, datum of 1929 (U.S. Soil Conservation Service bench mark).

Extremes.--Maximum discharge during the year, 1,280 cfs Dec. 8 (gage height, 17.42 ft); no flow many days.
1966-67: Maximum discharge, that of Dec. 8, 1966; no flow at times most years.

Remarks.--Record poor. Flow affected at times by Soil Conservation Service flood water retarding structures.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.9	0	9.5	3.7	38	4.1	14	82	23	.24	.09	.10
2	1.2	0	7.8	3.5	162	4.5	12	74	7.9	.21	.08	.10
3	.80	0	6.9	2.5	73	5.4	12	52	4.9	.15	.11	.10
4	.50	0	6.0	3.5	58	14	11	39	3.4	.18	.11	.10
5	.40	.10	42	1.9	45	164	11	31	2.4	.16	.05	.10
6	.20	.10	54	2.8	33	200	9.8	68	2.1	.15	.04	.10
7	.20	.10	200	23	21	66	9.0	234	1.8	.14	.04	.11
8	.10	.70	583	8.1	17	35	8.8	87	204	.13	.09	.14
9	.20	.50	367	6.8	14	22	8.8	65	97	.17	.17	.26
10	.10	23	312	6.2	12	19	10	48	173	.19	.08	.18
11	.10	11	82	5.6	11	23	8.6	36	87	.17	0	.09
12	0	6.9	58	5.0	9.6	27	8.3	25	60	.14	0	.06
13	0	4.2	42	4.6	9.0	22	9.6	19	45	.13	0	.05
14	0	2.9	31	4.3	8.2	20	9.6	97	30	.12	0	.04
15	.50	1.9	24	4.0	7.6	100	8.8	62	18	.12	0	.03
16	.20	1.6	19	3.6	7.0	32	8.4	40	11	.11	0	.05
17	.10	1.1	17	3.3	6.4	17	31	57	6.0	.11	0	.05
18	.20	.80	15	2.9	5.8	15	17	30	2.9	.12	.69	.10
19	.20	.60	13	2.6	5.2	12	13	18	1.9	.13	.95	.17
20	.10	.60	10	2.2	4.8	130	12	12	1.4	.14	1.2	.17
21	.10	.80	6.3	1.9	4.5	210	107	9.7	1.5	.15	.66	.24
22	.10	.60	3.9	1.8	4.3	85	77	8.5	1.3	.13	.43	.22
23	0	.50	3.1	2.8	4.1	47	43	7.8	.84	.11	.31	.11
24	0	.40	2.8	4.1	4.0	29	36	7.2	.65	.26	.26	.06
25	0	1.2	2.4	6.9	3.9	25	24	6.7	.53	.45	.22	0
26	0	18	2.2	51	3.9	21	26	6.4	.44	.29	.32	0
27	0	69	2.2	91	3.9	23	19	6.3	.39	.20	.50	.06
28	0	52	17	46	4.0	29	15	6.3	.37	.35	.25	.11
29	0	23	13	35	------	24	13	6.5	.30	.15	.17	.10
30	0	14	9.9	27	------	20	134	16	.26	.10	.12	.05
31	0	------	6.3	23	------	16	------	11	------	.11	.11	------
TOTAL	7.20	235.60	1,968.3	390.6	580.2	1,461.0	726.7	1,268.4	789.28	5.35	7.05	3.05
MEAN	.23	7.85	63.5	12.6	20.7	47.1	24.2	40.9	26.3	.17	.23	.10
MAX	1.9	69	583	91	162	210	134	234	204	.45	1.2	.26
MIN	0	0	2.2	1.8	3.9	4.1	8.3	6.3	.26	.10	0	0
CFSM	.01	.47	3.80	.75	1.24	2.82	1.45	2.45	1.57	.01	.01	.006
IN.	.01	.52	4.38	.86	1.29	3.25	1.62	2.82	1.75	.01	.01	.007

CAL YR 1966: TOTAL - MEAN - MAX - MIN - CFSM - IN -
WAT YR 1967: TOTAL 7,442.73 MEAN 20.4 MAX 583 MIN 0 CFSM 1.22 IN 16.53

3-3421.5 West Fork Busseron Creek near Hymera, Ind.

Location.--Lat 39°11'10", long 87°19'44", in NE¼NW¼NW¼ sec. 32, T. 9 N., R. 8 W., on right bank of downstream side of bridge on State Highway 48, 1.5 miles west of Hymera, and 3.7 miles east of U.S. Highway 41.

Drainage area.--14.4 sq mi.

Records available.--October 1966 to September 1967.

Gage.--Digital water stage recorder. Datum of gage is 476.00 ft above mean sea level, datum of 1929. (Indiana State Highway bench mark).

Extremes.--Maximum discharge during year, 1,130 cfs Dec. 8 (gage height, 12.12 ft); no flow Nov. 2-7 and Dec. 2, 3.

Remarks.--Record poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	.80	.10	.60	4.7	35	2.8	6.0	40	24	.15	.22	.04
2	.40	0	0	3.2	223	9.6	5.3	29	7.8	.14	.19	.04
3	.20	0	0	2.6	32	13	5.6	14	5.6	.12	.42	.04
4	.20	0	4.5	2.2	18	10	5.8	12	4.9	.12	.15	.04
5	.10	0	74	5.1	8.6	204	5.3	9.9	3.9	.11	.11	.04
6	.10	0	78	5.3	4.4	188	4.5	40	3.4	.10	.10	.04
7	.20	0	260	28	3.1	38	3.5	244	3.2	.10	.10	.04
8	.20	.60	503	1.7	2.7	25	3.5	29	289	.09	.12	.06
9	.20	.10	249	1.4	2.4	19	3.4	16	58	.08	.17	.07
10	.20	37	245	1.2	2.2	15	3.4	11	158	.08	.12	.06
11	.20	6.2	35	1.1	2.0	11	3.3	9.9	41	.08	.12	.05
12	.10	3.9	21	1.0	1.8	27	3.3	7.4	17	.08	.11	.05
13	.10	3.5	16	1.0	1.6	15	3.3	7.7	11	.07	.11	.05
14	.40	.90	13	1.0	1.5	15	3.4	104	9.3	.07	.10	.05
15	1.5	.50	7.8	.90	1.4	107	3.3	38	8.6	.07	.10	.04
16	.80	.30	6.0	.90	1.4	12	3.3	17	7.3	.06	.10	.04
17	.40	.30	4.8	.90	1.3	11	12	32	6.5	.07	.10	.04
18	.20	.30	3.8	.90	1.2	6.8	7.2	12	5.4	.08	1.9	.06
19	.10	.20	3.1	.90	1.2	6.2	5.3	8.8	5.4	.08	1.3	.06
20	.10	.30	2.6	.90	1.1	284	12	7.0	5.2	.08	.07	.05
21	.10	.20	2.3	.90	1.1	107	61	7.0	5.3	.07	.06	.09
22	.10	.10	2.0	.90	1.1	22	38	5.7	4.9	.07	.05	.05
23	.10	.10	1.8	1.8	1.0	15	23	4.5	4.4	.07	.05	.05
24	.10	.10	1.7	5.8	1.0	13	17	4.8	2.8	.11	.04	.05
25	.10	.30	1.6	12	1.2	11	14	4.6	.67	.52	.05	.05
26	.10	19	1.5	56	1.2	9.4	27	4.4	.50	.43	.06	.05
27	.10	140	3.0	101	1.4	8.3	17	4.1	.40	.41	.05	.05
28	.10	66	27	17	2.1	17	13	3.7	.30	.37	.04	.05
29	.10	12	39	12	------	13	12	4.6	.16	.35	.05	.05
30	.10	3.0	6.1	11	------	7.8	109	8.3	.16	.25	.05	.05
31	.10	------	5.2	10	------	6.5	------	9.9	------	.22	.04	------
TOTAL	7.60	295.00	1,618.40	293.30	356.0	1,249.4	433.7	750.3	694.09	4.70	6.25	1.50
MEAN	.25	9.83	52.2	9.46	12.7	40.3	14.5	24.2	23.1	.15	.20	.050
MAX	1.5	140	503	101	223	284	109	244	289	.52	1.9	.09
MIN	.10	0	0	.90	1.0	2.8	3.3	3.7	.16	.06	.04	.04
CFSM	.02	.68	3.63	.66	.88	2.80	1.00	1.68	1.61	.01	.01	.003
IN.	.02	.76	4.18	.76	.92	3.23	1.12	1.94	1.79	.01	.02	.004

CAL YR 1966: TOTAL MEAN MAX MIN CFSM IN
WAT YR 1967: TOTAL 5,710.24 MEAN 15.6 MAX 503 MIN 0 CFSM 1.09 IN 14.75

3-3422.5 Mud Creek near Dugger, Ind.

Location.--Lat 39°06'28", long 87°16'42", in SE¼NE¼ sec. 27, T. 8 N., R. 8 W., on right bank of downstream side of bridge on road 700 East, 0.6 mile north of road 100 North, 1.7 miles upstream from mouth, and 2.5 miles northwest of Dugger.

Drainage area.--11.9 sq mi.

Records available.--June 1966 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 466.41 ft above mean sea level, datum of 1929 (U.S. Soil Conservation Service bench mark).

Extremes.--Maximum discharge during year, 642 cfs Dec. 8 (gage height, 12.05 ft); minimum, 0.67 cfs Nov. 4; minimum gage height, 6.03 ft Aug. 11-18.
1966-67: Maximum discharge, that of Dec. 8, 1966; minimum, that of Nov. 4, 1966.

Remarks.--Record fair. Flow affected at times by strip-mined area.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.7	1.2	10	10	9.8	8.6	11	74	146	3.6	2.8	1.9
2	2.3	1.2	9.7	9.4	63	9.2	10	50	25	3.3	2.8	1.9
3	1.8	1.3	14	8.6	25	8.9	13	22	16	3.3	5.2	2.1
4	1.6	1.0	12	9.0	16	8.8	10	16	13	3.1	3.3	1.9
5	1.5	1.3	31	8.0	13	26	9.7	14	11	3.1	2.6	1.9
6	1.3	1.2	37	8.0	9.8	104	9.2	16	9.0	3.1	2.3	1.9
7	1.2	1.9	111	19	9.4	23	8.5	43	8.0	3.1	2.3	2.0
8	1.2	13	269	9.8	9.1	15	8.2	20	19	3.1	2.6	2.1
9	1.8	6.2	126	8.0	8.8	13	8.3	14	11	3.1	6.1	3.1
10	1.4	45	141	8.0	8.4	12	10	12	9.0	3.6	2.3	1.9
11	1.2	6.7	39	14	7.9	11	8.1	11	8.0	3.1	1.9	1.8
12	1.2	4.6	24	11	7.8	16	8.0	9.9	6.1	2.8	1.7	1.9
13	1.1	3.5	19	8.0	7.5	13	9.4	9.9	5.6	2.8	1.7	1.9
14	1.1	3.2	18	8.4	7.8	12	8.9	67	5.2	2.6	1.7	1.9
15	14	2.6	15	8.0	8.1	59	8.1	54	4.8	2.6	1.7	1.9
16	3.7	2.6	14	7.6	7.5	17	7.8	24	4.4	2.6	1.7	1.9
17	2.2	2.4	13	7.3	7.1	13	24	30	4.0	2.6	1.7	1.9
18	2.2	2.2	13	7.0	7.0	11	11	17	4.0	2.6	27	1.9
19	2.2	1.9	12	7.6	6.9	10	8.7	13	3.6	2.6	31	2.0
20	1.9	1.9	12	8.8	6.8	163	8.3	11	4.0	2.8	5.2	1.9
21	1.6	1.9	11	9.0	6.7	93	135	9.9	33	2.6	3.6	3.9
22	1.8	1.9	9.7	8.4	6.6	33	89	9.4	17	2.6	3.1	2.6
23	1.6	1.9	9.4	8.6	6.5	22	29	8.8	6.1	2.6	2.8	2.0
24	1.4	1.9	9.1	8.6	6.5	16	23	8.5	5.2	2.7	2.6	1.6
25	1.3	2.6	9.7	9.0	6.6	14	17	8.3	4.4	2.8	2.6	1.4
26	1.4	50	10	17	6.6	13	23	8.0	4.0	3.1	6.5	1.5
27	1.4	346	11	28	6.6	13	16	7.7	4.0	3.6	4.0	1.8
28	1.4	43	25	12	7.6	16	14	8.2	4.4	3.6	2.6	2.4
29	1.3	17	14	10	------	13	13	8.7	4.0	3.1	2.3	2.0
30	1.4	12	14	9.4	------	12	98	99	3.6	2.8	2.3	2.1
31	1.6	------	9.7	9.4	------	11	------	47	------	2.8	2.1	------
TOTAL	64.8	583.1	1,072.3	314.9	300.4	809.5	657.2	751.3	402.4	91.8	142.1	61.0
MEAN	2.09	19.4	34.6	10.2	10.7	26.1	21.9	24.2	13.4	2.96	4.58	2.03
MAX	14	346	269	28	63	163	135	99	146	3.6	31	3.9
MIN	1.1	1.0	9.1	7.0	6.5	8.8	7.8	7.7	3.6	2.6	1.7	1.4
CFSM	.18	1.63	2.91	.85	0.90	2.19	1.84	2.04	1.13	.25	.39	.17
IN.	.20	1.82	3.35	.98	.94	2.52	2.05	2.35	1.26	.29	.44	.19

CAL YR 1966: TOTAL - MEAN - MAX - MIN - CFSM - IN -
WAT YR 1967: TOTAL 5,250.8 MEAN 14.4 MAX 346 MIN 1.0 CFSM 1.21 IN 16.39

3-3423. Busseron Creek near Sullivan, Ind.

Location.--Lat 39°04'33", long 87°23'11", in SE¼NW¼ sec. 2, T. 7 N., R. 9 W., on left upstream bank of State Road 54 bridge, 1.6 miles east of intersections of State Roads 41 and 54, 1.5 miles southeast of Sullivan.

Drainage area.--138 sq mi.

Records available.--June 1966 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 440.00 ft above mean sea level, datum of 1929 (Indiana State Highway Commission bench mark).

Extremes.--Maximum discharge during year, 3,950 cfs Dec. 9 (gage height, 14.87 ft); minimum 2.0 cfs Oct. 31, minimum gage height, 1.92 ft Aug. 13-18.
1966-67: Maximum discharge, that of Dec. 9, 1966; minimum discharge 0.8 cfs Sept. 8, 9, 1966 (gage height, 1.82 ft).

Remarks.--Record fair. Flow affected at times by strip mined areas and Soil Conservation Service flood water retarding structures.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	21	2.8	59	55	130	40	77	866	888	13	5.3	4.5
2	19	2.4	42	47	849	50	67	680	432	13	4.9	4.5
3	19	2.6	39	42	1,010	99	72	256	152	10	8.9	4.3
4	17	2.6	40	38	370	82	72	171	100	8.8	10	4.3
5	16	2.8	246	34	213	410	64	134	71	8.0	5.7	4.3
6	15	3.3	648	38	152	1,280	66	149	57	7.5	5.0	4.4
7	14	3.2	895	233	88	1,100	53	855	50	7.3	4.9	4.2
8	14	16	1,650	151	77	455	44	896	224	7.3	4.9	4.5
9	15	21	3,330	77	73	288	45	310	1,120	6.9	15	6.3
10	14	159	2,680	66	64	225	54	186	778	8.2	6.1	5.1
11	13	112	1,670	60	59	181	50	150	536	7.4	4.8	4.1
12	10	40	696	56	53	225	41	113	219	6.8	4.2	3.8
13	10	25	344	52	51	227	52	94	138	5.5	3.8	4.2
14	9.8	19	215	47	53	163	65	671	107	5.3	3.9	3.9
15	20	16	182	43	56	839	58	732	85	5.3	3.8	4.0
16	10	13	156	38	54	375	46	328	64	5.1	3.8	3.8
17	6.6	12	127	36	46	185	138	419	47	5.3	3.8	4.0
18	5.5	10	110	35	43	126	132	309	38	5.4	18	4.8
19	5.1	9.0	99	35	40	101	73	165	31	6.0	273	5.1
20	4.3	8.2	87	35	38	578	56	111	26	6.2	40	4.5
21	3.7	7.7	74	36	36	1,680	311	86	67	6.8	18	11
22	3.8	7.5	64	38	34	1,420	1,540	70	53	6.0	12	5.0
23	3.6	7.6	55	43	32	437	995	58	31	4.8	10	4.0
24	3.2	7.1	50	50	31	256	426	68	25	9.0	7.9	3.9
25	3.0	8.0	53	92	30	180	222	59	21	11	7.2	3.6
26	2.8	12	50	241	30	149	234	50	18	8.0	7.7	3.6
27	2.8	627	43	892	31	132	198	41	16	6.8	15	4.0
28	3.0	799	173	353	33	159	135	34	15	10	7.0	4.4
29	2.8	222	203	180	------	172	104	34	15	7.3	6.0	3.8
30	2.3	93	99	145	------	124	384	130	14	6.2	5.5	3.5
31	2.5	------	71	124	------	96	------	362	------	5.9	4.8	------
TOTAL	291.8	2,270.8	14,250	3,412	3,776	11,834	5,874	8,587	5,438	230.5	530.9	135.4
MEAN	9.41	75.7	460	110	135	382	196	277	181	7.44	17.1	4.51
MAX	21	799	3,330	892	1,010	1,680	1,540	896	1,120	13	273	11
MIN	2.3	2.4	39	34	30	40	41	34	14	4.8	3.8	3.5
CFSM	.07	.55	3.33	.80	.98	2.77	1.42	2.01	1.31	.05	.12	.03
IN.	.08	.61	3.84	.92	1.02	3.19	1.58	2.31	1.47	.06	.14	.04

CAL YR 1966: TOTAL - MEAN - MAX - MIN - CFSM - IN -
WAT YR 1967: TOTAL 56,630.4 MEAN 155 MAX 3,330 MIN 2.3 CFSM 1.12 IN 15.26

3-3423.5 Buttermilk Creek near Paxton, Ind.

Location.--Lat 39°03'43", long 87°20'37", in SE¼NW¼ sec. 7, T. 7 N., R. 8 W., on left bank at downstream side of bridge, 3 miles northeast of Paxton.

Drainage area.--16.5 sq mi.

Records available.--June 1966 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 450.075 ft above mean sea level, datum of 1929 (U.S. Soil Conservation Service bench mark).

Extremes.--Maximum discharge during year, 403 cfs Dec. 8 (gage height, 12.98 ft); no flow Nov. 23, 24.
1966-67: Maximum discharge, 403 cfs Dec. 8, 1966 (gage height, 12.98 ft); minimum, no flow at times each year.

Remarks.--Record poor. Flow affected at times by strip mined areas.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.3	.10	2.6	11	18	4.4	7.6	111	237	2.7	1.0	.79
2	.60	.10	1.6	8.9	167	9.5	7.1	62	66	2.5	1.0	.72
3	.40	.30	1.7	7.4	52	9.1	34	21	38	2.2	5.7	.72
4	.30	.20	.89	11	27	7.6	17	15	26	1.9	2.1	.65
5	.20	.30	39	11	16	50	12	11	18	1.8	1.5	.60
6	.20	.30	68	6.9	6.7	160	9.5	14	13	1.7	1.1	.56
7	.20	.20	181	48	3.5	39	6.4	62	10	1.6	.85	.54
8	.20	2.2	221	12	2.9	18	5.3	24	73	1.6	.74	.61
9	.30	1.4	217	6.2	2.4	13	6.2	13	45	1.6	2.3	1.1
10	.30	12	204	4.5	2.1	9.4	28	8.9	62	1.7	1.5	.79
11	.30	1.5	53	3.3	1.9	8.0	12	9.1	35	1.5	1.1	.55
12	.20	.41	33	2.4	1.8	27	8.7	6.1	19	1.4	.80	.48
13	.20	.14	25	1.9	1.7	17	15	19	14	1.3	.62	.53
14	.20	.12	20	1.7	1.6	13	15	197	12	1.1	.51	.52
15	2.4	.08	17	1.5	1.6	102	11	121	15	1.1	.43	.52
16	.70	.06	15	1.3	1.5	26	8.1	38	11	.97	.37	.51
17	.30	.06	14	1.3	1.5	16	69	49	12	.98	.35	.52
18	.30	.04	12	1.2	1.4	11	20	34	12	1.0	27	.55
19	.30	.02	12	1.2	1.4	11	13	20	9.5	2.0	100	.64
20	.20	.01	11	1.2	1.4	200	9.7	13	7.8	1.8	10	.58
21	.20	.01	9.9	1.2	1.4	156	112	11	51	1.4	4.6	4.5
22	.10	.01	8.7	1.2	1.4	47	150	10	56	1.3	3.1	.63
23	.20	0	8.1	1.2	1.4	31	30	8.5	15	1.2	2.4	.29
24	.20	0	9.3	1.5	1.4	23	33	7.8	9.7	2.6	2.0	.23
25	.20	.04	8.7	9.9	1.4	18	14	7.2	7.4	1.6	1.8	.18
26	.20	14	8.5	65	1.4	15	41	6.5	5.9	1.3	15	.17
27	.10	116	7.8	89	1.4	14	18	5.9	4.7	1.3	7.1	.33
28	.10	44	50	26	2.5	20	11	5.9	4.0	1.6	2.0	.76
29	.10	8.7	19	20	------	16	8.3	7.2	3.4	1.3	1.5	.54
30	.10	4.1	15	19	------	12	100	79	2.7	1.1	1.3	.60
31	.10	------	10	17	------	8.9	------	47	------	1.2	.99	------
TOTAL	10.70	206.40	1,303.79	394.9	325.7	1,111.9	831.9	1,044.1	895.1	48.35	200.76	20.71
MEAN	.35	6.88	42.1	12.7	11.6	35.9	27.7	33.7	29.8	1.56	6.48	.69
MAX	2.4	116	221	89	167	200	150	197	237	2.7	100	4.5
MIN	.10	0	.89	1.2	1.4	4.4	5.3	5.9	2.7	.97	.35	.17
CFSM	.02	.42	2.55	.77	.70	2.18	1.68	2.04	1.81	.09	.39	.04
IN.	.02	.47	2.94	.89	.73	2.51	1.88	2.35	2.02	.11	.45	.05

CAL YR 1966: TOTAL - MEAN - MAX - MIN - CFSM - IN -
WAT YR 1967: TOTAL 6,394.04 MEAN 17.5 MAX 237 MIN 0 CFSM 1.06 IN 14.42

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 1967.

Gage.--Digital 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 and Nov. 8, 1950 to Aug. 15, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--24 years, 206 cfs.

Extremes.--Maximum discharge during year, 4,740 cfs Dec. 10 (gage height, 17.54 ft); minimum, 3.0 cfs Nov. 4 and 7; minimum gage height, 2.41 ft Oct. 21 and 22.
1943-67: 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.--Record good above 125 cfs, and poor below 125 cfs. Flow regulated at times by mining operations above gage.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	27	4.0	127	110	196	57	121	1,070	1,080	21	7.7	6.2
2	28	4.0	86	90	866	80	106	1,270	1,220	23	12	5.6
3	28	4.0	52	80	1,300	151	172	648	430	19	20	5.4
4	20	3.8	54	70	1,100	132	154	278	181	15	18	5.4
5	17	4.5	286	73	418	287	119	204	126	13	8.9	5.2
6	15	3.5	936	91	256	1,180	109	177	99	13	6.2	5.2
7	14	4.0	1,270	355	156	1,350	91	776	83	13	5.0	5.1
8	13	5.0	2,110	324	125	1,270	74	1,060	226	13	4.9	5.3
9	14	45	3,250	150	120	631	72	774	890	13	20	7.7
10	16	175	4,460	120	110	364	112	274	1,160	15	14	7.7
11	13	294	4,190	100	95	281	91	210	1,110	14	6.4	6.0
12	11	113	3,320	95	92	306	73	152	542	12	5.1	4.9
13	8.2	68	2,210	85	94	378	81	125	197	9.7	4.1	4.9
14	7.9	47	1,040	76	93	251	103	1,060	139	8.6	3.9	5.7
15	15	34	416	70	97	810	94	1,400	117	7.8	3.9	5.3
16	49	26	353	66	97	888	74	942	95	8.1	3.5	5.5
17	19	20	306	60	82	345	291	590	78	8.5	3.6	5.0
18	11	17	256	58	73	210	268	529	64	16	7.2	4.7
19	9.2	13	217	58	68	167	130	267	52	17	835	6.8
20	7.9	10	187	58	62	670	95	165	44	59	184	6.5
21	5.5	8.2	161	60	60	1,770	349	125	108	15	54	11
22	4.5	9.6	142	65	56	1,730	1,410	105	240	14	30	15
23	5.8	7.6	128	72	53	1,590	1,520	90	88	9.8	20	5.3
24	6.7	7.0	117	90	50	720	1,370	89	55	40	14	4.6
25	6.7	7.3	109	120	46	298	559	85	44	36	11	3.9
26	5.3	33	102	253	46	236	506	74	36	19	12	3.7
27	5.3	908	96	994	46	204	382	63	30	13	53	4.3
28	4.5	1,120	294	914	50	216	240	53	27	15	15	5.5
29	4.8	696	376	352	------	257	185	54	25	13	9.5	5.2
30	4.5	203	205	256	------	192	474	159	24	10	7.8	4.4
31	4.3	------	140	218	------	147	------	590	------	8.6	7.5	------
TOTAL	401.1	3,894.5	26,996	5,583	5,907	17,168	9,425	13,458	8,610	512.1	1,407.2	177.0
MEAN	12.9	130	871	180	211	554	314	434	287	16.5	45.4	5.90
MAX	49	1,120	4,460	994	1,300	1,770	1,520	1,400	1,220	59	835	15
MIN	4.3	3.5	52	58	46	57	72	53	24	7.8	3.5	3.7
CFSM	.06	.57	3.82	.79	.93	2.43	1.38	1.90	1.26	.07	.20	.03
IN.	.07	.64	4.40	.91	.96	2.80	1.54	2.20	1.40	.08	.23	.03

CAL YR 1966: TOTAL 63,652.50 MEAN 174 MAX 4,460 MIN .20 CFSM .76 IN 10.38
WAT YR 1967: TOTAL 93,538.9 MEAN 256 MAX 4,460 MIN 3.5 CFSM 1.12 IN 15.26

Peak discharge (base, 2,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1330	17.54	4,740				

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. 50 Business Route (Vigo St.) at Vincennes, Knox County, 4.8 miles downstream from Maria Creek, 5.8 miles upstream from Embarras River, and at mile 127.8.

Drainage area.--13,700 sq mi, approximately.

Records available.--October 1929 to September 1967. Prior to December 1929 monthly discharge only, published in WSP 1305. Gage-height records collected at same site since November 1904 and intermittent records since 1887 and flood peaks in 1867 and 1883 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 graphic water-stage recorder 4.7 miles upstream from base gage at datum 0.80 ft lower.

Average discharge.--38 years, 11,120 cfs.

Extremes.--Maximum discharge during year, 62,300 cfs Dec. 16; maximum gage height, 22.40 ft Dec. 16; minimum daily discharge, 1,340 cfs Oct. 13, 14; minimum gage height, 2.14 ft Oct. 14.
1929-67: 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.--Record good.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,940	1,640	10,900	14,300	22,600	8,160	33,500	14,800	11,400	4,930	3,080	2,340
2	1,840	1,640	10,200	13,200	23,800	9,150	32,500	15,300	13,500	5,150	2,890	2,080
3	1,840	1,640	10,400	12,700	26,700	10,600	31,000	14,000	12,200	4,930	2,700	2,000
4	1,840	1,540	9,400	12,200	27,500	10,200	30,100	12,700	9,900	4,720	3,280	2,080
5	1,640	1,540	8,160	11,700	27,200	10,200	29,100	11,900	8,900	4,720	3,280	2,000
6	1,540	1,540	10,900	10,900	27,500	15,000	28,000	11,400	8,160	4,510	3,480	1,840
7	1,540	1,540	14,000	10,400	27,200	18,600	25,800	13,200	7,680	4,300	3,280	1,840
8	1,440	1,540	21,800	11,200	27,200	18,500	24,500	23,800	7,200	4,300	3,080	1,840
9	1,440	1,840	30,000	10,400	26,100	17,500	24,100	27,200	8,160	4,090	2,890	1,920
10	1,440	2,140	37,300	10,200	22,100	16,300	24,000	27,500	9,650	4,090	2,890	1,920
11	1,440	4,090	43,200	9,650	18,100	16,600	23,500	28,100	13,800	4,090	2,700	1,920
12	1,440	4,520	49,600	8,900	17,200	17,400	22,700	28,200	13,500	4,090	2,700	2,000
13	1,340	4,090	55,600	8,650	15,100	20,100	21,400	28,700	10,600	3,680	2,520	2,340
14	1,340	5,400	59,800	8,400	13,500	22,400	21,200	30,500	8,900	3,480	2,170	2,340
15	1,440	6,990	61,400	8,160	12,500	24,600	20,300	32,800	8,400	3,480	2,170	2,340
16	1,640	6,760	62,200	7,920	11,900	26,400	19,200	33,400	7,680	3,280	2,080	2,520
17	1,740	6,300	61,300	7,680	11,900	26,400	22,200	33,000	7,200	3,280	2,080	2,520
18	1,740	5,620	58,100	6,970	15,000	26,400	24,000	32,700	6,510	3,480	2,080	2,520
19	1,640	4,960	54,500	6,510	19,400	26,300	25,000	30,500	6,280	3,280	2,890	2,520
20	1,640	4,300	50,300	5,150	21,800	26,600	23,700	26,300	6,050	3,680	3,480	2,520
21	1,640	3,880	46,700	4,720	21,700	29,600	22,200	20,400	6,740	3,680	2,520	2,700
22	1,740	3,670	42,400	4,930	19,200	31,200	21,200	17,400	7,680	3,280	2,170	2,700
23	1,640	3,460	38,900	5,590	16,100	31,300	20,900	16,100	7,200	3,080	2,080	2,520
24	1,640	3,250	36,000	6,280	15,600	30,600	18,900	14,300	6,510	3,280	2,340	2,700
25	1,740	3,040	32,200	6,970	13,500	30,300	17,200	13,200	6,050	3,880	2,340	2,520
26	1,640	3,040	29,300	6,970	11,700	30,300	16,400	12,200	5,820	3,480	2,170	2,340
27	1,640	4,300	25,700	9,650	9,650	30,600	16,400	11,200	5,590	3,280	2,170	2,340
28	1,640	10,800	22,700	17,300	7,920	31,400	15,600	10,400	5,370	3,080	2,170	2,340
29	1,640	13,800	20,000	20,400		32,800	14,800	9,900	5,150	3,480	2,170	2,340
30	1,640	12,200	16,400	21,800	- - - - -	33,400	13,800	9,900	5,150	3,680	2,170	2,170
31	1,640	- - - - -	16,100	22,300	- - - - -	34,100	- - - - -	10,600	- - - - -	3,480	2,170	- - - - -
Total	50,140	131,070	1,045,460	322,100	529,670	713,010	683,200	621,600	246,930	119,240	80,190	68,070
Mean	1,617	4,369	33,720	10,390	18,920	23,000	22,770	20,050	8,231	3,846	2,587	2,269
Max	1,940	13,800	62,200	22,300	27,500	34,100	33,500	33,400	13,800	5,150	3,480	2,700
Min	1,340	1,540	8,160	4,720	7,920	8,160	13,800	9,900	5,150	3,080	2,080	1,840
Cfsm	.118	.319	2.46	.758	1.38	1.68	1.66	1.46	.601	.281	.189	.166
In.	.14	.36	2.84	.87	1.44	1.94	1.85	1.68	.67	.32	.22	.19

Cal yr 1966: Total 3,047,800 Mean 8,350 Max 62,200 Min 1240 Cfsm .609 In. 8.29
Wtr yr 1967: Total 4,610,680 Mean12,630 Max 62,200 Min 1340 Cfsm .922 In.12.52

3-3455. Embarras 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 1967. Prior to October 1963, published as Embarrass River at Ste. Marie.

Gage.--Digital water-stage recorder. Datum of gage is 445.75 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark). Prior to June 29, 1940, chain gage and June 29, 1940, to Jan. 24, 1967, graphic water-stage recorder at same site at datum 1.00 ft higher.

Average discharge.--56 years, 1,168 cfs.

Extremes.--Maximum discharge during year, 19,200 cfs Dec. 12 (gage height, 20.64 ft); minimum daily, 28 cfs Nov. 4, 6, 7.
1909-12, 1914-67: Maximum discharge, 44,800 cfs Jan. 4, 1950 (gage height, 25.95 ft, present datum), from rating curve extended above 29,000 cfs; maximum gage height, 26.54 ft, present datum, June 30, 1957; minimum discharge, 1 cfs Oct. 5-9, 1914.

Remarks.--Records good except those for winter periods, which are poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	76	29	1,350	707	3,340	400	1,250	711	1,280	316	152	67
2	69	29	1,240	656	5,100	450	1,140	749	1,810	300	136	59
3	64	29	1,040	620	5,550	523	1,070	776	1,250	281	147	54
4	63	28	777	588	5,830	630	1,050	630	1,100	264	445	52
5	57	29	680	550	5,400	811	950	570	984	246	438	50
6	53	28	1,120	526	4,750	3,790	872	559	858	234	230	49
7	51	28	2,200	659	4,000	4,340	814	2,020	763	224	177	47
8	48	31	4,270	704	3,170	3,280	758	4,900	699	215	158	47
9	45	37	6,340	626	2,370	2,700	714	6,170	642	212	183	49
10	42	141	7,220	534	2,120	1,940	697	6,730	971	445	180	48
11	39	342	11,600	460	1,820	1,880	669	5,650	949	1,010	186	46
12	37	327	18,800	458	1,450	1,790	622	4,000	1,110	378	154	45
13	34	193	16,000	410	1,210	1,960	585	3,160	2,320	247	130	45
14	34	142	12,800	380	1,080	1,860	589	4,320	2,230	203	117	44
15	36	127	10,300	350	1,000	2,440	973	5,840	1,170	183	108	42
16	41	127	8,460	300	931	1,920	1,080	5,920	1,010	170	102	42
17	36	117	5,800	270	866	1,500	1,080	4,020	877	157	95	41
18	31	104	2,890	240	795	1,290	1,540	3,060	749	139	97	43
19	33	96	2,280	220	700	1,120	1,130	2,050	649	125	617	45
20	36	89	1,990	200	600	2,290	939	1,670	571	122	552	40
21	34	85	1,780	200	530	6,140	879	1,420	537	129	199	48
22	33	80	1,580	200	470	7,430	1,870	1,220	612	215	140	47
23	33	76	1,420	210	410	8,260	1,820	1,070	649	141	119	46
24	33	74	1,280	250	370	5,320	1,150	952	533	160	101	44
25	31	70	1,120	363	350	3,240	1,000	868	539	267	90	45
26	32	70	1,020	477	350	2,680	932	798	493	985	88	42
27	32	425	924	1,820	350	2,240	888	731	417	534	95	43
28	31	1,810	924	3,280	350	1,990	811	671	378	319	122	45
29	30	1,940	948	2,740		1,740	727	632	351	251	89	49
30	30	1,410	872	2,710	- - - - -	1,530	745	962	332	203	65	45
31	29	- - - - -	767	2,910	- - - - -	1,380	- - - - -	1,070	- - - - -	176	64	- - - - -
Total	1,273	8,113	129,792	24,618	58,262	78,864	29,344	73,899	26,833	8,851	5,576	1,409
Mean	41.1	270	4,187	794	2,081	2,544	978	2,384	894	286	180	47.0
Max	76	1,940	18,800	3,280	6,830	8,260	1,870	6,730	2,320	1,010	617	67
Min	29	28	680	200	350	400	585	559	332	122	64	40
Cfsm	.03	.18	2.77	.52	1.38	1.68	.65	1.58	.59	.19	.12	.03
In.	.03	.20	3.19	.61	1.43	1.94	.72	1.82	.66	.22	.14	.03

Cal yr 1966 : Total 305,056 Mean 836 Max 18,800 Min 28 Cfsm 0.55 In. 7.50
Wtr yr 1967 : Total 446,834 Mean 1,224 Max 18,800 Min 28 Cfsm 0.81 In. 10.98

Peak discharge (base, 6,500 cfs).--Dec.12 (1000) 20.64 ft, 19,200 cfs.

3-3460. North Fork Embarras 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, 0.8 mile upstream from Illinois Central Railroad bridge, 2 miles west of Oblong, and 8.5 miles upstream from mouth.

Drainage area.--319 sq mi.

Records available.--October 1940 to September 1967. Prior to October 1963, published as North Fork Embarrass River near Oblong.

Gage.--Digital water-stage recorder. Datum of gage is 456.19 ft above mean sea level, datum of 1929. Prior to Dec. 11, 1940, wire-weight gage and Dec. 11, 1940, to Sept. 30, 1964, graphic water-stage recorder at same site at datum 2.00 ft higher. Oct. 1, 1964, to July 7, 1965, graphic water-stage recorder at same site and present datum.

Average discharge.--27 years, 231 cfs.

Extremes.--Maximum discharge during year, 5,060 cfs Dec. 10 (gage height, 18.12 ft); minimum daily, 1.6 cfs Sept. 17.
1940-67: Maximum discharge, 27,100 cfs Jan. 4, 1950 (gage height, 24.38 ft, present datum), from rating curve extended above 16,000 cfs; no flow for many days in 1953-54, 1964-65.

Remarks.--Records good except those for winter periods, which are poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	3.2	180	90	350	45	149	176	382	14	19	5.9
2	9.6	3.1	128	83	1,500	55	128	169	737	13	15	5.0
3	13	3.1	99	80	2,570	100	128	202	221	11	14	4.5
4	9.7	3.1	81	72	2,180	158	153	136	104	10	244	4.0
5	7.1	3.8	141	66	612	329	137	106	75	9.2	117	3.5
6	5.7	4.1	646	63	314	1,800	118	94	62	8.6	41	2.9
7	4.7	4.8	1,280	202	216	2,460	106	719	54	8.8	25	2.7
8	4.3	6.9	2,030	372	145	1,500	93	1,750	51	9.6	21	2.6
9	4.9	39	3,630	197	133	866	85	2,500	47	9.3	20	2.8
10	5.0	139	4,750	136	121	511	88	1,370	207	12	22	2.8
11	4.4	662	4,300	95	111	485	84	324	244	13	28	2.7
12	4.0	256	2,020	75	102	400	78	241	218	8.7	17	2.2
13	3.6	112	620	68	86	549	76	187	95	8.0	12	2.1
14	3.2	73	402	60	83	381	78	1,270	59	7.2	9.7	2.0
15	4.1	57	290	52	85	606	86	1,850	43	6.8	7.9	1.9
16	15	47	222	45	85	493	109	1,370	35	6.3	7.0	1.8
17	40	41	190	40	79	227	154	587	30	5.7	6.1	1.6
18	24	36	173	37	69	162	471	514	26	5.4	7.0	2.4
19	20	32	159	35	66	132	234	266	24	117	155	4.3
20	14	28	144	35	60	733	135	172	23	239	114	3.4
21	10	25	134	35	55	3,040	128	126	24	88	34	4.4
22	8.4	23	121	37	50	4,260	978	102	35	44	20	6.5
23	7.7	22	110	45	45	1,850	673	86	32	13	14	6.0
24	6.7	20	100	77	42	447	283	76	28	48	10	6.2
25	5.8	20	91	121	40	284	239	68	23	258	8.0	5.7
26	5.0	24	80	345	40	232	206	61	20	123	7.2	4.5
27	4.8	462	75	1,340	40	232	208	55	19	61	7.0	4.4
28	4.7	1,410	103	1,650	40	433	166	51	17	34	9.3	4.1
29	4.2	1,240	216	498		426	132	62	16	56	21	3.4
30	3.7	327	210	273	- - - - -	252	143	81	15	37	11	3.1
31	3.5	- - - - -	127	245	- - - - -	185	- - - - -	88	- - - - -	26	7.8	- - - - -
Total	270.8	5,127.1	22,852	6,569	9,319	23,633	5,846	14,859	2,966	1,310.6	1,051.0	109.4
Mean	8.74	171	737	212	333	762	195	479	98.9	42.3	33.9	3.65
Max	40	1,410	4,750	1,650	2,570	4,260	978	2,500	737	258	244	6.5
Min	3.2	3.1	75	35	40	45	76	51	15	5.4	6.1	1.6
Cfsm	.03	.54	2.31	.66	1.04	2.39	.61	1.50	.31	.13	.11	.01
In.	.03	.60	2.66	.77	1.09	2.76	.68	1.73	.35	.15	.12	.01

Cal yr 1966 : Total 58,959.70 Mean 162 Max 4,750 Min .10 Cfsm .51 In. 6.87
Wtr yr 1967 : Total 93,912.9 Mean 257 Max 4,750 Min 1.6 Cfsm .81 In. 10.95

Peak discharge (base, 4,000 cfs) --Dec. 10 (2315) 18.12 ft, 5,060 cfs; Mar. 22 (0800) 17.80 ft, 4,540 cfs.

3-3470. White River at Muncie, Ind.

Location.--Lat 40°12'15", long 85°23'14", SE¼NW¼ Hackley Reserve, 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 1967. 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.--Digital water-stage recorder. Datum of gage is 917.10 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 8.00 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 7.00 ft higher. Feb. 15, 1941, to Jan. 27, 1942, wire-weight gage at bridge 200 ft upstream at datum 3.00 ft higher. Jan. 28, 1942, to Apr. 27, 1964, graphic water-stage recorder at present site and datum 3.00 ft higher.

Average discharge.--36 years (1931-67), 213 cfs (adjusted for diversion after September 1937).

Extremes.--Maximum discharge during year, 4,820 cfs Dec. 11 (gage height, 8.68 ft); minimum, 3.9 cfs Oct. 8; minimum gage height, 2.46 ft Aug. 17.

1930-67: Maximum discharge, 14,300 cfs Apr. 21, 1964; maximum gage height, 21.07 ft Jan. 15, 1937, present datum; minimum discharge, 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 22.6 ft in March 1913, present datum (discharge, about 20,000 cfs).

Remarks.--Record good except that below 20 cfs, which is 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.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	6.2	7.5	179	60	347	65	381	140	71	82	11	9.0
2	9.7	7.7	145	57	1,180	68	301	218	63	58	12	10
3	8.9	11	106	54	1,490	176	245	237	66	44	9.5	13
4	5.7	13	116	48	680	270	207	179	66	37	8.7	15
5	4.6	16	230	51	371	610	934	146	55	29	7.9	13
6	4.6	19	870	45	245	2,380	2,080	183	54	23	9.9	9.2
7	4.5	25	1,600	84	210	1,580	1,370	1,250	54	22	8.7	6.4
8	4.3	49	2,760	172	170	982	886	1,800	52	22	6.2	18
9	4.8	72	3,680	88	150	604	558	926	46	21	5.4	18
10	7.3	82	4,480	60	134	846	445	521	48	18	4.7	13
11	5.8	160	4,250	52	131	1,010	381	652	45	15	4.5	14
12	5.5	118	1,710	51	116	814	315	814	37	13	4.8	12
13	5.5	70	743	45	111	552	258	508	30	11	5.4	11
14	5.2	44	478	42	97	617	207	366	29	11	6.0	7.6
15	9.1	31	347	38	104	545	200	352	27	11	5.8	5.0
16	12	26	275	35	145	376	172	397	23	14	5.0	4.8
17	10	21	241	30	160	301	166	324	25	11	4.4	5.4
18	10	20	207	27	134	245	146	262	25	9.0	4.8	6.2
19	9.7	18	176	25	118	207	128	222	21	21	12	6.0
20	9.9	17	176	25	100	347	120	183	17	17	21	6.4
21	10	15	222	25	90	1,980	128	157	21	11	20	10
22	7.5	12	183	30	80	1,490	328	130	53	10	9.9	12
23	5.8	12	99	36	75	687	371	118	87	11	7.9	20
24	5.5	14	92	41	70	439	279	113	72	9.0	7.6	21
25	5.3	16	84	53	65	631	226	100	62	9.5	6.6	18
26	5.7	17	76	99	60	515	189	100	41	11	8.7	12
27	5.8	53	67	846	60	362	169	92	29	12	17	12
28	5.8	722	70	974	60	1,570	146	89	35	13	15	14
29	5.8	631	80	473	------	2,310	138	100	111	17	14	16
30	7.3	226	78	275	------	1,020	138	105	125	15	12	21
31	9.4	------	68	218	------	558	------	84	------	18	11	------
TOTAL	217.2	2,545.2	23,888	4,159	6,753	24,157	11,612	10,868	1,490	629.5	287.4	359.0
MEAN	7.01	84.8	771	134	241	779	387	351	49.7	20.3	9.27	12.0
MAX	12	722	4,480	974	1,490	2,380	2,080	1,800	125	82	21	21
MIN	4.3	7.5	67	25	60	65	120	84	17	9.0	4.4	4.8
(f)	18.88	18.1	17	18	18	17	18	18	19.5	19.2	20.94	20.8

Adjusted for diversion

Mean	25.9	103	788	152	259	796	405	369	69.2	39.5	30.2	32.8
Cfsm	.11	.43	3.26	.63	1.07	3.29	1.67	1.52	.29	.16	.12	.14
In.	.13	.48	3.76	.73	1.11	3.79	1.86	1.75	.32	.18	.14	.16

	Observed			Adjusted		
Calendar year 1966 :	Max 4,480	Min 3.2	Mean 141	Mean 159	Cfsm .66	In. 8.95
Water year 1967 :	Max 4,480	Min 4.3	Mean 238	Mean 257	Cfsm 1.06	In. 14.41

f Diversion above station for municipal supply, equivalent in cubic feet per second, furnished by Muncie Water Works Co.

Peak discharge (base 2,500 cfs)--Dec. 11 (0700) 8.68 ft, 4,820 cfs; Mar. 6 (1245) 6.83 ft, 2,600 cfs; Mar. 29 (0215) 7.11 ft, 2,390 cfs.

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 1967.

Gage.--Digital 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, and May 6, 1955 to Apr. 27, 1964, water-stage recorder at same site and datum.

Average discharge.--13 years, 32.6 cfs.

Extremes.--Maximum discharge during year, 656 cfs Dec. 10 (gage height, 8.90 ft from HWM in well); minimum, 8.3 cfs Sept. 7, 15, 16 (gage height, 2.21 ft).
1954-67: Maximum discharge, 1,780 cfs Apr. 21, 1964 (gage height, 13.96 ft); minimum daily 5.6 cfs Dec. 20, 1964.
Maximum stage known about 15 ft, from information by local residents. Date unknown.

Remarks.--Record good except for winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	9.5	12	22	22	37	18	40	30	30	19	12	9.6
2	9.2	13	19	21	139	23	37	39	29	19	11	9.4
3	8.8	14	17	21	73	32	34	31	30	18	12	9.3
4	9.0	15	17	20	47	29	33	29	28	18	11	9.2
5	9.0	16	21	20	38	135	135	27	27	17	11	9.1
6	9.0	18	60	19	33	170	101	39	27	17	10	9.1
7	9.5	21	90	47	30	84	79	202	28	17	11	8.7
8	9.5	25	190	33	27	70	54	101	26	17	11	8.6
9	9.7	30	320	25	25	52	46	60	25	16	11	9.5
10	11	33	500	22	23	63	41	46	25	16	11	9.1
11	11	32	310	20	22	62	37	76	24	16	11	8.9
12	11	23	180	20	22	50	35	55	23	15	10	8.8
13	11	19	70	19	22	43	36	44	23	15	10	9.1
14	11	17	55	18	22	44	35	41	22	15	9.9	9.0
15	13	16	47	18	24	39	33	43	22	15	9.6	8.9
16	13	16	43	17	26	35	31	40	22	14	9.4	8.7
17	12	15	39	16	24	32	34	37	21	14	9.3	8.6
18	12	15	36	16	23	29	31	34	21	15	10	8.9
19	12	14	33	15	22	28	29	33	21	14	11	8.9
20	12	14	32	15	20	62	28	30	20	14	10	9.4
21	12	14	30	16	20	178	30	29	26	13	9.9	9.5
22	12	13	28	17	19	73	47	28	27	13	9.7	9.5
23	12	13	28	17	18	51	36	28	22	13	9.6	9.2
24	12	13	27	19	17	44	36	28	23	13	9.3	9.2
25	12	13	25	20	18	45	32	27	26	12	9.4	9.1
26	12	13	24	28	18	40	32	28	21	12	9.7	8.8
27	12	42	23	85	18	36	30	27	20	12	11	9.3
28	13	40	25	50	19	188	28	33	21	13	9.7	9.8
29	12	27	27	37	------	105	27	53	24	12	9.6	9.5
30	12	23	24	31	------	61	28	37	20	12	9.7	9.3
31	12	------	23	31	------	47	------	33	------	12	9.6	------
TOTAL	345.2	589	2,385	775	846	1,968	1,255	1,388	724	458	318.4	274.0
MEAN	11.1	19.6	76.9	25.0	30.2	63.5	41.8	44.8	24.1	14.8	10.3	9.13
MAX	13	42	500	85	139	188	135	202	30	19	12	9.8
MIN	8.8	12	17	15	17	18	27	27	20	12	9.3	8.6
CFSM	.30	.53	2.10	.68	.82	1.73	1.14	1.22	.66	.40	.28	.25
IN.	.35	.60	2.42	.79	.86	1.99	1.27	1.41	.73	.46	.32	.28

CAL YR 1966: TOTAL 7,718.2 MEAN 21.1 MAX 500 MIN 6.5 CFSM .58 IN 7.82
WAT YR 1967: TOTAL 11,325.6 MEAN 31.0 MAX 500 MIN 8.6 CFSM .85 IN 11.48

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	Unknown	8.90	656				

3-3480. White River at Anderson, Ind.

Location.--Lat 40°06'22", long 85°40'20", in SW¼ sec. 7 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 1967. 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 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.--37 years, 365 cfs.

Extremes.--Maximum discharge during year, 5,490 cfs Dec. 10 (gage height, 12.20 ft); minimum, 31 cfs Oct. 15, Nov. 1, 2, minimum gage height, 7.28 ft Oct. 10, 15, Aug. 13, 14, Sept. 18.
1925-26, 1931-67: Maximum discharge, 18,700 cfs Apr. 21, 1964 (gage height, 19.41 ft); 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 of U.S. Weather Bureau at site then in use (discharge, 28,000 cfs, estimated).

Remarks.--Record poor. 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 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	35	216	170	468	160	780	340	241	224	89	57
2	57	37	150	160	1,180	170	690	364	207	159	71	68
3	47	40	130	160	2,010	179	594	408	199	152	68	68
4	57	37	120	150	1,170	187	492	460	191	152	65	68
5	40	37	216	150	780	602	1,280	430	183	137	68	68
6	40	37	735	150	560	2,250	2,370	468	183	130	52	65
7	40	86	1,440	183	420	1,890	1,890	1,280	187	123	52	62
8	40	133	2,630	340	360	1,330	1,440	2,630	183	116	68	60
9	40	156	3,540	300	300	1,070	1,120	1,550	179	123	62	60
10	35	195	4,530	220	270	1,020	872	1,070	144	109	62	66
11	37	199	4,850	190	250	1,330	825	1,070	159	102	62	60
12	37	228	2,760	170	230	1,280	735	1,550	144	86	62	56
13	37	175	1,330	160	220	970	552	1,070	123	80	47	54
14	47	130	920	150	220	825	500	735	123	80	47	56
15	50	95	602	140	220	872	543	690	130	80	57	56
16	92	86	543	135	237	735	452	717	137	77	62	52
17	71	80	460	130	300	594	430	645	119	74	62	47
18	65	74	388	125	300	475	394	560	123	83	57	40
19	77	65	360	125	254	370	358	475	123	83	68	54
20	60	62	340	125	237	611	340	410	130	80	68	65
21	57	57	376	130	220	2,130	340	360	130	77	71	71
22	44	60	340	130	211	2,250	518	320	175	68	80	77
23	50	57	281	135	200	1,280	825	295	183	65	74	74
24	42	47	245	140	190	920	735	280	216	65	62	72
25	40	54	228	148	180	872	543	270	216	68	62	62
26	50	52	224	183	170	780	475	260	191	65	57	54
27	42	62	228	825	170	735	460	250	191	62	57	54
28	40	408	228	1,280	160	1,220	400	245	191	80	57	62
29	50	358	203	330		3,020	340	305	183	74	57	54
30	52	325	203	330	- - - - -	1,660	340	330	199	68	62	54
31	42	- - - - -	179	376	- - - - -	1,120	- - - - -	263	- - - - -	68	57	- - - - -
Total	1,538	3,467	28,995	7,440	11,487	32,907	21,633	20,100	5,083	3,010	1,945	1,816
Mean	49.6	116	935	240	410	1,062	721	648	169	97.1	62.7	60.5
Max	92	408	4,850	1,280	2,010	3,020	2,370	2,630	241	224	89	77
Min	35	35	120	125	160	160	340	245	119	62	47	40
Cfsm	0.124	0.289	2.33	0.599	1.02	2.65	1.80	1.62	0.421	0.242	0.156	0.151
In.	0.14	0.32	2.69	0.69	1.06	3.06	2.01	1.87	0.47	0.28	0.18	0.17

Cal yr 1966 : Total 81,473 Mean 223 Max 4,850 Min 29 Cfsm 0.556 In. 7.56
Wtr yr 1967 : Total 139,421 Mean 382 Max 4,850 Min 35 Cfsm 0.953 In. 12.94

Peak discharge (base, 2,700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	2200	12.20	5,490				
3-29	0400	10.71	3,280				
5-8	1200	10.34	2,760				

3-3481. Killbuck Creek near Anderson, Ind.

Location.--Lat 40°08'18", long 85°39'44", in SW¼ sec. 31, T. 20 N., R. 8 E., on downstream side of State Highway 109 bridge, 900 ft downstream from Little Killbuck Creek, 2.1 miles from mouth and 2.3 miles northeast of county courthouse at Anderson.

Drainage area.--98.5 sq mi.

Records available.--July 1964 to September 1967.

Gage.--Wire-weight gage, crest-stage gage and SR recorder. Gage read twice daily. Datum of gage is 833.58 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Extremes.--Maximum discharge during year, 3,480 cfs Dec. 10 (gage height, 8.98 ft); minimum 5.5 cfs Sept. 26, 27 (gage height, 2.20 ft).
1964-67: Maximum discharge, 3,480 cfs Dec. 10, 1966 (gage height, 8.98 ft); minimum 5.5 cfs Sept. 26, 27, 1967 (gage height, 2.20 ft).

Remarks.--Record poor prior to Mar. 1, fair thereafter.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	9.4	56	39	220	23	152	53	39	20	18	16
2	11	10	41	37	380	23	144	54	38	19	17	16
3	10	12	34	36	250	28	105	55	38	19	16	15
4	9.4	13	30	35	160	32	88	52	38	18	15	12
5	9.2	15	34	34	110	57	238	48	36	18	14	12
6	9.2	17	60	34	80	421	423	73	30	21	16	12
7	9.0	30	150	50	60	233	325	299	29	22	16	12
8	8.6	54	310	76	52	158	300	396	27	20	17	12
9	9.2	62	600	68	46	111	242	263	26	21	17	12
10	9.8	76	1,200	54	42	158	133	162	25	20	14	12
11	9.8	82	2,000	45	40	318	109	164	21	21	14	12
12	9.8	86	620	40	37	308	88	192	20	20	14	14
13	9.4	67	410	37	36	200	92	145	24	20	16	14
14	9.4	49	260	35	36	148	94	113	22	20	14	14
15	12	39	180	33	46	115	94	98	24	21	13	13
16	14	33	160	32	50	109	92	85	22	21	12	12
17	13	31	135	30	52	103	85	79	22	20	11	13
18	12	28	120	28	48	93	73	73	24	19	12	13
19	11	25	105	27	39	81	62	67	23	17	14	13
20	10	23	92	27	33	111	61	58	24	16	18	12
21	9.8	22	82	27	30	371	59	54	25	15	13	11
22	9.8	22	72	29	28	390	93	52	24	15	11	10
23	9.8	22	64	32	27	308	95	51	24	13	11	9.7
24	9.4	22	56	35	25	204	90	50	23	11	10	7.9
25	9.4	24	50	42	24	165	71	49	26	11	9.1	6.7
26	9.4	26	46	190	23	152	67	46	24	9.7	11	5.5
27	9.4	28	45	300	22	173	63	45	21	11	12	6.1
28	9.2	120	48	80	22	566	61	43	22	14	17	6.7
29	9.2	92	53	80		1,150	58	44	26	15	12	6.4
30	9.1	73	51	90	- - - - -	442	54	43	24	17	9.7	6.1
31	9.0	- - - - -	45	110	- - - - -	242	- - - - -	40	- - - - -	17	12	- - - - -
Total	310.3	1,212.4	7,209	1,812	2,018	6,993	3,711	3,046	791	541.7	425.8	337.1
Mean	10.0	40.4	232	58.5	72.1	226	124	98.3	26.4	17.5	13.7	11.2
Max	14	120	2,000	300	380	1,150	423	396	39	22	18	16
Min	8.6	9.4	30	27	22	23	54	40	20	9.7	9.1	5.5
Cfsm	0.102	0.410	2.36	0.594	0.732	2.29	1.26	0.998	0.268	0.178	0.139	0.114
In.	0.12	0.46	2.72	0.68	0.76	2.64	1.41	1.14	0.30	0.21	0.16	0.13

Cal yr 1966 : Total 19,808.7 Mean 54.3 Max 2,000 Min 8.6 Cfsm 0.551 In. 7.49
Wtr yr 1967 : Total 28,407.3 Mean 77.8 Max 2,000 Min 5.5 Cfsm 0.790 In. 10.73

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	Unknown	8.98	3,480				
3-6	1400	6.04	555				
3-29	0500	7.13	1,340				
4-6	1200	5.90	515				

Note.--No gage-height record Oct. 1-Feb. 16.

3-3485. White River near Noblesville, Ind.

Location.--Lat 40°07'46", long 85°57'46", 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 1967. 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.

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.--50 years, 785 cfs.

Extremes.--Maximum discharge during year, 11,000 cfs Dec. 10 (gage height, 13.87 ft); minimum, 67 cfs Aug. 14 (gage height, 3.83 ft); 1915-26, 1928-67: 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, Apr. 22, 1964; minimum, 36 cfs Sept. 25, 1941.

Remarks.--Record good except for winter period, which is fair. Record of water temperatures for the water year 1967 is published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	108	86	436	392	1,170	370	1,700	552	380	314	130	96
2	100	98	320	418	2,390	380	1,330	602	352	259	136	96
3	84	116	260	368	3,980	482	1,130	632	337	218	113	88
4	82	130	230	356	2,660	587	958	607	325	198	113	80
5	86	136	240	340	1,620	808	1,770	547	310	179	103	78
6	86	157	602	337	1,140	2,680	3,860	602	310	188	93	84
7	88	160	2,320	487	850	3,210	3,750	2,020	318	175	82	90
8	88	205	5,130	744	730	2,150	2,680	4,330	306	179	88	88
9	90	248	8,960	607	660	1,610	1,940	3,240	299	166	100	108
10	98	329	10,700	454	600	1,760	1,530	1,980	292	160	96	130
11	116	368	10,500	370	550	2,960	1,270	1,760	295	160	90	103
12	103	388	7,760	330	520	2,820	1,090	2,130	262	157	86	96
13	98	329	3,650	310	487	2,120	1,050	1,660	248	139	82	100
14	100	256	2,300	300	502	1,780	1,000	1,240	238	130	73	103
15	119	218	1,760	280	497	1,700	1,050	1,090	228	125	73	100
16	182	192	1,440	260	557	1,370	940	1,020	222	119	80	96
17	139	175	1,240	250	602	1,150	862	952	218	108	82	86
18	119	160	1,110	250	572	982	790	838	205	182	80	80
19	136	151	988	250	512	838	688	744	198	185	103	84
20	128	136	898	250	477	1,120	627	647	202	202	125	113
21	113	122	814	250	430	3,480	617	562	208	163	103	119
22	108	125	773	266	380	4,420	826	512	242	136	106	116
23	100	125	677	280	350	2,690	1,020	487	259	122	108	100
24	93	125	572	303	340	1,850	922	463	284	113	100	93
25	96	130	522	325	330	1,700	790	445	277	113	96	88
26	90	154	463	446	320	1,850	710	431	252	119	96	88
27	98	284	427	2,150	330	1,460	662	422	225	119	110	93
28	96	577	468	3,150	350	2,830	612	392	202	133	116	106
29	98	790	547	2,040		5,770	562	492	212	151	106	98
30	90	582	454	1,300	- - - - -	4,430	547	527	273	119	100	93
31	84	- - - - -	401	1,070	- - - - -	2,480	- - - - -	436	- - - - -	116	96	- - - - -
Total	3,216	7,052	66,962	18,933	23,906	63,837	37,283	32,362	7,979	4,947	3,065	2,893
Mean	104	235	2,160	611	854	2,059	1,243	1,044	266	160	98.9	96.4
Max	182	790	10,700	3,150	3,980	5,770	3,860	4,330	380	314	136	130
Min	82	86	230	250	320	370	547	392	198	108	73	78
Cfsm	0.128	0.289	2.65	0.751	1.05	2.53	1.53	1.28	0.327	0.197	0.121	0.118
In.	0.15	0.32	3.06	0.86	1.09	2.92	1.71	1.48	0.36	0.23	0.14	0.13

Cal yr 1966: Total 169,665 Mean 465 Max 10,700 Min 65 Cfsm 0.571 In. 7.77
Wtr yr 1967: Total 272,435 Mean 746 Max 10,700 Min 73 Cfsm 0.916 In. 12.45

Peak discharge (base, 5,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1330	13.87	11,000				
3-29	1800	11.63	6,330				

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 1967. 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.--Digital water-stage recorder. Datum of gage is 738.16 ft above mean sea level, datum of 1929. Prior to Jan. 11, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--21 years, 799 cfs.

Extremes.--Maximum discharge during year, 10,900 cfs Dec. 10 (gage height, 15.77 ft); minimum, 83 cfs Aug. 14 (gage height, 3.95 ft).
1946-67: Maximum discharge, 26,800 cfs Apr. 22, 1964 (gage height, 21.31 ft); minimum, 0.9 cfs Sept. 24, 1964 (gage height, 3.45 ft); minimum daily discharge 44 cfs Sept. 28, 1954.
Maximum stage known, 23.8 ft Mar. 25, 1913, present site and datum, from U.S. Weather Bureau records.

Remarks.--Record good except for winter period, which is fair. Flow regulated by powerplant above station. Record of water temperatures for water year 1967 is published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	144	106	500	423	1,180	340	1,710	567	413	330	148	110
2	139	117	402	408	2,210	366	1,360	605	382	273	171	112
3	117	139	270	394	3,710	468	1,160	647	370	227	136	110
4	102	155	220	390	2,820	567	985	629	358	206	130	98
5	102	166	309	374	1,690	827	1,540	561	342	186	124	94
6	100	193	516	366	1,220	2,390	3,230	600	338	183	126	98
7	99	205	2,020	493	851	3,060	3,570	1,860	326	181	110	110
8	99	226	5,030	791	683	2,140	2,790	4,030	334	176	112	106
9	102	281	9,090	689	620	1,620	2,060	3,340	318	171	128	120
10	110	343	10,700	514	570	1,620	1,670	2,060	315	168	130	156
11	132	388	10,200	408	530	2,810	1,410	1,780	311	171	126	146
12	130	388	8,040	360	500	2,840	1,230	2,070	283	168	118	120
13	110	361	3,910	320	503	2,140	1,170	1,740	266	161	112	126
14	113	273	2,490	300	508	1,750	1,130	1,350	252	151	94	126
15	133	229	1,880	280	508	1,650	1,150	1,180	239	146	97	118
16	168	196	1,530	260	550	1,390	1,060	1,100	230	138	104	114
17	149	175	1,340	250	605	1,180	953	1,040	227	132	108	106
18	115	158	1,200	230	589	1,000	887	935	215	181	108	97
19	132	144	1,040	230	529	869	785	839	206	215	126	102
20	123	135	978	230	493	1,070	701	749	209	221	146	124
21	117	119	881	240	468	3,160	683	647	215	186	128	146
22	113	120	845	250	448	4,220	845	583	239	158	122	146
23	112	120	761	270	418	2,850	1,050	556	262	141	130	124
24	106	119	635	300	330	1,860	991	529	283	130	116	108
25	100	123	578	338	308	1,630	851	503	290	132	116	100
26	99	152	514	433	290	1,770	767	473	266	134	108	98
27	108	286	473	2,080	290	1,470	719	473	242	156	130	112
28	110	526	493	3,200	300	2,470	641	438	218	148	128	130
29	112	882	589	2,230	------	4,700	589	488	209	173	141	122
30	112	674	503	1,390	------	4,320	561	567	255	148	120	114
31	106	------	443	1,100	------	2,510	------	483	------	143	110	------
TOTAL	3,614	7,499	68,380	19,541	23,721	61,057	38,248	33,422	8,413	5,434	3,803	3,493
MEAN	117	250	2,206	630	847	1,970	1,275	1,078	280	175	123	116
MAX	168	882	10,700	3,200	3,710	4,700	3,570	4,030	413	330	171	156
MIN	99	106	220	230	290	340	561	438	206	130	94	94
CFSM	.14	.30	2.64	.75	1.01	2.35	1.52	1.29	.34	.21	.15	.14
IN.	.16	.33	3.04	.87	1.05	2.71	1.70	1.49	.37	.24	.17	.16

CAL YR 1966: TOTAL 175,694 MEAN 481 MAX 10,700 MIN 71 CFSM .58 IN 7.81
WAT YR 1967: TOTAL 276,625 MEAN 758 MAX 10,700 MIN 94 CFSM .91 IN 12.29

Peak discharge (base, 6,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	2030	15.77	10,900				

3-3495. Cicero Creek near Arcadia, Ind.

Location.--Lat 40°10'34", long 85°59'43", in NW¼ sec. 20, T. 20 N., R. 5 E., on left bank, on downstream side of county bridge, 1½ miles east of Arcadia and 10 miles upstream from Morse Dam.

Drainage area.--131 sq mi.

Records available.--October 1954 to September 1967.

Gage.--Digital 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, and Dec. 7, 1955, to Jan. 17, 1966, graphic water-stage recorder, all at same site and datum.

Average discharge.--13 years, 113 cfs.

Extremes.--Maximum discharge during year, 2,360 cfs Dec. 10 (gage height, 9.60 ft); minimum, 0.50 cfs Sept. 5 (gage height, 1.65 ft).
1954-67: 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.--Record good except for winter period, which is poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.5	1.1	56	58	301	47	208	62	34	10	3.2	1.7
2	2.3	1.5	36	52	796	51	165	60	29	5.0	3.0	1.2
3	1.9	1.9	32	47	751	109	136	48	27	7.5	2.8	1.2
4	1.1	3.7	21	45	408	85	111	44	25	7.1	2.4	.88
5	.80	4.2	46	43	254	151	283	42	24	6.4	1.9	.78
6	2.5	6.8	164	59	162	406	468	65	23	5.7	1.6	.82
7	2.3	15	633	237	140	230	358	727	23	5.5	1.2	1.9
8	2.3	22	1,900	121	110	164	222	868	22	5.2	1.1	1.8
9	2.8	14	2,240	80	90	138	179	505	21	5.2	1.2	3.1
10	2.8	27	2,250	60	80	296	151	327	25	5.2	1.1	4.1
11	2.8	41	1,700	50	70	757	122	369	239	5.5	1.1	2.4
12	2.5	19	979	40	64	554	106	347	144	5.1	.93	1.7
13	3.0	11	673	36	62	397	112	235	91	4.6	.97	1.7
14	3.5	8.3	507	31	63	342	123	182	61	4.0	.77	2.5
15	14	6.4	393	28	72	270	129	164	46	3.7	.74	2.7
16	12	5.5	331	26	97	201	117	140	37	3.3	.90	2.5
17	3.7	4.7	283	24	86	178	114	123	31	2.6	.96	2.7
18	3.0	4.2	239	22	75	140	93	114	27	6.4	.99	2.7
19	3.7	3.7	200	21	68	121	77	105	23	15	1.5	2.7
20	3.0	3.2	178	24	60	318	70	86	21	6.7	2.6	4.9
21	2.5	3.0	151	29	53	1,190	75	72	21	11	2.3	4.4
22	2.1	3.0	127	34	50	739	93	66	24	10	1.1	4.4
23	2.1	3.0	109	38	45	463	79	61	20	5.7	.84	3.9
24	1.9	3.0	92	39	40	316	80	59	16	4.2	1.0	3.7
25	1.9	3.2	82	49	38	298	71	53	21	4.1	1.3	3.5
26	1.7	3.9	77	169	38	241	73	48	14	3.9	1.7	2.9
27	1.9	69	74	1,110	39	188	70	43	11	4.4	2.2	3.3
28	2.3	216	88	799	42	739	60	41	14	4.1	2.2	7.1
29	4.7	138	82	419	------	832	57	54	19	3.7	1.3	3.5
30	1.7	85	70	263	------	483	61	46	14	4.2	1.1	2.2
31	.95	------	63	210	------	312	------	40	------	3.6	1.6	------
TOTAL	96.25	731.3	13,876	4,263	4,154	10,756	4,063	5,196	1,147	182.6	47.60	82.88
MEAN	3.10	24.4	448	138	148	347	135	168	38.2	5.89	1.54	2.76
MAX	14	216	2,250	1,110	796	1,190	468	868	239	15	3.2	7.1
MIN	.80	1.1	21	21	38	47	57	40	11	2.6	.74	.78
CFSM	.02	.19	3.42	1.05	1.13	2.65	1.03	1.28	.29	.04	.01	.02
IN.	.03	.21	3.94	1.21	1.18	3.05	1.15	1.48	.33	.05	.01	.02

CAL YR 1966: TOTAL 29,086.45 MEAN 79.7 MAX 2,250 MIN .80 CFSM .61 IN 8.26
WAT YR 1967: TOTAL 44,595.63 MEAN 122 MAX 2,250 MIN .74 CFSM .93 IN 12.66

Peak discharge (base, 1,100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0800	9.60	2,360				
1-27	1645	7.75	1,240				
3-21	1045	7.85	1,270				
5-7	1845	7.41	1,120				

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

Location.--Lat 40°10'32", long 86°02'45", 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 1967.

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

Average discharge.--12 years, 36.9 cfs.

Extremes.--Maximum discharge during year, 1,220 cfs Dec. 8 (gage height, 6.35 ft); no flow Oct. 11-16, Nov. 1, Aug. 12 to Sept. 30.
1955-67: Maximum discharge, 3,980 cfs June 28, 1957 (gage height, 8.69 ft); no flow Oct. 9, 10, 1956, Sept. 14 to Nov. 6, 1963, Sept. 8-20, 28-30, Oct. 1-21, 1964, Aug. 12 to Sept. 20, Oct. 11-16, Nov. 1, 1966, Aug. 12 to Sept. 30, 1967.

Remarks.--Record fair.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	0	18	11	96	9.2	56	18	10	2.3	1.0	
2	.5	.1	12	10	301	15	46	17	8.9	1.9	.8	
3	.4	.2	7.7	9.0	170	32	36	17	8.6	1.6	.6	
4	.2	.4	6.2	8.2	96	23	28	11	8.3	1.5	.5	
5	.1	.5	21	7.6	64	58	69	10	6.9	1.4	.4	
6	.1	.8	63	6.9	42	137	108	27	6.9	1.3	.4	
7	.1	1.6	366	74	30	84	108	433	6.7	1.3	.4	
8	.1	3.1	950	49	24	64	79	286	6.2	1.4	.3	
9	.1	3.0	962	24	19	56	64	161	6.4	1.3	.3	
10	.1	11	734	17	17	118	49	108	30	1.2	.1	
11	0	20	351	12	15	199	39	137	69	1.2	.1	
12	0	8	199	11	13	137	32	115	32	1.1	0	
13	0	4.5	137	9.5	13	102	34	84	17	.9	0	
14	0	3.3	102	8.2	13	90	40	69	12	.8	0	
15	0	2.7	84	7.4	14	74	49	60	8.3	.7	0	
16	0	2.4	74	6.5	21	60	46	52	7.2	.6	0	
17	1.0	2.1	64	6.0	19	52	38	49	6.2	.5	0	
18	.7	1.9	56	4.4	18	42	29	52	5.3	1.8	0	
19	.5	1.8	52	4.2	16	35	20	46	4.1	78	0	
20	.6	1.6	46	4.7	14	127	19	33	3.6	29	0	
21	.4	1.4	38	6.7	11	399	20	26	4.2	12	0	
22	.3	1.4	31	8.0	9.0	179	33	23	5.7	3.0	0	
23	.2	1.4	25	8.3	7.6	115	29	20	4.1	1.8	0	
24	.4	1.4	21	11	6.5	84	27	20	3.3	1.4	0	
25	.1	1.6	17	16	6.5	79	23	18	4.4	1.0	0	
26	.1	1.7	15	79	6.8	64	23	16	3.4	.6	0	
27	.1	53	13	427	7.2	56	20	15	2.6	4.6	0	
28	.1	89	17	179	8.2	180	17	15	2.8	6.7	0	
29	.1	49	20	102		161	16	20	4.1	3.6	0	
30	.1	27	13	69	- - - - -	102	17	15	2.9	1.6	0	
31	.1	- - - - -	12	69	- - - - -	74	- - - - -	13	- - - - -	1.3	0	- - - - -
Total	7.1	295.9	4,526.9	1,265.6	1,077.8	3,007.2	1,214	1,986	301.1	167.4	4.9	
Mean	0.23	9.86	146	40.8	38.5	97.0	40.5	64.1	10.0	5.40	0.16	0
Max	1.0	89	962	427	301	399	108	433	69	78	1.0	0
Min	0	0	6.2	4.2	6.5	9.2	16	10	2.6	0.5	0	0
Cfsm	0.0051	0.221	3.27	0.913	0.861	2.17	0.906	1.43	0.224	0.121	0.0036	0
In.	0.006	0.25	3.77	1.05	0.90	2.50	1.01	1.65	0.25	0.14	0.004	0

Cal yr 1966: Total 8,514.3 Mean 23.3 Max 962 Min 0 Cfsm 0.521 In. 7.10
Wtr yr 1967: Total 13,853.9 Mean 38.0 Max 962 Min 0 Cfsm 0.850 In. 11.53

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	2200	6.35	1,220				
1-27	1300	4.47	511				
5-7	2030	4.73	597				

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 1967.

Gage.--Digital water-stage recorder. Altitude of gage is 820 ft (from topographic map). Prior to Nov. 17, 1962, graphic water-stage recorder at same site and datum.

Average discharge.--12 years, 18,6 cfs.

Extremes.--Maximum discharge during year, 1,130 cfs Dec. 8 (gage height, 5.05 ft); minimum, 0.04 cfs Sept. 7, 8 (gage height, 0.90 ft).
1955-67: Maximum discharge, 4,920 cfs June 28, 1957 (gage height, 8.45 ft); minimum, 0.04 cfs Sept. 7, 8,1967 (gage height, 0.90 ft).

Remarks.--Record fair except below 5 cfs and for winter period, which is poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.0	.70	6.6	7.0	45	7.5	21	13	6.1	1.6	.55	.14
2	.80	.90	5.5	6.6	166	13	18	16	5.8	1.4	.50	.13
3	.70	1.1	4.4	6.2	81	16	16	11	5.5	1.3	.46	.13
4	.60	1.1	3.9	6.0	44	13	14	11	5.2	1.3	.46	.11
5	.50	1.6	12	6.1	28	67	81	9.7	4.7	1.3	.42	.10
6	.40	2.0	33	5.8	19	81	75	21	4.7	1.2	.38	.10
7	.50	5.2	316	45	15	44	85	252	4.4	1.2	.34	.08
8	.50	5.5	531	16	13	35	45	117	4.2	1.1	.38	.07
9	.60	3.9	325	11	11	32	33	65	4.2	1.1	.42	.11
10	.80	16	300	7.9	9.6	91	30	41	5.5	1.2	.31	.14
11	.80	8.4	137	6.7	8.6	98	23	89	6.7	1.2	.34	.12
12	.70	4.4	87	6.5	8.3	63	18	54	4.4	.94	.31	.11
13	.70	3.0	61	6.0	8.0	44	22	35	3.7	.86	.28	.11
14	.80	2.6	44	5.8	8.1	39	27	27	3.1	.86	.25	.10
15	1.7	2.2	33	4.9	9.2	30	44	25	3.0	.94	.25	.10
16	2.8	2.0	27	5.2	12	26	29	19	2.8	.86	.22	.10
17	1.4	1.9	23	5.2	11	22	23	18	2.7	.86	.22	.08
18	1.1	2.0	20	5.0	10	17	17	17	2.7	1.5	.20	.10
19	1.0	1.9	18	5.0	9.7	16	14	15	2.5	12	.28	.14
20	.90	1.7	16	5.2	8.8	115	13	12	2.2	2.5	.25	.22
21	.80	1.7	14	5.6	8.0	185	14	11	2.7	1.4	.25	.25
22	.70	1.7	11	6.1	7.4	85	22	10	2.8	.94	.25	.22
23	.70	1.7	10	7.1	7.0	54	16	9.7	2.4	.79	.20	.18
24	.70	1.9	9.0	7.9	6.6	39	16	9.7	2.2	.72	.20	.16
25	.70	2.4	8.0	10	6.4	36	14	8.8	2.4	.72	.18	.14
26	.70	2.8	7.0	54	6.4	28	14	8.3	1.9	.60	.34	.14
27	.70	32	6.5	196	6.7	23	13	7.9	1.8	.79	.50	.16
28	.70	34	9.0	79	7.0	126	11	8.8	1.9	1.6	.31	.18
29	.70	16	10	41	------	79	11	9.7	1.9	.94	.20	.18
30	.80	8.9	7.4	27	------	47	13	7.5	1.8	.66	.16	.18
31	.80	------	7.2	29	------	29	------	7.1	------	.60	.14	------
TOTAL	26.30	171.20	2,102.5	635.8	580.8	1,600.5	792	966.2	105.9	44.98	9.55	4.08
MEAN	.85	5.71	67.8	20.5	20.7	51.6	26.4	31.2	3.53	1.45	.31	.14
MAX	2.8	34	531	196	166	185	85	252	6.7	12	.55	.25
MIN	.40	.70	3.9	4.9	6.4	7.5	11	7.1	1.8	.60	.14	.07
CFSM	.05	.35	4.16	1.26	1.27	3.17	1.62	1.91	.22	.09	.02	.008
IN.	.06	.39	4.80	1.45	1.33	3.65	1.81	2.20	.24	.10	.02	.009

CAL YR 1966: TOTAL 4,440.10 MEAN 12.2 MAX 531 MIN .10 CFSM .75 IN 10.13
WAT YR 1967: TOTAL 7,039.81 MEAN 19.3 MAX 531 MIN .07 CFSM 1.18 IN 16.06

Peak discharge (base, 400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	2215	5.05	1,130				
5-7	1015	3.18	421				

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 1967.

Gage.--Digital 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). Prior to June 24, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--17 years, 182 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 4,690 cfs Dec. 9 (gage height, 13.05 ft); minimum, 0.81 cfs Aug. 6, 7 (gage height, 3.60 ft). 1950-67: Maximum discharge, 9,800 cfs June 28, 1957 (gage height, 15.26 ft); minimum, 0.5 cfs Sept. 25, 1954.

Remarks.--Record good except below 10 cfs and for winter period, which is fair. Flow regulated by Morse Reservoir located approximately 1.2 miles upstream beginning Dec. 9, 1955 (capacity, 6,900,000,000 gal).

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.5	63	1.9	94	433	48	400	117	51	10	3.0	17
2	1.2	25	1.9	86	976	70	302	135	37	20	2.8	17
3	1.2	1.5	1.8	82	1,220	117	272	98	40	7.3	1.5	17
4	1.2	1.2	1.8	76	769	141	173	92	40	8.2	6.8	17
5	1.3	1.5	2.3	74	517	218	337	85	39	3.5	1.8	23
6	1.2	1.4	2.6	67	335	655	691	125	37	2.2	.88	39
7	1.1	1.8	6.4	134	202	526	697	934	34	1.3	.83	45
8	1.2	1.8	1,370	290	184	367	487	1,500	33	1.2	3.0	45
9	1.3	1.7	4,420	177	159	280	360	976	36	1.3	34	43
10	1.8	2.8	4,060	132	135	391	332	640	50	1.6	36	43
11	1.8	1.9	2,760	89	120	973	226	652	150	4.7	30	34
12	1.6	1.6	1,520	76	107	928	183	661	194	7.7	29	26
13	1.7	1.5	1,030	68	104	694	194	484	134	12	29	26
14	1.8	1.5	772	60	103	571	198	377	91	7.7	29	26
15	2.9	1.5	601	54	110	496	237	320	63	1.8	29	25
16	1.8	1.5	490	48	132	350	228	257	46	1.1	35	25
17	1.5	1.5	412	43	129	327	214	228	40	1.0	42	25
18	1.4	1.6	367	37	123	232	186	212	34	1.6	46	26
19	1.5	1.6	305	32	112	198	129	210	18	22	47	26
20	1.3	1.6	282	32	105	388	115	169	14	45	47	27
21	1.3	1.6	222	34	86	1,530	123	129	28	29	47	26
22	1.4	1.6	200	45	64	1,290	179	123	45	21	35	23
23	1.8	1.6	159	55	43	835	157	100	26	13	25	19
24	1.9	1.8	137	61	30	589	150	98	19	13	25	18
25	2.0	2.0	122	79	29	493	120	98	37	6.8	25	18
26	2.1	2.1	106	151	31	436	134	89	7.3	2.6	25	18
27	20	3.8	97	1,210	34	360	118	83	6.8	5.0	18	18
28	65	2.6	123	1,320	39	787	104	79	11	13	16	20
29	64	2.1	137	784	------	1,220	98	98	16	11	16	14
30	64	2.0	107	499	------	835	109	76	13	3.2	16	1.0
31	61	------	98	370	------	574	------	71	------	3.2	17	------
TOTAL	314.8	138.7	19,915.7	6,359	6,431	16,919	7,253	9,316	1,390.1	282.0	718.61	747.0
MEAN	10.2	4.62	642	205	230	546	242	301	46.3	9.10	23.2	24.9
MAX	65	63	4,420	1,320	1,220	1,530	697	1,500	194	45	47	45
MIN	1.1	1.2	1.8	32	29	48	98	71	6.8	1.0	.83	1.0
(≠)	-4.8	+36.9	+86	+4	-5	+7	-6	-2	-1.7	-0.4	-26.7	-30.1
Adjusted for change in contents in Morse Reservoir												
Mean	5.40	41.5	728	209	225	553	236	299	44.6	8.70	-3.50	-5.20
Cfsm	.02	.19	3.32	.95	1.03	2.53	1.08	1.37	.20	.04	-.02	-.02
In.	.02	.21	3.83	1.10	1.07	2.92	1.20	1.58	.22	.05	-.02	-.02

	Observed			Adjusted			
Calendar year 1966 :	Max 4,420	Min 1.0	Mean 126	Mean 126	Cfsm .58	In. 7.73	(≠) 0
Water year 1967 :	Max 4,420	Min .83	Mean 191	Mean 196	Cfsm .89	In. 12.16	(≠) +5

Peak discharge (base, 2,000 cfs).--Dec. 9 (0700) 13.05 ft, 4,690 cfs.

≠ Change in contents, equivalent in cubic feet per second in Morse Reservoir, furnished by Indianapolis Water Co.

3-3507. Stony Creek near Noblesville, Ind.

Location.--Lat 40°01'44", long 85°59'42", in NE¼, sec. 7, T. 18 N., R. 5 E., on left bank at downstream side of county road bridge, 1.4 miles from mouth and 1.4 miles southeast of Noblesville.

Drainage area.--50.8 sq mi.

Records available.--July 1966 to September 1967.

Gage.--Water-stage recorder. Datum of gage is 749.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Extremes.--Maximum discharge during period, 9.4 cfs July 1, 2 (gage height, 1.81 ft); minimum, 3.8 cfs Sept. 1 (gage height, 1.62 ft).

Remarks.--Record good.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										9.0	5.6	3.8
2										9.0	5.4	4.0
3										8.0	5.0	4.1
4										8.0	5.0	4.1
5										8.0	4.8	4.1
6										7.8	4.8	4.3
7										7.2	5.0	4.2
8										7.2	4.5	4.2
9										7.2	4.5	4.3
10										7.2	4.3	4.3
11										7.2	4.3	4.3
12										7.2	4.3	4.3
13										7.0	4.3	4.5
14										6.5	4.2	4.5
15										6.5	4.3	4.8
16										6.8	4.2	4.9
17										6.8	4.2	4.8
18										6.8	4.2	4.8
19										7.0	4.5	4.9
20										6.8	4.3	5.2
21										6.8	4.3	5.0
22										6.5	4.8	5.0
23										6.5	4.3	5.2
24										6.2	4.5	5.0
25										6.0	4.2	5.2
26										5.6	4.3	5.2
27										5.6	4.8	5.2
28										5.6	4.8	5.4
29										6.0	4.2	5.5
30					- - - - -					5.6	4.2	5.5
31		- - - - -			- - - - -		- - - - -		- - - - -	6.0	4.0	- - - - -
Total										213.6	140.1	140.6
Mean										6.89	4.52	4.69
Max										9.0	5.6	5.5
Min										5.6	4.0	3.8
Cfsm										0.136	0.089	0.092
In.												

Cal yr	: Total	Mean	Max	Min	Cfsm	In.
Wtr yr	: Total	Mean	Max	Min	Cfsm	In.

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 1967. 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.--38 years, 1,053 cfs.

Extremes.--Maximum discharge during year, 14,700 cfs Dec. 11 (gage height, 14.03 ft); minimum, 97 cfs Oct. 8 (gage height, 1.80 ft).
1929-67: 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.--Record fair except for winter period, which is poor. Flow slightly regulated by Morse Reservoir. Record of water temperatures for the water year 1967 is published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	133	167	615	610	1,780	470	2,650	878	586	337	165	150
2	133	167	500	596	2,980	526	1,990	930	517	340	170	140
3	126	154	428	572	5,200	601	1,660	930	491	297	170	135
4	115	141	340	549	4,470	718	1,360	912	483	266	160	130
5	104	162	340	526	2,770	1,010	1,660	844	466	243	160	130
6	99	167	453	500	1,960	2,780	4,000	900	441	224	150	130
7	99	189	1,460	610	1,370	4,130	5,250	2,890	436	230	140	135
8	97	209	4,960	1,120	1,290	3,130	3,930	5,730	420	221	140	150
9	99	233	9,730	1,040	1,070	2,300	3,010	5,730	407	218	150	160
10	108	304	13,400	778	1,010	2,150	2,390	3,660	403	212	160	170
11	110	383	14,400	610	924	3,660	1,900	3,340	428	209	170	180
12	126	375	12,400	513	800	4,230	1,610	3,402	522	215	170	165
13	121	395	6,740	470	729	3,330	1,490	2,960	466	218	150	156
14	112	325	4,100	440	718	2,630	1,480	2,230	411	221	130	150
15	141	262	3,060	410	718	2,410	1,550	1,900	371	215	130	145
16	167	237	2,410	383	772	2,020	1,540	1,660	337	212	150	140
17	178	218	2,050	356	794	1,690	1,380	1,540	304	197	162	140
18	154	203	1,800	352	822	1,400	1,290	1,450	283	186	165	140
19	143	184	1,590	356	762	1,180	1,080	1,300	262	259	165	140
20	146	173	1,430	340	713	1,310	941	1,140	253	283	180	150
21	138	167	1,260	348	692	4,200	912	948	269	297	175	165
22	133	156	1,170	333	640	6,060	1,200	850	315	246	170	178
23	131	165	1,040	340	590	4,670	1,420	789	325	215	160	170
24	121	162	906	359	500	2,990	1,480	740	322	200	155	162
25	121	159	806	399	470	2,390	1,270	713	348	181	150	143
26	119	167	724	500	450	2,460	1,120	677	325	167	145	138
27	121	249	661	2,440	450	2,170	1,100	640	297	159	145	138
28	141	478	656	4,200	450	2,450	988	635	276	178	150	151
29	170	778	794	3,450		6,110	906	708	279	194	155	159
30	170	772	734	2,340	- - - - -	6,640	878	729	276	197	159	156
31	173	- - - - -	651	1,800	- - - - -	4,120	- - - - -	672	- - - - -	170	155	- - - - -
Total	4,049	7,901	91,608	27,640	35,894	85,935	53,435	52,427	11,319	7,007	4,856	4,496
Mean	131	263	2,955	892	1,282	2,772	1,782	1,691	377	226	157	150
Max	178	778	14,400	4,200	5,200	6,640	5,250	5,730	586	340	180	180
Min	97	141	340	333	450	470	878	635	253	159	130	130
Cfsm	0.109	0.219	2.46	0.743	1.07	2.31	1.48	1.41	0.314	0.188	0.131	0.125
In.	0.13	0.24	2.84	0.86	1.11	2.66	1.65	1.63	0.35	0.22	0.15	0.14

Cal yr 1966 : Total 240,771 Mean 660 Max 14,400 Min 97 Cfsm 0.550 In. 7.47
Wtr yr 1967 : Total 386,567 Mean 1,059 Max 14,400 Min 97 Cfsm 0.882 In. 11.98

Peak discharge (base, 7,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-11	0800	14.03	14,700				
3-30	0530	9.69	7,110				

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 1967.

Gage.--Digital 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, and June 28, 1942 to June 16, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--26 years, 161 cfs.

Extremes.--Maximum discharge during year, 2,270 cfs Dec. 11 (gage height, 7.30 ft); minimum, 13 cfs Sept. 16, 17, 18 (gage height, 1.20 ft).
1941-67: Maximum discharge, 8,750 cfs Apr. 21, 1964 (gage height, 9.88 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.--Record good except for winter period, which is fair. Record of suspended sediment loads for the water year 1967 is published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	24	19	85	92	203	72	240	124	168	59	31	19
2	25	20	79	86	483	82	210	129	139	53	29	18
3	22	25	70	81	614	120	190	137	128	49	27	16
4	20	24	69	78	371	120	170	120	119	48	27	16
5	18	27	92	75	271	207	192	112	108	46	26	15
6	18	34	251	75	205	704	620	129	100	45	24	15
7	17	40	399	129	165	494	635	488	96	46	24	15
8	16	60	765	210	140	405	467	751	93	45	24	15
9	17	73	1,380	124	130	306	340	444	88	42	27	18
10	20	85	2,070	103	115	350	270	306	100	43	27	18
11	20	113	1,900	87	110	369	218	500	150	43	25	18
12	20	84	807	78	105	323	192	533	101	42	25	16
13	18	61	505	73	100	269	180	345	87	40	23	16
14	18	48	376	68	106	249	190	285	79	36	20	16
15	21	43	304	64	110	229	182	269	75	38	20	15
16	29	39	262	60	122	196	162	249	70	36	18	15
17	28	36	234	58	119	186	154	247	66	37	21	14
18	25	34	212	55	112	160	150	267	63	43	21	13
19	24	30	188	54	103	146	139	212	61	51	27	15
20	22	27	176	52	90	238	128	174	69	47	25	20
21	20	27	156	55	82	782	124	150	72	39	23	20
22	20	27	141	59	73	586	182	139	72	36	21	19
23	20	27	128	64	67	384	238	126	69	34	21	18
24	19	27	115	70	62	294	199	122	61	34	19	18
25	19	28	105	82	64	276	186	119	66	33	18	17
26	19	30	97	122	66	249	156	112	72	30	20	17
27	19	103	96	539	68	218	148	105	61	29	27	17
28	18	223	108	464	72	418	135	170	57	32	26	18
29	18	143	128	280	------	710	128	558	61	35	23	19
30	17	103	100	210	------	428	124	335	78	33	21	19
31	16	------	95	187	------	304	------	221	------	31	19	------
TOTAL	627	1,660	11,493	3,834	4,328	9,874	6,649	7,978	2,629	1,255	729	505
MEAN	20.2	55.3	371	124	155	319	222	257	87.6	40.5	23.5	16.8
MAX	29	223	2,070	539	614	782	635	751	168	59	31	20
MIN	16	19	69	52	62	72	124	105	57	29	18	13
CFSM	.12	.32	2.16	72	.90	1.85	1.29	1.50	.51	.24	.14	.10
IN.	.14	.36	2.49	.83	.94	2.13	1.44	1.73	.57	.27	.16	.11

CAL YR 1966: TOTAL 32,322 MEAN 88.6 MAX 2,070 MIN 12 CFSM .51 IN 6.99
WAT YR 1967: TOTAL 51,561 MEAN 141 MAX 2,070 MIN 13 CFSM .82 IN 11.17

Peak discharge (base, 1,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-11	0615	7.30	2,270				

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 1967.

Gage.--Water-stage recorder. Datum of gage is 749.10 ft above mean sea level, datum of 1929.

Average discharge.--14 years, 5.10 cfs.

Extremes.--Maximum discharge during year, 578 cfs Dec. 8 (gage height, 5.82 ft); minimum daily 1.2 cfs Nov. 20, 22-24, 30. 1952-56, 1957-67: 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.--Record poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	2.4	2.0	4.2	7.0	3.5	7.4	5.6	3.4	2.4	4.0	1.9
2	1.6	3.2	1.6	4.0	21	4.3	6.9	4.9	3.3	2.4	4.0	2.0
3	1.8	4.6	1.4	3.9	9.2	6.0	6.9	4.4	3.2	2.2	3.9	1.9
4	1.8	4.2	1.4	3.7	7.6	11	6.5	4.4	3.2	2.4	3.9	2.0
5	1.8	6.7	10	3.6	7.2	18	15	4.4	3.2	2.2	3.7	2.0
6	1.8	2.6	9.7	3.6	6.8	22	8.5	14	3.2	2.2	3.6	2.1
7	1.8	4.5	42	11	6.5	14	6.9	47	3.1	2.4	3.6	2.0
8	1.8	7.2	98	6.4	6.2	12	6.5	10	3.1	2.4	3.6	2.1
9	3.3	3.1	62	5.8	5.8	10	6.0	7.1	2.4	2.2	3.6	3.6
10	2.7	15	59	5.2	5.8	13	5.7	5.8	2.4	2.7	3.4	2.1
11	1.6	3.6	14	5.0	6.8	16	5.7	41	2.2	2.7	3.1	2.1
12	2.0	2.6	9.2	4.7	7.4	13	5.5	8.2	2.4	2.5	3.2	2.1
13	2.0	1.8	7.6	4.4	6.2	10	6.2	6.2	2.4	2.5	3.0	2.0
14	2.4	1.6	6.4	4.2	5.3	8.2	5.7	7.1	2.4	2.4	3.1	2.2
15	9.4	2.2	5.8	4.0	4.9	7.0	4.6	7.4	3.1	2.4	3.0	2.1
16	1.8	1.4	5.5	3.8	4.5	6.4	4.9	6.2	2.5	2.4	2.8	2.2
17	1.6	1.4	5.3	3.7	4.2	6.0	5.0	13	2.7	2.5	2.8	2.5
18	2.9	1.4	4.9	3.6	4.0	5.2	3.5	6.7	2.5	2.4	3.0	2.7
19	1.8	1.4	4.9	3.3	3.8	4.7	3.2	5.5	2.7	3.2	5.3	2.8
20	1.4	1.2	4.7	3.2	3.7	9.1	3.1	4.9	3.0	2.8	2.5	3.7
21	1.6	1.4	4.7	3.1	3.5	16	4.2	4.6	3.2	2.4	2.0	2.8
22	2.2	1.2	4.6	3.2	3.4	12	14	4.6	2.7	2.4	1.9	2.7
23	2.2	1.2	4.4	3.6	3.3	12	6.5	4.6	2.7	2.4	1.8	2.7
24	2.2	1.2	4.3	4.2	3.2	9.5	5.8	4.3	3.0	2.4	1.9	2.5
25	2.2	2.4	4.2	5.0	3.0	8.0	5.0	4.3	2.4	2.4	1.9	2.7
26	2.2	4.9	4.3	14	3.0	6.7	5.2	4.4	2.5	2.4	2.0	3.1
27	2.4	31	4.3	22	3.0	6.4	4.6	4.6	2.5	2.5	1.9	3.6
28	2.4	6.9	8.0	8.2	3.1	13	4.7	5.7	2.7	4.0	1.9	3.0
29	2.4	3.6	5.0	6.9		9.5	4.6	5.4	2.4	4.2	1.8	3.1
30	2.2	1.2	4.7	5.7	- - - - -	8.5	5.3	4.2	2.5	3.9	2.0	2.7
31	2.6	- - - - -	4.4	3.0	- - - - -	7.8	- - - - -	3.6	- - - - -	4.6	2.0	- - - - -
Total	72.5	127.1	408.3	170.2	159.4	308.8	183.6	264.1	83.0	82.9	90.2	75.0
Mean	2.34	4.24	13.2	5.49	5.69	9.96	6.12	8.52	2.77	2.67	2.91	2.50
Max	9.4	31	98	22	21	22	15	47	3.4	4.6	5.3	3.7
Min	1.4	1.2	1.4	3.0	3.0	3.5	3.1	3.6	2.2	2.2	1.8	1.9
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Cal yr 1966 : Total 1,857.5 Mean 5.09 Max 98 Min 1.2 Cfsm - In. -
Wtr yr 1967 : Total 2,025.1 Mean 5.55 Max 98 Min 1.2 Cfsm - In. -

Peak discharge (base, 350 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	1700	5.82	578				
5-11	0430	4.95	364				

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, 1.5 miles upstream from mouth and 2.0 miles southeast of Castleton.

Drainage area.--42.5 sq mi.

Records available.--May 1958 to September 1967.

Gage.--Digital 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). Prior to Apr. 16, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--9 years, 31.8 cfs.

Extremes.--Maximum discharge during year, 604 cfs Dec. 10 (gage height, 6.60 ft); minimum, 0.3 cfs Sept. 14 (gage height, 1.51 ft). 1958-67: Maximum discharge, 2,010 cfs Apr. 21, 1964 (gage height, 8.37 ft); minimum, 0.2 cfs Aug. 24, 1962, several days in September and Oct. 3, 1963; Sept. 9, 10, 13, 14, 17, 18, 1966; minimum gage height, 1.48 ft Sept. 13, 14, 1966.

Remarks.--Record good except for winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.2	9.3	9.0	13	59	15	52	25	28	6.4	3.8	1.2
2	.74	9.8	7.5	13	243	18	43	27	24	6.2	3.7	1.2
3	.90	11	6.6	12	235	26	38	22	23	5.8	3.5	1.2
4	.98	11	6.0	12	123	23	32	20	21	5.8	3.5	1.1
5	1.1	13	9.3	11	84	65	70	20	19	5.6	3.3	.98
6	1.3	14	16	12	62	181	138	34	18	5.4	3.0	.98
7	1.3	15	50	34	50	125	175	261	17	5.4	2.5	.90
8	1.4	16	193	38	42	98	96	260	16	5.2	3.0	.82
9	1.7	14	485	22	35	75	77	142	15	5.0	3.0	.98
10	2.1	14	570	19	32	124	60	95	15	5.2	2.5	1.2
11	2.0	13	434	15	26	131	48	257	14	5.2	2.3	1.1
12	2.3	9.8	215	14	23	106	41	194	13	4.7	2.2	1.1
13	2.4	7.8	133	13	23	81	41	115	12	4.6	2.1	.90
14	2.5	6.8	95	12	24	70	39	90	11	4.4	1.9	.82
15	4.3	6.2	71	11	25	62	38	79	11	4.3	1.6	.90
16	6.0	5.8	59	10	28	52	36	66	10	4.3	1.7	.98
17	6.0	5.4	51	10	27	50	34	56	9.8	4.1	1.7	.98
18	6.4	5.0	45	9.4	26	42	30	107	9.5	4.1	1.8	.98
19	4.4	4.7	38	9.0	23	39	26	72	9.0	4.3	2.3	1.1
20	4.3	4.6	35	9.2	23	95	24	52	9.0	4.3	2.2	1.3
21	5.0	4.4	30	9.4	20	274	25	41	13	4.0	1.8	1.4
22	6.0	4.4	26	10	19	177	54	36	12	3.8	1.9	1.5
23	6.4	4.3	22	11	17	116	44	32	9.8	3.8	1.6	1.5
24	7.0	4.3	21	12	16	85	38	29	9.0	3.8	1.5	1.4
25	7.3	4.6	19	13	15	74	32	27	8.5	3.8	1.5	1.5
26	7.8	4.9	17	30	14	64	31	24	8.3	4.0	1.6	1.3
27	7.8	19	15	228	15	55	29	22	7.5	4.3	1.8	1.5
28	8.3	23	20	167	15	140	25	59	7.5	4.3	1.8	1.7
29	8.3	15	23	87	------	159	24	97	7.3	4.4	1.6	1.7
30	8.3	11	17	57	------	100	24	44	6.6	3.8	1.5	1.8
31	8.8	------	15	50	------	69	------	35	------	3.5	1.3	------
TOTAL	134.32	291.1	2,753.4	973.0	1,344	2,791	1,464	2,440	393.8	143.8	69.5	36.02
MEAN	4.33	9.70	88.8	31.4	48.0	90.0	48.8	78.7	13.1	4.64	2.24	1.20
MAX	8.8	23	570	228	243	274	175	261	28	6.4	3.8	1.8
MIN	.74	4.3	6.0	9.0	14	15	24	20	6.6	3.5	1.3	.82
CFSM	.10	.23	2.09	.74	1.13	2.12	1.15	1.85	.31	.11	.05	.03
IN.	.12	.25	2.41	.85	1.18	2.44	1.28	2.14	.34	.13	.06	.03

CAL YR 1966: TOTAL 6,102.02 MEAN 16.7 MAX 570 MIN .20 CFSM .39 IN 5.34
WAT YR 1967: TOTAL 12,833.94 MEAN 35.2 MAX 570 MIN .74 CFSM .83 IN 11.23

Peak discharge (base, 450 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1930	6.60	604				

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 1967. 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.--Digital water-stage recorder. Datum of gage is 722.16 ft above mean sea level, datum of 1929. Prior to July 29, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--38 years, 267 cfs (unadjusted).

Extremes.--Maximum discharge during year, 3,370 cfs Dec. 10 (gage height, 8.62 ft); minimum, 34 cfs Nov. 15 (gage height, 1.66 ft).
1929-67: 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.--Record fair. Flow regulated by Geist Reservoir, 8.5 miles upstream, since January 1943 (capacity, 6,900,000,000 gal).

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	48	63	52	150	371	125	457	217	335	75	66	74
2	48	56	47	140	879	140	363	237	261	71	65	72
3	48	54	42	135	1,190	184	346	219	239	60	65	72
4	48	52	46	130	860	206	284	198	217	64	65	72
5	48	56	73	127	627	401	429	188	196	60	63	72
6	48	50	102	121	510	1,090	907	286	181	70	61	64
7	48	49	232	195	355	1,050	1,070	1,140	169	66	61	63
8	48	58	580	280	300	853	826	1,390	171	70	64	63
9	48	52	1,120	246	260	661	580	1,040	160	70	74	78
10	48	76	2,820	199	230	645	488	711	150	70	71	75
11	48	50	3,070	161	210	682	375	1,290	165	69	70	71
12	48	44	2,030	140	200	636	308	1,240	175	69	69	60
13	48	43	1,090	130	190	524	313	844	146	66	65	60
14	48	42	760	120	185	472	308	665	121	67	69	59
15	79	43	582	110	181	425	289	600	109	66	66	58
16	60	44	468	105	197	354	273	524	96	65	69	59
17	59	44	406	100	215	346	248	520	98	64	67	66
18	52	46	365	92	194	289	237	612	96	65	67	67
19	52	46	321	90	179	266	219	524	92	70	95	72
20	54	46	288	90	169	404	196	404	67	70	89	76
21	54	46	267	92	157	1,110	198	320	116	67	75	75
22	54	41	244	97	140	1,200	346	289	127	66	72	70
23	54	37	222	108	125	871	384	241	109	66	61	70
24	55	37	180	113	115	641	352	219	90	67	63	67
25	55	41	172	122	110	524	296	215	84	67	75	66
26	55	42	161	208	110	460	277	204	80	67	76	67
27	55	172	149	870	110	411	241	179	79	67	76	71
28	55	139	193	1,010	120	592	221	246	70	72	75	70
29	56	75	222	696	------	997	202	728	67	71	74	70
30	57	56	170	479	------	862	209	699	71	67	72	65
31	55	------	155	362	------	616	------	472	------	69	72	------
TOTAL	1,633	1,700	16,629	7,018	8,489	18,037	11,242	16,661	4,137	2,093	2,172	2,044
MEAN	52.7	56.7	536	226	303	582	375	537	138	67.5	70.1	68.1
MAX	79	172	3,070	1,010	1,190	1,200	1,070	1,390	335	75	95	78
MIN	48	37	42	90	110	125	196	179	67	60	61	58
CFSM	-	-	-	-	-	-	-	-	-	-	-	-
IN.	-	-	-	-	-	-	-	-	-	-	-	-
(ƒ)	-23.6	+40.2	+111	+5	-6	+10	-7	+6	-10	-28.9	-48.0	-48.5

CAL YR 1966: TOTAL 50,879 MEAN 139 MAX 3,070 MIN 34 CFSM .44 IN. 6.05 ƒ +9
WAT YR 1967: TOTAL 91,855 MEAN 252 MAX 3,070 MIN 37 CFSM .81 IN. 10.91 ƒ 0

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	2115	8.62	3,370				

ƒ 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 1967. 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.--Digital water-stage recorder. Datum of gage is 662.26 ft 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. Mar. 3, 1932 to May 14, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--38 years (1904-5, 1930-67), 1,377 cfs (adjusted for diversion and change in contents since October 1955; includes sewage effluent, April 1930 to September 1931).

Extremes.--Maximum discharge during year, 18,800 cfs Dec. 10 (gage height, 14.30 ft); minimum, 55 cfs Oct. 8 (gage height, 2.04 ft).
1904-6, 1930-67: 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.--Record good except below 100 cfs and for winter period, which is fair. During the year the Indianapolis Water Co. diverted 29,495,000,000 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 CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	94	123	517	751	2,060	602	3,260	1,100	851	263	140	90
2	81	123	380	717	3,980	614	2,490	1,100	704	333	131	90
3	84	163	260	672	6,210	697	2,080	1,060	690	303	163	105
4	71	139	191	641	5,700	851	1,740	1,010	614	406	122	110
5	64	183	325	623	3,650	1,550	2,350	945	566	263	94	98
6	60	155	450	589	2,590	3,570	4,420	1,370	524	224	103	87
7	61	159	1,710	863	1,740	5,010	6,020	4,740	530	202	105	72
8	59	360	5,990	1,220	1,290	4,230	4,950	7,080	536	182	92	72
9	94	235	12,300	1,300	1,300	3,150	3,630	7,010	518	171	112	90
10	167	629	17,900	1,010	1,250	2,850	2,860	4,520	524	202	90	128
11	66	395	18,200	793	1,140	3,840	2,300	5,520	548	185	105	137
12	62	345	15,700	647	1,010	4,800	1,910	4,800	590	117	103	131
13	66	330	10,200	617	893	4,030	1,900	3,850	566	96	112	117
14	70	300	5,160	578	858	3,170	1,780	3,110	476	122	117	89
15	330	235	3,700	550	879	2,820	1,760	2,640	406	134	92	89
16	163	191	2,950	480	872	2,510	1,810	2,270	378	134	85	90
17	167	171	2,500	420	908	2,090	1,670	2,240	323	146	90	94
18	147	147	2,170	390	930	1,760	1,420	2,000	298	125	87	94
19	106	112	1,900	375	886	1,510	1,270	1,760	283	134	323	96
20	106	106	1,660	385	802	1,860	1,110	1,470	243	220	263	125
21	85	100	1,530	380	760	4,820	1,150	1,230	318	215	159	115
22	84	94	1,360	405	711	7,100	1,700	1,040	383	189	140	120
23	84	91	1,240	425	669	5,910	1,670	945	389	167	120	120
24	94	85	1,100	470	506	3,840	1,750	858	358	159	108	125
25	75	115	958	506	458	2,990	1,480	802	338	128	94	120
26	80	163	878	772	464	2,840	1,330	760	383	117	100	90
27	69	1,050	786	3,280	450	2,680	1,250	718	323	128	125	94
28	70	567	966	5,750	500	3,020	1,130	746	313	156	134	96
29	91	611	1,010	4,660	------	6,390	1,020	1,420	293	174	103	103
30	147	672	950	2,960	------	7,600	1,060	1,310	253	167	100	112
31	147	------	807	2,150	------	5,020	------	1,110	------	159	90	------
TOTAL	3,144	8,149	115,748	35,379	43,466	103,724	64,270	70,534	13,519	5,721	3,802	3,099
MEAN	101	272	3,734	1,141	1,552	3,346	2,142	2,275	451	185	123	103
MAX	330	1,050	18,200	5,750	6,210	7,600	6,020	7,080	851	406	323	137
MIN	59	85	191	375	450	602	1,020	718	243	96	85	72
(f)	+114	+106	+107	+117	+117	+115	+118	+124	+138	+147	+154	+142
(ff)	-28	+77	+197	+9	-11	+16	-13	+5	-12	-29	-75	-79

Adjusted for diversion and change in reservoir contents

Mean	187	455	4,038	1,267	1,658	3,477	2,247	2,404	577	303	202	166
Cfsm	.11	.28	2.48	.78	1.02	2.14	1.38	1.48	.35	.19	.12	.10
In.	.13	.31	2.86	.90	1.06	2.47	1.54	1.71	.39	.22	.14	.11

	Observed			Adjusted		
Calendar year 1966 :	Max 18,200	Min 57	Mean 732	Mean 867	Cfsm .53	In. 7.22
Water year 1967 :	Max 18,200	Min 59	Mean 1,289	Mean 1,419	Cfsm .87	In. 11.84

Peak discharge (base, 8,500 cfs).--Dec. 10 (1945) 18,800 cfs, (14.30 ft).

f Diversion above station for municipal supply, equivalent in cubic feet per second, furnished by Indianapolis Water Co.
ff Change in contents, equivalent in cubic feet per second, in Morse and Geist Reservoirs, furnished by Indianapolis Water Co.

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 1967.

Gage.--Digital 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). Prior to Dec. 1, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--7 years (1960-67), 5.86 cfs.

Extremes.--Maximum discharge during year, 590 cfs Dec. 8 (gage height, 6.36 ft); minimum, 0.04 cfs Sept. 5 (gage height, 2.91 ft).
1959-67: Maximum discharge, 1,610 cfs Mar. 4, 1963 (gage height, 10.32 ft); no flow at times some years.
Flood in May 1956 reached a stage of 16.0 ft, from information by local resident.

Remarks.--Record good except for winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.2	.90	2.5	1.5	6.3	2.7	2.1	4.9	.64	.29	.90	.13
2	1.0	1.6	2.2	1.3	39	10	1.8	3.5	1.3	.64	.80	.09
3	.90	3.2	1.8	1.3	8.8	4.5	2.4	1.9	2.8	.50	.72	.07
4	.80	3.7	1.8	1.2	4.9	3.7	1.2	1.5	.56	3.7	.29	.07
5	.72	9.6	14	1.2	3.7	43	43	1.3	.56	.39	.15	.39
6	.56	3.2	13	1.2	3.1	34	11	36	.44	.34	.07	.25
7	.56	5.6	52	13	2.6	12	4.9	97	.34	.90	.11	.15
8	.50	18	165	3.0	2.2	8.4	3.5	12	.90	.44	.18	.13
9	7.8	4.5	88	1.8	2.0	6.3	2.5	6.3	.56	.29	.34	1.2
10	5.6	27	101	1.5	1.7	4.9	2.1	3.7	.29	.72	.15	1.0
11	1.3	4.8	13	1.3	1.6	3.7	1.8	77	.34	.15	.15	.80
12	.90	2.8	6.6	1.2	1.5	3.0	1.5	6.3	.50	.13	.72	.64
13	.80	2.2	4.5	1.1	1.4	3.0	8.0	3.0	.64	.18	.11	.90
14	.80	1.9	3.2	1.1	1.5	2.8	2.4	11	.64	.13	.21	.50
15	9.9	1.8	2.8	1.0	1.7	2.8	1.5	13	.39	.15	.72	.25
16	1.6	1.6	2.7	.90	2.0	2.4	1.2	7.3	.56	.25	.21	.18
17	1.3	1.4	2.4	.90	1.5	2.2	3.7	13	.56	.56	.25	.39
18	1.9	1.2	2.2	.90	1.3	1.9	1.3	3.7	.56	.80	.15	.72
19	1.9	1.3	2.1	.90	1.2	1.8	1.2	2.2	.56	.90	7.0	.44
20	1.8	1.0	1.9	.90	1.1	29	1.3	1.5	1.0	1.8	1.5	1.3
21	1.0	1.0	1.7	1.1	1.1	25	3.7	1.2	1.9	.44	1.8	2.2
22	.90	1.0	1.5	1.5	1.0	7.3	18	.90	.80	.34	1.6	.64
23	.90	.80	1.3	1.6	.90	4.5	4.0	.72	.44	.34	.56	.21
24	.90	.72	1.2	1.6	.90	3.5	6.3	.72	.34	.56	.44	.13
25	.90	2.4	1.0	1.8	.90	2.7	2.2	.72	.34	.29	.25	.15
26	.90	14	1.0	21	.90	2.5	2.5	.56	.34	.29	.25	.25
27	1.0	78	1.0	33	1.2	2.5	2.1	.72	.39	.50	.11	.80
28	.90	10	13	7.0	1.8	19	1.6	2.5	.44	.80	.11	.29
29	.80	4.2	4.5	3.7	------	5.6	1.3	3.2	.72	1.6	.39	.21
30	.90	3.0	2.1	3.0	------	3.5	5.2	1.3	.72	.11	.25	.18
31	.80	------	1.6	3.5	------	2.5	------	1.0	------	.39	.13	------
TOTAL	52.74	212.42	512.6	116.00	97.80	260.7	145.3	319.64	20.57	18.92	20.62	14.66
MEAN	1.70	7.08	16.5	3.74	3.49	8.41	4.84	10.3	.69	.61	.67	.49
MAX	9.9	78	165	33	39	43	43	97	2.8	3.7	7.0	2.2
MIN	.50	.72	1.0	.90	.90	1.8	1.2	.56	.29	.11	.07	.07
CFSM	.22	.92	2.16	.49	.46	1.10	.63	1.34	.09	.08	.09	.06
IN.	.26	1.03	2.49	.56	.47	1.26	.70	1.55	.10	.09	.10	.07

CAL YR 1966: TOTAL 1,723.C6 MEAN 4.72 MAX 165 MIN .10 CFSM .62 IN 8.35
WAT YR 1967: TOTAL 1,791.97 MEAN 4.91 MAX 165 MIN .07 CFSM .64 IN 8.69

Peak discharge (base, 450 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	1930	6.36	590				

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 1967.

Gage.--Digital 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). Prior to Dec. 3, 1966 graphic water-stage recorder at same site and datum.

Average discharge.--7 years (1960-67), 7.68 cfs.

Extremes.--Maximum discharge during year, 790 cfs Dec. 8 (gage height, 5.95 ft); no flow for several days.
1959-67: Maximum discharge, 2,010 cfs Mar. 4, 1963 (gage height, 9.22 ft); no flow at times during most years.

Remarks.--Record fair, except for winter period, which is poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.6	.12	2.0	5.0	9.5	16	3.4	6.8	1.9	.32	1.9	.01
2	1.2	.32	1.9	4.7	53	13	3.2	6.3	3.0	.94	1.7	0
3	.78	2.4	1.3	4.5	14	6.0	3.8	4.7	5.0	.41	1.6	0
4	.94	3.0	1.3	4.4	8.7	5.2	3.4	4.5	1.9	5.8	.41	0
5	.62	9.1	13	4.3	7.2	53	45	4.2	1.7	.94	.24	.51
6	.32	2.4	9.8	4.2	6.5	42	12	41	1.7	.51	.06	.94
7	.41	4.0	80	18	5.6	14	6.5	146	1.4	1.7	0	.10
8	.41	27	241	4.7	5.0	10	5.5	15	2.6	1.1	.18	0
9	1.1	5.2	148	3.6	4.7	7.9	4.7	8.3	1.9	.62	1.3	4.2
10	23	33	175	3.0	4.5	6.8	4.2	6.0	1.3	2.2	.10	1.4
11	8.0	4.2	21	2.6	4.3	6.3	3.8	131	.94	.51	0	2.6
12	3.0	2.6	11	2.4	4.1	5.2	4.0	9.8	1.4	.18	1.4	1.6
13	1.0	1.9	7.9	2.2	4.5	5.5	9.8	6.0	1.7	.32	.24	2.0
14	.70	1.6	6.5	2.0	4.8	5.0	5.2	16	2.2	.32	.32	1.6
15	30	1.6	5.8	1.9	5.3	5.0	3.8	16	.94	.51	1.9	.51
16	5.0	1.6	5.2	1.8	4.0	4.5	3.6	11	1.3	.51	.32	.02
17	1.0	1.2	5.0	1.7	3.1	4.0	8.3	17	1.1	1.9	.24	0
18	2.0	1.1	4.5	1.6	2.9	3.8	4.2	6.5	.62	1.9	4.2	1.1
19	1.5	1.1	4.0	1.6	2.8	3.6	3.8	5.0	.41	2.0	19	.94
20	.94	.94	4.0	1.9	2.6	26	3.8	3.8	1.3	3.0	3.6	1.9
21	.32	.94	4.0	2.1	2.5	24	7.6	3.4	3.2	1.3	2.4	4.0
22	.18	.78	3.7	2.4	2.4	8.3	28	3.2	1.3	.78	3.0	1.9
23	.14	.78	3.4	2.6	2.3	6.5	6.8	3.0	.51	.62	1.9	.41
24	.14	.51	3.2	2.4	2.3	5.8	8.7	2.8	.41	1.4	1.9	.05
25	.12	2.2	3.0	3.0	2.3	5.2	5.5	2.4	.18	.62	.78	0
26	.12	19	3.0	26	2.3	4.5	6.0	2.4	.18	.51	.94	0
27	.14	114	3.2	53	2.8	4.5	5.0	2.4	.41	1.7	.41	1.6
28	.18	8.7	20	13	7.0	15	4.5	5.2	.51	1.6	.05	.78
29	.10	4.0	9.5	8.7	------	6.0	4.5	6.0	.62	2.8	.41	.08
30	.08	2.8	6.0	6.8	------	4.7	8.7	3.2	1.1	.18	.94	.02
31	.10	------	5.5	6.8	------	3.8	------	2.8	------	1.1	.24	------
TOTAL	87.14	258.09	812.7	202.9	181.0	331.1	227.3	501.7	42.73	38.30	51.68	28.27
MEAN	2.81	8.60	26.2	6.55	6.46	10.7	7.58	16.2	1.42	1.24	1.67	.94
MAX	30	114	241	53	53	53	45	146	5.0	5.8	19	4.2
MIN	.08	.12	1.3	1.6	2.3	3.6	3.2	2.4	.18	.18	0	0
CFSM	.27	.84	2.55	.64	.63	1.04	.74	1.57	.14	.12	.16	.09
IN.	.31	.93	2.93	.73	.65	1.20	.82	1.81	.15	.14	.19	.10

CAL YR 1966: TOTAL 2,148.43 MEAN 5.89 MAX 241 MIN 0 CFSM .57 IN 7.76
WAT YR 1967: TOTAL 2,762.91 MEAN 7.57 MAX 241 MIN 0 CFSM .73 IN 9.98

Peak discharge (base, 380 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	1900	5.95	790				
5-7	0745	4.96	496				
5-11	0600	5.38	613				

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 1967.

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.--10 years, 90.0 cfs.

Extremes.--Maximum discharge during year, 3,900 cfs Dec. 9 (gage height, 10.10 ft); no flow Oct. 1 to Nov. 9, Aug. 7 to Sept. 30. 1957-1967: Maximum discharge, 12,400 cfs Apr. 20, 1964 (gage height, 14.64 ft); no flow for several days in September 1959, September, October 1963, September, October 1964, July, August, September, October, November, 1966, August, September 1967. Flood of June 28, 1957, reached a stage of 19.20 ft, from floodmark.

Remarks.--Record good except for winter period, which is poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	33	52	227	27	105	46	26	3.8	0.5	
2		0	26	45	690	29	92	54	23	3.2	.3	
3		0	20	40	650	61	83	41	22	2.8	.2	
4		0	17	36	400	55	64	34	21	2.2	.1	
5		0	25	32	220	162	285	31	19	2.2	.1	
6		0	92	29	140	368	409	76	18	2.0	.1	
7		0	824	67	110	215	493	1,400	15	1.8	0	
8		0	1,950	109	92	173	271	596	14	1.5	0	
9		0	2,000	109	76	136	187	331	14	1.4	0	
10		4.9	1,370	90	64	328	154	218	85	1.5	0	
11		42	539	40	56	493	119	707	198	1.4	0	
12		21	230	31	48	322	96	348	79	1.2	0	
13		14	150	26	40	232	94	212	40	.8	0	
14		10	110	23	39	179	103	173	26	.6	0	
15		7.4	90	20	43	141	159	159	19	.5	0	
16		5.8	86	18	55	111	121	131	15	.5	0	
17		4.6	116	17	50	105	94	105	12	.4	0	
18		3.6	109	16	46	79	74	86	12	.3	0	
19		3.2	94	16	43	70	56	70	10	.3	0	
20		3.0	88	16	40	300	51	58	8.6	.8	0	
21		2.6	68	17	37	867	54	47	9.0	8.2	0	
22		2.4	60	21	34	395	83	43	11	4.0	0	
23		2.4	52	26	30	250	184	41	9.0	2.1	0	
24		2.2	48	30	28	176	66	39	8.2	1.2	0	
25		2.8	45	41	26	156	56	35	6.6	.7	0	
26		3.8	43	212	24	126	55	31	5.8	.5	0	
27		36	41	1,120	25	107	52	30	5.5	.4	0	
28		138	40	411	26	410	46	36	4.6	1.0	0	
29		75	74	221		344	40	47	4.6	1.0	0	
30		47	64	151	- - - - -	215	45	34	4.6	.8	0	
31		- - - - -	58	151	- - - - -	146	- - - - -	31	- - - - -	.6	0	- - - - -
Total		431.7	8,562	3,233	3,359	6,778	3,791	5,290	745.5	49.7	1.3	0
Mean	0	14.4	276	104	120	219	126	171	24.8	1.60	0.042	0
Max	0	138	2,000	1,120	690	867	493	1,400	198	8.2	0.5	0
Min	0	0	17	16	24	27	40	30	4.6	0.3	0	0
Cfsm	0	0.141	2.71	1.02	1.18	2.15	1.24	1.68	0.243	0.016	0.00041	0
In.	0	0.16	3.12	1.18	1.23	2.48	1.38	1.94	0.27	0.02	0.0005	0

Cal yr 1966 : Total 17,332.3 Mean 47.5 Max 2,000 Min 0 Cfsm 0.466 In. 6.31
Wtr yr 1967 : Total 32,241.2 Mean 88.3 Max 2,000 Min 0 Cfsm 0.866 In. 11.78

Peak discharge (base, 1,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0900	10.10	3,900				
1-27	0730	7.01	1,560				
5-7	1030	8.33	2,280				

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 Lynhurst Drive, approximately 600 ft south of intersection of West 10th Street and Lynhurst 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 mi.

Records available.--November 1938 to September 1967.

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 Lynhurst Drive, a wire-weight gage on downstream side of 10th Street Bridge, approximately half a mile upstream; Aug. 8, 1957 to June 30, 1958. Mar. 10, 1966 to Aug. 16, 1967 during channelization of Eagle Creek, a wire-weight gage on downstream side of Lynhurst Drive Bridge. All gages at same datum.

Average discharge.--28 years (1939-67); 149 cfs.

Extremes.--Maximum discharge during year about 4,910 cfs Dec. 9 (gage height +1.10); minimum, 0.1 cfs Sept. 26. (gage height, -5.54 ft).
1938-67: 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.--Record poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.6	1.3	54	69	422	57	195	90	69	14	4.4	0.2
2	4.2	1.5	29	62	1,540	60	159	115	59	12	2.7	.2
3	2.6	2.3	18	60	996	64	141	90	56	12	4.4	.2
4	2.0	2.6	27	58	566	65	110	73	55	16	3.6	.8
5	5.0	5.4	33	56	410	147	345	75	49	12	3.0	.6
6	1.7	2.6	72	56	290	620	965	135	47	11	3.0	.6
7	3.0	7.4	956	100	183	395	706	2,180	47	10	2.8	.5
8	2.6	7.8	2,610	206	171	306	482	2,050	44	9.5	2.7	.4
9	4.6	4.6	4,320	135	150	230	345	1,380	44	8.7	2.8	.5
10	2.0	23	3,620	112	135	416	258	512	55	8.7	2.7	.5
11	1.5	27	1,530	102	115	755	202	1,340	250	8.3	2.6	.3
12	1.5	11	804	59	98	584	159	860	113	7.9	2.1	.2
13	1.7	9.8	530	54	84	335	177	494	79	6.3	1.8	.2
14	2.0	8.2	360	50	81	262	209	380	52	5.6	1.6	.4
15	8.2	7.4	266	46	83	212	310	330	44	5.0	1.4	.5
16	7.4	7.0	223	44	95	168	223	270	37	5.6	1.6	.5
17	2.0	5.8	189	41	100	156	171	250	34	5.0	.8	.5
18	4.2	5.0	171	38	90	115	132	192	31	5.0	1.1	.6
19	2.6	5.0	153	36	81	100	115	150	27	5.6	3.2	.4
20	4.6	5.0	141	35	73	195	102	122	25	6.3	3.0	.4
21	2.3	4.2	125	35	67	1,320	98	109	31	6.7	2.2	.4
22	2.6	4.2	105	36	61	776	147	97	27	9.5	1.4	.4
23	2.6	4.2	85	48	54	476	147	73	24	8.7	1.4	.2
24	2.0	4.6	74	56	51	330	115	66	21	7.1	1.2	.3
25	2.6	6.6	70	73	50	270	125	79	19	4.7	1.4	.2
26	2.0	10	67	151	50	223	115	66	17	4.4	1.2	.2
27	2.3	95	64	2,350	52	183	100	63	15	4.4	1.6	.7
28	1.5	149	88	1,350	54	416	90	55	16	6.3	1.8	.6
29	.6	100	141	512		632	79	105	16	9.5	1.4	.3
30	1.0	90	108	330	- - - - -	400	90	93	15	5.6	1.2	.4
31	3.4	- - - - -	77	286	- - - - -	286	- - - - -	83	- - - - -	5.0	.7	- - - - -
Total	90.9	617.5	17,110	6,646	6,202	10,554	5,612	11,977	1,418	246.4	66.8	12.2
Mean	2.93	20.6	552	214	222	340	220	386	47.3	7.95	2.15	0.41
Max	8.2	149	4,320	2,350	1,540	1,320	965	2,180	250	14	44	0.8
Min	0.6	1.3	18	35	50	57	79	55	15	4.4	0.7	0.2
Cfsm	0.016	0.115	3.08	1.20	1.24	1.90	1.23	2.16	0.264	0.044	0.012	0.0023
In.	0.02	0.13	3.55	1.38	1.29	2.19	1.37	2.49	0.29	0.05	0.01	0.003

Cal yr 1966 : Total 30,847.0 Mean 84.5 Max 4,320 Min 0.1 Cfsm 0.472 In. 6.39
Wtr yr 1967 : Total 61,552.8 Mean 169 Max 4,320 Min 0.2 Cfsm 0.944 In. 12.77

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1900	+1.10	4,910				
1-27	1800	+0.10	3,800				
2-2	1800	-0.70	2,710				
5-7	1200	-0.20	3,370				

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 Dry Run and 2.4 miles upstream from mouth.

Drainage area.--23.9 sq mi (Revised). (Includes 5.57 sq mi from Dry Run Basin. Since June 1964 part of the flow from the 5.57 sq mi of Dry Run basin has been diverted into Little Eagle Creek above gage).

Records available.--October 1959 to September 1967.

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).

Average Discharge.--8 years, 15.2 cfs.

Extremes.--Maximum discharge during year, 1,390 cfs Dec. 8 (gage height, 5.24 ft); minimum daily, 0.1 cfs Oct. 1-6.
1959-67: Maximum discharge, 1,940 cfs Apr. 25, 1961 (gage height, 7.44 ft); no flow at times most years.

Remarks.--Record poor.

Revisions.--Figures of runoff since June 1964 have been found to be in error and should not be used.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.1	0.6	8.6	9.0	24	7.6	23	8.4	12	1.1	1.6	0.9
2	.1	.9	6.8	8.4	195	9.0	19	17	11	1.4	1.6	.9
3	.1	1.4	5.0	7.8	74	11	17	9.2	9.2	1.1	1.9	.9
4	.1	1.6	4.5	7.6	40	13	14	8.4	10	4.3	1.1	.9
5	.1	3.4	7.0	7.2	29	60	51	16	9.2	1.6	1.1	.7
6	.1	1.4	24	7.0	20	110	45	36	8.4	1.4	1.4	.7
7	1.4	4.8	173	32	18	56	19	287	6.4	1.4	1.4	.7
8	1.4	5.8	471	18	16	49	10	87	5.3	1.1	1.1	.7
9	1.4	5.8	505	13	14	34	6.4	45	4.8	.9	1.6	1.1
10	.7	8.5	466	10	13	48	5.3	24	9.4	1.1	1.4	.6
11	.6	4.8	101	7.5	12	36	4.8	270	3.0	1.4	1.1	.6
12	.6	1.6	55	6.0	11	27	4.3	70	2.6	1.1	1.1	.6
13	.6	1.6	39	5.2	11	23	4.3	40	2.2	1.4	.9	.7
14	.6	1.1	29	4.6	10	22	13	46	3.0	1.4	1.4	.6
15	9.3	.6	22	4.1	10	20	12	49	2.6	1.1	1.4	.9
16	2.0	.6	20	3.9	14	22	10	39	2.4	1.1	1.1	.9
17	.4	.6	16	3.7	12	20	9.2	67	2.0	1.6	1.4	1.1
18	.4	.6	16	3.6	12	19	5.8	40	1.8	2.2	1.4	.7
19	.3	.6	12	3.5	8.4	16	4.3	32	1.6	8.4	2.2	.7
20	.3	.7	12	3.5	7.8	25	5.3	23	1.4	5.8	2.2	.9
21	.6	.7	9.2	3.9	7.0	108	5.8	20	1.6	2.6	1.4	1.4
22	.6	.7	8.6	4.3	6.4	48	27	17	1.5	.9	1.4	.9
23	.4	.6	8.1	6.4	6.0	32	10	16	1.3	.9	1.4	.9
24	.4	.7	7.6	7.6	6.0	23	13	14	1.2	.9	1.1	1.1
25	.4	3.0	7.2	12	6.2	20	10	13	1.0	2.6	1.4	1.4
26	.2	3.8	6.8	21	6.4	16	10	12	.9	2.2	.9	1.1
27	.2	24	6.4	158	6.6	14	9.2	12	.9	1.4	1.1	1.9
28	.2	100	10	56	7.0	37	7.6	18	.4	2.3	1.6	1.6
29	.6	20	23	33		32	5.8	28	.4	2.2	1.1	1.4
30	.4	12	13	22	- - - - -	32	10	21	.9	1.6	1.1	1.6
31	.6	- - - - -	9.6	21	- - - - -	23	- - - - -	16	- - - - -	1.9	.9	- - - - -
Total	25.2	212.5	2102.4	510.8	602.8	1012.6	391.1	1401	118.4	60.4	41.8	29.1
Mean	0.81	7.08	67.8	16.5	21.5	32.7	13.0	45.2	3.95	1.95	1.35	0.97
Max	9.3	100	505	158	195	110	51	287	12	8.4	2.2	1.9
Min	0.1	0.6	4.5	3.5	6.0	7.6	4.3	8.4	0.4	0.9	0.9	0.6
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Cal yr 1966: Total 3,932.2 Mean 10.8 Max 505 Min 0 Cfsm - In. -
Wtr yr 1967: Total 6,508.1 Mean 17.8 Max 505 Min 0.1 Cfsm - In. -

Peak discharge (base, 450 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	1730	5.24	1,390				
5-7	1230	2.78	470				
5-11	0900	3.24	597				

3-3537. West Fork White Lick Creek at Danville, Ind.

Location.--Lat 39°45'36", long 86°30'47", in NW¼NE¼ 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 1967.

Gage.--Wire-weight gage read twice daily. Type-A recorder since July 14, 1965, and crest-stage gage since Dec. 10, 1959. Datum of the gage is 828.83 ft above mean sea level, datum of 1929.

Average discharge.--9 years, 22.2 cfs.

Extremes.--Maximum discharge during year, 1,850 cfs Dec. 9 (gage height, 8.17 ft, from graph based on gage readings); no flow many days.
1958-67: Maximum discharge, 3,330 cfs July 14, 1962 (gage height, 11.32 ft); no flow many days.
Maximum flood known, 6,660 cfs June 28, 1957 (gage height, 16.0 ft, from floodmark), from contracted-opening measurement.

Remarks.--Record poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	.1	0	6.8	15	58	7.9	24	12	22	1.2	1.2	0
2	.1	.1	4.9	14	300	8.5	21	10	17	.8	.6	0
3	0	.1	3.6	12	139	9.5	18	9.9	14	.6	.6	0
4	0	.1	2.8	10	80	10	16	9.3	13	.8	.6	0
5	0	.7	18	8.0	47	90	23	8.4	12	.6	.3	0
6	0	.3	49	5.1	33	58	67	27	11	.6	.2	0
7	0	1.4	184	19	25	58	54	160	10	.6	.3	0
8	0	3.0	705	18	19	58	33	160	9.6	.6	.3	0
9	1.1	1.0	820	4.7	14	54	24	95	9.6	.4	.3	0
10	.4	62	600	2.3	11	52	18	72	8.4	.3	.2	0
11	0	7.4	224	3.1	9.0	47	16	187	7.3	.3	.2	0
12	0	2.3	106	2.1	9.0	44	15	85	6.3	.3	.1	0
13	0	1.2	76	1.0	9.0	40	16	76	6.0	.2	0	0
14	0	.7	58	.9	11	34	18	67	5.6	.2	0	0
15	2.3	.5	49	.8	12	28	19	62	5.1	.2	0	0
16	.6	.4	42	.8	14	25	19	55	4.5	.2	0	0
17	.1	.3	38	.8	13	23	20	76	4.2	.2	0	0
18	.5	.2	33	.8	12	21	18	44	3.4	.2	0	0
19	.1	.1	29	.8	11	19	16	28	3.1	.8	0	0
20	.1	.2	26	.8	10	40	13	21	3.1	.4	0	0
21	.1	.1	21	.8	9.0	153	18	16	3.6	.4	0	.3
22	0	.1	18	.8	8.3	146	38	14	4.9	.3	0	.2
23	0	.1	16	.9	7.7	125	24	12	4.1	.2	0	.1
24	0	.1	14	1.1	7.0	76	21	12	3.1	.2	0	0
25	0	.5	12	1.8	6.7	49	20	10	2.4	.1	0	0
26	0	1.7	15	38	6.5	34	18	9.6	2.3	0	0	0
27	0	63	24	340	6.6	30	15	9.0	4.1	0	0	0
28	0	41	112	153	7.1	47	14	15	2.6	.4	0	0
29	0	17	240	50		56	13	112	1.8	.2	0	0
30	0	9.9	20	35	- - - - -	41	12	54	1.4	.5	0	0
31	0	- - - - -	17	38	- - - - -	30	- - - - -	28	- - - - -	2.8	0	- - - - -
Total	5.5	215.5	3584.1	779.4	894.9	1513.9	661	1556.2	205.5	14.6	4.9	0.6
Mean	.177	7.18	116	25.1	32.0	48.8	22.0	50.2	6.85	.471	.158	.020
Max	2.3	63	820	340	300	153	67	187	22	2.8	1.2	.3
Min	0	0	2.8	0.8	6.5	7.9	12	8.4	1.4	0	0	0
Cfsm	0.0061	0.248	4.01	0.869	1.11	1.69	0.761	1.74	0.237	0.016	0.0055	0.0010
In.	0.007	0.28	4.62	1.00	1.16	1.95	0.85	2.01	0.26	0.02	0.006	0.001

Cal yr 1966 : Total 6,033.8 Mean 16.5 Max 820 Min 0 Cfsm 0.571 In. 7.77
Wtr yr 1967 : Total 9,436.1 Mean 25.9 Max 820 Min 0 Cfsm 0.896 In. 12.16

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1500	8.17	1,850				
12-10	1300	5.47	768				

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 1967.

Gage.--Water-stage recorder. Datum of gage is 644.64 ft above mean sea level, datum of 1929. Dec. 10, 1963 to Sept. 30, 1964, wire-weight gage at bridge 1,950 ft upstream at datum 1.39 ft higher.

Average discharge.--10 years, 183 cfs.

Extremes.--Maximum discharge during year, 6,250 cfs Dec. 8 (gage height, 19.32 ft); minimum 3.4 cfs Sept. 17-18; minimum gage height, 8.07 ft Sept. 17, 18, 26, 27.

1957-67: Maximum discharge, 18,000 cfs Mar. 4, 1963 (gage height, 22.95 ft); minimum, 1.8 cfs Sept. 3, 1966 (gage height, 8.02 ft).

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.--Record fair except for the winter period, which is poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	8.3	112	105	350	58	218	115	148	21	13	4.6
2	12	8.8	87	97	1,680	87	190	136	120	20	12	4.6
3	11	9.8	74	95	965	133	170	106	104	19	19	4.1
4	8.8	9.3	75	78	548	117	146	92	97	19	17	4.6
5	8.3	12	129	74	410	457	349	88	85	19	13	4.6
6	7.8	14	382	64	319	1,180	588	172	77	19	11	4.1
7	7.8	16	1,880	238	248	632	355	2,210	72	19	11	4.1
8	7.8	21	3,400	222	222	552	259	1,140	72	18	11	4.6
9	8.3	27	3,910	123	180	596	222	632	77	17	13	4.6
10	13	98	3,320	103	176	568	185	439	65	18	12	4.6
11	12	147	1,530	80	158	588	146	978	61	17	10	4.1
12	11	76	1,020	70	121	636	132	704	59	16	9.7	4.1
13	9.3	51	722	56	117	349	162	446	51	15	9.7	4.6
14	8.8	35	528	46	119	304	160	584	45	14	9.7	4.1
15	25	31	417	40	123	259	170	624	40	14	9.7	3.8
16	32	27	354	36	133	215	178	476	39	14	9.1	3.8
17	22	24	316	33	114	200	172	548	35	14	9.1	3.8
18	17	22	295	31	100	165	136	425	34	14	9.7	4.1
19	15	21	265	30	90	150	111	307	31	23	33	5.8
20	13	19	228	30	80	386	102	225	32	40	14	8.0
21	12	18	192	31	72	1,190	107	185	37	22	8.8	6.4
22	10	17	167	33	66	588	200	162	40	19	6.8	5.8
23	9.8	16	143	41	60	414	175	142	34	17	5.8	5.0
24	9.3	16	131	54	54	325	170	132	31	16	5.8	4.6
25	8.8	19	116	108	51	301	142	120	29	15	5.8	4.6
26	8.8	28	98	328	49	262	140	107	27	14	5.8	4.1
27	8.3	594	89	1,710	50	235	134	97	25	16	5.8	5.0
28	8.3	516	162	664	53	531	111	94	25	21	5.8	5.8
29	8.3	262	235	389		544	104	628	24	16	5.4	5.8
30	8.3	156	131	292	- - - - -	362	106	250	23	14	5.0	5.8
31	8.3	- - - - -	110	270	- - - - -	274	- - - - -	195	- - - - -	15	4.6	- - - - -
Total	362.1	2,319.2	20,618	5,571	6,708	12,658	5,540	12,559	1,639	555	320.3	143.6
Mean	11.7	77.3	665	180	240	408	185	405	54.6	17.9	10.3	4.79
Max	32	594	3,910	1,710	1,680	1,190	588	2,210	148	40	33	8.0
Min	7.8	8.3	74	30	49	58	102	88	23	14	4.6	3.8
Cfsm	.055	.365	3.14	.849	1.13	1.92	.873	1.91	.258	.084	.049	.023
In.	.06	.41	3.62	.98	1.18	2.21	.97	2.20	.29	.10	.06	.03

Cal yr 1966 : Total 40,403.1 Mean 111 Max 3,910 Min 2.0 Cfsm .524 In. 7.07
Wtr yr 1967 : Total 68,993.2 Mean 189 Max 3,910 Min 3.8 Cfsm .892 In. 12.11

Peak discharge (base, 3,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-7	1400	14.95	3,100				
12-8	2400	19.32	6,250				
12-10	0730	16.87	4,430				
5-7	1200	15.65	3,520				

3-3540. White River near Centerton, Ind.

Location.--Lat 39°30'02", long 86°24'24", in SW¼SE¼ 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 1967. 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 and November 1946, published in WSP 1305. Daily chain-gage readings of gage height from July 1925 to September 1930 are available in the district office.

Gage.--Digital 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 datum 17.72 ft lower. November 1946 to July 1953, wire-weight gage three-eights of a mile upstream at present datum. July 1953 to Nov. 25, 1962, graphic water-stage recorder at present site and datum.

Average discharge.--22 years (1930-31, 1946-67) 2,258 cfs (unadjusted).

Extremes.--Maximum discharge during year, 31,000 cfs Dec. 10 (gage height, 15.29 ft); minimum discharge, 272 cfs Oct. 30; minimum gage height, 0.65 ft Sept. 18.
1930-32, 1946-67: Maximum discharge, 50,500 cfs Apr. 22, 1964; minimum, 131 cfs Nov. 15, 1930; 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.--Record good. Flow slightly regulated by Morse and Geist Reservoirs (combined capacity, 13,800,000,000 gal). Record of water temperatures and suspended sediment loads for water year 1967 are published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	471	331	1,530	1,590	3,570	1,210	5,950	1,720	1,830	540	468	378
2	392	320	1,270	1,500	7,330	1,190	4,340	1,970	1,540	547	420	378
3	421	348	1,040	1,430	9,240	1,420	3,510	1,790	1,380	554	456	355
4	348	370	900	1,370	8,870	1,460	3,070	1,660	1,280	575	462	345
5	331	364	1,210	1,310	7,160	2,950	3,010	1,580	1,190	617	408	350
6	320	446	2,100	1,260	5,040	7,340	5,180	1,820	1,120	516	360	372
7	315	428	4,940	1,730	3,610	7,120	6,770	6,320	1,060	492	350	360
8	309	836	9,840	2,150	2,740	7,200	7,420	9,480	1,040	486	378	345
9	304	1,100	21,300	2,180	2,430	5,780	6,120	9,450	1,080	468	390	350
10	446	1,640	29,400	1,940	2,380	4,890	4,790	8,390	980	468	414	360
11	452	1,680	27,800	1,600	2,240	5,150	3,980	6,930	1,030	528	372	350
12	364	972	24,900	1,410	1,970	6,370	3,300	8,670	1,070	516	378	378
13	342	772	20,900	1,320	1,790	6,370	2,920	6,820	1,080	438	360	372
14	320	692	13,600	1,280	1,690	5,350	2,890	6,390	972	420	350	360
15	375	625	7,440	1,210	1,640	4,530	2,680	6,190	876	438	372	335
16	684	549	5,630	1,120	1,690	4,110	2,770	5,290	813	414	366	330
17	434	496	4,700	1,060	1,660	3,550	2,750	5,160	757	396	360	315
18	440	464	4,090	956	1,660	3,100	2,530	4,380	708	444	366	310
19	434	421	3,610	892	1,620	2,660	2,220	3,700	680	414	522	340
20	392	375	3,210	876	1,550	3,020	1,960	3,070	659	504	736	350
21	381	348	2,900	892	1,470	6,670	1,990	2,580	638	528	516	372
22	348	353	2,590	940	1,390	8,290	3,260	2,210	836	504	462	360
23	326	348	2,370	972	1,320	8,810	2,740	1,960	750	462	438	340
24	304	342	2,180	1,040	1,210	7,020	2,850	1,780	708	438	414	320
25	326	331	1,930	1,110	1,080	5,180	2,600	1,640	666	444	396	320
26	309	477	1,760	1,310	996	4,400	2,340	1,530	659	420	390	325
27	304	7,180	1,630	5,540	1,050	4,200	2,190	1,420	659	414	390	310
28	287	3,730	1,910	7,350	1,190	4,470	2,000	1,340	617	480	384	345
29	282	2,110	2,440	7,310	------	6,430	1,800	2,460	596	474	414	325
30	282	1,760	1,960	5,570	------	8,430	1,730	2,480	561	444	390	320
31	298	------	1,740	4,050	------	8,460	------	2,300	------	432	390	------
TOTAL	11,341	30,208	212,820	64,268	79,586	157,130	101,660	122,480	27,835	14,815	12,872	10,370
MEAN	366	1,007	6,865	2,073	2,842	5,069	3,389	3,951	928	478	415	346
MAX	684	7,180	29,400	7,350	9,240	8,810	7,420	9,480	1,830	617	736	378
MIN	282	320	900	876	996	1,190	1,730	1,340	561	396	350	310
CFSM	.15	.41	2.82	.85	1.17	2.08	1.39	1.62	.38	.20	.17	.14
IN.	.17	.46	3.25	.98	1.22	2.40	1.55	1.87	.43	.23	.20	.16

CAL YR 1966: TOTAL 523,256 MEAN 1,434 MAX 29,400 MIN 274 CFSM .59 IN 7.99
WAT YR 1967: TOTAL 845,385 MEAN 2,316 MAX 29,400 MIN 282 CFSM .95 IN 12.91

Peak discharge (base, 9,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1745	15.29	31,000				
2-2	2130	8.72	9,780				
5-8	1345	8.57	9,560				

3-3545. Beanblossom Creek at Beanblossom, 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 Beanblossom and 2.5 miles upstream from North Fork Beanblossom Creek.

Drainage area.--14.6 sq mi.

Records available.--October 1951 to September 1967. Prior to October 1965, published as Bean Blossom Creek at Bean Blossom.

Gage.--Digital water-stage recorder. Datum of gage is 673.65 ft above mean sea level, datum of 1929. Oct. 8, 1951 to Apr. 14, 1964 and Jan. 21, 1965 to Mar. 20, 1967, graphic water-stage recorder at same site and datum. Apr. 14, 1964 to Jan. 21, 1965, digital water-stage recorder at same site and datum.

Average discharge.--16 years, 15.1 cfs.

Extremes.--Maximum discharge during year, 1,560 cfs Apr. 21 (gage height, 8.05 ft); no flow for many days.
1951-67: 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 for many days in most years.

Remarks.--Record good except for the winter period which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.2	.90	11	13	16	9.3	13	200	7.4	.20	.15	0
2	1.6	1.2	8.8	11	231	14	11	138	5.4	.17	.09	0
3	1.2	1.7	7.6	10	66	14	10	48	8.2	.14	.09	0
4	1.1	1.6	6.4	8.6	38	21	8.5	36	6.0	.12	.07	0
5	.80	2.9	25	7.1	28	113	8.3	29	4.5	.13	.06	0
6	.70	4.0	42	7.5	20	200	7.3	44	4.0	.16	.05	0
7	.70	56	411	22	17	66	6.1	261	3.0	.16	.05	0
8	.50	136	503	16	15	54	5.2	65	2.5	.16	.05	0
9	.80	39	387	12	11	39	4.8	38	2.0	.13	.05	0
10	2.0	99	413	9.0	8.0	27	5.3	27	1.7	.12	.05	0
11	1.3	31	71	7.5	6.0	21	4.3	27	1.4	.12	.05	0
12	.90	15	41	6.4	5.5	17	3.9	20	1.2	.07	.05	0
13	.70	9.8	31	5.2	4.5	15	5.3	17	1.0	.05	.05	0
14	.70	7.1	24	4.2	4.5	23	5.1	168	.80	.05	.05	0
15	13	6.0	18	3.7	5.0	72	4.3	207	.65	.05	.04	0
16	3.8	5.3	14	3.3	4.5	39	3.8	63	.56	.05	.04	0
17	2.2	4.3	13	3.0	4.2	28	145	99	.49	.05	.03	0
18	2.0	3.8	13	2.8	4.0	19	37	57	.43	.05	.03	0
19	1.9	3.1	12	2.7	3.8	14	20	35	.37	.15	.05	0
20	1.7	2.9	10	3.1	3.6	97	15	24	.37	.18	.05	0
21	1.6	2.7	8.4	4.0	3.4	182	163	15	2.1	.09	.06	0
22	1.6	2.5	7.1	5.3	3.2	52	201	11	1.4	.06	.05	0
23	1.6	2.5	6.0	7.1	3.2	39	58	10	.69	.05	.04	0
24	1.4	2.4	5.3	7.1	3.0	36	68	10	.73	.07	.03	0
25	1.3	4.0	4.6	6.7	3.0	32	40	8.0	.43	.19	.03	0
26	1.2	57	3.6	15	3.0	22	40	6.0	.31	.12	.05	0
27	1.1	258	3.4	85	3.5	17	31	5.0	.26	4.3	.20	0
28	1.1	65	34	32	6.0	89	24	6.0	.50	2.0	.11	0
29	1.1	27	31	22	———	42	20	9.3	.39	.41	.06	0
30	.90	15	23	19	———	25	22	7.8	.27	.19	.05	0
31	.90	———	16	19	———	17	———	6.9	———	.17	.04	———
TOTAL	53.60	866.70	2,204.2	380.3	523.9	1,455.3	990.02	1,698.0	59.05	9.96	1.87	0
MEAN	1.73	28.9	71.1	12.3	18.7	46.9	33.0	54.8	1.97	.32	.060	0
MAX	13	258	503	85	231	200	201	261	8.2	4.3	.20	0
MIN	.50	.90	3.4	2.7	3.0	9.3	3.8	5.0	.26	.05	.03	0
CFSM	.12	1.98	4.87	.84	1.28	3.22	2.26	3.75	.13	.02	.004	0
IN.	.14	2.21	5.61	.97	1.33	3.71	2.52	4.33	.15	.03	.005	0

CAL YR 1966: TOTAL 6,898.00 MEAN 18.9 MAX 503 MIN 0 CFSM 1.29 IN 17.57
WAT YR 1967: TOTAL 8,243.08 MEAN 22.6 MAX 503 MIN 0 CFSM 1.55 IN 21.00

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-7	1300	5.88	914	2-2	0900	5.60	830
12-8	1330	7.10	1,280	4-21	2145	8.05	1,560
12-10	0130	6.14	992	5-1	1915	5.57	821

3-3550. Bear Creek near Treviac, 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 Treviac, and 1.3 miles upstream from mouth.

Drainage area.--7.00 sq mi.

Records available.--May 1952 to September 1967.

Gage.--Water-stage recorder and concrete control. Altitude of gage is 640 ft (from topographic map).

Average discharge.--15 years, 6.36 cfs.

Extremes.--Maximum discharge during year, 412 cfs Dec. 8 (gage height, 4.47 ft); no flow for many days.
1952-67: 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.--Record good.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.3	0.2	5.7	6.3	7.3	3.3	7.3	13	1.4	0	0	0
2	.9	.3	4.2	5.2	82	7.6	6.0	18	1.1	0	0	0
3	.7	.6	3.3	4.0	37	13	5.7	13	.9	0	.1	0
4	.5	.5	3.0	3.5	21	15	4.9	10	.9	0	.1	0
5	.4	.8	11	3.1	16	69	4.7	8.2	.7	0	.1	0
6	.4	1.3	26	3.0	10	80	4.4	18	.6	0	0	0
7	.3	11	108	10	7.0	33	3.8	100	.5	0	0	0
8	.3	28	173	7.9	5.5	28	3.0	33	.5	0	.1	0
9	.4	14	146	5.4	4.8	19	2.8	19	.5	0	.1	.1
10	.6	37	138	4.9	4.3	14	3.5	12	.3	0	0	.1
11	.4	15	33	4.2	4.0	12	3.1	11	.2	0	0	0
12	.3	7.0	19	3.8	3.8	10	2.8	7.9	.2	0	0	0
13	.3	4.4	12	3.8	3.5	9.1	4.2	6.6	.2	0	0	0
14	.3	3.3	8.5	3.5	3.3	9.8	4.4	53	.1	0	0	0
15	1.7	2.5	7.0	2.7	4.0	33	4.0	70	.1	0	0	0
16	1.3	2.2	5.4	2.3	3.5	20	3.3	33	.1	0	0	0
17	.9	2.0	4.4	1.8	3.0	14	32	41	.1	0	0	0
18	.8	1.5	4.0	1.4	2.6	9.8	20	28	.1	0	0	0
19	.6	1.4	3.3	1.2	2.4	8.2	12	17	.1	.4	.2	0
20	.5	1.4	3.1	1.2	2.8	30	8.2	10	.1	.1	.1	0
21	.4	1.3	2.5	1.6	2.4	74	49	7.3	1.2	.1	.1	.1
22	.4	1.2	2.4	2.2	2.1	28	63	5.2	.5	.1	0	0
23	.4	.9	2.1	2.4	1.9	18	28	4.0	.2	0	0	0
24	.3	.8	1.8	2.4	1.7	13	26	3.0	.1	.1	0	0
25	.3	1.4	1.5	2.4	1.5	11	18	2.5	.1	.4	0	0
26	.3	23	1.4	4.9	1.5	9.1	18	2.1	.1	.1	0	0
27	.2	107	1.4	30	1.9	7.9	13	1.7	.1	.4	.1	0
28	.2	30	16	17	2.5	23	11	1.4	.1	.3	0	0
29	.2	16	13	11		20	8.8	1.5	.1	.1	0	0
30	.2	8.5	9.1	8.8	- - - - -	13	9.8	1.4	.1	.1	0	0
31	.2	- - - - -	7.3	7.9	- - - - -	9.5	- - - - -	1.4	- - - - -	.1	0	- - - - -
Total	16.0	324.5	776.4	169.8	243.3	664.3	384.7	553.2	11.3	2.3	1.0	0.3
Mean	0.52	10.8	25.0	5.48	8.69	21.4	12.8	17.8	0.38	0.07	0.03	0.001
Max	1.7	107	173	30	82	80	63	100	1.4	0.4	0.2	0.1
Min	0.2	0.2	1.4	1.2	1.5	3.3	2.8	1.4	0.1	0	0	0
Cfsm	0.074	1.54	3.57	0.783	1.24	3.06	1.83	2.54	0.054	0.010	0.0043	0.00014
In.	0.09	1.72	4.12	0.90	1.29	3.53	2.04	2.93	0.06	0.01	0.005	0.0002

Cal yr 1966 : Total 2,975.3 Mean 8.15 Max 178 Min 0 Cfsm 1.16 In. 15.82
Wtr yr 1967 : Total 3,147.1 Mean 8.62 Max 173 Min 0 Cfsm 1.23 In. 16.70

Peak discharge (base, 200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-26	2200	3.83	260				
12-8	1130	4.47	412				
2-2	0730	3.76	240				
4-21	0800	4.06	314				

3-3560. Beanblossom 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, 5 3/4 miles northeast of Bloomington, and 17.5 miles upstream from mouth.

Drainage area.--100 sq mi.

Records available.--April 1946 to September 1967. Prior to October 1965, published as Bean Blossom Creek at Dolan.

Gage.--Digital water-stage recorder. Datum of gage is 576.41 ft above mean sea level, unadjusted. Prior to Sept. 28, 1951, wire-weight gage, and Sept. 28, 1951 to Nov. 5, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--21 years, 112 cfs (unadjusted).

Extremes.--Maximum discharge during year, 2,830 cfs Dec. 10 (gage height, 15.00 ft); minimum 12 cfs Oct. 24 to Nov. 5; minimum gage height, 1.67 ft Aug. 2.
1946-67: 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.--Record good. Flow regulated since April 1953 by Lake Lemon (capacity, 4,640,000,000 gal) 8.1 miles upstream.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	18	12	116	107	118	35	134	141	33	16	15	19
2	17	13	82	92	642	45	113	438	31	16	19	19
3	16	13	62	78	893	87	101	370	29	16	46	20
4	16	12	59	65	463	119	98	222	25	16	22	20
5	16	13	86	59	287	413	82	152	24	16	21	20
6	16	13	219	56	202	1,100	76	159	22	16	21	20
7	16	32	795	91	131	772	65	915	21	16	21	20
8	17	104	1,630	116	97	475	62	849	20	16	21	20
9	18	85	2,450	99	79	328	59	424	20	16	21	29
10	18	150	2,700	84	73	242	50	245	20	16	20	20
11	19	78	1,920	70	67	196	51	170	20	16	20	19
12	20	39	633	63	56	171	53	133	19	15	20	19
13	20	27	297	59	51	145	55	106	18	15	20	20
14	23	23	194	57	50	131	64	506	18	15	20	20
15	36	20	145	52	58	322	50	996	17	15	20	20
16	37	19	112	46	48	339	48	775	17	15	20	20
17	32	18	94	36	45	248	192	569	17	15	20	20
18	28	17	82	28	43	179	296	485	17	15	20	20
19	28	16	75	23	41	143	199	296	17	16	21	20
20	27	16	61	21	37	301	142	180	17	16	20	20
21	24	16	60	22	34	1,090	261	126	53	15	20	20
22	14	16	50	25	31	703	1,320	97	32	15	20	20
23	14	16	45	28	28	359	772	75	21	15	20	20
24	13	15	39	35	26	228	473	61	19	16	20	20
25	14	17	35	40	25	159	334	49	18	19	20	20
26	13	59	31	47	25	132	254	43	17	16	20	20
27	12	774	29	252	26	114	201	37	17	17	20	20
28	12	276	85	299	30	230	162	33	17	17	20	20
29	12	228	178	219	------	400	133	33	17	16	19	20
30	12	173	152	168	------	279	125	37	17	15	20	20
31	12	------	123	133	------	185	------	34	------	15	19	------
Total	590	2,310	12,639	2,570	3,706	9,670	6,025	8,756	650	489	646	605
Mean	19.0	77.0	408	82.9	132	312	201	282	21.7	15.8	20.8	20.2
Max	37	774	2,700	299	893	1,100	1,320	996	53	19	46	29
Min	12	12	29	21	25	35	48	33	17	15	15	19
Cfsm	—	—	—	—	—	—	—	—	—	—	—	—
In.	—	—	—	—	—	—	—	—	—	—	—	—
(ƒ)	-11.4	+82.0	0	0	-6	+3	+3	-5	-18.8	-15.0	-22.8	-24.9

Cal yr 1966: Total 41,615 Mean 114 Max 2,700 Min 12 Cfsm 1.14 In. 15.48 ƒ +2
Wtr yr 1967: Total 48,656 Mean 133 Max 2,700 Min 12 Cfsm 1.33 In. 18.10 ƒ -1

Peak discharge (base, 1,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	2015	15.00	2,830				

ƒ 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 1967. Monthly discharge only for some periods, published in WSP 1305. Prior to October 1948, published as West Fork White River at Spencer. Gage-height records collected since July 1925 are contained in reports of U.S. Weather Bureau.

Gage.--Digital 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, and Dec. 26, 1940, to Mar. 3, 1967, graphic water-stage recorder at same site and datum.

Average discharge.--42 years, 2,959 cfs, (unadjusted).

Extremes.--Maximum discharge during year, 36,100 cfs Dec. 11 (gage height, 21.57 ft); minimum 274 cfs Sept. 17, 18; minimum gage height, 1.71 ft Sept. 6, 18.
1925-67: 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.--Record good. Flow slightly regulated by three reservoirs above station.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	464	350	2,600	2,300	4,310	1,590	8,290	2,600	2,650	759	516	352
2	536	384	2,210	2,130	6,100	1,630	5,820	2,790	2,260	730	537	342
3	464	401	1,850	1,920	11,000	1,870	4,640	3,060	1,980	728	1,970	335
4	406	415	1,590	1,740	11,600	2,060	4,070	2,710	1,860	724	1,050	316
5	392	451	1,760	1,600	10,200	3,360	3,620	2,440	1,720	794	651	301
6	366	474	2,760	1,520	7,420	8,900	4,440	2,990	1,620	739	543	301
7	354	560	5,020	1,750	5,380	10,500	6,170	7,920	1,510	674	486	314
8	334	906	11,000	2,670	4,060	9,560	7,290	11,400	1,460	652	470	307
9	330	2,120	15,800	2,680	3,400	8,360	7,190	12,300	1,430	627	473	318
10	342	2,220	26,100	2,630	3,190	6,500	5,810	11,400	1,410	604	475	529
11	469	3,260	35,000	2,300	3,020	5,880	4,750	8,840	1,330	609	467	322
12	464	2,110	33,000	2,070	2,770	6,390	4,070	8,670	1,340	640	438	298
13	374	1,490	25,600	1,900	2,520	7,140	3,580	8,700	1,360	607	435	318
14	346	1,210	23,700	1,840	2,350	6,650	3,500	7,830	1,320	543	403	318
15	396	1,080	16,300	1,770	2,260	6,030	3,340	9,220	1,220	532	367	314
16	528	966	8,870	1,670	2,230	5,570	3,190	8,840	1,130	533	374	290
17	720	870	6,430	1,570	2,190	4,950	3,390	7,840	1,060	519	360	282
18	532	795	5,450	1,440	2,140	4,280	3,820	7,530	994	506	367	278
19	514	735	4,780	1,340	2,100	3,740	3,350	5,910	944	531	729	286
20	491	675	4,330	1,290	2,030	3,830	2,980	4,760	919	512	599	318
21	451	620	3,930	1,270	1,950	8,170	2,720	3,940	995	591	708	346
22	433	585	3,580	1,300	1,860	10,200	6,360	3,380	1,290	592	521	362
23	401	575	3,270	1,350	1,790	10,700	6,140	2,990	1,170	571	466	358
24	379	555	3,030	1,400	1,680	9,890	5,130	2,710	1,000	548	435	342
25	358	565	2,780	1,480	1,520	7,230	4,650	2,490	933	563	411	326
26	366	665	2,520	1,570	1,400	5,700	3,910	2,300	889	544	391	322
27	354	7,770	2,350	3,150	1,400	5,140	3,530	2,130	882	511	381	338
28	346	11,100	2,470	7,050	1,510	5,080	3,210	1,970	858	647	375	334
29	334	5,460	3,350	7,760	------	6,430	2,850	2,150	824	640	368	366
30	330	3,160	2,920	7,120	------	8,240	2,640	3,020	796	561	382	354
31	330	------	2,600	5,300	------	9,410	------	2,980	------	520	357	------
TOTAL	12,904	52,527	266,950	76,880	103,380	194,980	134,450	167,810	39,154	18,851	16,505	9,887
MEAN	416	1,751	8,611	2,480	3,692	6,290	4,482	5,413	1,305	608	532	330
MAX	720	11,100	35,000	7,760	11,600	10,700	8,290	12,300	2,650	794	1,970	529
MIN	330	350	1,590	1,270	1,400	1,590	2,640	1,970	796	506	357	278
CFSM	.14	.59	2.89	.83	1.24	2.11	1.50	1.82	.44	.20	.18	.11
IN.	.16	.66	3.33	.96	1.29	2.43	1.68	2.09	.49	.24	.21	.12

CAL YR 1966: TOTAL 712,641 MEAN 1,952 MAX 35,000 MIN 215 CFSM .66 IN 8.89
WAT YR 1967: TOTAL 1,094,278 MEAN 2,998 MAX 35,000 MIN 278 CFSM 1.01 IN 13.66

Peak discharge (base, 11,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-27	0700	14.08	11,600				
12-11	2130	21.57	36,100				
2-4	0030	14.27	11,900				
5-9	0930	14.59	12,400				

3-3575. Big Walnut Creek near Reelsville, Ind.

Location.--Lat 39°32'11", long 86°58'35", in NW¼SE¼ 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 1967. Published as Eel River near Reelsville, October 1952 to September 1956.

Gage.--Digital 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, and Dec. 10, 1949, to Feb. 17, 1967, graphic water-stage recorder at same site and datum.

Average discharge.--18 years, 318 cfs.

Extremes.--Maximum discharge during year, 6,120 cfs Dec. 8 (gage height, 13.72 ft); minimum, 6.6 cfs Oct. 7-9; minimum gage height, 2.14 ft Sept 18.
1949-67: 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.--Record poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	15	8.7	122	183	520	113	433	232	229	47	63	16
2	14	9.4	92	170	2,170	139	367	229	187	43	34	15
3	11	9.4	80	154	1,420	238	331	190	151	41	1,090	14
4	10	9.4	66	137	824	205	292	163	133	39	877	12
5	9.4	11	211	130	616	562	316	148	120	36	181	12
6	8.2	11	349	130	445	1,220	664	448	108	34	109	12
7	7.3	15	1,110	268	330	744	550	4,130	98	33	72	11
8	6.6	22	3,620	355	300	667	436	2,230	90	32	63	11
9	7.3	28	4,460	223	275	526	364	1,240	88	31	74	12
10	10	142	3,900	148	245	691	313	856	223	30	57	11
11	14	100	1,820	130	220	782	262	849	275	30	48	10
12	12	57	1,110	125	202	681	235	990	183	30	42	10
13	10	34	803	120	196	556	247	677	161	29	38	9.0
14	9.4	24	610	110	196	472	247	884	143	26	34	9.0
15	14	18	508	100	199	400	274	814	131	25	31	8.4
16	20	15	433	90	211	334	280	677	120	24	29	8.4
17	17	14	388	80	175	301	340	681	112	23	27	8.4
18	16	13	352	75	163	262	265	604	101	24	27	9.6
19	16	11	319	74	157	250	214	484	94	23	42	17
20	16	9.4	301	74	151	800	187	382	89	103	38	16
21	15	8.7	274	77	139	1,750	316	316	94	39	30	15
22	14	8.0	247	95	125	970	702	277	95	33	27	16
23	12	8.0	226	125	118	681	448	241	88	30	24	12
24	10	8.0	211	145	90	556	403	214	80	33	21	11
25	9.4	11	193	169	90	496	319	193	73	31	20	9.0
26	9.4	15	175	394	93	436	328	166	69	23	20	8.4
27	9.4	202	163	1,630	100	391	319	142	63	20	20	9.0
28	9.4	388	238	1,000	110	1,150	262	145	58	46	20	9.6
29	8.7	310	313	631	------	970	229	719	54	91	19	9.6
30	8.7	187	220	490	------	688	229	403	52	69	20	9.0
31	8.7	------	202	433	------	538	------	379	------	52	17	------
TOTAL	357.9	1,707.0	23,116	8,065	9,880	18,569	10,172	20,103	3,562	1,170	3,214	340.4
MEAN	11.5	56.9	746	260	353	599	339	648	119	37.7	104	11.3
MAX	20	388	4,460	1,630	2,170	1,750	702	4,130	275	103	1,090	17
MIN	6.6	8.0	66	74	90	113	187	142	52	20	17	8.4
CFSM	.03	.17	2.21	.77	1.04	1.77	1.00	1.92	.35	.11	.31	.03
IN.	.04	.19	2.54	.89	1.09	2.04	1.12	2.21	.39	.13	.35	.04

CAL YR 1966: TOTAL 56,613.2 MEAN 155 MAX 4,460 MIN 4.2 CFSM .459 IN 6.21
WAT YR 1967: TOTAL 100,256.3 MEAN 275 MAX 4,460 MIN 6.6 CFSM .81 IN 11.03

Peak discharge (base, 2,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	2330	13.72	6,120				
2-2	1200	9.92	2,980				
5-7	1200	13.46	5,860				
8-3	2115	11.67	4,260				

3-3580. Mill Creek near Cataract, Ind.

Location.--Lat 39°26'00", long 86°45'48", 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 1967.

Gage.--Digital 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, and Nov. 8, 1949, to Nov. 9, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--18 years, 239 cfs.

Extremes.--Maximum discharge during year, 4,770 cfs Dec. 10 (gage height, 16.34 ft); minimum, 2.0 cfs Oct. 8, 9 (gage height, 3.08 ft).
1949-67: 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.--Record good above 100 cfs and fair below, except for the winter period, which is poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	6.0	3.9	122	108	298	73	209	122	167	15	12	5.3
2	5.0	3.9	89	100	1,700	97	177	226	126	14	11	4.6
3	4.0	4.3	62	91	1,590	209	156	130	110	13	42	4.4
4	3.5	4.8	61	73	571	150	130	92	90	13	47	3.8
5	3.0	5.6	308	75	399	1,100	143	79	80	12	19	3.8
6	2.4	7.0	696	66	306	2,290	209	296	70	12	12	3.3
7	2.4	7.7	1,710	253	224	1,120	149	2,020	60	12	11	3.1
8	2.2	10	2,860	224	210	730	113	1,590	55	12	11	3.0
9	2.7	12	3,950	140	176	475	108	557	50	12	20	4.0
10	4.9	110	4,600	115	156	487	102	345	70	12	15	4.0
11	7.5	136	3,620	80	137	402	76	308	95	12	13	3.0
12	7.0	50	1,590	81	96	319	64	248	80	11	12	3.0
13	6.1	27	699	78	98	274	101	190	45	10	11	3.0
14	5.3	17	434	76	102	243	170	883	35	10	10	3.0
15	31	13	330	69	111	227	115	1,060	25	10	9.0	3.0
16	45	10	278	49	121	180	75	683	25	9.0	8.0	3.0
17	27	9.2	246	59	94	167	603	907	25	9.0	9.0	3.0
18	13	8.2	221	47	91	132	263	603	20	9.0	15	3.0
19	9.0	7.3	193	42	86	124	100	369	20	9.0	13	7.0
20	6.8	6.5	180	43	86	760	70	234	20	11	10	6.0
21	5.8	6.0	150	51	79	1,870	210	176	19	27	8.0	6.0
22	5.1	5.8	130	64	72	662	1,120	146	30	14	7.0	6.0
23	3.8	6.0	111	79	67	415	345	122	25	11	7.0	5.0
24	3.8	5.6	102	119	59	306	334	109	25	11	6.5	4.0
25	3.4	6.6	90	149	62	278	204	96	20	12	6.3	4.0
26	3.2	43	85	330	50	232	152	85	20	13	6.2	4.0
27	4.1	1,410	80	1,680	59	206	158	76	19	11	6.2	4.0
28	4.3	1,030	173	696	72	805	103	70	18	15	6.1	5.0
29	4.3	356	334	347	------	694	79	425	17	20	6.0	5.0
30	4.3	191	221	258	------	392	79	210	16	15	5.8	4.0
31	3.9	------	144	246	------	273	------	286	------	13	5.6	------
TOTAL	239.8	3,513.4	23,869	5,888	7,172	15,692	5,917	12,743	1,477	389.0	380.7	123.3
MEAN	7.74	117	770	190	256	506	197	411	49.2	12.5	12.3	4.11
MAX	45	1,410	4,600	1,680	1,700	2,290	1,120	2,020	167	27	47	7.0
MIN	2.2	3.9	61	42	50	73	64	70	16	9.0	5.6	3.0
CFSM	.03	.49	3.19	.79	1.06	2.10	.82	1.71	.20	.05	.05	.02
IN.	.04	.54	3.68	.91	1.11	2.42	.91	1.97	.23	.06	.06	.02

CAL YR 1966: TOTAL 54,341.9 MEAN 149 MAX 4,600 MIN 1.4 CFSM .62 IN 8.39
WAT YR 1967: TOTAL 77,404.2 MEAN 212 MAX 4,600 MIN 2.2 CFSM .88 IN 11.94

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0200	16.34	4,770				

3-3590. Mill Creek near Manhattan, Ind.

Location.--Lat 39°29'22", long 86°55'50", 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 1967. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Digital water-stage recorder. Datum of gage 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. May 13, 1941, to Sept. 30, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--29 years (1938-67), 279 cfs (unadjusted).

Extremes.--Maximum discharge during year, 2,250 cfs Dec. 23 (gage height, 7.38 ft); maximum gage height, 11.04 ft Dec. 9 (back water from Deer Creek); minimum daily discharge, 2.2 cfs Sept. 8-17.
1931, 1938-67: Maximum discharge, 8,960 cfs Jan. 5, 1950 (gage height, 18.38 ft); no flow Aug. 7, 1953.

Remarks.--Record fair. Flow regulated since Dec. 20, 1952 by Cagles Mill Reservoir (capacity, 228,100 acre-ft).

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	13	15	495	1,830	795	107	1,450	206	361	21	11	2.8
2	6.7	15	492	1,770	1,120	108	1,400	313	569	13	11	2.7
3	3.4	15	485	1,720	142	108	1,400	287	236	7.1	83	2.6
4	3.4	15	481	583	126	184	1,700	154	25	3.8	11	2.5
5	3.4	15	481	67	128	363	1,800	104	25	3.5	11	2.4
6	3.4	15	770	100	133	390	1,710	110	45	3.4	11	2.3
7	3.2	15	1,030	104	656	101	1,260	110	53	3.2	11	2.3
8	3.2	19	450	108	1,020	102	175	110	54	3.0	11	2.2
9	3.2	28	100	255	1,250	104	108	110	70	3.0	11	2.2
10	3.6	71	100	308	1,380	104	108	109	90	2.9	11	2.2
11	3.6	108	100	230	1,360	105	107	112	90	2.9	5.7	2.2
12	3.6	107	99	100	1,170	105	107	112	90	2.9	2.9	2.2
13	3.6	107	100	97	699	105	215	113	40	2.7	2.7	2.2
14	3.6	107	100	97	274	105	294	111	27	2.7	2.5	2.2
15	4.1	107	100	97	107	105	124	104	27	2.7	2.5	2.2
16	4.1	105	100	97	107	105	48	104	27	2.7	2.5	2.2
17	3.9	105	100	78	108	105	166	107	27	2.7	2.4	2.2
18	9.4	105	100	48	107	1,000	405	106	27	2.7	2.4	5.0
19	15	105	100	48	107	1,700	315	105	27	2.7	4.1	5.0
20	14	67	100	48	212	1,000	107	104	27	2.6	11	5.0
21	14	13	608	48	136	110	241	104	27	2.6	11	2.5
22	16	13	1,360	49	98	105	405	919	26	2.6	11	2.5
23	16	13	1,960	48	83	105	442	1,940	35	2.6	11	2.5
24	15	13	2,180	74	57	105	437	1,900	38	2.6	11	2.5
25	15	14	2,140	99	13	105	196	1,850	38	5.9	11	2.5
26	15	16	2,100	255	39	105	105	1,940	37	12	10	2.5
27	15	92	2,060	268	91	105	104	2,150	37	14	10	2.5
28	15	112	2,030	117	107	105	105	2,080	37	39	10	2.5
29	15	387	2,000	384	------	600	179	422	37	48	10	2.5
30	15	499	1,930	488	------	1,500	208	81	33	48	9.0	2.5
31	15	------	1,880	485	------	1,450	------	223	------	48	5.0	------
TOTAL	277.4	2,418	26,131	10,100	11,625	10,501	15,421	16,300	2,282	316.5	329.7	79.6
MEAN	8.95	80.6	843	326	415	339	514	526	76.1	10.2	10.6	2.65
MAX	16	499	2,180	1,830	1,380	1,700	1,800	2,150	569	48	83	5.0
MIN	3.2	13	99	48	13	101	48	81	25	2.6	2.4	2.2
(ƒ)	+3.25	+92.4	+81	-91	-90	+294	-301	+15	-20.2	+1.6	-3.2	-1.68
Adjusted for change in contents in Cagles Mill Reservoir												
Mean	12.2	173	.924	235	325	633	213	541	55.9	11.8	7.4	0.97
Cfsm	0.042	0.592	3.16	0.805	1.11	2.17	0.729	1.85	0.191	0.040	0.025	0.003
In.	0.05	0.66	3.64	0.93	1.16	2.50	0.81	2.13	0.21	0.05	0.03	0.003

	Observed			Adjusted				
Calendar year 1966 :	Max 2,180	Min 1.7	Mean 176	Mean 190	Cfsm 0.65	In. 8.78	(ƒ)	+14
Water year 1967 :	Max 2,180	Min 2.2	Mean 262	Mean 262	Cfsm 0.90	In. 12.17	(ƒ)	0

ƒ Change in contents, equivalent in cubic feet per second, in Cagles Mill Reservoir, furnished by Corps of Engineers.

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 1967. Prior to October 1934, published as "near Centerpoint."

Gage.--Digital 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. Dec. 1, 1949 to Nov. 10, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--36 years, 819 cfs (adjusted for storage December 1952 to September 1956).

Extremes.--Maximum discharge during year, 8,840 cfs Dec. 9 (gage height, 18.42 ft); minimum, 27 cfs Sept. 17, 18, 27; minimum gage height, 1.02 ft Oct. 9, 14, 15.
1931-67: 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.--Record good. Flow regulated since Dec. 20, 1952 by Eagles Mill Reservoir (capacity, 228,100 acre-ft).

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	75	41	699	2,170	1,280	305	2,210	731	950	123	122	42
2	63	41	645	2,100	4,010	358	2,100	835	891	108	98	40
3	49	40	588	2,010	3,330	524	2,030	747	852	98	1,390	38
4	41	39	582	1,440	1,470	482	2,070	536	405	88	405	37
5	36	41	974	425	1,090	1,780	2,300	425	365	81	195	35
6	35	45	1,430	413	905	3,910	2,520	880	343	77	144	35
7	33	49	3,310	558	978	1,780	2,460	4,730	333	75	120	34
8	33	74	5,180	608	1,490	1,380	982	5,040	325	73	109	32
9	32	102	8,370	530	1,560	1,010	653	2,160	333	71	115	33
10	49	591	7,920	575	1,830	1,040	593	1,360	365	68	108	34
11	42	501	5,020	518	1,790	1,150	533	1,140	545	68	91	32
12	40	283	2,190	373	1,660	1,080	485	1,430	368	60	75	31
13	35	227	1,530	355	1,230	905	542	1,070	295	62	68	31
14	32	197	1,200	350	692	775	689	2,080	233	60	65	30
15	67	183	974	335	488	704	584	1,920	213	59	61	29
16	76	173	842	300	476	605	460	1,330	199	58	61	28
17	60	165	754	287	435	551	958	1,600	187	56	56	28
18	50	156	695	241	410	998	873	1,210	173	57	56	31
19	54	152	644	243	395	2,020	800	905	166	57	96	34
20	56	149	602	221	438	3,150	453	728	170	105	98	38
21	53	87	776	223	425	4,240	587	629	166	75	76	37
22	50	72	1,470	246	348	1,930	1,760	779	175	61	67	35
23	49	69	2,060	289	310	1,180	1,250	2,330	162	60	62	34
24	44	65	2,430	340	281	919	1,110	2,320	149	65	59	31
25	43	76	2,390	383	310	817	838	2,260	149	69	56	30
26	43	131	2,340	901	263	731	584	2,210	144	60	55	28
27	42	1,800	2,280	3,050	267	677	602	2,490	138	65	56	28
28	42	1,180	2,410	1,860	300	2,100	533	2,440	136	269	56	30
29	41	738	2,530	1,130	------	2,280	521	1,940	136	217	54	30
30	41	782	2,310	1,130	------	2,400	713	936	131	144	53	29
31	39	------	2,230	1,030	------	2,400	------	1,040	------	127	48	------
TOTAL	1,445	8,249	67,375	24,634	28,461	44,181	32,793	50,231	9,197	2,716	4,175	984
MEAN	46.6	275	2,173	795	1,016	1,425	1,093	1,620	307	87.6	135	32.8
MAX	76	1,800	8,370	3,050	4,010	4,240	2,520	5,040	950	269	1,390	42
MIN	32	39	582	221	263	305	453	425	131	56	48	28
CFSM	-	-	-	-	-	-	-	-	-	-	-	-
IN.	-	-	-	-	-	-	-	-	-	-	-	-
(Δ)	+3.2	+92	+81	-91	-90	+294	-301	+15	-20	+1.6	-3	-1.7

CAL YR 1966: TOTAL 171,196 MEAN 469 MAX 8,370 MIN 17 CFSM .56 IN 7.54 Δ +14
WAT YR 1967: TOTAL 274,441 MEAN 752 MAX 8,370 MIN 28 CFSM .89 IN 12.09 Δ 0

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 1967. Prior to October 1948, published as West Fork White River at Newberry.

Gage.--Digital water-stage recorder. Datum of gage is 465.59 ft above mean sea level, datum of 1929. Prior to Oct. 21, 1928, staff gage, Oct. 21, 1928 to Aug. 16, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--39 years, 4,459 cfs (unadjusted).

Extremes.--Maximum discharge during year, 44,600 cfs Dec. 13 (gage height, 21.02 ft); minimum, 406 cfs Nov. 1; minimum gage height, 0.68 ft Oct. 11, 31, Nov. 1, 2.
1928-67: 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.--Record good. Flow slightly regulated by four reservoirs above station.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	653	406	5,450	5,190	6,670	2,300	12,000	6,950	5,560	1,330	1,020	650
2	610	420	4,530	4,890	8,320	2,420	11,200	7,630	4,820	1,280	963	629
3	645	442	3,890	4,650	13,600	2,710	8,730	6,130	3,980	1,220	1,260	615
4	610	452	3,370	4,410	15,700	3,110	7,410	5,020	3,630	1,190	2,910	601
5	539	467	3,560	3,970	15,800	3,850	6,670	4,300	3,040	1,160	2,220	580
6	498	496	5,600	3,060	13,400	10,800	6,390	3,850	2,760	1,170	1,380	566
7	470	531	8,870	3,140	9,620	15,200	7,270	7,810	2,600	1,160	1,130	559
8	448	626	14,800	3,700	6,790	16,100	8,640	13,100	2,470	1,100	1,040	566
9	436	1,070	21,500	3,820	5,980	14,100	8,820	16,300	2,780	1,070	1,090	580
10	425	2,230	28,400	3,660	5,390	11,300	8,070	17,100	2,580	1,050	985	587
11	416	3,380	34,400	3,540	5,350	8,860	6,690	15,800	3,030	1,030	910	776
12	481	3,750	40,700	3,240	5,080	8,250	5,600	12,100	2,780	1,010	867	664
13	547	2,660	43,800	2,950	4,710	8,910	4,930	10,800	2,420	1,020	811	601
14	475	1,990	38,500	2,780	4,220	8,980	4,650	12,100	2,250	985	783	594
15	556	1,660	31,700	2,690	3,710	9,750	4,700	14,800	2,090	933	755	594
16	586	1,490	26,300	2,550	3,390	9,240	4,390	15,500	1,930	910	734	587
17	638	1,360	17,500	2,430	3,230	7,370	4,810	13,700	1,800	903	727	559
18	804	1,270	9,670	2,240	3,110	6,250	6,500	12,400	1,700	888	720	545
19	676	1,160	7,410	2,060	3,010	5,650	5,500	10,500	1,610	955	985	539
20	615	1,080	6,390	2,000	2,950	7,160	4,700	8,040	1,530	978	1,320	532
21	597	1,020	5,680	1,990	2,880	13,900	4,220	6,370	1,930	903	1,070	580
22	563	948	5,160	1,960	2,820	16,600	9,650	5,300	3,350	970	1,070	594
23	539	859	5,320	2,000	2,670	16,900	12,500	4,700	2,540	970	918	587
24	507	818	5,430	2,120	2,500	15,300	9,510	5,250	1,950	963	832	580
25	479	810	5,470	2,270	2,260	12,900	7,740	5,170	1,700	1,330	790	552
26	454	832	5,190	2,430	2,160	9,730	6,600	4,890	1,570	1,320	762	526
27	447	5,670	4,890	4,370	2,140	7,590	5,730	4,640	1,480	1,020	741	526
28	439	13,500	5,200	7,840	2,130	7,040	5,020	4,590	1,450	1,300	713	526
29	428	14,700	6,420	9,400	------	8,280	4,490	4,550	1,410	1,610	692	519
30	417	8,710	6,420	9,030	------	9,860	4,420	4,580	1,360	1,310	685	526
31	410	------	5,690	8,370	------	10,900	------	5,000	------	1,140	671	------
TOTAL	16,408	74,807	417,210	118,750	159,590	291,310	207,550	268,970	74,100	34,178	31,554	17,440
MEAN	529	2,494	13,460	3,831	5,700	9,397	6,918	8,676	2,470	1,103	1,018	581
MAX	804	14,700	43,800	9,400	15,800	16,900	12,500	17,100	5,560	1,610	2,910	776
MIN	410	406	3,370	1,960	2,130	2,300	4,220	3,850	1,360	888	671	519
CFSM	.11	.53	2.87	.82	1.21	2.00	1.47	1.85	.53	.23	.22	.12
IN.	.13	.59	3.30	.94	1.26	2.31	1.64	2.13	.59	.27	.25	.14

CAL YR 1966: TOTAL 1,124,543 MEAN 3,081 MAX 43,800 MIN 367 CFSM .66 IN 8.91
WAT YR 1967: TOTAL 1,711,867 MEAN 4,690 MAX 43,800 MIN 406 CFSM 1.00 IN 13.56

3-3610. Big Blue River at Carthage, Ind.

Location.--Lat 39°44'38", long 85°34'33", in SW¼ sec. 18, T. 15 N., R. 9 E., on right bank, 300 ft upstream from highway bridge, half a mile northwest of Carthage, and 2.2 miles downstream from Three Mile Creek.

Drainage area.--187 sq mi.

Records available.--October 1950 to September 1967. Prior to October 1961, published as Blue River at Carthage, Ind.

Gage.--Digital 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 300 ft downstream at same datum. July 19, 1951 to July 18, 1966, graphic water-stage recorder at present site and datum.

Average discharge.--17 years, 188 cfs.

Extremes.--Maximum discharge during year, 3,470 cfs Dec. 10 (gage height, 8.82 ft); minimum, 38 cfs Sept. 7, 17, 18, (gage height, 1.29 ft).
1950-67: Maximum discharge, 12,900 cfs Mar. 4, 1963 (gage height, 14.62 ft, from floodmarks), from rating curve extended above 6,200 cfs; minimum, 16 cfs Sept. 18-20, 1955; minimum gage height, 1.19 ft Aug. 9, 1966.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	60	52	308	143	249	105	259	230	211	118	59	44
2	52	55	248	139	902	122	227	579	186	103	57	44
3	48	65	200	148	763	208	212	341	193	93	56	42
4	47	63	176	137	435	193	193	252	173	94	56	40
5	46	70	256	131	311	847	516	213	158	88	53	41
6	45	85	548	124	257	1,280	718	432	151	86	50	42
7	45	150	1,060	278	207	717	644	1,480	148	84	50	41
8	45	262	1,470	268	180	590	389	1,200	149	84	52	41
9	46	245	2,620	170	160	416	309	696	152	80	53	48
10	71	339	2,900	148	150	395	259	487	134	80	51	46
11	59	355	1,730	128	140	408	222	1,250	125	84	49	42
12	53	203	797	121	136	366	202	864	118	78	48	42
13	50	147	578	118	134	313	216	515	115	74	46	48
14	49	122	451	114	135	398	221	475	111	72	45	51
15	61	110	366	109	142	348	199	568	109	72	46	43
16	70	101	320	105	165	287	178	479	106	70	46	42
17	57	93	287	101	151	254	187	453	101	70	45	40
18	57	87	260	98	140	213	172	428	98	83	46	40
19	57	81	234	97	130	195	158	338	96	81	72	44
20	56	77	222	97	125	325	151	274	98	75	52	47
21	55	74	201	99	118	1,180	167	237	142	70	49	48
22	54	73	186	102	112	681	592	218	169	68	49	50
23	52	72	171	112	108	454	380	204	124	65	47	46
24	50	69	163	119	104	351	313	195	114	63	45	43
25	52	72	152	127	102	324	255	184	113	65	45	42
26	52	130	141	154	103	285	229	173	101	62	47	44
27	51	2,160	135	429	107	252	208	165	97	63	73	43
28	52	1,030	178	376	112	586	185	174	97	65	53	50
29	51	477	216	245	------	685	171	628	228	65	48	45
30	50	341	158	199	------	424	177	359	153	58	46	43
31	50	------	143	189	------	315	------	262	------	57	45	------
TOTAL	1,643	7,260	16,875	4,925	5,878	13,517	8,309	14,353	4,070	2,370	1,579	1,322
MEAN	53.0	242	544	159	210	436	277	463	136	76.5	50.9	44.1
MAX	71	2,160	2,900	429	902	1,280	718	1,480	228	118	73	51
MIN	45	52	135	97	102	105	151	165	96	57	45	40
CFSM	.28	1.29	2.91	.85	1.12	2.33	1.48	2.48	.73	.41	.27	.24
IN.	.33	1.44	3.36	.98	1.17	2.69	1.65	2.85	.81	.47	.31	.26

CAL YR 1966: TOTAL 54,667 MEAN 150 MAX 2,900 MIN 25 CFSM .80 IN 10.87
WAT YR 1967: TOTAL 82,101 MEAN 225 MAX 2,900 MIN 40 CFSM 1.20 IN 16.33

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-27	1530	7.98	2,630				
12-10	1630	8.82	3,470				

3-3615. Big Blue River at Shelbyville, Ind

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 1967. Prior to October 1961, published as Blue River at Shelbyville.

Gage.--Digital 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. Oct. 1, 1953 to Aug. 17, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--24 years, 448 cfs.

Extremes.--Maximum discharge during year, 8,350 cfs Dec. 11 (gage height, 14.64 ft); minimum, 49 cfs Sept. 19 (gage height, 2.55 ft).
1943-67: Maximum discharge, 15,800 cfs Mar. 5, 1963 (gage height, 17.70 ft); minimum, 23 cfs Oct. 2, 1953.
Flood of March 1913 reached a stage of about 20.2 ft, from floodmarks.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	80	63	1,010	335	546	222	614	424	397	157	87	62
2	86	68	793	319	1,640	234	531	1,270	350	169	86	61
3	79	74	611	308	2,630	412	479	1,060	339	153	85	60
4	72	76	505	298	1,510	456	429	704	335	152	84	59
5	69	81	571	281	1,000	1,380	629	553	302	144	81	57
6	66	93	1,240	265	790	3,500	1,680	587	282	136	79	57
7	65	148	2,290	368	581	2,700	1,340	2,560	271	133	75	56
8	64	460	4,070	681	481	1,880	974	3,470	260	131	74	56
9	66	752	5,680	451	420	1,340	708	2,170	265	128	76	61
10	68	720	7,680	360	380	1,080	588	1,410	248	125	75	64
11	82	1,090	7,700	275	360	1,020	495	1,830	229	125	73	60
12	77	719	4,310	270	337	935	437	2,810	214	123	70	55
13	72	474	2,040	260	313	790	425	1,560	202	114	69	55
14	68	363	1,380	250	308	759	440	1,550	193	110	68	57
15	72	300	1,030	235	311	799	411	1,800	187	107	67	61
16	76	260	848	210	331	672	371	1,730	182	106	66	55
17	86	232	747	200	336	602	363	1,460	174	105	66	52
18	79	209	673	190	316	518	357	1,650	167	104	65	51
19	77	187	603	194	296	457	319	1,180	161	121	71	51
20	77	172	562	204	270	589	300	821	159	114	90	54
21	74	162	505	202	260	2,180	337	646	186	105	75	53
22	72	153	455	205	250	2,150	761	560	310	101	70	56
23	70	148	413	212	240	1,320	924	495	252	98	68	57
24	69	142	386	228	230	920	640	454	211	96	66	54
25	67	143	362	243	225	759	551	418	210	93	65	53
26	66	174	330	280	225	670	485	383	194	92	66	51
27	66	3,330	307	802	229	586	445	356	174	94	68	53
28	66	4,820	366	1,090	235	814	390	342	164	95	91	54
29	65	2,820	587	709	------	1,690	356	574	195	95	73	60
30	64	1,460	428	541	------	1,130	350	672	262	93	67	60
31	63	------	356	486	------	783	------	480	------	91	64	------
TOTAL	2,223	19,893	48,838	10,952	15,050	33,347	17,129	35,979	7,075	3,650	2,280	1,695
MEAN	71.7	663	1,575	353	538	1,076	571	1,161	236	118	73.5	56.5
MAX	86	4,820	7,700	1,090	2,630	3,500	1,680	3,470	397	197	91	64
MIN	63	63	307	190	225	222	300	342	159	91	64	51
CFSM	.17	1.56	3.71	.83	1.26	2.53	1.34	2.73	.55	.28	.17	.13
IN.	.19	1.74	4.27	.96	1.32	2.92	1.50	3.15	.62	.32	.20	.15

CAL YR 1966: TOTAL 137,426 MEAN 377 MAX 7,700 MIN 41 CFSM .89 IN 12.03
WAT YR 1967: TOTAL 198,111 MEAN 543 MAX 7,700 MIN 51 CFSM 1.28 IN 17.34

Peak discharge (base, 3,400 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	0715	11.82	4,960				
12-11	0330	14.64	8,350				
3-6	1615	10.36	3,690				
5-8	0815	10.20	3,560				

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 1967. Prior to December 1942 monthly discharge only, published in WSP 1305.

Gage.--Digital 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, and June 30, 1955 to Nov. 12, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--25 years, 106 cfs.

Extremes.--Maximum discharge during year, 5,210 cfs Nov. 27 (gage height, 10.92 ft); minimum, 1.8 cfs Sept. 26, 27; minimum gage height, 0.77 ft Aug. 13-15, 31, Sept. 1-5, 17.
1942-67: Maximum discharge, 10,700 cfs Jan. 27, 1952 (gage height, 13.4 ft); minimum, 0.4 cfs Sept. 14, 1954.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	13	5.2	235	72	117	38	114	85	69	14	5.6	3.1
2	13	5.0	179	63	750	49	99	118	60	13	4.8	3.0
3	13	7.1	131	58	712	95	89	83	57	12	4.6	2.7
4	11	9.0	108	52	379	79	77	71	53	11	4.6	2.8
5	8.3	12	197	50	283	346	82	65	47	10	4.2	3.1
6	6.9	23	409	46	227	1,010	96	155	45	9.7	3.9	3.4
7	5.1	72	795	133	149	569	84	823	43	10	3.5	3.3
8	4.6	339	1,310	144	107	419	70	571	40	9.8	4.0	3.4
9	4.2	428	2,420	86	91	295	68	330	39	9.1	4.1	3.4
10	13	501	2,780	71	85	244	67	214	37	11	3.9	3.3
11	9.1	489	1,430	55	74	205	58	210	33	9.3	3.5	2.9
12	8.6	270	452	57	58	162	55	176	30	7.9	3.2	3.3
13	6.9	182	316	56	57	139	59	132	29	7.4	3.0	3.2
14	5.4	138	239	55	58	131	58	390	27	6.9	2.7	3.4
15	25	107	190	49	59	154	54	623	22	6.4	3.1	3.3
16	20	90	163	42	62	129	50	439	20	5.6	3.2	3.0
17	15	77	144	35	54	114	61	598	18	5.4	3.2	2.8
18	12	67	128	30	53	91	58	368	17	5.8	3.4	3.1
19	9.1	58	111	30	49	83	48	237	16	5.8	20	3.8
20	7.6	52	104	37	46	283	45	153	16	5.5	8.2	4.7
21	6.2	50	87	39	44	752	79	116	29	5.6	5.7	5.9
22	5.5	47	76	40	42	409	441	98	91	5.3	4.6	3.4
23	4.7	44	67	42	39	276	209	86	46	5.9	4.4	2.7
24	4.2	42	64	47	36	197	181	79	30	5.4	4.6	3.1
25	4.2	43	59	52	33	164	134	72	25	5.3	4.1	2.2
26	3.8	60	52	58	30	138	118	65	21	4.5	4.3	2.4
27	3.5	2,720	48	312	36	117	102	59	19	5.2	3.9	2.7
28	3.5	2,060	138	243	42	268	86	55	18	17	3.4	3.7
29	4.0	514	238	144	------	318	78	114	17	9.7	3.8	3.7
30	3.6	315	109	108	------	209	77	86	16	6.9	3.6	3.4
31	4.5	------	79	102	------	148	------	75	------	6.3	3.3	------
TOTAL	258.5	8,826.3	12,858	2,408	3,772	7,631	2,897	6,746	1,030	252.7	142.4	98.2
MEAN	8.34	294	415	77.7	135	246	96.6	218	34.3	8.15	4.59	3.27
MAX	25	2,720	2,780	312	750	1,010	441	823	91	17	20	5.9
MIN	3.5	5.0	48	30	30	38	45	55	16	4.5	2.7	2.2
CFSM	.08	2.70	3.81	.71	1.24	2.26	.89	2.00	.31	.07	.04	.03
IN.	.09	3.01	4.39	.82	1.29	2.60	.99	2.30	.35	.09	.05	.03

CAL YR 1966: TOTAL 38,036.0 MEAN 104 MAX 2,780 MIN 2.0 CFSM .96 IN 12.98
WAT YR 1967: TOTAL 46,920.1 MEAN 129 MAX 2,780 MIN 2.2 CFSM 1.18 IN 16.01

Peak discharge (base, 1,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-27	1815	10.92	5,210				
12-10	1915	9.43	2,890				

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 1967. Prior to February 1943 monthly discharge only, published in WSP 1305.

Gage.--Digital 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. Oct. 1, 1952 to Apr. 14, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--25 years, 470 cfs.

Extremes.--Maximum discharge during year, 9,560 cfs Dec. 11 (gage height, 13.85 ft); minimum, 18 cfs Sept. 26; minimum gage height, 3.53 ft Sept. 17, 18.
1942-67: 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.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	57	47	938	380	582	193	636	380	411	96	51	29
2	55	49	732	341	1,680	193	536	508	330	91	49	28
3	57	54	572	307	2,910	308	478	423	302	85	47	28
4	55	54	470	280	1,790	377	416	367	279	81	45	28
5	50	59	567	259	1,220	923	419	318	248	83	43	28
6	46	71	1,190	240	944	3,240	1,130	401	230	79	39	27
7	44	156	2,150	363	669	3,100	994	1,830	214	75	39	27
8	43	560	3,840	756	563	2,030	774	2,640	201	71	41	27
9	44	1,050	5,800	551	486	1,460	669	1,910	192	67	40	28
10	61	1,050	8,630	431	445	1,140	555	1,310	182	67	37	29
11	49	1,510	8,770	333	405	1,010	449	1,080	174	68	35	27
12	46	929	5,440	296	340	891	382	1,870	162	63	33	25
13	46	649	2,740	282	301	773	365	1,450	151	67	32	26
14	46	498	1,580	265	291	692	368	1,530	142	63	31	26
15	65	401	1,160	243	287	691	347	2,060	129	57	30	24
16	80	338	940	211	299	622	316	1,810	122	55	29	22
17	71	292	810	194	289	557	319	1,780	118	54	29	21
18	81	254	717	173	278	483	318	1,470	111	55	28	21
19	73	220	635	170	266	427	278	1,220	106	54	38	23
20	66	195	584	170	256	671	249	876	104	56	42	24
21	61	180	522	166	246	2,120	285	655	114	54	35	24
22	59	168	464	172	230	1,990	860	542	259	53	35	23
23	56	158	409	178	218	1,430	774	467	207	52	35	23
24	54	149	376	190	183	1,030	715	416	159	52	34	21
25	52	149	348	208	180	820	592	375	146	50	33	20
26	50	169	312	240	180	696	511	334	133	48	33	19
27	49	2,930	279	858	181	607	461	302	117	49	33	20
28	49	6,040	401	1,440	190	802	393	275	112	63	31	21
29	48	2,460	829	975	------	1,290	345	389	114	59	32	23
30	47	1,340	569	688	------	1,090	328	410	103	53	32	23
31	47	------	424	572	------	832	------	512	------	53	31	------
TOTAL	1,707	22,179	53,198	11,932	15,909	32,488	15,262	29,910	5,372	1,973	1,122	735
MEAN	55.1	739	1,716	385	568	1,048	509	965	179	63.6	36.2	24.5
MAX	81	6,040	8,770	1,440	2,910	3,240	1,130	2,640	411	96	51	29
MIN	43	47	279	166	180	193	249	275	103	48	28	19
CFSM	.12	1.60	3.71	.83	1.23	2.27	1.10	2.09	.39	.14	.08	.05
IN.	.14	1.79	4.28	.96	1.28	2.62	1.23	2.41	.43	.16	.09	.06

CAL YR 1966: TOTAL 143,115 MEAN 392 MAX 8,770 MIN 24 CFSM .85 IN 11.52
WAT YR 1967: TOTAL 191,787 MEAN 525 MAX 8,770 MIN 19 CFSM 1.14 IN 15.44

Peak discharge (base, 4,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	0600	12.52	6,750				
12-11	0445	13.85	9,560				

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 1967. Prior to July 1941 monthly discharge only, published in WSP 1305.

Gage.--Digital 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, and Oct. 7, 1941 to Aug. 25, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--27 years, 1,099 cfs.

Extremes.--Maximum discharge during year, 18,500 cfs Dec. 11 (gage height, 15.13 ft); minimum daily, 100 cfs Sept. 17, 18.
1940-67: Maximum discharge, 40,500 cfs Mar. 6, 1963 (gage height, 16.97 ft); minimum observed, 36 cfs Sept. 23, 1941.
Maximum stage known, 20.3 ft in March 1913, from information by local residents.

Remarks.--Record good, except for period of no gage-height record, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	191	151	2,650	996	1,450	685	1,910	1,180	1,170	497	207	126
2	187	156	2,070	937	3,020	705	1,660	1,740	1,010	439	196	120
3	191	165	1,670	885	5,520	890	1,510	2,060	959	359	191	117
4	179	168	1,380	849	4,580	1,100	1,370	1,690	921	379	186	114
5	166	178	1,410	810	3,120	1,930	1,330	1,410	869	373	177	117
6	158	196	2,340	775	2,410	5,980	2,670	1,400	815	359	173	110
7	153	298	4,170	887	1,960	7,220	2,930	3,680	779	346	171	108
8	149	780	6,900	1,530	1,590	5,200	2,450	5,950	750	336	171	107
9	151	1,720	10,600	1,360	1,390	3,870	2,010	5,630	727	323	168	115
10	173	1,880	15,900	1,090	1,290	3,050	1,730	3,940	714	315	164	115
11	157	2,620	17,700	903	1,170	2,730	1,480	3,100	668	314	161	110
12	167	2,010	13,600	838	1,050	2,500	1,320	4,580	635	302	153	113
13	163	1,490	7,550	808	960	2,230	1,240	4,420	604	296	147	112
14	157	1,130	4,180	775	940	2,020	1,230	3,880	577	276	144	112
15	176	927	3,170	740	940	2,050	1,200	4,680	551	258	141	108
16	198	806	2,610	690	950	1,900	1,120	4,410	526	250	142	105
17	192	719	2,250	648	950	1,730	1,100	4,200	508	242	140	100
18	212	649	2,020	567	925	1,560	1,070	3,710	484	241	138	100
19	199	586	1,830	577	895	1,410	994	3,510	464	241	156	103
20	189	532	1,690	580	870	1,680	937	2,690	451	259	167	108
21	182	495	1,530	576	845	3,980	976	2,080	494	243	169	112
22	176	465	1,370	578	815	4,840	1,880	1,760	729	227	157	115
23	170	441	1,240	587	785	3,870	2,160	1,560	765	219	151	116
24	165	418	1,130	607	715	2,850	1,970	1,420	655	215	144	114
25	162	414	1,040	637	700	2,290	1,700	1,310	598	208	144	110
26	158	439	973	692	680	2,000	1,510	1,190	563	203	141	109
27	155	3,880	909	1,470	700	1,800	1,390	1,090	509	213	139	109
28	155	9,560	1,040	2,730	705	2,000	1,250	1,010	481	238	143	112
29	153	7,140	1,620	2,190	------	3,150	1,130	1,160	466	222	150	115
30	152	4,090	1,400	1,670	------	3,090	1,070	1,460	514	207	146	119
31	150	------	1,090	1,420	------	2,390	------	1,390	------	208	131	------
TOTAL	5,286	44,503	119,032	30,402	41,925	82,700	46,297	83,290	19,956	8,848	4,908	3,351
MEAN	171	1,483	3,840	981	1,497	2,668	1,543	2,687	665	285	158	112
MAX	212	9,560	17,700	2,730	5,520	7,220	2,930	5,950	1,170	497	207	126
MIN	149	151	909	567	680	685	937	1,010	451	203	131	100
CFSM	.16	1.41	3.64	.93	1.42	2.53	1.46	2.55	.63	.27	.15	.11
IN.	.19	1.57	4.20	1.07	1.48	2.92	1.63	2.94	.70	.31	.17	.12

CAL YR 1966: TOTAL 233,475 MEAN 914 MAX 17,700 MIN 98 CFSM .87 IN 11.77
WAT YR 1967: TOTAL 490,498 MEAN 1,344 MAX 17,700 MIN 100 CFSM 1.28 IN 17.31

Peak discharge (base, 7,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-28	1615	13.13	10,200				
12-11	0900	15.13	18,500				
3-7	0615	11.52	7,610				

Note.--No gage-height record Aug. 28 to Sept. 22.

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 1967. Prior to October 1958, published as Flatrock Creek at St. Paul.

Gage.--Digital 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. Oct. 21, 1938 to Aug. 21, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--37 years, 307 cfs.

Extremes.--Maximum discharge during year, 6,700 cfs Dec. 10 (gage height, 7.19 ft); minimum, 3.4 cfs Sept. 27; minimum gage height, 0.29 ft Sept. 6-8, 27.
1930-67: Maximum discharge, 18,500 cfs Jan. 5, 1949; maximum recorded gage height, 12.17 ft Mar. 5, 1963; minimum discharge, 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.--Record good. Slight diversion occasionally by quarry above gage.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	16	17	548	206	403	150	420	332	252	136	25	7.3
2	17	18	463	194	1,250	162	355	1,080	220	58	22	6.9
3	17	24	367	178	1,520	415	316	1,010	221	77	19	6.3
4	16	23	350	170	1,310	463	271	659	225	70	18	5.7
5	15	27	316	162	796	733	321	490	203	60	17	5.7
6	13	32	621	150	600	1,950	791	519	191	53	15	4.7
7	12	57	1,300	186	451	2,010	866	2,460	188	45	14	4.4
8	12	238	1,990	328	380	1,380	595	2,480	178	47	14	4.5
9	12	439	3,610	275	340	964	453	2,140	164	45	14	5.8
10	13	457	5,550	200	306	1,010	391	1,290	150	43	14	6.8
11	13	663	4,210	140	265	929	314	1,080	138	42	13	7.0
12	14	517	2,380	140	222	800	269	1,410	123	40	12	7.0
13	14	338	1,340	145	206	657	259	1,450	112	37	11	6.7
14	15	246	866	146	202	562	257	1,280	102	33	11	6.1
15	19	202	663	138	202	612	247	1,990	92	32	10	5.5
16	19	170	555	119	214	565	226	1,660	89	31	10	5.3
17	21	146	499	110	214	479	225	1,360	80	32	9.9	5.5
18	26	130	457	110	202	388	214	1,080	77	33	9.7	6.4
19	23	112	415	108	190	332	194	822	70	36	10	5.5
20	21	98	379	108	186	549	182	602	70	39	13	5.2
21	19	87	338	108	178	1,820	213	465	70	31	15	5.7
22	18	84	300	108	162	1,620	378	396	81	29	12	6.3
23	17	78	265	112	130	1,170	451	343	90	26	11	5.1
24	17	75	242	123	110	726	445	310	80	24	9.9	4.6
25	16	81	226	134	100	585	361	283	72	21	9.7	4.7
26	17	84	210	154	120	504	318	260	66	20	9.7	4.0
27	17	511	200	481	134	434	290	245	60	19	9.5	4.0
28	17	1,090	260	726	140	529	250	238	57	35	9.5	5.6
29	17	1,430	427	561	———	883	231	309	55	39	9.2	5.6
30	17	803	306	415	———	792	237	407	190	28	8.8	6.2
31	17	———	246	361	———	546	———	315	———	25	7.1	———
TOTAL	517	8,277	30,299	6,596	10,533	24,719	10,340	28,765	3,766	1,330	393.0	170.1
MEAN	16.7	276	977	213	376	797	345	928	126	42.9	12.7	5.67
MAX	26	1,430	5,950	726	1,520	2,010	866	2,480	252	136	25	7.3
MIN	12	17	200	108	100	150	182	238	55	19	7.1	4.0
CFSM	.06	.93	3.28	.71	1.26	2.68	1.16	3.11	.42	.14	.04	.02
IN.	.06	1.03	3.78	.82	1.31	3.08	1.29	3.59	.47	.17	.05	.02

CAL YR 1966: TOTAL 83,111.1 MEAN 228 MAX 5,950 MIN 4.1 CFSM .76 IN 10.37
WAT YR 1967: TOTAL 125,705.1 MEAN 344 MAX 5,950 MIN 4.0 CFSM 1.16 IN 15.69

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1215	7.19	6,700				
5-7	1100	4.66	3,050				

3-3640. East Fork White River at Columbus, Ind.

Location.--Lat 39°12'00", long 85°55'32", 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 1.3 miles upstream from Haw Creek.

Drainage area.--1,692 sq mi.

Records available.--October 1947 to September 1967. Prior to January 1948 monthly discharge only, published in WSP 1305.

Gage.--Water-stage recorder (digital since Mar. 24) above concrete control. 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.--20 years, 1,786 cfs.

Extremes.--Maximum discharge during year, 28,400 cfs Dec. 11 (gage height, 12.02 ft); minimum, 140 cfs Sept. 17-19 (gage height, 1.08 ft).
1947-67: Maximum discharge, 52,300 cfs Mar. 6, 1963 (gage height, 16.23 ft); minimum, 87 cfs Sept. 29, Oct. 7, 1954.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	329	212	4,120	1,550	2,250	960	2,860	1,800	1,670	715	301	186
2	329	230	3,230	1,550	4,120	976	2,360	3,650	1,410	653	292	179
3	316	236	2,560	1,320	8,300	1,220	2,080	3,950	1,320	574	286	173
4	316	236	2,100	1,320	7,850	1,820	1,850	3,100	1,280	531	279	169
5	290	254	1,960	1,220	5,250	2,400	1,700	2,350	1,200	513	269	167
6	266	272	3,230	1,120	4,320	7,400	2,870	2,190	1,110	488	261	162
7	254	348	6,580	1,320	3,230	10,400	4,130	5,890	1,060	465	254	158
8	242	755	10,200	1,960	2,560	9,150	3,510	9,980	1,020	451	261	156
9	236	2,250	15,200	2,100	2,100	5,950	2,870	9,870	978	434	252	164
10	278	2,730	22,800	1,680	1,960	4,890	2,400	7,070	940	427	247	164
11	254	3,760	27,400	1,440	1,820	4,320	2,010	4,890	892	412	241	162
12	236	3,400	22,800	1,220	1,550	3,940	1,720	5,600	843	399	233	161
13	236	2,400	14,400	1,220	1,440	3,400	1,590	6,340	800	390	227	163
14	230	1,820	7,620	1,220	1,320	3,060	1,550	5,830	759	381	224	158
15	242	1,440	4,890	1,120	1,320	3,230	1,500	8,180	727	365	222	156
16	296	1,220	3,940	1,060	1,320	3,060	1,420	8,320	699	348	214	153
17	278	1,090	3,400	992	1,320	2,560	1,840	6,930	671	345	212	145
18	290	992	3,060	870	1,320	2,250	1,510	5,990	645	346	212	140
19	290	915	2,900	870	1,220	1,960	1,320	5,240	612	344	224	145
20	278	840	2,560	900	1,220	2,250	1,200	4,170	597	354	243	154
21	266	768	2,400	885	1,120	5,950	1,410	3,190	629	349	248	167
22	260	740	2,100	885	1,100	7,620	3,560	2,620	771	338	242	167
23	254	712	1,960	915	1,070	6,270	3,140	2,230	891	330	233	164
24	242	670	1,820	915	976	4,520	3,160	1,960	823	326	227	166
25	236	657	1,680	945	930	3,580	2,610	1,780	753	317	263	160
26	230	670	1,550	1,010	930	3,060	2,250	1,600	707	303	250	157
27	224	2,900	1,320	1,960	960	2,670	2,010	1,460	656	317	221	161
28	224	9,150	1,550	3,940	960	2,900	1,730	1,370	620	343	205	165
29	224	10,600	2,560	3,760	------	4,300	1,510	1,630	595	329	214	166
30	218	7,150	2,400	2,900	------	4,650	1,420	1,930	593	320	208	170
31	212	------	1,820	2,250	------	3,670	------	1,980	------	311	193	------
TOTAL	8,076	59,457	186,110	46,417	63,836	124,386	65,090	133,090	26,271	12,518	7,458	4,858
MEAN	261	1,982	6,004	1,497	2,280	4,012	2,170	4,293	876	404	241	162
MAX	329	10,600	27,400	3,940	8,300	10,400	4,130	9,980	1,670	715	301	186
MIN	212	212	1,320	870	930	960	1,200	1,370	593	303	193	140
CFSM	.15	1.17	3.55	.88	1.35	2.37	1.28	2.54	.52	.24	.14	.10
IN.	.18	1.31	4.09	1.02	1.40	2.73	1.43	2.93	.58	.28	.16	.11

CAL YR 1966: TOTAL 514,410 MEAN 1,409 MAX 27,400 MIN 155 CFSM .83 IN 11.31
WAT YR 1967: TOTAL 737,567 MEAN 2,021 MAX 27,400 MIN 140 CFSM 1.19 IN 16.21

Peak discharge (base, 10,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-29	0600	6.11	11,300				
12-11	1330	12.02	28,400				
3-7	1530	6.63	12,100				
5-8	1515	5.52	10,400				

3-3642. Haw Creek near Clifford, Ind.

Location.--Lat 39°15'00", long 85°51'22", in NW¼SW¼ sec. 34, T. 10 N., R. 6 E., on left bank, 20 ft downstream from County Road 450 North bridge, 1.2 miles southeast of Clifford, 5.8 miles northeast of Columbus and 7.4 miles upstream from mouth.

Drainage area.--47.5 sq mi.

Records available.--August to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 643.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during period 4.3 cfs Aug. 7, 25; maximum gage height, 1.73 ft, Aug. 25; minimum, no flow for parts of many days as the result of irrigation.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1											3.4	.64
2											3.4	.74
3											3.4	.80
4											3.4	1.0
5											3.0	1.0
6											2.8	1.0
7											3.0	.85
8											3.4	.85
9											2.8	.85
10											2.8	.85
11											2.5	.71
12											2.2	.83
13											2.0	1.0
14											1.7	1.0
15											1.7	.74
16											1.5	.85
17											1.7	.85
18											1.7	.85
19											1.5	.85
20											1.5	1.0
21											1.3	1.1
22											1.3	.70
23											1.3	.78
24											1.3	1.1
25											1.7	.87
26											1.5	.92
27											1.3	.87
28											1.3	0
29					------						1.1	.57
30					------						1.0	1.0
31		------			------		------		------		.85	------
TOTAL											63.35	25.17
MEAN											2.04	.84
MAX											3.4	1.1
MIN											.85	0
CFSM											.04	.02
IN.											.05	.02

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 1967.

Gage.--Digital 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 and Sept. 24, 1952 to Dec. 17, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 96.5 cfs.

Extremes.--Maximum discharge during year, 2,190 cfs Dec. 10 (gage height, 6.64 ft); no flow for many days.
1948-67: Maximum discharge, 11,300 cfs Jan. 21, 1959 (gage height, 14.29 ft); no flow at times most years.
Flood in 1913 reached a stage of 25.1 ft, from floodmarks.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	4.8	4.6	70	54	101	33	106	113	47	4.4	3.7	0
2	4.9	5.6	61	49	562	41	93	719	42	3.9	2.2	0
3	4.4	8.2	44	43	450	136	84	333	47	3.0	1.5	0
4	3.1	9.0	44	39	226	133	73	200	49	2.3	.98	0
5	2.0	11	71	37	157	320	73	143	42	2.2	.65	0
6	1.1	16	178	35	127	867	101	180	38	3.0	.38	0
7	.90	49	610	44	89	378	84	1,540	44	3.9	.25	0
8	.90	115	632	58	80	263	69	575	36	3.1	.30	0
9	1.1	148	877	43	72	231	65	334	30	3.0	.23	0
10	11	206	1,920	37	67	331	65	227	27	2.8	.10	0
11	5.5	235	590	35	59	256	58	214	22	3.2	.06	0
12	3.7	125	302	32	44	193	52	191	20	2.5	.03	0
13	2.8	81	214	31	45	153	55	142	17	2.2	0	0
14	3.7	60	163	28	41	135	53	346	15	1.7	0	0
15	6.5	48	129	26	43	260	49	1,200	14	1.5	0	0
16	12	41	113	24	47	204	45	545	12	1.3	0	0
17	10	36	105	22	45	151	58	433	11	1.4	0	0
18	9.6	32	97	20	42	112	52	303	10	1.2	0	0
19	8.3	28	86	21	39	97	42	211	9.4	1.0	0	0
20	7.0	25	81	21	36	296	41	148	9.1	9.4	0	0
21	5.9	23	69	24	33	962	71	115	9.4	37	0	0
22	5.7	21	62	26	31	394	146	99	13	19	0	0
23	6.2	20	54	27	29	256	104	86	12	10	0	0
24	6.2	19	49	29	27	190	105	76	12	7.0	0	0
25	5.6	21	42	32	25	166	87	68	9.5	4.6	0	0
26	5.1	28	39	36	24	147	78	61	6.7	2.4	0	0
27	5.1	124	47	163	26	128	67	55	5.3	6.0	0	0
28	5.1	184	96	168	28	185	54	52	6.0	9.1	0	0
29	4.6	131	163	114	------	237	49	89	5.7	4.4	0	0
30	4.6	91	82	88	------	164	51	71	4.8	2.9	0	0
31	4.6	------	66	86	------	128	------	57	------	4.0	0	------
TOTAL	162.00	1,949.4	7,156	1,492	2,595	7,547	2,130	8,926	625.9	163.4	10.38	0
MEAN	5.23	65.0	231	48.1	92.7	243	71.0	288	20.9	5.27	.33	0
MAX	12	239	1,920	168	562	962	146	1,540	49	37	3.7	0
MIN	.90	4.6	39	20	24	33	41	52	4.8	1.0	0	0
CFSM	.06	.73	2.60	.54	1.04	2.74	.80	3.24	.23	.06	.004	0
IN.	.07	.82	3.00	.62	1.09	3.16	.89	3.74	.26	.07	.004	0

CAL YR 1966: TOTAL 25,223.50 MEAN 69.1 MAX 1,920 MIN 0 CFSM .78 IN 10.56
WAT YR 1967: TOTAL 32,757.08 MEAN 89.7 MAX 1,920 MIN 0 CFSM 1.01 IN 13.72

Peak discharge (base, 1,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1100	6.64	2,190				
5-7	1500	6.22	1,950				
5-15	1345	5.51	1,550				

3-3650. Sand Creek near Brewersville, Ind.

Location.--Lat 39°05'03", long 85°39'32", 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 5.7 miles upstream from Wyaloosing Creek and 16 miles upstream from mouth.

Drainage area.--156 sq mi.

Records available.--February 1948 to September 1967.

Gage.--Digital 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. Oct. 6, 1952 to Aug. 21, 1964 graphic water-stage recorder at present site and datum.

Average discharge.--19 years, 165 cfs.

Extremes.--Maximum discharge during year, 4,880 cfs May 7 (gage height, 11.72 ft); minimum, no flow Sept. 15-19, 30.
1948-67: Maximum discharge, 19,900 cfs Jan. 21, 1959 (gage height, 21.70 ft inside, 22.20 ft outside), from rating curve extended above 6,500 cfs on basis of contracted-opening measurement of peak flow; no flow many times.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	6.7	6.0	65	79	144	50	149	323	68	17	10	.46
2	4.9	7.2	57	67	939	62	125	2,980	59	15	8.4	.22
3	3.5	10	44	58	838	223	119	781	55	21	6.7	.11
4	5.7	9.8	41	54	348	258	106	382	57	24	5.4	.07
5	4.6	13	45	48	230	828	95	258	58	14	4.7	.10
6	2.7	13	146	45	183	2,240	100	215	47	11	4.1	.04
7	1.6	15	606	60	125	776	93	2,870	79	10	3.8	.04
8	1.6	56	727	97	110	562	80	978	63	5.4	3.6	.01
9	2.1	172	1,650	65	105	450	72	466	44	8.6	3.6	.06
10	2.4	554	3,280	55	95	619	76	297	36	6.4	3.5	.13
11	2.1	449	992	48	91	376	75	245	30	6.1	2.9	.14
12	1.7	164	399	40	73	262	65	216	26	7.9	2.3	.07
13	1.9	100	256	37	67	200	64	169	23	8.6	1.8	.04
14	14	68	195	38	66	177	70	509	20	8.8	1.5	.02
15	17	52	156	39	68	601	65	2,630	18	6.0	1.3	0
16	16	43	133	32	73	384	58	864	17	7.0	1.3	0
17	13	36	119	27	70	235	179	782	16	6.1	1.1	0
18	18	32	109	25	61	160	190	525	17	5.6	1.1	0
19	11	28	98	22	59	128	95	313	16	5.8	1.5	0
20	7.1	24	90	22	58	174	75	212	14	5.6	1.8	.25
21	4.6	22	82	22	63	1,650	146	156	16	4.9	1.5	.96
22	4.5	20	72	25	54	600	1,800	129	34	4.7	1.3	.94
23	4.8	19	63	30	48	311	414	107	30	8.7	1.2	.44
24	3.5	18	55	35	42	216	417	93	38	10	.80	.24
25	3.9	20	47	39	37	174	263	85	23	13	.98	.09
26	3.6	24	43	44	36	149	219	75	18	5.2	2.8	.01
27	3.4	36	41	549	37	127	214	66	15	6.7	11	.10
28	3.6	101	111	405	42	525	161	58	14	20	6.0	.20
29	4.5	134	362	201	------	525	138	81	13	8.3	3.7	.10
30	5.3	96	154	148	------	274	138	111	11	14	2.4	0
31	5.2	------	105	134	------	193	------	80	------	14	1.3	------
TOTAL	184.5	2,342.0	10,347	2,590	4,162	13,509	5,861	17,056	975	323.4	103.38	4.84
MEAN	5.95	78.1	334	83.5	149	436	195	550	32.5	10.4	3.33	.16
MAX	18	554	3,280	549	939	2,240	1,800	2,980	79	24	11	.96
MIN	1.6	6.0	41	22	36	50	58	58	11	4.7	.80	0
CFSM	.04	.50	2.14	.54	.95	2.79	1.25	3.53	.21	.07	.02	.001
IN.	.04	.56	2.47	.62	.99	3.22	1.40	4.07	.23	.08	.02	.001

CAL YR 1966: TOTAL 46,847.40 MEAN 128 MAX 3,280 MIN .90 CFSM .82 IN 11.17
WAT YR 1967: TOTAL 57,458.12 MEAN 157 MAX 3,280 MIN 0 CFSM 1.01 IN 13.70

Peak discharge (base, 2,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1115	11.17	4,440	5-2	1100	11.57	4,760
3-6	0915	9.46	3,230	5-7	1300	11.72	4,880
4-22	0500	10.12	3,680	5-15	1100	11.19	4,450

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 1967. 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.--Digital 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. July 16, 1934 to July 11, 1965, graphic water-stage recorder at present site and datum.

Average discharge.--40 years, 2,346 cfs.

Extremes.--Maximum discharge during year, 33,700 cfs Dec. 11 (gage height, 17.56 ft); minimum, 199 cfs Sept. 24 (gage height, 0.38 ft).
1923-67: Maximum discharge, 78,500 cfs Jan. 5, 1949 (gage height, 19.67 ft).
1927-67: 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.--Record good. Some regulation of low flow by Seymour Water Co. at dam above station. Records of water temperatures and suspended sediment loads for the water year 1967 are published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	354	291	6,750	2,270	2,740	1,090	4,270	2,170	2,450	861	450	275
2	356	302	4,290	2,050	3,360	1,100	3,490	6,950	2,160	968	436	269
3	356	316	3,320	1,880	8,180	1,300	3,050	9,460	1,960	830	424	262
4	389	310	2,670	1,750	9,780	2,040	2,760	6,030	1,910	762	411	257
5	369	318	2,350	1,650	8,440	2,700	2,500	4,300	1,830	727	394	253
6	340	329	2,780	1,560	6,050	7,310	2,560	3,420	1,720	701	379	251
7	325	364	4,810	1,560	4,580	12,200	4,020	6,610	1,610	677	370	246
8	315	576	8,940	1,980	3,460	12,500	4,230	14,600	1,580	657	371	243
9	305	1,540	13,400	2,490	2,930	10,400	3,650	13,000	1,500	636	374	244
10	311	2,750	24,600	2,270	2,710	8,100	3,100	11,000	1,420	628	356	242
11	345	4,180	32,900	1,890	2,470	6,880	2,730	8,220	1,350	609	344	239
12	325	4,300	30,400	1,660	2,230	5,930	2,390	6,480	1,260	596	334	238
13	320	3,420	25,000	1,570	1,960	5,170	2,180	7,180	1,190	578	322	238
14	312	2,600	15,700	1,520	1,800	4,540	2,080	7,600	1,140	561	319	235
15	324	2,070	8,690	1,450	1,730	4,890	2,010	11,300	1,090	545	312	232
16	334	1,740	6,240	1,370	1,680	5,460	1,900	15,400	1,040	528	307	228
17	359	1,520	5,120	1,280	1,640	4,400	2,150	11,600	1,000	512	301	228
18	361	1,360	4,420	1,170	1,600	3,690	2,750	10,300	963	506	306	224
19	376	1,240	3,910	1,070	1,530	3,150	2,040	8,440	922	503	308	223
20	371	1,130	3,490	1,070	1,470	2,930	1,750	6,920	889	501	302	223
21	361	1,040	3,170	1,080	1,420	6,350	1,720	5,320	886	504	306	227
22	350	972	2,870	1,070	1,370	10,200	5,130	4,280	962	489	309	223
23	334	917	2,600	1,090	1,310	9,520	5,280	3,630	1,100	485	301	218
24	323	869	2,370	1,110	1,220	7,550	4,390	3,200	1,120	474	293	214
25	317	845	2,200	1,140	1,050	5,630	4,020	2,870	1,050	519	310	212
26	312	831	2,020	1,190	1,010	4,570	3,300	2,580	968	455	633	211
27	307	1,150	1,840	2,000	1,050	3,940	3,030	2,350	915	445	372	213
28	303	4,560	1,870	4,260	1,080	3,900	2,650	2,160	873	573	312	217
29	298	7,610	3,030	4,550	------	5,630	2,320	2,160	829	528	298	213
30	294	8,960	3,300	3,770	------	5,950	2,120	2,470	796	481	297	213
31	291	------	2,670	3,040	------	5,390	------	2,640	------	462	284	------
TOTAL	10,337	58,450	237,720	57,810	79,850	174,410	89,570	204,640	38,483	18,303	10,835	7,011
MEAN	333	1,948	7,668	1,865	2,852	5,626	2,986	6,601	1,283	590	350	234
MAX	389	8,960	32,900	4,550	9,780	12,500	5,280	15,400	2,450	968	633	275
MIN	291	291	1,840	1,070	1,010	1,090	1,720	2,160	796	445	284	211
CFSM	.14	.84	3.29	.80	1.22	2.41	1.28	2.83	.55	.25	.15	.10
IN.	.16	.93	3.79	.92	1.27	2.78	1.43	3.26	.61	.29	.17	.11

CAL YR 1966: TOTAL 702,507 MEAN 1,925 MAX 32,900 MIN 226 CFSM .83 IN 11.20
WAT YR 1967: TOTAL 987,419 MEAN 2,705 MAX 32,900 MIN 211 CFSM 1.16 IN 15.74

Peak discharge (base, 12,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-11	0700	17.56	33,700				
3-8	0830	13.60	12,600				
5-8	0830	14.50	15,300				
5-16	0315	14.99	17,000				

3-3660. Graham Creek near Vernon, Ind.

Location.--Lat 38°55'47", long 85°33'45", 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 1967.

Gage.--Digital 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, and June 10, 1955 to Apr. 13, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--12 years, 86.3 cfs.

Extremes.--Maximum discharge during year, 3,680 cfs Apr. 22 (gage height, 9.58 ft); minimum, no flow Sept. 24-27.
1955-67: 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.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.1	1.5	33	38	44	13	56	130	8.7	.68	3.2	.92
2	1.4	2.2	26	32	497	21	45	2,080	7.5	.61	2.7	.73
3	.98	4.1	20	27	502	107	38	350	7.5	.56	1.9	.61
4	.91	3.7	15	23	142	108	37	125	7.5	.47	1.4	.50
5	1.2	4.8	15	21	89	372	33	80	7.2	.40	1.1	.42
6	1.3	6.2	57	18	70	1,230	30	64	6.2	.44	.93	.38
7	.91	13	331	18	52	384	26	1,720	5.3	.52	.79	.34
8	.77	23	337	38	37	262	21	404	4.8	.48	.69	.29
9	.64	74	666	36	30	240	18	183	4.3	.43	.74	.28
10	.70	484	2,030	24	27	434	17	95	3.6	.57	.68	.23
11	.52	303	438	17	25	188	17	70	3.1	.48	.65	.18
12	.20	78	155	15	22	128	16	55	2.5	.38	.60	.15
13	.28	41	94	13	18	98	14	41	2.0	.31	.52	.18
14	.28	26	68	14	17	112	14	118	1.6	.28	.44	.18
15	.58	19	52	12	17	1,050	14	1,610	1.4	.28	.39	.14
16	.77	15	41	10	19	282	11	379	1.2	.24	.34	.12
17	.70	12	35	9.0	20	130	139	313	1.0	.20	.32	.09
18	3.0	10	30	7.7	18	81	178	192	.94	.22	.30	.07
19	2.8	8.7	27	6.7	15	61	62	99	.87	.20	.31	.06
20	2.1	7.3	24	5.7	14	60	40	67	.79	.21	.27	.05
21	1.7	6.5	21	6.3	14	570	285	47	.91	.20	.22	.06
22	1.2	6.0	19	7.5	12	216	2,110	36	1.3	.20	.18	.06
23	1.4	5.4	16	9.2	10	109	271	29	1.4	.17	.14	.04
24	2.2	5.1	14	10	9.0	77	164	23	2.0	.15	.11	0
25	2.0	8.1	12	12	7.7	61	115	20	1.8	.34	6.0	0
26	1.8	24	10	15	6.6	52	84	18	1.3	.27	8.3	0
27	1.6	32	9.0	86	7.0	44	86	15	1.0	.24	11	0
28	1.5	75	34	179	7.5	273	62	13	.91	.52	3.7	.05
29	1.3	80	235	74	------	335	46	10	.83	.38	2.3	.05
30	1.0	50	98	54	------	117	50	9.6	.76	.44	1.8	.04
31	1.0	------	55	46	------	76	------	8.9	------	1.5	1.2	------
TOTAL	38.84	1,428.6	5,017.0	884.1	1,748.8	7,291	4,099	8,404.5	90.21	12.37	53.22	6.22
MEAN	1.25	47.6	162	28.5	62.5	235	137	271	3.01	.40	1.72	.21
MAX	3.0	484	2,030	179	502	1,230	2,110	2,080	8.7	1.5	11	.92
MIN	.20	1.5	9.0	5.7	6.6	13	11	8.9	.76	.15	.11	0
CFSM	.02	.61	2.09	.37	.80	3.03	1.76	3.49	.04	.005	.02	.003
IN.	.02	.68	2.40	.42	.84	3.49	1.96	4.03	.04	.006	.03	.003

CAL YR 1966: TOTAL 29,949.34 MEAN 82.1 MAX 2,610 MIN 0 CFSM 1.06 IN 14.35
WAT YR 1967: TOTAL 29,073.86 MEAN 79.7 MAX 2,110 MIN 0 CFSM 1.03 IN 13.93

Peak discharge (base, 2,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0930	8.21	2,830	5-15	1100	8.29	2,870
4-22	0245	9.58	3,680				
5-2	0800	8.97	3,280				
5-7	0900	8.21	2,830				

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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 541.17 ft above mean sea level, datum of 1929. Prior to June 22, 1955, wire-weight gage, and June 22, 1955 to May 6, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--19 years (1948-67), 337 cfs.

Extremes.--Maximum discharge during year, 9,590 cfs May 7 (gage height, 20.05 ft); minimum, 0.10 cfs Aug. 17, Sept. 26; minimum gage height, 0.32 ft Aug. 17.
1947-67: Maximum discharge, 52,200 cfs Jan. 21, 1959 (gage height, 33.1 ft, from floodmarks), from rating curve extended abpve 25,000 cfs on basis of contracted-opening measurement of peak flow; no flow at times in most years.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.0	3.8	151	168	149	39	291	551	52	7.1	6.5	5.8
2	2.8	4.8	111	128	767	70	234	5,280	49	6.4	4.7	3.8
3	2.9	7.1	86	111	1,830	139	270	1,910	45	5.0	3.2	2.5
4	2.8	9.1	67	94	718	306	270	597	43	3.9	2.3	1.5
5	2.4	9.6	72	82	440	645	211	388	41	3.0	1.7	1.1
6	2.1	9.5	181	70	340	2,630	182	313	35	2.5	1.2	.76
7	2.1	17	681	71	262	1,830	158	6,720	31	2.2	.95	.57
8	1.8	33	1,180	95	190	1,110	129	2,180	27	2.0	.78	.45
9	1.5	96	1,340	125	166	953	111	844	25	1.8	.81	.42
10	1.5	476	5,600	98	151	1,540	127	474	22	2.2	.50	.36
11	1.2	1,230	2,290	68	136	1,010	143	348	19	2.4	.35	.33
12	1.1	406	814	65	113	1,020	108	277	17	7.5	.24	.30
13	1.0	194	481	49	99	923	101	228	14	5.9	.22	.49
14	.70	119	338	47	92	651	95	484	12	3.6	.25	.44
15	1.7	83	253	46	89	2,410	87	2,370	11	2.4	.19	.38
16	3.0	63	205	41	90	1,450	76	1,630	9.4	1.6	.14	.28
17	3.1	51	171	37	87	679	422	877	8.1	4.9	.80	.24
18	3.0	43	145	32	84	442	976	760	7.5	8.5	.82	13
19	3.0	36	124	26	77	329	368	429	7.0	3.1	1.5	.21
20	3.7	31	110	20	74	293	222	307	6.4	2.1	1.3	.22
21	3.6	27	97	21	72	1,260	207	237	6.1	1.5	.92	.37
22	3.3	25	85	25	67	1,080	2,860	193	8.4	1.3	.67	.46
23	3.4	23	73	28	54	540	1,120	160	14	1.2	.50	.36
24	4.5	21	62	30	43	383	487	134	13	1.1	.38	.24
25	4.3	27	53	32	37	300	406	115	10	4.0	10	.25
26	4.1	56	47	34	31	251	390	96	7.8	3.7	81	.20
27	4.0	97	39	169	35	220	414	82	6.7	3.7	48	.26
28	3.9	165	132	549	37	730	298	68	7.0	30	22	.34
29	3.8	302	611	317	------	1,450	229	58	7.2	12	15	.25
30	3.7	224	487	204	------	617	314	53	7.1	11	13	.21
31	3.6	------	322	161	------	395	------	52	------	8.8	8.9	------
TOTAL	86.60	3,888.9	16,408	3,043	6,330	25,695	11,306	28,215	568.7	156.4	228.82	36.09
MEAN	2.79	130	529	98.2	226	829	377	910	19.0	5.05	7.38	1.20
MAX	4.5	1,230	5,600	549	1,830	2,630	2,860	6,720	52	30	81	13
MIN	.70	3.8	39	20	31	39	76	52	6.1	1.1	.14	.20
CFSM	.009	.44	1.79	.33	.76	2.80	1.27	3.07	.06	.02	.02	.004
IN.	.01	.49	2.06	.38	.80	3.23	1.42	3.54	.07	.02	.03	.005

CAL YR 1966: TOTAL 109,627.00 MEAN 300 MAX 7,430 MIN .70 CFSM 1.01 IN 13.77
WAT YR 1967: TOTAL 95,962.51 MEAN 263 MAX 6,720 MIN .14 CFSM .89 IN 12.06

Peak discharge (base, 7,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
5-7	1230	20.05	9,590				

3-3670. Muscatatuck River near Austin, Ind.

Location.--Lat 38°46'13", long 85°49'21", in SW¼ sec. 23, T. 4 N., R. 6 E., on right bank 15 ft downstream from bridge on U. S. Highway 31, 2 miles northwest of Austin, and 5.5 miles upstream from W. L. McClain ditch.

Drainage area.--365 sq mi.

Records available.--August 1932 to September 1967 (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 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, 7,440 cfs May 8 (gage height, 21.67 ft).
1932-67: Maximum discharge, 53,900 cfs Jan. 22, 1959 (gage height, 29.20 ft).

Remarks.--Record poor. Daily discharge not computed when gage height is below 13.0 ft.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1												
2					925			2,650				
3					1,980			5,040				
4					1,330			2,790				
5								871				
6						1,660						
7			965			2,810		3,070				
8			1,230			2,050		6,700				
9			1,290			971		3,240				
10		845	2,600			1,610		1,190				
11		1,260	4,810			1,510						
12		1,000	3,270			1,210						
13			1,300			1,410						
14			879			955						
15						1,960		2,000				
16						2,640		3,140				
17						1,090		1,850				
18							1,050	963				
19												
20												
21						1,020	1,700					
22						1,450	2,950					
23							1,160					
24												
25												
26												
27												
28												
29						1,620					•	
30					- - - - -	1,000						
31		- - - - -			- - - - -		- - - - -		- - - - -			- - - - -
Total	-	-	-	-	-	-	-	-	-	-	-	-
Mean	-	-	-	-	-	-	-	-	-	-	-	-
Max	-	-	-	-	-	-	-	-	-	-	-	-
Min	-	-	-	-	-	-	-	-	-	-	-	-
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Cal yr 1966 : Total Mean - Max 7,980 Min - Cfsm - In. -
Wtr yr 1967 : Total Mean - Max 6,700 Min - Cfsm - In. -

Peak discharge (base, 5,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-11	1600	20.65	5,530				
5-3	1400	20.83	5,850				
5-8	0900	21.67	7,440				

3-3680. Brush Creek near Nebraska, Ind.

Location.--Lat 39°04'13", long 85°29'10", 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 1967.

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.--12 years, 12.3 cfs.

Extremes.--Maximum discharge during year, 1,240 cfs May 2 (gage height, 7.47 ft); no flow for many days.
1955-67: Maximum discharge, 3,120 cfs July 15, 1962 (gage height, 10.90 ft), 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.--Record good. Record of suspended sediment loads for the water year 1967 is published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.2	3.4	3.6	6.1	2.9	6.7	133	1.2	0.1	0	
2	.1	.5	2.8	3.2	108	7.0	5.8	296	1.1	.1	0	
3	.1	1.2	2.0	2.8	21	12	7.6	26	1.4	.1	0	
4	.1	1.1	1.8	2.4	12	31	5.5	14	1.2	0	0	
5	0	1.6	4.0	2.2	9.0	42	5.0	11	1.0	0	0	
6	0	2.4	11	2.2	7.3	120	4.7	13	1.2	0	0	
7	0	3.4	33	5.0	4.7	31	4.0	152	1.2	0	0	
8	0	4.6	15	4.2	4.0	30	3.6	35	.8	0	0	
9	0	7.9	62	3.0	3.8	34	3.4	15	.7	0	0	
10	0	70	185	2.2	4.0	25	3.8	11	.6	0	0	
11	0	9.7	21	1.8	3.6	14	3.4	10	.4	0	0	
12	0	4.7	12	1.8	3.0	11	3.2	7.6	.4	0	0	
13	0	3.6	8.2	2.0	3.0	8.6	3.4	6.4	.3	0	0	
14	0	2.8	6.1	2.4	3.2	20	3.2	70	.3	0	0	
15	1.4	2.2	4.7	2.0	3.6	70	2.8	254	.3	0	0	
16	.4	.6	4.2	1.5	3.6	15	2.6	26	.2	0	0	
17	.2	1.6	3.8	1.1	3.0	10	54	31	.3	0	0	
18	.1	1.6	3.6	.9	2.8	7.3	13	14	.4	0	0	
19	.1	1.2	3.0	.8	2.6	6.4	7.9	9.3	.3	0	0	
20	.1	1.2	2.8	1.0	3.2	23	6.1	6.7	.2	0	0	
21	.1	1.1	2.6	1.3	3.0	71	123	5.5	1.8	0	0	
22	.1	1.0	2.0	1.7	2.6	16	133	4.4	5.1	0	0	
23	.1	1.0	1.8	2.1	1.9	11	19	3.6	1.1	0	0	
24	.1	.9	1.6	2.5	1.3	8.2	27	3.4	.6	0	0	
25	.1	2.7	1.4	2.8	1.0	7.3	13	2.6	.3	0	0	
26	.1	3.4	1.2	2.4	1.2	6.1	14	2.2	.3	0	.1	
27	.1	5.8	1.1	46	1.5	5.5	12	1.8	.2	0	.4	
28	.1	7.3	20	14	2.2	78	8.6	1.4	.2	.6	.1	
29	.1	5.2	9.7	9.0		19	7.3	1.2	.2	.1	0	
30	.1	3.8	4.4	7.0	- - - - -	11	10	1.6	.2	0	0	
31	.1	- - - - -	3.6	6.7	- - - - -	8.2	- - - - -	1.4	- - - - -	0	0	- - - - -
Total	3.9	154.3	438.8	141.6	226.2	761.5	516.6	1,170.1	23.5	1.0	0.6	0
Mean	0.13	5.14	14.2	4.57	8.08	24.6	17.2	37.7	0.78	0.03	0.02	0
Max	1.4	70	185	46	108	120	133	296	5.1	0.6	0.4	0
Min	0	0.2	1.1	0.8	1.0	2.9	2.6	1.2	0.2	0	0	0
Cfsm	0.011	0.439	1.21	0.391	0.691	2.10	1.47	3.22	0.067	0.0026	0.0017	0
In.	0.01	0.49	1.40	0.45	0.72	2.42	1.64	3.71	0.07	0.003	0.002	0

Cal yr 1966 : Total 3,207.8 Mean 8.79 Max 299 Min 0 Cfsm 0.751 In. 10.21
Wtr yr 1967 : Total 3,438.1 Mean 9.42 Max 296 Min 0 Cfsm 0.805 In. 10.92

Peak discharge (base, 950 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
4-21	2300	7.15	1,110				
5-2	0400	7.47	1,240				

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 1967. Prior to October 1960, published as North Fork of Vernon Fork near Butlerville, Ind.

Gage.--Digital 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, and Aug. 19, 1942 to Aug. 18, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--25 years, 91.9 cfs (unadjusted).

Extremes.--Maximum discharge during year, 3,950 cfs May 15 (gage height, 10.50 ft); minimum daily, 0.30 cfs Sept. 22-26; minimum gage height, 0.23 ft Sept. 2.
1942-67: 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.--Record 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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.5	1.4	34	29	70	15	62	439	18	2.7	2.0	.60
2	1.4	1.9	27	25	798	46	55	2,070	16	2.5	4.8	.60
3	1.4	2.2	19	19	268	152	54	297	15	2.3	25	1.3
4	1.8	2.0	13	16	142	143	49	180	14	2.2	32	2.0
5	1.8	2.4	21	17	106	521	45	114	12	2.1	32	1.5
6	1.7	2.6	101	12	74	1,210	44	90	27	2.1	33	1.0
7	1.7	3.1	274	22	43	280	39	1,440	89	2.1	43	1.5
8	1.5	12	182	47	34	230	31	288	44	2.0	1.9	9.9
9	1.3	54	660	24	30	220	27	172	31	2.0	1.0	7.2
10	1.6	464	1,770	18	30	255	31	116	23	2.2	.80	4.6
11	1.6	146	279	12	28	156	28	104	15	2.1	.75	3.3
12	1.4	76	170	9.6	20	123	22	77	9.4	2.0	.70	16
13	1.3	49	107	9.4	19	82	22	64	6.2	5.1	.80	19
14	1.3	34	58	11	19	77	24	315	4.6	23	1.4	17
15	1.8	24	46	11	21	295	21	1,870	4.1	2.1	1.3	4.3
16	1.4	19	38	6.8	24	156	17	319	3.8	1.5	1.2	2.2
17	1.3	15	33	4.4	28	117	129	319	3.5	1.6	1.0	1.6
18	1.5	13	38	2.4	39	74	102	181	27	1.6	.90	2.6
19	1.9	9.6	46	2.0	22	62	68	103	8.2	1.6	.80	2.0
20	2.0	8.3	43	1.8	12	118	52	76	3.6	1.6	.75	1.2
21	1.7	7.2	31	2.6	9.5	746	198	59	8.1	1.6	.75	.75
22	1.6	6.8	15	5.0	7.3	200	1,360	51	59	1.5	.70	.30
23	1.4	6.2	13	8.0	5.4	135	212	41	38	1.4	.65	.30
24	1.4	6.0	9.9	10	4.2	92	222	32	22	1.4	.65	.30
25	1.4	11	7.4	28	3.0	74	141	26	12	2.1	1.0	.30
26	1.4	20	6.2	40	2.3	66	142	20	5.7	1.4	20	.30
27	1.4	31	4.4	292	5.0	58	132	16	4.1	5.6	25	1.5
28	1.4	51	44	156	8.8	333	66	13	3.6	56	1.7	16
29	1.3	62	128	93	------	220	56	26	3.6	34	1.3	2.9
30	1.3	45	43	68	------	129	70	28	3.0	5.5	1.1	1.7
31	1.4	------	34	63	------	87	------	20	------	4.5	.75	------
TOTAL	46.9	1,225.7	4,294.9	1,065.0	1,872.5	6,472	3,521	8,966	533.5	183.4	242.70	123.75
MEAN	1.51	40.9	139	34.4	66.9	209	117	289	17.8	5.92	7.83	4.13
MAX	2.0	464	1,770	292	798	1,210	1,360	2,070	89	56	43	19
MIN	1.3	1.4	4.4	1.8	2.3	15	17	13	3.0	1.4	.65	.30
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
(ℓ)	-0.16	+6.6	+5.5	0	-0.4	+1.0	0	0	-0.7	-1.95	-4.06	-3.53

CAL YR 1966: TOTAL 26,205.8 MEAN 71.8 MAX 1,770 MIN 1.3 CFSM 0.822 IN 11.16 (ℓ) 0
WAT YR 1967: TOTAL 28,547.35 MEAN 78.2 MAX 2,070 MIN .30 CFSM 0.896 IN 12.16 (ℓ) +0.1

Peak discharge (base, 4,000 cfs).--No peak above base.

ℓ Change in contents, equivalent in cubic feet per second, in Brush Creek Reservoir; furnished by the Indiana Department of Natural Resources.

3-3695. Vernon Fork at Vernon Ind.

Location.--Lat 38°58'34", long 85°37'13", in SE¼ sec. 10, T. 6 N., R. 8 E., on right bank just downstream from highway bridge, 1 mile southwest of Vernon and 3.1 miles downstream from South Fork Vernon Fork.

Drainage area.--201 sq mi.

Records available.--October 1939 to September 1967. Monthly discharge only for some periods, published in WSP 1305.

Gage.--Digital 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, and Jan. 14, 1940 to May 6, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--28 years, 215 cfs.

Extremes.--Maximum discharge during year, 7,300 cfs Apr. 22 (gage height, 12.90 ft); minimum daily, 0.40 cfs Sept. 27.
1939-67: 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.--Record 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.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	4.9	7.8	57	75	133	37	181	451	44	7.1	14	3.7
2	4.5	9.3	44	68	1,390	53	142	4,880	38	7.0	12	2.4
3	3.1	14	34	57	1,010	294	133	944	37	6.0	7.1	2.0
4	2.8	14	27	49	345	318	124	438	34	6.0	5.6	1.5
5	2.8	14	28	45	233	823	114	292	29	5.5	19	1.3
6	2.4	15	29	40	181	2,790	106	211	26	5.5	15	1.1
7	2.2	15	501	44	124	845	94	2,690	65	5.5	14	1.5
8	2.1	20	626	85	85	630	80	900	49	5.5	15	1.5
9	2.0	85	1,070	71	78	595	73	455	30	6.0	3.0	1.3
10	2.1	872	3,740	50	72	770	74	292	22	6.0	1.1	1.3
11	2.5	568	885	38	68	420	77	233	18	5.5	1.1	1.3
12	3.0	161	375	33	58	292	65	211	16	5.5	1.1	1.3
13	3.7	91	268	30	48	233	65	161	16	20	1.2	1.4
14	3.6	61	151	30	50	268	65	489	14	30	3.5	2.3
15	7.3	43	115	31	51	1,310	63	4,030	12	6.0	3.2	3.4
16	11	33	97	29	54	525	58	938	9.3	4.5	3.0	3.7
17	4.5	28	84	24	52	292	531	770	7.8	3.0	2.7	3.0
18	3.0	24	78	20	58	201	476	490	7.1	1.7	2.4	2.4
19	3.0	21	80	17	57	161	211	280	7.1	2.0	2.3	2.0
20	2.6	18	79	15	42	171	151	201	7.5	1.7	2.0	1.8
21	2.0	17	72	15	36	1,560	504	151	7.8	1.7	1.5	2.0
22	1.4	15	53	19	32	557	3,630	124	51	1.5	1.1	2.3
23	3.4	15	39	23	29	305	668	103	57	1.4	1.3	2.4
24	6.0	13	34	30	25	222	560	83	28	1.4	1.3	1.4
25	4.7	19	29	33	20	191	360	73	12	1.5	1.4	1.2
26	4.5	30	25	71	20	161	280	61	10	1.4	26	.70
27	6.4	38	23	580	20	142	330	49	9.0	10	161	.40
28	6.9	75	93	525	28	740	201	41	8.8	60	34	1.7
29	7.3	104	375	222	------	745	161	35	9.3	30	16	3.0
30	7.8	80	151	161	------	318	161	48	7.8	25	8.5	2.4
31	7.8	------	102	133	------	233	------	53	------	20	5.3	------
TOTAL	131.3	2,520.1	9,364	2,663	4,399	16,202	9,738	20,177	689.5	293.5	385.7	57.70
MEAN	4.24	84.0	302	85.9	157	523	325	651	23.0	9.48	12.4	1.92
MAX	11	872	3,740	580	1,390	2,790	3,630	4,880	65	60	161	3.7
MIN	1.4	7.8	23	15	20	37	58	35	7.1	1.4	1.1	.40
CFSM	.02	.42	1.50	.43	.78	2.60	1.61	3.24	.11	.05	.06	.01
IN.	.02	.47	1.73	.49	.81	3.00	1.80	3.73	.13	.05	.07	.01

CAL YR 1966: TOTAL 61,064.10 MEAN 167 MAX 3,890 MIN .90 CFSM .83 IN 11.30
WAT YR 1967: TOTAL 66,621.20 MEAN 183 MAX 4,880 MIN .40 CFSM .91 IN 12.33

Peak discharge (base, 6,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	1130	11.94	6,340				
4-22	0730	12.90	7,300				
5-2	0700	12.83	7,230				
5-15	1200	12.75	7,150				

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.--3,870 sq mi.

Records available.--May 1939 to September 1967 (high-water records only October 1943 to September 1957).

Gage.--Digital 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, graphic water-stage recorder, at site 9.7 miles downstream at datum 4.39 ft lower (now used as an auxiliary gage). Sept. 24, 1957 to Aug. 4, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--14 years (1939-43, 1957-67), 3,438 cfs.

Extremes.--Maximum discharge during year, 36,200 cfs Dec. 14; maximum gage height, 26.43 ft Dec. 14; minimum 290 cfs Sept. 30 (gage height, 2.49 ft).
1939-67: Maximum discharge, 75,700 cfs Mar. 12, 1964; maximum gage height, 35.97 ft May 11, 1961.
1957-67: Minimum daily, 220 cfs Dec. 18, 19, 1963; minimum gage height, 2.40 ft Oct. 14, 18, 1964.
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.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	435	367	5,620	4,820	4,830	1,740	8,480	4,960	3,380	1,100	932	465
2	431	376	6,580	4,060	4,530	1,760	7,290	9,070	3,480	1,110	807	452
3	425	389	6,350	3,490	6,050	1,810	6,080	10,500	3,200	1,300	739	424
4	425	391	4,970	3,110	7,630	1,940	5,370	11,100	2,910	1,390	688	408
5	427	359	3,940	2,850	9,210	2,610	4,950	12,600	2,770	1,160	651	392
6	445	407	3,370	2,680	10,600	5,050	4,530	12,500	2,640	1,030	622	376
7	439	421	3,700	2,560	10,400	7,670	4,150	13,100	2,470	976	598	366
8	421	429	5,330	2,540	8,220	9,450	4,420	13,400	2,310	940	578	365
9	409	470	7,330	2,710	6,240	11,900	5,040	15,000	2,190	906	604	358
10	401	767	10,400	3,050	4,850	15,700	5,060	18,700	2,120	929	633	353
11	387	1,910	12,800	3,150	4,210	15,900	4,670	21,000	2,020	1,030	584	347
12	385	3,510	19,600	2,880	3,820	16,200	4,220	20,100	1,910	936	556	339
13	402	4,770	31,900	2,580	3,470	12,800	3,830	16,600	1,810	872	537	339
14	396	4,330	35,700	2,370	3,140	11,500	3,470	12,900	1,720	824	515	335
15	414	3,380	32,100	2,270	2,870	11,600	3,210	13,200	1,630	785	495	331
16	412	2,640	25,700	2,180	2,720	11,100	3,010	14,100	1,560	757	480	316
17	415	2,190	18,900	2,100	2,610	10,500	3,240	15,700	1,490	736	466	311
18	415	1,910	12,200	1,980	2,530	10,000	4,170	18,700	1,410	717	456	305
19	434	1,700	7,930	1,860	2,450	9,420	5,530	19,000	1,360	700	475	301
20	439	1,540	6,070	1,740	2,370	8,290	5,360	17,400	1,310	720	464	300
21	442	1,410	5,260	1,650	2,310	7,640	4,210	15,100	1,280	737	450	307
22	442	1,290	4,760	1,620	2,240	8,040	4,800	11,800	1,320	740	436	300
23	434	1,200	4,360	1,590	2,180	9,640	6,700	9,060	1,370	712	430	303
24	422	1,120	4,000	1,580	2,050	11,500	8,320	6,380	1,400	695	423	305
25	411	1,070	3,690	1,600	2,000	11,700	8,860	5,120	1,460	661	455	307
26	402	1,050	3,410	1,630	1,900	9,930	8,910	4,460	1,410	662	552	305
27	396	1,080	3,170	1,830	1,800	7,760	8,560	4,030	1,320	500	614	305
28	390	1,250	3,120	2,890	1,700	6,510	7,490	3,630	1,250	618	817	306
29	384	2,210	3,580	4,850	------	6,370	6,060	3,310	1,190	521	685	307
30	376	4,250	4,450	5,910	------	7,550	4,960	3,080	1,150	1,300	576	302
31	372	------	5,150	5,630	------	8,610	------	3,100	------	1,180	521	------
TOTAL	12,828	48,246	305,440	85,760	118,930	272,190	164,950	358,700	56,840	28,654	17,886	10,254
MEAN	414	1,608	9,853	2,766	4,248	8,780	5,498	11,570	1,895	924	577	342
MAX	445	4,770	35,700	5,910	10,600	16,200	8,910	21,000	3,480	1,390	932	485
MIN	372	367	3,120	1,580	1,700	1,740	3,010	3,080	1,150	695	423	300
CFSM	.11	.42	2.55	.71	1.10	2.27	1.42	2.99	.49	.24	.15	.09
IN.	.12	.46	2.94	.82	1.14	2.62	1.59	3.45	.55	.28	.17	.10

CAL YR 1966: TOTAL 1,173,200 MEAN 3,214 MAX 35,700 MIN 289 CFSM .83 IN 11.27
WAT YR 1967: TOTAL 1,486,680 MEAN 4,057 MAX 35,700 MIN 300 CFSM 1.05 IN 14.23

Peak discharge (base, 13,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-14	0800	26.43	36,200	5-9	0045	20.22	19,600
5-11	1200-1930	20.89	21,300				

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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 568.00 ft above mean sea level, datum of 1929 (unadjusted). Prior to May 3, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--7 years, 36.5 cfs.

Extremes.--Maximum discharge during year, 3,070 cfs May 7 (gage height, 11.38 ft); no flow for many days.
1960-67: Maximum discharge, 5,500 cfs Feb. 10, 1965 (gage height, 13.44 ft, from floodmark); no flow at times in most years.
Flood of January 1959 reached a stage of approximately 15 ft, from floodmarks.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.4	.07	5.0	29	33	10	40	499	11	.06	.33	0
2	3.0	.09	3.3	23	360	16	32	955	7.9	.05	.19	0
3	1.5	.23	2.1	19	152	23	45	166	5.4	.03	.10	0
4	.70	.50	1.7	15	83	79	35	96	4.6	.02	.07	0
5	.40	.74	9.5	13	57	211	31	67	3.9	.02	.05	0
6	.20	1.6	38	11	39	645	25	75	2.9	.01	.03	0
7	.20	2.7	505	84	24	209	22	1,270	2.4	.01	.02	0
8	.10	5.1	134	47	19	165	18	218	1.9	.01	.01	0
9	.10	9.1	341	40	16	138	17	100	1.7	.01	.02	0
10	.10	55	891	35	14	160	19	54	1.3	.04	.01	0
11	.10	13	151	24	13	111	16	42	1.0	.04	0	0
12	0	4.7	76	17	12	137	14	30	.75	.02	0	0
13	0	2.8	48	17	12	102	16	25	.57	.03	0	0
14	0	1.9	34	17	12	151	15	191	.46	.04	0	0
15	.10	1.4	26	15	13	375	13	846	.38	.02	0	0
16	3.0	1.2	22	10	11	133	12	191	.30	.01	0	0
17	1.4	.99	17	8.5	10	79	131	269	.23	0	0	0
18	.70	.80	16	6.7	9.6	51	73	161	.17	0	0	0
19	.50	.66	14	5.4	9.4	41	44	92	.14	44	0	0
20	.40	.54	12	6.3	11	201	34	59	.11	5.3	0	0
21	.30	.51	11	7.5	8.5	435	94	44	.38	.75	0	0
22	.20	.47	9.5	11	7.1	140	172	33	2.3	.29	0	0
23	.20	.42	8.2	14	5.6	85	89	25	1.3	.13	0	0
24	.20	.39	7.5	14	4.8	61	119	19	.80	.13	0	0
25	.20	3.3	6.2	13	3.8	46	73	14	.38	62	0	0
26	.10	5.0	5.3	19	4.8	37	87	10	.22	3.5	0	0
27	.10	62	4.8	210	6.0	31	70	7.9	.14	1.4	0	0
28	.09	35	149	80	8.0	218	54	6.4	.10	37	0	0
29	.09	15	104	54	------	132	46	6.2	.08	4.1	0	0
30	.08	7.7	64	43	------	79	77	6.3	.06	1.2	0	0
31	.07	------	38	38	------	53	------	5.8	------	.58	0	------
TOTAL	16.53	236.91	2,754.1	946.4	958.6	4,354	1,533	5,583.6	52.67	160.60	0.83	0
MEAN	.53	7.90	88.8	30.5	34.2	140	51.1	180	1.76	5.15	.027	0
MAX	3.0	62	891	210	360	645	172	1,270	11	62	.33	0
MIN	0	.07	1.7	5.4	3.8	10	12	5.8	.06	0	0	0
CFSM	.01	.21	2.33	.80	.90	3.69	1.34	4.73	.05	.14	.0007	0
IN.	.02	.23	2.69	.92	.94	4.25	1.50	5.45	.05	.16	.0008	0

CAL YR 1966: TOTAL 14,321.14 MEAN 39.2 MAX 1,370 MIN 0 CFSM 1.03 IN 13.98
WAT YR 1967: TOTAL 16,597.44 MEAN 45.5 MAX 1,270 MIN 0 CFSM 1.19 IN 16.20

Peak discharge (base, 1,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0315	9.29	1,950	5-7	0700	11.38	3,070
3-6	0445	8.23	1,520	5-15	0600	9.92	2,210
5-2	0600	10.41	2,460				

3-3716.5 North Fork Salt Creek at Nashville, Ind.

Location.--Lat 39°12'05", long 86°14'50", in SW¼ sec. 19, T. 9 N., R. 3 E., near center of stream at downstream side of bridge on State Highway 46, 700 ft downstream from Greasy Creek and 0.4 mile south of center of Nashville, Brown County.

Drainage area.--75.9 sq mi.

Records available.--July 1962 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 579.576 ft above mean sea level, datum of 1929. Prior to Jan. 21, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--5 years, 64.2 cfs.

Extremes.--Maximum discharge during year, 3,820 cfs Dec. 9 (gage height, 13.53 ft); no flow Sept. 17-20, 23-30.
1962-67: Maximum discharge, 7,500 cfs Mar. 4, 1963; maximum gage height, 15.93 ft (from floodmark) Mar. 9, 1964; no flow at times during most years.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	12	4.3	69	67	80	28	85	624	32	2.2	2.4	.22
2	13	5.2	57	58	745	47	72	823	28	1.9	1.8	.18
3	11	7.5	44	51	386	100	66	281	40	1.6	1.6	.14
4	8.0	7.2	39	42	204	95	59	169	36	1.4	1.3	.10
5	6.3	9.5	105	41	145	431	56	118	28	1.2	1.0	.06
6	5.0	14	211	36	104	875	52	129	22	1.1	.74	.03
7	4.1	134	1,450	70	64	346	45	972	18	1.3	.74	.03
8	3.8	268	1,650	70	56	280	39	358	15	1.3	.74	.22
9	3.7	214	1,690	56	52	183	37	189	14	1.4	.62	.32
10	3.6	313	1,850	54	49	154	38	127	12	1.5	.62	.22
11	4.1	184	437	48	47	131	34	108	9.6	1.4	.50	.18
12	4.8	88	222	41	36	105	30	80	8.1	1.1	.40	.14
13	3.5	63	148	35	36	87	34	68	6.8	.72	.40	.10
14	2.9	50	106	30	34	81	34	542	6.0	.54	.40	.10
15	8.6	41	81	25	35	388	31	958	5.3	.50	.40	.06
16	23	35	69	22	31	209	28	349	4.8	.43	.32	.03
17	11	29	61	20	27	143	626	455	4.1	.32	.40	0
18	8.6	25	54	17	25	99	241	293	3.7	.32	.40	0
19	7.8	21	51	16	23	82	129	172	3.3	2.0	.74	0
20	6.9	18	44	16	21	299	90	106	3.2	4.0	.74	0
21	7.0	17	39	18	20	862	526	78	8.9	2.2	.74	.03
22	6.5	16	34	20	18	277	1,100	62	12	1.3	.50	.01
23	6.0	14	30	25	17	173	279	49	7.0	.66	.50	0
24	6.3	14	26	26	15	127	314	41	4.7	.74	.50	0
25	6.2	17	23	26	14	102	195	33	3.8	6.0	.50	0
26	5.8	30	20	33	13	84	174	26	3.2	1.6	.62	0
27	5.6	566	18	320	15	73	140	21	2.8	9.5	.86	0
28	5.4	284	120	180	20	234	109	20	2.9	47	.74	0
29	4.7	150	169	125	------	218	89	71	2.9	9.3	.50	0
30	4.6	91	106	97	------	150	87	42	2.5	4.5	.40	0
31	4.6	------	76	88	------	107	------	38	------	3.4	.20	------
TOTAL	214.4	2,729.7	9,139	1,773	2,332	6,570	4,839	7,402	350.6	113.23	22.38	2.17
MEAN	6.92	91.0	295	57.2	83.3	212	161	239	11.7	3.65	.72	.072
MAX	23	566	1,850	320	745	875	1,100	972	40	47	2.4	.32
MIN	2.9	4.3	18	16	13	28	28	20	2.5	.32	.26	0
CFSM	.09	1.20	3.88	.75	1.10	2.79	2.13	3.15	.15	.05	.01	.0009
IN.	.11	1.34	4.48	.87	1.14	3.22	2.37	3.63	.17	.06	.01	.001

CAL YR 1966: TOTAL 29,533.90 MEAN 82.0 MAX 1,850 MIN 0 CFSM 1.08 IN 14.67
WAT YR 1967: TOTAL 35,487.48 MEAN 97.2 MAX 1,850 MIN 0 CFSM 1.28 IN 17.39

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-7	1330	11.21	2,600	3-6	0530	8.14	1,400	5-1	2200	9.37	1,830
12-9	0015	13.53	3,820	3-21	0245	8.57	1,550	5-7	0715	9.00	1,700
12-10	0530	12.14	3,070	4-17	1015	8.56	1,550	5-15	0715	8.73	1,610
2-2	1245	9.05	1,720	4-22	0130	11.68	2,840				

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 1967.

Gage.--Digital 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, and Oct. 9, 1951 to Apr. 15, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--21 years, 128 cfs.

Extremes.--Maximum discharge during year, 4,430 cfs Dec. 9 (gage height, 18.97 ft); minimum, 0.09 cfs Sept. 9; minimum gage height, 2.55 ft July 17, 18.
1946-67: Maximum discharge, 13,300 cfs June 23, 1960 (gage height, 23.10 ft); no flow at times in most years.
Flood in March 1913 reached a stage of 25.7 ft, from information by local residents.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	11	4.5	96	108	133	45	147	562	55	4.1	8.3	.49
2	17	6.8	75	93	927	77	123	1,670	48	3.9	6.2	.35
3	16	9.0	61	78	911	167	115	599	50	3.5	7.4	.26
4	14	6.8	49	66	364	164	98	299	59	3.1	5.5	.21
5	12	6.9	100	60	237	495	92	205	49	2.5	3.5	.17
6	9.3	11	306	54	177	1,410	87	183	39	2.7	2.5	.17
7	7.3	59	1,340	104	111	677	81	1,270	33	2.7	1.9	.17
8	6.3	312	2,290	132	95	476	64	824	28	2.6	1.6	.17
9	5.9	478	3,600	92	84	307	61	348	26	2.5	1.6	.26
10	6.9	358	3,190	80	76	244	68	217	21	3.0	1.9	.26
11	6.3	387	1,420	73	70	207	61	186	17	2.8	1.5	.17
12	6.2	150	405	68	62	174	55	142	14	2.6	1.0	.17
13	7.0	97	236	61	57	148	59	118	12	2.5	.76	.17
14	7.2	74	169	52	56	130	63	724	10	2.3	.64	.17
15	8.9	59	131	45	59	496	60	1,510	9.0	2.2	.48	.17
16	27	50	108	39	60	354	53	784	7.9	2.0	.40	.17
17	28	43	93	32	51	232	721	753	7.0	1.9	.40	.17
18	17	39	82	28	47	160	545	554	6.2	2.0	.36	.21
19	14	33	75	26	44	135	231	319	5.6	2.2	1.1	.26
20	11	28	68	24	47	332	157	191	5.2	2.3	.88	.26
21	8.7	25	57	27	40	1,480	379	139	8.9	5.3	.73	.40
22	7.5	23	53	31	36	589	1,890	110	21	4.6	.78	.37
23	6.6	21	47	38	32	307	645	85	16	3.3	.65	.30
24	6.5	20	41	42	28	209	520	71	11	3.3	.54	.26
25	6.7	24	35	43	24	169	348	59	9.4	48	.43	.21
26	6.3	42	30	51	22	141	292	49	6.0	16	.45	.21
27	5.5	790	28	497	27	121	245	40	5.0	70	.77	.21
28	5.0	575	136	343	36	367	188	35	4.7	195	.86	.17
29	5.6	247	313	205	------	446	155	85	4.5	60	.80	.17
30	5.6	149	165	161	------	271	148	77	4.3	27	.80	.14
31	4.6	------	132	142	------	188	------	63	------	12	.74	------
TOTAL	306.9	4,128.0	14,935	2,895	3,913	10,718	7,751	12,271	592.7	497.9	55.47	6.87
MEAN	9.90	138	482	93.4	140	346	258	396	19.8	16.1	1.79	.23
MAX	28	790	3,600	497	927	1,480	1,890	1,670	59	195	8.3	.49
MIN	4.6	4.5	28	24	22	45	53	35	4.3	1.9	.36	.14
CFSM	.08	1.15	4.01	.78	1.16	2.88	2.15	3.30	.16	.13	.01	.002
IN.	.10	1.28	4.63	.90	1.21	3.32	2.40	3.80	.18	.15	.02	.002

CAL YR 1966: TOTAL 48,543.60 MEAN 133 MAX 3,600 MIN .20 CFSM 1.11 IN 15.04
WAT YR 1967: TOTAL 58,070.84 MEAN 159 MAX 3,600 MIN .14 CFSM 1.33 IN 18.00

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1230	18.97	4,430				
4-22	1200	16.77	2,180				

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, 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 1967.

Gage.--Digital 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. Prior to June 14, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--12 years, 469 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 2,690 cfs Dec. 29 (gage height, 19.04 ft); maximum gage height, 20.28 Mar. 21; minimum daily, 45 cfs Sept. 20.
1955-67: 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; no flow Sept. 29 to Dec. 2, 1964.

Remarks.--Record good except for periods of no gage-height record and backwater from Clear Creek or East Fork White River, which are fair. Flow regulated by Monroe Reservoir (capacity, 418,700 acre-ft), since January 1963. Record of water temperatures for the water year 1967 is published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	51	51	52	2,080	946	195	1,810	600	1,810	51	51	51
2	51	51	52	929	950	219	1,800	600	1,780	51	51	51
3	51	51	52	291	1,500	265	1,800	600	1,760	51	51	50
4	51	51	52	188	1,800	427	1,860	600	1,750	51	51	51
5	51	51	52	848	1,640	785	1,920	600	1,740	51	51	51
6	51	51	52	1,180	1,380	1,710	1,910	858	1,810	51	51	51
7	51	51	52	400	1,480	150	1,890	1,760	1,870	51	51	51
8	51	51	52	194	1,530	180	2,210	190	1,870	51	51	51
9	51	51	52	320	787	180	2,190	190	1,870	51	51	51
10	51	51	110	304	373	180	1,870	190	1,850	51	51	51
11	51	51	135	297	364	180	1,850	190	1,850	51	51	51
12	51	51	135	177	353	180	1,830	190	1,830	51	51	51
13	52	51	135	177	250	180	1,830	190	1,820	51	51	51
14	52	51	135	177	82	180	1,640	190	1,810	51	51	51
15	52	51	135	173	60	180	961	190	1,800	51	51	51
16	52	51	135	169	105	180	379	190	1,720	51	51	51
17	52	50	135	168	137	180	548	190	1,100	51	52	51
18	52	50	135	164	135	1,210	866	190	335	51	52	51
19	52	49	135	109	134	2,140	1,160	190	55	51	51	51
20	52	56	135	80	130	2,100	1,270	190	51	51	51	45
21	52	48	664	65	115	1,000	1,380	190	51	51	51	51
22	52	48	1,300	65	100	180	1,760	190	51	51	51	51
23	52	48	1,850	60	100	180	1,900	190	51	51	51	51
24	52	47	2,370	65	100	180	2,030	190	51	51	51	51
25	51	49	2,630	80	100	180	1,980	173	51	51	51	52
26	51	52	2,610	177	100	180	1,980	1,040	51	51	52	52
27	51	52	2,580	538	139	180	1,950	1,650	51	51	51	52
28	51	52	2,300	909	183	180	1,840	1,640	51	51	51	52
29	51	52	2,570	1,110	------	840	1,130	1,660	51	51	51	52
30	51	52	2,660	976	------	1,750	611	1,640	51	51	51	52
31	51	------	2,610	959	------	1,830	------	1,680	------	63	51	------
TOTAL	1,593	1,521	26,072	13,429	15,073	17,681	48,155	18,331	30,991	1,613	1,564	1,529
MEAN	51.4	50.7	841	433	538	570	1,605	591	1,033	52.0	51.1	51.0
MAX	52	56	2,660	2,080	1,800	2,140	2,210	1,760	1,870	63	52	52
MIN	51	47	52	60	60	150	379	173	51	51	51	45
(ℱ)	-66.8	+218	+467	-86	-58	+734	-731	+952	-1,022	+17.9	-78.1	-123

Adjusted for change in contents in Monroe Reservoir

Mean	-15.4	+269	+1308	+347	+480	+1,304	+874	+1,543	+11	+69.9	-27.0	-72.0
Cfsm	-0.035	0.610	2.97	0.787	1.09	2.96	1.98	3.50	0.025	0.159	-0.061	-0.163
In.	-0.04	0.68	3.42	0.91	1.14	3.41	2.21	4.04	0.03	0.18	-0.07	-0.18

	Observed				Adjusted				
Calendar year 1966 :	Max 2,770	Min 3.3	Mean 265	Mean 420	Cfsm 0.952	In. 12.91	(ℱ)	+155
Water year 1967 :	Max 2,660	Min 45	Mean 486	Mean 510	Cfsm 1.16	In. 15.73	(ℱ	+ 24

ℱ Change in contents, equivalent in cubic feet per second, in Monroe Reservoir, furnished by Corps of Engineers.

Note.--No gage-height record June 20 to Aug. 16.

3-3727. Clear Creek near 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 517.00 ft above mean sea level, datum of 1929. Prior to Nov. 23, 1962, graphic water-stage recorder at same site and datum.

Average discharge.--7 years, 63.0 cfs.

Extremes.--Maximum discharge during year, 2,500 cfs Dec. 10 (gage height, 8.87 ft); minimum, 8.4 cfs Sept. 30 (gage height, 3.31 ft). 1960-67: Maximum discharge, 6,380 cfs Mar. 9, 1964; minimum, 4.3 cfs Nov. 27, 1964; 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.--Record good. Flow regulated by effluent from the sewage treatment plant of the city of Bloomington and possibly by pumpage from several rock quarries.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	38	14	63	66	63	34	71	224	58	15	32	17
2	22	15	51	57	441	37	66	312	39	13	28	17
3	19	18	42	50	281	43	72	185	34	12	425	16
4	18	20	36	45	184	56	62	136	30	12	112	15
5	16	24	162	43	138	115	61	109	27	12	51	16
6	15	23	163	40	107	425	58	102	25	13	35	15
7	15	49	746	72	83	252	52	475	24	13	29	14
8	15	70	1,110	56	70	205	47	269	36	14	26	14
9	16	63	1,200	49	64	159	46	174	28	13	35	88
10	17	157	1,450	47	56	137	57	130	22	22	23	68
11	15	85	450	41	50	117	46	115	19	17	19	22
12	14	52	287	41	46	116	43	90	18	16	17	18
13	14	39	198	41	44	105	48	79	17	16	15	18
14	15	33	147	40	43	95	46	298	16	16	14	18
15	56	28	117	35	43	180	42	589	16	15	14	18
16	28	26	100	31	41	133	39	290	15	14	13	17
17	19	24	85	29	35	113	123	424	15	14	13	16
18	15	23	75	25	33	93	78	280	14	15	17	17
19	17	21	69	23	31	81	60	191	13	31	85	19
20	16	19	64	22	29	202	55	135	14	15	25	17
21	15	19	57	22	28	570	207	106	102	14	19	27
22	16	19	49	22	27	268	236	90	64	14	17	19
23	15	18	44	23	26	188	134	76	30	13	16	17
24	14	16	40	24	25	145	150	68	23	14	16	14
25	14	27	36	28	27	114	107	61	20	172	16	13
26	14	29	33	39	28	98	117	53	17	27	20	14
27	14	336	31	179	29	87	96	47	17	353	40	14
28	14	217	203	115	31	114	84	50	19	257	19	14
29	14	125	140	89	------	100	74	62	17	76	18	13
30	13	84	89	77	------	90	92	47	15	43	19	12
31	13	------	73	71	------	80	------	46	------	36	18	------
TOTAL	560	1,693	7,450	1,542	2,103	4,552	2,469	5,313	804	1,277	1,246	617
MEAN	18.1	56.4	240	49.7	75.1	147	82.3	171	26.8	44.4	40.2	20.6
MAX	56	336	1,450	179	441	570	236	589	102	353	425	88
MIN	13	14	31	22	25	34	39	46	13	12	13	12
CFSM	.33	1.02	4.35	.90	1.36	2.66	1.49	3.10	.49	.80	.73	.37
IN.	.38	1.14	5.02	1.04	1.42	3.07	1.66	3.58	.54	.53	.84	.42

CAL YR 1966: TOTAL 26,180.2 MEAN 71.7 MAX 1,450 MIN 9.5 CFSM 1.30 IN 17.64
WAT YR 1967: TOTAL 29,726 MEAN 81.4 MAX 1,450 MIN 12 CFSM 1.48 IN 20.03

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0145	8.87	2,500				
2-2	0930	7.01	1,100				
7-27	2300	8.74	2,390				
8-3	0445	7.84	1,680				

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, 6.5 miles downstream from Monroe Reservoir, and 18.6 miles upstream from mouth.

Drainage area.--582 sq mi.

Records available.--February 1939 to September 1950, February 1957 to September 1967.

Gage.--Wire-weight gage read twice daily and concrete control. 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.--21 years, 641 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 3,600 cfs Dec. 10 (gage height, 18.96); minimum, 57 cfs July 7; minimum gage height, 2.18 ft Aug. 25;
1939-50, 1957-67: 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.--Record good. Stage-discharge relation affected at times by backwater from East Fork White River or return flow from overbank storage. Flow regulated by Monroe Reservoir (capacity, 418,700 acre-ft), since January 1963.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	67	191	2,190	1,070	274	2,060	962	1,900	60	77	72
2	92	72	174	1,040	1,070	425	1,990	2,510	1,900	60	77	72
3	77	72	150	395	1,230	603	2,020	2,790	1,850	60	142	72
4	72	87	142	298	1,950	865	2,090	1,740	1,850	60	182	72
5	72	92	252	713	2,020	1,060	2,090	1,320	1,820	61	97	67
6	72	92	395	1,230	2,350	2,530	2,120	1,320	1,850	59	77	67
7	72	92	1,110	865	2,060	1,100	2,120	2,420	1,900	61	87	72
8	72	150	1,340	365	1,090	700	2,300	1,630	1,900	65	87	67
9	72	142	1,720	350	941	500	2,850	1,000	1,900	62	107	82
10	72	166	3,360	350	903	450	2,820	700	1,920	60	77	87
11	72	200	2,340	324	770	400	2,510	500	1,920	60	72	87
12	72	158	1,100	311	455	380	2,040	400	1,900	60	72	87
13	66	142	600	285	365	370	1,970	350	1,900	59	72	87
14	65	134	350	274	274	350	1,750	500	1,870	59	72	77
15	72	125	300	274	230	650	1,210	900	1,250	60	77	72
16	102	102	250	263	220	500	572	1,540	946	61	77	72
17	77	97	230	252	220	400	916	1,580	626	61	82	72
18	67	97	220	230	220	1,690	1,250	1,100	554	61	92	72
19	67	112	210	174	220	2,300	1,170	800	485	72	92	72
20	67	120	200	158	210	2,390	1,300	600	324	92	92	72
21	67	102	694	150	182	1,440	1,490	450	220	72	82	77
22	67	87	1,250	142	166	1,210	1,560	400	150	61	77	72
23	67	92	1,540	142	158	902	2,160	350	142	60	72	72
24	67	92	2,040	142	158	680	2,350	311	120	65	67	72
25	67	97	2,460	142	158	590	2,300	263	116	298	65	72
26	72	116	2,490	568	158	470	2,170	760	97	200	77	72
27	67	395	2,490	1,110	166	400	2,140	1,660	72	166	77	77
28	72	455	2,490	1,130	230	450	2,140	1,730	65	485	72	77
29	72	298	2,460	1,110		608	1,660	1,750	63	220	72	72
30	72	230	2,460	1,090	- - - - -	1,750	1,170	1,730	62	125	72	72
31	67	- - - - -	2,460	1,090	- - - - -	2,040	- - - - -	1,750	- - - - -	87	72	- - - - -
Total	2,269	4,283	37,468	17,157	19,244	28,477	56,288	35,816	31,672	3,092	2,615	2,235
Mean	73.2	143	1,209	553	687	919	1,876	1,155	1,056	99.7	84.4	74.5
Max	112	455	2,490	2,190	2,350	2,530	2,850	2,790	1,920	485	182	87
Min	65	67	142	142	158	274	572	263	62	59	65	67
(f)	-66.8	+218	+467	-86.1	-58	+734	-731	+952	-1,022	+17.9	-78.1	-123.0
Adjusted for change in contents in Monroe Reservoir												
Mean	+6.4	+361	+1,676	+467	+629	+1,653	+1,145	+2,107	+34	+118	+6.3	-48.5
Cfsm	0.011	0.620	2.88	0.802	1.08	2.84	1.97	3.62	0.058	0.203	0.001	-0.083
In.	0.01	0.69	3.32	0.92	1.12	3.27	2.20	4.17	0.06	0.23	0.0012	-0.09

	Observed			Adjusted		
Calendar year 1966 :	Max 2,880	Min 48	Mean 416	Mean 571	Cfsm 0.981	In. 13.28
Water year 1966-67 :	Max 2,850	Min 65	Mean 649	Mean 683	Cfsm 1.17	In. 15.89

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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 580.00 ft above mean sea level, datum of 1929, unadjusted. Prior to July 30, 1963, graphic water-stage recorder at same site and datum.

Average discharge.--6 years, 45.5 cfs.

Extremes.--Maximum discharge during year, 3,110 cfs Dec. 8 (gage height, 9.01 ft); minimum, 0.12 cfs Sept. 18; minimum gage height, 1.43 July 19.
1961-67: Maximum discharge, 6,450 cfs Mar. 9, 1964 (gage height, 12.95 ft); minimum, no flow in some years.
Flood of Spring 1950 or 1951 reached a stage of 18.4 ft, from information by local resident.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	4.6	1.7	42	46	41	15	33	355	53	2.2	1.6	.82
2	5.0	2.2	33	38	430	22	29	373	27	1.9	2.8	.71
3	4.1	2.6	26	33	193	50	36	150	18	1.5	6.0	.63
4	3.3	2.5	21	26	113	56	36	94	15	1.3	2.5	.60
5	2.6	3.0	160	24	82	140	33	67	13	1.1	1.9	.58
6	2.3	3.8	191	21	61	505	29	59	11	1.1	1.1	.51
7	1.6	5.6	914	57	42	204	24	442	9.5	1.1	.80	.47
8	1.4	7.7	1,160	52	30	161	20	198	8.9	1.1	.72	.61
9	1.7	13	1,230	35	28	114	20	108	8.8	1.1	43	.63
10	1.4	68	1,320	29	27	96	25	73	7.3	1.2	6.2	.73
11	1.5	52	281	23	26	76	23	60	6.4	1.1	3.5	1.4
12	1.6	29	154	21	21	95	20	43	5.7	1.2	1.8	.82
13	1.7	20	104	21	19	87	21	36	5.0	1.0	1.2	.47
14	2.1	15	76	21	19	70	21	307	4.5	.78	.88	.31
15	14	13	60	19	19	246	20	665	4.0	.69	.67	.26
16	13	11	49	14	19	115	17	196	3.7	.60	.54	.26
17	7.5	9.8	42	12	17	81	128	259	3.2	.55	.51	.26
18	5.4	8.5	36	10	16	59	79	131	2.9	.51	.71	.21
19	4.3	7.7	32	9.8	15	49	49	82	2.7	4.4	34	.27
20	3.6	6.9	29	9.7	14	363	37	54	2.6	2.5	9.9	.26
21	3.3	6.3	25	10	14	533	235	41	37	1.2	4.7	.81
22	2.9	6.0	22	11	13	176	266	33	28	.75	2.6	.55
23	2.8	5.6	19	14	11	111	114	27	11	.62	1.8	.44
24	2.7	5.3	17	15	10	79	126	23	6.7	1.4	1.3	.35
25	2.5	6.6	16	14	8.4	63	81	21	5.1	56	1.1	.33
26	2.3	14	14	23	8.1	52	101	19	4.0	8.6	1.1	.29
27	2.1	257	13	209	9.2	45	85	17	3.2	2.7	8.6	.29
28	2.2	226	253	91	12	56	63	15	3.1	24	4.6	.32
29	2.1	103	137	62	------	57	51	15	2.9	5.8	2.3	.28
30	1.9	60	69	51	------	46	99	14	2.5	2.5	1.4	.29
31	1.9	------	51	45	------	38	------	13	------	2.1	1.0	------
TOTAL	109.4	972.8	6,596	1,066.5	1,317.7	3,860	1,921	3,990	315.7	133.00	152.83	14.76
MEAN	3.53	32.4	213	34.4	47.1	125	64.0	129	10.5	4.29	4.93	.49
MAX	14	257	1,320	209	430	533	266	665	53	56	43	1.4
MIN	1.4	1.7	13	9.7	8.1	15	17	13	2.5	.51	.51	.21
CFSM	.06	.53	3.49	.56	.77	2.04	1.05	2.11	.17	.07	.08	.008
IN.	.07	.59	4.03	.65	.80	2.36	1.17	2.44	.19	.08	.09	.009

CAL YR 1966: TOTAL 20,053.40 MEAN 54.9 MAX 1,470 MIN .40 CFSM .90 IN 12.25
WAT YR 1967: TOTAL 20,449.69 MEAN 56.0 MAX 1,320 MIN .21 CFSM .92 IN 12.49

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-7	1230	6.45	1,600				
12-8	1900	9.01	3,110				
12-10	0145	8.05	2,530				
5-15	0430	5.69	1,240				

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 U.S. Highway 50 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 1967. 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.--53 years (1903-5, 1909-16, 1923-67) 5,289 cfs.

Extremes.--Maximum discharge during year, 29,300 cfs Dec. 16 (gage height, 19.16 ft); minimum, 395 cfs Sept. 21, 25-30 (gage height, 2.20 ft).
1903-6, 1908-16, 1923-67: 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.--Record good. Flow regulated by Monroe Reservoir (capacity, 418,700 acre-ft), since January 1963.

Discharge, in cubic feet per second, water year October 1966 to September 1967.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	575	460	4,820	7,800	6,360	2,240	11,200	7,300	5,040	1,320	1,320	658
2	575	460	5,920	6,580	6,360	2,240	10,500	15,700	5,480	1,320	1,060	615
3	535	498	6,360	5,040	8,800	2,330	9,050	17,400	5,480	1,390	945	575
4	535	498	5,920	4,030	9,780	2,510	7,800	15,200	5,040	1,530	1,060	575
5	535	498	4,820	3,650	11,200	3,270	7,300	15,200	4,820	1,530	945	535
6	535	498	4,410	3,840	12,800	5,580	7,050	15,800	4,820	1,320	840	498
7	535	535	5,260	4,220	13,500	11,200	6,360	17,600	4,600	1,180	745	498
8	535	575	8,550	3,840	12,400	11,700	6,140	19,200	4,600	1,120	745	498
9	498	615	10,000	3,460	9,300	13,300	6,800	17,700	4,410	1,120	790	498
10	498	745	16,100	3,650	6,580	15,800	7,300	17,500	4,410	1,120	840	498
11	498	1,320	18,800	3,840	5,260	17,100	6,800	18,900	4,220	1,180	790	498
12	498	2,890	18,300	3,840	4,820	17,400	6,360	19,900	4,220	1,250	745	498
13	460	4,220	19,900	3,460	4,410	16,900	5,920	19,300	4,030	1,060	700	460
14	460	4,600	24,100	3,080	4,030	15,700	5,700	17,800	3,840	1,000	658	460
15	498	4,030	27,800	2,890	3,650	15,000	5,260	17,700	3,840	945	615	460
16	535	3,270	29,000	2,890	3,270	16,100	4,410	19,900	3,840	945	615	460
17	575	2,700	26,400	2,700	3,270	14,200	5,040	18,600	3,650	890	615	460
18	575	2,330	20,200	2,510	3,080	13,000	6,140	19,300	3,080	890	615	428
19	535	2,070	13,000	2,330	3,080	13,000	6,360	19,900	2,240	840	615	428
20	535	1,830	7,800	2,150	2,890	12,800	7,050	19,400	1,760	840	658	428
21	535	1,680	6,140	2,070	2,890	14,100	6,580	18,000	1,600	890	615	395
22	535	1,530	5,920	1,910	2,700	13,700	6,800	16,200	1,680	890	615	428
23	535	1,460	5,920	1,910	2,700	11,700	8,800	12,800	1,760	890	575	428
24	535	1,320	5,920	1,910	2,510	13,000	10,500	9,050	1,760	840	575	428
25	535	1,320	6,140	1,910	2,330	14,400	12,100	6,360	1,760	1,060	535	395
26	498	1,250	5,920	1,990	2,150	13,700	12,400	5,480	1,760	1,530	745	395
27	498	1,320	5,700	2,330	2,240	10,700	12,600	5,480	1,680	1,180	790	395
28	498	2,070	5,920	3,840	2,240	8,300	11,500	5,700	1,530	1,120	790	295
29	498	2,510	6,580	5,260		7,300	9,300	5,260	1,460	1,460	945	395
30	498	3,460	6,800	6,580	- - - - -	8,300	7,300	5,040	1,390	1,460	840	395
31	460	- - - - -	7,550	7,050	- - - - -	10,500	- - - - -	4,820	- - - - -	1,530	700	- - - - -
Total	16,150	52,562	342,970	112,560	154,600	349,070	236,420	443,490	99,800	35,640	23,641	14,077
Mean	521	1,752	11,060	3,631	5,521	11,260	7,881	14,310	3,327	1,150	763	469
Max	575	4,600	29,000	7,800	13,500	17,400	12,600	19,900	5,480	1,530	1,320	658
Min	460	460	4,410	1,910	2,150	2,240	4,410	4,820	1,390	840	535	395
Cfsm	.105	.354	2.23	.733	1.11	2.27	1.59	2.89	.672	.232	.154	.095
In.	.12	.40	2.57	.85	1.16	2.62	1.77	3.33	.75	.27	.18	.11

Cal yr 1966: Total 1,411,506 Mean 3,867 Max 29,000 Min 460 Cfsm .781 In. 10.62
Wtr yr 1967: Total 1,880,980 Mean 5,153 Max 29,000 Min 395 Cfsm 1.04 In. 14.13

Peak discharge (base, 20,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-16	0900	19.16	29,300				
5-16	0600	13.91	20,400				

3-3737. Lost River near West Baden Springs, Ind.

Location.--Lat 38°35'10", long 86°38'03", in SE¼ sec. 21, T. 2 N., R. 2 W., on left bank, 20 ft downstream from bridge on U.S. Highway 150, 1.7 miles northwest of West Baden Springs, Orange County, and 3.8 miles downstream from Lick Creek.

Drainage area.--287 sq mi.

Records available.--December 1964 to September 1967. Prior to October 1965 published as Lost River near West Baden.

Gage.--Water-stage recorder. Datum of gage is 457.92 ft above mean sea level, datum of 1929 (levels by Indiana Department of Natural Resources).

Extremes.--Maximum discharge during year, 2,950 cfs May 2 (gage height, 21.85 ft); minimum daily, 7.5 cfs Oct 8.
1964-67: Maximum discharge, 3,020 cfs Feb. 10, 1965 (gage height, 22.04 ft); minimum, 3.4 cfs July 20, 1965 (gage height, 2.47 ft) due to unusual regulation.
Maximum stage known, 28.1 ft, March 1964, from floodmarks.

Remarks.--Record good.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	10	46	142	107	93	322	1,350	178	52	31	18
2	12	11	39	128	226	107	286	2,680	170	49	64	17
3	11	14	35	114	636	114	250	2,850	163	43	93	15
4	11	15	29	100	540	121	242	2,000	149	40	46	15
5	11	17	33	93	420	259	226	1,500	142	37	35	15
6	9.7	19	70	86	322	856	210	1,160	128	37	32	14
7	8.6	23	250	100	259	1,070	186	2,000	121	37	29	13
8	7.5	29	470	142	202	828	163	2,350	107	36	27	12
9	12	37	540	142	178	660	156	1,900	100	36	55	14
10	12	121	1,640	121	163	912	149	1,200	93	40	156	14
11	9.7	277	1,620	107	156	926	149	940	86	67	93	12
12	9.7	178	926	100	135	954	135	636	80	52	46	13
13	9.7	100	530	93	121	1,160	128	510	70	37	38	12
14	11	64	410	93	114	898	121	716	64	33	33	13
15	11	49	304	90	107	1,400	114	1,560	64	31	30	12
16	34	42	242	80	107	1,380	107	1,740	58	30	29	14
17	27	37	202	74	100	982	156	1,260	58	30	27	12
18	16	33	178	67	93	688	226	912	86	29	27	11
19	14	29	156	61	83	540	178	674	107	30	29	13
20	12	26	142	56	83	480	142	540	74	32	27	12
21	11	24	128	52	80	842	186	450	67	32	28	14
22	11	23	114	51	77	884	440	400	128	30	27	13
23	10	22	100	52	74	674	440	340	114	26	25	14
24	10	21	90	61	70	552	322	304	77	29	22	12
25	10	21	80	58	61	480	259	268	74	58	107	12
26	9.7	21	77	58	58	410	390	242	70	149	135	11
27	9.2	26	74	93	61	350	470	218	55	77	114	8.6
28	9.2	39	128	156	77	410	360	202	58	49	52	10
29	9.2	52	304	149		520	286	202	128	41	34	9.7
30	9.2	52	234	128	- - - - -	460	648	202	67	36	27	9.2
31	9.2	- - - - -	170	114	- - - - -	380	- - - - -	186	- - - - -	34	19	- - - - -
Total	370.6	1,432	9,361	2,961	4,710	20,390	7,447	31,492	2,936	1,339	1,537	384.5
Mean	12.0	47.7	302	95.5	168	658	248	1,016	97.9	43.2	49.6	12.8
Max	34	277	1,640	156	636	1,400	648	2,850	178	149	156	18
Min	7.5	10	29	51	58	93	107	186	55	26	19	8.6
Cfsm	.042	.166	1.05	.333	.585	2.29	.864	3.54	.341	.151	.173	.045
In.	.05	.19	1.21	.38	.61	2.64	.96	4.08	.38	.17	.20	.05

Cal yr 1966: Total 91,412.8 Mean 250 Max 2,750 Min 7.5 Cfsm .871 In. 11.86
Wtr yr 1967: Total 84,360.1 Mean 231 Max 2,850 Min 7.5 Cfsm .805 In. 10.92

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
5-2	2100	21.85	2,950				
5-8	1200	19.42	2,350				

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 1967. 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.--40 years, 11,180 cfs.

Extremes.--Maximum discharge during year, 62,000 cfs Dec. 16 (gage height, 22.87 ft); minimum discharge 1,140 cfs Sept. 28, 29, 30; minimum gage height, 0.86 ft Nov. 2.

1927-67: 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.--Record good. Flow slightly regulated by reservoirs. Record of water temperatures for the water year 1967 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,640	1,150	13,600	14,900	15,900	5,070	21,100	18,700	12,000	3,700	3,100	1,570
2	1,640	1,150	11,600	14,600	16,100	5,070	22,300	23,900	12,900	3,700	2,800	1,460
3	1,520	1,200	10,800	13,300	18,000	5,410	22,300	27,500	13,100	3,550	2,650	1,460
4	1,520	1,200	10,400	11,500	20,300	5,750	20,700	27,800	11,800	3,400	2,650	1,360
5	1,520	1,200	9,570	10,200	22,700	6,600	18,400	25,300	10,700	3,400	3,250	1,360
6	1,400	1,200	9,060	9,120	24,700	10,900	16,600	23,900	9,840	3,400	3,700	1,360
7	1,400	1,250	11,800	8,940	25,800	17,800	15,500	26,500	9,120	3,250	2,950	1,360
8	1,300	1,250	16,500	9,300	25,300	23,100	15,100	29,200	8,760	3,100	2,530	1,270
9	1,300	1,300	21,800	8,940	21,700	25,300	15,700	32,000	8,400	3,100	2,290	1,360
10	1,300	1,640	30,600	8,760	17,600	27,500	16,800	33,400	8,400	2,950	2,290	1,360
11	1,250	2,480	37,000	8,400	14,200	29,200	17,000	34,500	8,400	2,950	2,290	1,270
12	1,200	3,700	43,000	8,400	12,400	30,100	15,900	36,100	8,400	2,950	2,290	1,360
13	1,200	5,620	50,900	8,040	11,500	30,100	14,400	37,300	8,220	2,950	2,170	1,460
14	1,200	6,580	58,000	7,500	10,600	28,600	13,100	37,700	7,680	2,800	2,050	1,360
15	1,640	6,580	59,800	5,960	9,840	28,300	12,400	38,500	7,140	2,650	1,930	1,360
16	1,760	5,940	61,400	6,430	8,940	28,000	11,600	39,400	6,960	2,530	1,810	1,270
17	1,760	4,990	60,600	6,260	8,040	27,500	11,500	39,800	6,780	2,530	1,810	1,270
18	1,640	4,400	57,400	5,750	7,500	24,900	13,100	39,800	6,430	2,530	1,690	1,270
19	1,640	3,980	49,400	5,410	7,320	22,100	14,400	38,500	5,920	2,410	2,050	1,270
20	1,640	3,560	37,200	5,070	6,960	20,700	14,400	37,300	5,070	2,530	1,930	1,270
21	1,520	3,280	23,200	4,900	6,780	23,500	14,200	34,500	4,600	2,530	2,170	1,270
22	1,520	3,000	16,500	4,600	6,600	25,800	14,000	30,400	4,900	2,650	2,050	1,270
23	1,400	2,860	13,600	4,600	6,430	27,500	16,100	25,500	5,920	2,410	2,050	1,180
24	1,400	2,720	12,900	4,600	6,260	27,800	19,900	21,300	5,920	2,530	1,930	1,180
25	1,400	2,600	12,700	4,600	5,920	29,200	21,900	17,600	4,900	2,530	2,050	1,180
26	1,300	2,480	12,700	4,750	5,410	29,800	22,300	14,900	4,600	2,530	2,410	1,180
27	1,300	2,860	12,500	5,580	5,070	27,500	21,700	13,300	4,450	3,100	1,930	1,180
28	1,250	5,300	12,900	7,320	5,070	22,700	20,700	12,700	4,150	2,950	1,930	1,140
29	1,200	10,100	14,000	10,600		18,900	18,700	12,500	4,000	2,650	1,810	1,140
30	1,200	12,700	14,600	13,400	- - - - -	17,600	17,800	12,000	3,850	3,100	1,810	1,140
31	1,200	- - - - -	14,900	15,500	- - - - -	18,900	- - - - -	11,800	- - - - -	3,100	1,690	- - - - -
Total	44,160	108,270	820,930	258,230	352,940	671,200	509,600	853,600	223,310	90,460	70,060	38,940
Mean	1,425	3,609	26,480	8,330	12,600	21,650	16,990	27,540	7,444	2,918	2,260	1,298
Max	1,760	12,700	61,400	15,500	25,800	30,100	22,300	39,800	13,100	3,700	3,700	1,570
Min	1,200	1,150	9,060	4,600	5,070	5,070	11,500	11,800	3,850	2,410	1,690	1,140
Cfsm	.128	.324	2.38	.748	1.13	1.94	1.53	2.47	.668	.262	.203	.117
In.	.15	.36	2.74	.86	1.18	2.24	1.71	2.85	.75	.30	.23	.13

Cal yr 1966: Total 2,941,560 Mean 8,059 Max 61,400 Min 1,150 Cfsm .723 In. 9.81
Wtr yr 1967: Total 4,041,700 Mean 11,070 Max 61,400 Min 1,140 Cfsm .994 In. 13.50

Peak discharge (base, 30,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-16	1100	22.87	62,000				
3-12	2200	16.87	30,600				
5-17	2400	19.33	40,000				

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 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 1967. Discharge measurements only during May 1961.

Gage.--Digital water-stage recorder. Datum of gage is 477.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 1, 1961, wire-weight gage on downstream side of bridge, 200 ft downstream at same datum. Oct. 1, 1961 to Aug. 19, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--6 years, 165 cfs.

Extremes.--Maximum discharge during year, 3,130 cfs May 2 (gage height, 14.53 ft); minimum, 0.1 cfs Oct. 13, 14, Nov. 1, minimum gage height, 1.94 ft Aug 6-8.
1961-67: Maximum discharge, 14,700 cfs Mar. 10, 1964 (gage height, 20.02 ft); minimum, no flow Oct. 30, 1964.
Flood of March 1913 reached a stage of 19.1 ft (discharge about 12,300 cfs) according to information by local resident.

Remarks.--Record good above 10 cfs, poor for winter period and below cfs.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.0	.25	31	106	82	127	146	1,530	30	6.3	3.2	1.3
2	.85	.55	22	88	316	153	127	2,790	37	5.4	2.5	1.2
3	.65	1.0	16	72	670	153	112	2,630	34	5.4	2.3	.89
4	.70	1.2	14	57	497	261	112	2,250	31	4.8	2.2	1.2
5	.55	1.3	15	48	283	447	106	1,480	27	4.2	2.0	1.3
6	.40	1.2	57	41	150	1,050	97	581	24	3.8	1.9	1.3
7	.40	1.7	198	66	110	1,190	86	1,460	20	3.8	1.9	1.2
8	.25	1.9	271	82	87	1,000	75	1,550	17	3.8	1.9	1.0
9	.25	2.1	554	70	75	658	67	1,370	17	3.8	20	.89
10	.40	45	1,340	63	65	847	77	611	15	4.0	54	1.2
11	.25	64	1,350	45	59	789	102	272	13	3.8	60	1.3
12	.25	76	898	48	54	935	91	202	11	3.6	21	1.5
13	.10	38	238	40	51	1,210	84	158	9.8	14	10	1.3
14	.10	17	141	38	49	996	78	428	8.6	14	6.2	1.3
15	1.2	9.9	103	37	47	795	71	1,070	7.7	8.1	4.5	1.0
16	1.3	7.5	78	30	46	772	63	1,080	7.1	5.8	3.7	.89
17	1.5	5.8	63	18	44	494	62	730	6.8	5.0	3.2	.75
18	.85	5.4	52	13	43	309	65	464	13	4.3	2.9	.62
19	.70	4.7	43	13	41	221	64	292	9.0	3.8	3.2	.62
20	.55	4.3	37	13	38	196	60	199	6.9	4.3	2.9	.62
21	.40	4.3	30	16	36	488	91	149	6.8	4.6	2.9	.89
22	.40	4.0	26	19	33	576	194	117	8.9	4.1	2.6	.89
23	.40	3.7	22	22	30	383	236	93	8.9	3.7	2.6	.75
24	.40	3.5	18	24	27	266	231	76	8.9	4.5	2.4	.75
25	.40	4.0	16	23	26	196	216	63	10	3.8	47	.75
26	.40	5.0	13	24	25	176	461	53	7.3	3.2	90	.62
27	.40	9.9	10	84	25	153	658	44	5.9	3.1	13	.62
28	.55	18	101	112	79	218	421	36	8.5	3.6	4.6	.62
29	.40	27	233	127	------	273	253	32	11	17	2.9	.62
30	.40	40	213	112	------	226	693	32	8.1	7.4	2.3	.49
31	.25	------	136	95	------	181	------	29	------	4.5	1.8	------
TOTAL	16.85	408.20	6,337	1,646	3,088	15,739	5,199	21,871	429.2	171.5	381.6	28.38
MEAN	.54	13.6	204	53.1	110	508	173	706	14.3	5.53	12.3	.95
MAX	1.5	76	1,350	127	670	1,210	693	2,790	37	17	90	1.5
MIN	.10	.25	10	13	25	127	60	29	5.9	3.1	1.8	.49
CFSM	.003	.08	1.20	.31	.64	2.97	1.01	4.13	.08	.03	.07	.006
IN.	.004	.09	1.38	.36	.67	3.42	1.13	4.76	.09	.04	.08	.006

CAL YR 1966: TOTAL 70,594.65 MEAN 193 MAX 2,620 MIN .10 CFSM 1.13 IN 15.35
WAT YR 1967: TOTAL 55,315.73 MEAN 152 MAX 2,790 MIN .10 CFSM .89 IN 12.03

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	2100	11.55	1,440	5-2	1345	14.53	3,130
3-6	2400	9.69	1,200	5-7	1915	12.49	1,630
3-13	0600	9.94	1,230	5-15	1845	9.74	1,210

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 Seltz 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 446.19 ft above mean sea level, datum of 1929. Sept. 19, 1956 to Sept. 28, 1967, graphic water-stage recorder at same site and datum. 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 1,500 cfs).

Average discharge.--19 years (1948-1967), 344 cfs.

Extremes.--Maximum discharge during year, 3,440 cfs May 5; (gage height, 10.36 ft observed at supplementary gage); maximum gage height at base gage, 15.44 ft May 3, 4; minimum discharge; .12 cfs Sept. 20 (gage height, 3.10 ft).
1947-67: Maximum discharge, 14,100 cfs Mar. 11, 1964; maximum gage height at base gage, 21.20 ft Mar. 11, 1964; no flow at times during 1948, 1952-56, 1963-65.
Maximum stage known, 15.9 ft (at former site) in March 1913, from floodmark furnished by local residents (discharge, 16,000 cfs).

Remarks.--Record fair 330 to 1,500 cfs, poor above and below. Low flow slightly regulated by Beaver Creek Reservoir.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.7	3.8	50	170	131	126	269	1,190	45	11	8.7	7.3
2	1.7	1.6	48	132	318	195	216	1,620	44	9.7	6.6	5.8
3	1.4	1.3	38	110	778	214	185	2,050	45	7.5	5.7	4.4
4	5.6	1.0	29	90	804	297	169	3,100	45	6.2	5.1	3.7
5	3.2	1.2	29	75	580	631	161	3,390	42	5.7	4.2	6.0
6	1.4	1.5	57	65	377	1,020	153	3,120	38	5.3	3.6	17
7	5.1	6.7	265	90	260	1,200	140	2,920	33	5.7	7.5	3.4
8	3.0	5.1	484	145	185	1,300	123	2,350	29	5.1	4.0	6.8
9	1.2	13	660	128	142	1,370	109	2,050	25	5.0	3.9	3.8
10	1.2	28	1,160	104	121	1,360	109	1,940	23	5.1	4.6	1.7
11	1.6	78	1,240	87	100	1,290	119	1,860	21	4.6	19	1.2
12	2.4	97	1,340	85	90	1,290	135	1,130	19	3.8	58	1.0
13	6.5	84	1,400	77	81	1,330	129	531	17	3.6	31	.74
14	2.9	67	1,090	67	76	1,370	120	457	15	6.4	16	.52
15	3.9	41	395	63	73	1,410	114	971	13	6.2	11	4.4
16	4.4	26	188	58	70	1,380	107	1,160	12	5.4	8.2	2.6
17	6.4	19	137	49	68	1,240	116	1,260	11	7.5	6.6	.45
18	3.5	16	111	36	66	834	243	1,230	25	6.4	5.6	.21
19	2.8	14	95	31	64	451	387	863	43	7.8	5.4	.18
20	6.3	12	82	30	61	344	294	434	19	7.8	4.8	.15
21	3.5	11	72	30	58	603	199	263	16	6.2	3.9	4.3
22	2.2	10	63	34	55	773	242	186	27	5.7	3.4	2.5
23	2.1	9.8	55	40	51	652	365	141	23	5.0	7.0	.51
24	2.5	9.5	48	45	46	494	395	113	15	4.8	3.9	.20
25	6.0	9.4	41	46	42	375	354	93	13	4.8	6.6	.16
26	3.6	10	33	50	40	308	434	77	11	5.0	286	.16
27	2.0	14	26	97	40	258	723	65	11	5.0	136	3.9
28	5.9	21	79	169	62	274	722	56	11	4.6	46	2.6
29	3.5	34	252	171	------	452	490	49	9.7	4.6	22	.45
30	1.5	42	308	165	------	422	663	45	9.7	3.5	13	.21
31	5.4	------	248	153	------	342	------	46	------	8.4	9.5	------
TOTAL	106.8	691.9	10,123	2,696	4,839	23,645	7,985	34,760	710.4	193.6	756.8	86.34
MEAN	3.45	23.1	327	87.0	173	763	266	1,121	23.7	6.25	24.4	2.88
MAX	6.5	97	1,400	171	804	1,410	723	3,390	45	11	286	17
MIN	1.2	1.0	26	30	40	126	107	45	9.7	3.6	3.4	.15
CFSM	.01	.09	1.27	.34	.67	2.97	1.04	4.36	.09	.02	.09	.01
IN.	.02	.10	1.46	.39	.70	3.42	1.16	5.03	.10	.03	.11	.01

CAL YR 1966: TOTAL 101,590.5 MEAN 278 MAX 3,180 MIN 1.0 CFSM 1.08 IN 14.70
WAT YR 1967: TOTAL 86,554.04 MEAN 237 MAX 3,390 MIN .15 CFSM .92 IN 12.53

3-3762.6 Flat Creek near Otwell, Ind.

Location.--Lat 38°26'12", long 87°07'52", in SE¼ sec. 12, T. 1 S., R. 7 W., on the right bank at the upstream side of bridge on State Road 56, 2.15 miles west of intersection of State Road 56 and State Road 257, 2.5 miles southwest of Otwell, Ind., and 6.2 miles east of junction of State Road 56 and State Road 61.

Drainage area.--21.4 sq mi.

Records available.--October 1964 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 448.00 ft above mean sea level, datum of 1929. Prior to Oct. 11, 1965, graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 943 cfs Apr. 30 (gage height, 11.14 ft); no flow for many days.
1965-67: Maximum discharge, 1,320 cfs Feb. 9 or 10, 1965 (gage height, 11.89 ft, from recorded range in stage); no flow at times each year.
Maximum stage known, 12.58 ft in March 1964.

Remarks.--Record fair except below one cfs, which is poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	.30	.10	.10	8.0	5.8	8.2	4.0	532	5.6	1.5	1.4	.22
2	.40	.10	.10	8.3	154	8.1	3.8	324	4.5	1.2	.69	.16
3	.30	.10	.10	7.3	28	8.3	3.9	30	4.0	.92	.65	.10
4	.10	.10	.10	5.8	12	46	4.2	21	4.4	.76	2.1	.07
5	.10	.10	1.5	5.3	6.2	45	3.9	17	3.4	.69	1.2	.05
6	.10	.20	8.1	5.0	4.0	276	3.5	60	4.1	.65	.69	.03
7	0	.20	104	41	2.6	59	3.0	323	2.7	.71	.42	.03
8	0	.80	24	14	2.1	20	2.6	29	2.4	.95	.33	.02
9	0	1.1	97	6.4	1.8	13	2.6	17	2.8	.75	.46	.02
10	0	7.3	387	4.7	3.2	11	5.0	11	2.0	3.1	.71	.03
11	0	3.4	29	3.5	3.4	10	3.9	9.3	1.6	5.5	.47	.06
12	0	.80	15	3.2	2.6	496	3.0	7.8	1.3	2.5	.30	.07
13	0	.20	11	3.6	2.6	134	3.3	7.6	1.1	1.5	.21	.07
14	0	.10	9.3	4.4	2.8	71	4.1	174	.99	1.0	.14	.05
15	1.3	.10	8.0	4.1	3.0	78	3.9	264	.91	.81	.10	.03
16	2.1	.10	7.4	3.0	3.2	17	2.9	28	.82	.69	.06	.02
17	1.2	.10	6.8	2.1	2.8	12	2.5	23	.83	.58	.05	0
18	.60	.10	6.4	1.6	2.9	9.1	2.1	14	2.6	.58	.04	0
19	.40	0	5.9	1.4	2.9	8.3	1.7	10	6.7	.71	8.8	0
20	.30	0	5.6	1.3	3.4	26	1.6	6.5	1.9	1.1	3.0	0
21	.20	0	5.2	2.0	3.0	78	3.9	5.5	1.7	1.2	.83	.12
22	.20	0	4.8	2.9	2.6	16	9.0	5.0	21	.89	.39	.27
23	.10	0	4.3	3.8	2.5	12	5.1	4.5	4.1	.75	.23	.26
24	.10	0	4.0	3.8	2.1	9.5	4.4	3.9	1.9	.61	.15	.15
25	.10	0	3.6	3.6	2.1	8.2	3.2	3.6	1.5	.50	13	.10
26	.10	0	3.3	11	1.9	7.4	26	3.6	1.2	.28	30	.07
27	.10	.60	3.1	44	2.8	7.0	10	3.6	.85	.47	2.6	.05
28	.10	1.2	61	14	7.7	6.8	6.0	2.7	3.4	.54	1.1	.04
29	.10	.80	24	8.9	------	6.2	5.1	3.4	4.4	.91	.50	.03
30	.10	.30	9.9	8.3	------	5.4	520	3.4	2.0	.98	.33	.02
31	.10	------	7.1	7.1	------	4.6	------	4.4	------	1.6	.27	------
TOTAL	8.50	17.90	856.70	243.4	274.0	1,507.1	658.2	1,951.8	96.70	34.93	71.22	2.14
MEAN	.27	.60	27.6	7.85	9.79	48.6	21.9	63.0	3.22	1.13	2.30	.071
MAX	2.1	7.3	387	44	154	486	520	532	21	5.5	30	.27
MIN	0	0	.10	1.3	1.8	4.6	1.6	2.7	.82	.28	.04	0
CFSM	.01	.03	1.29	.37	.46	2.27	1.03	2.94	.15	.05	.11	.003
IN.	.01	.03	1.49	.42	.48	2.62	1.14	3.39	.17	.06	.12	.004

CAL YR 1966: TOTAL 6,528.70 MEAN 17.9 MAX 762 MIN 0 CFSM .84 IN 11.35
WAT YR 1967: TOTAL 5,722.59 MEAN 15.7 MAX 532 MIN 0 CFSM .73 IN 9.95

Peak discharge (base, 350 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0445	10.28	635	4-30	1300	11.14	943
3-6	0445	9.80	511	5-7	0245	10.32	647
3-12	0915	10.72	772	5-15	0515	9.79	525

3-3763. Patoka River at Winslow, Ind.

Location.--Lat 38°22'48", long 87°13'00", in SW¼ sec. 32, T. 1 S., R. 7 W., on right bank at abandoned bridge abutment, 65 ft upstream from State Road 61 bridge, 100 ft downstream from dam of Winslow Water Company, and 41.3 miles above mouth.

Drainage area.--603 sq mi.

Records available.--October 1963 to September 1967. Discharge measurements and gage readings June 1961 to Sept. 1963, obtained by Indiana Flood Control and Water Resources Commission are available in the district office.

Gage.--Digital water-stage recorder. Datum of gage is 400.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Nov. 21, 1963, wire-weight gage on downstream side of bridge, 65 ft downstream. Nov. 21, 1963 to Dec. 1, 1966, graphic water-stage recorder at present site. All gages at same datum.

Extremes.--Maximum discharge during year, 5,300 cfs May 7 (gage height, 24.90 ft); minimum, 4.4 cfs Oct. 29, 30; minimum gage height, 5.90 ft Oct. 14, 15.
1963-67: Maximum discharge, 15,500 cfs Mar. 13, 1964 (gage height, 28.84 ft); minimum daily, 0.5 cfs Aug. 5, 1964.
Maximum stage known, 28.9 ft in January 1937, from floodmarks, information from Indiana Flood Control and Water Resources Commission.

Remarks.--Record poor. An average of 0.13 cfs is diverted for municipal water supply 100 ft above gage.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	14	5.5	55	405	291	211	560	2,180	124	47	86	43
2	13	5.6	50	349	458	288	469	2,760	138	45	65	26
3	14	6.6	46	291	1,050	330	375	2,870	136	29	35	19
4	13	7.3	48	232	1,140	410	310	3,040	119	18	38	12
5	14	7.7	71	192	1,130	659	274	3,360	99	7.4	46	8.8
6	14	8.3	111	176	1,100	1,230	251	3,710	83	5.2	38	7.5
7	13	9.8	355	201	964	1,520	235	4,890	75	6.5	29	6.5
8	12	14	759	326	663	1,560	217	5,220	82	7.4	20	6.1
9	11	19	936	326	457	1,590	196	5,180	64	6.9	23	5.9
10	10	32	1,660	271	360	1,710	195	4,820	55	43	41	8.5
11	9.0	78	1,660	217	286	1,740	211	4,410	49	200	167	8.5
12	8.8	162	1,640	174	239	2,310	226	3,920	42	167	133	6.5
13	9.3	141	1,640	180	204	2,560	220	3,550	34	135	59	6.8
14	8.0	112	1,650	174	190	2,520	226	3,370	28	81	30	7.0
15	13	100	1,660	160	168	2,590	219	3,270	23	38	50	6.8
16	18	85	1,660	125	155	2,640	197	3,110	20	21	50	6.5
17	34	70	1,630	105	143	2,650	184	2,920	15	15	34	6.3
18	48	51	1,460	92	138	2,580	179	2,680	17	11	21	6.3
19	45	35	1,090	80	132	2,460	154	2,450	39	12	30	7.0
20	28	25	660	74	130	2,350	110	2,220	152	75	22	6.5
21	18	20	389	70	122	2,270	107	2,060	158	27	20	7.0
22	14	16	261	70	118	2,120	231	1,900	126	107	24	7.0
23	11	15	173	71	112	1,940	291	1,710	102	103	17	6.5
24	10	13	127	90	103	1,760	317	1,420	124	44	9.8	6.8
25	8.5	13	103	96	98	1,620	359	1,010	84	23	38	8.0
26	6.8	14	88	109	95	1,410	564	593	55	24	197	8.0
27	5.3	20	78	245	95	1,110	738	367	32	29	534	7.0
28	4.8	38	162	482	110	814	756	270	21	51	558	6.8
29	4.4	63	507	422	------	634	764	207	22	93	366	7.8
30	4.4	66	552	359	------	633	1,340	151	46	96	182	6.8
31	5.0	------	458	320	------	627	------	129	------	119	84	------
TOTAL	441.3	1,252.8	21,743	6,484	10,251	48,846	10,475	79,747	2,164	1,690.4	3,046.8	283.2
MEAN	14.2	41.8	701	209	366	1,576	349	2,572	72.1	54.5	98.3	9.44
MAX	48	162	1,660	482	1,140	2,650	1,340	5,220	158	200	558	43
MIN	4.4	5.5	46	70	95	211	107	129	15	6.5	9.8	5.9
CFSM	.02	.07	1.16	.35	.61	2.61	.58	4.27	.12	.09	.16	.02
IN.	.03	.08	1.34	.40	.63	3.01	.65	4.92	.13	.10	.19	.02

CAL YR 1966: TOTAL 211,053.3 MEAN 578 MAX 3,800 MIN 4.4 CFSM .96 IN 13.02
WAT YR 1967: TOTAL 186,424.5 MEAN 511 MAX 5,220 MIN 4.4 CFSM .85 IN 11.50

3-3763.5 South Fork Patoka River near Spurgeon, Ind.

Location.--Lat 38°17'50", long 87°15'39", on line between secs. 35 and 36, T. 2 S., R. 8 W., on the right bank at the downstream side of bridge on State Road 61, 0.5 mile north of Enos Corner, and 3.1 miles north of Spurgeon.

Drainage area.--43.0 sq mi.

Records available.--October 1964 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 420.88 ft above mean sea level, datum of 1929. Prior to Oct. 11, 1965, graphic water-stage recorder at same site and datum.

Extremes.--Maximum discharge during year, 1,200 cfs May 1 (gage height, 11.42 ft); minimum, 2.6 cfs Sept. 26 (gage height, 1.23 ft).
1965-67: Maximum discharge, 1,320 cfs Feb. 10, 1965 (gage height, 12.32 ft); minimum, 1.8 cfs Aug. 25, 1965; minimum gage height, 1.21 ft Aug. 25, 1965, Sept. 8, 1966.
Maximum stage known, 13.09 ft March 1964, from floodmark.

Remarks.--Record fair except for the winter period, which is poor. Some slight regulation by coal-washing operation and strip mining above gage.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	8.3	8.0	8.3	18	22	50	17	489	24	12	24	5.4
2	5.5	6.9	9.0	16	197	33	17	382	23	11	18	5.4
3	5.8	9.9	10	14	89	28	21	123	21	10	28	5.8
4	5.8	8.3	8.3	12	55	26	18	83	21	9.7	25	6.6
5	5.3	9.4	34	12	43	42	17	64	19	10	15	5.8
6	4.8	8.0	46	16	33	231	15	155	18	12	14	4.4
7	4.8	9.0	148	52	30	124	14	333	17	13	13	4.7
8	4.5	8.0	52	22	27	83	13	120	21	11	13	5.1
9	5.5	7.2	207	19	24	140	13	72	18	11	46	7.0
10	8.3	48	254	19	21	117	37	57	13	257	17	6.2
11	5.3	15	70	20	19	72	22	50	13	72	13	5.1
12	5.0	11	41	16	17	446	18	45	12	34	12	4.7
13	4.8	9.4	32	12	17	142	21	44	11	24	12	5.4
14	5.3	8.7	26	11	17	88	23	193	11	19	10	4.4
15	40	8.3	21	11	17	75	18	252	11	18	9.2	4.7
16	9.9	8.0	20	12	15	52	15	98	12	16	8.2	5.4
17	8.3	7.6	18	14	17	46	26	78	13	14	8.7	6.6
18	8.3	7.6	18	15	16	36	15	55	17	14	8.2	5.8
19	8.3	7.6	17	15	14	34	13	46	13	27	12	5.4
20	6.9	7.2	16	16	16	60	12	43	12	21	10	4.4
21	5.8	7.6	14	17	14	75	24	35	24	84	9.7	16
22	5.8	6.9	14	17	13	48	30	31	28	67	7.4	5.1
23	6.2	6.9	12	15	20	41	21	28	14	35	7.4	4.1
24	6.5	6.5	13	14	25	35	27	26	12	23	7.0	4.1
25	5.8	9.4	15	12	17	34	19	25	12	36	12	4.1
26	5.5	9.9	17	34	18	33	93	25	10	33	10	3.2
27	5.3	30	21	101	23	33	45	24	11	20	8.7	3.5
28	5.5	19	104	40	89	30	29	24	16	76	7.0	4.1
29	6.5	11	40	32	------	25	25	28	23	38	6.2	3.5
30	6.5	8.7	26	27	------	21	346	25	14	26	6.6	3.2
31	6.9	------	21	23	------	18	------	24	------	26	5.8	------
TOTAL	227.0	329.0	1,352.6	674	925	2,318	1,024	3,077	484	1,079.7	404.1	159.2
MEAN	7.32	11.0	43.6	21.7	33.0	74.8	34.1	99.3	16.1	34.8	13.0	5.31
MAX	40	48	254	101	197	446	346	489	28	257	46	16
MIN	4.5	6.5	8.3	11	13	18	12	24	10	9.7	5.8	3.2
CFSM	.17	.26	1.01	.51	.77	1.74	.79	2.31	.38	.81	.30	.12
IN.	.20	.28	1.17	.58	.80	2.00	.89	2.66	.42	.93	.35	.14

CAL YR 1966: TOTAL 12,705.6 MEAN 34.8 MAX 738 MIN 3.8 CFSM .81 IN 10.99
WAT YR 1967: TOTAL 12,053.6 MEAN 33.0 MAX 489 MIN 3.2 CFSM .77 IN 10.42

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0100	6.16	551	5-6	2330	9.43	946
4-30	1230	9.43	946	7-10	1745	6.24	561
5-1	1830	11.42	1,200				

3-3765. Patoka River near Princeton, Ind.

Location.--Lat 38°23'30", long 87°32'55", in NE¼NW¼ 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 1967. 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.--Digital water-stage recorder and concrete control. Datum of gage is 394.14 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, Jan. 22, 1941 to Aug. 17, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--33 years, 963 cfs.

Extremes.--Maximum discharge during year, 5,150 cfs May 11 (gage height, 16.27 ft); minimum, 6.7 cfs Oct. 29 (gage height, 0.87 ft). 1934-67: 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.--Record fair except for the winter period, which is poor. Record of suspended sediment loads for water year 1967 is published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	26	11	90	719	466	257	1,370	1,600	286	80	165	97
2	33	14	83	633	759	346	1,110	2,000	262	75	124	65
3	24	14	70	526	1,080	417	902	2,190	242	67	109	52
4	20	11	65	403	1,140	629	693	2,410	218	55	151	44
5	19	20	126	339	1,200	910	480	2,600	186	43	102	37
6	17	20	238	290	1,240	1,360	374	2,890	147	38	84	31
7	16	24	884	394	1,270	1,400	335	3,700	129	38	74	25
8	15	48	1,130	500	1,260	1,520	302	4,130	126	40	63	23
9	15	50	1,320	504	1,180	1,650	275	4,570	123	36	169	29
10	15	132	1,850	440	974	1,770	272	4,950	115	537	133	29
11	16	154	1,670	355	669	1,850	290	5,120	98	778	100	33
12	16	138	1,720	276	429	2,460	282	5,060	80	359	162	33
13	13	178	1,790	274	339	2,670	286	4,940	65	237	123	29
14	11	144	1,840	265	296	2,800	286	5,040	53	157	80	28
15	93	120	1,880	246	271	3,030	291	5,060	146	102	61	27
16	83	104	1,920	221	251	3,080	269	4,890	110	73	70	26
17	39	93	1,960	198	228	3,110	247	4,640	80	56	70	27
18	39	77	1,990	124	215	3,100	240	4,340	350	74	59	32
19	53	60	2,000	137	205	3,070	211	4,050	215	216	291	33
20	50	43	1,960	128	200	3,080	162	3,770	102	653	132	32
21	35	33	1,830	121	198	3,120	146	3,520	190	258	68	34
22	20	26	1,530	126	188	3,100	217	3,300	246	366	55	47
23	16	20	1,010	133	179	3,060	324	3,090	178	383	51	36
24	14	19	532	138	138	2,990	360	2,910	141	188	43	22
25	14	17	318	143	135	2,890	386	2,720	138	116	130	24
26	11	19	218	186	132	2,770	688	2,530	106	119	699	27
27	8.7	57	178	406	132	2,630	896	2,260	80	101	429	28
28	7.7	90	550	569	190	2,490	952	1,900	65	269	603	27
29	6.7	90	802	637	------	2,300	979	1,350	83	482	577	26
30	8.7	96	815	625	------	2,040	1,390	741	75	211	334	23
31	11	------	794	547	------	1,730	------	374	------	174	171	------
TOTAL	765.8	1,922	33,163	10,603	14,964	67,629	15,015	102,645	4,435	6,381	5,482	1,026
MEAN	24.7	64.1	1,070	342	534	2,182	501	3,311	148	206	177	34.2
MAX	93	178	2,000	719	1,270	3,120	1,390	5,120	350	778	699	97
MIN	6.7	11	65	121	132	257	146	374	53	36	43	22
CFSM	.03	.08	1.31	.42	.66	2.68	.61	4.06	.18	.25	.22	.04
IN.	.03	.09	1.51	.48	.68	3.09	.69	4.68	.20	.29	.25	.05

CAL YR 1966: TOTAL 267,627.6 MEAN 733 MAX 3,400 MIN 6.7 CFSM .90 IN 12.21
WAT YR 1967: TOTAL 264,030.8 MEAN 723 MAX 5,120 MIN 6.7 CFSM .89 IN 12.05

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 and at mile 94.5.

Drainage area.--28,600 sq mi, approximately.

Records available.--January 1900 to September 1913 (gage heights only), October 1927 to September 1967. 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.--Digital water-stage recorder. Datum of gage is 371.46 ft above mean sea level, datum of 1929. Prior to Dec. 21, 1928, staff gage; Dec. 21, 1928 to Sept. 30, 1933 and Oct. 1, 1949 to Aug. 31, 1965, graphic water-stage recorder at same site and datum. Oct. 1, 1933 to Feb. 8, 1935, chain gage, and Feb. 9, 1935 to Sept. 30, 1949, graphic water-stage recorder at New York Central Railroad bridge 3.0 miles downstream at datum 0.17 ft higher.

Average discharge.--40 years, 25,960 cfs.

Extremes.--Maximum discharge during year, 133,000 cfs Dec. 18 (gage height, 25.50 ft); minimum, 2,880 Nov. 5 (gage height 0.25 ft).
1927-67: 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.
1874-78, 1884-67: **Maximum discharge, 428,000 cfs (from rating curve extended above 310,000 cfs) Mar. 30, 1913, (gage height, 31.0 ft, present site and datum).**

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	4,000	3,130	26,100	33,400	43,000	14,800	57,300	38,700	25,500	9,430	7,150	4,650
2	3,830	3,080	25,300	31,600	44,200	15,700	57,700	41,300	27,700	9,290	6,700	4,410
3	3,800	3,130	23,500	29,900	48,400	17,300	57,500	43,900	28,900	9,040	6,470	4,170
4	3,670	3,060	22,200	28,000	52,500	17,800	56,300	45,000	26,800	8,690	6,700	4,110
5	3,500	3,020	20,900	25,600	55,600	18,600	53,600	44,800	23,500	8,490	6,890	4,050
6	3,400	3,040	19,900	23,600	58,100	23,300	50,500	43,000	21,400	8,360	7,740	3,860
7	3,330	3,150	24,600	22,500	59,900	36,300	47,300	44,900	19,700	8,190	7,740	3,750
8	3,230	3,210	35,600	23,200	61,500	45,400	44,400	51,900	18,400	7,930	6,860	3,750
9	3,210	3,310	47,600	23,000	60,800	49,800	42,800	59,800	17,900	7,710	6,370	3,750
10	3,190	3,750	59,400	21,900	55,500	50,800	42,900	64,600	19,000	8,450	5,980	3,690
11	3,130	4,620	67,400	20,900	45,800	50,700	43,400	67,500	22,300	9,150	5,690	3,640
12	3,100	7,350	76,000	20,000	37,000	52,700	42,700	69,800	24,200	8,690	5,590	3,690
13	3,100	8,450	86,000	19,400	31,700	55,500	41,500	72,400	22,300	7,970	5,460	3,910
14	3,040	10,100	96,000	18,600	28,800	57,300	38,200	76,700	20,000	7,250	5,110	4,200
15	3,400	12,300	108,000	17,600	26,800	58,600	35,900	81,100	19,200	6,930	4,780	4,200
16	3,860	13,100	122,000	16,900	24,400	60,500	34,000	83,000	17,600	6,600	4,590	4,170
17	3,720	12,100	130,000	16,000	23,000	61,300	35,000	85,300	16,100	6,310	4,470	4,200
18	3,750	10,700	133,000	15,000	23,800	60,300	38,700	83,600	15,000	6,280	4,410	4,410
19	3,560	9,460	131,000	14,000	27,400	57,900	41,400	83,300	14,200	6,240	5,270	4,470
20	3,480	8,490	126,000	12,700	30,400	55,400	42,100	80,600	12,800	7,150	7,710	4,380
21	3,530	7,770	115,000	11,700	31,600	57,100	40,300	72,800	12,600	7,480	6,470	4,590
22	3,530	7,190	95,000	11,400	30,700	61,800	38,000	64,000	13,800	7,510	5,430	4,530
23	3,400	6,800	74,700	11,500	27,800	65,200	38,400	56,900	14,300	7,090	4,980	4,350
24	3,310	6,470	62,000	11,900	24,800	67,200	40,200	49,400	14,000	6,540	4,780	4,260
25	3,310	6,180	55,600	12,700	22,400	68,000	41,400	42,100	13,000	6,800	4,750	4,230
26	3,270	5,950	51,300	13,200	19,800	68,900	41,900	36,100	11,700	6,990	5,200	4,140
27	3,210	6,570	47,800	14,400	17,400	69,800	42,400	31,800	11,100	6,990	5,630	4,000
28	3,190	10,700	44,400	22,700	15,200	67,800	41,200	28,800	10,500	7,640	5,170	3,890
29	3,130	19,400	42,100	31,500	------	63,100	39,100	27,100	10,100	7,640	5,240	3,890
30	3,130	24,800	39,400	37,500	------	59,100	37,500	25,600	9,780	7,280	5,070	3,890
31	3,130	------	35,400	41,000	------	57,200	------	25,200	------	7,540	4,680	------
TOTAL	105,440	230,380	2,043.2M	653,300	1,028.3M	1,565.2M	1,303.6M	1,721.0M	533,380	237,650	179,080	123,230
MEAN	3,401	7,679	65,910	21,070	36,730	50,490	43,450	55,520	17,780	7,666	5,777	4,108
MAX	4,000	24,800	133,000	41,000	61,500	69,800	57,700	85,300	28,900	9,430	7,740	4,650
MIN	3,040	3,020	19,900	11,400	15,200	14,800	34,000	25,200	9,780	6,240	4,410	3,640
CFSM	.12	.27	2.30	.74	1.28	1.77	1.52	1.94	.62	.27	.20	.14
IN.	.14	.30	2.66	.85	1.34	2.04	1.70	2.24	.69	.31	.23	.16

CAL YR 1966: TOTAL 6,736,450 MEAN 18,460 MAX 133,000 MIN 3,020 CFSM .65 IN 8.76
WAT YR 1967: TOTAL 9,723,760 MEAN 26,640 MAX 133,000 MIN 3,020 CFSM .93 IN 12.64

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 0.2 mile upstream from Southern Railway bridge.

Drainage area.--228 sq mi.

Records available.--October 1940 to September 1967.

Gage.--Digital water-stage recorder and concrete dam. Datum of gage is 374.92 ft above mean sea level, datum of 1929. Prior to Apr. 22, 1965, graphic water-stage recorder at same site and datum. Auxiliary wire-weight gage near mouth on Wabash River at Grayville read twice daily.

Average discharge.--27 years, 210 cfs.

Extremes.--Maximum discharge during year, 1,770 cfs May 17 (gage height, 14.19 ft); no flow Sept. 14-17.
1940-67: Maximum discharge, 7,500 cfs May 9, 1961 (gage height, 24.04 ft); no flow at times in most years.

Remarks.--Records good except those for winter periods, which are poor. Albion municipal water plant diverts about 0.1 cfs at gage; diversion not included in record.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.4	.80	17	51	36	16.	40	659	56	3.6	1.5	.80
2	6.9	.80	8.5	35	332	18	34	777	62	3.5	1.0	.80
3	6.2	.60	5.1	30	594	21	31	714	51	3.4	1.1	.70
4	5.7	.50	3.5	25	591	114	30	482	32	2.6	17.0	.55
5	6.6	.50	4.7	20	402	277	31	209	20	2.4	32	.38
6	7.4	.40	35	21	148	789	30	159	14	2.4	22	.30
7	7.9	.40	380	200	60	785	28	1,230	11	2.4	16	.24
8	8.0	.40	607	321	35	806	29	1,080	9.4	6.3	15	.20
9	7.3	.40	770	160	31	707	32	859	8.6	25	4.3	.20
10	5.8	1.5	1,050	70	25	489	31	505	9.3	269	1.5	.20
11	5.6	.80	1,020	36	20	288	59	203	11	318	.76	.13
12	5.7	.50	938	27	20	787	72	101	70	244	.52	.10
13	5.4	.40	781	21	20	1,070	41	63	60	40	.39	0.02
14	4.6	.30	387	17	21	1,120	32	749	30	23	.30	0
15	4.7	.30	66	13	21	1,110	30	1,450	18	11	.30	0
16	5.3	.30	52	10	19	849	30	1,710	10	6.8	.28	0
17	6.2	.30	29	8.0	17	514	28	1,730	7.3	4.6	.30	0
18	6.5	.30	27	7.0	16	260	143	1,510	6.1	3.5	.31	.42
19	5.5	.30	16	6.0	16	90	132	1,190	5.3	2.7	110	176
20	4.4	.30	8.0	6.0	15	263	46	803	4.8	2.3	221	120
21	3.4	.30	38	6.5	13	656	32	350	5.1	2.2	68	34
22	2.7	.30	42	8.3	11	758	29	74	36	2.2	23	69
23	2.2	.20	27	10	9.0	814	57	32	28	1.9	10	33
24	2.1	.20	9.5	12	7.0	685	49	25	27	1.7	5.6	14
25	1.9	.30	7.2	13	6.0	379	51	20	25	1.7	4.1	5.4
26	1.8	.40	6.3	17	5.0	148	184	18	13	1.5	2.9	2.6
27	1.6	2.9	5.5	76	5.0	73	353	20	7.5	1.5	2.0	1.6
28	1.4	41	126	195	7.0	64	318	18	5.5	1.7	1.3	1.1
29	1.2	42	318	143		59	146	80	4.5	5.1	1.0	.77
30	1.1	33	276	61	- - - - -	56	476	83	4.2	5.1	.80	.49
31	.90	- - - - -	115	43	- - - - -	51	- - - - -	31	- - - - -	2.3	.80	- - - - -
Total	139.40	130.70	7,175.3	1,668.8	2,502.0	14,116	2,624	16,934	651.6	1,003.4	565.06	463.00
Mean	4.50	4.36	231	53.8	89.4	455	87.5	546	21.7	32.4	18.2	15.4
Max	8.0	42	1,050	321	594	1,120	476	1,730	70	318	221	176
Min	.90	.20	3.5	6.0	5.0	16	28	18	4.2	1.5	.28	0
Cfsm	.02	.02	1.02	.24	.39	2.00	.38	2.40	.10	.14	.08	.07
In.	.02	.02	1.17	.27	.41	2.30	.43	2.76	.11	.16	.09	.08

Cal yr 1966: Total 39,851.90 Mean 109 Max 1,720 Min 0 Cfsm .48 In. 6.50
Wtr yr 1967: Total 47,973.26 Mean 131 Max 1,730 Min 0 Cfsm .58 In. 7.83

3-3785.50 Big Creek near Wadesville, Ind.

Location.--Lat 38°04'58", long 87°46'10", in SW¼ sec. 16, T. 5 S., R. 12 W., on left bank at downstream side of bridge on U.S. Highway 460 (S.R. 66), 0.6 mile northwest of Blairsville, and 1.6 miles southeast of Wadesville.

Drainage area.--104 sq mi.

Records available.--July 1965 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 370.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 3,690 cfs July 11 (gage height, 18.13 ft); no flow many days.
1965-67: Maximum discharge, that of July 11, 1967; no flow at times each year.

Remarks.--Record poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	.30	0	.90	15	12	15	19	823	6.9	3.8	5.9	.22
2	.25	0	.40	14	220	32	16	867	6.2	3.1	4.3	.20
3	.10	0	.20	13	194	32	16	173	5.6	1.8	21	.22
4	.10	0	.20	11	71	25	15	91	5.3	1.2	17	.24
5	0	0	13	9.0	50	25	13	59	4.6	1.1	3.5	.20
6	0	.10	53	7.1	26	316	13	78	4.0	1.7	2.1	.15
7	0	.10	333	42	19	194	11	475	3.5	1.4	1.6	.16
8	0	.10	76	31	16	185	8.8	117	3.1	1.1	409	.17
9	0	.10	121	20	14	166	9.4	56	4.9	6.8	73	.24
10	0	26	730	15	12	273	41	36	5.1	2,590	1.2	.20
11	0	22	86	11	11	106	19	33	4.1	3,330	.50	.15
12	0	3.5	34	9.0	10	1,010	11	21	2.9	595	.45	.14
13	0	1.5	22	8.1	10	600	12	19	2.2	88	.45	.17
14	0	.70	16	6.0	9.5	220	13	424	1.8	33	.37	.12
15	42	.40	12	4.0	9.0	140	13	400	39	20	.34	.13
16	18	.30	10	3.2	8.6	100	9.8	169	13	16	.30	.12
17	3.3	.20	8.0	2.8	9.2	70	11	98	3.1	12	.32	.16
18	1.4	.20	7.0	2.4	7.8	50	8.1	64	297	10	.30	.15
19	.60	.20	5.6	2.8	7.2	30	6.0	43	157	8.1	.45	.12
20	.30	.30	5.0	2.3	6.7	45	5.0	27	18	9.6	.36	.14
21	.20	.20	4.0	4.4	6.0	70	9.3	21	127	24	.36	.50
22	.20	.10	3.4	5.4	5.6	90	11	19	230	67	.28	.16
23	.10	.10	2.8	5.5	5.0	60	7.8	15	34	23	.27	.13
24	.10	.10	2.4	5.0	4.7	45	8.6	13	17	5.7	.26	.12
25	.10	.10	2.0	4.3	4.6	32	7.2	11	12	4.1	.45	.13
26	0	.10	1.7	17	4.6	21	250	9.2	7.6	3.4	.35	.10
27	0	11	1.4	73	5.0	25	49	7.7	5.6	2.7	.30	.11
28	0	8.1	216	28	9.0	30	21	6.7	4.6	50	.26	.13
29	0	2.6	82	16	------	35	16	6.8	13	9.0	.23	.11
30	0	1.7	29	10	------	28	227	6.3	5.8	6.0	.25	.10
31	0	------	17	14	------	23	------	6.5	------	5.6	.22	------
TOTAL	67.00	79.80	1,892.00	419.2	766.5	4,093	886.9	4,195.2	1,045.9	6,936.2	545.57	4.98
MEAN	2.16	2.66	61.0	13.5	27.4	132	29.6	135	34.9	224	17.6	.17
MAX	42	26	730	73	220	1,010	259	867	297	3,330	409	.50
MIN	0	0	.20	2.8	4.6	15	5.9	6.3	1.8	1.1	.22	.10
CFSM	.02	.03	.59	.13	.26	1.27	.28	1.30	.34	2.15	.17	.002
IN.	.02	.03	.68	.15	.27	1.46	.32	1.50	.37	2.48	.20	.002

CAL YR 1966: TOTAL 20,704.00 MEAN 56.7 MAX 2,230 MIN 0 CFSM .55 IN 7.40
WAT YR 1967: TOTAL 20,932.25 MEAN 57.3 MAX 3,330 MIN 0 CFSM .55 IN 7.49

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	0615	13.63	1,300	6-18	2130	14.48	1,640
3-12	Unknown	17.70	3,390	7-11	0800	18.13	3,690
5-1	2045	16.08	2,420	8-8	1800	14.89	1,820
5-7	0315	12.72	1,020				

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 7.8 miles downstream from Skillet Fork.

Drainage area.--3,111 sq mi.

Records available.--October 1908 to December 1912 (gage heights only), October 1939 to September 1967.

Gage.--Digital 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 ft higher. Oct. 1 to Nov. 9, 1939, wire-weight gage at present site and datum. Nov. 10, 1939, to May 3, 1965, graphic water-stage recorder at present site and datum. Since Nov. 14, 1939, auxiliary water-stage recorder 3.1 miles upstream.

Average discharge.--28 years, 2,377 cfs.

Extremes.--Maximum discharge during year, 8,970 cfs May 19; maximum gage height, 23.55 ft Mar. 16; minimum discharge, 14 cfs Nov. 7.
1939-67: Maximum discharge, 46,900 cfs May 12, 1961; maximum gage height, 36.70 ft May 13, 1961; no flow Sept. 16-17, 1952, result of temporary dam upstream; minimum unregulated discharge, 0.6 cfs Sept. 9, 1953, July 31, 1954.

Remarks.--Records good except those for winter periods, which are poor. There was no diversion through McHenry Slough during the year.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	112	22	1,300	952	2,330	440	4,920	5,210	287	235	1,290	54
2	82	21	1,600	866	2,650	445	4,500	5,680	261	200	1,440	42
3	77	19	1,550	744	4,250	429	3,580	5,380	262	157	1,110	39
4	125	16	1,160	597	5,050	448	2,040	4,390	444	137	607	42
5	141	16	736	478	5,220	833	1,000	3,480	964	130	311	42
6	110	15	468	390	4,850	2,990	797	2,100	1,260	122	326	36
7	81	14	1,000	505	4,160	5,340	757	4,430	1,120	111	355	31
8	62	16	2,600	1,200	3,770	5,280	747	5,830	762	102	476	34
9	51	19	4,190	1,500	3,680	5,640	703	5,940	477	92	1,520	422
10	52	51	5,840	1,300	3,710	6,500	610	5,610	334	201	1,390	443
11	45	32	5,690	916	3,730	5,880	517	4,950	269	1,470	908	271
12	39	22	6,980	703	3,480	6,480	494	4,310	268	2,520	584	141
13	35	19	7,040	664	2,510	7,420	684	3,660	1,030	3,210	325	104
14	30	173	6,570	557	1,410	7,970	688	4,040	1,550	3,470	263	78
15	36	873	5,840	441	853	8,380	602	5,020	2,410	2,460	247	62
16	32	841	5,430	350	600	8,530	1,080	7,630	2,680	1,430	232	47
17	23	552	5,340	283	490	8,000	1,600	8,380	2,820	854	190	46
18	23	326	5,390	201	426	7,170	1,610	8,810	2,600	476	154	64
19	21	212	5,470	150	387	6,480	1,250	8,840	1,840	283	206	66
20	17	151	5,480	150	369	6,060	1,020	8,230	992	200	613	849
21	15	111	5,240	150	340	6,410	931	7,230	882	168	747	1,760
22	15	84	4,680	160	314	6,650	858	5,360	730	362	674	1,780
23	17	69	3,520	170	288	6,290	705	5,760	620	683	674	1,410
24	17	59	2,140	180	243	5,890	718	5,350	627	728	702	1,040
25	17	52	1,040	186	180	5,470	1,310	4,840	604	624	536	665
26	18	46	635	199	170	5,160	1,990	3,960	454	364	364	407
27	17	73	495	300	170	4,950	2,360	2,540	336	256	291	295
28	17	224	737	1,140	200	4,850	2,330	1,090	336	240	226	218
29	19	480	1,350	1,840		4,990	1,980	609	294	369	198	175
30	18	769	1,280	2,220	- - - - -	5,060	2,800	343	259	567	125	139
31	20	- - - - -	1,060	2,340	- - - - -	5,110	- - - - -	318	- - - - -	533	76	- - - - -
Total	1,384	5,377	102,851	21,832	55,830	163,545	45,181	151,320	27,772	22,754	17,160	10,802
Mean	44.6	179	3,318	704	1,994	5,276	1,506	4,881	926	734	554	360
Max	141	873	7,040	2,340	5,220	8,530	4,920	8,840	2,820	3,470	1,520	1,780
Min	15	14	468	150	170	429	494	318	259	92	76	31
Cfsm	.01	.06	1.07	.23	.64	1.70	.48	1.57	.30	.24	.18	.12
In.	.02	.06	1.23	.26	.67	1.96	.54	1.81	.33	.27	.21	.13

Cal yr 1966 : Total 524,462.0 Mean 1,437 Max 10,400 Min 5.0 Cfsm .46 In. 6.27
Wtr yr 1967 : Total 625,808 Mean 1,715 Max 8,840 Min 14 Cfsm .55 In. 7.48

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 1967.

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.--25 years, 55.9 cfs.

Extremes.--Maximum discharge during year, about 950 cfs Apr. 2; maximum gage height 3.96 ft Apr. 2; minimum, 2.0 cfs Oct. 9; minimum gage height, 0.48 ft July 22, Aug. 31, Sept. 3, 4.
1942-67: Maximum discharge, 2,670 cfs Apr. 28, 1958; maximum gage height, 7.83 ft Oct. 11, 1954; minimum discharge, 0.8 cfs Sept. 5, 6, 1964; minimum gage height, 0.44 ft Sept. 5, 6, 1964, July 12, 1965.

Remarks.--Record good. 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.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.8	5.2	20	12	14	29	497	412	10	14	4.2	4.2
2	3.5	9.4	14	14	15	33	900	206	9.6	18	4.8	4.2
3	3.0	10	11	14	16	56	600	114	9.6	15	4.8	4.2
4	4.0	7.9	11	14	17	140	350	84	8.7	10	4.8	3.6
5	3.5	7.2	26	12	17	134	200	68	8.7	8.7	4.8	4.2
6	3.0	5.8	51	14	17	93	165	66	12	8.7	4.2	4.2
7	3.0	5.8	371	22	17	70	106	60	15	7.8	4.2	4.2
8	3.5	58	700	18	17	56	81	52	21	7.8	5.5	4.2
9	3.5	131	600	16	17	76	72	48	16	10	7.0	4.2
10	7.9	56	350	14	17	342	74	43	16	18	4.8	4.2
11	5.8	27	185	12	18	640	58	114	14	10	4.2	4.2
12	4.6	16	111	12	19	535	50	114	21	9.6	4.2	4.8
13	29	13	77	12	21	360	64	70	35	7.0	4.2	4.2
14	8.6	11	58	12	28	308	100	52	272	7.8	4.2	4.8
15	32	10	48	12	80	210	88	44	130	6.2	4.2	4.8
16	5.8	9.4	44	9.6	165	131	187	38	60	5.5	4.2	5.5
17	5.8	10	42	5.6	192	125	465	33	48	5.5	4.2	6.2
18	5.2	9.4	37	5.4	165	88	225	30	48	5.5	17	6.2
19	5.2	8.6	36	5.4	137	77	114	28	30	5.5	12	7.0
20	5.2	8.6	34	5.5	110	200	81	24	22	4.8	7.8	8.7
21	4.0	9.4	32	6.2	80	605	206	22	64	4.2	5.5	29
22	4.6	9.4	29	8.7	65	605	570	21	168	3.6	4.8	8.7
23	4.6	9.4	24	18	52	412	342	19	88	7.0	4.8	5.5
24	4.6	11	22	25	45	255	192	19	58	6.2	4.8	4.8
25	4.6	12	18	32	38	216	131	18	37	6.2	4.2	4.8
26	3.0	13	15	22	35	155	100	17	29	7.8	8.7	12
27	2.5	71	12	7.8	32	134	86	16	22	6.2	5.5	44
28	3.5	82	12	7.8	31	106	66	16	32	5.5	4.2	23
29	4.6	43	12	8.7		84	241	16	21	4.8	4.2	16
30	4.6	26	12	10	- - - - -	68	570	14	17	4.2	4.8	7.8
31	4.6	- - - - -	12	12	- - - - -	64	- - - - -	12	- - - - -	4.2	3.6	- - - - -
Total	193.1	705.5	3,026	399.7	1,477	6,407	6,981	1,890	1,342.6	245.3	170.4	253.4
Mean	6.23	23.5	97.6	12.9	52.8	207	233	61.0	44.8	7.91	5.50	8.45
Max	32	131	700	32	192	640	900	412	272	18	17	44
Min	2.5	5.2	11	5.4	14	29	50	12	8.7	3.6	3.6	3.6
Cfsm	0.090	0.340	1.41	0.186	0.763	2.99	3.37	0.882	0.647	0.114	0.079	0.122
In.	0.10	0.38	1.63	0.21	0.79	3.45	3.76	1.02	0.72	0.13	0.09	0.14

Cal yr 1966 : Total 22,616.2 Mean 62.0 Max 1,100 Min 2.5 Cfsm 0.896 In. 12.17
Wtr yr 1967 : Total 23,091.0 Mean 63.3 Max 900 Min 2.5 Cfsm 0.915 In. 12.42

Peak discharge (base, 800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
4-2	Unknown	3.96	about 950				

Note.--Stage-discharge relation affected by backwater Dec. 8-10, Apr. 2-5.

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 1967.

Gage.--Water-stage recorder. Datum of gage is 580.72 ft above mean sea level, datum of 1929.

Average discharge.--9 years, 60.2 cfs.

Extremes.--Maximum discharge, 660 cfs April 2 (gage height, 11.15 ft); minimum, 0.4 cfs Aug. 31 (gage height, 2.72 ft as the result of unusual regulation).
1958-67: Maximum discharge, 1,510 cfs Apr. 28, 1959 (gage height, 13.67 ft); minimum, 0.4 cfs Aug. 31, 1967 (gage height, 2.72 ft as the result of unusual regulation).

Remarks.--Record good.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.7	7.0	33	18	19	39	358	400	15	17	5.1	5.6
2	3.6	12	29	17	21	50	622	300	15	20	5.3	5.3
3	3.8	13	24	20	22	78	586	190	14	20	6.0	5.3
4	4.0	10	23	20	23	134	460	134	14	15	6.2	4.9
5	4.0	9.0	50	18	25	151	340	104	14	12	5.1	5.3
6	3.8	7.5	48	18	24	111	280	98	17	11	4.9	5.6
7	3.6	7.5	252	33	23	86	200	80	19	9.8	5.1	6.2
8	4.0	48	559	22	23	70	142	70	26	10	6.0	6.0
9	4.0	220	559	24	23	75	118	60	17	16	8.8	5.6
10	8.8	134	430	17	24	230	104	58	17	26	6.2	5.3
11	9.6	52	310	17	25	430	86	151	20	15	5.6	5.6
12	7.3	35	210	15	27	420	75	142	41	12	4.9	6.2
13	46	26	142	16	30	360	92	92	37	9.0	4.7	5.6
14	16	22	111	16	54	320	118	68	178	8.6	4.9	5.6
15	48	20	86	16	114	270	111	58	163	7.6	5.6	5.8
16	11	19	75	10	220	190	126	50	75	6.9	5.6	6.4
17	7.4	18	68	8.3	240	160	350	43	55	6.7	5.1	7.3
18	6.7	16	62	8.0	220	118	270	39	52	7.4	38	8.2
19	6.9	14	55	8.0	180	98	160	35	35	7.4	38	9.5
20	8.6	13	52	8.2	140	190	104	29	26	7.2	14	13
21	6.9	13	46	8.8	120	440	165	26	102	5.3	8.8	45
22	6.0	12	43	14	95	460	440	24	180	5.1	6.5	15
23	5.8	12	39	19	79	400	390	22	117	15	8.3	8.0
24	5.6	14	35	27	66	340	290	22	75	11	6.2	6.6
25	5.6	22	31	35	56	290	210	20	52	9.8	6.7	6.4
26	4.7	18	24	35	50	230	151	18	35	12	16	18
27	3.3	89	22	11	45	190	126	17	26	10	14	70
28	4.5	111	24	11	41	151	98	22	69	7.6	8.8	32
29	6.0	62	22	12		111	214	19	27	6.2	7.4	22
30	6.0	41	20	14	- - - - -	92	450	18	20	5.1	9.0	10
31	6.0	- - - - -	19	17	- - - - -	92	- - - - -	17	- - - - -	4.9	6.0	- - - - -
Total	272.2	1,097.0	3,503	533.3	2,029	6,376	7,236	2,426	1,553	336.6	282.8	361.3
Mean	8.78	36.6	113	17.2	72.5	206	241	78.3	51.8	10.9	9.12	12.0
Max	48	220	559	35	240	460	622	400	180	26	38	70
Min	3.3	7.0	19	8.0	19	39	75	17	14	4.9	4.7	4.9
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Cal yr 1966 : Total 23,892.1 Mean 65.5 Max 751 Min 3.0 Cfsm - In. -
Wtr yr 1967 : Total 26,006.2 Mean 71.2 Max 622 Min 3.3 Cfsm - In. -

4-0905. 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, 1.5 miles upstream from Grand Trunk Railway, and at mile 4.25.

Drainage area.--104 sq mi.

Records available.--May 1948 to September 1967.

Gage.--Digital 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 and Dec. 19, 1948, to Apr. 5, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 90.3 cfs.

Extremes.--Maximum discharge during year, 1,690 cfs Apr. 2 (gage height, 11.34 ft); minimum daily, 16 cfs Oct. 2.
1948-67: 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. 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.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	29	53	39	40	61	597	448	44	51	29	25
2	16	35	49	38	43	69	1,490	225	41	53	31	23
3	20	39	41	41	41	116	815	149	38	50	31	21
4	24	36	35	37	39	191	330	125	36	40	42	21
5	24	40	113	36	44	160	215	108	39	34	28	25
6	24	36	115	38	42	123	172	109	49	39	25	26
7	26	37	420	77	45	103	143	93	43	40	30	26
8	27	103	1,110	45	41	88	130	87	51	37	32	26
9	26	407	858	40	40	111	126	78	43	36	38	25
10	30	246	361	37	45	367	115	72	45	52	34	23
11	29	104	215	34	53	692	100	256	66	39	32	26
12	27	69	149	37	51	458	86	169	92	42	29	27
13	90	50	118	41	51	347	150	112	131	41	25	26
14	68	41	100	38	88	301	166	88	81	38	26	28
15	111	37	89	32	242	220	139	80	61	35	28	30
16	33	36	82	32	322	161	279	73	92	33	28	28
17	26	33	76	32	262	148	484	66	88	35	27	26
18	26	31	72	29	209	111	231	63	61	37	72	28
19	28	29	69	30	174	93	140	61	49	37	73	55
20	27	27	69	34	191	241	112	58	46	36	36	44
21	26	29	68	34	160	688	187	53	225	36	26	108
22	26	30	64	38	137	647	821	52	276	34	23	35
23	25	30	54	58	100	381	476	69	120	35	23	27
24	26	30	50	58	78	283	254	81	129	33	24	23
25	24	54	43	69	67	253	187	49	100	40	24	25
26	23	33	37	54	62	208	154	49	66	57	32	29
27	24	211	40	35	63	195	134	51	59	41	28	157
28	26	190	49	35	63	159	110	71	104	32	25	59
29	25	102	51	37		124	329	55	75	25	25	50
30	23	69	45	40	- - - - -	108	822	47	61	24	27	37
31	25	- - - - -	38	41	- - - - -	108	- - - - -	44	- - - - -	27	25	- - - - -
Total	973	2,243	4,733	1,266	2,793	7,315	9,494	3,141	2,411	1,189	979	1,109
Mean	31.4	74.8	153	40.8	99.8	236	316	101	80.4	38.4	31.6	37.0
Max	111	407	1,110	77	322	692	1,490	448	276	57	73	157
Min	16	27	35	29	39	61	86	44	36	24	23	21
Cfsm	.30	.72	1.47	.39	.96	2.27	3.04	.97	.77	.37	.30	.36
In.	.35	.80	1.69	.45	1.00	2.62	3.40	1.12	.86	.43	.35	.40

Cal yr 1966 : Total 38,073 Mean 104 Max 2,070 Min 14 Cfsm 1.00 In. 13.61
Wtr yr 1967 : Total 37,646 Mean 103 Max 1,490 Min 16 Cfsm .99 In. 13.46

Peak discharge (base, 900 cfs)--Dec. 8 (1815) 10.07 ft, 1,270 cfs; Apr. 2 (0845) 11.34 ft, 1,690 cfs; Apr. 22 (1430) 8.55 ft, 910 cfs.

4-0910. 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 at mile 21.66.

Records available.--October 1947 to September 1967.

Gage.--Water-stage recorder. Datum of gage is 575.00 ft above mean sea level, datum of 1929. 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 at same site read twice daily.

Average discharge.--20 years, 158 cfs.

Extremes.--Maximum discharge during year, 1,890 cfs Apr. 2 (gage height, 14.97 ft); minimum daily, 26 cfs Oct. 24.
1947-67: 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 floodmarks (discharge, 4,760 cfs).

Remarks.--Records good except those for winter periods, 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 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	30	109	61	68	107	761	808	54	66	35	31
2	32	34	92	58	72	110	1,720	513	50	66	36	31
3	29	46	85	65	69	161	1,520	345	49	74	38	30
4	32	41	75	62	67	285	830	268	46	62	45	28
5	32	43	172	57	74	306	410	223	44	47	33	32
6	32	37	173	54	73	244	320	218	62	50	30	35
7	32	33	529	102	83	196	270	191	59	52	30	35
8	33	96	1,380	86	77	162	242	175	74	51	35	35
9	31	558	1,430	71	73	167	239	159	56	51	46	34
10	38	484	842	70	84	444	210	141	56	84	41	31
11	37	188	553	65	90	911	185	362	86	67	35	31
12	35	119	397	65	89	802	155	320	137	60	33	34
13	102	93	302	69	83	638	207	212	189	52	30	35
14	66	79	239	70	115	575	250	156	188	46	30	35
15	126	73	197	66	293	475	243	128	214	43	32	37
16	55	67	172	56	511	361	274	116	147	41	30	35
17	30	66	156	55	464	316	681	110	146	41	31	33
18	30	62	146	52	408	258	503	95	109	45	83	34
19	31	57	134	54	347	214	310	83	81	48	155	72
20	31	54	131	58	364	360	220	75	68	48	66	54
21	30	51	124	63	323	939	263	71	197	45	31	134
22	28	56	120	64	260	995	909	69	468	45	31	69
23	27	55	108	80	200	744	800	70	252	60	30	38
24	26	58	94	93	150	583	513	97	194	53	32	30
25	29	91	81	106	130	516	380	66	181	58	32	28
26	30	66	66	94	107	428	300	60	103	65	38	34
27	29	264	63	70	110	376	261	62	83	65	64	228
28	28	364	72	62	111	320	213	80	175	40	35	150
29	28	209	81	64		256	400	86	116	32	35	102
30	28	140	69	68	- - - - -	218	1,020	62	81	30	36	68
31	27	- - - - -	59	72	- - - - -	211	- - - - -	55	- - - - -	30	32	- - - - -
Total	1,177	3,614	8,251	2,132	4,895	12,678	14,609	5,476	3,765	1,617	1,290	1,603
Mean	38.0	120	266	68.8	175	409	487	177	126	52.2	41.6	53.4
Max	126	558	1,430	106	511	995	1,720	808	468	84	155	228
Min	26	30	59	52	67	107	155	55	44	30	30	28
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Cal yr 1966: Total 63,174 Mean 173 Max 2,350 Min 26 Cfsm - In. -
Wtr yr 1967: Total 61,107 Mean 167 Max 1,720 Min 26 Cfsm - In. -

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 1967.

Gage.--Digital 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, graphic water-stage recorder at site 400 ft upstream at datum 11.80 ft higher. July 20, 1955 to Sept. 30, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--20 years, 93.6 cfs.

Extremes.--Maximum discharge during year, 1,120 cfs Dec. 9 (gage height, 10.07 ft); minimum, 4.0 cfs Oct. 21, regulated (gage height, 3.67 ft).
1947-67: 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.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	8.8	8.7	78	33	41	70	338	551	29	39	12	11
2	9.4	11	54	32	46	68	1,010	428	27	37	12	11
3	11	17	46	31	45	79	945	301	26	35	12	9.4
4	8.8	13	39	29	49	121	701	140	26	36	10	8.9
5	5.6	13	48	30	52	146	524	125	26	32	11	8.4
6	6.8	14	73	33	50	135	414	137	28	27	12	8.2
7	8.4	17	251	39	47	122	331	136	31	24	12	8.5
8	9.1	29	862	40	46	103	262	125	53	24	13	8.8
9	12	136	1,040	35	42	102	219	108	54	25	14	7.3
10	21	199	748	34	40	295	189	96	50	34	12	6.1
11	19	146	524	29	39	683	137	126	62	33	11	5.0
12	15	73	432	28	38	763	114	160	76	30	11	5.2
13	24	52	337	29	38	638	140	146	96	22	10	5.8
14	23	41	246	30	40	563	169	120	195	20	10	5.9
15	43	36	124	29	75	485	171	102	181	18	10	6.1
16	32	33	116	25	169	393	165	89	126	17	11	5.7
17	30	30	123	24	301	325	263	78	113	16	11	6.5
18	24	24	111	20	315	265	441	74	128	14	18	6.5
19	22	22	104	17	280	227	408	62	99	13	27	8.0
20	34	21	95	17	250	274	310	53	72	13	27	12
21	23	21	89	23	224	813	267	50	68	13	21	38
22	7.2	22	82	28	186	912	290	45	81	14	13	35
23	7.2	23	75	35	159	717	298	45	82	19	11	28
24	6.5	21	64	45	133	558	261	43	69	19	10	14
25	9.3	23	55	61	105	470	213	40	86	19	9.5	9.7
26	13	23	52	75	88	409	181	40	90	22	19	10
27	16	69	46	57	81	347	113	38	68	20	26	52
28	14	176	43	41	74	296	112	35	61	18	23	68
29	11	152	40	38	------	249	156	35	55	15	13	60
30	23	108	37	36	------	210	402	33	48	13	11	39
31	9.5	------	35	36	------	180	------	30	------	12	10	------
TOTAL	506.6	1,573.7	6,069	1,059	3,053	11,018	9,544	3,591	2,206	693	432.5	508.0
MEAN	16.3	52.5	196	34.2	109	355	318	116	73.5	22.4	14.0	16.9
MAX	43	199	1,040	75	315	912	1,010	551	195	39	27	68
MIN	5.6	8.7	35	17	38	68	112	30	26	12	9.5	5.0
CFSM	.13	.42	1.57	.27	.87	2.84	2.55	.93	.59	.18	.11	.14
IN.	.15	.47	1.81	.32	.91	3.28	2.84	1.07	.66	.21	.13	.15

CAL YR 1966: TOTAL 40,388.0 MEAN 111 MAX 1,410 MIN 5.6 CFSM .89 IN 12.02
WAT YR 1967: TOTAL 40,253.8 MEAN 110 MAX 1,040 MIN 5.0 CFSM .88 IN 11.98

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	0500	10.07	1,120				
3-12	0245	8.86	800				
3-22	0215	9.46	955				
4-2	1930	9.95	1,090				

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 1967.

Gage.--Water-stage recorder. Datum of gage is 580.00 ft above mean sea level, datum of 1929.

Average discharge.--9 years, 16.5 cfs.

Extremes.--Maximum daily discharge during year, 116 cfs April 5; maximum gage height, 8.51 ft Mar. 25; no flow Sept. 15-19.
1958-67: Maximum discharge, 196 cfs May 1, 1959 (gage height, 9.63 ft); no flow at times during most years.
Flood in October 1954 reached a stage of 13.09 ft, from floodmark.

Remarks.--Record poor. During times of flood on Deep River, reverse flow may occur at the gage.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	.6	1.0	18	11	5.0	13	45	50	4.9	13	1.5	2.6
2	.4	1.1	15	10	5.5	16	80	54	4.6	13	1.4	2.0
3	.3	1.2	12	9.0	6.0	18	92	52	4.1	12	1.7	1.5
4	.2	1.2	11	8.4	6.5	21	110	47	3.9	12	2.0	1.2
5	.2	1.2	17	9.2	3.6	21	116	42	3.6	11	1.8	.8
6	.2	1.1	20	11	3.6	22	110	38	4.6	9.6	1.5	.6
7	.2	1.2	32	15	3.6	21	98	34	5.9	12	1.3	.5
8	.2	2.0	52	16	3.6	21	86	30	13	10	1.2	.4
9	.2	14	62	12	3.6	24	74	28	10	10	1.1	.4
10	.6	19	71	10	3.6	34	65	26	11	16	1.0	.3
11	.2	17	74	9.5	3.6	42	54	32	10	12	.9	.2
12	.1	15	80	9.2	7.0	47	47	34	8.1	8.5	.8	.1
13	1.1	13	71	10	8.0	52	47	32	14	7.0	.7	.1
14	1.4	11	62	10	10	57	47	30	22	5.9	.7	.1
15	4.1	9.6	57	10	20	60	47	28	16	5.7	.7	0
16	2.6	8.9	52	6.2	32	54	47	26	16	5.2	.7	0
17	2.0	8.5	47	5.0	32	52	47	24	17	4.6	.7	0
18	1.5	7.3	42	3.0	32	44	44	21	14	4.1	1.3	0
19	1.4	6.2	37	3.0	32	42	42	18	12	3.6	8.9	0
20	1.4	5.9	35	2.4	32	50	38	15	10	3.4	7.0	2.6
21	1.2	5.7	32	3.2	32	62	38	13	15	3.2	6.6	7.0
22	1.0	5.2	30	6.6	32	65	42	12	24	3.0	5.4	5.7
23	.9	4.6	28	15	30	68	44	11	20	3.9	4.6	4.6
24	.8	4.6	26	18	22	71	50	10	18	3.2	3.9	3.5
25	.8	5.9	24	22	19	71	50	9.6	17	2.4	3.0	2.4
26	.8	6.2	22	10	16	65	44	7.3	16	2.8	2.3	1.8
27	.9	16	21	3.5	15	57	40	7.0	14	3.0	4.0	19
28	.9	24	20	3.0	14	50	40	6.2	17	2.6	6.6	18
29	.9	21	22	3.0		44	42	5.9	16	2.1	5.4	16
30	.8	20	16	3.5	- - - - -	40	50	5.9	15	2.1	4.4	14
31	.9	- - - - -	12	4.0	- - - - -	36	- - - - -	5.4	- - - - -	1.8	3.4	- - - - -
Total	28.8	258.6	1,120	271.7	433.2	1,340	1,776	754.3	376.7	208.7	86.5	105.4
Mean	0.93	8.62	36.1	8.76	15.5	43.2	59.2	24.3	12.6	6.73	2.79	3.51
Max	4.1	24	80	22	32	71	116	54	24	16	8.9	19
Min	0.1	1.0	11	2.4	3.6	13	38	5.4	3.6	1.8	0.7	0
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Cal yr 1966 : Total 8,080.8 Mean 22.1 Max 146 Min 0.1 Cfsm - In. -
Wtr yr 1967 : Total 6,759.9 Mean 18.5 Max 116 Min 0 Cfsm - In. -

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 1967 (October 1950 to September 1955, high-water records only).

Gage.--Digital 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. Prior to June 7, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--19 years (1943-50, 1955-67), 131 cfs.

Extremes.--Maximum discharge during year, 1,150 cfs Apr. 3 (gage height, 9.92 ft); minimum, 11 cfs Oct. 6, 7 (gage height, 3.22 ft). 1943-67: 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.--Record good. 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.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	15	15	122	60	61	126	402	650	41	61	19	19
2	15	21	97	54	69	119	942	595	39	59	18	18
3	15	18	77	49	68	130	1,130	457	37	56	18	17
4	15	17	68	50	68	167	952	257	35	55	19	16
5	13	17	87	55	85	201	757	156	34	53	18	16
6	12	17	112	60	80	187	617	173	38	47	18	15
7	12	18	283	67	73	169	512	167	44	45	19	16
8	12	38	769	67	68	144	416	157	78	42	18	16
9	14	163	1,110	63	66	146	300	138	78	43	22	15
10	18	224	991	59	65	309	250	125	78	64	36	15
11	20	200	765	54	64	680	200	173	83	59	18	14
12	16	129	607	51	64	836	170	199	94	58	15	14
13	23	91	528	52	66	793	200	185	122	45	15	14
14	22	78	404	53	70	709	240	157	215	36	15	14
15	49	69	330	51	122	638	255	135	234	31	15	14
16	40	64	290	47	319	545	240	122	182	29	15	14
17	31	60	275	43	413	463	400	114	156	27	16	14
18	26	54	270	37	447	386	560	105	162	26	25	14
19	23	49	250	34	402	328	510	101	142	25	46	16
20	23	47	220	33	359	368	400	93	103	23	64	20
21	38	46	195	35	321	776	350	83	107	23	45	56
22	14	47	170	43	278	1,010	370	76	129	25	35	49
23	12	46	145	60	240	909	370	70	119	36	23	40
24	12	46	125	69	210	746	340	67	113	32	20	31
25	12	51	100	89	180	637	270	63	120	28	20	23
26	15	49	83	114	160	564	230	55	125	33	36	22
27	17	114	80	192	148	494	180	54	98	35	54	89
28	19	313	79	125	138	427	170	52	100	30	34	97
29	16	333	84	57	------	367	310	50	86	25	28	90
30	18	164	74	55	------	308	500	49	71	23	25	64
31	22	------	66	55	------	259	------	45	------	21	22	------
TOTAL	609	2,598	8,856	1,933	4,704	13,941	12,543	4,923	3,063	1,195	791	872
MEAN	19.6	86.6	286	62.4	168	450	418	159	102	38.5	25.5	29.1
MAX	49	333	1,110	192	447	1,010	1,130	650	234	64	64	97
MIN	12	15	66	33	61	119	170	45	34	21	15	14
Cfsm	0.122	0.541	1.79	0.390	1.05	2.81	2.61	0.994	0.638	0.241	0.159	0.182
In	0.14	0.60	2.06	0.45	1.09	3.24	2.91	1.15	0.71	0.28	0.18	0.20

CAL YR 1966: TOTAL 56,257 MEAN 154 MAX 1,540 MIN 11 Cfsm 0.962 Inches 13.06
WAT YR 1967: TOTAL 56,028 MEAN 154 MAX 1,130 MIN 12 Cfsm 0.962 Inches 13.01

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., on right bank at downstream end of county road bridge, 200 ft upstream from U.S. Highway 20 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 603.48 ft above mean sea level, catum of 1929. Prior to June 26, 1952, wire-weight gage, July 26, 1952 to May 3, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--22 years, 68.6 cfs.

Extremes.--Maximum discharge during year, 890 cfs Dec. 8 (gage height, 7.92 ft); minimum, 21 cfs Jan. 16 (gage height, 2.52 ft as the result of freeze-up).
1945-67: 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.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	25	28	77	42	65	64	108	259	37	35	33	31
2	24	30	58	41	70	63	490	155	36	34	29	30
3	24	31	52	41	69	72	365	107	35	37	29	29
4	24	31	46	40	70	104	232	87	34	35	30	29
5	24	32	62	40	71	99	146	79	34	33	28	29
6	24	39	90	47	70	91	108	80	35	31	27	28
7	24	41	223	56	73	87	86	76	36	30	27	28
8	24	47	720	55	69	76	72	70	42	30	27	28
9	24	100	701	49	70	75	71	66	40	30	28	28
10	28	183	391	49	70	144	69	62	39	46	27	28
11	28	143	233	46	68	463	61	107	57	40	26	28
12	26	79	154	46	64	424	57	139	95	34	26	28
13	29	56	113	46	56	320	68	94	60	31	26	28
14	32	49	91	49	57	296	92	74	87	30	26	28
15	43	44	81	47	114	247	105	68	56	25	25	28
16	43	42	77	39	195	175	94	62	55	29	25	28
17	32	40	74	46	444	136	96	57	121	25	24	28
18	30	38	73	38	268	109	89	55	81	30	26	28
19	40	36	71	42	166	97	71	52	55	30	39	28
20	48	34	70	41	150	118	64	48	45	29	38	28
21	36	34	67	43	141	452	75	47	44	27	31	54
22	32	34	65	47	121	429	142	46	56	28	28	47
23	30	34	62	66	100	271	170	45	43	36	28	33
24	28	34	59	73	94	191	118	46	49	34	27	30
25	31	37	55	94	89	156	101	44	59	36	28	29
26	28	37	53	75	83	133	87	42	45	35	38	28
27	28	69	50	58	75	109	82	40	39	47	74	58
28	28	210	48	68	69	95	73	39	44	35	61	51
29	27	197	47	71	------	81	87	40	46	31	39	38
30	27	106	45	67	------	73	270	39	39	29	37	37
31	28	------	43	66	------	67	------	39	------	34	34	------
TOTAL	919	1,915	4,051	1,628	3,051	5,317	3,749	2,264	1,544	1,024	991	973
MEAN	29.6	63.8	131	52.5	109	172	125	73.0	51.5	33.0	32.0	32.4
MAX	48	210	720	94	444	463	490	259	121	47	74	58
MIN	24	28	43	38	56	63	57	39	34	27	24	28
CFSM	.47	1.01	2.08	.83	1.73	2.73	1.99	1.16	.82	.53	.51	.52
IN.	.54	1.13	2.40	.96	1.80	3.14	2.22	1.34	.91	.61	.59	.58

CAL YR 1966: TOTAL 26,331 MEAN 72.1 MAX 720 MIN 22 CFSM 1.15 IN 15.57
WAT YR 1967: TOTAL 27,426 MEAN 75.1 MAX 720 MIN 24 CFSM 1.19 IN 16.22

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	2200	7.92	890				

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 1967.

Gage.--Digital water-stage 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, July 25, 1955 to Nov. 16, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--22 years, 67.6 cfs.

Extremes.--Maximum discharge during year, 805 cfs Dec. 8 (gage height, 8.84 ft); minimum, 19 cfs Jan. 9 (gage height, 2.10 ft as result of freeze-up).
1945-67: Maximum discharge, 3,180 cfs Oct. 11, 1954 (gage height, 14.12 ft); minimum, 6.3 cfs Aug. 24, 1955; minimum gage height, 2.10 ft Jan. 9, 1967 as the result of freeze-up.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	24	26	72	41	57	56	70	218	36	38	30	29
2	24	28	57	40	62	58	450	140	35	38	29	28
3	23	31	49	41	62	78	300	107	35	40	29	28
4	23	30	46	39	61	126	210	90	34	36	29	27
5	24	30	59	40	63	104	150	84	34	33	29	27
6	24	31	94	40	56	88	121	83	38	33	28	27
7	24	30	203	47	63	83	104	82	40	32	27	27
8	24	38	539	46	59	72	92	78	51	32	28	27
9	24	128	610	41	56	74	89	74	43	32	29	27
10	36	169	317	41	57	173	87	68	50	51	28	27
11	31	116	194	39	58	323	79	131	58	50	27	27
12	27	77	117	39	51	312	72	143	69	38	27	27
13	28	56	88	41	56	248	85	102	57	33	27	27
14	33	49	72	42	47	223	118	82	108	32	27	27
15	41	44	64	41	54	195	129	74	65	31	27	27
16	49	41	62	35	210	149	107	68	51	31	27	26
17	36	40	59	38	229	134	149	63	97	30	26	26
18	30	38	57	35	161	112	171	60	78	31	28	26
19	28	36	54	36	119	103	142	57	56	31	43	27
20	31	35	54	36	121	141	99	52	46	30	38	28
21	28	35	52	38	106	444	100	49	46	29	29	72
22	27	35	50	43	88	397	166	47	59	30	28	52
23	26	36	48	54	72	262	137	46	45	37	27	34
24	28	36	45	58	63	190	108	46	54	35	27	31
25	31	38	42	78	58	161	97	44	101	31	27	30
26	26	38	39	61	56	137	87	42	73	48	32	30
27	26	84	40	42	55	123	84	40	54	70	48	82
28	27	186	40	57	54	114	77	39	52	53	36	75
29	27	157	41	59	------	100	105	39	54	37	30	54
30	25	98	36	56	------	92	244	39	44	32	32	52
31	25	------	40	55	------	82	------	37	------	31	31	------
TOTAL	880	1,816	3,340	1,399	2,254	4,954	4,029	2,324	1,663	1,135	930	1,054
MEAN	28.4	60.5	108	45.1	80.5	160	134	75.0	55.4	36.6	30.0	35.1
MAX	49	186	610	78	229	444	450	218	108	70	48	82
MIN	23	26	36	35	47	56	70	37	34	29	26	26
CFSM	.36	.77	1.37	.57	1.02	2.03	1.71	.95	.70	.47	.38	.45
IN.	.42	.86	1.58	.66	1.07	2.34	1.90	1.10	.79	.54	.44	.50

CAL YR 1966: TOTAL 23,940 MEAN 65.6 MAX 633 MIN 22 CFSM .83 IN 11.31
WAT YR 1967: TOTAL 25,778 MEAN 70.6 MAX 610 MIN 23 CFSM .90 IN 12.18

Peak discharge (base, 600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	2400	8.84	805				

4-0985. 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.--192 sq mi.

Records available.--July 1903 to July 1904 (gage height and discharge measurements only), October 1957 to September 1967.

Gage.--Water-stage recorder. Datum of gage is 805.4 ft above mean sea level, datum of 1929.

Average discharge.--10 years, 138 cfs.

Extremes.--Maximum discharge during year, 417 cfs Dec. 11 (gage height, 4.07 ft); minimum, 41 cfs Aug. 25 (gage height, 1.87 ft).
1957-67: Maximum discharge, 488 cfs Mar. 15, 1962 (gage height, 4.37 ft); maximum gage height, 4.65 ft Jan. 9, 1966 (backwater from ice); minimum discharge, 26 cfs Aug. 5, 1964; minimum gage height, 1.72 ft Jan. 10, Sept. 10, 1964.
A daily mean discharge of 750 cfs occurred Mar. 15, 1904.

Remarks.--Records good. Small diurnal fluctuation caused by powerplants above station.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	83	65	156	210	187	180	267	261	153	125	73	83
2	88	75	130	197	197	180	288	257	145	115	73	59
3	81	85	120	210	214	183	306	257	131	101	72	70
4	70	88	130	195	208	197	319	257	130	102	63	52
5	72	85	146	188	203	185	337	249	128	103	71	65
6	69	98	168	176	188	180	341	245	131	98	75	58
7	71	93	197	176	171	175	330	233	130	97	64	53
8	75	108	247	158	170	159	312	223	134	89	69	66
9	77	124	301	143	159	158	303	212	138	93	68	50
10	70	153	366	164	187	161	306	216	140	98	57	59
11	70	175	406	168	199	195	308	233	126	101	63	46
12	81	194	408	163	180	208	306	225	124	99	70	63
13	80	195	378	163	166	229	299	225	134	93	52	54
14	81	171	350	158	170	243	299	218	125	89	56	54
15	86	146	332	138	187	255	306	212	125	80	57	64
16	92	128	319	131	195	267	306	219	121	88	63	58
17	97	132	310	112	200	269	303	227	121	84	60	56
18	80	142	310	120	200	259	299	210	134	78	59	45
19	86	140	306	120	212	251	295	192	115	79	51	58
20	90	137	299	142	199	253	286	192	121	92	68	48
21	92	125	297	153	208	259	288	194	130	83	69	65
22	92	126	290	150	206	261	303	180	142	83	69	101
23	90	125	278	182	187	271	306	171	137	79	52	112
24	77	119	269	166	173	282	306	173	134	72	43	107
25	78	128	255	180	161	284	301	170	128	83	42	86
26	89	136	249	178	158	273	299	168	126	71	65	83
27	84	151	243	168	201	269	292	164	125	77	64	85
28	88	153	233	142	185	269	284	161	128	79	71	89
29	88	158	216	187		261	273	146	126	83	80	84
30	83	154	210	200	- - - - -	255	267	142	132	74	61	88
31	74	- - - - -	200	201	- - - - -	257	- - - - -	136	- - - - -	79	75	- - - - -
Total	2534	3909	8119	5139	5271	7128	9035	6368	3914	2767	1975	2061
Mean	81.7	130	262	166	188	230	301	205	130	89.3	63.7	68.7
Max	97	195	408	210	214	284	341	261	153	125	80	112
Min	69	65	120	112	158	158	267	136	115	71	42	45
Cfsm	.428	.681	1.37	.869	.984	1.20	1.58	1.07	.681	.468	.334	.360
In.	.49	.76	1.58	1.00	1.03	1.39	1.76	1.24	.76	.54	.38	.40

Cal yr 1966: Total 62,463 Mean 171 Max 408 Min 65 Cfsm .895 In. 12.16
Wtr yr 1967: Total 58,220 Mean 160 Max 408 Min 42 Cfsm .838 In. 11.34

4-0990. 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.--1,866 sq mi.

Records available.--October 1923 to September 1967. Monthly discharge only for some periods, published in WSP 1307.

Gage.--Digital 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. Oct. 1, 1951, to Nov. 20, 1962, graphic water-stage recorder at present site and datum.

Average discharge.--44 years 1,470 cfs.

Extremes.--Maximum discharge during year, 4,420 cfs Apr. 7 (gage height, 6.40 ft); minimum, 120 cfs July 24 (gage height, 1.11 ft); minimum daily, 400 cfs July 22.
1923-67: Maximum discharge, 10,700 cfs Apr. 27, 1950 (gage height, 6.56 ft, site and datum then in use); minimum daily, 39 cfs Oct. 19, 1963.

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

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	427	765	1,420	1,370	1,890	1,880	3,160	2,880	1,640	1,280	880	897
2	448	770	1,450	1,550	2,010	1,740	3,160	2,710	1,610	990	854	507
3	753	817	826	1,950	1,870	1,820	3,470	2,660	1,280	1,110	771	511
4	809	849	852	1,650	1,820	1,790	3,580	2,650	792	518	781	518
5	820	546	1,370	1,580	1,780	1,760	3,820	2,490	1,430	1,180	494	715
6	777	523	1,450	1,730	1,760	1,840	3,970	2,480	1,560	1,140	494	687
7	837	1,040	1,550	1,350	1,510	1,670	4,280	2,430	1,310	1,260	613	684
8	505	912	1,910	1,280	1,470	1,730	4,270	2,380	1,280	569	624	687
9	435	1,290	2,250	1,590	1,530	1,660	4,190	2,230	1,310	463	646	517
10	775	1,510	2,820	1,580	1,670	1,780	4,190	2,250	1,110	1,170	659	517
												666
11	767	1,460	2,970	1,490	1,540	1,600	3,990	2,260	1,020	1,100	667	
12	790	1,250	3,140	1,430	1,580	1,690	3,670	2,400	1,480	995	508	657
13	781	1,220	3,100	1,560	1,750	2,090	3,740	2,380	1,610	963	518	666
14	862	1,640	3,080	1,220	1,650	2,640	3,650	2,180	1,330	981	851	669
15	462	1,510	2,880	1,050	1,670	3,110	3,500	2,240	1,400	573	722	661
16	425	1,420	2,790	1,380	1,690	3,160	3,350	2,260	1,430	550	739	514
17	780	1,090	2,620	1,420	1,720	3,140	3,410	2,080	1,420	1,080	698	492
18	798	1,190	2,550	1,250	1,700	3,130	3,280	2,140	1,080	1,020	656	584
19	844	1,070	2,440	1,100	1,710	3,000	3,190	2,230	1,690	929	514	592
20	829	812	2,470	1,340	2,020	3,170	3,010	1,960	1,600	893	517	597
21	893	1,150	2,420	925	1,900	2,900	3,080	1,760	1,470	831	660	661
22	498	1,300	2,390	1,010	1,900	3,080	3,080	1,890	1,300	400	667	924
23	487	1,300	2,180	1,600	1,900	3,190	3,180	1,580	1,330	419	686	529
24	821	609	1,670	1,760	1,990	3,320	3,220	1,630	1,250	875	668	533
25	828	1,100	1,930	1,780	1,900	3,380	3,200	1,640	1,550	1,090	706	713
26	795	940	1,920	1,920	1,900	3,380	3,150	1,800	1,290	901	516	708
27	796	888	2,170	1,620	2,000	3,420	3,140	1,660	1,390	836	544	933
28	900	1,610	1,930	1,170	2,000	3,440	3,100	1,430	1,360	848	683	878
29	560	1,420	1,760	1,610		3,340	3,020	1,630	1,340	451	751	886
30	452	1,270	1,990	1,810	- - - - -	3,250	2,720	1,410	1,360	500	748	576
31	769	- - - - -	1,470	1,700	- - - - -	3,050	- - - - -	1,490	- - - - -	890	746	- - - - -
Total	21,723	33,271	65,768	45,775	49,830	80,150	103,770	65,210	41,022	26,805	20,581	19,679
Mean	701	1,109	2,122	1,477	1,780	2,585	3,459	2,104	1,367	865	664	656
Max	900	1,640	3,140	1,950	2,020	3,440	4,280	2,880	1,690	1,280	880	933
Min	425	523	826	925	1,470	1,600	2,720	1,410	792	400	494	492
Cfsm	.38	.59	1.14	.79	.95	1.39	1.85	1.13	.73	.46	.36	.35
In.	.43	.66	1.31	.91	.99	1.60	2.07	1.30	.82	.53	.41	.39

Cal yr 1966 : Total 562,615 Mean 1,541 Max 3,910 Min 400 Cfsm .83 In. 11.21
Wtr yr 1967 : Total 573,584 Mean 1,571 Max 4,280 Min 400 Cfsm .84 In. 11.43

4-0995. Pigeon Creek at Hogback Lake Outlet near Angola, Ind.

Location.--Lat 41°37'24", long 85°05'44", in NE¼NW¼ 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 1967. 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.--22 years, 71.8 cfs.

Extremes.--Maximum discharge during year, 276 cfs Dec. 14 (gage height, 13.30 ft); minimum, 5.0 cfs Sept. 19, 20; minimum gage height, 7.79 ft Sept. 17-19.
1945-67: Maximum discharge, 744 cfs Apr. 8, 1950 (gage height, 14.95 ft); minimum, 3.4 cfs Oct. 25-27, 1964; minimum gage height, 7.24 ft Sept. 9, 10, 1953.

Remarks.--Record good.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.4	8.2	37	91	83	71	181	101	54	42	18	11
2	8.4	8.4	38	87	79	68	187	96	50	38	18	11
3	8.6	9.8	38	83	79	68	199	91	50	37	18	10
4	8.4	10	38	79	83	68	211	87	48	37	17	9.8
5	8.6	11	38	75	83	68	224	83	46	36	16	9.6
6	8.8	11	40	68	79	71	231	83	46	34	16	9.2
7	9.0	11	50	68	75	71	231	79	46	32	16	8.8
8	9.2	12	75	64	71	71	224	79	46	31	15	8.4
9	9.6	16	121	64	68	68	211	75	46	31	15	8.2
10	8.6	21	181	60	64	68	205	75	48	30	14	7.6
11	9.0	26	224	60	60	75	193	79	48	28	14	7.2
12	9.4	32	260	57	58	96	181	83	48	28	14	7.0
13	9.8	38	268	57	57	121	175	87	48	26	13	6.8
14	11	42	276	54	56	146	163	91	46	25	13	6.4
15	10	43	268	52	57	169	163	96	45	25	13	6.0
16	10	43	260	50	64	187	157	96	43	24	12	5.8
17	10	43	252	48	75	199	157	96	43	24	12	5.6
18	10	42	238	46	91	199	151	91	42	22	12	5.4
19	11	40	224	45	106	193	146	83	42	22	12	5.2
20	11	38	211	43	111	181	136	79	40	22	12	5.4
21	11	37	205	42	111	181	131	75	42	22	12	7.2
22	11	36	193	43	111	181	131	71	45	20	12	7.8
23	10	34	175	45	106	187	131	68	45	20	11	8.4
24	10	32	169	50	101	199	126	64	45	19	11	8.6
25	9.8	31	151	57	96	211	126	60	46	19	11	8.8
26	9.4	30	141	64	87	211	121	57	46	19	11	8.8
27	9.2	31	131	75	83	211	116	57	46	19	11	9.4
28	8.8	31	121	83	79	211	111	54	45	19	11	9.6
29	8.4	34	116	83		211	106	54	43	19	11	10
30	8.0	37	106	83	- - - - -	199	106	54	43	19	11	11
31	8.0	- - - - -	101	83	- - - - -	187	- - - - -	54	- - - - -	19	11	- - - - -
Total	292.4	838.4	4,746	1,959	2,273	4,447	4,931	2,398	1,371	808	413	244.0
Mean	9.43	27.9	153	63.2	81.2	143	164	77.4	45.7	26.1	13.3	8.13
Max	11	43	276	91	111	211	231	101	54	42	18	11
Min	8.0	8.2	37	42	56	68	106	54	40	19	11	5.2
Cfsm	0.092	0.274	1.50	0.620	0.796	1.40	1.61	0.759	0.448	0.256	0.130	0.080
In.	0.11	0.31	1.73	0.71	0.83	1.61	1.80	0.88	0.50	0.30	0.15	0.09

Cal yr 1966: Total 25,605.8 Mean 70.2 Max 300 Min 8.0 Cfsm 0.688 In. 9.34
Wtr yr 1967: Total 24,720.8 Mean 67.7 Max 276 Min 5.2 Cfsm 0.664 In. 9.02

4-0996.10 Pretty Lake Inlet near Stroh, Ind.

Location (revised).--Lat 41°34'45", long 85°14'59", in NW¼ sec. 15, T. 36 N., R. 11 E., on left bank 400 ft upstream from mouth, and 2.6 miles west of Stroh.

Drainage area.--1.96 sq mi.

Records available.--June 1963 to September 1967.

Gage.--Water-stage recorder with steel V-notch weir (0.5 cfs notch capacity). Datum of gage is 960.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 7.84 cfs Dec. 8 (gage height, 7.09 ft); minimum, 0.02 cfs Nov. 3; minimum gage height, 6.07 ft, Jan. 20, as the result of a siphon effect.
1963-67: Maximum discharge, 21.1 cfs Dec. 25, 1965; no flow for many days in most years.

Remarks.--Record good except for period of no gage-height record, which is fair.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.08	0.08	0.29	0.27	0.40	0.25	1.6	0.72	0.27	0.19	0.12	0.08
2	.08	.08	.20	.23	1.1	.31	2.6	.67	.25	.17	.12	.08
3	.07	.09	.16	.25	.95	.40	1.6	.50	.23	.16	.11	.08
4	.07	.12	.15	.23	.78	.48	1.2	.51	.22	.17	.11	.08
5	.07	.09	.37	.20	.67	.40	1.0	.51	.22	.17	.11	.08
6	.07	.10	1.1	.22	.60	.37	.95	.62	.27	.17	.10	.08
7	.06	.17	3.4	.33	.50	.31	.83	.72	.27	.16	.10	.08
8	.06	.25	5.0	.29	.45	.27	.78	.72	.25	.16	.10	.08
9	.07	1.2	2.6	.25	.38	.31	.89	.67	.25	.16	.12	.08
10	.08	.89	1.6	.23	.34	.89	.95	.62	.27	.16	.10	.08
11	.07	.54	1.2	.20	.30	1.7	.89	2.0	.23	.15	.09	.08
12	.07	.33	1.0	.22	.27	1.4	.72	1.2	.22	.15	.09	.08
13	.08	.25	.89	.25	.25	1.3	1.1	.89	.23	.15	.09	.08
14	.08	.23	.78	.25	.25	1.2	1.2	.78	.25	.16	.09	.08
15	.12	.20	.72	.20	.95	1.1	1.0	.72	.23	.16	.09	.08
16	.09	.19	.67	.15	1.6	.89	.89	.67	.27	.15	.09	.08
17	.08	.16	.67	.11	1.1	.83	.83	.58	.29	.15	.09	.07
18	.09	.15	.72	.11	.72	.78	.78	.54	.25	.13	.09	.07
19	.08	.13	.67	.11	.62	.72	.72	.45	.25	.15	.09	.07
20	.08	.13	.67	.13	.50	.78	.67	.42	.23	.16	.09	.13
21	.08	.13	.62	.20	.45	1.5	1.1	.40	.29	.13	.09	.20
22	.08	.12	.54	.33	.38	1.6	1.3	.40	.33	.13	.09	.12
23	.08	.12	.45	.62	.35	1.6	1.0	.37	.25	.13	.08	.08
24	.08	.12	.4	.62	.30	1.3	.89	.37	.31	.13	.08	.08
25	.08	.13	.37	.95	.25	1.2	.83	.35	.33	.12	.08	.08
26	.08	.13	.35	.58	.18	1.2	.78	.33	.25	.13	.08	.08
27	.08	.45	.29	.54	.16	1.1	.72	.33	.22	.13	.08	.08
28	.09	.45	.31	.51	.15	1.0	.62	.29	.27	.15	.08	.08
29	.08	.37	.29	.45		.83	.62	.35	.22	.13	.08	.08
30	.08	.35	.27	.40	- - - - -	.78	.67	.35	.20	.13	.08	.10
31	.08	- - - - -	.22	.40	- - - - -	.78	- - - - -	.33	- - - - -	.12	.08	- - - - -
Total	2.44	7.75	26.97	9.83	14.95	27.58	29.73	18.38	7.62	4.61	2.89	2.60
Mean	0.079	0.258	0.870	0.317	0.534	0.890	0.991	0.593	0.254	0.149	0.093	0.087
Max	0.12	1.2	5.0	0.95	1.6	1.7	2.6	2.0	0.33	0.19	0.12	0.20
Min	0.06	0.08	0.15	0.11	0.15	0.25	0.62	0.29	0.20	0.12	0.08	0.07
Cfsm	0.040	0.132	0.444	0.162	0.272	0.454	0.506	0.303	0.130	0.076	0.047	0.044
In.	0.05	0.15	0.51	0.19	0.28	0.52	0.56	0.35	0.14	0.09	0.05	0.05

Cal yr 1966 : Total 120.51 Mean 0.330 Max 5.0 Min 0.01 Cfsm 0.168 In. 2.29
Wtr yr 1967 : Total 155.35 Mean 0.426 Max 5.0 Min 0.06 Cfsm 0.217 In. 2.94

Note: No gage-height record Aug. 12 to Sept. 14.

4-1002.2 North Branch Elkhart River near Cosperville, Ind.

Location.--Lat 41°29'32", long 85°26'54", in SW¼NE¼ 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 1967.

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.--17 years, 107 cfs.

Extremes.--Maximum discharge during year, 394 cfs Dec. 12-14; maximum gage height, 8.08 ft Dec. 13; minimum, 3.5 cfs Sept. 16-18 (gage height, 4.58 ft).
1950-67: 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, 4.43 ft Aug. 11, Sept. 17, 1964.

Remarks.--Record good.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	24	89	162	124	129	254	161	69	41	20	8.6
2	12	24	84	157	129	124	280	161	66	39	19	8.0
3	12	26	79	152	134	124	293	150	63	36	18	8.0
4	11	28	79	146	134	134	293	144	57	34	17	7.6
5	12	31	79	139	129	139	293	139	55	30	16	7.1
6	10	33	94	134	126	139	293	134	55	28	16	6.6
7	10	35	129	129	123	134	280	134	55	26	13	6.2
8	11	44	230	124	121	134	280	134	57	25	12	6.2
9	10	74	319	119	118	134	267	129	55	25	12	6.2
10	16	109	364	114	114	139	267	124	55	25	12	5.8
11	14	119	379	109	110	172	267	139	53	26	10	5.3
12	16	119	394	104	106	206	254	150	49	26	9.2	4.4
13	17	119	394	99	103	230	254	150	47	25	8.6	4.0
14	19	109	394	94	106	242	254	150	45	23	8.6	4.0
15	19	104	379	89	114	242	254	150	44	21	8.0	4.0
16	24	99	379	84	144	254	254	150	40	20	7.1	3.5
17	24	94	364	81	183	242	242	144	43	18	6.6	3.5
18	25	89	349	79	183	242	242	139	44	20	6.2	3.5
19	26	84	349	77	183	230	230	134	40	20	11	4.0
20	26	79	334	75	183	242	230	129	36	17	13	4.4
21	26	74	319	74	172	254	218	124	36	16	13	8.0
22	26	69	306	74	172	280	230	119	45	14	13	11
23	25	65	293	84	161	293	218	109	45	14	12	12
24	25	62	280	94	150	306	218	104	44	12	11	12
25	25	62	267	99	144	293	206	99	54	12	10	10
26	26	61	254	109	139	293	206	94	54	11	9.2	9.2
27	26	74	230	114	139	293	194	89	52	11	11	13
28	25	84	218	129	134	280	183	84	48	24	12	16
29	26	89	206	134		280	172	79	46	22	9.9	16
30	26	94	183	129	- - - - -	267	172	79	43	23	11	14
31	25	- - - - -	173	129	- - - - -	254	- - - - -	74	- - - - -	22	9.9	- - - - -
Total	607	2,177	7,990	3,436	3,878	6,725	7,298	3,899	1,495	706	365.3	232.1
Mean	19.6	72.6	258	111	138	217	243	126	49.8	22.8	11.8	7.74
Max	26	119	394	162	183	306	293	161	69	41	20	16
Min	10	24	79	74	103	124	172	74	36	11	6.2	3.5
Cfsm	0.147	0.546	1.94	0.835	1.04	1.63	1.83	0.947	0.374	0.171	0.089	0.058
In.	0.17	0.61	2.24	0.96	1.08	1.88	2.04	1.09	0.42	0.20	0.10	0.06

Cal yr 1966: Total 40,200 Mean 110 Max 394 Min 9.2 Cfsm 0.827 In. 11.26
Wtr yr 1967: Total 38,808.4 Mean 106 Max 394 Min 3.5 Cfsm 0.797 In. 10.85

4-1005. Elkhart River at Goshen, Ind.

Location.--Lat 41°35'36", long 85°50'55", 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 1967.

Gage.--Digital 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. Prior to Nov. 15, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--36 years, 492 cfs.

Extremes.--Maximum discharge during year 2,740 cfs Dec. 9 (gage height, 6.95 ft); minimum, 80 cfs Oct. 7 (gage height, 1.79 ft).
1931-67: Maximum discharge, 5,440 cfs Apr. 4, 1950 (gage height, 10.15 ft); maximum gage height, 10.33 ft July 10, 1951; minimum discharge, 6.6 cfs Aug. 11, 1964 (gage height, 1.38 ft).

Remarks.--Record good. The flow is regulated by three powerplants above station. Record of suspended sediment loads for the water year 1967 are published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	131	140	450	762	557	721	1,150	752	383	244	160	126
2	129	144	400	717	593	639	1,890	728	362	231	134	122
3	126	144	405	683	656	637	2,310	688	342	244	144	121
4	123	158	410	642	640	651	1,840	649	327	225	146	118
5	121	157	485	624	615	650	1,490	610	309	226	143	116
6	111	158	611	596	541	617	1,290	608	298	208	144	113
7	86	167	1,070	592	483	583	1,190	609	298	212	143	106
8	88	189	1,960	572	480	555	1,130	617	299	202	145	104
9	97	286	2,680	522	517	536	1,100	601	289	198	149	102
10	98	489	2,420	506	564	562	1,090	580	280	209	148	100
11	108	498	2,040	498	562	1,070	1,060	721	272	222	145	102
12	115	452	1,860	494	543	1,640	995	987	262	212	140	99
13	126	419	1,770	486	493	1,650	986	848	248	207	107	96
14	126	401	1,710	476	500	1,580	1,060	733	280	196	138	94
15	135	411	1,650	468	563	1,500	1,140	718	255	199	129	91
16	165	393	1,610	391	955	1,310	1,170	702	241	192	125	92
17	165	389	1,580	376	1,310	1,170	1,110	679	243	189	123	90
18	150	375	1,540	373	1,120	1,110	1,080	670	243	197	133	89
19	159	358	1,500	370	930	1,050	977	656	246	200	126	88
20	165	346	1,450	380	887	1,080	931	638	241	196	128	88
21	150	337	1,390	400	840	1,460	940	619	237	192	136	144
22	141	340	1,320	421	800	1,980	1,090	603	301	190	145	152
23	138	323	1,250	468	750	1,810	1,180	607	297	184	139	156
24	144	309	1,180	503	660	1,580	1,010	589	267	185	127	148
25	153	302	1,090	550	570	1,450	922	567	342	190	116	142
26	138	300	1,020	609	600	1,390	874	551	354	160	113	136
27	127	371	960	585	640	1,330	833	513	308	158	113	126
28	138	507	927	501	660	1,270	783	483	292	157	120	124
29	140	551	872	500	------	1,220	761	475	288	158	129	126
30	134	509	753	530	------	1,160	766	438	272	156	129	130
31	135	------	756	547	------	1,110	------	405	------	172	126	------
TOTAL	4,062	9,923	39,119	16,142	19,029	35,071	34,148	19,644	8,676	6,135	4,143	3,441
MEAN	131	331	1,262	521	680	1,131	1,138	634	289	198	134	115
MAX	165	551	2,680	762	1,310	1,980	2,310	987	383	244	160	156
MIN	86	140	400	370	480	536	761	405	237	156	107	88
CFSM	.23	.57	2.18	.90	1.17	1.95	1.96	1.09	.50	.34	.23	.20
IN.	.26	.64	2.51	1.04	1.22	2.25	2.19	1.26	.56	.39	.27	.22

CAL YR 1966: TOTAL 188,998 MEAN 518 MAX 2,680 MIN 86 CFSM .89 IN 12.12
WAT YR 1967: TOTAL 199,533 MEAN 547 MAX 2,680 MIN 86 CFSM .94 IN 12.79

Peak discharge (base, 1,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1300	6.95	2,740				
3-22	1515	5.70	2,030				
4-3	0645	6.47	2,550				

4-1010. St. Joseph River at Elkhart, Ind.

Location.--Lat 41°41'30", long 85°58'30", in NE¼ sec. 5, T. 37 N., R. 5 E., on left bank 200 ft downstream from mouth of Elkhart River, 200 ft upstream from Main Street Bridge in Elkhart, and 2,000 ft downstream from Christiana Creek, and ½ mile downstream from Elkhart Hydroelectric Plant.

Drainage area.--3,339 sq mi.

Records available.--August 1947 to September 1967. 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.--Digital water-stage recorder. Datum of gage is 700.00 ft above mean sea level, datum of 1929. Prior to Nov. 15, 1962, graphic water-stage recorder at same site and datum.

Average discharge.--20 years, 2,914 cfs.

Extremes.--Maximum discharge during year, 8,480 cfs Apr. 3 (gage height, 22.70 ft); minimum daily, 810 cfs Sept. 30.
1947-67: Maximum discharge, 18,400 cfs Apr. 5, 1950 (gage height, 27.82 ft); minimum daily, 336 cfs Aug. 5, 1964.

Remarks.--Record good. The flow is regulated by Elkhart Hydroelectric Plant, 2,400 ft upstream, and by a hydroelectric plant on Elkhart River at Goshen.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1,170	1,380	2,660	3,180	3,330	2,780	6,000	4,840	2,970	2,520	1,540	1,460
2	1,130	1,360	2,600	3,170	3,520	3,280	7,070	5,130	2,870	2,300	1,430	1,100
3	1,380	1,450	2,380	3,550	3,420	3,380	8,100	4,910	2,520	2,080	1,360	987
4	1,380	1,470	1,950	3,310	3,400	3,360	7,850	4,830	2,140	1,850	1,330	991
5	1,500	1,200	1,940	3,090	3,390	3,360	7,420	4,600	2,400	1,530	1,070	1,170
6	1,430	1,160	2,840	3,020	3,030	3,320	7,420	4,510	2,630	2,360	985	1,220
7	1,400	1,660	3,590	3,030	2,470	3,240	7,390	4,450	2,880	2,160	1,090	1,170
8	1,120	1,840	5,070	2,740	2,200	3,090	7,430	4,390	2,520	1,770	1,130	1,150
9	1,070	2,220	6,440	2,820	2,650	3,090	7,180	3,620	2,460	1,320	1,210	1,030
10	1,280	2,750	6,880	3,100	3,400	3,110	7,240	4,080	2,350	1,680	1,200	948
11	1,220	2,820	6,770	2,910	3,180	3,740	7,080	4,410	2,170	2,270	1,180	1,100
12	1,330	2,520	6,440	2,690	2,960	5,020	6,650	4,820	2,660	1,970	1,010	1,100
13	1,490	2,460	6,300	2,870	3,240	5,400	6,560	4,710	2,860	1,660	903	1,120
14	1,440	2,680	6,140	2,530	3,200	6,030	6,590	4,490	2,720	1,760	1,270	1,150
15	1,190	2,700	5,820	2,340	3,240	6,260	6,560	4,140	2,380	1,290	1,240	1,130
16	1,040	2,530	5,760	2,370	3,810	6,470	6,330	4,320	2,300	1,360	1,120	984
17	1,340	2,280	5,540	2,530	4,240	5,980	6,430	4,090	2,900	1,690	1,250	947
18	1,450	2,140	5,390	1,960	4,120	5,960	6,300	4,010	2,250	2,030	1,140	1,020
19	1,440	2,100	5,180	2,130	3,840	5,710	5,900	3,940	2,850	1,810	1,040	1,020
20	1,490	1,960	5,140	2,260	3,960	5,740	5,690	3,850	2,830	1,650	970	1,100
21	1,450	2,050	4,980	2,160	3,980	6,390	5,760	3,390	2,700	1,600	1,120	1,420
22	1,250	2,150	4,890	2,400	3,880	6,950	6,140	3,440	2,640	1,100	1,180	1,640
23	1,040	2,260	4,630	2,690	3,780	6,900	6,180	3,200	2,550	1,050	1,110	1,280
24	1,320	1,790	4,210	3,030	3,680	6,910	6,110	3,260	2,440	1,580	1,220	1,220
25	1,440	1,910	4,100	3,260	3,480	6,750	5,920	3,110	2,810	1,720	1,190	1,280
26	1,420	1,730	4,020	3,390	2,550	6,660	5,780	3,020	2,820	1,640	1,030	1,410
27	1,430	2,140	4,030	3,260	3,700	6,570	5,690	3,160	2,580	1,540	1,110	1,580
28	1,450	2,950	4,000	2,680	3,700	6,490	5,970	2,910	2,740	1,510	1,240	1,600
29	1,240	3,080	3,650	2,820	------	6,370	5,470	2,860	2,700	1,060	1,300	1,820
30	1,060	2,590	3,330	3,240	------	6,130	5,240	2,960	2,690	1,090	1,350	810
31	1,270	------	3,260	3,100	------	5,870	------	2,770	------	1,530	1,280	------
TOTAL	40,660	63,330	139,930	87,630	95,350	160,310	195,450	122,220	78,330	53,360	36,598	35,957
MEAN	1,312	2,111	4,514	2,827	3,405	5,171	6,515	3,943	2,611	1,721	1,181	1,199
MAX	1,500	3,080	6,880	3,550	4,240	6,950	8,100	5,130	2,970	2,520	1,540	1,820
MIN	1,040	1,160	1,940	1,960	2,200	2,780	5,240	2,770	2,140	1,050	903	810
CFSM	.39	.63	1.35	.85	1.02	1.55	1.95	1.18	.78	.52	.35	.36
IN.	.45	.71	1.56	.98	1.06	1.79	2.18	1.36	.87	.59	.41	.40

CAL YR 1966: TOTAL 1,123,268 MEAN 3,077 MAX 7,750 MIN 968 CFSM .92 IN 12.51
WAT YR 1967: TOTAL 1,109,125 MEAN 3,039 MAX 8,100 MIN 810 CFSM .91 IN 12.35

4-1015. St. Joseph River at Niles, Mich.

Location.--Lat 41°49'45", long 84°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.--3,666 sq mi.

Records available.--October 1930 to September 1967. Monthly discharge only for some periods, published in WSP 1307.

Gage.--Digital 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). July 1, 1931 to Nov. 20, 1962, graphic water-stage recorder at present site and datum. Since Oct. 1, 1943, auxiliary gage is headwater gage at hydroelectric plant at Buchanan Dam, 8 miles downstream.

Average discharge.--37 years, 3,040 cfs.

Extremes.--Maximum discharge during year, 9,860 cfs Apr. 3 (gage height, 7.92 ft); minimum daily discharge, 881 cfs Aug. 13. 1930-67: Maximum discharge, 20,200 cfs Apr. 5, 1950 (gage height, 13.10 ft); minimum daily, 420 cfs Aug. 30, 1931.

Remarks.--Records fair except those for periods of no gage-height record, which are poor. 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 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,600	1,500	2,640	3,500	3,600	3,000	6,460	5,390	3,000	2,520	1,660	1,580
2	1,040	1,500	2,940	3,500	3,800	3,500	8,120	5,520	3,190	2,510	1,810	1,660
3	1,540	1,600	2,550	4,000	3,700	3,600	9,530	5,050	2,630	2,260	1,450	1,250
4	1,510	1,600	2,130	3,500	3,700	3,700	9,080	5,050	2,490	2,040	1,420	1,210
5	1,390	1,300	2,600	3,260	3,700	3,700	8,180	4,860	2,500	1,790	1,310	1,210
6	1,910	1,300	2,790	3,300	3,200	3,600	7,950	4,490	2,580	2,200	1,260	1,300
7	1,510	1,800	4,380	3,300	2,700	3,600	7,890	4,570	3,180	2,170	1,520	1,510
8	1,350	2,000	5,500	3,010	2,400	3,300	7,730	4,600	2,810	2,290	1,380	1,310
9	1,000	2,500	7,000	3,080	3,000	3,400	7,760	3,970	2,600	1,420	1,240	1,170
10	2,000	3,000	7,500	3,400	3,700	3,500	7,010	4,050	2,610	1,770	1,270	1,107
11	1,470	2,900	7,500	3,200	3,500	4,000	7,310	4,600	2,430	2,450	1,340	1,220
12	1,290	2,650	7,000	2,690	3,300	5,000	7,070	4,780	2,540	1,950	1,250	1,320
13	1,660	2,430	7,000	3,000	2,500	6,000	6,680	4,800	2,730	2,060	881	1,280
14	1,600	2,260	6,500	2,800	3,500	6,500	7,110	4,590	2,960	2,230	1,260	1,260
15	1,400	2,950	6,500	2,500	3,500	7,000	6,570	4,290	2,770	1,680	1,340	1,230
16	1,100	2,720	6,500	2,600	4,200	7,000	6,890	4,350	2,520	1,620	1,350	1,170
17	1,400	2,430	6,000	2,800	4,700	6,500	6,660	4,120	2,770	1,460	1,340	1,080
18	1,500	1,750	6,000	2,100	4,500	6,500	6,840	3,990	2,690	2,020	1,260	1,170
19	1,600	2,610	5,500	2,300	4,200	6,000	6,510	3,970	2,530	1,960	1,670	1,110
20	1,600	1,860	5,500	2,500	4,300	6,000	5,630	4,030	3,280	1,820	1,010	1,290
21	1,600	1,950	5,500	2,400	4,300	7,260	5,960	4,040	3,220	1,610	1,470	2,040
22	1,400	2,040	5,500	2,700	4,200	7,900	6,520	3,340	2,870	1,940	1,110	1,440
23	1,200	2,400	5,000	3,000	4,100	8,040	6,800	3,240	2,590	1,060	1,230	1,690
24	1,400	2,090	4,500	3,500	4,000	7,590	6,490	3,320	2,850	1,580	1,350	1,410
25	1,500	1,600	4,500	3,600	3,700	7,450	6,210	3,440	2,700	1,810	1,300	1,130
26	1,600	2,230	4,500	3,700	2,800	7,070	6,050	3,110	2,940	1,950	1,530	1,670
27	1,600	2,430	4,500	3,500	4,000	6,960	5,750	3,220	2,480	1,420	1,300	1,680
28	1,600	2,970	4,500	3,000	4,000	7,060	5,670	3,260	2,240	1,740	1,460	1,980
29	1,400	3,300	4,000	3,200		6,790	5,200	2,830	2,630	1,820	1,480	2,730
30	1,200	2,800	3,500	3,500	- - - - -	6,510	5,390	3,010	2,580	994	1,600	2,670
31	1,400	- - - - -	3,500	3,500	- - - - -	5,270	- - - - -	2,920	- - - - -	1,600	1,480	- - - - -
Total	45,370	66,470	153,530	95,940	102,800	174,300	208,020	126,800	81,910	57,744	42,331	43,940
Mean	1,464	2,216	4,953	3,095	3,671	5,623	6,934	4,090	2,730	1,863	1,366	1,465
Max	2,000	3,300	7,500	4,000	4,700	8,040	9,530	5,520	3,280	2,520	1,810	2,730
Min	1,000	1,300	2,130	2,100	2,400	3,000	5,390	2,830	2,240	994	881	1,080
Cfsm	.40	.60	1.35	.84	1.00	1.53	1.89	1.12	.74	.51	.37	.40
In.	.46	.67	1.56	.97	1.04	1.77	2.11	1.29	.83	.59	.43	.45

Cal yr 1966: Total 1,208,707 Mean 3,312 Max 8,840 Min 581 Cfsm .90 In. 12.26
Wtr yr 1967: Total 1,199,155 Mean 3,285 Max 9,530 Min 881 Cfsm .90 In. 12.16

Note.--No gage-height record Jan. 13 to Mar. 20.

4-1780. St. Joseph River near Newville, Ind.

Location.--Lat 41°23'08", long 84°48'06", in Ohio, in SW¼ sec. 18, T. 5 N., R. 1 E., on left bank at bridge on Ohio State Highway 249, 6½ miles northwest of Hicksville, Ohio, and 3½ miles northeast of Newville.

Drainage area.--609 sq mi.

Records available.--October 1946 to September 1967. Monthly discharge only for some periods, published in WSP 1307.

Gage.--Digital water-stage recorder. Datum of gage 795.40 ft above mean sea level, datum of 1929. Prior to Oct. 22, 1947, wire-weight gage, Oct. 22, 1947 to Apr. 27, 1966, graphic water-stage recorder, at same site and datum.

Average discharge.--21 years, 488 cfs.

Extremes.--Maximum daily discharge during year, 4,750 cfs Dec. 10; maximum gage height, 14.58 ft Dec. 11; minimum, 16 cfs Sept. 14, 15 (gage height, 1.57 ft).
1946-67: Maximum discharge, 9,710 cfs Apr. 6, 1950 (gage height, 17.05 ft); minimum, 14 cfs Sept. 9, 10, 14-16, 1964; minimum gage height, 1.45 ft Sept. 30, 1953.

Remarks.--Record good except for periods of no gage-height record, which are fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	27	29	200	393	439	356	861	420	200	93	40	24
2	27	29	180	345	544	339	916	400	180	86	38	24
3	28	33	170	309	670	437	1,190	380	165	79	35	24
4	30	35	170	260	625	663	1,390	354	160	76	35	23
5	29	37	200	220	450	689	1,500	325	150	70	38	22
6	27	36	250	190	300	612	1,400	310	150	67	36	22
7	23	39	995	200	250	485	1,250	328	150	64	32	21
8	20	57	2,940	200	230	414	1,100	373	147	62	31	20
9	19	198	3,940	180	220	362	950	385	174	60	30	20
10	26	490	4,750	170	210	488	1,050	360	200	59	32	19
11	22	716	4,650	165	200	1,160	1,100	900	184	59	30	18
12	21	500	4,330	160	190	1,570	950	1,200	173	69	31	18
13	22	270	3,690	150	180	1,790	850	800	154	91	28	17
14	22	230	3,060	145	180	2,000	900	650	136	87	26	16
15	25	200	2,540	140	514	2,160	1,000	550	121	69	26	17
16	27	180	2,060	130	1,340	2,260	950	480	111	61	25	18
17	24	160	1,600	130	1,420	2,240	900	400	111	56	25	17
18	26	150	1,320	130	1,330	2,230	800	350	106	53	24	17
19	29	140	1,160	130	1,290	2,230	700	300	104	51	31	17
20	32	120	1,050	130	1,200	1,700	620	280	109	62	31	19
21	31	110	931	130	946	1,600	550	270	108	66	28	30
22	30	105	818	150	744	1,850	700	220	129	56	27	29
23	27	100	714	220	611	1,930	850	200	125	56	25	35
24	26	95	611	464	541	1,940	750	195	158	54	24	48
25	26	95	534	693	464	1,940	650	190	145	47	23	46
26	24	110	515	781	416	1,940	580	230	126	49	23	40
27	24	220	489	773	422	1,870	550	290	119	46	25	38
28	31	400	427	683	408	1,690	500	320	109	43	25	34
29	31	300	402	600	------	1,470	470	290	101	41	26	34
30	30	240	384	542	------	1,260	450	250	97	42	26	40
31	29	------	389	483	------	1,030	------	230	------	44	25	------
TOTAL	815	5,424	45,469	9,396	16,334	42,705	26,427	12,230	4,202	1,918	901	767
MEAN	26.3	181	1,467	303	583	1,378	881	395	140	61.9	29.1	25.6
MAX	32	716	4,750	781	1,420	2,260	1,500	1,200	200	93	40	48
MIN	19	29	170	130	180	339	450	190	97	41	23	16
CFSM	.04	.30	2.41	.50	.96	2.26	1.45	.65	.23	.10	.05	.04
IN.	.05	.33	2.78	.57	1.00	2.61	1.61	.75	.26	.12	.06	.05

CAL YR 1966: TOTAL 155,929 MEAN 427 MAX 4,750 MIN 19 CFSM .70 IN 9.52
WAT YR 1967: TOTAL 166,588 MEAN 456 MAX 4,750 MIN 16 CFSM .75 IN 10.17

Note.--No gage-height record Nov. 12 to Dec. 6, Apr. 5 to May 2, May 10 to June 7.

4-1790. St. Joseph River at Cedarville, Ind.

Location.--Lat 41°11'46", long 85°01'27", 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.--762 sq mi.

Records available.--January 1931 to May 1932, October 1955 to September 1967.

Gage.--Digital 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. Sept. 21, 1955 to Aug. 4, 1965, graphic water-stage recorder at present site and datum.

Average discharge.--12 years (1955-67), 539 cfs.

Extremes.--Maximum daily discharge during year, 6,000 cfs Dec. 11; maximum gage height, 16.22 ft Dec. 11 from inside tape reading; minimum daily, 15 cfs Sept. 22.
1931-32, 1955-67: Maximum discharge, 10,100 cfs May 1, 1956 (gage height, 1807 ft, from flood marks); minimum daily, 1.6 cfs May 22, 27, 1958.

Remarks.--Record good. Flow regulated by reservoir above station. Cedar Creek used as factor during periods of high flows.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	38	43	440	440	580	360	1,340	500	325	130	57	35
2	38	54	330	460	700	390	1,080	470	275	126	47	30
3	38	47	222	390	850	580	1,350	460	222	93	40	31
4	39	67	153	370	800	850	1,500	460	227	97	44	32
5	40	71	370	306	600	835	1,700	420	212	81	45	43
6	34	63	790	290	500	780	1,870	415	184	88	48	50
7	30	64	2,580	360	400	690	1,920	720	228	89	55	48
8	31	157	5,590	350	330	530	1,900	500	152	99	52	46
9	33	2,510	4,690	295	310	400	1,570	550	171	97	50	44
10	36	1,380	5,500	285	300	730	1,740	500	239	84	45	40
11	35	1,510	6,000	286	300	1,610	1,460	1,170	226	78	42	35
12	34	1,030	5,810	297	300	2,170	1,270	1,710	208	78	41	28
13	34	790	5,750	316	310	2,380	1,420	1,450	214	79	40	26
14	34	600	4,900	356	335	2,630	1,700	1,330	172	98	40	26
15	36	350	4,050	290	860	2,790	1,470	1,020	158	117	40	27
16	39	295	3,120	209	2,470	2,800	1,310	850	149	84	50	29
17	38	251	2,480	159	2,210	2,830	1,430	670	172	65	58	29
18	39	244	2,090	163	1,680	2,740	1,410	590	136	79	52	44
19	39	209	1,730	178	1,640	2,360	1,120	530	131	89	38	65
20	39	168	1,420	215	1,540	2,080	868	440	94	84	44	67
21	39	168	1,380	250	1,380	2,950	796	370	138	70	47	24
22	39	166	1,250	244	900	2,850	857	350	159	84	53	15
23	42	147	1,050	270	850	2,610	941	278	153	105	59	30
24	41	141	780	540	660	2,560	1,030	286	161	78	58	31
25	41	148	720	730	450	2,470	980	277	262	64	48	31
26	40	175	695	1,000	410	2,470	800	246	170	67	41	31
27	38	279	635	950	360	2,440	710	440	159	89	41	35
28	38	500	595	860	350	2,270	620	740	158	83	41	39
29	43	460	490	650	------	2,070	565	650	145	76	40	37
30	39	450	380	620	------	1,640	520	540	99	63	42	63
31	40	------	370	580	------	1,450	------	370	------	57	44	------
TOTAL	1,164	12,537	66,360	12,709	22,375	56,315	37,247	19,302	5,499	2,671	1,442	1,111
MEAN	37.5	418	2,141	410	799	1,817	1,242	623	183	86.2	46.5	37.0
MAX	43	2,510	6,000	1,000	2,470	2,950	1,920	1,710	325	130	59	67
MIN	30	43	153	159	300	360	520	246	94	57	38	15
CFSM	.05	.55	2.81	.54	1.05	2.38	1.63	.82	.24	.11	.06	.05
IN.	.06	.61	3.24	.62	1.09	2.75	1.82	.94	.27	.13	.07	.05

CAL YR 1966: TOTAL 220,828 MEAN 605 MAX 6,000 MIN 30 CFSM .79 IN 10.78
WAT YR 1967: TOTAL 238,732 MEAN 654 MAX 6,000 MIN 15 CFSM .86 IN 11.65

Note.--No gage height record Dec. 10, 11.

4-1795. Cedar Creek at Auburn, Ind.

Location.--Lat 41°21'57", long 85°03'08", in N½ sec. 32, T. 34 N., R. 13 E., on right bank, 15 ft downstream from Ninth Street Bridge in Auburn, and 2 miles upstream from John Diehl ditch.

Drainage area.--87.3 sq mi.

Records available.--July 1943 to September 1967.

Gage.--Water-stage recorder. Datum of gage is 847.14 ft above mean sea level (City of Auburn bench mark). 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.--24 years, 67.2 cfs.

Extremes.--Maximum discharge during year, 1,190 cfs Dec. 9 (gage height, 9.23 ft); minimum, 2.5 cfs Sept. 16, 17 (gage height, 0.84 ft).
1943-67: Maximum discharge, 1,520 cfs Apr. 5, 1950 (gage height, 9.90 ft) minimum, 0.5 cfs Nov. 12, 1953; minimum gage height, 0.57 ft Oct. 4, 1964.

Remarks.--Record good.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6.5	6.8	46	44	48	36	89	43	21	11	5.1	4.5
2	5.4	6.8	39	42	114	66	165	41	20	10	4.7	3.7
3	5.4	8.1	33	40	121	267	154	38	20	10	4.7	3.2
4	5.1	8.4	29	39	85	206	132	32	18	11	5.1	3.4
5	5.1	8.1	38	37	71	105	110	33	18	11	4.5	3.8
6	5.1	8.7	127	34	54	76	140	36	20	10	4.2	3.8
7	5.1	11	414	38	50	68	201	45	18	10	4.3	3.8
8	4.9	28	990	36	44	58	154	50	18	10	4.5	3.8
9	5.0	121	1,190	34	41	52	165	41	16	9.2	4.9	3.4
10	5.9	185	990	34	42	189	237	36	18	13	4.0	3.0
11	5.4	126	705	32	39	393	189	117	16	16	3.7	3.4
12	5.1	80	550	31	34	381	154	177	14	16	3.7	3.4
13	5.1	58	441	32	34	333	317	116	13	14	3.2	3.5
14	4.9	44	345	33	38	333	405	90	13	12	3.7	3.7
15	7.1	36	285	31	133	297	261	80	13	14	3.2	3.4
16	5.9	30	237	29	453	225	201	66	15	12	3.0	2.8
17	6.2	26	201	26	321	177	154	62	18	11	3.0	2.7
18	6.8	24	213	24	201	138	126	54	14	9.6	3.7	3.2
19	7.1	20	177	22	154	116	112	46	14	9.2	3.1	3.8
20	7.1	18	154	22	165	139	95	39	13	9.2	3.1	4.0
21	6.8	16	138	24	126	429	105	36	16	6.8	3.1	4.9
22	6.2	16	121	32	95	429	126	32	14	6.3	3.1	4.7
23	5.4	16	105	80	76	345	105	28	13	5.8	3.1	4.0
24	6.2	14	90	85	58	261	100	30	16	5.8	3.2	3.5
25	6.5	16	80	95	50	213	90	28	16	5.6	3.4	4.2
26	6.8	16	71	85	45	189	80	28	13	9.3	3.8	4.0
27	7.1	44	62	76	44	154	66	27	12	9.6	4.2	5.1
28	6.8	72	58	62	44	138	52	26	14	9.0	4.5	5.4
29	6.5	58	58	53		116	44	26	14	7.0	4.3	6.1
30	5.4	49	48	48	- - - - -	100	44	24	12	5.6	4.7	5.6
31	6.5	- - - - -	44	45	- - - - -	85	- - - - -	22	- - - - -	5.2	4.5	- - - - -
Total	184.4	1,170.9	8,079	1,345	2,780	6,114	4,373	1,549	470	304.2	121.3	117.8
Mean	5.95	39.0	261	43.4	99.3	197	146	50.0	15.7	9.81	3.91	3.93
Max	7.1	185	1,190	95	453	429	405	177	21	16	5.1	6.1
Min	4.9	6.8	29	22	34	36	44	22	12	5.2	3.0	2.7
Cfsm	0.068	0.447	2.99	0.497	1.14	2.26	1.67	0.573	0.180	0.112	0.045	0.045
In.	0.08	0.50	3.45	0.57	1.19	2.61	1.86	0.66	0.20	0.13	0.05	0.05

Cal yr 1966 : Total 23,918.0 Mean 65.5 Max 1,190 Min 4.9 Cfsm 0.750 In. 10.19
Wtr yr 1967 : Total 26,608.6 Mean 72.9 Max 1,190 Min 2.7 Cfsm 0.835 In. 11.35

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1200	9.23	1,190				

4-1800. Cedar Creek near Cedarville, Ind.

Location.--Lat 41°13'08", long 85°04'35", in NW¼ sec. 19, T. 32 N., R. 13 E., on left bank at downstream side of bridge on State Highway 427, 3 miles northwest of Cedarville, 5.8 miles upstream from mouth, and 10 miles south of Auburn.

Drainage area.--270 sq mi.

Records available.--October 1946 to September 1967.

Gage.--Digital 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. Prior to Apr. 20, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--21 years, 230 cfs.

Extremes.--Maximum discharge during year, 4,590 cfs Dec. 9 (gage height, 11.47); minimum discharge, 20 cfs Oct. 31, Nov. 1, Sept. 17, 18; minimum gage height, 1.27 ft Sept. 17, 18.
1946-67 Maximum discharge, 4,870 cfs Apr. 5, 1950 (gage height, 11.67 ft); minimum, 12 cfs Oct. 3, 1949; minimum gage height, 1.22 ft Sept. 7, 8, 9, 1964.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	24	22	200	150	144	125	283	151	110	51	33	26
2	24	24	165	144	342	136	490	143	101	47	32	25
3	22	28	132	137	457	251	483	131	94	45	33	24
4	22	27	115	130	324	480	401	119	83	48	32	23
5	23	29	148	125	249	319	340	113	73	44	31	23
6	23	29	432	117	200	240	310	128	75	43	29	25
7	23	33	1,200	128	170	197	308	208	79	42	28	25
8	24	69	3,280	128	150	169	278	242	73	42	30	25
9	24	550	4,460	115	135	155	262	205	69	40	31	25
10	25	669	4,050	111	120	312	439	167	67	41	30	24
11	29	536	2,920	105	110	1,130	371	633	64	54	29	22
12	29	333	2,070	102	110	1,350	292	838	59	54	28	23
13	30	230	1,480	104	115	1,090	333	494	57	46	26	24
14	33	172	1,090	109	116	1,080	718	366	54	43	25	24
15	35	139	818	106	347	891	604	350	52	41	27	24
16	42	117	674	91	1,440	666	466	328	51	39	27	24
17	33	104	582	88	1,320	534	370	273	72	36	27	22
18	34	92	577	84	700	431	294	234	69	38	26	21
19	36	81	506	80	494	366	231	208	58	39	38	22
20	33	72	448	78	499	400	202	180	56	46	39	25
21	31	67	403	79	413	1,320	214	159	54	42	29	29
22	29	66	372	84	326	1,570	303	149	83	39	28	32
23	27	62	332	141	265	1,080	249	139	61	37	27	26
24	25	61	292	212	218	775	221	141	58	36	26	24
25	25	61	257	227	180	642	210	136	133	48	26	22
26	25	60	228	239	160	558	196	135	97	38	28	24
27	25	141	206	213	150	485	181	137	72	47	34	26
28	24	357	197	187	148	427	163	133	64	44	33	32
29	23	276	191	158	------	370	157	136	63	41	29	28
30	22	210	167	144	------	322	152	130	56	36	29	31
31	21	------	155	136	------	286	------	119	------	34	28	------
TOTAL	845	4,717	28,147	4,052	9,402	18,157	9,521	7,025	2,157	1,321	918	750
MEAN	27.3	157	908	131	336	586	317	227	71.9	42.6	29.6	25.0
MAX	42	669	4,460	239	1,440	1,570	718	838	133	54	39	32
MIN	21	22	115	78	110	125	152	113	51	34	25	21
CFSM	.10	.58	3.36	.48	1.24	2.17	1.18	.84	.27	.16	.11	.09
IN.	.12	.65	3.88	.56	1.30	2.50	1.31	.97	.30	.18	.13	.10

CAL YR 1966: TOTAL 78,149 MEAN 214 MAX 4,460 MIN 20 CFSM .79 IN 10.76
WAT YR 1967: TOTAL 87,012 MEAN 238 MAX 4,460 MIN 21 CFSM .88 IN 11.99

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1645	11.47	4,590				

4-1815. St. Marys River at Decatur, Ind.

Location.--Lat 40°50'55", long 84°56'16", 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 upstream from Holthouse ditch, and 1.3 miles north of Decatur.

Drainage area.--621 sq mi.

Records available.--October 1946 to September 1967. 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.--Digital 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, July 27, 1948 to Apr. 30, 1964, graphic water-stage recorder, at same site and datum.

Average discharge.--21 years, 479 cfs.

Extremes.--Maximum discharge during year, 5,910 cfs Dec. 11 (gage height, 21.92 ft); minimum, 11 cfs Sept. 13, 14, 18; minimum gage height, 1.87 ft Oct. 2, 14, 15.
1946-67: Maximum discharge, 11,300 cfs Feb. 10, 11, 1959; maximum gage height, 24.22 ft Feb. 10, 1959 (ice jam); minimum discharge, 4.7 cfs Oct. 19, 1960; minimum gage height, 1.73 ft Sept. 12, 1955.

Remarks.--Record good. Flow regulated by Grand Lake Reservoir. Slight diversion from or into Wabash River and into Miami and Erie Canal.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	17	13	439	105	1,580	126	2,770	183	88	99	17	18
2	13	14	392	103	2,710	129	2,260	191	80	72	17	19
3	17	17	326	100	2,840	235	1,500	190	77	71	19	19
4	17	20	313	93	2,120	506	922	161	75	89	21	19
5	16	23	514	89	1,470	403	675	148	71	82	23	20
6	16	23	1,250	75	800	707	936	190	67	68	22	17
7	15	140	2,210	91	550	789	1,330	1,280	63	56	20	16
8	15	333	3,410	101	450	638	1,440	2,180	60	47	18	15
9	17	402	4,600	84	400	626	1,050	1,710	56	42	17	16
10	19	706	5,270	78	350	1,300	1,160	1,420	53	41	16	14
11	15	604	5,850	71	320	2,720	1,050	2,390	54	42	15	12
12	14	352	5,640	66	300	3,100	829	3,110	49	39	14	12
13	14	275	4,910	61	292	2,890	840	2,900	46	34	13	11
14	13	238	3,930	62	291	2,760	1,510	2,350	43	29	13	12
15	17	200	3,020	60	1,080	2,710	947	1,900	40	26	13	12
16	14	150	2,080	53	2,000	2,310	637	1,630	36	24	14	13
17	17	107	1,300	48	1,140	1,910	564	1,270	33	25	14	12
18	16	78	903	45	586	1,590	483	830	32	23	15	12
19	15	60	665	42	570	1,260	380	615	34	22	23	14
20	15	48	537	40	470	1,190	299	489	34	35	21	16
21	15	42	428	42	400	2,800	254	389	37	182	20	19
22	14	37	337	47	340	2,900	662	321	42	138	18	15
23	13	35	270	65	304	2,290	492	259	53	78	17	14
24	14	31	227	75	250	1,850	328	202	64	51	17	13
25	14	32	180	102	210	1,700	323	163	69	37	20	12
26	13	31	143	169	170	1,400	305	151	76	28	24	12
27	13	225	138	1,560	156	1,010	284	159	88	23	25	15
28	13	446	147	2,080	136	2,580	242	130	94	20	21	15
29	13	301	140	1,380	------	3,640	211	125	163	18	19	17
30	13	341	121	880	------	3,440	194	113	171	17	17	18
31	13	------	115	926	------	3,060	------	98	------	17	17	------
TOTAL	460	5,324	49,805	8,793	22,285	54,569	24,877	27,247	1,948	1,575	560	449
MEAN	14.8	177	1,607	284	796	1,760	829	879	64.9	50.8	18.1	15.0
MAX	19	706	5,850	2,080	2,840	3,640	2,770	3,110	171	182	25	20
MIN	13	13	115	40	136	126	194	98	32	17	13	11
CFSM	.02	.29	2.59	.46	1.28	2.83	1.34	1.42	.10	.08	.03	.02
IN.	.03	.32	2.98	.53	1.33	3.27	1.49	1.63	.12	.09	.03	.03

CAL YR 1966: TOTAL 102,388 MEAN 281 MAX 5,850 MIN 12 CFSM .45 IN 6.13
WAT YR 1967: TOTAL 197,892 MEAN 542 MAX 5,850 MIN 11 CFSM .87 IN 11.85

Peak discharge (base, 2,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-11	1500	21.92	5,910	3-29	1515	18.68	3,710
2-2	2345	16.96	3,020	5-12	1715	17.36	3,160
3-12	1145	17.26	3,130				

4-1820. St. Marys River near Fort Wayne, Ind.

Location.--Lat 40°59'16", long 85°06'03", in NE¼ sec. 12, T. 29 N., R. 12 E., on left bank, 130 ft downstream from highway bridge, 5 miles south of Fort Wayne, and 10.8 miles upstream from confluence with St. Joseph River.

Drainage area.--762 sq mi.

Records available.--October 1930 to September 1967. 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.--Digital water-stage recorder. Datum of gage is 748.97 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission, revised). Prior to Apr. 13, 1939, chain gage on highway bridge at same datum. Prior to July 6, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--37 years, 543 cfs.

Extremes.--Maximum discharge during year, 7,810 cfs Dec. 12 (gage height, 15.29 ft); minimum discharge, 12 cfs Oct. 4, 16, 17 (gage height, 0.61 ft.)
1930-67: 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.--Record good. The flow is sometimes regulated by Grand Lake. There is slight diversion from or into Wabash River basin and into Miami and Erie Canal. Records of water temperatures and suspended sediment loads for the water year 1967 are published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	21	15	613	164	1,380	185	3,510	234	114	171	22	20
2	18	16	577	147	3,430	194	3,030	234	102	105	22	20
3	14	19	463	120	3,930	278	2,130	240	93	78	21	20
4	12	18	578	113	3,150	697	1,270	214	88	85	22	21
5	14	27	715	108	1,930	600	905	186	86	95	22	21
6	14	24	1,700	116	1,280	745	954	213	81	87	23	21
7	14	52	3,290	147	850	1,100	1,360	1,220	78	74	24	21
8	14	318	5,020	175	650	720	1,720	2,660	73	61	22	19
9	14	814	6,210	135	580	720	1,320	2,390	79	51	21	19
10	15	1,620	7,140	118	540	1,340	1,840	1,620	198	45	19	19
11	18	1,350	7,570	106	500	3,090	1,390	2,570	109	44	18	19
12	17	697	7,740	97	460	3,820	1,100	3,490	78	44	17	17
13	16	445	7,230	92	437	3,790	1,030	3,640	65	41	17	16
14	16	347	6,040	86	429	3,600	1,840	3,180	58	36	16	15
15	17	293	4,730	85	1,450	3,430	1,450	2,510	52	32	15	15
16	14	243	3,370	83	2,890	3,090	912	2,020	47	28	16	15
17	15	182	1,970	80	1,960	2,490	736	1,650	43	28	16	16
18	18	135	1,310	76	940	1,980	638	1,150	39	35	17	16
19	20	103	980	76	702	1,560	515	834	38	31	19	15
20	19	82	778	70	620	1,540	405	649	38	26	22	18
21	18	70	628	68	550	3,730	337	517	39	52	25	20
22	17	62	497	70	460	3,570	761	420	41	154	23	20
23	17	56	392	80	408	3,270	873	347	45	141	21	22
24	15	52	321	100	350	2,400	486	280	58	86	19	18
25	14	51	270	140	280	2,050	415	228	75	76	18	16
26	15	51	250	213	230	1,750	390	191	76	47	18	15
27	15	167	222	1,420	200	1,360	366	189	84	36	20	14
28	14	781	242	2,420	185	2,640	315	177	99	31	23	14
29	14	561	240	1,840	------	4,050	272	186	116	26	24	16
30	15	461	218	1,070	------	4,290	251	166	210	24	24	16
31	15	------	188	910	------	3,990	------	135	------	23	22	------
TOTAL	489	9,132	71,492	10,525	30,771	68,069	32,521	33,740	2,402	1,937	628	534
MEAN	15.8	304	2,306	340	1,099	2,196	1,084	1,088	80.1	62.5	20.3	17.8
MAX	21	1,620	7,740	2,420	3,930	4,290	3,510	3,640	210	194	25	22
MIN	12	15	188	68	185	185	251	135	38	23	15	14
CFSM	.02	.40	3.03	.45	1.44	2.88	1.42	1.43	.11	.08	.03	.02
IN.	.02	.45	3.49	.51	1.50	3.32	1.59	1.65	.12	.09	.03	.03

CAL YR 1966: TOTAL 137,932 MEAN 378 MAX 7,740 MIN 12 CFSM .50 IN 6.73
WAT YR 1967: TOTAL 262,240 MEAN 718 MAX 7,740 MIN 12 CFSM .94 IN 12.80

Peak discharge (base, 4,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-12	1045	15.29	7,810				
2-2	2400	11.15	4,140				

4-1825.90 Harber ditch at Fort Wayne, Ind.

Location.--Lat 41°00'27", long 85°10'58", in SW¼ sec. 33, T. 30 N., R. 12 E., at Ft. Wayne city limits, on left bank 50 ft upstream from State Highway 3 bridge and 3.2 miles upstream from mouth. The stream name changes to Fairfield ditch 3,850 ft downstream at bridge on lower Huntington Road.

Drainage area.--21.9 sq mi.

Records available.--May 1964 to September 1967. Discharge measurements available October 1960 to May 1964 and gage heights January 1961 to May 1964 at site 3,850 ft downstream.

Gage.--Water-stage recorder. Datum of gage is 757.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 702 cfs Dec. 7 (gage height, 11.22 ft); minimum daily, 0.2 cfs July 16, 23, Aug. 6, Sept. 4. 1964-67: Maximum discharge, 702 cfs Dec. 7, 1966 (gage height, 11.22 ft); minimum, 0.1 cfs Sept. 7, 1964, several days in Oct., Nov., 1964; minimum gage height, 1.59 ft Nov. 1, 1964.

Remarks.--Record good except those for the winter period or no gage-height record, which are poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.3	0.4	38	4.0	36	4.5	24	5.6	3.6	0.7	0.4	0.4
2	.3	.4	21	3.5	251	5.0	17	5.1	2.0	2.2	.6	.3
3	.3	.5	14	3.0	105	9.0	12	3.2	2.0	2.4	.9	.3
4	.3	.6	13	2.8	45	13	10	2.6	1.7	2.2	.5	.2
5	.3	.8	59	2.7	29	9.5	12	2.2	1.6	.8	.4	.4
6	.3	.9	153	2.8	20	18	12	10	1.6	.7	.2	.8
7	.3	27	380	23	11	21	19	122	1.6	.5	.5	.5
8	.3	28	475	10	10	16	14	83	1.4	.4	.6	.9
9	.3	150	326	7.6	9.0	16	13	36	7.3	.4	1.3	.6
10	.3	254	249	4.8	8.2	50	148	16	82	.5	.8	.5
11	.3	119	147	3.5	7.5	160	45	144	21	.5	1.0	.3
12	.4	52	87	2.8	7.0	140	22	60	9.5	.4	.8	.6
13	.4	28	54	3.0	6.8	100	52	26	5.8	.5	.5	.7
14	.4	20	34	2.8	30	75	70	19	4.1	.4	.4	.6
15	.5	14	23	2.2	170	57	45	23	3.6	.3	.6	.7
16	.7	12	22	1.9	300	38	23	21	3.4	.2	.9	.8
17	.5	10	22	1.7	210	31	17	16	2.2	.3	.6	.5
18	.4	8.7	22	1.7	150	29	12	13	1.7	.4	.5	.6
19	.4	7.1	19	1.8	90	27	9.5	10	1.4	.9	2.6	.9
20	.4	6.3	17	1.9	52	65	8.4	7.6	1.4	.8	.6	1.4
21	.4	6.1	14	2.1	35	350	10	6.1	1.7	.5	.4	1.6
22	.4	5.6	12	2.5	22	300	19	5.8	1.7	.3	.5	.8
23	.4	5.1	11	3.5	13	200	12	5.3	1.6	.2	.5	.4
24	.4	4.8	10	5.6	9.0	100	9.5	4.8	2.8	.5	.5	.3
25	.4	6.1	9.0	12	6.5	65	7.6	4.1	3.0	6.6	.7	.6
26	.4	5.6	8.0	23	5.5	45	7.4	3.4	.8	1.0	2.2	1.2
27	.4	51	7.6	132	4.8	30	6.6	3.0	.8	.5	1.7	3.2
28	.4	82	7.0	62	4.5	120	5.3	3.9	2.6	.9	.6	1.2
29	.4	38	6.0	27		130	4.8	15	1.4	.4	.5	.9
30	.4	31	5.0	20	- - - - -	65	5.6	4.8	.9	.3	1.2	.6
31	.4	- - - - -	4.6	20	- - - - -	45	- - - - -	3.2	- - - - -	2.1	.7	- - - - -
Total	11.8	975.0	2,269.2	397.2	1,647.8	2,334	672.7	684.7	176.2	28.8	24.2	22.8
Mean	0.38	32.5	73.2	12.8	58.8	75.3	22.4	22.1	5.87	0.93	0.78	0.76
Max	0.7	254	475	132	300	350	148	144	82	6.6	2.6	3.2
Min	0.3	0.4	4.6	1.7	4.5	4.5	4.8	2.2	0.8	0.2	0.2	0.2
Cfsm	0.017	1.48	3.34	0.584	2.68	3.44	1.02	1.01	0.268	0.042	0.036	0.035
In.	0.02	1.65	3.85	0.67	2.79	3.97	1.14	1.16	0.30	0.05	0.04	0.04

Cal yr 1966: Total 5,659.2 Mean 15.6 Max 475 Min 0.3 Cfsm 0.712 In. 9.60
Wtr yr 1967: Total 9,244.4 Mean 25.3 Max 475 Min 0.2 Cfsm 1.16 In. 15.68

Peak discharge (base, 250 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
11-10	1230	8.10	352	2-15	Unknown	9.22	440
12-7	2400	11.22	702	3-21	Unknown	9.50	470
2-2	0700	8.04	345				

4-1830. Maumee River at New Haven, Ind.

Location.--Lat 41°05'06", long 85°01'19", in SE¼NE¼ sec. 2, T. 30 N., R. 13 E., on left bank 600 ft upstream from a new county bridge on Landin Road, 1400 ft upstream from the Wabash Railroad bridge, 3/4 mile north of New Haven in Allen County, 2.8 miles upstream from Sixmile Creek, and 5.8 miles downstream from the gaging station on the Maumee River at Anthony Boulevard in Ft. Wayne.

Drainage area.--1,966 sq mi.

Records available.--December 1946 to September 1956 (high-water records only), October 1956 to September 1967.

Gage.--Digital 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, Sept. 7, 1956 to May 1, 1964, graphic water-stage recorder, and May 1, 1964 to Sept. 14, 1965, digital water-stage recorder, at site 500 ft downstream at same datum.

Average discharge.--11 years (1956-67), 1,393 cfs.

Extremes.--Maximum discharge during year, 17,700 cfs Dec. 10 (gage height, 21.26 ft); minimum daily, 71 cfs Aug. 13.
1946-67: Maximum discharge, 19,100 cfs Feb. 16, 1950 (gage height, 21.4 ft at site in use);
1956-67: Minimum daily discharge, 48 cfs Oct. 6, 13, 1963.

Remarks.--Record good. Flow regulated at low stage by powerplant above station. Flow slightly regulated by upstream reservoirs.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	89	119	1,450	785	2,180	772	5,430	955	574	355	126	102
2	124	99	1,340	852	5,100	796	5,010	932	503	357	131	102
3	86	103	981	774	6,320	1,050	4,410	874	497	228	128	82
4	85	123	607	664	5,130	1,780	3,520	855	401	282	130	80
5	101	152	1,240	641	3,750	2,010	3,120	804	445	256	116	94
6	82	157	3,130	549	2,330	1,790	3,170	960	363	238	110	100
7	83	235	7,260	808	1,450	1,970	3,600	2,520	408	245	111	100
8	82	549	15,600	764	1,480	1,850	3,960	4,070	414	240	113	99
9	81	5,050	17,100	647	1,630	1,530	3,540	3,710	370	232	105	101
10	125	5,190	17,600	539	1,670	2,330	4,500	2,810	634	266	90	99
11	115	4,270	17,300	518	1,440	5,780	3,780	4,990	573	252	106	102
12	86	2,720	16,200	506	1,050	7,500	2,940	6,470	428	221	80	94
13	97	1,880	15,300	517	934	7,660	3,030	6,030	382	215	71	92
14	109	1,450	13,800	547	1,040	7,560	4,520	5,390	359	212	75	89
15	179	1,000	11,400	540	2,870	7,390	4,270	4,400	324	249	80	88
16	115	868	8,640	411	7,510	6,850	3,190	3,610	310	214	83	85
17	90	791	5,830	350	6,590	6,050	2,750	3,020	373	175	84	80
18	100	477	4,350	256	4,110	5,260	2,540	2,320	307	151	89	84
19	96	493	3,740	313	3,180	4,460	2,150	1,830	287	258	180	91
20	114	363	2,870	347	2,990	4,420	1,710	1,430	236	205	132	95
21	88	310	2,720	363	2,820	8,500	1,720	1,140	239	190	99	127
22	87	338	2,440	401	2,130	9,080	2,560	985	298	231	109	139
23	103	300	2,050	434	1,660	7,970	2,440	854	292	347	100	92
24	84	254	1,800	687	1,280	6,350	1,950	889	365	270	87	87
25	159	306	1,410	1,160	912	5,410	1,750	701	741	291	84	87
26	113	300	1,280	1,590	832	4,960	1,540	570	376	202	127	89
27	85	1,030	1,130	2,680	959	4,460	1,440	479	375	214	203	110
28	82	1,930	1,160	3,850	917	5,000	1,210	1,100	344	182	127	102
29	79	1,640	1,090	3,330	------	6,530	1,090	1,100	326	175	116	94
30	77	1,370	809	2,260	------	6,490	998	966	322	146	108	107
31	257	------	801	1,900	------	6,060	------	680	------	139	119	------
TOTAL	3,253	33,867	182,428	29,983	74,264	149,618	87,838	67,444	11,866	7,280	3,419	2,893
MEAN	105	1,129	5,885	967	2,652	4,826	2,928	2,176	396	235	110	96.4
MAX	257	5,190	17,600	3,850	7,510	9,080	5,430	6,470	741	357	203	139
MIN	77	99	607	256	832	772	998	479	236	139	71	80
CFSM	.05	.57	2.99	.49	1.35	2.45	1.49	1.11	.20	.12	.06	.05
IN.	.06	.64	3.45	.57	1.40	2.83	1.66	1.28	.22	.14	.06	.05

CAL YR 1966: TOTAL 493,774 MEAN 1,353 MAX 17,600 MIN 77 CFSM .69 IN 9.34
WAT YR 1967: TOTAL 654,153 MEAN 1,792 MAX 17,600 MIN 71 CFSM .91 IN 12.37

Peak discharge (base, 9,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-10	2115	21.26	17,700				

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.--2,128 sq mi.

Records available.--September 1921 to December 1935, April 1939 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 694.90 ft above mean sea level, datum of 1929, supplementary adjustment of 1951. Prior to Sept. 13, 1925, chain gage at site 400 ft upstream at same datum. Sept. 13, 1925, to Dec. 30, 1935 and Apr. 1, 1939, to Mar. 30, 1965, graphic water-stage recorder at present site and datum.

Average discharge.--42 years, 1,625 cfs.

Extremes.--Maximum discharge during year, 19,000 cfs Dec. 9 (gage height, 18.54 ft); minimum, 73 cfs Sept. 19, 20 (gage height, 0.63 ft).
1921-35, 1939-67: 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. Low flow slightly regulated by powerplant at Fort Wayne, Ind. Flow slightly regulated by upstream reservoirs.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	124	221	1,500	890	1,880	993	5,950	1,100	689	373	136	130
2	108	181	1,500	863	4,260	839	5,560	1,060	585	392	147	108
3	139	154	1,250	899	6,990	990	5,000	996	525	380	126	116
4	114	128	960	790	5,230	1,460	4,030	948	503	275	137	93
5	95	147	840	731	4,620	1,950	3,240	917	409	307	119	80
6	110	204	2,440	681	3,040	1,820	3,090	960	456	275	126	80
7	102	230	7,150	689	1,960	1,770	3,530	1,610	381	248	109	105
8	93	381	15,600	945	1,600	1,870	3,880	4,160	420	247	112	101
9	93	3,470	18,800	801	1,710	1,620	3,940	4,130	418	239	117	103
10	96	5,640	18,800	709	1,760	1,750	4,540	3,260	455	222	129	102
11	132	5,850	18,600	620	1,570	5,440	4,650	4,480	708	248	110	106
12	145	3,560	17,700	632	1,280	7,770	3,350	7,110	553	242	119	101
13	112	2,210	16,700	578	1,050	8,260	2,780	6,720	428	204	115	100
14	100	1,620	15,800	592	963	8,200	4,320	6,040	385	189	92	94
15	145	1,280	14,100	550	2,010	8,010	5,040	5,150	342	194	84	91
16	194	960	11,100	450	7,870	7,530	3,870	4,120	312	219	90	87
17	186	910	7,630	350	7,890	6,820	2,930	3,330	336	205	91	85
18	110	745	5,470	290	5,600	5,960	2,660	2,620	369	176	90	82
19	126	520	4,420	290	3,600	5,090	2,300	2,040	308	195	102	74
20	118	516	3,390	310	3,160	4,570	1,870	1,660	286	252	176	83
21	139	407	2,910	330	3,040	8,500	1,660	1,360	246	221	204	94
22	114	374	2,610	360	2,480	9,900	2,660	1,160	246	188	136	110
23	100	374	2,240	400	1,840	9,140	2,740	1,040	303	208	121	168
24	118	343	1,930	460	1,580	7,520	2,240	903	303	320	134	108
25	104	314	1,600	700	962	6,220	1,850	952	588	286	120	91
26	152	357	1,410	1,350	1,100	5,530	1,710	770	717	293	110	84
27	179	730	1,270	2,180	1,100	5,020	1,570	544	430	227	149	89
28	108	1,890	1,100	3,700	1,150	4,890	1,430	718	419	222	244	98
29	91	1,980	1,100	3,760		6,480	1,260	1,220	415	197	152	140
30	89	1,560	1,000	2,670	- - - - -	6,880	1,170	1,120	380	193	147	108
31	83	- - - - -	880	1,950	- - - - -	6,610	- - - - -	953	- - - - -	162	120	- - - - -
Total	3,719	38,256	201,800	30,520	82,295	159,402	94,820	73,151	12,915	7,599	3,964	3,011
Mean	120	1,275	6,510	985	2,939	5,142	3,161	2,360	431	245	128	100
Max	194	6,640	18,800	3,760	7,890	9,900	5,950	7,110	717	392	244	168
Min	83	128	840	290	962	839	1,170	544	246	162	84	74
Cfsm	.06	.60	3.06	.46	1.38	2.42	1.49	1.11	.20	.12	.06	.05
In.	.06	.67	3.53	.53	1.44	2.79	1.66	1.28	.23	.13	.07	.05

Cal yr 1966: Total 524,890 Mean 1,438 Max 18,800 Min 83 Cfsm .68 In. 9.17
Wtr yr 1967: Total 711,452 Mean 1,949 Max 18,800 Min 74 Cfsm .92 In. 12.43

Peak discharge (base, 8,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	1300	18.54	19,000				
2-16	1800	11.82	8,600				
3-13	1200	11.56	8,320				
3-22	0700	13.01	10,000				

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 1967.

Gage.--Digital 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, and June 27, 1956 to Dec. 13, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--16 years, 141 cfs.

Extremes.--Maximum discharge during year, 617 cfs Dec. 9 (gage height, 8.93 ft); minimum, 59 cfs Aug. 18 (gage height, 2.55 ft).
1951-67: Maximum discharge, 686 cfs Oct. 10, 1954; maximum gage height, 8.93 ft Dec. 9, 1966; minimum discharge, 44 cfs Sept. 9, 10, 1964; minimum gage height, 1.60 ft Aug. 19, 1957.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	88	78	212	144	153	145	289	277	129	144	90	91
2	87	77	194	142	163	145	463	368	135	140	87	100
3	87	80	180	141	163	145	465	326	141	138	82	90
4	90	79	169	138	165	145	428	288	138	134	78	85
5	89	81	193	137	163	145	385	267	137	129	76	82
6	88	87	288	135	155	145	350	259	139	127	77	81
7	89	103	492	144	157	152	316	251	144	115	84	81
8	88	114	580	145	146	150	288	238	150	112	74	80
9	90	188	613	138	146	147	277	221	141	120	76	80
10	94	274	584	136	147	162	262	209	166	123	73	78
11	94	242	532	133	144	263	245	257	235	120	69	78
12	94	201	473	134	138	321	231	266	187	108	70	77
13	98	177	413	130	139	357	238	238	193	102	69	77
14	102	164	365	125	141	411	262	219	276	103	67	77
15	114	153	325	125	168	407	267	210	226	101	68	76
16	118	147	301	120	287	358	255	197	205	101	70	75
17	111	141	282	120	282	331	302	191	255	102	68	75
18	108	135	266	115	249	303	300	187	232	106	63	75
19	104	129	249	115	225	284	261	180	204	105	110	77
20	101	127	236	115	218	300	240	170	187	96	115	79
21	97	124	222	115	208	438	245	166	181	93	99	93
22	95	123	208	128	199	461	379	164	193	91	94	106
23	91	121	196	145	189	442	348	163	176	106	90	98
24	87	119	188	161	161	415	312	165	169	100	86	94
25	84	122	177	178	155	387	291	162	185	91	80	91
26	81	121	167	173	150	357	273	158	168	102	77	90
27	81	152	159	180	145	336	258	154	159	114	99	94
28	80	250	157	139	145	314	239	155	161	107	100	99
29	79	233	156	138	------	289	240	157	160	82	88	98
30	78	218	147	143	------	268	288	152	151	87	84	106
31	79	------	143	147	------	249	------	138	------	89	90	------
TOTAL	2,866	4,360	8,867	4,279	4,901	8,772	8,997	6,553	5,323	3,388	2,553	2,583
MEAN	92.5	145	286	138	175	283	300	211	177	109	82.4	86.1
MAX	118	274	613	180	287	461	465	368	276	144	115	106
MIN	78	77	143	115	138	145	231	138	129	82	63	75
CFSM	.61	.96	1.88	.91	1.15	1.86	1.97	1.39	1.17	.72	.54	.57
IN.	.70	1.07	2.17	1.05	1.20	2.15	2.20	1.60	1.30	.83	.62	.63

CAL YR 1966: TOTAL 63,113 MEAN 173 MAX 613 MIN 66 CFSM 1.14 IN 15.44
WAT YR 1967: TOTAL 63,442 MEAN 174 MAX 613 MIN 63 CFSM 1.14 IN 15.52

5-5155. Kankakee River at Davis, Ind.

Location.--Lat 41°24'00", long 86°42'04", 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 1967. Monthly discharge only for some periods, published in WSP 1308.

Gage.--Digital 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 one half of a mile downstream at different datum. Apr. 19, 1931 to Mar. 11, 1942, chain gage, Mar. 12, 1942 to Nov. 3, 1953, wire-weight gage, and Nov. 4, 1953 to Apr. 5, 1966, graphic water-stage recorder, all at present site and datum.

Average discharge.--43 years (1924-67), 479 cfs.

Extremes.--Maximum discharge during year, 1,140 cfs Dec. 13, 14 (gage height, 11.64 ft); minimum, 246 cfs Sept. 18, (gage height, 5.62 ft).

1905-6, 1924-29, 1931-67: 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.--Record fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	313	299	610	673	556	560	946	926	532	471	322	297
2	309	300	600	654	580	570	1,010	947	519	458	319	296
3	307	304	580	640	594	570	1,090	955	513	456	312	294
4	305	311	560	600	596	580	1,120	950	504	448	307	284
5	305	324	650	580	594	580	1,090	937	496	437	298	277
6	307	328	750	570	570	580	1,070	922	494	426	292	272
7	307	338	880	550	569	583	1,070	907	494	419	296	269
8	304	354	1,000	540	568	566	1,060	890	497	408	293	267
9	304	516	1,090	520	552	554	1,040	865	499	406	291	266
10	317	708	1,120	510	546	580	1,030	842	492	414	288	262
11	318	719	1,130	500	539	713	998	853	515	419	281	260
12	320	674	1,130	490	523	817	976	883	542	409	273	259
13	324	614	1,140	480	521	863	965	886	519	396	266	259
14	331	568	1,140	470	521	890	970	867	561	386	260	259
15	343	530	1,130	470	556	908	970	844	593	377	255	256
16	361	507	1,120	470	701	917	976	816	567	374	261	252
17	361	485	1,100	470	796	920	998	785	587	370	258	251
18	359	465	1,080	470	806	913	1,010	759	628	375	255	249
19	357	446	1,050	470	790	899	998	735	619	384	276	257
20	365	434	1,020	470	776	897	979	706	582	372	323	273
21	350	429	992	486	758	941	964	677	550	359	316	312
22	340	422	965	500	737	979	968	655	564	350	301	334
23	325	419	937	534	710	1,000	980	636	560	350	289	322
24	315	415	908	561	660	1,020	984	625	532	362	283	308
25	305	416	874	591	629	1,030	977	612	537	353	277	300
26	295	417	841	614	610	1,030	967	597	527	341	276	295
27	295	456	806	556	590	1,030	950	583	505	359	315	316
28	298	643	778	549	570	1,020	929	570	498	364	334	330
29	296	696	751	552	------	998	908	567	501	346	319	325
30	292	650	717	552	------	974	920	562	488	327	306	326
31	296	------	692	554	------	947	------	549	------	323	303	------
TOTAL	9,924	14,187	28,141	16,646	17,518	25,429	29,913	23,908	16,015	12,043	9,045	8,527
MEAN	320	473	908	537	626	820	997	771	534	388	292	284
MAX	365	719	1,140	673	806	1,030	1,120	955	628	471	334	334
MIN	292	299	560	470	521	554	908	549	488	323	255	249
CFSM	.63	.93	1.79	1.06	1.23	1.61	1.96	1.52	1.05	.76	.57	.56
IN.	.73	1.04	2.06	1.22	1.28	1.86	2.19	1.75	1.17	.88	.66	.62

CAL YR 1966: TOTAL 210,818 MEAN 578 MAX 1,140 MIN 287 CFSM 1.14 IN 15.43
WAT YR 1967: TOTAL 211,296 MEAN 579 MAX 1,140 MIN 249 CFSM 1.14 IN 15.47

5-5160. Yellow River near Bremen, Ind.

Location.--Lat 41°25'11", long 86°10'14", 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 1967.

Gage.--Digital 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). Prior to July 27, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--12 years, 94.1 cfs.

Extremes.--Maximum discharge during year, 1,300 cfs Dec. 9 (gage height, 13.51 ft); minimum, 7.1 cfs Sept. 17 (gage height, 1.36 ft). 1955-67: Maximum discharge, 1,650 cfs Dec. 26, 1965 (gage height, 13.99 ft); minimum, 6.2 cfs Aug. 23 and Oct. 11, 12, 13, 1957, Oct. 17, 1964; minimum gage height, 0.81 ft Sept. 10, 1955.

Remarks.--Record good except for winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	11	9.3	116	51	71	57	228	111	29	22	8.2	8.6
2	11	9.2	92	48	99	58	944	101	28	20	8.3	8.3
3	11	9.9	72	47	114	70	1,030	83	27	19	8.3	8.0
4	11	10	61	47	99	115	870	73	26	19	8.5	7.9
5	10	11	118	44	82	100	536	68	25	18	8.1	7.9
6	11	11	407	42	84	85	358	72	26	17	8.0	7.8
7	10	12	771	52	89	76	241	80	26	16	8.0	7.7
8	10	16	1,040	52	80	66	174	78	27	16	7.9	7.7
9	9.8	61	1,260	46	68	61	162	70	26	15	8.1	7.7
10	11	145	1,240	44	59	136	157	61	28	15	8.0	7.5
11	10	92	1,050	39	52	707	123	261	25	15	7.9	7.7
12	10	56	771	40	49	833	105	264	23	14	7.8	7.5
13	11	42	512	41	48	807	116	146	30	13	7.7	7.5
14	11	36	339	43	53	779	193	109	79	12	7.7	7.4
15	14	31	231	39	153	649	269	95	46	12	7.7	7.3
16	12	29	192	37	689	426	178	79	33	11	7.6	7.2
17	12	27	165	35	539	320	223	69	40	13	7.6	7.1
18	12	25	154	34	282	233	202	62	61	12	7.9	7.3
19	11	23	138	32	180	191	132	56	46	11	9.8	8.0
20	11	22	127	32	184	239	109	49	36	10	8.9	8.5
21	11	21	111	31	159	803	142	46	35	9.6	8.6	13
22	10	20	101	33	128	884	283	43	60	9.1	8.3	10
23	9.7	20	91	47	105	685	196	42	49	10	8.0	9.5
24	9.6	20	84	57	84	468	142	41	45	10	8.1	8.1
25	9.3	20	76	121	76	368	126	39	74	9.3	7.9	7.8
26	9.5	20	69	113	68	277	112	36	49	9.9	11	7.6
27	9.4	73	64	86	62	239	100	35	36	11	11	8.9
28	9.4	229	63	83	58	209	87	33	32	9.6	10	8.0
29	9.1	140	62	79	------	166	83	34	29	9.2	8.9	8.2
30	9.0	113	57	73	------	139	113	32	26	8.5	9.5	7.9
31	9.2	------	51	72	------	119	------	30	------	8.2	9.0	------
TOTAL	325.0	1,353.4	9,685	1,640	3,814	10,365	7,734	2,398	1,122	404.4	262.3	243.6
MEAN	10.5	45.1	312	52.9	136	334	258	77.4	37.4	13.0	8.46	8.12
MAX	14	229	1,260	121	689	884	1,030	264	79	22	11	13
MIN	9.0	9.2	51	31	48	57	83	30	23	8.2	7.6	7.1
CFSM	.08	.34	2.37	.40	1.03	2.53	1.95	.59	.28	.10	.06	.06
IN.	.09	.38	2.73	.46	1.07	2.92	2.18	.68	.32	.11	.07	.07

CAL YR 1966: TOTAL 43,326.4 MEAN 119 MAX 1,260 MIN 9.0 CFSM .90 IN 12.21
WAT YR 1967: TOTAL 39,346.7 MEAN 108 MAX 1,260 MIN 7.1 CFSM .82 IN 11.09

Peak discharge (base, 800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	2230	13.51	1,300				
3-12	1000	11.10	850				
3-22	0130	11.65	923				
4-3	0945	12.42	1,040				

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 1967.

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.--19 years, 238 cfs.

Extremes.--Maximum discharge during year, 2,180 cfs Dec. 11 (gage height, 13.22 ft); minimum, 17 cfs Oct. 1 (gage height, 4.15 ft). 1948-67: Maximum discharge, 5,390 cfs Oct. 12, 13, 1954 (gage height, 17.13 ft); minimum, 12 cfs in the period Nov. 20 to Dec. 9, 1964; minimum gage height observed, 3.49 ft Jan. 11, 14, 1954.

Remarks.--Record fair except for winter period, which is poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	35	318	137	186	162	486	337	93	100	45	35
2	18	35	268	133	256	166	1,200	322	88	90	46	33
3	18	35	206	125	339	199	1,610	481	88	82	44	30
4	19	36	167	117	292	385	1,720	234	86	79	42	30
5	20	37	222	114	245	343	1,590	213	86	76	40	30
6	21	39	623	112	166	276	1,210	220	87	74	38	30
7	22	39	1,110	124	213	237	900	258	98	72	38	31
8	22	57	1,610	133	178	204	650	276	104	71	37	31
9	24	256	1,960	120	168	187	510	247	104	70	37	28
10	27	455	2,140	112	150	374	460	201	108	70	34	28
11	25	368	2,150	98	140	980	420	338	100	73	32	27
12	24	300	2,020	104	136	1,250	354	719	93	74	30	27
13	25	255	1,730	104	130	1,400	385	536	139	70	29	28
14	27	215	1,330	104	141	1,500	644	372	276	67	29	27
15	38	185	925	102	306	1,550	756	314	198	64	29	24
16	35	160	637	99	923	1,350	830	268	167	63	28	22
17	35	140	521	92	1,260	1,030	573	226	175	66	28	22
18	35	115	470	82	1,150	765	600	204	176	76	35	23
19	35	105	427	71	721	584	450	187	158	67	44	23
20	35	95	391	69	576	400	360	158	130	73	49	31
21	35	85	343	73	529	450	381	141	129	58	35	61
22	35	80	306	84	421	540	611	134	206	58	32	44
23	35	75	278	103	330	800	697	127	208	61	31	33
24	35	72	249	130	188	1,250	503	126	162	61	30	28
25	35	70	222	232	170	1,550	416	121	416	59	30	26
26	35	200	194	312	165	1,600	372	110	339	68	43	25
27	35	420	173	198	160	1,350	328	107	187	69	55	28
28	35	554	166	226	160	950	284	102	154	62	46	28
29	35	492	166	217		640	264	103	137	55	40	27
30	35	351	141	198	- - - - -	474	312	103	118	52	38	26
31	35	- - - - -	141	184	- - - - -	404	- - - - -	98	- - - - -	51	36	- - - - -
Total	908	5,361	21,604	4,109	9,799	23,350	19,876	7,383	4,610	2,131	1,150	886
Mean	29.3	179	697	132	350	753	662	238	154	68.7	37.1	29.5
Max	38	554	2150	312	1,260	1,600	1,720	719	416	100	55	61
Min	18	35	141	69	130	162	264	98	86	51	28	22
Cfsm	0.103	0.630	2.45	0.465	1.23	2.65	2.33	0.838	0.542	0.242	0.131	0.104
In.	0.12	0.70	2.82	0.54	1.28	3.06	2.60	0.97	0.60	0.28	0.15	0.12

Cal yr 1966: Total 96,300 Mean 264 Max 2,150 Min 18 Cfsm 0.930 In. 12.60
Wtr yr 1967: Total 101,167 Mean 277 Max 2,150 Min 18 Cfsm 0.975 In. 13.24

5-5170. Yellow River at Knox, Ind.

Location.--Lat 41°18'10", long 86°37'14", 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 1967.

Gage.--Digital 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, and July 18, 1952 to Aug. 17, 1965, graphic water-stage recorder, at same site and datum.

Average discharge.--24 years (1943-67), 372 cfs.

Extremes.--Maximum discharge during year, 3,110 cfs Dec. 12 (gage height, 9.61 ft); minimum, 69 cfs Sept. 25; minimum gage height, 4.60 ft Aug. 15, 16.
1905-6, 1943-67: 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.--Record fair. Low flow is affected by pumpage at times.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	89	95	544	318	352	325	669	562	243	235	138	134
2	89	96	497	312	399	320	972	564	230	220	135	124
3	88	98	437	304	482	349	1,310	537	222	210	133	121
4	86	98	370	293	511	457	1,750	495	218	205	129	119
5	84	100	361	281	471	551	2,080	460	214	200	128	113
6	84	103	508	276	411	497	2,080	464	214	197	125	109
7	84	105	898	280	323	438	1,680	499	223	194	124	108
8	84	116	1,430	300	305	395	1,200	535	288	187	124	106
9	86	298	2,230	291	295	364	872	514	264	182	125	103
10	86	559	2,790	270	285	385	802	478	273	179	123	102
11	87	604	2,960	257	285	698	767	498	264	179	121	101
12	87	518	3,080	242	280	1,030	681	673	232	178	121	99
13	87	371	2,940	242	285	1,310	648	832	218	171	122	99
14	89	292	2,540	243	286	1,570	787	713	348	164	118	98
15	94	248	1,930	240	339	1,680	955	593	410	161	119	95
16	104	221	1,350	230	664	1,640	1,010	538	255	158	144	95
17	101	203	976	202	958	1,500	974	488	255	162	138	93
18	98	190	808	171	1,170	1,240	870	444	260	194	121	91
19	96	177	739	165	1,200	959	829	407	235	188	150	99
20	96	167	687	165	918	811	699	375	200	168	173	111
21	95	160	644	165	746	974	648	340	250	158	144	141
22	93	156	597	170	673	1,230	701	325	330	153	131	183
23	91	153	555	180	585	1,520	837	320	330	151	128	128
24	93	151	519	215	483	1,820	883	311	300	154	122	95
25	95	149	484	323	440	1,820	736	300	415	151	118	90
26	95	148	444	442	400	1,490	654	286	600	148	125	104
27	95	215	403	474	365	1,200	608	272	530	165	189	104
28	95	496	382	390	340	977	564	264	410	160	183	103
29	95	674	372	391	------	863	527	264	315	152	150	102
30	95	646	355	385	------	756	528	272	260	146	138	101
31	95	------	325	359	------	676	------	259	------	142	135	------
TOTAL	2,836	7,607	33,155	8,576	14,251	29,845	28,321	13,882	8,806	5,412	4,174	3,271
MEAN	91.5	254	1,070	277	509	963	944	448	294	175	135	109
MAX	104	674	3,080	474	1,200	1,820	2,080	832	600	235	189	183
MIN	84	95	325	165	280	320	527	259	200	142	118	90
CFSM	.22	.60	2.52	.65	1.20	2.27	2.22	1.05	.69	.41	.32	.26
IN.	.25	.67	2.90	.75	1.25	2.61	2.48	1.21	.77	.47	.37	.29

CAL YR 1966: TOTAL 147,092 MEAN 403 MAX 3,080 MIN 84 CFSM .95 IN 12.87
WAT YR 1967: TOTAL 160,136 MEAN 439 MAX 3,080 MIN 84 CFSM 1.03 IN 14.01

Peak discharge (base, 1,600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-12	1330	9.61	3,110				
3-15	1515	8.20	1,700				
3-25	0100	8.39	1,890				
4-6	0100	8.65	2,150				

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 1967.

Gage.--Digital 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, and July 17, 1956 to Sept. 30, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 1,226 cfs.

Extremes.--Maximum discharge during year, 3,610 cfs Apr. 7, 8 (gage height, 11.26 ft); minimum, 408 cfs Sept. 18, 19 (gage height, 2.27 ft).
1948-67: Maximum discharge, 5,300 cfs Oct. 22, 1954 (gage height, 13.20 ft); minimum daily discharge, 280 cfs Jan. 25-29, 1963, result of freezeup; minimum gage height, 1.87 ft Sept. 9-19, 1964.

Remarks.--Record good except those for winter period, which is fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	471	471	1,690	1,900	1,370	1,620	3,030	2,760	1,260	1,130	636	540
2	462	469	1,610	1,830	1,420	1,550	3,160	2,780	1,220	1,070	623	543
3	443	473	1,590	1,750	1,500	1,490	3,250	2,770	1,190	1,020	610	530
4	432	460	1,520	1,690	1,570	1,560	3,330	2,720	1,170	1,000	590	515
5	418	478	1,400	1,570	1,580	1,640	3,440	2,660	1,140	982	570	503
6	414	494	1,540	1,510	1,490	1,650	3,540	2,620	1,100	948	558	485
7	418	501	1,930	1,500	1,400	1,590	3,590	2,610	1,080	923	553	475
8	425	538	2,500	1,480	1,500	1,520	3,600	2,610	1,100	903	553	468
9	437	835	2,830	1,420	1,580	1,460	3,560	2,590	1,160	870	550	465
10	462	1,390	3,010	1,370	1,330	1,490	3,450	2,520	1,160	847	525	453
11	457	1,660	3,270	1,320	1,360	1,790	3,330	2,490	1,160	858	510	448
12	446	1,730	3,380	1,280	1,350	2,130	3,230	2,500	1,170	842	498	448
13	450	1,600	3,470	1,280	1,320	2,370	3,150	2,540	1,150	819	490	440
14	460	1,420	3,530	1,280	1,250	2,560	3,120	2,590	1,150	787	485	428
15	476	1,300	3,540	1,260	1,350	2,700	3,110	2,600	1,310	766	473	423
16	512	1,210	3,520	1,220	1,720	2,780	3,140	2,530	1,330	756	460	415
17	524	1,120	3,460	1,160	2,030	2,820	3,250	2,430	1,360	743	455	413
18	519	1,050	3,390	1,160	2,170	2,840	3,300	2,320	1,520	777	463	408
19	522	982	3,300	1,160	2,270	2,820	3,280	2,210	1,510	811	495	413
20	533	938	3,190	1,170	2,350	2,810	3,230	2,110	1,430	782	573	450
21	529	905	3,090	1,150	2,330	2,880	3,170	2,020	1,340	743	590	495
22	503	888	2,980	1,140	2,260	2,970	3,120	1,930	1,320	714	555	558
23	496	883	2,870	1,220	2,150	3,040	3,080	1,820	1,340	709	533	560
24	487	868	2,760	1,300	2,080	3,150	3,060	1,750	1,340	719	510	538
25	478	858	2,720	1,400	1,950	3,270	3,040	1,680	1,300	709	495	515
26	483	845	2,720	1,500	1,870	3,350	2,990	1,630	1,360	688	490	498
27	473	905	2,720	1,460	1,780	3,390	2,920	1,590	1,390	709	528	508
28	473	1,220	2,530	1,360	1,700	3,360	2,840	1,550	1,290	735	595	538
29	471	1,530	2,260	1,450	------	3,280	2,780	1,500	1,230	706	593	538
30	464	1,650	2,260	1,390	------	3,190	2,770	1,450	1,190	670	570	533
31	457	------	2,250	1,380	------	3,070	------	1,240	------	646	548	------
TOTAL	14,595	29,671	82,830	43,060	48,030	76,140	95,860	69,120	37,770	25,382	16,677	14,544
MEAN	471	989	2,672	1,389	1,715	2,456	3,195	2,230	1,259	819	538	485
MAX	533	1,730	3,540	1,900	2,350	3,390	3,600	2,780	1,520	1,130	636	560
MIN	414	460	1,400	1,140	1,250	1,460	2,770	1,240	1,080	646	455	408
CFSM	.36	.76	2.04	1.06	1.31	1.88	2.44	1.70	.96	.63	.41	.37
IN.	.41	.84	2.36	1.22	1.37	2.16	2.73	1.97	1.07	.72	.47	.41

CAL YR 1966: TOTAL 507,672 MEAN 1,391 MAX 3,540 MIN 414 CFSM 1.06 IN 14.43
WAT YR 1967: TOTAL 553,679 MEAN 1,517 MAX 3,600 MIN 408 CFSM 1.16 IN 15.74

5-5180. Kankakakee River at Shelby, Ind.

Location.--Lat 41°10'58", long 87°20'33", in NE¼ sec. 33, T. 32 N., R. 8 W., on right bank 25 ft upstream 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 1967. Monthly discharge only for some periods, published in WSP 1308.

Gage.--Digital 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, Dec. 19, 1934 to Oct. 4, 1965, graphic water-stage recorder on left bank 50 ft downstream, and Oct. 5, 1965 to Sept. 21, 1966, staff gage on right bank, 200 ft upstream, all at same datum.

Average discharge.--45 years, 1,513 cfs.

Extremes.--Maximum discharge during year, 4,770 cfs Apr. 18, 19; (gage height 10.48 ft) ; minimum 518 cfs Sept. 19, 20 (gage height, 2.57 ft).
1922-67: 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 site below railroad bridge; 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.--Record good. Record of suspended sediment loads for the water year 1967 is published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	626	558	2,060	2,520	1,750	2,300	3,960	4,070	1,670	1,420	785	671
2	599	560	2,020	2,420	1,810	2,250	4,280	4,080	1,590	1,340	770	680
3	587	555	1,930	2,330	1,880	2,200	4,480	4,060	1,540	1,280	761	668
4	570	560	1,850	2,220	1,960	2,180	4,530	3,980	1,490	1,240	746	650
5	560	558	1,930	2,110	2,000	2,160	4,520	3,870	1,470	1,210	719	635
6	545	568	2,010	2,030	1,930	2,160	4,500	3,810	1,430	1,180	701	620
7	548	620	2,400	2,000	1,820	2,100	4,470	3,780	1,400	1,140	692	605
8	555	713	3,240	1,960	1,750	2,010	4,450	3,750	1,390	1,120	680	599
9	560	968	3,870	1,890	1,910	1,930	4,440	3,700	1,400	1,100	683	590
10	584	1,580	4,010	1,840	2,230	1,970	4,440	3,610	1,440	1,070	668	578
11	584	1,960	4,020	1,750	2,070	2,430	4,390	3,600	1,410	1,060	644	570
12	575	2,090	4,020	1,690	1,890	2,790	4,290	3,620	1,420	1,040	629	563
13	575	2,070	4,040	1,670	1,850	3,010	4,240	3,570	1,450	1,020	623	563
14	581	1,940	4,060	1,660	1,730	3,210	4,230	3,520	1,490	995	605	565
15	611	1,800	4,070	1,630	1,770	3,340	4,200	3,490	1,520	971	593	553
16	614	1,690	4,080	1,580	2,160	3,390	4,190	3,420	1,590	956	573	540
17	635	1,580	4,090	1,490	2,560	3,410	4,450	3,310	1,660	941	565	535
18	629	1,480	4,080	1,500	2,690	3,420	4,720	3,170	1,740	935	581	530
19	698	1,390	4,040	1,500	2,750	3,400	4,760	3,040	1,820	962	623	520
20	635	1,330	3,980	1,500	2,840	3,450	4,680	2,890	1,770	959	668	528
21	647	1,280	3,910	1,450	2,880	3,700	4,580	2,740	1,670	929	713	584
22	638	1,250	3,800	1,450	2,850	3,940	4,540	2,570	1,620	896	695	620
23	596	1,230	3,690	1,500	2,740	3,960	4,510	2,410	1,590	881	665	647
24	581	1,200	3,580	1,600	2,560	3,970	4,420	2,280	1,600	884	641	644
25	568	1,190	3,450	1,700	2,500	4,010	4,310	2,170	1,660	866	617	626
26	555	1,180	3,300	1,900	2,450	4,050	4,230	2,070	1,620	851	623	611
27	558	1,250	3,150	1,830	2,400	4,080	4,130	1,970	1,630	851	638	632
28	558	1,560	3,030	1,700	2,350	4,110	4,030	1,890	1,630	872	683	647
29	563	1,850	2,910	1,650	------	4,090	3,950	1,850	1,560	866	716	656
30	555	2,020	2,750	1,760	------	4,040	4,030	1,790	1,490	845	710	653
31	555	------	2,630	1,750	------	3,940	------	1,750	------	812	695	------
TOTAL	18,245	38,580	102,000	55,580	62,080	97,000	130,950	95,830	46,760	31,492	20,705	18,083
MEAN	589	1,286	3,290	1,793	2,217	3,129	4,365	3,091	1,559	1,016	668	603
MAX	698	2,090	4,090	2,520	2,880	4,110	4,760	4,080	1,820	1,420	785	680
MIN	545	555	1,850	1,450	1,730	1,930	3,950	1,750	1,390	812	565	520
CFSM	.34	.73	1.88	1.02	1.26	1.78	2.49	1.76	.89	.58	.38	.34
IN.	.39	.82	2.16	1.18	1.32	2.06	2.78	2.03	.99	.67	.44	.38

CAL YR 1966: TOTAL 651,690 MEAN 1,785 MAX 4,270 MIN 545 CFSM 1.02 IN 13.83
WAT YR 1967: TOTAL 717,305 MEAN 1,965 MAX 4,760 MIN 520 CFSM 1.12 IN 15.22

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, 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 1967.

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.--19 years, 92.5 cfs.

Extremes.--Maximum discharge during year, 1,030 cfs Dec. 8 (gage height, 10.39 ft); minimum, 6.8 cfs Oct. 4 (gage height, 1.37 ft). 1948-67: Maximum discharge, 1,120 cfs Feb. 14, 1959 (gage height, 10.45 ft); maximum gage height, 10.58 ft Dec. 24, 1965; minimum discharge, 3.0 cfs Sept. 7, 1964 (gage height, 1.13 ft).

Remarks.--Record Poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8.2	20	53	82	75	140	402	490	50	44	21	12
2	8.2	14	67	75	60	130	894	363	48	42	20	12
3	7.8	15	62	69	50	120	711	276	48	41	20	12
4	7.2	16	59	56	60	115	528	227	46	40	22	12
5	7.8	13	76	53	60	110	404	200	45	40	19	11
6	7.8	14	93	52	60	100	348	205	46	40	19	11
7	7.5	12	315	52	60	95	288	209	46	40	20	11
8	7.8	15	956	52	60	95	240	200	47	35	19	10
9	7.8	80	812	52	60	100	242	175	54	40	20	11
10	8.2	137	590	52	60	281	226	153	93	40	18	10
11	7.8	81	434	52	65	598	195	296	66	40	17	10
12	12	61	324	52	70	496	173	273	77	40	16	10
13	16	53	260	52	85	454	207	210	66	35	16	9.8
14	12	52	216	52	100	429	280	178	64	35	16	10
15	12	48	188	52	151	363	242	158	57	35	16	9.5
16	13	52	172	52	400	296	455	138	54	35	15	9.2
17	12	53	160	51	412	284	945	125	91	30	14	9.2
18	12	46	146	51	290	230	802	115	76	30	16	9.2
19	12	43	136	50	209	208	566	106	66	30	21	10
20	10	38	130	50	213	258	513	94	60	30	22	9.8
21	10	34	119	50	182	694	347	89	55	30	18	16
22	11	30	109	50	179	709	449	97	56	25	16	13
23	13	28	100	50	176	540	369	82	51	25	15	11
24	12	27	91	52	262	441	316	75	57	26	14	11
25	11	28	88	67	242	405	279	69	107	24	13	11
26	11	27	84	66	169	339	250	65	77	23	14	11
27	11	43	84	92	154	318	227	62	60	24	18	22
28	10	107	84	107	148	276	200	58	54	23	16	21
29	10	82	112	102		236	286	60	52	22	15	18
30	10	64	118	100	- - - - -	209	664	59	48	22	14	16
31	20	- - - - -	98	90	- - - - -	180	- - - - -	54	- - - - -	21	14	- - - - -
Total	326.1	1,333	6,338	1,935	4,122	9,249	12,048	4,951	1,807	1,007	534	358.7
Mean	10.5	44.4	204	62.4	147	289	402	160	60.2	32.5	17.2	12.0
Max	20	137	956	107	412	709	945	490	107	44	22	22
Min	7.2	12	53	50	60	95	173	54	45	21	13	9.2
Cfsm	.086	.364	1.68	.511	1.21	2.37	3.30	1.31	.493	.266	.141	.098
In.	.10	.41	1.94	.59	1.26	2.73	3.68	1.51	.55	.31	.16	.11

Cal yr 1966: Total 39,889.8 Mean 109 Max 1,030 Min 7.1 Cfsm 0.896 In. 12.19
Wtr yr 1967: Total 44,008.8 Mean 121 Max 956 Min 7.2 Cfsm 0.992 In. 13.35

Peak discharge (base, 730 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	1200	10.39	1,030				
3-21	2300	9.03	834				
4-2	0200	10.20	1,000				
4-17	1000	10.15	992				
4-30	0300	8.37	742				

5-5195. West Creek near Schneider, Ind.

Location.--Lat 41°12'52", long 87°29'36", in NW¼NE¼ 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 1967.

Gage.--Digital 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, and June 11, 1956 to July 11, 1966, graphic water-stage recorder at present site and datum.

Average discharge.--16 years, 39.1 cfs.

Extremes.--Maximum discharge during year, 1,480 cfs Dec. 8 (gage height, 7.47 ft); minimum, 6.2 cfs Oct. 6; minimum gage height, 1.14 ft Sept. 20.
1948-51, 1954-67: 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.--Record fair except those for winter period, which is poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	7.1	6.9	24	21	15	95	449	166	16	16	9.3	9.8
2	6.8	6.9	28	20	15	80	786	109	15	16	9.3	9.5
3	7.1	7.1	24	19	15	70	313	89	15	15	9.0	9.3
4	7.4	6.8	20	19	15	60	181	72	15	15	9.3	9.3
5	7.0	6.9	26	18	15	50	134	58	15	14	9.0	9.0
6	6.3	7.5	39	18	15	45	121	50	15	14	8.8	8.8
7	6.8	7.7	256	18	15	40	102	47	17	14	9.3	8.8
8	6.8	7.9	1,230	17	15	35	87	43	36	13	9.3	8.8
9	6.7	49	401	17	16	35	84	39	48	13	9.3	8.5
10	7.4	82	192	17	18	141	80	34	52	14	9.3	8.3
11	7.0	45	140	17	25	314	68	82	31	13	8.8	8.5
12	6.8	32	114	17	35	189	60	87	25	12	8.8	8.3
13	7.1	27	98	17	45	160	70	65	24	12	9.0	8.3
14	7.4	23	84	17	60	144	96	52	43	11	8.8	8.5
15	8.3	20	74	17	74	122	80	44	44	11	8.8	8.0
16	8.2	19	66	17	329	99	148	38	34	11	8.8	8.0
17	7.5	17	58	17	346	89	435	34	86	10	8.8	8.0
18	7.0	17	53	17	240	76	200	31	39	11	12	7.8
19	7.0	16	48	17	180	64	143	29	29	11	17	7.8
20	6.7	15	44	17	130	64	113	26	24	10	14	7.8
21	6.7	15	41	17	120	406	94	24	23	9.9	12	9.3
22	6.8	15	38	17	115	346	127	23	37	9.8	12	10
23	6.8	15	35	17	110	187	114	22	27	9.8	11	9.8
24	6.5	16	33	19	140	146	91	21	26	9.7	11	9.3
25	6.6	16	30	22	135	133	76	20	25	9.6	11	8.8
26	6.7	16	28	45	130	113	63	19	21	9.6	11	8.8
27	6.7	14	26	90	120	103	53	18	20	9.5	10	12
28	6.8	58	24	70	115	89	44	17	18	9.5	10	13
29	7.0	40	23	45	------	76	125	17	17	9.3	10	12
30	6.9	27	27	25	------	67	398	17	17	9.3	10	11
31	6.9	------	24	15	------	58	------	17	------	9.3	9.5	------
TOTAL	216.8	651.7	3,348	736	2,603	3,696	4,935	1,410	854	361.3	314.2	275.1
MEAN	6.99	21.7	108	23.7	93.0	119	165	45.5	28.5	11.7	10.1	9.17
MAX	8.3	82	1,230	90	346	406	786	166	86	16	17	13
MIN	6.3	6.8	20	15	15	35	44	17	15	9.3	8.8	7.8
CFSM	.13	.40	1.98	.44	1.71	2.19	3.02	.83	.52	.21	.19	.17
IN.	.15	.44	2.28	.50	1.78	2.52	3.37	.96	.58	.25	.21	.19

CAL YR 1966: TOTAL 17,188.9 MEAN 47.1 MAX 1,300 MIN 6.3 CFSM .86 IN 11.73
WAT YR 1967: TOTAL 19,401.1 MEAN 53.2 MAX 1,230 MIN 6.3 CFSM .98 IN 13.24

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
3-21	2300	5.75	682				
4-1	2330	7.35	1,420				
4-17	1130	5.45	612				
4-30	0130	5.99	718				
12-8	0715	7.47	1,480				

5-5200. Singleton ditch at Illinoi, Ill.

Location.--Lat 41°11'20", long 87°31'35", in SW¼NW¼ 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 1967.

Gage.--Digital 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, and Aug. 28, 1953 to Sept. 28, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--23 years, 163 cfs.

Extremes.--Maximum discharge during year, 1,810 cfs Apr. 2 (gage height, 9.76 ft); maximum gage height, 9.80 ft Dec. 8; minimum discharge, 10 cfs Oct. 30; minimum gage height 1.53 ft Sept. 19-21.
1944-67: Maximum discharge, 2,040 cfs Feb. 14, 23, 1959; maximum gage height, 10.11 ft Mar. 4, 1963 (backwater from ice); minimum, 4.5 cfs Sept. 8, 1964; minimum gage height, 0.71 ft Oct. 21, 1948.

Remarks.--Record poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	14	26	96	138	130	271	680	898	92	76	32	22
2	13	19	123	119	100	250	1,660	692	90	74	31	21
3	13	21	108	96	90	230	1,350	480	88	73	29	21
4	15	21	103	79	85	210	1,000	340	85	71	31	21
5	17	16	132	74	85	200	738	270	83	66	29	20
6	14	17	169	71	85	180	616	270	84	63	28	20
7	14	16	511	70	85	170	495	280	86	60	29	20
8	13	19	1,660	70	85	167	410	245	104	56	28	20
9	13	138	1,400	70	85	168	404	220	113	55	29	20
10	16	257	998	70	90	436	382	225	179	58	28	20
11	14	142	727	70	95	1,010	324	370	118	58	26	19
12	20	104	546	70	100	810	286	355	123	55	24	19
13	18	87	423	70	130	694	332	280	110	54	24	23
14	16	81	353	70	189	658	460	230	121	52	24	23
15	19	75	305	70	292	563	398	200	132	50	23	22
16	19	74	274	70	660	454	645	180	120	49	22	21
17	16	73	249	70	814	428	1,500	160	185	48	21	20
18	16	67	230	70	658	360	1,310	150	165	47	25	20
19	16	63	213	70	416	314	949	130	130	43	34	19
20	14	57	201	70	364	358	660	120	100	41	32	19
21	14	53	184	70	380	1,120	550	115	100	39	26	22
22	14	48	169	70	372	1,280	750	110	100	38	24	26
23	20	47	156	70	469	922	623	105	90	37	23	24
24	19	46	153	70	464	723	517	100	140	38	22	23
25	14	45	187	92	467	656	450	98	250	37	21	22
26	13	44	148	132	370	539	404	95	150	36	22	22
27	13	60	147	213	312	495	370	95	100	37	26	35
28	14	179	148	243	288	430	328	95	90	36	25	38
29	15	136	134	219	------	368	489	95	88	34	23	34
30	13	107	173	205	------	324	1,270	95	83	33	23	29
31	18	------	146	193	------	280	------	95	------	32	23	------
TOTAL	477	2,138	10,566	3,134	7,760	15,068	20,350	7,193	3,499	1,546	807	685
MEAN	15.4	71.3	341	101	277	486	678	232	117	49.9	26.0	22.8
MAX	20	257	1,660	243	814	1,280	1,660	898	250	76	34	38
MIN	13	16	96	70	85	167	286	95	83	32	21	19
CFSM	.07	.33	1.56	.46	1.27	2.22	3.10	1.06	.53	.23	.12	.10
IN.	.08	.36	1.79	.53	1.32	2.56	3.46	1.22	.59	.26	.14	.12

CAL YR 1966: TOTAL 69,922 MEAN 192 MAX 1,810 MIN 13 CFSM .87 IN 11.87
WAT YR 1967: TOTAL 73,223 MEAN 201 MAX 1,660 MIN 13 CFSM .92 IN 12.43

Peak discharge (base, 1,100 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12- 8	1545	9.80	1,780	4-30	0400	8.40	1,410
3-22	0045	8.68	1,490				
4- 2	0430	9.76	1,810				
4-17	1215	9.06	1,600				

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 1.2 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 1967.

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.--52 years (1915-67), 1,834 cfs.

Extremes.--Maximum discharge during year, 7,540 cfs Apr. 2 (gage height, 3.80 ft); minimum, 560 cfs Sept. 14-20.
1905-6, 1914-67: 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 winter periods, which are poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	614	608	2,290	3,350	2,000	3,100	5,400	6,340	2,430	1,730	808	739
2	608	620	2,350	3,180	1,900	3,120	7,540	5,880	2,290	1,610	792	725
3	596	608	2,630	3,060	1,800	3,500	7,200	5,600	2,200	1,530	768	725
4	584	608	2,830	2,900	1,800	3,920	6,600	5,350	2,070	1,470	768	725
5	584	614	2,410	2,800	1,900	3,410	6,200	5,200	1,940	1,410	760	704
6	578	620	2,570	2,700	2,000	3,180	6,190	5,200	1,890	1,360	739	690
7	578	627	2,520	2,600	2,000	3,010	5,950	5,160	1,840	1,310	753	683
8	572	690	6,040	2,500	1,900	2,890	5,730	5,050	1,800	1,260	746	669
9	584	1,130	6,080	2,450	1,800	2,790	5,680	4,980	1,840	1,240	746	655
10	584	1,720	5,970	2,400	1,900	3,180	5,620	4,940	1,910	1,220	746	590
11	578	1,840	5,930	2,300	2,000	4,130	5,530	4,910	1,820	1,180	732	590
12	578	2,020	7,710	2,200	2,100	4,150	5,400	4,910	1,770	1,150	711	590
13	578	2,180	5,460	2,200	2,200	4,320	5,460	4,870	1,720	1,100	704	590
14	578	2,260	5,270	2,200	2,370	4,540	5,710	4,850	1,730	1,050	690	560
15	602	2,270	5,160	2,100	2,650	4,610	5,620	4,800	1,780	1,030	683	560
16	602	2,160	5,110	2,100	3,100	4,610	5,640	4,630	1,870	1,010	676	560
17	602	2,050	5,050	2,000	3,540	4,580	6,430	4,450	2,260	984	662	560
18	614	1,930	5,020	2,000	3,710	4,540	6,480	4,360	2,120	962	676	560
19	614	1,770	4,980	2,000	3,810	4,450	6,390	4,200	2,070	951	718	560
20	620	1,650	4,960	1,900	3,960	4,630	6,170	4,000	2,070	973	732	560
21	620	1,570	4,870	1,900	4,020	5,790	6,010	3,800	2,070	962	753	590
22	627	1,490	4,760	1,800	4,040	6,300	6,260	3,600	2,050	962	760	620
23	627	1,420	4,650	1,800	4,000	6,190	6,120	3,500	1,980	920	760	655
24	620	1,400	4,500	2,100	3,370	5,970	5,930	3,310	1,940	890	739	620
25	608	1,350	4,360	2,000	3,600	5,860	5,770	3,200	1,960	890	711	620
26	608	1,320	4,200	1,900	3,500	5,640	5,600	3,060	1,980	880	704	620
27	602	1,410	4,000	1,800	3,400	5,570	5,460	2,930	1,940	870	718	655
28	602	1,800	3,980	1,700	3,200	5,400	5,310	2,790	1,910	860	718	655
29	608	1,980	3,800	1,800		5,400	5,460	2,730	1,890	870	739	655
30	602	2,160	3,600	2,410	- - - - -	5,200	6,700	2,650	1,850	870	760	655
31	602	- - - - -	3,500	2,000	- - - - -	5,200	- - - - -	2,530	- - - - -	832	753	- - - - -
Total	18,574	43,875	136,560	70,150	77,570	139,180	179,560	133,780	58,990	34,336	22,725	18,940
Mean	599	1,462	4,373	2,263	2,770	4,490	5,985	4,315	1,966	1,108	733	631
Max	627	2,270	6,080	3,350	4,040	6,300	7,540	6,340	2,430	1,730	808	739
Min	572	608	2,290	1,800	1,800	2,790	5,310	2,530	1,720	832	662	560
Cfsm	0.256	0.625	1.87	0.967	1.18	1.92	2.56	1.84	0.840	0.474	0.313	0.270
In.	0.30	0.70	2.15	1.11	1.23	2.21	2.86	2.13	0.94	0.55	0.36	0.30

Cal yr 1966 : Total 885,249 Mean 2,425 Max 6,870 Min 572 Cfsm 1.04 In. 14.07
Wtr yr 1967 : Total 933,240 Mean 2,557 Max 7,540 Min 560 Cfsm 1.09 In. 14.84

5-5210. Iroquois River at Rosebud, Ind.

Location.--Lat 41°02'00", long 87°10'49", 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 1967.

Gage.--Digital 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. Oct. 1, 1953,to Oct. 21, 1966,graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 23.6 cfs.

Extremes.--Maximum discharge during year, 221 cfs Dec. 8 (gage height, 6.76 ft); minimum, 2.0 cfs Oct. 27; minimum gage height, 0.96 ft Aug. 17.
1948-67: Maximum discharge, 422 cfs Apr. 4, 1950; maximum gage height, 8.86 ft Feb. 10, 1959; minimum discharge, 0.2 cfs Oct. 11, 1964.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	4.6	2.7	19	22	27	32	109	76	32	10	4.3	6.3
2	3.9	2.4	24	21	49	36	185	159	26	9.6	4.3	6.3
3	3.6	2.8	22	20	44	52	141	107	24	9.1	4.0	4.9
4	3.2	2.6	19	27	42	48	104	81	22	8.9	3.9	4.7
5	3.0	3.3	25	23	36	37	102	68	21	10	3.7	4.5
6	2.8	3.9	44	22	33	33	97	87	20	9.2	3.6	4.7
7	2.7	2.8	123	35	30	30	76	125	18	8.8	3.7	4.6
8	2.7	4.9	213	27	28	27	65	120	19	8.2	3.5	4.3
9	2.8	38	187	23	26	35	89	93	17	6.8	3.5	4.3
10	3.1	50	136	20	23	71	94	77	18	6.5	3.3	4.0
11	2.9	33	104	18	21	87	69	182	18	6.0	3.3	3.7
12	2.9	20	81	18	21	75	60	162	16	5.9	3.2	3.7
13	3.0	15	66	18	22	74	90	118	14	5.7	3.3	3.6
14	3.2	14	56	18	24	74	114	93	14	5.5	3.0	3.6
15	4.7	14	50	17	107	68	111	78	13	5.5	2.9	3.5
16	3.6	13	48	15	182	59	80	66	13	5.5	2.8	3.3
17	3.0	11	47	14	119	56	80	59	15	5.4	2.6	3.4
18	3.1	11	46	13	82	46	64	53	16	5.1	3.3	3.4
19	3.3	10	43	13	72	43	53	49	13	4.9	4.3	3.2
20	3.5	9.7	41	13	82	86	49	42	12	4.8	3.7	3.4
21	3.1	9.4	37	14	69	177	53	38	24	14	3.2	4.3
22	3.2	8.8	34	15	54	133	63	36	58	17	3.8	3.7
23	2.7	8.5	31	16	63	102	53	35	33	9.0	3.3	3.3
24	2.5	8.5	29	17	70	91	52	32	25	7.2	3.3	3.5
25	2.5	8.0	27	42	45	93	48	31	24	6.1	3.3	3.2
26	2.5	7.8	26	37	37	80	51	29	18	5.3	4.2	3.3
27	2.2	35	23	55	37	78	51	28	16	5.2	4.2	4.0
28	3.2	56	26	46	30	68	45	27	15	5.1	3.8	3.6
29	2.5	33	25	33	------	59	49	52	13	4.7	3.8	3.2
30	3.2	24	38	28	------	51	70	48	11	4.4	3.9	3.0
31	3.1	------	21	27	------	45	------	36	------	4.4	3.7	------
TOTAL	96.3	463.1	1,711	727	1,477	2,046	2,367	2,287	598	223.8	110.7	118.5
MEAN	3.11	15.4	55.2	23.5	52.8	66.0	78.9	73.8	19.9	7.22	3.57	3.95
MAX	4.7	56	213	55	182	177	185	182	58	17	4.3	6.3
MIN	2.2	2.4	19	13	21	27	45	27	11	4.4	2.6	3.0
CFSM	.10	.51	1.82	.77	1.74	2.18	2.60	2.43	.66	.24	.12	.13
IN.	.12	.57	2.10	.89	1.81	2.51	2.91	2.81	.73	.27	.14	.15

CAL YR 1966: TOTAL 9,055.2 MEAN 24.8 MAX 213 MIN 2.2 CFSM .82 IN 11.11
WAT YR 1967: TOTAL 12,225.4 MEAN 33.5 MAX 213 MIN 2.2 CFSM 1.11 IN 15.01

Peak discharge (base, 150 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-8	1545	6.76	221	4-2	0200	6.05	198
2-16	0030	5.87	206	5-2	0400	5.46	173
3-21	0545	5.53	187	5-11	1400	6.06	199

5-5220. Iroquois River near North Marion, Ind.

Location.--Lat 40°58'12", long 87°06'50", 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 1967.

Gage.--Digital 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, Sept. 6, 1955, to Oct. 20, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--18 years (1949-67) 113 cfs.

Extremes.--Maximum discharge during year, 1,000 cfs Dec. 9 (gage height, 12.25 ft); minimum, 5.6 cfs Sept. 12 (gage height, 1.35 ft). 1948-67: Maximum discharge, 2,040 cfs June 10, 1958 (gage height, 15.09 ft); minimum, 1.5 cfs Sept. 8, 1964.

Remarks.--Record fair except for winter period, which is poor. Water is diverted from Oliver ditch, an upstream tributary, into Ryan ditch.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	15	11	153	90	112	172	292	293	112	48	9.7	7.0
2	13	9.9	108	86	151	178	658	352	98	43	9.1	10
3	11	9.5	116	86	188	239	758	399	85	38	8.7	8.8
4	11	12	100	89	160	269	702	323	76	40	9.0	9.4
5	11	12	116	90	145	232	615	250	75	40	8.3	9.2
6	9.8	11	170	77	135	180	559	253	73	35	9.8	7.6
7	9.8	11	390	104	130	155	469	394	73	23	10	7.2
8	9.8	13	775	77	122	135	353	515	69	23	8.2	8.4
9	9.8	113	960	60	120	141	330	490	63	26	9.4	8.6
10	10	190	990	52	108	267	471	388	61	27	8.0	8.5
11	10	202	900	48	90	433	437	534	59	23	7.6	6.7
12	10	148	780	45	90	458	333	702	58	20	7.5	5.9
13	10	98	660	43	90	419	337	667	50	16	8.7	7.0
14	11	78	510	40	124	398	518	563	52	15	8.2	8.3
15	13	70	375	36	297	376	594	440	49	15	7.1	8.8
16	13	65	290	35	623	332	552	326	58	15	7.9	6.5
17	10	64	245	35	716	291	453	254	166	16	7.7	6.7
18	14	59	225	37	626	261	368	216	114	19	8.1	7.1
19	13	53	210	40	493	228	291	194	84	16	28	7.3
20	12	50	199	56	432	278	238	170	67	18	32	6.9
21	12	50	182	71	373	614	220	156	77	20	16	10
22	11	50	165	76	270	721	248	134	232	36	13	10
23	11	49	151	81	230	680	255	121	187	21	12	9.4
24	9.6	48	136	80	190	593	227	122	129	20	10	10
25	9.7	45	120	129	210	534	218	109	142	14	8.3	8.9
26	9.9	45	111	147	180	469	206	101	108	13	10	9.0
27	11	107	105	91	150	411	216	98	87	11	16	13
28	12	239	106	144	140	377	203	94	78	11	15	17
29	13	253	90	147	------	322	184	273	71	10	13	12
30	9.8	203	105	120	------	271	240	219	60	11	16	11
31	9.4	------	101	115	------	230	------	146	------	11	11	------
TOTAL	344.6	2,368.4	9,644	2,427	6,695	10,664	11,545	9,296	2,713	694	353.3	266.2
MEAN	11.1	78.9	311	78.3	239	344	385	300	90.4	22.4	11.4	8.87
MAX	15	253	990	147	716	721	758	702	232	48	32	17
MIN	9.4	9.5	90	35	90	135	184	94	49	10	7.1	5.9
CFSM	.08	.59	2.32	.58	1.78	2.57	2.87	2.24	.67	.17	.09	.07
IN.	.10	.66	2.68	.67	1.86	2.96	3.20	2.58	.75	.19	.10	.07

CAL YR 1966: TOTAL 45,982.1 MEAN 126 MAX 990 MIN 2.0 CFSM .94 IN 12.76
WAT YR 1967: TOTAL 57,010.5 MEAN 156 MAX 990 MIN 5.9 CFSM 1.17 IN 15.82

Peak discharge (base, 420 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	2330	12.25	1,000	4-3	1145	10.25	765
2-17	0430	9.89	729	4-15	1415	8.63	635
3-11	2315	7.29	469	5-3	0415	6.71	451
3-22	0945	9.86	726	5-12	1345	9.71	711

5-5225. Iroquois River at Rensselaer, Ind.

Location.--Lat 40°56'00", long 87°07'44", in NE¼NW¼SE¼ 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 Slough Creek.

Drainage area.--194 sq mi.

Records available.--July 1948 to September 1967.

Gage.--Digital 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, July 8, 1949 to July 29, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 149 cfs.

Extremes.--Maximum discharge during year, 1,440 cfs Dec. 9 (gage height, 13.08 ft); minimum, 3.8 cfs Oct. 6; minimum gage height, 3.06 ft Sept. 16, 17.
1948-67: Maximum discharge, 2,550 cfs June 10, 1958 (gage height, 16.54 ft); minimum, 1.7 cfs Oct. 29, 30, 1964; minimum gage height, 2.73 ft Sept. 15, 1948.

Remarks.--Record good except for the winter period, which is poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	6.2	11	206	117	137	156	367	345	165	60	10	7.5
2	5.6	10	142	108	201	175	879	413	136	53	9.5	11
3	4.5	9.7	153	108	251	266	998	462	113	47	8.9	10
4	5.8	9.8	124	97	200	309	895	370	100	48	10	11
5	5.3	13	155	109	180	265	787	288	97	47	9.1	10
6	4.4	12	265	94	160	202	710	301	94	44	10	7.9
7	5.3	13	586	132	150	175	578	510	92	32	14	7.9
8	5.0	17	1,150	110	140	150	423	660	87	31	11	8.3
9	6.5	146	1,410	100	130	160	403	606	81	33	12	9.3
10	8.7	247	1,390	95	120	334	583	465	79	36	9.0	9.0
11	9.6	242	1,230	90	115	540	528	761	76	32	8.4	7.1
12	8.9	170	1,030	80	110	566	396	944	74	26	8.9	5.6
13	11	112	834	72	110	515	457	858	62	21	9.5	5.6
14	12	88	642	62	125	491	714	707	63	20	10	7.4
15	14	77	471	57	450	459	795	546	57	18	9.3	8.3
16	14	70	375	52	874	401	707	398	96	18	11	6.4
17	8.5	68	326	50	946	352	562	307	283	20	11	4.9
18	12	61	304	50	799	312	441	257	185	26	12	6.0
19	14	52	283	56	614	273	342	228	127	22	31	6.4
20	12	46	266	60	536	384	281	195	99	22	45	6.4
21	11	45	244	66	445	886	259	177	116	24	23	9.3
22	11	45	221	77	352	969	290	155	318	45	17	14
23	8.8	44	201	92	269	886	296	137	249	28	15	11
24	7.7	44	179	93	221	760	265	142	173	26	13	11
25	7.2	41	162	166	251	682	255	125	184	19	8.8	11
26	8.3	40	148	195	201	585	243	114	135	17	13	8.8
27	9.8	149	138	134	168	506	256	112	107	14	23	16
28	12	362	136	154	162	455	238	116	95	13	20	24
29	14	375	116	180	------	384	213	488	88	12	16	15
30	11	282	197	144	------	321	286	345	75	13	20	13
31	9.1	------	171	138	------	270	------	225	------	13	14	------
TOTAL	283.2	2,900.5	13,255	3,138	8,417	13,189	14,447	11,757	3,706	880	442.4	289.1
MEAN	9.14	96.7	428	101	301	425	482	379	124	28.4	14.3	9.64
MAX	14	375	1,410	195	946	969	998	944	318	60	45	24
MIN	4.4	9.7	116	50	110	150	213	112	57	12	8.4	4.9
CFSM	.05	.50	2.20	.52	1.55	2.19	2.48	1.95	.64	.15	.07	.05
IN.	.05	.56	2.54	.60	1.62	2.53	2.77	2.25	.71	.17	.08	.06

CAL YR 1966: TOTAL 58,663.5 MEAN 161 MAX 1,410 MIN 4.0 CFSM .83 IN 11.25
WAT YR 1967: TOTAL 72,704.2 MEAN 199 MAX 1,410 MIN 4.4 CFSM 1.03 IN 13.94

Peak discharge (base, 650 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-9	2045	13.08	1,440	4-15	1030	9.62	805
2-17	0100	10.58	974	5-8	1245	8.83	673
3-22	0430	10.62	982	5-12	0745	10.48	956
4-3	1030	10.78	1010				

5-5230. Bice ditch near South Marion, Ind.

Location.--Lat 40°52'00", long 87°05'32", 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 651.30 ft above mean sea level, datum of 1929. Prior to Aug. 5, 1955, wire-weight gage, and Aug. 5, 1955 to Sept. 30, 1965, graphic water-stage recorder, at present site and datum 2.00 ft higher. Oct. 1, 1965 to Oct. 20, 1966, graphic water-stage recorder at present site and datum.

Average discharge.--18 years (1949-67), 15.6 cfs.

Extremes.--Maximum discharge during year, 260 cfs March 20 (gage height, 5.75 ft); minimum observed, 0.18 cfs Oct. 12-14.
1948-67: Maximum discharge, 780 cfs June 13, 1958 (gage height, 12.02 ft); no flow at times during 1952, 1955, and 1964.

Remarks.--Record fair.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	.27	.27	.83	2.9	7.2	6.1	28	17	3.4	1.9	.63	.59
2	.27	.27	.49	2.9	29	9.0	45	20	3.1	1.6	.68	.59
3	.27	.27	.33	2.8	21	14	32	12	3.1	1.5	1.1	.59
4	.27	.25	.39	2.4	15	12	22	9.3	2.9	1.5	.84	.59
5	.27	.33	2.5	2.4	12	9.6	46	8.3	2.8	1.3	.73	.59
6	.27	.30	4.8	2.5	13	8.8	48	25	2.9	1.1	.68	.55
7	.27	.33	26	3.8	6.0	7.5	27	95	3.1	1.1	.68	.55
8	.27	.41	93	3.4	5.0	7.0	20	93	2.8	1.1	.68	.55
9	.27	1.1	58	2.4	4.5	14	28	54	2.9	1.1	.78	.55
10	.24	2.8	29	2.1	4.0	30	22	38	3.4	1.1	.68	.55
11	.21	1.1	15	1.7	3.8	41	16	135	3.1	1.2	.63	.51
12	.18	.57	15	1.6	3.8	38	13	72	2.7	.98	.55	.51
13	.18	.43	12	1.4	3.9	41	67	48	2.2	.84	.59	.43
14	.18	.39	10	1.1	46	49	104	45	1.9	.84	.59	.47
15	.38	.38	9.4	.95	157	43	89	37	1.8	.84	.55	.47
16	.27	.37	9.8	.80	89	34	53	22	5.9	.84	.55	.43
17	.24	.35	9.9	.70	53	30	41	14	25	.90	.51	.47
18	.24	.33	9.2	.66	36	22	26	10	9.9	.84	.63	.47
19	.27	.30	8.4	.66	33	20	18	7.3	5.7	.78	1.2	.47
20	.24	.31	8.0	.76	38	100	16	4.9	4.0	.78	.98	.68
21	.22	.34	6.8	1.6	24	143	16	4.3	3.9	.73	.73	.73
22	.21	.34	5.9	3.1	18	75	22	3.9	5.9	.73	.63	.63
23	.20	.35	4.8	3.8	14	58	16	3.7	4.3	.78	.63	.55
24	.20	.35	4.4	2.9	10	62	22	3.5	4.5	.90	.59	.51
25	.21	.42	3.7	7.1	10	63	21	3.2	14	.78	.55	.43
26	.21	.42	3.0	6.6	8.5	48	26	3.2	7.0	.73	1.3	.43
27	.23	4.0	2.7	12	8.0	42	26	3.1	4.3	.73	1.8	.63
28	.24	4.5	3.1	11	6.8	33	18	3.4	3.9	.73	1.4	.59
29	.24	2.0	3.3	7.7	------	26	15	6.8	3.2	.73	.84	.55
30	.23	1.3	2.6	6.8	------	21	20	5.5	2.4	.68	.68	.51
31	.23	------	2.6	6.8	------	16	------	4.2	------	.63	.63	------
TOTAL	7.48	24.88	368.94	107.33	679.5	1,123.0	963	811.6	146.0	30.29	24.04	16.17
MEAN	.24	.83	11.9	3.46	24.3	36.2	32.1	26.2	4.87	.98	.78	.54
MAX	.38	4.5	93	12	157	143	104	135	25	1.9	1.8	.73
MIN	.18	.25	.33	.66	3.8	6.1	13	3.1	1.8	.63	.51	.43
CFSM	.01	.04	.53	.15	1.07	1.60	1.42	1.16	.22	.04	.03	.02
IN.	.01	.04	.61	.18	1.12	1.85	1.58	1.34	.24	.05	.04	.03

CAL YR 1966: TOTAL 3,284.50 MEAN 9.00 MAX 93 MIN .18 CFSM .40 IN 5.40
WAT YR 1967: TOTAL 4,302.23 MEAN 11.8 MAX 157 MIN .18 CFSM .52 IN 7.08

5-5235. Slough Creek near Collegeville, Ind.

Location.--Lat 40°53'30", long 87°09'17", in SW¼NW¼ 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 1967. Prior to October 1965, published as Big Slough Creek near Collegeville.

Gage.--Digital 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, graphic water-stage recorder, at same site at datum 3.00 ft higher. Oct. 9, 1958, to Oct. 22, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--18 years, 62.7 cfs.

Extremes.--Maximum discharge during year, about 976 cfs Feb. 15, maximum gage height, 11.42 ft Dec. 8; minimum 2.2 cfs Oct. 31 (gage height, 3.27 ft).
1948-51, 1952-67: Maximum discharge, 2,130 cfs Dec. 25, 1965, from rating curve extended above 1,700 cfs on basis of slope-area determination; maximum gage height, 16.46 ft Mar. 5, 1963 (backwater from ice); minimum daily discharge, 0.7 cfs Dec. 20-26, 1963.

Remarks.--Record fair, except for periods of backwater from Iroquois River, which are poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.6	2.7	32	36	65	35	95	85	63	22	7.7	4.5
2	3.5	2.6	40	34	55	34	254	132	49	20	7.3	4.3
3	3.5	3.3	31	33	47	34	231	105	40	18	8.0	4.5
4	3.3	3.7	29	32	45	34	163	74	35	17	7.7	4.3
5	3.5	2.9	43	31	42	34	196	52	32	16	7.0	4.3
6	3.3	2.8	66	30	38	34	257	108	31	15	6.7	4.0
7	3.8	2.9	219	28	36	34	145	335	30	15	7.0	4.0
8	3.5	3.8	706	27	33	35	85	422	29	15	7.0	4.0
9	4.0	12	584	27	32	41	90	230	29	14	7.0	4.0
10	4.0	30	296	26	32	104	87	118	31	14	6.4	3.8
11	3.5	25	214	26	32	167	56	586	30	14	5.8	3.8
12	3.3	17	170	24	32	146	54	429	28	13	5.5	3.8
13	4.0	13	145	23	32	144	233	262	24	12	5.5	3.8
14	3.8	12	124	22	92	190	474	168	23	12	5.5	3.8
15	4.5	10	108	21	583	179	538	123	22	12	5.5	3.5
16	4.0	9.1	95	19	762	140	300	102	48	11	5.3	3.5
17	3.8	8.4	85	19	464	130	178	82	136	11	5.0	3.5
18	4.0	7.7	76	17	298	86	113	69	56	11	6.1	3.5
19	4.0	7.0	70	16	208	74	81	69	37	10	9.1	3.8
20	3.5	6.7	65	16	150	232	69	52	33	10	7.7	3.8
21	3.3	6.7	58	15	104	682	69	46	37	9.4	5.5	5.3
22	3.0	6.7	54	15	72	414	97	41	54	9.1	5.0	4.3
23	2.9	6.4	52	15	45	262	71	39	40	9.4	4.5	3.8
24	2.9	6.4	50	17	42	209	82	37	40	9.4	4.8	3.5
25	2.9	6.7	47	35	40	210	85	34	62	9.8	4.5	3.5
26	2.9	7.0	45	51	38	165	90	32	43	9.1	7.7	3.3
27	2.9	29	43	122	37	127	103	30	34	9.1	8.7	4.8
28	2.8	71	41	110	36	98	74	49	31	9.1	7.0	4.3
29	2.8	52	40	95	------	76	62	394	30	8.7	5.3	4.0
30	2.8	37	38	85	------	62	90	176	26	8.0	5.0	3.5
31	2.9	------	37	75	------	57	------	88	------	8.0	4.5	------
TOTAL	106.7	410.5	3,693	1,142	3,492	4,269	4,522	4,569	1,203	381.1	195.3	118.8
MEAN	3.44	13.7	119	36.8	125	138	151	147	40.1	12.3	6.30	3.96
MAX	4.5	71	706	122	762	682	538	586	136	22	9.1	5.3
MIN	2.8	2.6	29	15	32	34	54	30	22	8.0	4.5	3.3
CFSM	.04	.16	1.42	.44	1.48	1.64	1.79	1.75	.48	.15	.07	.05
IN.	.05	.18	1.63	.51	1.54	1.89	2.00	2.02	.53	.17	.09	.05

CAL YR 1966: TOTAL 24,248.6 MEAN 66.4 MAX 846 MIN 2.5 CFSM .79 IN 10.72
WAT YR 1967: TOTAL 24,102.4 MEAN 66.0 MAX 762 MIN 2.6 CFSM .79 IN 10.66

5-5240. Carpenter Creek at Egypt, Ind.

Location.--Lat 40°51'58", long 87°12'20", 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 1967.

Gage.--Digital water-stage recorder. Datum of gage is 641.79 ft above mean sea level, datum of 1929. Prior to Sept. 6, 1955, wire wire-weight gage, and Sept. 6, 1955, to Oct. 21, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--18 years, 33.7 cfs.

Extremes.--Maximum discharge during year, 517 cfs Feb. 15, 16 (gage height, 8.71 ft); minimum, 0.06 cfs Sept. 7; minimum observed gage height, 1.60 ft Oct. 13.
1948-51, 1952-67: Maximum discharge, 3,720 cfs June 10, 1958 (gage height, 11.66 ft); no flow at times most years.

Remarks.--Record poor.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1966 TO SEPTEMBER 1967

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	.19	.32	1.9	7.6	25	20	44	37	12	4.6	.71	.21
2	.18	.36	1.2	6.4	99	30	72	37	10	3.9	.71	.16
3	.18	.39	.86	6.0	97	50	65	28	9.2	3.5	1.8	.16
4	.17	.32	.86	6.6	61	34	53	23	8.6	3.5	1.2	.16
5	.17	.39	3.9	5.9	43	24	75	22	8.2	3.1	.94	.21
6	.17	.44	7.8	5.4	34	17	96	37	8.0	2.9	.71	.23
7	.17	.44	62	8.2	27	15	60	178	7.4	2.7	.71	.10
8	.17	.53	248	9.0	20	12	43	226	7.2	2.7	.66	.26
9	.17	1.6	266	7.4	19	23	48	133	7.0	2.6	.76	.21
10	.17	3.5	154	6.4	20	66	42	77	8.6	3.8	.52	.21
11	.14	1.2	104	4.8	16	89	31	267	7.4	3.2	.37	.16
12	.11	.63	68	5.4	13	78	27	216	6.0	2.2	.37	.14
13	.10	.58	47	6.4	17	77	118	119	5.5	1.7	.37	.14
14	.28	.44	33	6.4	69	98	227	92	5.3	1.4	.34	.16
15	.49	.39	25	4.8	352	90	219	87	4.8	1.4	.31	.14
16	.56	.36	23	3.7	483	71	120	60	68	1.3	.37	.10
17	.61	.32	22	3.3	440	66	82	35	171	1.3	.31	.16
18	.49	.32	20	2.7	70	47	54	28	46	1.3	.49	.21
19	.45	.32	18	3.1	62	40	40	19	28	1.2	1.2	.21
20	.52	.28	18	4.1	67	149	34	16	19	1.2	1.1	.41
21	.45	.28	14	4.8	56	405	34	14	21	.88	.56	.88
22	.92	.25	12	6.4	52	232	42	13	29	.76	.37	.49
23	.80	.28	8.8	8.0	46	166	34	11	17	.99	.37	.31
24	.68	.28	10	5.2	56	150	38	11	26	1.9	.34	.16
25	.80	.36	9.4	7.6	36	170	40	10	31	1.2	.31	.26
26	.63	.39	7.4	9.8	28	117	46	9.6	16	.94	1.9	.16
27	.63	6.0	6.8	48	25	95	48	9.4	11	.82	2.7	.34
28	.74	9.6	8.2	79	23	75	41	15	8.5	.94	.94	.66
29	.80	3.9	8.6	63	------	61	37	27	7.3	.82	.45	.52
30	.80	2.1	7.4	39	------	50	41	21	5.7	.76	.34	.41
31	.32	------	7.0	29	------	41	------	16	------	.71	.31	------
TOTAL	13.06	36.57	1,224.12	413.4	2,356	2,658	1,951	1,894.0	619.7	60.22	22.54	7.93
MEAN	.42	1.22	39.5	13.3	84.1	85.7	65.0	61.1	20.7	1.94	.73	.26
MAX	.92	9.6	266	79	483	405	227	267	171	4.6	2.7	.88
MIN	.10	.25	.86	2.7	13	12	27	9.4	4.8	.71	.31	.10
CFSM	.009	.03	.82	.28	1.75	1.78	1.35	1.27	.43	.04	.02	.005
IN.	.01	.03	.95	.32	1.82	2.06	1.51	1.46	.48	.05	.02	.006

CAL YR 1966: TOTAL 7,983.65 MEAN 21.9 MAX 266 MIN 0 CFSM .45 IN 6.17
WAT YR 1967: TOTAL 11,256.54 MEAN 30.8 MAX 483 MIN .10 CFSM .64 IN 8.70

Peak discharge (base, 600 cfs).--No peak above base.

5-5245. Iroquois River near Foresman, Ind.

Location.--Lat 40°52'14", long 87°18'24", 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 Highway 16 and 55, 0.6 miles west of Foresman, and 3 miles east of Brook.

Drainage area.--452 sq mi.

Records available.--December 1948 to September 1967.

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.--18 years, 330 cfs.

Extremes.--Maximum discharge during year, 2,360 cfs Dec. 11 (gage height, 16.78 ft); minimum daily, 18 cfs Oct. 4, 5, 8, 9, 25-28, Sept. 20; minimum gage height, 3.31 ft Sept. 20.
1948-67: Maximum discharge, 5,930 cfs June 14, 1958 (gage height, 24.42 ft); minimum discharge, 6.1 cfs Sept. 10, 1964; minimum gage height, 2.92 ft Sept. 27-29, 1956.

Remarks.--Record poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	20	385	196	282	350	704	594	704	163	38	32
2	20	20	290	189	335	320	968	704	496	139	35	28
3	20	21	226	182	496	380	1,220	794	355	121	35	30
4	18	20	210	175	524	435	1,300	794	266	115	37	28
5	18	20	242	182	482	435	1,330	704	218	109	35	29
6	20	20	335	169	396	400	1,330	636	203	103	32	29
7	20	21	452	189	320	350	1,280	830	196	91	32	28
8	18	21	1,130	170	275	300	1,140	1,250	182	80	34	26
9	18	60	1,850	155	250	250	991	1,450	182	75	34	26
10	20	220	2,270	140	230	370	945	1,390	242	75	34	26
11	20	290	2,320	130	210	540	922	1,480	242	85	30	26
12	20	282	2,180	120	203	700	830	1,780	226	75	30	25
13	20	226	1,930	110	203	790	794	1,850	182	65	30	22
14	21	157	1,700	100	220	860	1,110	1,740	157	57	30	22
15	22	127	1,420	90	694	900	1,390	1,570	151	53	30	24
16	22	109	1,200	84	1,450	880	1,480	1,390	225	53	29	24
17	24	97	968	81	1,700	840	1,420	1,140	1,100	51	29	22
18	22	91	794	80	1,700	750	1,250	922	1,140	53	29	20
19	22	80	650	81	1,540	700	1,040	722	899	53	35	20
20	24	70	566	86	1,390	960	830	552	650	51	61	18
21	22	61	496	94	1,250	1,500	668	430	482	49	57	20
22	21	65	430	105	1,000	1,800	594	335	608	57	40	22
23	20	61	375	120	900	1,930	580	308	622	70	35	24
24	20	61	317	157	770	1,850	538	274	510	61	32	22
25	18	61	299	196	660	1,780	538	258	482	57	32	22
26	18	57	266	290	580	1,670	524	234	407	46	34	21
27	18	101	234	274	495	1,480	552	210	308	44	46	21
28	18	342	234	345	415	1,330	538	214	250	42	47	25
29	20	454	218	355		1,170	496	676	218	42	40	28
30	21	454	182	335	- - - - -	991	510	968	189	40	37	25
31	21	- - - - -	203	299	- - - - -	812	- - - - -	899	- - - - -	38	38	- - - - -
Total	627	3,689	24,372	5,279	18,970	27,823	27,812	27,098	12,092	2,213	1,117	735
Mean	20.2	123	786	170	678	898	927	874	403	71.4	36.0	24.5
Max	24	454	2,320	355	1,700	1,930	1,480	1,850	1,140	163	61	32
Min	18	20	182	80	203	250	496	210	151	38	29	18
Cfsm	0.045	0.272	1.74	0.376	1.50	1.99	2.05	1.93	0.892	0.158	0.080	0.054
In.	0.05	0.30	2.01	0.43	1.56	2.29	2.29	2.22	1.00	0.18	0.09	0.06

Cal yr 1966: Total 117,249.6 Mean 321 Max 2,320 Min 9.0 Cfsm 0.710 In. 9.64
Wtr yr 1967: Total 151,827 Mean 416 Max 2,320 Min 18 Cfsm 0.920 In. 12.48

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 4.5 miles downstream from Indiana-Illinois State line.

Drainage area.--682 sq mi.

Records available.--October 1944 to September 1967.

Gage.--Digital water-stage recorder. Datum of gage is 614.34 ft above mean sea level, datum of 1929. Prior to Aug. 5, 1945, chain gage and Aug. 5, 1945, to Apr. 14, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--23 years, 490 cfs.

Extremes.--Maximum discharge during year, 2,590 cfs Dec. 12 (gage height, 16.10 ft); minimum, 11 cfs Oct. 30, 31.
1944-67: Maximum discharge, 10,400 cfs June 13, 1958 (gage height, 26.31 ft); minimum, 5.2 cfs Sept. 13, 1964.

Remarks.--Records good except those for winter periods, which are poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	24	14	250	250	320	500	1,130	757	930	273	44	31
2	24	16	150	250	350	465	1,240	1,070	730	227	43	29
3	22	16	130	230	450	529	1,400	1,110	558	195	58	28
4	20	16	120	220	580	605	1,530	1,080	445	173	51	28
5	18	17	110	220	600	637	1,630	1,020	361	155	45	27
6	17	17	290	220	580	614	1,710	966	318	145	41	25
7	15	17	544	220	520	539	1,690	1,230	288	137	39	25
8	16	19	1,380	210	470	446	1,600	1,650	282	127	36	25
9	16	29	1,920	200	410	393	1,470	1,800	288	114	41	24
10	16	78	2,270	200	370	515	1,380	1,810	438	108	40	23
11	15	219	2,520	200	350	800	1,260	2,010	438	109	38	21
12	14	295	2,580	190	320	1,010	1,170	2,170	466	105	36	22
13	15	286	2,460	180	300	1,140	1,140	2,220	361	96	32	23
14	16	234	2,220	180	361	1,270	1,370	2,180	410	84	30	22
15	18	177	1,960	170	952	1,360	1,580	2,080	330	75	31	21
16	18	138	1,710	150	1,780	1,360	1,730	1,820	282	68	30	20
17	19	117	1,450	130	2,000	1,300	1,790	1,560	1,130	63	29	20
18	20	105	1,180	120	2,100	1,170	1,700	1,270	1,600	61	35	20
19	22	98	996	120	2,050	1,040	1,530	1,040	1,480	63	41	20
20	20	92	850	110	1,970	1,080	1,300	890	1,220	63	62	20
21	20	83	728	110	1,870	1,800	1,080	690	929	60	68	20
22	21	76	626	120	1,600	2,190	906	588	900	58	52	18
23	19	75	552	150	1,400	2,410	797	529	889	76	41	19
24	18	60	494	170	1,200	2,490	755	459	834	91	35	22
25	16	54	417	200	1,100	2,550	717	417	752	79	37	23
26	14	50	370	250	900	2,440	714	368	655	70	42	24
27	12	50	350	330	750	2,230	712	336	562	61	50	24
28	12	100	330	250	631	2,010	721	306	457	54	50	25
29	12	350	300	400		1,790	708	410	373	49	45	30
30	11	330	280	380	- - - - -	1,570	699	790	320	47	41	28
31	11	- - - - -	260	350	- - - - -	1,320	- - - - -	1,030	- - - - -	46	38	- - - - -
Total	531	3,228	29,797	6,480	26,284	39,573	37,159	35,656	19,026	3,132	1,301	707
Mean	17.1	108	961	209	939	1,277	1,239	1,150	634	101	42.0	23.6
Max	24	350	2,580	400	2,100	2,550	1,790	2,220	1,600	273	68	31
Min	11	14	110	110	300	393	699	306	282	46	29	18
Cfsm	.03	.16	1.41	.31	1.38	1.87	1.82	1.69	0.930	.15	.06	.03
In.	.03	.18	1.62	.35	1.43	2.16	2.03	1.94	1.04	.17	.07	.04

Cal yr 1966 : Total 147,600.3 Mean 404 Max 2,580 Min 8.5 Cfsm .59 In. 8.05
Wtr yr 1967 : Total 202,874 Mean 556 Max 2,580 Min 11 Cfsm .82 In. 11.06

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, 300 ft downstream from Mud Creek and 1 mile west of Milford.

Drainage area.--430 sq mi.

Records available.--July 1948 to September 1967.

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.--19 years, 316 cfs.

Extremes.--Maximum discharge during year, 3,220 cfs Dec. 9 (gage height, 16.10 ft); minimum, 2.6 cfs Oct. 9.
1948-67: 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, that of Oct. 9, 1966.

Remarks.--Records fair except those for winter periods, which are poor.

Discharge, in cubic feet per second, water year October 1966 to September 1967

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.9	6.6	247	90	340	170	394	299	176	53	18	7.7
2	5.3	4.7	31	80	635	190	400	424	135	50	17	6.0
3	4.2	5.5	25	75	790	250	410	610	111	56	23	7.1
4	3.6	6.2	17	70	705	232	418	465	114	34	22	5.5
5	3.3	6.6	42	70	720	197	432	362	107	30	19	6.0
6	3.3	5.1	103	80	420	162	710	400	108	41	14	5.8
7	3.4	7.2	610	110	360	120	530	1,170	105	40	13	5.0
8	3.3	6.2	2,200	60	320	122	444	2,310	98	28	18	4.8
9	2.7	9.0	3,140	58	300	127	402	2,220	112	36	34	4.5
10	5.3	40	2,480	56	280	184	367	1,540	105	38	24	5.5
11	4.7	33	1,640	54	270	600	308	1,380	114	38	18	5.0
12	3.6	29	760	70	312	585	276	1,690	127	28	14	4.8
13	3.0	14	662	80	424	732	357	1,290	112	32	10	5.0
14	2.8	12	560	70	522	760	1,010	927	92	27	9.5	5.0
15	3.8	7.6	424	50	1,370	705	927	840	96	26	12	5.8
16	4.2	5.5	392	45	1,960	632	635	702	81	26	12	5.5
17	4.7	6.6	384	40	1,570	555	545	555	122	24	6.5	4.0
18	5.3	5.5	362	35	1,030	460	452	510	98	23	7.7	5.0
19	6.2	4.2	337	30	650	386	322	428	80	22	13	5.0
20	6.6	4.4	340	37	548	562	315	400	77	22	16	5.2
21	6.9	3.8	288	53	408	2,010	302	285	76	20	15	6.2
22	6.2	3.4	231	84	337	2,200	326	281	232	19	9.5	5.8
23	5.5	4.4	200	108	300	1,700	290	256	184	21	5.8	5.5
24	4.4	4.7	180	84	250	1,250	268	250	144	33	10	4.5
25	4.9	5.5	170	90	220	1,050	268	222	127	27	12	4.8
26	5.5	4.2	150	176	200	900	254	218	131	25	8.9	4.8
27	6.6	55	130	957	190	805	268	200	128	42	12	6.2
28	6.6	344	140	1,240	180	775	315	162	78	29	10	14
29	4.2	328	130	1,080		510	283	380	74	26	7.7	7.1
30	5.5	344	110	548	- - - - -	540	295	186	63	24	8.9	6.0
31	5.1	- - - - -	100	396	- - - - -	452	- - - - -	166	- - - - -	20	8.6	- - - - -
Total	145.6	1,315.9	15,585	6,076	15,611	19,923	12,523	21,128	3,407	960	429.1	173.1
Mean	4.70	43.9	535	196	558	643	417	682	114	31.0	13.8	5.77
Max	6.9	344	3,140	1,240	1,960	2,200	1,010	2,310	232	56	34	14
Min	2.7	3.4	17	30	180	120	254	162	63	19	5.8	4.0
Cfsm	0.011	0.102	1.24	0.456	1.30	1.50	0.970	1.59	0.265	0.072	0.032	0.013
In.	0.01	0.11	1.43	0.53	1.35	1.72	1.08	1.83	0.29	0.08	0.04	0.01

Cal yr 1966: Total 90,966.9 Mean 249 Max 3,140 Min 2.7 Cfsm 0.579 In. 7.83
Wtr yr 1967: Total 98,276.7 Mean 269 Max 3,140 Min 2.7 Cfsm 0.626 In. 8.50

Peak discharge (base, 2,500 cfs).--Dec. 9 (0700) 16.10 ft, 3,220 cfs; May 9 (0200) 15.10 ft, 2,640 cfs.

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 flood-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 easurements made at low-flow partial-record stations during water year 1967

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Great Miami River Basin				
3-2748	Martindale Creek near Cambridge City, Ind.	Lat 39°49'50", long 85°08'32", on line secs. 13 and 24, T. 16 N., R. 12 E., 1¼ miles upstream from U.S. Highway 40, and 1 3/4 miles northeast at Cambridge City.	58.1	1960-67	10-31-66 8-11-67	3.37 7.76
3-2752	Salt Creek near Metamora, Ind.	Lat 39°26'45", long 85°11'01", in SW¼ sec. 34, T. 12 N., R. 12 E., 0.3 mile south of U.S. Highway 52 and 2 3/4 miles west of Metamora.	115	1954 1960-67	10-31-66 8-9-67	1.05 2.29
3-2757	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.	9.67	1960-65 1967	10-31-66 8-10-67	0.37 0.21
		Laughery Creek Basin				
3-2765.5	Laughery Creek near Ballstown, Ind.	Lat 39°14'42", long 85°14'52", in SW¼NE¼ sec. 12, T. 9 N., R. 11 E., at bridge on State Highway 229, 0.6 mile south of Ballstown.	a 37	1961-65 1967	o-	0.02
		Indian Kentuck Creek Basin				
3-2918	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 1960-65, 1967	8-2-67	0
		Fourteenmile Creek Basin				
3-2924	Fourteenmile Creek near Charlestown, Ind.	Lat 38°27'58", long 85°37'04", in SE¼SE¼ of lot 120 of Clark Military Grant, at bridge on State Highway 62, 2.0 miles northeast of Charlestown, Ind.	a 97	1954 1960-65 1967	8-2-67	3.11
		Indian Creek Basin				
3-3026	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 0.2 mile south of State Highway 62, 1 3/4 miles east of Corydon, and 2.4 miles upstream from mouth.	32.5	1949-50 1960-67	10-31-66 8-2-67	0.31 2.03
		Blue River Basin				
3-3027	Middle Fork Blue River near Salem, Ind.	Lat 38°32'36", long 86°05'37", in NE¼ sec. 8, T. 1 N., R. 4 E., at bridge on State Highway 135, 1.7 miles upstream from confluence with West Fork Blue River, and 4.4 miles south of Salem.	38.4	1954 1960-61 1963-67	10-31-66 8-30-67	0 1.60
3-3029	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, 0.8 mile north of White Cloud, and at mouth of Harrison Spring.		1951-52 1954-67	10-18-66 11-18-66 12-22-66 1-23-67 2-28-67 3-28-67 5-31-67 6-29-67 8-3-67	36.3 53.2 93.8 70.2 97.7 148 102 48.6 25.9

Discharge measurements made at low-flow partial-record stations during water year 1967--Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Little Pigeon Creek Basin				
3-3040	Little Pigeon Creek near Tennyson, Ind.	Lat 38°02'43", long 87°07'08", in NW¼ sec. 31, T. 5 S., R. 6 W., at county highway bridge, 1.0 mile south of State Highway 62, 1.2 miles downstream from Chrisney ditch, and 2½ miles south of Tennyson.	150	1944-47 1960-67	10- 1-66 3-8-67 5-15-67 5-17-67 9-12-67	0 c512 c483 c715 b1.0
		Pigeon Creek Basin				
3-3220.5	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, about 200 feet downstream from C.C.C. & St. L. R.R. bridge, 3 miles south of Buckskin, and 8.3 miles west of Lynnville.	a 184	1961-63 1965,67	11-1-66 9-12-67	1.80 7.10
		Wabash River Basin				
3-3228	Bear Creek near Bryant, Ind.	Lat 40°30'53", long 84°58'23", in SE¼ sec. 19, T. 24 N., R. 14 E., at bridge on U.S Highway 27, 1¼ miles south of Bryant.	a 14	1957 1961-67	10-26-66 9-8-67	0 0
3-3232	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 at Markle.	a 92	1954 1960-67	10-25-66 12-21-66 1-24-67 2-28-67 3-28-67 4-22-67 6-16-67 7-19-67 8-9-67	0.70 67.0 14.9 31.8 235 67.0 15.1 4.69 0.71
3-3238	Eight Mile Creek at Zanesville, Ind.	Lat 40°54'40", long 85°17'30", in sec. 4, T. 28 N., R. 11 E., at bridge on State Highway 3, 0.7 mile southwest of Zanesville.	a 46	1954 1961-67	5-4-66 5-9-66 5-10-66 5-11-66 6-6-66 7-8-66 11-2-66	c11.0 c14.5 c8.25 c10.0 c3.46 c0.05 c 0.59
3-3261	Big Lick Creek near Wheeling, Ind.	Lat 40°22'37", long 85°26'52", in NE¼ sec. 12, T. 22 N., R. 9 E., at county highway bridge, three-eighths of a mile upstream from mouth, and 1¼ miles northwest of Wheeling.	a 83	1954 1961-67	5-24-66 7-26-66 10-31-66	c38.2 c5.38 4.42
3-3275.2	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 1960-67	9-16-67	7.28
3-3277.7	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	1961-67	10-24-66 11-22-66 12-13-66 1-24-67 2-14-67 3-23-67 4-18-67 6-14-67 7-12-67 8-9-67	4.20 10.3 430 32.8 19.8 79.9 51.2 10.5 19.8 5.62
3-3314.3	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	1960-67	10-27-66 12-2-66 1-10-67 2-7-67 3-8-67 4-11-67 5-8-67 6-6-67 7-5-67 8-1-67 8-30-67 9-27-67	3.58 67.4 36.0 56.4 37.7 99.1 186 28.5 16.9 17.0 9.03 4.63
3-3334	Mud Creek near Windfall, Ind.	Lat 40°24'36", long 85°54'18", in NW¼NE¼ 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	1960-64 1967	10-31-66	0.42

Discharge measurements made at low-flow partial-record stations during water year 1967-Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Wabash River Basin--continued				
3-3343	Kilmore Creek at Kilmore, Ind.	Lat 40°20'40", long 86°30'25", in SW¼ sec. 14, T. 22 N., R. 1 W., at county highway bridge, ¼ mile south of Kilmore.	a 62	1954 1960-67	9-13-67	0
3-3356.7	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	1960-67	7-19-67 9-13-67	16.3 8.90
3-3391	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, ¼ mile west of U.S. Highway 41, 2.0 miles northeast of Veedersburg, and 3.6 miles upstream from East Fork Coal Creek.	a 76	1962-65 1967	10-7-66 9-12-67	4.66 4.36
3-3392	Sugar Creek near Kirklin, Ind.	Lat 40°12'29", long 86°22'03", in SE¼NW¼ sec. 1, T. 20 N., R. 1 E., at bridge on U.S. Highway 421, 1 mile north of Kirklin.	a 41	1960-67	9-13-67	0.10
3-3414.5	Otter Creek at Burnette, Ind.	Lat 39°32'17", long 87°17'44", on line between secs. 27 and 28, T. 13 N., R. 8 W., at county road bridge, 0.3 mile south of Burnette.	a 69	1961-65 1967	10-31-66 11-16-66 11-18-66 7-17-67 9-13-67	6.18 c11.2 c9.86 5.23 2.27
3-3415.8	Honey Creek near Terre Haute, Ind.	Lat 39°23'40", long 87°23'54", in sec. 15, T. 11 N., R. 9 W., at bridge on U. S. Highway 41, at north edge of Allendale, and about 3 miles south of the city limits of Terre Haute.	a 64	1965 1967	10-31-66 7-19-67 9-13-67	12.5 2.26 3.12
3-3416	Honey Creek near Prairieton, Ind.	Lat 39°23'50", 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	1960-64 1967	10-31-66	15.4
3-3418	Prairie Creek at Prairie Creek, Ind.	Lat 39°16'50", long 87°29'54", on line between secs. 26 and 27, T. 10 W., R. 10 W., at bridge on State Highway 63, ½ mile north of Prairie Creek.	a 24	1960 1962-65 1967	10-31-66 7-19-67 9-13-67	0.52 0 0
3-3419.2	Turman Creek near Farmersburg, Ind.	Lat 39°14'40", long 87°24'28", at corner secs. 3, 4, 9 and 10, T. 9 N., R. 9 W., at bridge on 1100 North Road, 1½ miles southwest of Farmersburg.	a 13	1964 1967	7-9-67 9-13-67	2.21 0.82
3-3419.5	Turman Creek near Fairbanks, Ind.	Lat 39°09'18", long 87°31'22", in NW¼NW¼ sec. 9, T. 8 N., R. 10 W., at bridge on State Highway 63, 4.6 miles south of Fairbanks.	a 69	1954 1961-63 1965 1967	10-31-66	0.65
3-3427	Maria Creek near Emison, Ind.	Lat 38°46'35", long 87°28'21", in NW¼ sec. 24, T. 4 N., R. 10 W., at bridge on U.S. Highway 41, 2 miles south of Emison.	a 88	1954 1960-65 1967	10-31-66 7-17-67 9-12-67	6.34 6.35 3.21
3-3467	White River near Harrisville, Ind.	Lat 40°10'32", long 84°53'23", in sec. 19, T. 20 N., R. 15 E., at bridge on State Highway 32, 3/4 mile southwest at Harrisville.	21.3	1961-65 1967	11-1-66	0.90
3-3483	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.	44.7	1960-65 1967	10-31-66	2.61
3-3519	Indian Creek at Oaklandon, Ind.	Lat 39°51'51", long 85°58'07", in SW¼NW¼ sec. 3, T. 16 N., R. 5 E., at bridge on old State Highway 67, 0.2 miles northeast of State Highway 67 and Sunnyside Road intersection, and one mile southwest of Oaklandon.	18	1960-67	10-31-66	0.01
3-3536.5	Pleasant Run 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.	4.93	1960-65 1967	10-31-66	0.006
3-3536.7	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.	28.7	1960-67	11-1-66 9-14-67	0 0
3-3541	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.	17.1	1960-65 1967	11-1-66 7-17-67 9-13-67	0.81 0.35 0.02
3-3542	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, and 1.6 miles east of Morgantown.	a 20	1961-65 1967	10-31-66 7-17-67 9-13-67	0.71 7.01 0

Discharge measurements made at low-flow partial-record stations during water year 1967-Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Wabash River Basin--continued				
3-3571	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	1960-65 1967	11-1-66 7-19-67 9-13-67	2.46 1.63 1.04
3-3573	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, 1¼ miles southeast of Barnard.	120	1961-65 1967	10-7-66 9-14-67	1.50 3.19
3-3602	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 1960-65 1967	2-14-67 8-10-67 9-8-67	c6.83 1.85 0.01
3-3603	Richland Creek near Bloomfield, Ind.	Lat 39°01'38", long 86°54'25", in NE¼SE¼ sec. 24, T. 7 N., R. 5 W., at bridge on State Highway 54, 1.9 miles east of Bloomfield.	a 96	1960-65 1967	11-1-66 8-10-67 9-8-67	4.04 21.1 3.23
3-3607	Black Creek near Sandborn, Ind.	Lat 38°52'38", long 87°11'12", at corner secs. 9, 10, 15, and 16, T. 5 N., R. 7 W., at bridge on State Highway 58, 1.3 miles south of Sandborn.	a 101	1960-63 1965 1967	11-1-66 8-10-67 9-8-67	11.2 26.2 12.0
3-3608	Prairie Creek near Washington, Ind.	Lat 38°43'01", long 87°10'00", in SW¼SW¼ sec. 2, T. 3 N., R. 7 W., at bridge on State Highway 57, 4 miles north of Washington.	a 117	1954 1960-63 1965 1967	11-1-66 8-9-67 9-11-67	1.26 1.08 0.11
3-3614	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 bridge on county highway, 2.8 miles west of Rays Crossing.	97.0	1960-65 1967	10-31-66 5-24-67 5-31-67 8-8-67 8-9-67 8-9-67 8-10-67	4.06 c101 c64.2 c2.70 c2.53 2.56 2.86
3-3616	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 bridge on county highway, 1.6 miles northeast of Maxwell and 4.5 miles northeast of Greenfield.	24.3	1960-65 1967	10-31-66 8-17-67	0.16 0.05
3-3617	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.	130	1954 1960-67	8-9-67	10.9
3-3618	Buck Creek near New Bethel, Ind.	Lat 39°43'34", long 85°58'21", on line between secs. 21 and 28, T. 15 N., R. 5 E., at bridge on county highway on East Troy Avenue, 2.4 miles northeast of New Bethel.	51.0	1960-65 1967	10-31-66 8-9-67	0.82 0.61
3-3619	Hurricane Creek at Franklin, Ind.	Lat 39°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 bridge on Johnson County Road 400 East, 1.0 mile northeast of Franklin.	14.0	1960-65 1967	10-31-66 8-17-67	0 0
3-3632	Flatrock River at Lewisville, Ind.	Lat 39°48'24", long 85°21'29", in NW¼SE¼ sec. 25, T. 16 N., R. 10 E., at bridge on U. S. Highway 40 at Lewisville.	47.8	1954 1960-67	9-30-66 8-11-67	2.99 6.33
3-3643	Haw Creek near Columbus, Ind.	Lat 39°14'44", long 85°52'51", in W½SE¼ sec. 5, T. 9 N., R. 6 E., at bridge on county highway, 1.1 miles north of corporate limits of Columbus.	50.6	1960-65	10-31-66	2.98
3-3648	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.	9.16	1960-65 1967	6-5-67 6-7-67 7-31-67 8-2-67 8-8-67	c88.3 c87.5 c12.0 c9.58 0.01
3-3656	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.	96.2	1954 1960-65 1967	10-31-66 9-7-67	0.11 0.07
3-3663	Big Creek near Volga, Ind.	Lat 38°46'47", long 85°32'57", in NE¼NW¼ sec 20, T. 4 N., R. 9 E., at bridge on county highway, 1.7 miles west of Volga.	96.9	1954 1960-65 1967	8-1-67	1.72
3-3715.5	Middle Fork Salt Creek at Story, Ind.	Lat 39°05'37", long 86°12'29", in SE¼SE¼ sec. 29, T. 8 N., R. 3 E., at bridge on State Highway 135, 0.5 mile southeast of Story.	a 37	1954- 1960-65 1967	10-31-66 8-2-67	0.41 2.93

Discharge measurements made at low-flow partial-record stations during water year 1967-Continued

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
		Wabash River Basin--continued				
3-3733.2	Indian Creek near Trinity Springs, Ind.	Lat 38°44'15", long 86°46'14", in W½ sec. 32, T. 4 N., R. 3 W., at bridge on McBride Bluff Road, 1.3 miles south of Trinity Springs, and 2.3 miles above mouth.	a 240	1961-67	8-11-67 9-11-67	51.6 2.05
3-3736	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 to "The Pioneer Mother's Memorial National Forest", 0.2 mile south of U.S. Highway 150, and 1.3 miles southeast of Paoli.	a 16	1962-67	8-11-67 9-11-67	6.91 0.60
		Streams Tributary to Lake Michigan				
4-1004.9	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 bridge on County Highway 46, 0.4 mile west of New Paris.	a 160	1960-65 1967	11-1-66 8-1-67	33.4 37.3
		Illinois River Basin				
5-5163	Dausman ditch near Bremen, Ind.	Lat 41°22'58", long 86°07'02", on line between sec. 19, T. 34 N., R. 4 E., and sec. 24, T. 34 N., R. 3 E., at bridge on State Highway 331, 4½ miles south of Bremen.	a 48	1956 1961-65 1967	11-1-66 8-31-67	3.08 3.55

a--about
b--estimate
c--furnished by FWPCA
+--operated as continous record station

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. Discharge measurements totaling 510 were made at miscellaneous sites in the state by the Federal Water Polution Control Administration. The results of these measurements are available in the district office of The Geological Survey.

Discharge measurements made at miscellaneous sites during water year 1967

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
		Wabash River Basin				
Paw Paw Creek	Eel River	Lat 40°57'15", long 85°47'33", on line between S½ sec. 7, T. 28 N., R. 7 E., and sec. 12, T. 28 N., R. 6 E., at bridge on State Highway 13, 0.75 mile south of Urbana, Ind.			3-22-67	25.8
Wildcat Creek	Wabash River	Lat 40°29'13", long 86°23'42", in NE¼ sec. 34, T. 24 N., R. 1 E., at bridge on State Highway 29, at north edge of Burlington, Carroll Co., Ind.		1966	10-10-66	18.1
Wabash River	Ohio River	Lat 40°20'06", long 87°10'05", in SE¼ sec. 23, T. 24 N., R. 7 W., at bridge on county road at south edge of Independence, Warren Co., Ind.		1966	10-14-66 11-8-66	822 998
...Do.....	...do.....	Lat 39°57'09", long 87°25'12", on line sec. 3, T. 17 N., R. 9 W. at bridge on State Highway 234, 2 miles east of Cayuga, Vermillion Co., Ind.		1966	10-20-66 11-16-66	900 4,420
Brouilletts Creek	Wabash River	Lat 39°40'53", long 87°31'15", on line between secs. 3 and 4, T. 14 N., R. 10 W., at bridge on State Highway 71, 1 mile south of Saint Bernice, Ind.			10-5-66	*13.8
...Do.....	...do.....	Lat 39°37'48", long 87°27'48", in NW¼ sec. 30, T. 14 N., R. 9 W., at county road bridge, Vermilion County, 0.3 mile north of Universal, Ind.			10-5-66	*18.4
...Do.....	...do.....	Lat 39°36'16", long 87°24'57", in NE¼ sec. 4, T. 13 N., R. 9 W., at county road bridge, Vigo County, 0.25 mile north of Shepardsville, Ind.	334	1966	10-5-66	*18.5
Wabash River	Ohio River	Lat 39°06'36", long 87°39'18", in NE¼ sec. 29, T. 8 N., R. 11 W., at bridge on State Highway 154 at east edge of Hutsonville, Crawford Co., Ill.		1966	10-5-66 11-2-66	1,450 1,380
Duck Creek	White River	Lat 40°08'18", long 85°56'22", in SE¼ sec. 34, T. 20 N., R. 5 E., at bridge on State Highway 213, 1 mile north of Strawtown, Ind.		1946	6-1-65 6-14-65	33.2 20.7
Cicero Creek	...do.....	Lat 40°04'19", long 86°02'41", in NW¼ sec. 26, T. 19 N., R. 4 E., 200 ft below Morse Reservoir, 2¼ miles northwest of Noblesville, Ind.	214	1966	10-6-66 10-21-66 11-16-66	0.19 0.20 0.31
Fall Creek	...do.....	Lat 39°54'12", long 85°59'19", in SW¼ sec. 20, T. 17 N., R. 5 E., 2,000 ft below Geist Reservoir, 3½ miles west of McCordsville, Ind.		1965	12-8-66	1.31
Muddy Fork	Sand Creek	Lat 39°16'39", long 85°31'44", in SW¼ sec. 28, T. 10 N., R. 9 E., at county road bridge, Decatur County at Harris City, 4 miles south southwest of Greensburg, Ind.			10-27-66	*1.56
Sand Creek	East Fork White River	Lat 39°14'01", long 85°31'37", in SW¼ sec. 9, T. 9 N., R. 9 E., at county road bridge, Decatur County, 2 miles east of Letts, Ind.			10-27-66	*3.38
...Do.....	...do.....	Lat 39°06'14", long 85°36'14", in SW¼ sec. 26, T. 8 N., R. 8 E., 400 ft upstream from county road bridge, Jennings County, 1½ miles north northeast of Brewersville, Ind.			10-27-66	*3.80
...Do.....	...do.....	Lat 39°04'42", long 85°45'07", in SW¼ sec. 4, T. 7 N., R. 7 E., at private road on northside of creek, approximately 1½ miles west of Scipio, Ind.			10-28-66	*2.95
...Do.....	...do.....	Lat 39°04'06", long 85°47'54", in NW¼ sec. 7, T. 7 N., R. 7 E., 200 ft upstream from county line road, Jennings County, 3 miles southeast of Azalia, Ind.			10-28-66	*3.88
...Do.....	...do.....	Lat 39°03'29", long 85°50'51", in SW¼ sec. 10, T. 7 N., R. 6 E., 250 ft above mouth, 3/4 mile downstream from U.S. Highway 31, 1½ miles northwest of Reddington, Ind.			10-28-66	*6.61
Vernon Fork	Muscatatuck River	Lat 38°57'15", long 85°41'06", in NE¼ sec. 24, T. 6 N., R. 7 E., at county road bridge, Jennings County, ½ miles upstream from Indian Creek, 3 miles southeast of Hayden, Ind.			10-7-66	*3.45
...Do.....	...do.....	Lat 38°54'22", long 85°49'17", in NE¼ sec. 2, T. 5 N., R. 6 E., at bridge on U.S. Highway 31, 4 miles south southeast of Seymour, Ind.			10-7-66	*5.41

Discharge measurements made at miscellaneous sites during water year 1967--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Wabash River Basin--Continued						
Vernon Fork	Muscatatuck River	Lat 38°47'36", long 85°53'03", in NW¼ sec. 17, T. 4 N., R. 6 E., at bridge on Crothersville-Brownstown Road, 2½ miles west of Crothersville, Ind.		1932	10-7-66	*6.19
Streams tributary to Lake Michigan						
Cady Marsh ditch	Hart ditch	Lat 41°33'00", long 87°28'16", in NE¼ sec. 29, T. 36 N., R. 9 W., at bridge on U.S. Highway 41, at Highland, Ind.		1954	10-24-66	0.35

* - Chemical quality of stream water published in Part 2 of this report.
a - Estimate.
c - Seepage run.
f - Formerly gaging site.

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 Natural 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	-	1950-67
Wabash River basin					
Banning Lake near North Webster	Kosciusko	0.58	12	837.50	1945-67
Baugher Lake near Washington Center	Noble	36.4	32	878.52	1945-51
Beaver Dam Lake near Silver Lake	Kosciusko	1.89	146	868.95	1947-53
Big Barbee Lake near North Webster	Kosciusko	44.8	*304	837.50	1945-67
Big Chapman Lake near Warsaw a/	Kosciusko	4.59	474	827.75	1945-67
Big Lake near Wolflake	Noble	6.77	228	*898.18	1943-67
Blue Lake near Churubusco	Whitley	3.47	239	850.28	1946-67
Bruce Lake at Lake Bruce	Pulaski	5.19	245	723.69	1943-53
Carr Lake near Claypool	Kosciusko	2.56	79	848.88	1947-53
Cedar Lake at Tri-Lakes	Whitley	1.62	131	901.90	1943-49
Center Lake at Warsaw	Kosciusko	0.75	120	803.86	1945-67
Crooked Lake near Wolflake	Noble	1.32	206	905.69	1943-53
Crystal Lake near Atwood	Kosciusko	0.38	76	789.69	1945-51
Diamond Lake near Silver Lake	Kosciusko	5.35	79	-	1954-67
Everett Lake near Levert	Allen	2.13	43	835.13	1946-66
Fish Lake near Warsaw	Kosciusko	3.59	15	845.52	1951-66
Fletcher Lake at Fletcher	Fulton	0.62	45	783.20	1946-53
Gilbert Lake near Washington Center	Noble	0.39	*37	-	1954-67
Goose Lake near Lorane	Whitley	1.42	84	910.96	1945-53
Hill Lake near Silver Lake	Kosciusko	0.56	67	871.50	1952-67
Hoffman Lake at Atwood	Kosciusko	7.14	180	785.85	1945-53
Horseshoe Lake near Washington Center	Noble	1.39	18	901.80	1945-66
Irish Lake near North Webster	Kosciusko	50.8	*182	837.50	1945-67
James Lake at Oswego	Kosciusko	-	*282	836.40	1943-67
Kuhn Lake near North Webster	Kosciusko	3.74	*137	837.50	1945-67
Lake Manitou at Rochester	Fulton	38.1	631	778.41	1943-67
Langenbaum Lake near Monterey	Starke	0.98	48	717.96	1954-66
Little Barbee Lake near North Webster	Kosciusko	48.8	*74	837.50	1945-67
Little Chapman Lake near Warsaw	Kosciusko	7.78	128	827.75	1945-67
Little Wilson Lake near Larwill	Whitley	0.59	8	865.39	1946-52
Long Lake at Laketon	Wabash	0.64	48	751.19	1946-51 1959-67
Loon Lake at Ormas	Whitley	11.2	222	895.14	1943-66
Loon Lake near Silver Lake	Kosciusko	2.70	40	865.74	1947-53
Lost Lake near Culver d/	Marshall	10.2	40	732.00	1954-67
Lukens Lake near Disko	Wabash	0.99	46	-	1948-49 1959-67
McClures Lake near Silver Lake	Kosciusko	0.45	32	865.85	1945-52
Maxinkuckee Lake at Culver	Marshall	9.48	1,650	733.12	1943-67
Muskelonge Lake near Warsaw	Kosciusko	11.1	32	842.67	1943-53 1959-67
New Lake near Etna	Whitley	0.49	50	903.91	1945-53
North Little Lake at Silver Lake	Kosciusko	2.81	12	861.73	1947-67
Nyona Lake near Greenoak	Fulton	6.47	104	793.91	1946-67
Ogle Lake near Nashville	Brown	1.03	20	-	1954-67
Old Lake near Etna	Whitley	3.13	32	898.07	1949-66
Oswego Lake at Oswego	Kosciusko	115.0	*83	836.40	1943-67
Palestine Lake at Palestine	Kosciusko	29.9	290	-	1954-67
Pike Lake at Warsaw	Kosciusko	40.4	203	805.64	1954-67
Ridinger Lake near Pierceton	Kosciusko	34.9	136	843.12	1943-67
Robinson Lake near Pierceton	Kosciusko	6.95	59	851.09	1946-51
Rock Lake near Akron	Kosciusko	1.78	56	847.29	1949-66
Round Lake at Tri-Lakes	Whitley	0.83	125	901.90	1946-53
Sawmill Lake near North Webster	Kosciusko	51.9	*36	837.50	1945-67

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	0.42	*105	837.50	1945-67
Sherburn Lake near Pierceton e/	Kosciusko	5.42	15	-	1954-67
Shoe Lake near Oswego	Kosciusko	0.47	40	841.57	1946-53
Shriner Lake at Tri-Lakes	Whitley	1.12	111	907.04	1943-67
Silver Lake at Silver Lake	Kosciusko	4.47	102	861.73	1947-67
Smalley Lake near Washington Center	Noble	32.6	69	-	1943-67
South Mud Lake near Fulton	Fulton	4.74	94	793.42	1946-66
Starve Hollow Lake near Vallonia	Jackson	6.14	145	-	1946-61 1963-67
Tippecanoe Lake at Oswego	Kosciusko	115.0	*768	836.40	1943-67
Town Lake near Akron	Fulton	1.74	23	-	1949-50
Troy Cedar Lake near Lorane	Whitley	5.51	93	905.41	1945-52
Versailles Lake near Versailles	Ripley	167.0	232	-	1957-67
Webster Lake at North Webster	Kosciusko	54.0	774	852.75	1943-67
Wilmot Pond at Wilmot b/	Noble	39.7	10	-	1945-51
Wilson Lake near Larwill	Whitley	0.49	29	865.39	1946-52
Winona Lake at Warsaw	Kosciusko	32.1	562	811.06	1943-67
Yellow Creek Lake near Silver Lake	Kosciusko	8.50	151	860.50	1945-53
Zink Lake near Rochester	Fulton	0.26	19	810.68	1952-55
Lakes in the St. Lawrence River basin for which records are available					
Streams tributary to Lake Michigan					
Adams Lake near Wolcottville	Lagrange	5.69	*308	953.59	1964-67
Atwood Lake near Wolcottville	Lagrange	1.31	170	899.99	1948-53
Bass Lake near Angola	Steuben	0.60	61	979.68	1954-66
Bear Lake at Wolflake	Noble	6.12	136	894.60	1943-67
Big Long Lake near Stroh	Lagrange	4.13	388	956.21	1954-67
Big Otter Lake near Fremont	Steuben	19.8	69	965.18	1946-53
Big Turkey Lake at Stroh	Lagrange	34.6	450	926.61	1945-66
Bixler Lake at Kendallville	Noble	3.63	120	963.65	1945-67
Blackman Lake near Wolcottville	Lagrange	1.4	67	974.20	1953-59
Bower Lake near Pleasant Lake	Steuben	87.5	25	948.50	1946-67
Cedar Lake near Ontario	Lagrange	1.66	120	871.90	1948-51
Cedar Lake near Waterloo	DeKalb	23.4	28	896.76	1943-56
Cree Lake near Kendallville	Noble	4.90	58	945.23	1949-66
Crooked Lake at Crooked Lake	Steuben	11.9	733	988.17	1946-67
Dallas Lake near Wolcottville	Lagrange	39.4	283	897.36	1945-67
Dewart Lake near Leesburg	Kosciusko	7.88	551	867.70	1945-67
Diamond Lake near Wawaka	Noble	2.82	105	-	1946-67
Duely Lake near Cromwell c/	Noble	11.2	21	876.68	1953-66
Eagle Lake near Kimmel	Noble	1.77	81	-	1946-48
Emma Lake near Emma	Lagrange	14.8	42	880.87	1954-66
Engle Lake near Ligonier	Noble	3.22	48	-	1956-67
Fish Lake near Plato	Lagrange	10.8	100	936.50	1945-67
Fish Lake near Scott	Lagrange	6.14	135	814.42	1954-67
Flatbelly Lake near Syracuse	Kosciusko	4.4	326	-	1964-67
Fox Lake near Angola	Steuben	1.13	142	1,018.83	1946-53
Golden Lake near Pleasant Lake	Steuben	92.4	119	948.50	1946-67
Gordy Lake near Cromwell	Noble	8.82	31	876.68	1953-66
Hackenburg Lake near Wolcottville	Lagrange	54.8	42	897.36	1945-67
Harper Lake near Washington Center	Noble	2.67	11	878.25	1946-67
Heaton Lake near Elkhart	Elkhart	8.78	87	767.30	1946-53
High Lake near Wolflake	Noble	4.75	123	896.35	1961-67
Hindman Lake near Washington Center	Noble	8.00	13	878.25	1946-67
Hogback Lake near Angola	Steuben	102.0	146	948.50	1946-67
Howard Lake near Angola	Steuben	3.94	27	977.34	1954-63
Hunter Lake near Middlebury	Elkhart	0.72	99	856.90	1946-53
Indian Lake near Corunna	DeKalb	3.76	56	-	1957
Indiana Lake near Bristol	Elkhart	0.53	122	759.73	1946-53
Jimmerson Lake at Nevada Mills f/	Steuben	47.0	283	964.66	1946-67
Knapp Lake near Washington Center	Noble	5.64	88	878.25	1946-67
Lake Gage at Panama	Steuben	17.2	324	954.25	1946-67
Lake George at Hobart	Lake	125.0	282	602.23	1946-67
Lake George at Jamestown	Steuben	12.3	488	985.28	1946-67
Lake James at Lake James	Steuben	43.0	1,034	964.96	1943-49
Lake of the Woods near Helmer	Lagrange	5.36	136	951.09	1951-67
Lake Pleasant near Nevada Mills	Steuben	2.51	424	-	1954-67
Latta Lake near Rome City	Noble	4.37	42	918.71	1954-66
Lime Lake at Panama	Steuben	17.4	44	954.25	1946-67
Little Long Lake at Kendallville	Noble	4.34	71	-	1954-67
Little Otter Lake near Fremont	Steuben	14.3	34	965.18	1946-53

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 Turkey Lake at Elmira	Lagrange	56.0	135	925.72	1945-66
Long Lake at Moonlight	Steuben	70.8	92	-	1946-67
Long Lake near Burr Oak	Noble	12.0	40	895.82	1954-67
Loon Lake near Angola	Steuben	2.73	138	1,011.98	1954-66
Lower Long Lake near Albion	Noble	3.96	66	889.81	1946-52
McClish Lake near Helmer	Lagrange	1.36	35	951.09	1951-67
Marsh Lake near Fremont	Steuben	14.8			1967
Martin Lake near Valentine	Lagrange	5.36	26		1945-67
Messick Lake near Wolcottville	Lagrange	55.8	68	897.36	1945-67
Moss Lake near Washington Center	Noble	5.90	9	878.25	1946-67
Mud Lake near Orland	Steuben	1.64	25	939.01	1956-67
Muncie Lake near Burr Oak	Noble	43.4	47	-	1954-67
North Twin Lake near Howe	Lagrange	1.99	135	843.56	1953-67
Olin Lake near Valentine	Lagrange	6.12	103	899.45	1945-67
Oliver Lake near Valentine	Lagrange	11.3	362	899.45	1945-67
Otter Lake near Flint	Steuben	6.82	118	934.15	1954-66
Papakeechie Lake near Syracuse	Kosciusko	5.3	300	-	1964-67
Pigeon Lake near Angola	Steuben	30.6	61	988.24	1954-63
Pleasant Lake at Pleasant Lake	Steuben	0.94	53	963.52	1946-66
Pleasant Lake near Wolflake	Noble	0.30	20	-	1952-53
Pretty Lake near Stroh	Lagrange	2.91	184	965.50	1949-53
					1963-65
Rider Lake near Cromwell	Noble	9.12	5	876.68	1953-66
Rivir Lake near Burr Oak	Noble	18.7	24	-	1954-65
Round Lake at Kendallville	Noble	3.60	99	-	1954-67
Royer Lake near Plato	Lagrange	4.91	69	936.50	1952-66
Sacarider Lake near Kendallville	Noble	2.42	33	-	1954-63
Sand Lake near Burr Oak	Noble	15.0	47	893.56	1946-51
Sanford Lake near Cosperville	Noble	104.0	114	-	1948-67
Shipshewana Lake near Shipshewana	Lagrange	4.00	202	852.04	1951-67
Silver Lake near Angola	Steuben	3.72	238	959.40	1945-53
Silver Lake near Wolflake	Noble	0.32	34	-	1953-63
Simonton Lake near Elkhart	Elkhart	4.37	282	772.19	1946-67
Skinner Lake near Albion	Noble	13.8	125	927.74	1945-67
Snow Lake near Lake James	Steuben	36.3	310	964.96	1943-49
South Twin Lake near Howe	Lagrange	3.13	116	843.56	1953-66
Sparta Lake at Kimmel	Noble	0.26	31	888.50	1946-51
Steinbarger Lake near Cosperville	Noble	25.3	73	-	1948-67
Stone Lake near Scott	Lagrange	1.32	152	818.76	1954-67
Story Lake near Hudson	DeKalb	2.48	77	942.20	1946
					1954-66
Sylvan Lake at Rome City	Noble	31.5	575	916.20	1943-67
Syracuse Lake at Syracuse	Kosciusko	37.4	414	858.87	1943-67
Tamarack Lake near Cosperville	Noble	15.1	50	-	1948-67
Upper Long Lake near Wolflake	Noble	2.03	86	-	1956-67
Village Lake near Cromwell	Noble	11.9	12	876.68	1953-66
Wabee Lake near Milford	Kosciusko	13.4	187	829.79	1946-53
Waldron Lake near Cosperville	Noble	131.0	216	-	1948-67
Wall Lake near Orland	Lagrange	1.43	141	942.25	1953-54
Wawasee Lake near Wawasee	Kosciusko	36.1	3,060	858.89	1943-66
Westler Lake near Wolcottville	Lagrange	37.3	88	897.36	1945-67
Witmer Lake near Wolcottville	Lagrange	35.8	204	897.36	1945-67
Wolf Lake at Hammond	Lake	5.72	999	-	1946-49
Wolf Lake near Goshen	Elkhart	0.87	100	813.00	1947-57
Streams tributary to Lake Erie					
Ball Lake near Hamilton	Steuben	11.6	87	-	1961-67
Clear Lake at Clear Lake	Steuben	6.86	800	1,037.38	1943-67
Hamilton Lake at Hamilton	Steuben	16.5	802	898.83	1943-67
Long Lake near Ray	Steuben	2.80	154	-	1961-63
Round Lake at Clear Lake	Steuben	7.25	30	1,037.38	1943-67
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	1943-67
Cedar Lake at Cedar Lake	Lake	8.05	781	-	1943-67
Clear Lake at LaPorte	LaPorte	0.35	106	798.20	1942-49
					1952-67
Dalecarlia Lake near Creston	Lake	19.4	193	-	1947-52
Eagle Lake near Ober	Starke	26.2	24	713.25	1946-53
Eliza Lake near Beatrice	Porter	2.69	45	-	1954-67

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					
Flint Lake near Valparaiso	Porter	2.88	86	797.66	1946-67
Hudson Lake at Hudson Lake	LaPorte	3.06	432	763.09	1946-67
J. C. Murphy Lake near Morocco	Newton	16.7	1,515	-	1952-61
Koontz Lake at Koontz Lake	Starke	6.46	346	714.56	1943-67
Lake of the Woods near Bremen	Marshall	11.6	416	803.85	1945-67
Long Lake near Valparaiso	Porter	1.25	65	797.66	1947-52
Lower Fish Lake near Stillwell	LaPorte	10.5	134	688.22	1946-53
Mill Pond Lake and Kreighbaum Lake near Twin Lakes	Marshall	4.86	168	767.75	1945-53
Myers Lake near Twin Lakes	Marshall	1.66	96	768.69	1945-53
North Chain Lake at Lydick	St. Joseph	4.50	88	721.17	1946-53
Pine Lake at LaPorte	LaPorte	5.88	564	796.20	1946-67
Pretty Lake near Plymouth	Marshall	0.91	97	787.36	1954-66
Riddles Lake near Lakeville	St. Joseph	13.5	77	817.50	1946-67
Ringneck Lake near Medaryville	Jasper	-	1,400	-	1949-55
Saugany Lake near Rolling Prairie	LaPorte	0.82	74	781.21	1946-50
Silver Lake near Rolling Prairie	LaPorte	0.82	54	795.20	1946-66
Skitz Lake near Knox	Starke	-	1,000	-	1949-53
South Chain Lake at Westfield	St. Joseph	6.00	90	717.04	1946-53
Spectacle (Loomis) Lake near Valparaiso	Porter	0.89	62	812.82	1946-53
Stone Lake at LaPorte	LaPorte	5.88	140	796.20	1946-67
Upper Fish Lake near Stillwell	LaPorte	9.71	139	688.22	1946-53
Wauhob Lake near Valparaiso	Porter	0.29	21	-	1946-67
Wharton Lake near South Bend	St. Joseph	1.75	-	-	1960-67

* Revised.
** Elevation, in feet, above mean sea level.
a Formerly published as Chapman Lake near Warsaw.
b Formerly published as Rider Lake at Wilmot.
c Formerly published as Duley Lake near Cromwell, Druley Lake near Cromwell and Druely Lake near Cromwell.
d Formerly published as Hawks Lake near Culver.
e Formerly published as Johnson Lake near Pierceton.
f Formerly published as Jimerson Lake at Nevada Mills.

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

WATER RESOURCES DATA FOR INDIANA

1967

Part 2. Water Quality Records

Prepared in cooperation with

Indiana Department of Natural Resources
Indiana Board of Health
Indiana State Highway Commission
Ohio River Valley Water Sanitation Commission

CONTENTS

Part 2. Water Quality Records

(Symbols after station name designate type of data: c, chemical; t, water temperature; s, sediment)

Part 2. Water Quality Records

INTRODUCTION

The quality-of-water investigations of the U.S.Geological Survey are concerned with the chemical and physical characteristics of surface- and ground-water supplies of the Nation. The basic records for the 1965 water year for quality of surface waters within the State of Indiana are given in this report. For convenience and interest, there are also records for a few water quality stations in bordering states. The data were collected and computed by the Water Resources Division of the U.S. Geological Survey, under the direction of John J. Molloy, district chief, Water Resources Division, Columbus, Ohio. The records of stream discharge and many of the temperature records were provided by Malcolm D. Hale, district chief, Indianapolis, Indiana.

The Geological Survey began publishing annual basic records of chemical quality, water temperatures, and suspended sediment for the 1941 through 1963 water years in the water-supply paper series, "Quality of Surface Waters of the United States." Each volume covered an area whose boundaries coincided with those of certain natural drainage areas. The records for Indiana are contained in Parts 3 and 4 and Parts 5 and 6 of the water-supply series. These publications are available in most public libraries. The water-quality records for Indiana were released in "Water Quality Records in Indiana and Illinois, 1964." The records for the 1964 and 1965 water years will be published in Geological Survey Water-Supply Papers Nos. 1956, 1957, and 1958.

COOPERATION

The work was done under cooperative agreements between the U.S. Geological Survey and the following organizations:

Indiana Department of Natural Resources, John E. Mitchell, director, through Bureau of Water and Mineral Resources W. J. Andrews, deputy director.

Indiana Board of Health, A. C. Offutt, commissioner, and B. A. Poole, director, Bureau of Environmental Sanitation.

Indiana State Highway Commission, Robert F. Whitehead, chairman, Martin L. Hayes, executive director, F. L. Ashbaucher, chief engineer.

Ohio River Valley Water Sanitation Commission, E. J. Cleary, executive director and chief engineer.

DEFINITION OF TERMS AND ABBREVIATIONS

The terms and abbreviations of water-quality and hydrologic data, as used in the text and tabular data of this report, are defined as follows:

Acre-foot (ac-ft) is a quantity of water required to cover 1 acre to a depth of 1 foot and is equal to 43,560 cubic feet or 325,851 gallons. The term is commonly used in measuring volumes of water used or stored.

Discharge, in its simplest concept, means outflow; therefore, the use of this term is not restricted as to course or location, and it can be applied to describe the flow of water from a pipe or from a drainage basin. It is also correct to speak of the discharge of a canal or stream into a lake, a stream, or an ocean.

Daily mean discharge is the mean discharge for one day.

Mean daily discharge is the arithmetic mean discharge for the same day during a specific period of years.

Mean discharge is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge (at time of sampling). If the discharge value at the time of sampling is reported instead of daily mean value, the heading of the discharge column will be "Discharge (cfs)."

Equivalents per million (epm) is a unit for expressing the concentration of chemical constituents in terms of the interreacting values of the electrically charged particles, or ions, in solution. One equivalent per million of a positively charged ion will react with one equivalent per million of a negatively charged ion. Parts per million is converted to equivalents per million by multiplying by the reciprocal of the combining weight of the ion.

Conversion factors: Parts per million to equivalents per million

Ion	Multiply by	Ion	Multiply by
Aluminum (Al^{+3}).....	0.11119	Hydroxide (OH^{-1})....	0.05880
Arsenic (As^{+3}).....	.04004	Iodide (I^{-1}).....	.00788
Barium (Ba^{+2}).....	.01456	Iron (Fe^{+3}).....	.05372
Beryllium (Be^{+2})....	.22192	Lead (Pb^{+2}).....	.00965
Bicarbonate (HCO_3^{-1})	.01639	Lithium (Li^{+1}).....	.14411
Bromide (Br^{-1}).....	.01251	Magnesium (Mg^{+2})....	.08226
Cadmium (Cd^{+2}).....	.01779	Manganese (Mn^{+2})....	.03640
Calcium (Ca^{+2}).....	.04990	Nickel (Ni^{+2}).....	.03406
Carbonate (CO_3^{-2})...	.03333	Nitrate (NO_3^{-1}).....	.01613
Chloride (Cl^{-1}).....	.02821	Phosphate (PO_4^{-3})...	.03159
Chromium (Cr^{+6}).....	.11539	Potassium (K^{+1}).....	.02557
Cobalt (Co^{+2}).....	.03394	Sodium (Na^{+1}).....	.04350
Copper (Cu^{+2}).....	.03148	Strontium (Sr^{+2})....	.02282
Fluoride (F^{-1}).....	.05264	Sulfate (SO_4^{-2}).....	.02082
Hydrogen (H^{+1}).....	.99209	Zinc (Zn^{+2}).....	.03060

Hardness of water is the property of water attributable to the presence of alkaline earths and is expressed as equivalent calcium carbonate ($CaCO_3$). Hardness is a physical-chemical characteristic, not a substance.

Particle size is the diameter, in millimeters (mm) of suspended sediment or bed material determined by sieve and sedimentation methods.

Particle-size classification is the classification recommended by the American Geophysical Union Subcommittee on sediment terminology (Lane and others, 1947, p. 937). According to this classification, a particle having a diameter:

Less than 0.004 mm is clay.
Between 0.004 and 0.062 mm is silt.
Between 0.062 and 2.0 mm is sand.

Parts per million (ppm) is a unit for expressing the concentration of chemical constituents by weight, usually as grams of constituents per million grams of a solution. In the laboratory the results are expressed in weights of solutes in a given volume of water. To express the results

in parts per million, the data must be converted. For most waters this conversion is made by assuming that a liter of water weighs 1 kilogram; and thus milligrams per liter is equivalent to parts per million. Parts per million, for suspended sediment, is computed as 1 million times the ratio of the weight of sediment to the weight of the mixture of water and sediment.

Sediment is solid material both mineral and organic that is transported by, suspended in, or deposited by water. The amount, characteristics and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are: degree of slope, length of slope, soil characteristics, land usage, and amount and intensity of precipitation.

Sediment discharge is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks and dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the concentration of dissolved solids in the water. The following general relations are applicable:

$$\text{Specific conductance} \times (0.65 \pm 0.05) = \text{ppm dissolved solids;}$$

$$\frac{\text{Specific conductance}}{100} = \frac{\text{total epm}}{2}$$

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Thermograph is a thermometer for continuously recording variations of temperature automatically on a chart. The term "temperature recorder" is used to indicate the location of the thermograph in station descriptions in the table headings.

Tons per day is a quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

COLLECTION AND EXAMINATION OF SAMPLES

Water samples for chemical and physical analyses usually are collected at or near points on streams where gaging stations are maintained by the Geological Survey for measurement of discharge. These discharge records are in Part 1 of this volume and are used in the computation of the chemical and sediment loads.

Solutes

The methods of collecting and analyzing water samples are described by Rainwater and Thatcher in Water-Supply Paper 1454. Outside of analysis of each daily samples, no single analytical program is applicable to all problems related to the study of water quality. For daily sampling stations the analyses reported in this publication were made for days of maximum dissolved-solids content occurring during each 10-day period of each month, and the minimum dissolved-solids content for each month, as indicated by measurements of the specific conductance of each daily sample. Samples collected at miscellaneous water-quality sites were analyzed individually.

Temperature

Water temperatures are measured at most of the water-quality stations. For daily stations, the water temperatures are taken at about the same time each day in order that the data will be relatively unaffected by diurnal variations in temperature. Most large swiftly flowing streams have a small diurnal variation in water temperature, whereas sluggish or shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. The thermometers used for determining the water temperature are accurate to plus or minus 0.5°F.

At stations where thermographs are located, the records consist of maximum and minimum temperatures for each day and the monthly averages of maximum daily and minimum daily temperatures.

Sediment

To obtain a continuous record of sediment discharge, suspended-sediment samples are collected daily with U.S. depth-integrating samplers from a fixed sampling point at one vertical in the cross section. Depth-integrated samples are collected periodically at three or more verticals in the cross section to determine the ratio of the cross-sectional distribution of the concentration to the concentration at the daily sampling vertical. During periods of high or rapidly changing flow, samples are taken two or more times throughout the day.

During periods of inadequate sampling, daily loads of suspended sediment are estimated on the basis of water discharge, sediment concentrations observed immediately preceding and following the periods, and suspended-sediment loads for other periods of similar water discharge. The estimates are further guided by weather conditions prior to and during the questionable periods.

For some of the sediment stations in Indiana, samples are collected periodically, mostly during periods of high streamflow. For these stations, the instantaneous sediment discharge data are given and no attempt is made to determine the daily sediment discharges.

In addition to records of quantities of suspended sediment transported, records of particle sizes of sediment are included. The particle sizes of the suspended sediment for many of the stations and the particle sizes of the bed material for some of the stations are determined periodically.

3-2772. OHIO RIVER AT MARKLAND DAM, NEAR WARSAW, KY.

LOCATION.--Lat 38°46'31", long 84°58'19", about 1,000 feet upstream from dam (mile 531.5), 3.5 miles west of Warsaw, Gallatin County, 0.4 mile upstream from Stevens Creek, 1.4 miles downstream from Craigs Creek, and 0.2 mile upstream from site of lock and dam 39.
DRAINAGE AREA.--83,200 square miles.
RECORDS AVAILABLE.--Chemical analyses: October 1959 to September 1967.
Water temperatures: October 1959 to September 1967.
EXTREMES, 1966-67.--Specific conductance: Maximum daily, 743 micromhos Oct. 2; minimum daily, 218 micromhos Mar. 11.
Water temperatures: Maximum, 82°F Aug. 3, 4, 6-10; minimum, 37°F Feb. 27 to Mar. 4.
EXTREMES, 1959-67.--Specific conductance: Maximum daily, 810 micromhos Oct. 21, 1962; minimum daily, 167 micromhos Mar. 3, 1962.
Water temperatures: Maximum, 88°F July 14, 1962; minimum, freezing point on many days during winter months.
REMARKS.--Daily samples were collected at this station and samples were selected for analysis on the following basis: (1) Maximum daily specific conductance for each month, (2) minimum daily specific conductance for each month, (3) median daily specific conductance for each month, and (4) a composite analysis each month to determine heavy metals. Samples for iron and manganese were filtered clear when collected. Samples were also collected at this station for pesticide analyses to determine the extent and magnitude of pesticide contamination in the stream. No discharge records available.

Chemical analyses, in parts per million, water year October 1966 to September 1967

Date of collection	Mean discharge (cfs)	Silica (SiO_2)	Aluminum (Al)	Iron (Fe)	Manganese (Mn)	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Lithium (Li)	Bicarbonate (HCO_3)	Carbonate (CO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Phosphorus as PO_4	Dissolved solids (residue at 180°C)	Hardness as $CaCO_3$		Total acidity as H^{+1}	Specific conductance (micromhos at 25°C)	pH	Color
																			Calcium, magnesium	Noncarbonate				
Oct. 2, 1966.				--	--						63	0	180	74	0.8	8.6	0.24	454	224	173		743	7.0	
Oct. 11.....				--	--						52	0	108	38	.4	7.2	.25	257	142	100		464	6.9	
Oct. 14.....				--	--						50	0	95	32	.4	7.1	.32	237	128	87		408	7.2	
Nov. 12.....				1.8	0.09						90	0	88	32	.4	8.5	.42	263	160	86		456	7.3	
Nov. 16.....				.20	.23						66	0	124	52	.4	9.7	.39	332	180	126		566	6.8	
Nov. 23.....				.43	.04						80	0	133	66	.5	8.7	.40	377	208	143		632	7.3	
Dec. 3.....				.26	.20						72	0	126	36	.5	9.5	.28	315	180	121		506	7.3	
Dec. 17.....				1.3	.53						64	0	63	20	.2	6.9	.18	196	120	68		310	7.2	
Dec. 28.....				.23	.00						74	0	64	24	.2	7.0	.32	207	132	72		346	7.5	
Jan. 8, 1967.				.41	1.0						52	0	58	18	.2	4.0	.28	186	99	56		279	6.7	
Jan. 16.....				.00	.21						58	0	79	29	.2	4.9	.35	198	124	76		352	6.6	
Jan. 30.....				.04	.25						70	0	86	30	.3	5.4	.42	224	135	78		385	6.7	
Feb. 4.....				--	--						106	0	87	35	.4	4.0	1.0	276	158	71		450	8.2	
Feb. 19.....				--	--						94	0	82	33	.4	5.6	.30	254	140	63		405	7.9	
Feb. 21.....				--	--						82	0	74	32	.3	6.2	.28	226	128	61		374	8.0	
Mar. 2.....				.51	.48						78	0	72	32	.4	4.4	.48	214	123	59		355	8.0	
Mar. 11.....				--	--						44	0	55	12	.1	1.8	.58	122	84	48		218	6.8	
Mar. 23.....				.82	.14						76	0	64	14	.3	4.6	.26	174	115	53		284	7.4	
Apr. 1.....				.70	.16						60	0	78	17	.2	6.7	.02	242	130	81		332	7.8	
Apr. 15.....				.56	.22						63	0	74	22	.2	5.6	.18	238	129	78		341	8.0	
Apr. 19.....				.44	.23						64	0	89	29	.2	5.3	.04	260	149	96		402	7.3	
May 3.....				.15	.29						78	0	84	20	.2	2.8	.27	234	150	86		367	7.5	
May 14.....				.66	.26						58	0	79	14	.3	3.4	.12	206	130	82		318	7.3	
May 19.....				.77	.26						46	0	52	10	.1	2.3	.14	150	92	54		226	7.4	
June 1.....				.18	.23						66	0	77	17	.2	.3	.24	208	134	80		329	8.1	
June 12.....				.14	.24						84	0	79	23	.3	3.3	.21	232	152	83		374	7.4	
June 29.....				--	--						90	0	82	24	.3	4.0	.33	252	158	84		399	8.2	
July 1.....				.14	.13						89	0	82	24	.3	5.8	.37	246	155	82		400	8.1	
July 15.....				.68	.12						95	0	112	38	.3	7.4	.25	300	190	112		522	7.5	
July 31.....				.13	.05						62	0	138	50	.2	7.8	.27	326	195	144		570	7.7	
Aug. 7.....				.19	.04						70	0	155	56	.5	6.9	.45	410	215	158		623	7.7	
Aug. 17.....				.08	.03						70	0	146	48	.3	6.9	.61	370	205	148		587	7.9	
Aug. 29.....				.06	.08						52	0	142	40	.4	5.8	.50	332	180	138		532	7.7	
Sept. 5.....				.07	.08						52	0	154	52	.6	5.0	.28	356	190	148		588	7.8	
Sept. 15.....				.23	.23						54	0	135	40	.4	3.7	.28	314	175	131		522	7.8	
Sept. 25.....				.13	.14						54	0	139	44	.6	5.3	.33	342	180	136		546	7.4	

OHIO RIVER MAIN STEM--Continued

3-2772. OHIO RIVER AT MARKLAND DAM, NEAR WARSAW, KY.--Continued

Temperature (°F) of water, water year October 1966 to September 1967
(Once-daily measurement, usually between 1600 and 2200)

Month	Day																															Aver-age
	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	
October	70	69	69	68	67	67	66	66	66	66	67	66	66	66	66	64	66	64	62	62	63	--	63	63	60	60	60	60	59	59	58	64
November	--	50	--	57	56	--	54	54	54	54	53	53	53	53	53	53	53	53	53	52	--	--	52	53	53	53	53	--	--	52	--	--
December	--	--	48	46	--	--	--	47	--	48	48	--	48	--	45	45	45	45	43	43	--	43	43	--	43	42	40	42	42	41	40	--
January	40	41	40	40	40	40	40	40	40	--	40	40	40	40	40	40	40	39	39	40	40	--	40	41	44	44	44	43	42	44	44	41
February	43	44	44	43	44	44	42	--	41	42	42	43	41	--	42	41	41	41	41	41	41	41	40	40	38	38	37	37	--	--	--	41
March	37	37	37	37	--	39	39	--	39	39	38	38	--	--	46	46	--	46	48	48	47	--	46	46	--	47	46	49	49	49	49	--
April	51	53	--	--	53	55	56	--	--	58	55	55	55	59	59	59	62	61	61	61	60	60	60	--	60	60	60	59	58	58	--	58
May	58	59	59	59	59	61	60	58	58	59	59	58	58	58	58	58	58	60	60	--	--	--	--	--	--	--	--	--	67	65	63	--
June	60	62	62	67	63	63	70	70	70	72	73	73	--	77	77	77	77	77	80	78	77	78	78	78	78	78	--	78	78	79	--	73
July	79	80	79	78	--	78	78	--	--	78	--	79	79	79	79	--	--	79	78	78	80	79	--	80	80	--	79	--	--	80	80	--
August	81	81	82	82	--	82	82	82	82	82	80	--	79	79	--	79	79	79	--	79	79	79	79	79	79	79	78	78	78	78	78	80
September	78	78	--	--	77	77	77	77	77	75	75	75	75	74	74	--	--	75	75	76	76	--	--	75	75	--	74	73	71	71	--	--

OHIO RIVER MAIN STEM--Continued

3-2772. OHIO RIVER AT MARKLAND DAM, NEAR WARSAW, KY.--Continued

Radioisotopes in water, October 1964 to September 1967

Units of measurement: Uranium, micrograms per liter of water; radium, as radium-226, in picocuries per liter of water; gross beta radiation as strontium-90-yttrium-90, in picocuries per liter of water; gross alpha radiation, as micrograms of uranium equivalent per liter of water; extractable alpha, as uranium, in micrograms of uranium per liter of water; tritium as tritium units (approximately equal to 3.2 picocuries per liter). A picocurie is one millionth of the amount of radioactivity represented by a microcurie, which is the quantity of radiation represented by one millionth of a gram of radium-226. A picocurie of radium results in 2.22 disintegrations per minute. A tritium unit is equal to one tritium atom in 10^{18} protium (ordinary hydrogen) atoms.
Symbols used: ND, sought but not detected by method used; NS, no sample collected; <, less than.

Date of collection	Determination					
	Uranium µg/l	Radium pc/l	Gross β pc/l	Gross α µg/l	Extractable α µg/l	Tritium T.U.
Oct. 27, 1964.....	<0.4	0.1	10	2.1	<0.6	--
Nov. 17.....	<.4	<.1	6.6	ND	<.6	690
Dec. 15.....	<.4	<.1	6.3	ND	<.6	630
Jan. 12, 1965.....	<.4	.1	8.5	ND	<.8	745
Feb. 16.....	<.4	<.1	7.3	1.5	<.6	625
Mar. 16.....	<.4	<.1	5.1	ND	<.5	555
Apr. 13.....	<.4	<.1	9.8	ND	<.6	--
May 18.....	<.4	.1	4.5	2.1	<.6	660
June 2.....	NS	NS	NS	NS	NS	560
June 18.....	<.4	<.1	6.3	1.5	<.6	450
July 16.....	<.4	.1	8.1	ND	<.6	625
Aug. 17.....	<.4	.1	7.2	ND	ND	620
Sept. 24.....	<.4	<.1	8.3	1.3	<.6	445
Oct. 22.....	<.4	.1	8.3	ND	ND	435
Nov. 8.....	<.4	.1	6.1	1.5	<.6	375
Dec. 19.....	<.4	<.1	7.7	8.5	<.6	415
Jan. 21, 1966.....	<.4	<.1	6.7	<.4	<.6	355
Feb. 18.....	<.4	.1	9.8	2.6	<.6	325
Mar. 18.....	<.4	.1	2.8	<.4	<.6	330
Apr. 16.....	<.4	.1	4.4	<.4	<.6	429
May 27.....	<.4	<.1	4.3	1.4	<.6	371
June 24.....	.4	<.1	4.0	<.4	<.6	365
July 22.....	<.4	<.1	5.0	2.0	<.6	388
Aug. 18.....	.6	<.1	6.9	.6	<.6	413
Sept. 22.....	.4	<.1	6.7	.7	<.6	366
Oct. 20.....	<.4	<.1	7.9	1.9	<.6	371
Nov. 30.....	<.4	.1	10	.5	<.6	346
Dec. 21.....	<.4	<.1	5.0	3.1	<.6	367
Jan. 20, 1967.....	<.4	<.1	4.0	1.2	<.6	380
Feb. 20.....	<.4	<.1	3.4	3.7	<.6	322
Mar. 23.....	<.4	<.1	3.8	3.8	<.6	255
Apr. 24.....	<.4	<.1	3.7	<4	<.6	270
May 15.....	<.4	<.1	3.5	2.1	<.6	215
June 29.....	<.4	<.1	4.0	.8	<.6	--
July 25.....	<.4	<.1	5.4	5.0	<.6	280
Aug. 17.....	<.4	<.1	6.9	2.2	<.6	243
Sept. 18.....	<.4	.1	4.6	2.8	<.6	225

OHIO RIVER MAIN STEM--Continued

3-2772. OHIO RIVER AT MARKLAND DAM, NEAR WARSAW, KY.--Continued

Additional determinations of heavy metals

Chemical analyses, in parts per million, water year October 1966 to September 1967--Continued

Date of collection	Mean discharge (cfs)	Chromium		Nickel (Ni)	Copper (Cu)	Lead (Pb)	Zinc (Zn)	Cobalt (Co)	Arsenic (As)	Selenium (Se)	Cadmium (Cd)
		Total Cr	Cr^6								
Oct. 1-31, 1966		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00
Nov. 1-30		.00		.00	.00	.00	.01	.00	.00		.00
Dec. 1-31		.00		.00	.02	.00	.02	.00	.00		.00
Jan. 1-31, 1967		.00		.00	.01	.02	.00	.00	.00		.00
Feb. 1-28		.00		.00	.01	.02	.01	.00	.00		.00
Mar. 1-31		.00		.00	.04	.02	.00	--	.00		.00
Apr. 1-30		.00		.00	.04	.00	.00	.01	.01		.00
May 1-19, 29-31		.00		.00	.05	.00	.01	.00	.00		.00
June 1-30		.00		.01	.11	.00	.00	.00	.01		.00
July 1-31		.00		.00	.00	.00	.00	.00	.00		.00
Aug. 1-31		.00		.00	.00	.00	.02	.00	.00		.00
Sept. 1-30		.00		.00	.00	.00	.01	.00	.00		.00

Pesticide analyses, in parts per trillion, water year October 1966 to September 1967

Date of collection	Aldrin	Lindane	Chlordane	DDD	DDE	DDT	Dieldrin	Endrin	Heptachlor	Heptachlor epoxide	Methoxychlor	Malathion	Parathion	Methyl parathion
Oct. 20, 1966	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nov. 30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dec. 21	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Jan. 20, 1967	<10	0	0	0	0	<10	10	0	0	0	0	0	0	0
Feb. 20	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mar. 23	<10	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr. 24	0	<10	0	0	0	0	0	0	0	0	0	0	0	0
May 17	0	0	0	0	0	36	0	0	0	0	0	0	0	0
June 29	0	0	0	0	10	10	0	0	0	0	0	0	0	0
July 25	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Aug. 17	0	0	0	0	<10	0	0	0	0	0	0	0	0	0

OHIO RIVER MAIN STEM--Continued

3-2772. OHIO RIVER AT MARKLAND DAM, NEAR WARSAW, KY.--Continued

Specific conductance (micromhos at 25°C), water year October 1966 to September 1967
(Once-daily measurement, usually between 1600 and 2200)

Day	October	November	December	January	February	March	April	May	June	July	August	September
1.....	735	--	--	327	386	351	332	360	329	400	580	580
2.....	743	546	--	339	429	355	347	363	329	402	572	577
3.....	703	--	506	333	431	342	--	367	340	426	588	--
4.....	657	579	506	327	450	335	--	360	344	406	613	584
5.....	575	576	--	310	417	--	361	347	344	--	--	588
6.....	536	--	--	286	404	345	364	347	350	434	619	585
7.....	481	580	--	279	414	345	377	353	370	432	623	582
8.....	470	580	502	279	435	265	--	347	373	--	605	572
9.....	480	548	--	286	434	264	--	307	378	--	588	565
10.....	482	408	412	--	426	234	350	282	381	462	586	562
11.....	404	473	336	318	433	218	344	272	370	--	584	546
12.....	436	456	--	313	450	228	347	266	374	479	--	533
13.....	412	474	359	318	438	--	354	270	--	494	558	529
14.....	408	520	--	321	--	--	341	318	384	516	558	523
15.....	416	511	313	333	399	260	341	315	386	522	--	522
16.....	431	566	316	352	399	269	344	286	385	--	583	527
17.....	443	535	310	363	422	--	354	274	380	--	587	--
18.....	452	536	318	363	423	224	384	236	374	534	594	540
19.....	452	597	321	366	405	224	402	226	374	537	--	545
20.....	441	615	324	367	386	228	402	--	367	544	607	545
21.....	461	--	--	369	374	241	379	--	363	535	616	546
22.....	--	--	333	--	388	--	357	--	367	533	622	--
23.....	451	632	333	379	387	284	368	--	370	--	617	--
24.....	445	622	--	377	386	284	--	--	370	538	600	547
25.....	430	564	349	367	391	--	368	--	381	551	591	546
26.....	423	575	352	359	398	286	354	--	380	--	591	--
27.....	426	572	349	352	397	302	369	--	--	555	582	544
28.....	456	--	346	339	378	298	373	--	384	--	562	541
29.....	485	--	346	359	--	324	382	350	399	--	532	547
30.....	516	562	352	385	--	348	382	350	399	567	535	563
31.....	513	--	342	379	--	342	--	329	--	570	566	--
Average	494	--	--	339	410	287	363	--	369	--	587	553

WABASH RIVER BASIN

3-3235. WABASH RIVER AT HUNTINGTON, IND.

LOCATION.--Lat 40°51'20", long 85°29'53", temperature recorder at gaging station on right bank at the Huntington Water and Light Company Plant, 2 miles south of courthouse in Huntington, Huntington County, 3.2 miles upstream from Little Wabash River, and at mile 409.
DRAINAGE AREA.--710 square miles.
RECORDS AVAILABLE.--Water temperatures: October 1963 to September 1967.
EXTREMES, 1966-67.--Water temperatures: Maximum, 84°F June 16; minimum, freezing point Feb. 5, 16, 17.
EXTREMES, 1963-67.--Water temperatures: Maximum, 90°F July 27, 1964; minimum, freezing point on several days during winter months most years.

Temperature (°F) of water, water year October 1966 to September 1967
(Continuous ethyl alcohol-actuated thermograph)

Month	Day																													Average
	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	
October																																
Maximum	53	53	54	58	56	55	54	54	55	56	54	54	54	59	59	54	53	52	51	50	50	51	51	50	50	49	48	51	51	50	49	53
Minimum	52	50	52	54	54	50	51	53	54	54	52	51	53	54	54	53	52	51	50	48	48	49	48	48	48	47	47	48	50	48	48	51
November																																
Maximum	49	48	43	39	39	41	45	47	51	51	50	48	47	44	44	44	46	46	46	44	43	43	45	47	48	48	48	48	43	43	--	46
Minimum	48	43	38	38	39	39	41	45	47	50	48	47	44	44	43	43	44	46	44	42	41	41	43	45	47	46	47	43	42	42	--	44
December																																
Maximum	43	42	39	39	39	38	45	49	49	49	45	43	41	40	38	37	41	41	42	42	42	41	40	40	40	39	37	37	36	36	36	41
Minimum	42	39	39	38	38	38	38	45	49	45	43	41	40	38	37	37	37	40	41	42	41	40	40	40	39	37	37	36	35	35	35	39
January																																
Maximum	36	36	36	36	36	36	36	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	34	36	39	39	35	34	34	33	34	35
Minimum	36	36	36	36	36	36	35	35	35	35	35	35	35	34	35	34	35	35	35	35	35	34	34	34	36	35	34	34	33	33	33	35
February																																
Maximum	35	35	35	33	33	39	40	41	40	39	39	39	38	37	37	33	33	37	39	39	39	38	37	37	38	37	36	35	--	--	--	37
Minimum	34	35	33	33	32	33	39	40	37	38	37	38	37	37	33	32	32	33	37	39	38	37	35	36	37	36	35	35	--	--	--	36
March																																
Maximum	35	35	35	36	37	39	38	33	34	37	40	40	41	41	41	40	39	37	39	39	36	38	40	40	42	44	45	46	46	50	53	40
Minimum	35	35	35	34	34	37	33	33	33	34	37	39	40	41	40	39	37	36	36	36	36	36	38	40	40	42	44	45	45	46	49	38
April																																
Maximum	55	58	58	55	52	53	53	50	51	52	52	51	51	52	56	56	56	55	53	52	53	54	52	50	48	49	48	50	51	52	--	53
Minimum	52	54	55	52	52	52	50	49	49	51	50	49	49	51	52	55	55	53	50	51	52	52	50	48	46	48	47	48	50	51	--	51
May																																
Maximum	56	56	54	55	55	54	52	52	50	51	51	51	51	51	51	51	52	54	57	56	57	57	57	61	64	64	69	68	65	63	65	56
Minimum	52	53	52	54	54	52	48	50	50	50	51	51	51	51	50	49	50	52	54	54	54	55	55	56	59	62	63	65	63	60	59	54
June																																
Maximum	64	66	70	71	75	74	76	74	76	74	74	77	80	83	83	84	81	79	77	79	78	78	78	77	77	74	77	76	73	73	--	76
Minimum	61	60	64	67	68	71	71	72	72	71	70	73	75	78	79	81	79	75	71	73	75	73	73	75	72	69	71	70	70	69	--	72
July																																
Maximum	78	79	78	76	73	75	75	79	79	79	81	81	79	75	71	72	75	74	75	77	80	78	76	77	79	78	77	75	77	76	76	77
Minimum	73	76	74	71	70	71	72	73	77	77	77	77	75	70	68	68	69	71	70	71	72	75	75	74	75	74	75	73	70	72	72	73
August																																
Maximum	78	80	78	77	77	74	73	75	76	75	70	71	71	72	73	74	74	76	74	71	72	72	71	72	72	72	72	69	71	71	68	73
Minimum	72	75	75	73	71	70	71	70	73	69	64	64	65	66	67	69	70	71	71	69	67	69	66	66	68	70	65	64	65	68	64	69
September																																
Maximum	68	68	68	68	70	71	72	71	69	68	66	67	69	72	71	69	69	69	69	72	72	66	63	64	61	63	63	57	54	53	--	67
Minimum	62	62	63	63	65	65	66	67	68	64	61	61	65	66	65	66	66	67	68	68	66	62	59	60	57	59	57	54	52	51	--	62

3-3355. WABASH RIVER AT LAFAYETTE, IND.

LOCATION.--Lat 40°25'19", long 86°53'49", at gaging station at Brown Street Bridge in Lafayette, Tippecanoe County, 5.1 miles downstream from Wildcat Creek, and at mile 311.9.
DRAINAGE AREA.--7,247 square miles.
RECORDS AVAILABLE.--Water temperatures: July 1954 to September 1963, August and September 1967.
EXTREMES, August and September 1967.--Water temperatures: Maximum, 80°F Aug. 9; minimum, 59°F Sept. 30.
EXTREMES, 1954-63, August and September 1967.--Water temperatures: Maximum, 90°F July 30, 31, 1954; minimum, freezing point on many days during winter months.
REMARKS.--Some regulation at low stages caused by powerplants above station.

Temperature (°F) of water, August and September 1967
(Continuous ethyl alcohol-actuated thermograph)

Month	Day																														Average
	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																															
Maximum	--	--	--	--	--	--	--	76	80	78	73	73	74	75	75	75	78	78	77	75	74	74	75	75	77	77	75	72	73	73	70	--
Minimum	--	--	--	--	--	--	--	76	75	73	69	68	69	70	71	72	74	75	74	73	70	72	71	71	72	75	69	67	69	70	67	--
September																															
Maximum	69	71	71	70	72	72	72	72	72	72	70	68	69	71	71	71	72	72	73	74	74	73	70	68	67	67	67	64	63	61	--	70
Minimum	66	67	68	68	69	70	70	71	71	69	67	66	67	69	70	70	71	71	72	72	73	70	68	67	66	66	64	62	61	59	--	68

WABASH RIVER BASIN--Continued

3-3355. WABASH RIVER AT LAFAYETTE, IND.--Continued

Periodic determinations of suspended-sediment discharge, water year October 1966 to September 1967
(Methods of analysis: B, bottom withdrawal tube; C, chemically dispersed; D, decantation; N, in native water; P, pipet; S, sieve; V, visual accumulation tube; W, in distilled water)

Date of collection	Time (24 hour)	Water temperature (°F)	Sampling point	Discharge (cfs)	Sediment concentration (ppm)	Sediment discharge (tons per day)	Suspended sediment: Percent finer than size indicated, in millimeters										Method of analysis
							0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
July 28, 1965.....	1000			1270	115	394												
Oct. 11, 1966.....	1310			642	20	35												
Dec. 6.....	1125			4620	56	699												
Jan. 24, 1967.....	1150			2760	10	75												
Feb. 15.....	1020			6490	52	911												
Apr. 11.....	1245			14700	232	9210												
May 1.....	1100			6250	103	1740												
June 13.....	1245			3650	86	848												
July 19.....	1030			1730	36	168												
Sept. 11.....	1420			1550	67	280												

WABASH RIVER BASIN--Continued

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.

LOCATION.--Lat 39°48'45", long 86°57'14", at gaging station at county road bridge, 8,350 feet upstream from Ramp Creek, and 3.1 miles northwest of Fincastle, Putnam County.
DRAINAGE AREA.--132 square miles.
RECORDS AVAILABLE.--Water temperatures: July 1965 to September 1967.
Sediment records: August 1959 to September 1967.
EXTREMES, 1966-67.--Water temperatures: Maximum, 80°F June 15, July 25; minimum, freezing point Feb. 7, 8.
Sediment concentrations: Maximum daily, 4,300 ppm Mar. 21; minimum daily, 2 ppm Feb. 14.
Sediment loads: Maximum daily, 19,700 tons Dec. 9; minimum daily, less than 0.50 ton on many days during October, November, January, February, and June to September.
EXTREMES, 1959-67.--Water temperatures (1965-67 revised): Maximum, 88°F July 16, 1966; minimum, freezing point Feb. 7, 8, 1967.
Sediment concentrations: Maximum daily, 19,100 ppm Mar. 21, 1962; minimum daily, 2 ppm Nov. 24, 1965, Feb. 14, 1967.
Sediment loads: Maximum daily, 260,000 tons Mar. 21, 1962; minimum daily, less than 0.50 ton on many days during 1959-67.
REMARKS.--Flow affected by ice Dec. 27 to Jan. 6, Jan. 9-24, Feb. 6-11.

Temperature (°F) of water, water year October 1966 to September 1967
(Once-daily measurement between 1600 and 1900)

Month	Day																														Aver-age
	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	
October	58	57	58	--	57	58	--	--	--	--	--	--	--	58	--	--	57	57	--	56	56	57	--	54	55	56	55	54	54	54	54	--
November	54	52	52	51	42	45	47	49	50	50	50	51	51	49	48	48	47	47	--	48	47	47	47	47	46	46	45	45	45	45	--	48
December	40	37	35	--	--	--	54	55	42	--	39	38	39	38	39	39	--	--	--	--	--	--	39	39	35	--	--	--	--	--	36	--
January	--	--	--	--	--	35	35	35	--	--	--	--	35	35	--	--	--	34	34	35	39	40	42	44	42	--	34	33	--	--	34	--
February	35	--	34	34	33	33	32	32	33	--	34	34	35	35	35	35	35	35	34	34	34	34	34	34	34	34	34	35	--	--	--	34
March	35	35	36	36	36	36	35	34	34	36	37	38	39	39	39	39	39	39	39	40	40	42	45	45	45	45	46	45	46	46	47	40
April	50	52	50	48	52	53	54	54	55	57	59	60	60	61	54	56	56	56	56	53	54	53	--	50	50	48	47	49	50	51	--	53
May	--	52	52	50	50	53	54	54	54	54	58	59	59	58	58	59	58	59	59	60	59	59	60	60	62	62	63	63	--	64	65	58
June	65	65	65	66	66	67	67	69	71	75	76	77	79	77	80	79	77	78	77	78	79	78	77	78	78	79	79	79	78	79	--	75
July	78	79	78	78	79	78	--	--	--	--	--	--	--	--	--	--	--	71	--	--	76	--	--	79	80	79	79	76	78	--	78	--
August	--	--	78	--	--	--	78	--	74	--	76	76	73	--	--	--	--	--	--	--	74	--	70	--	--	--	--	--	69	69	69	--
September	70	70	--	--	--	69	70	69	--	--	--	--	--	--	--	--	--	--	--	69	68	--	--	--	68	67	67	67	65	--	--	--

WABASH RIVER BASIN--Continued

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.--Continued

Suspended sediment, water year October 1966 to September 1967
(Where no daily concentrations are reported, loads are estimated)

Day	OCTOBER			NOVEMBER			DECEMBER		
	Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment	
		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day
1	4.9	37	T	3.7	181	2	41	107	12
2	3.8	12	T	4.2	101	1	28	52	4
3	3.7	13	T	4.7	61	1	21	41	2
4	3.1	6	T	4.9	19	T	21	27	2
5	3.1	7	T	5.6	9	T	56	60 B	11
6	2.7	7	T	5.6	33	T	113	--	85
7	2.6	7	T	7.8	24	1	612	2200 A	4600
8	2.3	8	T	10	17	T	1680	2210 S	11500
9	2.6	8	T	9.1	12	T	2160	3380	19700
10	2.8	6	T	15	100 A	4	1440	1820	7080
11	2.7	7	T	15	144	6	743	1430	2870
12	2.6	7	T	11	69	2	440	1170	1390
13	2.6	7	T	7.2	25	T	320	780	674
14	2.8	6	T	6.2	15	T	250	410	277
15	3.2	7	T	5.3	11	T	204	265	146
16	3.6	6	T	5.4	11	T	183	208	103
17	3.4	15	T	4.9	12	T	168	91	41
18	3.1	11	T	4.5	12	T	155	8	3
19	3.1	6	T	4.0	6	T	137	13	5
20	3.0	5	T	3.8	4	T	129	36	13
21	3.0	8	T	3.7	3	T	110	33	10
22	2.7	25	T	3.6	13	T	97	22	6
23	2.6	33	T	3.6	25	T	84	11	2
24	2.8	13	T	3.4	18	T	76	5	1
25	2.8	35	T	6.0	6	T	68	4	1
26	3.1	96	1	8.3	8	T	62	18	3
27	3.4	117	1	34	236 S	25	57	32	5
28	3.7	126	1	68	205	38	53	50 A	7
29	3.7	141	1	85	208	48	50	90 A	12
30	3.7	130	1	58	158	25	47	18	2
31	3.7	110	1	--	--	--	45	9	1
Total	96.9	--	9	411.5	--	157	9650	--	48568

Day	JANUARY			FEBRUARY			MARCH		
	Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment	
		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day
1	43	6	1	211	107	61	43	5	1
2	42	3	T	922	1900 A	5500	47	20	3
3	41	5	1	551	1100 A	1600	75	102	21
4	40	89	10	300	335	271	69	67	12
5	40	102	11	218	36	21	106	55 A	20
6	40	103	11	155	18	8	333	--	100
7	160	650 A	330	127	18	6	224	51	31
8	144	347	135	110	12	4	190	38	19
9	80	187	40	95	10	3	166	30	13
10	42	--	19	80	7	2	323	150 A	130
11	34	--	14	72	7	1	443	--	300
12	32	134	12	70	42	8	300	189	153
13	30	85	7	71	17	3	229	168	104
14	29	47	4	70	2	T	186	125	63
15	27	10	1	71	3 B	1	158	103	44
16	26	89	6	72	5 B	1	131	103	36
17	26	265	19	64	5 B	1	124	90	30
18	26	22	2	62	6 B	1	103	76	21
19	26	12	1	62	6 B	1	97	41	11
20	26	12	1	59	6 B	1	158	1000 A	600
21	26	12	1	53	6 B	1	555	4300 A	6400
22	30	12	1	47	6 B	1	338	2500	2280
23	35	16	2	46	7 B	1	235	1040	660
24	45	100	12	45	7 B	1	185	620	310
25	64	189	33	37	7 B	1	168	520	236
26	178	--	700	35	7	1	148	350	140
27	952	--	7700	40	8	1	137	150	55
28	418	422	476	44	8	1	561	1760 S	3720
29	242	126 S	88	--	--	--	543	2140	3140
30	180	12	6	--	--	--	310	1900	1590
31	169	16	7	--	--	--	215	528	307
Total	3293	--	9651	3789	--	7502	6900	--	20550

S Computed by subdividing day.
T Less than 0.50 ton.
A Computed from partly estimated-concentration graph.
B Computed from estimated-concentration graph.

WABASH RIVER BASIN--Continued

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.--Continued

Suspended sediment, water year October 1966 to September 1967--Continued
(Where no daily concentrations are reported, loads are estimated)

Day	APRIL			MAY			JUNE		
	Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment	
		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day
1..	162	273	119	62	6	1	52	25	4
2..	137	162	60	58	4	1	43	13	2
3..	127	57	20	46	6	1	39	15	2
4..	110	28	8	41	7	1	38	14	1
5..	264	850	A 900	40	6	1	35	13	1
6..	496	1200	A 1600	74	160	A 45	33	12	1
7..	287	272	211	1560	1300	A 5500	32	12	1
8..	214	167	96	946	484	S 1380	30	12	1
9..	178	154	74	465	154	193	29	11	1
10..	150	140	57	296	170	136	28	10	1
11..	125	125	42	658	341	S 686	27	15	1
12..	105	109	31	504	342	465	24	17	1
13..	109	38	11	298	90	72	21	12	1
14..	112	19	6	264	81	58	18	7	T
15..	153	--	20	262	67	47	17	20	1
16..	133	14	5	222	30	18	15	34	1
17..	139	--	30	200	23	12	14	17	1
18..	109	21	6	167	18	8	13	8	T
19..	84	13	3	136	20	7	13	8	T
20..	74	16	3	105	23	7	12	8	T
21..	76	17	3	88	27	6	13	8	T
22..	104	134	38	79	26	6	13	8	T
23..	86	42	10	71	24	5	13	8	T
24..	83	16	4	68	22	4	13	8	T
25..	73	10	2	62	20	3	14	8	T
26..	74	11	2	56	14	2	12	12	T
27..	73	12	2	52	8	1	11	27	1
28..	63	10	2	49	13	2	11	23	1
29..	59	8	1	77	168	35	11	15	T
30..	61	7	1	67	100	18	10	14	T
31..	--	--	--	65	74	13	--	--	--
Total	4020	--	3367	7138	--	8734	654	--	27

	JULY			AUGUST			SEPTEMBER		
1..	9.8	15	T	19	69	4	5.1	11	T
2..	9.6	15	T	29	58	5	4.9	10	T
3..	8.8	15	T	190	1400	S 865	4.7	25	T
4..	8.4	15	T	75	227	S 51	4.5	24	T
5..	8.0	16	T	33	35	3	4.5	12	T
6..	8.0	18	T	21	20	1	4.3	12	T
7..	7.8	18	T	16	24	1	4.2	12	T
8..	7.4	19	T	13	25	1	4.0	13	T
9..	7.4	20	T	15	25	1	4.9	13	T
10..	7.6	21	T	12	25	1	5.8	5	T
11..	7.4	22	T	9.1	26	1	5.1	12	T
12..	8.2	22	T	8.0	25	1	4.5	22	T
13..	6.8	24	T	7.4	26	1	4.1	25	T
14..	6.1	20	T	6.9	31	1	3.9	23	T
15..	6.2	7	T	6.6	49	1	3.8	22	T
16..	5.8	10	T	6.3	63	1	3.6	24	T
17..	5.7	14	T	6.1	64	1	3.6	41	T
18..	5.9	13	T	6.3	41	1	4.4	25	T
19..	5.6	16	T	8.8	25	1	4.1	6	T
20..	5.8	22	T	8.1	22	T	4.1	6	T
21..	6.0	28	T	6.9	33	1	4.2	7	T
22..	5.4	18	T	6.2	21	T	4.1	7	T
23..	5.8	14	T	5.9	28	T	3.9	8	T
24..	8.4	18	T	5.7	52	1	3.5	7	T
25..	7.1	25	T	6.1	240	A 4	3.4	7	T
26..	5.7	8	T	5.9	340	5	3.2	18	T
27..	184	750	S 985	5.4	163	2	3.5	21	T
28..	187	1470	S 825	5.4	113	2	3.8	15	T
29..	51	278	S 44	5.2	32	T	3.5	9	T
30..	27	132	10	5.0	12	T	3.5	9	T
31..	22	90	5	4.9	14	T	--	--	--
Total	655.7	--	1878	559.2	--	959	124.7	--	5

Total discharge for year (cfs-days)..... 37292.0
Total load for year (tons)..... 101407

S Computed by subdividing day.
A Computed from partly estimated-concentration graph.
T Less than 0.50 ton.

WABASH RIVER BASIN--Continued

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.--Continued

Particle-size analyses of suspended sediment, water year October 1966 to September 1967
(Methods of analysis: B, bottom withdrawal tube; C, chemically dispersed; D, decantation; N, in native water; P, pipet; S, sieve; V, visual accumulation tube; W, in distilled water)

Date of collection	Time (24 hour)	Water temperature (°F)	Sampling point	Discharge (cfs)	Sediment concentration (ppm)	Sediment discharge (tons per day)	Suspended sediment										Method of analysis
							Percent finer than size indicated, in millimeters										
							0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
Mar. 22, 1967.....	1700			298	2080		34	38	51	70	85	94	96	99	100			SBWC
Mar. 28.....	1700			988	2930		28	35	45	61	83	98	99	100				SBWC
May 7.....	1410			2080	1610		25	32	42	59	80	97	99	100				SBWC
July 27.....	2100			716	2380		50	71	85	95	98	99	100	--				SBWC
Aug. 25.....	2100			7.0	577		53	67	78	89	95	99	99	100				SBWC

WABASH RIVER BASIN--Continued

3-3485. WHITE RIVER NEAR NOBLESVILLE, IND.

LOCATION.--Lat 40°07'46", long 85°57'46", temperature recorder at gaging station on downstream side of center pier of highway bridge, 1 mile west of Strawtown, 7 miles northeast of Noblesville, Hamilton County, 9.5 miles upstream from Cicero Creek, and at mile 277.4.
DRAINAGE AREA.--814 square miles.
RECORDS AVAILABLE.--Water temperatures: October 1953 to July 1957, October 1962 to September 1967.
EXTREMES, 1966-67.--Water temperatures: Maximum, 80°F June 15-17, July 25-27, Aug. 2, 3; minimum, freezing point Dec. 26-28, 30, 31, Mar. 1.
EXTREMES, 1953-57, 1962-67.--Water temperatures: Maximum, 88°F July 14, 1954; minimum, freezing point many days during winter months.

Temperature (°F) of water, water year October 1966 to September 1967
(Continuous ethyl alcohol-actuated thermograph)

Month	Day																													Average
	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	
October																																
Maximum	58	56	58	62	61	58	58	57	58	59	58	58	59	62	63	60	56	55	53	52	51	53	54	53	51	51	50	51	52	52	51	56
Minimum	56	54	55	58	58	55	55	55	56	58	56	55	57	59	62	56	54	53	52	50	50	51	52	51	50	49	49	49	51	50	50	54
November																																
Maximum	51	50	43	42	41	42	46	50	54	54	53	50	48	46	45	46	48	50	50	47	45	45	47	50	51	51	50	50	46	42	--	48
Minimum	50	43	41	40	41	41	42	46	50	53	50	48	45	44	44	45	46	48	47	44	43	44	45	47	50	49	49	46	42	41	--	45
December																																
Maximum	41	39	37	35	36	39	47	50	50	48	43	40	40	40	40	40	41	41	40	40	40	40	40	38	36	34	32	33	33	33	33	39
Minimum	39	37	35	35	35	36	39	47	48	43	40	40	40	40	40	40	40	40	40	40	40	40	38	36	34	32	32	32	33	32	32	38
January																																
Maximum	33	34	34	34	33	35	36	36	35	34	33	34	35	36	36	35	33	33	33	33	33	37	41	44	45	45	41	37	35	35	36	36
Minimum	33	33	34	33	33	33	35	35	34	33	33	33	33	35	35	33	33	33	33	33	33	33	37	41	44	41	37	35	34	34	35	35
February																																
Maximum	37	37	37	37	36	36	34	33	33	35	35	35	35	38	41	41	38	37	38	38	38	36	36	34	34	34	33	33	--	--	--	36
Minimum	36	37	36	36	36	34	33	33	33	33	35	33	34	35	38	38	36	36	36	38	36	35	34	34	34	33	33	33	--	--	--	35
March																																
Maximum	33	36	38	38	37	36	36	36	37	41	43	43	43	44	44	43	42	41	41	41	41	41	44	44	46	47	49	48	49	51	54	42
Minimum	32	33	36	37	36	35	35	36	36	37	41	43	43	43	43	41	40	39	39	41	41	40	41	44	44	46	47	47	47	49	51	41
April																																
Maximum	56	58	57	56	53	53	53	52	53	55	55	54	53	58	62	64	66	64	57	56	58	58	58	55	53	51	52	56	56	57	--	56
Minimum	54	56	56	53	52	51	52	50	49	53	53	51	52	53	58	61	64	57	54	54	56	58	55	53	50	51	49	52	54	55	--	54
May																																
Maximum	60	60	58	60	60	60	55	53	54	54	55	55	55	54	54	56	59	63	66	65	64	64	64	66	70	71	73	73	71	67	63	61
Minimum	57	58	56	57	58	55	51	52	53	53	54	54	53	54	53	53	56	58	62	62	60	60	60	61	65	68	69	71	67	62	60	58
June																																
Maximum	63	65	66	68	72	72	73	73	74	73	75	77	78	79	80	80	80	79	77	77	77	75	76	76	76	73	74	74	73	75	--	74
Minimum	60	62	64	65	67	70	70	72	70	72	73	74	76	76	78	78	78	77	74	74	75	73	73	75	73	70	70	72	72	72	--	72
July																																
Maximum	76	77	76	74	73	72	72	76	76	75	78	78	77	74	70	70	71	72	72	75	76	78	78	78	80	80	80	77	77	77	79	76
Minimum	74	74	73	71	69	69	71	72	74	74	74	76	74	70	67	66	69	70	70	71	73	74	77	76	78	77	77	75	74	75	75	73
August																																
Maximum	79	80	80	79	77	77	76	75	78	77	73	72	72	74	74	74	76	76	76	74	72	72	72	73	74	74	73	69	69	70	69	74
Minimum	77	77	79	76	74	74	74	74	75	73	69	69	69	70	71	72	72	74	74	72	70	71	70	70	72	73	66	65	65	69	66	72
September																																
Maximum	67	67	67	66	69	69	69	69	68	68	67	66	68	69	69	69	69	69	70	71	71	68	65	65	62	64	64	60	57	55	--	67
Minimum	64	64	65	65	65	67	67	67	68	65	63	63	66	67	67	68	68	68	68	67	68	64	61	62	60	60	60	57	55	53	--	64

WABASH RIVER BASIN--Continued

3-3490. WHITE RIVER AT NOBLESVILLE, IND.

LOCATION.--Lat 40°02'50", long 86°01'00", temperature recorder at gaging station on right bank at downstream side of Logan Street Bridge in Noblesville, Hamilton County, 1.5 miles upstream from Cicero Creek, 3.5 miles downstream from dam at Clare, and at mile 269.0.
DRAINAGE AREA.--837 square miles.
RECORDS AVAILABLE.--Water temperatures: November 1952 to September 1967.
EXTREMES, 1966-67.--Water temperatures: Maximum, 85°F June 15, 16; minimum, freezing point on several days during December to March.
EXTREMES, 1952-67.--Water temperatures: Maximum, 94°F Aug. 1, 1953; minimum, freezing point on many days during winter months.
REMARKS.--Flow regulated by powerplant above station.

Temperature (°F) of water, water year October 1966 to September 1967
(Continuous ethyl alcohol-actuated thermograph)

Month	Day																														Average
	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	
October																																
Maximum	60	58	58	62	60	58	59	58	57	57	60	60	61	65	63	58	57	57	58	55	55	55	57	54	55	56	57	58	56	53	52	58
Minimum	57	54	54	58	57	55	56	54	55	55	57	57	59	61	58	55	53	55	54	54	54	55	54	50	52	53	54	55	53	52	49	55
November																																
Maximum	54	52	50	49	49	44	46	48	52	52	52	48	46	49	49	49	50	50	49	46	44	45	47	48	49	48	49	49	48	43	--	48
Minimum	51	48	46	46	43	41	41	46	48	52	48	46	44	42	43	45	46	49	46	43	42	44	44	47	48	46	48	47	43	40	--	45
December																																
Maximum	41	39	35	32	37	40	45	50	50	48	43	40	39	40	40	40	41	42	45	44	43	44	43	40	37	35	35	35	36	36	34	40
Minimum	38	34	32	32	32	35	40	45	48	43	40	39	39	39	39	40	40	41	42	43	42	43	40	37	35	34	33	34	35	34	34	38
January																																
Maximum	36	37	39	40	39	41	41	38	37	36	37	38	39	37	36	37	36	34	35	36	35	35	46	46	45	45	44	37	35	36	38	38
Minimum	34	36	36	36	36	36	38	35	34	34	33	33	34	36	35	34	32	33	33	32	33	33	35	43	45	44	37	35	34	34	36	35
February																																
Maximum	39	39	38	35	35	34	34	35	34	35	36	34	37	40	42	41	39	38	38	40	39	37	36	35	35	33	36	37	--	--	--	37
Minimum	37	38	35	35	34	33	32	32	32	32	34	32	33	35	38	38	36	36	36	38	35	34	33	32	33	32	32	32	--	--	--	34
March																																
Maximum	38	37	39	37	37	37	36	37	39	43	46	46	46	46	46	45	44	43	42	44	43	42	46	46	48	50	53	53	53	55	58	44
Minimum	32	33	32	36	36	35	35	36	36	38	43	46	45	46	45	42	41	39	40	42	42	41	42	46	46	48	50	52	51	53	53	42
April																																
Maximum	59	62	62	60	57	55	55	54	54	57	56	55	55	57	61	63	66	63	58	58	61	60	58	56	54	54	55	59	58	59	--	58
Minimum	57	59	60	56	54	53	54	51	51	54	54	53	54	55	57	61	63	58	53	54	56	58	56	53	51	53	50	53	56	57	--	55
May																																
Maximum	63	63	62	65	64	62	57	55	56	56	58	58	57	55	57	59	62	65	69	67	65	67	66	68	76	78	77	76	73	73	69	64
Minimum	58	60	57	59	60	57	54	54	55	55	55	56	55	55	54	54	57	60	64	64	62	63	62	62	67	71	72	73	71	64	63	60
June																																
Maximum	69	71	72	71	76	76	78	78	78	78	76	81	83	84	85	85	84	81	81	81	81	79	80	80	77	76	76	76	76	78	--	78
Minimum	63	63	66	67	67	71	71	73	72	73	71	73	77	80	81	82	80	76	73	75	77	75	73	77	73	69	70	72	72	72	--	73
July																																
Maximum	79	80	77	76	74	74	74	78	78	78	83	84	82	77	74	74	75	76	77	78	79	82	81	83	84	84	83	78	78	77	81	79
Minimum	74	76	73	71	69	69	71	71	74	75	77	82	77	72	69	68	69	69	71	71	73	74	76	76	80	79	78	77	73	72	74	74
August																																
Maximum	83	83	83	82	79	78	77	79	81	79	76	76	76	78	80	78	80	79	78	77	78	77	77	77	77	76	75	75	75	75	74	78
Minimum	78	80	79	78	74	74	73	74	75	73	70	70	70	70	75	74	73	75	76	74	72	72	72	72	74	74	70	68	69	72	70	73
September																																
Maximum	73	72	72	71	72	75	75	73	72	71	70	70	73	72	72	75	74	72	79	77	76	72	69	67	65	67	67	62	58	57	--	71
Minimum	67	68	68	67	67	71	71	71	71	68	65	66	70	68	66	72	70	70	72	73	72	69	64	64	61	62	61	58	56	54	--	67

WABASH RIVER BASIN--Continued

3-3510. WHITE RIVER NEAR NORA, IND.

LOCATION.--Lat 39°54'35", long 86°06'20", temperature recorder at gaging station on downstream side of center pier of bridge on State Highway 100, 2 miles east of Nora, Marion County, 14 miles upstream from Fall Creek, and at mile 253.4.
DRAINAGE AREA.--1,200 square miles.
RECORDS AVAILABLE.--Water temperatures: June 1954 to May 1960, October 1962 to September 1967.
EXTREMES, 1966-67.--Water temperatures: Maximum, 81°F June 18, 19; minimum, 33°F Jan. 16-22, Feb. 9, 10, 27, 28, Mar. 1.
EXTREMES, 1954-60, 1962-67.--Water temperatures: Maximum, 89°F July 14, 1954; minimum, freezing point on many days during winter months.
REMARKS.--Flow regulated by powerplant above station.

Temperature (°F) of water, water year October 1966 to September 1967
(Continuous ethyl alcohol-actuated thermograph)

Month	Day																													Average
	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	
October																																
Maximum	59	58	57	58	58	58	57	56	56	56	56	56	56	58	58	58	56	54	54	53	51	52	52	52	51	51	50	50	51	51	51	55
Minimum	58	57	56	56	58	57	56	56	56	56	56	55	55	56	58	56	54	54	53	51	51	51	52	51	51	50	50	50	50	50	50	54
November																																
Maximum	50	50	46	44	43	43	45	47	49	50	50	49	47	45	44	45	46	48	48	47	45	44	44	46	47	47	47	47	46	--	--	47
Minimum	50	46	44	42	42	43	43	45	47	49	49	47	45	44	44	44	45	46	47	45	44	44	44	44	46	47	47	46	44	--	--	45
December																																
Maximum	--	--	--	--	--	40	44	48	48	48	45	44	42	42	42	41	40	41	41	41	41	41	42	41	40	38	36	36	36	36	36	41
Minimum	--	--	--	--	--	39	40	44	48	45	44	42	41	42	40	40	40	40	41	40	41	41	41	40	38	36	36	36	36	36	36	40
January																																
Maximum	36	36	36	36	36	37	38	38	36	35	35	34	35	35	35	35	33	33	33	33	33	36	39	41	43	43	41	38	36	36	36	36
Minimum	36	36	36	36	36	36	37	36	35	35	34	34	34	35	35	33	33	33	33	33	33	33	36	39	41	41	38	36	35	35	35	35
February																																
Maximum	37	37	37	36	36	36	35	34	34	34	35	35	34	36	39	39	39	38	38	38	38	37	37	35	35	34	34	33	--	--	--	36
Minimum	36	36	36	36	36	35	34	34	33	33	34	34	34	34	36	39	38	38	38	38	37	36	35	35	34	34	33	33	--	--	--	35
March																																
Maximum	35	37	38	38	38	37	36	37	37	39	41	41	41	42	42	42	41	40	39	39	39	39	41	41	43	45	46	46	47	48	50	41
Minimum	33	34	37	38	37	36	36	36	37	37	39	41	41	41	42	41	40	39	39	39	39	39	39	41	41	43	45	46	46	47	48	40
April																																
Maximum	52	54	54	54	53	53	53	53	52	53	53	53	52	54	56	58	60	60	58	56	55	56	56	55	54	52	52	54	54	55	--	54
Minimum	50	52	54	53	53	52	52	52	51	51	53	52	52	52	54	56	58	58	56	55	55	55	55	54	52	52	51	52	54	54	--	53
May																																
Maximum	58	58	58	60	60	60	58	55	55	55	56	56	56	56	56	56	57	58	60	61	61	61	61	61	65	67	68	69	69	66	65	60
Minimum	55	57	57	57	60	58	54	54	55	55	55	56	56	56	56	55	56	57	58	60	61	61	61	61	61	65	66	67	66	65	65	59
June																																
Maximum	65	66	66	68	71	72	73	76	77	77	78	79	80	80	80	80	80	81	81	80	79	78	76	76	76	75	72	72	73	74	--	75
Minimum	65	65	66	66	68	71	72	73	75	77	77	78	78	79	79	80	79	79	79	79	78	76	76	76	75	72	72	72	72	73	--	74
July																																
Maximum	76	76	76	75	75	74	75	76	76	77	79	80	80	79	76	73	74	75	76	76	77	78	78	78	79	79	79	79	77	77	79	77
Minimum	73	76	75	74	73	73	74	75	76	76	77	79	79	76	73	72	72	74	75	76	76	77	78	77	77	78	79	77	76	77	77	76
August																																
Maximum	79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	76	77	--	--	--	--	--	--	--	--	--	--	--	73	--	--
Minimum	78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	74	76	--	--	--	--	--	--	--	--	--	--	--	72	--	--
September																																
Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	66	66	63	63	61	62	61	57	55	--	--
Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	65	63	63	61	61	61	57	55	54	--	--

WABASH RIVER BASIN--Continued

3-3540. WHITE RIVER NEAR CENTERTON, IND.

LOCATION.--Lat 39°30'02", long 86°24'24", at gaging station, 0.4 mile downstream from highway bridge, 1 mile south of Centerton, 1.1 miles downstream from White Lick Creek, and at mile 202.6.
DRAINAGE AREA.--2,435 square miles.
RECORDS AVAILABLE.--Water temperatures: September 1953 to April 1956, October 1966 to September 1967.
EXTREMES, 1966-67.--Water temperatures: Maximum, 86°F June 14-17, Aug. 2.
EXTREMES, 1953-56, 1966-67.--Water temperatures: Maximum, 89°F July 14, 1954; minimum, freezing point Feb. 13, 14, 1955.
REMARKS.--Minimum temperature observed during period when thermograph was not operating was 35°F Dec. 30. Flow slightly regulated by Morse and Geist Reservoirs. Sediment samples were taken at highway bridge, 0.4 mile upstream from gaging station.

Temperature (°F) of water, water year October 1966 to September 1967
(Continuous ethyl alcohol-actuated thermograph)

Month	Day																														Average
	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	
October																															
Maximum	--	63	63	65	65	63	62	62	63	63	63	63	64	66	66	63	62	60	58	58	58	58	59	58	58	57	57	57	58	58	56	61
Minimum	--	59	60	62	62	60	59	59	60	61	60	60	62	64	63	61	59	58	58	56	56	57	57	56	56	56	55	56	57	56	56	59
November																															
Maximum	56	56	50	47	48	50	53	55	59	59	56	51	49	48	48	50	53	55	55	53	49	49	52	54	55	55	55	53	45	43	--	52
Minimum	56	50	47	46	46	48	50	53	55	56	51	49	48	48	48	48	50	53	53	49	49	49	49	52	54	55	53	45	43	42	--	50
December																															
Maximum	44	44	43	43	43	44	50	53	53	50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Minimum	42	43	43	43	43	43	44	50	50	45	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
January																															
Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
February																															
Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
March																															
Maximum	44	45	46	46	46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	41	43	43	47	50	51	53	55	55	56	--
Minimum	43	43	45	46	42	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	40	41	43	43	47	50	51	53	54	54	--
April																															
Maximum	60	62	62	60	58	59	59	56	57	58	58	58	59	62	65	66	68	66	62	62	62	63	62	59	56	55	55	60	59	61	--	60
Minimum	56	60	60	57	58	58	56	55	55	57	56	56	57	59	62	64	66	61	59	60	61	60	59	56	55	54	54	55	58	59	--	58
May																															
Maximum	63	63	63	65	66	64	59	55	57	57	61	61	58	57	57	58	60	63	66	66	66	66	66	69	73	77	77	77	75	69	66	65
Minimum	61	62	60	62	63	59	54	54	55	57	57	58	57	57	56	56	58	60	63	64	62	63	63	64	68	72	73	74	69	64	63	62
June																															
Maximum	66	69	68	71	73	76	77	77	79	79	81	82	84	86	86	86	86	84	82	80	80	79	80	80	80	77	78	78	78	81	--	79
Minimum	65	64	67	65	69	72	73	75	74	76	77	77	78	79	81	82	82	81	77	76	77	76	76	78	76	72	73	75	75	76	--	75
July																															
Maximum	83	83	82	78	76	75	76	80	79	80	83	83	82	78	73	76	76	78	77	80	82	83	83	81	84	85	84	80	81	82	82	80
Minimum	77	79	76	74	73	72	73	75	77	78	78	80	78	72	70	69	73	73	75	75	77	78	78	78	78	78	79	78	76	76	78	76
August																															
Maximum	84	86	85	87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Minimum	79	81	81	78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
September																															
Maximum	74	74	73	72	74	75	76	75	73	74	73	72	74	76	77	76	76	76	77	79	78	75	71	71	70	70	70	65	60	61	--	73
Minimum	69	68	68	69	68	70	71	72	72	69	68	68	70	72	72	73	73	73	73	75	74	71	68	68	65	66	65	60	58	57	--	69

WABASH RIVER BASIN--Continued

3-3540. WHITE RIVER NEAR CENTERTON, IND.--Continued

Periodic determinations of suspended-sediment discharge, water year October 1966 to September 1967
(Methods of analysis: B, bottom withdrawal tube; C, chemically dispersed; D, decantation; N, in native water; P, pipet; S, sieve; V, visual accumulation tube; W, in distilled water)

Date of collection	Time (24 hour)	Water temperature (°F)	Sampling point	Discharge (cfs)	Sediment concentration (ppm)	Sediment discharge (tons per day)	Suspended sediment: Percent finer than size indicated, in millimeters										Method of analysis
							0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
Oct. 3, 1966.....	1150			314	28	24											
Nov. 1.....	1345			342	14	13											
Dec. 1.....	1150			1520	39	160											
Feb. 1, 1967.....	1325			3480	71	667											
Mar. 1.....	1255			1230	18	60											
Apr. 3.....	1000			3550	73	700											
May 1.....	1225			1700	30	138											
May 29.....	1220			2970	893	7160											
July 3.....	1115			582	13	20											
July 30.....	1125			438	13	15											
Sept. 5.....	0700			340	8	7											

WABASH RIVER BASIN--Continued

3-3655. EAST FORK WHITE RIVER AT SEYMOUR, IND.--Continued

Particle-size analyses of suspended sediment, water year October 1966 to September 1967
(Methods of analysis: B, bottom withdrawal tube; C, chemically dispersed; D, decantation; N, in native water; P, pipet; S, sieve; V, visual accumulation tube; W, in distilled water)

Date of collection	Time (24 hour)	Water temperature (°F)	Sampling point	Discharge (cfs)	Sediment concentration (ppm)	Sediment discharge (tons per day)	Suspended sediment											Method of analysis
							Percent finer than size indicated, in millimeters											
							0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
Nov. 30, 1966	1215				146		55	60	68	78	88	97	99	100	--	--		SBWC
Dec. 9	1000				180		58	61	68	78	84	89	93	100	--	--		SBWC
Dec. 9	1000				180		3	4	30	63	80	84	90	95	100	--		SBN
Dec. 10	1220				321		45	53	57	64	70	73	76	80	95	100		SBWC
Mar. 7, 1967	1250				227		51	65	73	82	86	87	90	95	97	100		SBWC
Mar. 7	1250				227		20	38	61	82	87	88	90	95	99	100		SBN
May 2	1615				518		53	64	73	83	89	93	96	98	99	100		SBWC
May 9	1310				170		55	62	71	80	82	86	88	92	98	100		SBWC
May 9	1310				170		34	48	66	80	84	85	88	93	99	100		SBN
May 15	1625				198		44	52	61	69	75	78	82	89	99	100		SBWC

WABASH RIVER BASIN--Continued

3-3655. EAST FORK WHITE RIVER AT SEYMOUR, IND.--Continued

Suspended sediment, July to September 1966

Day	JULY			AUGUST			SEPTEMBER		
	Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment	
		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day
1..	534	50	72	310	35	A 30	282	32	24
2..	486	43	56	305	36	30	275	32	24
3..	448	32	39	294	36	29	268	32	23
4..	432	30	35	285	38	29	261	32	23
5..	451	31	38	278	40	30	250	34	23
6..	698	--	E 130	270	40	29	247	38	25
7..	662	50	A 90	263	39	28	281	38	29
8..	609	27	44	257	38	26	266	36	26
9..	518	22	31	252	36	24	258	34	24
10..	467	19	24	254	35	24	252	33	22
11..	478	29	37	297	35	28	246	34	23
12..	982	40	B 110	280	34	26	240	38	25
13..	823	41	91	300	32	26	236	40	25
14..	640	38	66	542	--	E 120	235	40	25
15..	548	36	53	725	--	E 200	250	40	27
16..	525	34	48	574	52	81	238	40	26
17..	485	33	43	566	34	52	230	40	25
18..	454	32	39	490	31	41	226	40	B 25
19..	448	30	A 35	428	31	36	241	35	B 25
20..	839	--	E 250	407	31	34	288	24	19
21..	608	90	A 150	452	36	44	446	25	30
22..	479	67	87	534	37	53	493	30	40
23..	423	55	63	460	36	45	483	30	39
24..	395	46	49	409	39	43	442	30	36
25..	375	40	40	397	37	40	387	30	31
26..	361	34	33	370	34	34	360	31	30
27..	346	32	30	348	34	32	359	32	31
28..	340	31	28	326	33	29	355	31	30
29..	377	31	32	309	33	28	349	29	27
30..	386	31	32	299	33	27	340	28	26
31..	347	29	27	290	33	26	--	--	--
Total	15964	--	1902	11571	--	1324	9084	--	808

Total discharge for period (cfs-days)..... 36619
Total load for period (tons)..... 4034

E Estimated.
A Computed from partly estimated-concentration graph.
B Computed from estimated-concentration graph.

WABASH RIVER BASIN--Continued

3-3655. EAST FORK WHITE RIVER AT SEYMOUR, IND.--Continued

Suspended sediment, water year October 1966 to September 1967

Day	OCTOBER			NOVEMBER			DECEMBER		
	Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment	
		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day
1..	354	28	27	291	20	16	6750	87	1590
2..	356	28	27	302	16	13	4290	51	591
3..	356	27	24	316	8	7	3320	39	350
4..	389	27	28	310	5	4	2670	33	238
5..	369	27	27	318	4	3	2350	31	197
6..	340	27	25	329	5	4	2780	47	353
7..	325	27	24	364	6	6	4810	196 S	2690
8..	315	27	23	576	14	22	8940	282	6810
9..	305	25 B	20	1540	82 S	391	13400	230	8320
10..	311	25 B	20	2790	210 B	1600	24600	327	21700
11..	345	23	21	4180	-- E	400	32900	289	25700
12..	325	24	21	4300	280 A	3300	30400	201	16500
13..	320	25	22	3420	98	905	25000	132	8910
14..	312	25	21	2600	55	386	15700	81	3430
15..	324	25	22	2070	37	207	8690	67	1570
16..	334	25	23	1740	30	141	6240	50	842
17..	359	25	24	1520	29	119	5120	41	567
18..	361	26	25	1360	27	99	4420	39	465
19..	376	16	16	1240	25	84	3910	38	401
20..	371	9	9	1130	23	70	3490	27	254
21..	361	13	13	1040	21	59	3170	25	214
22..	350	18	17	972	19	50	2870	22	170
23..	334	18	16	917	18	45	2600	21	147
24..	323	18	16	869	16	38	2370	17	109
25..	317	18	15	845	16	37	2200	18	107
26..	312	18	15	831	16	36	2020	12	65
27..	307	17	14	1150	61 S	248	1840	9	45
28..	303	16	13	4560	439	5400	1870	13	66
29..	298	16	13	7610	341	7010	3030	40 B	330
30..	294	17	13	8960	169	4090	3300	36	321
31..	291	18	14	--	--	--	2670	22	159
Total	10337	--	608	58450	--	28790	237720	--	103211

Day	JANUARY			FEBRUARY			MARCH		
1..	2270	12	74	2740	27	200	1090	6	18
2..	2050	11	61	3360	67 S	717	1100	8	24
3..	1880	10	51	8180	360	7950	1300	14	49
4..	1750	9	43	9780	177	4670	2040	25	138
5..	1650	8	36	8440	97	2210	2700	65 S	511
6..	1560	9	38	6050	60	980	7310	386	7620
7..	1560	8	34	4580	64	791	12200	276	9090
8..	1980	11	59	3460	29	271	12500	151	5100
9..	2490	31	208	2930	27	214	10400	93	2610
10..	2270	28	172	2710	38	278	8100	71	1550
11..	1890	23	117	2470	37	247	6880	63	1170
12..	1660	10	45	2230	38	229	5930	63	1010
13..	1570	9	38	1960	47	249	5170	57	796
14..	1520	8	33	1800	46	224	4540	65	797
15..	1450	9	35	1730	34	159	4890	80 B	1100
16..	1370	6	22	1680	48	218	5460	102	1500
17..	1280	6	21	1640	40	177	4400	65	772
18..	1170	6	19	1600	43	186	3690	42	418
19..	1070	7	20	1530	32	132	3150	23	196
20..	1070	12	35	1470	36	143	2930	21	166
21..	1080	13	38	1420	24	92	6350	196 S	3560
22..	1070	20	58	1370	7	26	10200	181	4980
23..	1090	31	91	1310	9	32	9520	118	3030
24..	1110	21	63	1220	11	36	7550	87	1770
25..	1140	28	86	1050	14	40	5630	63	958
26..	1190	41	132	1010	12	33	4570	59	728
27..	2000	80 B	510	1050	23	65	3940	58	617
28..	4260	70 A	2000	1080	16	47	3900	66	695
29..	4550	77	946	--	--	--	5630	133	2020
30..	3770	40	407	--	--	--	5950	92	1480
31..	3040	26	213	--	--	--	5390	71	1030
Total	57810	--	5705	79850	--	20616	174410	--	55503

E Estimated.
S Computed by subdividing day.
A Computed from partly estimated-concentration graph.
B Computed from estimated-concentration graph.

WABASH RIVER BASIN--Continued

3-3655. EAST FORK WHITE RIVER AT SEYMOUR, IND.--Continued

Suspended sediment, water year October 1966 to September 1967--Continued

Day	APRIL			MAY			JUNE		
	Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment	
		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day
1..	4270	46	530	2170	65	381	2450	52	344
2..	3490	43	405	6950	408	7660	2160	57	332
3..	3050	75	618	9460	204 S	5490	1960	46	243
4..	2760	53	395	6030	86	1400	1910	59	304
5..	2500	43	290	4300	64	743	1830	56	277
6..	2560	47	325	3420	58	536	1720	48	223
7..	4020	75	814	6610	310 A	6800	1610	58	252
8..	4230	70	799	14600	279	11000	1580	56	239
9..	3650	58	572	13000	118	4140	1500	41	166
10..	3100	66	552	11000	69	2050	1420	38	146
11..	2730	53	391	8220	54	1200	1350	38	139
12..	2390	51	329	6480	66	1150	1260	37	126
13..	2180	47	277	7180	78	1510	1190	33	106
14..	2080	54	303	7600	87	1790	1140	30	92
15..	2010	39	212	11300	180 A	5500	1090	30	88
16..	1900	46	236	15400	140 A	5800	1040	30	84
17..	2150	-- E	410	11600	74	2320	1000	28	76
18..	2750	110 A	800	10300	76	2110	963	30	78
19..	2040	38	209	8440	54	1230	922	31	77
20..	1750	45	213	6920	70	1310	889	30	72
21..	1720	50	232	5320	79	1130	886	32	77
22..	5130	451	6250	4280	83	959	962	30	78
23..	5280	193 S	3040	3630	86	843	1100	35	104
24..	4390	95	1130	3200	83	717	1120	40	121
25..	4020	76	825	2870	96	744	1050	48	136
26..	3300	51	454	2580	73	509	968	44	115
27..	3030	40	327	2350	75	476	915	45	111
28..	2650	50	358	2160	75	437	873	46	108
29..	2320	56	351	2160	72	420	829	55	123
30..	2120	54	309	2470	59	393	796	88	189
31..	--	--	--	2640	66	470	--	--	--
Total	89570	--	21956	204640	--	71218	38483	--	4626

	JULY			AUGUST			SEPTEMBER		
1..	861	-- E	130	450	40	49	275	41	30
2..	968	-- E	190	436	35	41	269	39	28
3..	830	63	141	424	32	37	262	36	25
4..	762	67	138	411	30	33	257	34	24
5..	727	59	116	394	30	32	253	34	23
6..	701	56	106	379	33	34	251	34	23
7..	677	52	95	370	34	34	246	35	23
8..	657	52	92	371	35	35	243	35	23
9..	636	51	88	374	38	38	244	32	21
10..	628	51	86	356	38	37	242	29	19
11..	609	49	81	344	34	32	239	28	18
12..	596	42	68	334	33	30	238	30	19
13..	578	36	56	322	36	31	238	32	21
14..	561	34	51	319	36	31	235	34	22
15..	545	44	65	312	32	27	232	35	22
16..	528	43	61	307	31	26	228	30	18
17..	512	38	53	301	30	24	228	26	16
18..	508	37	51	306	28	23	224	22	13
19..	503	36	49	308	27	22	223	22	13
20..	501	39	53	302	25	20	223	22	13
21..	504	41	56	306	24	20	227	21	13
22..	489	35	46	309	29	24	223	21	13
23..	485	34	45	301	30	24	218	21	12
24..	474	33	42	293	30	24	214	21	12
25..	519	45 A	63	310	35 B	30	212	20	11
26..	455	37	45	633	71	121	211	17	10
27..	445	37	44	372	60	60	213	15	9
28..	573	-- E	85	312	45	38	217	10	6
29..	528	44	63	298	44	35	213	10	6
30..	481	29	38	297	43	34	213	10	6
31..	462	30 A	35	284	42	32	--	--	--
Total	18303	--	2332	10835	--	1078	7011	--	512

Total discharge for year (cfs-days)..... 987419
Total load for year (tons)..... 316155

E Estimated.
S Computed by subdividing day.
A Computed from partly estimated-concentration graph.
B Computed from estimated-concentration graph.

WABASH RIVER BASIN--Continued

3-3655. EAST FORK WHITE RIVER AT SEYMOUR, IND.

LOCATION.--Lat 38°58'57", long 85°53'57", at gaging station on left bank, 1,700 feet downstream from highway bridge, 1 mile north of Seymour, Jackson County, 9.6 miles downstream from Sand Creek, and at mile 219.2.
DRAINAGE AREA.--2,333 square miles.
RECORDS AVAILABLE.--Water temperatures: October 1954 to September 1967.
Sediment records: July 1966 to September 1967.
EXTREMES, 1966-67.--Water temperatures: Maximum, 81°F July 26, 27; minimum, freezing point Feb. 25, 26.
Sediment concentrations: Maximum daily, 451 ppm Apr. 22; minimum daily, 4 ppm Nov. 5.
Sediment loads: Maximum daily, 25,700 tons Dec. 11; minimum daily, 3 tons Nov. 5.
EXTREMES, 1954-67.--Water temperatures: Maximum, 87°F July 13, 14, 1966; minimum, freezing point on many days during winter months.
Sediment concentrations (July 1966 to September 1967): Maximum daily, 451 ppm Apr. 22, 1967; minimum daily, 4 ppm Nov. 5, 1966.
Sediment loads (July 1966 to September 1967): Maximum daily, 25,700 tons Dec. 11, 1966; minimum daily, 3 tons Nov. 5, 1966.
REMARKS.--Maximum temperature known, 90°F July 19, 1954. Regulation at low flow by pumping plant 1,200 feet upstream from recorder. Sediment samples collected at highway bridge, 1,700 feet upstream from gaging station.

Temperature (°F) of water, water year October 1966 to September 1967
(Continuous ethyl alcohol-actuated thermograph)

Month	Day																													Average
	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	
October																																
Maximum	61	62	61	62	62	60	59	59	60	61	60	59	61	61	62	61	58	57	55	53	53	53	54	54	53	52	52	52	52	51	50	57
Minimum	58	58	59	60	59	58	57	58	58	60	59	58	59	60	61	58	57	55	53	52	52	52	53	52	52	51	50	50	51	50	50	55
November																																
Maximum	50	49	44	42	43	44	47	49	52	53	53	51	47	46	45	46	48	49	49	49	47	46	47	49	50	50	50	49	48	42	--	48
Minimum	49	44	42	41	42	42	44	47	49	52	51	47	46	45	45	45	46	48	49	47	46	46	46	47	49	49	49	48	42	40	--	46
December																																
Maximum	40	40	38	37	38	40	46	51	51	50	46	43	41	39	49	40	41	42	42	42	42	42	42	41	40	38	37	37	37	35	35	41
Minimum	40	38	36	35	37	38	40	46	50	46	43	41	39	39	39	40	40	41	42	42	42	42	41	40	38	37	36	37	35	35	34	40
January																																
Maximum	36	37	38	38	38	38	39	39	38	36	35	35	37	39	39	39	38	37	35	35	36	40	43	46	47	48	48	44	40	37	38	39
Minimum	35	36	37	38	38	37	38	38	36	35	35	34	35	37	39	38	37	35	34	34	34	36	40	43	46	47	44	40	37	36	37	38
February																																
Maximum	39	40	40	38	37	37	36	34	34	35	37	37	37	39	42	41	40	39	39	39	39	38	37	35	33	33	33	35	--	--	--	37
Minimum	38	39	38	36	36	36	34	33	33	33	35	36	35	37	39	40	39	38	37	39	37	37	35	33	32	32	33	33	--	--	--	36
March																																
Maximum	36	40	42	42	42	41	40	41	42	46	50	51	52	53	53	51	49	46	45	45	45	45	46	47	49	52	54	55	57	58	58	48
Minimum	35	36	40	41	41	39	38	40	41	42	46	50	51	52	51	49	46	45	44	45	45	44	45	46	47	49	52	54	55	56	57	46
April																																
Maximum	60	62	62	59	58	58	59	58	57	58	58	57	58	60	63	65	67	66	61	59	59	59	59	58	55	54	53	55	56	57	--	59
Minimum	58	60	59	58	57	57	58	56	55	57	57	56	57	58	60	62	64	61	59	57	58	59	58	55	54	53	51	53	55	56	--	57
May																																
Maximum	59	59	58	58	59	59	57	55	56	57	59	59	59	58	58	56	58	60	62	62	61	61	61	62	65	68	70	71	70	67	63	61
Minimum	57	58	57	57	58	57	54	54	54	55	57	59	58	58	56	55	56	58	60	61	60	60	60	60	62	65	68	69	69	63	62	59
June																																
Maximum	62	61	61	62	66	68	70	70	71	72	74	74	75	77	77	78	78	78	78	77	76	75	75	76	76	76	75	75	75	76	--	73
Minimum	61	60	60	60	62	66	68	70	70	70	72	73	74	74	76	77	78	78	76	76	75	74	73	75	76	74	74	74	74	75	--	72
July																																
Maximum	77	77	77	76	74	73	72	75	76	76	78	79	79	77	74	73	73	74	74	74	76	78	78	78	79	81	81	80	78	78	78	77
Minimum	76	76	76	74	72	72	71	72	74	76	76	78	77	74	72	72	72	72	74	73	74	76	78	78	78	79	80	78	77	77	77	75
August																																
Maximum	78	80	80	80	79	78	77	78	78	77	76	74	74	74	75	76	76	76	76	75	75	75	76	77	76	75	74	73	74	75	75	76
Minimum	78	78	80	79	78	77	77	77	77	76	74	73	72	72	74	74	75	75	75	73	72	74	75	75	75	74	73	72	73	74	72	75
September																																
Maximum	72	72	72	71	72	74	75	73	72	71	71	70	70	72	73	74	73	73	73	74	74	73	70	69	68	67	67	65	60	58	--	71
Minimum	70	70	70	70	70	71	72	72	71	70	69	69	69	70	71	72	72	72	72	72	73	70	68	67	66	65	65	60	57	57	--	69

3-3725. SALT CREEK NEAR HARRODSBURG, IND.

LOCATION.--Lat 39°00'16", long 86°30'31", temperature recorder at gaging station on right bank, 1,300 feet downstream from Monroe Reservoir dam, 0.9 mile upstream from Clear Creek, 2.2 miles southeast of Harrodsburg, Monroe County, and 25.1 miles upstream from mouth.
DRAINAGE AREA.--441 square miles.
RECORDS AVAILABLE.--Water temperatures: August 1966 to September 1967.
EXTREMES, 1966-67.--Water temperatures: Maximum, 76°F Aug. 10; minimum, 36°F on many days during January to March.
EXTREMES, August 1966 to September 1967.--Water temperatures: Maximum, 76°F Aug. 10, 1966; minimum, 36°F on many days during January to March 1967.
REMARKS.--Flow regulated by Monroe Reservoir (capacity, 418,700 acre-ft).

Temperature (°F) of water, water year October 1966 to September 1967
(Continuous ethyl alcohol-actuated thermograph)

Month	Day																														Average
	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	
October																																
Maximum	67	66	66	66	66	66	65	64	64	64	64	63	63	63	62	62	62	62	61	60	59	59	58	58	58	58	58	57	57	56	56	62
Minimum	66	65	65	65	65	64	64	64	64	64	63	62	62	62	62	62	61	61	60	59	58	58	58	58	58	58	57	57	56	55	55	61
November																																
Maximum	55	54	53	52	52	52	52	52	52	52	52	51	51	51	51	50	50	51	50	50	50	49	49	49	49	50	50	50	48	48	--	51
Minimum	54	52	52	52	52	51	51	51	52	51	51	51	50	50	50	50	50	50	50	49	49	49	49	49	49	49	50	48	48	47	--	50
December																																
Maximum	47	46	45	44	44	44	45	47	47	45	44	44	44	44	44	44	43	43	43	43	43	43	43	42	42	41	40	40	40	39	39	43
Minimum	46	45	44	44	43	44	44	45	45	44	44	44	44	44	44	43	43	43	43	43	43	43	42	42	41	40	40	40	39	39	39	43
January																																
Maximum	39	38	38	38	38	38	38	38	38	37	37	36	37	36	36	37	37	37	37	37	36	36	37	37	37	38	38	38	38	38	38	37
Minimum	38	38	38	38	38	38	38	37	37	37	36	36	36	36	36	36	36	36	36	36	36	36	36	36	37	37	38	38	38	38	38	37
February																																
Maximum	38	38	38	38	38	38	38	37	37	37	37	37	37	37	38	38	38	38	38	38	38	38	38	37	37	37	36	36	--	--	--	38
Minimum	38	38	38	38	38	38	37	36	36	37	37	36	36	37	36	38	38	38	38	38	37	37	37	36	36	36	36	36	--	--	--	37
March																																
Maximum	37	37	37	37	37	37	38	38	38	39	39	40	40	41	42	42	42	43	43	43	43	43	45	44	45	44	45	45	48	49	49	42
Minimum	36	37	37	37	37	37	37	38	38	38	38	39	40	40	41	42	42	42	42	42	43	43	43	44	44	44	44	45	45	47	48	41
April																																
Maximum	50	50	51	50	50	51	52	52	53	54	55	55	55	55	57	57	58	57	58	58	58	58	58	60	60	60	60	59	59	59	--	56
Minimum	46	46	48	50	50	50	51	52	52	53	54	55	55	55	55	55	55	57	57	58	58	58	58	58	60	60	59	59	59	59	--	55
May																																
Maximum	59	60	60	61	61	61	61	60	61	60	62	61	61	61	61	61	61	61	61	61	62	64	63	63	63	64	64	65	64	65	65	62
Minimum	59	59	60	60	61	61	60	60	60	60	60	61	61	61	61	60	60	60	60	60	61	62	61	63	61	62	64	64	63	64	65	61
June																																
Maximum	65	65	64	64	65	65	65	65	66	67	68	69	70	71	71	71	70	68	69	67	66	66	66	65	65	68	68	67	66	67	--	67
Minimum	65	64	64	64	64	64	64	64	65	66	66	68	68	70	71	70	67	67	67	65	65	64	65	64	64	65	66	64	65	66	--	66
July																																
Maximum	67	67	68	68	68	70	71	70	68	68	69	69	69	71	71	70	70	70	70	71	72	71	71	72	72	73	73	73	74	74	74	70
Minimum	65	66	65	65	66	67	70	67	67	68	67	67	66	66	68	69	69	69	69	70	70	70	70	68	68	70	70	70	72	72	71	68
August																																
Maximum	73	72	72	72	74	73	72	72	72	76	75	75	74	74	74	74	74	74	74	73	73	74	75	75	74	74	73	73	73	74	75	74
Minimum	72	72	70	70	70	72	71	71	69	69	71	72	73	73	73	73	73	73	71	71	73	73	73	74	73	73	72	72	73	73	73	72
September																																
Maximum	74	74	73	73	74	73	73	72	71	72	72	72	71	71	71	71	71	71	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Minimum	73	73	73	73	73	73	72	71	71	71	71	71	71	71	70	71	71	71	--	--	--	--	--	--	--	--	--	--	--	--	--	--

WABASH RIVER BASIN--Continued

3-3740. WHITE RIVER AT PETERSBURG, IND.

LOCATION.--Lat 38°30'39", long 87°17'22", temperature recorder at gaging station on left bank, 300 feet downstream from bridge on State Highway 61, 0.4 mile upstream from Prides Creek, 1 mile north of Petersburg, Pike County, and at mile 47.7.
DRAINAGE AREA.--11,139 square miles.
RECORDS AVAILABLE.--Water temperatures: June 1964 to September 1967.
EXTREMES, 1966-67.--Water temperatures: Maximum, 84°F July 26-28, Aug. 2, 3; minimum, 35°F Dec. 30 to Jan. 3, Jan. 18-20.
EXTREMES, 1964-67.--Water temperatures: Maximum, 88°F July 14, 15, 1966; minimum, freezing point on many days during winter months.
REMARKS.--Flow slightly regulated by reservoirs.

Temperature (°F) of water, water year October 1966 to September 1967
(Continuous ethyl alcohol-actuated thermograph)

Month	Day																														Average
	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	
October																																
Maximum	62	61	62	63	63	62	62	61	64	64	62	63	63	64	64	61	58	58	56	54	54	54	55	56	55	55	54	55	55	53	52	59
Minimum	60	58	59	62	60	59	58	60	61	61	58	59	61	63	61	58	57	56	54	53	53	54	54	54	54	52	52	52	53	51	52	57
November																																
Maximum	52	51	44	45	46	46	51	54	56	56	53	52	50	48	48	48	48	48	48	48	47	46	48	48	49	51	52	52	49	45	--	49
Minimum	51	44	42	42	45	44	46	51	54	53	52	50	48	46	46	47	48	48	48	46	46	46	46	48	48	49	51	49	45	43	--	47
December																																
Maximum	43	42	40	39	37	36	42	44	46	46	46	45	43	41	39	37	37	36	37	38	39	39	39	39	39	38	37	36	36	36	35	40
Minimum	42	40	39	37	36	36	36	42	44	46	45	43	41	39	37	37	36	36	36	37	38	39	39	39	38	37	36	36	36	35	35	38
January																																
Maximum	35	35	36	36	36	36	36	37	37	37	37	36	36	38	38	38	38	37	35	36	38	41	44	46	47	48	48	45	44	43	43	39
Minimum	35	35	35	36	36	36	36	36	37	37	36	36	36	36	38	38	37	35	35	35	36	38	41	44	46	47	45	44	43	43	43	38
February																																
Maximum	43	42	42	42	41	41	40	39	38	37	37	38	38	40	41	41	41	40	41	41	41	40	40	38	36	36	36	37	--	--	--	40
Minimum	42	42	42	41	41	40	39	38	37	37	37	37	38	38	40	41	40	40	40	41	40	40	38	36	36	36	36	36	--	--	--	39
March																																
Maximum	38	41	42	42	42	42	41	41	41	40	42	46	48	51	52	52	52	50	49	48	47	45	46	47	48	49	51	52	55	56	57	47
Minimum	37	38	41	42	42	41	41	41	40	40	40	42	46	48	51	52	50	49	48	47	45	45	45	46	47	48	49	51	52	55	56	46
April																																
Maximum	59	60	60	60	60	60	60	60	60	60	60	60	60	60	61	63	65	65	64	63	62	62	62	61	60	59	58	57	56	56	--	60
Minimum	57	59	60	60	60	60	60	60	59	60	60	59	59	60	60	61	63	64	63	62	62	62	61	60	59	58	57	56	56	56	--	60
May																																
Maximum	58	60	60	60	60	60	60	60	60	60	60	60	62	62	62	62	61	61	63	64	65	66	66	66	68	69	71	72	72	72	71	64
Minimum	56	58	60	60	60	60	60	60	60	59	59	60	60	62	62	61	61	61	61	63	64	65	66	66	66	68	69	71	72	71	70	63
June																																
Maximum	70	68	68	69	69	70	71	71	73	74	75	76	77	79	80	81	81	81	80	80	80	80	80	80	78	78	79	79	79	80	--	76
Minimum	68	68	68	68	68	69	70	71	71	73	74	75	76	77	79	80	80	80	80	80	80	78	79	78	77	77	77	78	78	79	--	75
July																																
Maximum	81	82	82	80	78	77	76	77	77	80	81	83	83	81	78	78	79	80	80	79	80	80	82	82	83	84	84	84	82	81	81	80
Minimum	80	81	80	77	77	76	76	76	77	77	79	81	81	78	76	76	77	78	78	77	78	78	80	82	81	83	84	82	80	80	81	79
August																																
Maximum	82	84	84	82	81	81	80	80	81	81	80	77	77	78	78	79	80	80	80	77	75	76	77	78	78	77	76	76	76	--	--	79
Minimum	81	82	82	80	80	80	80	80	80	80	77	75	75	76	76	77	78	78	77	75	74	74	76	76	77	76	74	74	74	--	--	77
September																																
Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	72	72	68	64	63	--	--
Minimum	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	68	64	62	60	--	--

STREAMS TRIBUTARY TO LAKE ERIE

4-1820. ST. MARYS RIVER NEAR FORT WAYNE, IND.

LOCATION (revised).--Lat 40°59'16", long 85°06'03", at gaging station at highway bridge, 5 miles south of Fort Wayne, Allen County, and 10.8 miles upstream from confluence with St. Joseph River.
DRAINAGE AREA.--762 square miles.
RECORDS AVAILABLE.--Water temperatures: October 1964 to September 1967.
Sediment records: May 1953 to September 1967.
EXTREMES, 1966-67.--Water temperatures: Maximum, 87°F June 15; minimum, freezing point on several days during December to March.
Sediment concentrations: Maximum daily, 649 ppm Mar. 29; minimum daily, 4 ppm Jan. 23.
Sediment loads: Maximum daily, 8,420 tons Dec. 10; minimum daily, 1 ton on several days during October, November, and January.
EXTREMES, 1953-67.--Water temperatures (1964-67): Maximum, 89°F July 1, 1966; minimum, freezing point on many days during winter months.
Sediment concentrations: Maximum daily, 2,060 ppm Feb. 25, 1956; minimum daily, 1 ppm on many days during 1955-56, 1960-61.
Sediment loads: Maximum daily, 30,800 tons Feb. 11, 1959; minimum daily, less than 0.50 ton on many days during 1953-57, 1959-64, 1966.
REMARKS.--Flow affected by ice Jan. 3-6, 10, 11, 16-18, Feb. 7-12, 20-22, 24-28, Mar. 1, 5, 8, 9. Flow sometimes regulated by Grand Lake. Some diversion from or into Wabash River basin and into Miami and Erie Canal.

Temperature (°F) of water, water year October 1966 to September 1967
(Once-daily measurement between 1400 and 2000)

Month	Day																													Average
	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	
October	--	55	58	61	57	57	57	59	61	59	56	56	59	66	--	52	58	50	49	51	55	58	56	51	49	50	52	58	54	--	50	56
November	46	38	--	--	36	--	45	49	52	52	48	40	43	46	43	48	--	46	42	--	42	45	50	--	--	48	--	44	39	38	--	--
December	35	34	--	32	33	39	46	53	--	43	41	39	39	36	36	30	37	--	38	40	38	37	--	34	--	--	--	--	--	--	--	--
January	--	--	33	32	32	32	32	--	33	--	32	33	32	33	--	32	32	--	32	--	--	35	37	39	40	36	33	--	33	32	34	--
February	34	32	34	33	32	32	--	--	32	32	32	35	32	35	35	33	32	33	--	34	33	33	32	--	--	--	--	--	--	--	--	--
March	--	--	--	33	32	--	--	35	34	38	40	39	41	41	40	39	35	37	--	37	36	40	--	40	46	--	50	51	50	52	51	--
April	58	--	--	57	55	--	52	51	--	--	--	53	56	59	--	--	63	56	--	59	61	54	54	48	51	48	54	57	55	59	--	--
May	62	52	58	--	57	53	--	55	54	54	55	57	55	--	53	55	56	62	65	61	60	64	61	69	--	69	--	--	59	--	65	--
June	66	71	72	--	75	75	75	76	--	74	--	83	85	85	87	--	--	--	76	80	75	77	80	--	73	76	78	72	75	77	--	--
July	79	--	--	--	--	76	77	82	81	--	80	81	74	70	68	--	76	73	76	71	82	79	--	--	81	79	--	76	81	77	79	--
August	--	--	82	80	76	--	74	--	81	69	--	70	--	--	77	79	78	74	72	--	72	--	73	73	78	75	65	73	76	71	71	--
September	74	71	--	70	71	74	77	72	--	--	67	68	--	73	73	73	--	73	72	76	68	66	64	--	63	68	57	55	55	49	--	68

STREAMS TRIBUTARY TO LAKE ERIE--Continued

4-1820. ST. MARYS RIVER NEAR FORT WAYNE, IND.--Continued

Suspended sediment, water year October 1966 to September 1967

Day	OCTOBER			NOVEMBER			DECEMBER		
	Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment		Mean discharge (cfs)	Suspended sediment	
		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day
1..	21	50	3	15	27	1	613	52	(86)
2..	18	(43)	2	16	32	1	577	48	75
3..	14	66	2	19	37	2	463	42	53
4..	12	72	2	18	30	1	578	47	73
5..	14	60	2	27	15	1	715	(49)	95
6..	14	47	2	24	17	1	1700	142	652
7..	14	50	2	52	28	4	3290	240	2130
8..	14	60	2	318	103	88	5020	318	4310
9..	14	59	2	814	186 S	450	6210	466	7810
10..	15	53	2	1620	255 S	1190	7140	437	8420
11..	18	47	2	1350	149	543	7570	248	5070
12..	17	37	2	697	84	158	7740	167	3490
13..	16	43	2	445	57	68	7230	128	2500
14..	16	55	2	347	44	41	6040	112	1830
15..	17	62	3	293	32	25	4730	91	1160
16..	14	48	(2)	243	29	19	3370	71	646
17..	(15)	40	2	182	30	15	1970	60	319
18..	18	37	2	135	(43)	16	1310	50	177
19..	20	37	2	(103)	38	11	980	41	108
20..	19	36	2	82	32	7	778	32	67
21..	18	37	2	70	27	5	628	28	47
22..	17	49	2	62	23	4	497	26	35
23..	17	42	2	56	33	5	392	19	20
24..	15	37	1	52	44	6	321	15	13
25..	14	36	1	51	55	8	270	11	8
26..	15	39	2	51	44	6	250	11	7
27..	15	36	1	167	110 A	70	222	11	7
28..	14	42	2	781	220 A	460	242	8	5
29..	14	42	2	581	95	149	240	5	3
30..	15	40	2	461	63	78	218	5	3
31..	15	34	1	--	--	--	188	5	3
Total	489	46	60	9132	66	3433	71492	96	39222
	16		2	304		114	2306		1265
	JANUARY			FEBRUARY			MARCH		
1..	164	5	2	1380	48	179	185	17	8
2..	147	5	2	3430	182	1690	194	17	9
3..	120	7	2	3930	214	2270	278	20	15
4..	(113)	6	2	3150	132	1120	697	60	113
5..	108	5	1	1930	81	422	600	46	75
6..	116	6	2	1280	84	290	745	63	127
7..	147	42	17	850	-- E	400	1100	115	342
8..	175	29	14	650	63	111	720	58	113
9..	135	24	9	580	40	63	720	38	74
10..	118	22	7	540	91	133	1340	148 S	608
11..	106	15	4	500	49	66	3090	362	3020
12..	97	13	3	460	23	29	3820	234	2410
13..	92	11	3	437	17	20	3790	109	1120
14..	86	7	2	429	16	19	3600	92	894
15..	85	9	2	1450	201 S	982	3430	200	1850
16..	83	7	(2)	2890	610	4760	3090	132	1100
17..	80	7	2	1960	407	2150	2490	148	995
18..	76	(8)	2	940	132	335	1980	162	(866)
19..	76	7	1	702	89	169	1560	132	556
20..	70	5	1	(620)	77	(129)	1540	186 S	893
21..	68	6	1	550	63	94	3730	373	3760
22..	70	5	1	460	49	61	3570	252	2430
23..	80	4	1	408	35	39	3270	133	1170
24..	100	7	2	350	27	26	2400	101	654
25..	140	32	12	280	24	18	2050	91	504
26..	213	25	14	230	20	12	(1750)	75	354
27..	1420	124 S	569	200	17	9	1360	71	261
28..	2420	204	1330	185	17	8	2640	319 S	2750
29..	1840	82	407	--	--	--	4050	649	7100
30..	1070	46	133	--	--	--	4290	363	4200
31..	910	38	93	--	--	--	3990	273	2940
Total	10525	26	2643	30771	104	15604	68069	163	41311
	340		85	1099		557	2196		1333

E Estimated.
S Computed by subdividing day.
A Computed from partly estimated-concentration graph.

STREAMS TRIBUTARY TO LAKE ERIE--Continued

4-1820. ST. MARYS RIVER NEAR FORT WAYNE, IND.--Continued

Suspended sediment, water year October 1966 to September 1967--Continued

Day	APRIL			MAY			JUNE		
	Mean discharge (cfs)	Suspended sediment: Mean concentration (ppm)	Suspended sediment: Tons per day	Mean discharge (cfs)	Suspended sediment: Mean concentration (ppm)	Suspended sediment: Tons per day	Mean discharge (cfs)	Suspended sediment: Mean concentration (ppm)	Suspended sediment: Tons per day
1	3510	262	2480	234	73	46	114	76	23
2	3030	210	1720	234	87	55	102	77	21
3	2130	154	886	240	97	63	93	60	15
4	1270	140	480	214	87	50	88	67	16
5	905	127	310	186	82	41	86	66	(15)
6	954	122	314	213	77	44	81	57	12
7	1360	198	727	1220	320 A	1300	78	64	13
8	1720	539	2500	2660	370 A	2700	73	61	12
9	1320	267	952	2390	188	1210	79	78 S	19
10	1840	300 A	1500	1620	174	761	198	-- E	230
11	1390	209	784	2570	225	1560	109	168	49
12	1100	161	478	3490	318	3000	(78)	108	23
13	1030	(172)	478	3640	217	2130	65	88	15
14	1840	456	2270	3180	142	1220	58	94	15
15	1450	256	1000	2510	125	847	52	105	15
16	(912)	161	396	2020	119	649	47	97	12
17	736	207	411	1650	137	610	43	75	9
18	638	190	327	1150	128	397	39	104	11
19	515	175	243	834	108	243	38	94	10
20	405	154	168	649	111	195	38	82	8
21	337	121	110	517	(106)	148	39	88	9
22	761	306 S	735	(420)	91	(103)	41	117	13
23	873	354	834	347	87	82	45	102	12
24	486	166	218	280	70	53	58	102	16
25	415	88	99	228	45	28	75	97	20
26	390	68	72	191	42	22	76	(95)	19
27	366	107	106	189	47	24	84	85	19
28	315	116	99	177	45	22	99	104	28
29	272	98	72	186	106	53	116	99	31
30	251	82	56	166	70	31	210	127	72
31	--	--	--	135	54	20	--	--	--
Total	32521	199	20825	33740	127	17707	2402	91	782
	1084		694	1088		571	80		26

Day	JULY			AUGUST			SEPTEMBER		
	Mean discharge (cfs)	Suspended sediment: Mean concentration (ppm)	Suspended sediment: Tons per day	Mean discharge (cfs)	Suspended sediment: Mean concentration (ppm)	Suspended sediment: Tons per day	Mean discharge (cfs)	Suspended sediment: Mean concentration (ppm)	Suspended sediment: Tons per day
1	171	140	65	22	134	8	20	128	7
2	105	145	41	22	145	9	20	128	7
3	78	150	32	21	128	7	20	136	7
4	85	142	33	22	125	7	21	133	8
5	95	(131)	34	22	112	7	21	128	7
6	87	118	28	23	100	6	21	120	7
7	74	114	23	24	99	6	21	126	7
8	61	112	18	22	104	6	19	127	7
9	51	102	14	21	113	6	19	122	6
10	(45)	100	12	19	145	(7)	19	113	6
11	44	102	12	18	131	6	19	102	5
12	44	98	12	17	117	5	17	97	4
13	41	93	10	17	119	5	16	100	4
14	36	103	10	16	116	5	15	93	4
15	32	89	8	15	113	5	15	85	3
16	28	92	7	16	112	5	15	80	3
17	28	87	7	16	114	5	16	107	5
18	39	156	(16)	17	123	6	16	96	4
19	31	135	11	19	152	8	15	95	4
20	26	128	9	22	127	8	(18)	88	4
21	52	221 S	26	25	138	9	20	108	6
22	194	395	207	23	142	9	20	(103)	6
23	141	458	174	(21)	(126)	7	22	104	6
24	86	356	83	19	124	6	18	100	(5)
25	76	535	110	18	112	5	16	93	4
26	47	300	38	18	140	7	15	91	4
27	36	184	18	20	175	9	14	98	4
28	31	158	13	23	140	9	14	78	3
29	26	140	10	24	143	9	16	44	2
30	24	125	8	24	137	9	16	42	2
31	23	121	8	22	137	8	--	--	--
Total	1937	172	1097	628	127	214	534	102	151
	62		35	20		7	18		5

Total discharge for year (cfs-days)..... 262240
Total load for year (tons)..... 143049

E Estimated.
A Computed from partly estimated-concentration graph.
S Computed by subdividing day.

STREAMS TRIBUTARY TO LAKE ERIE--Continued

4-1820. ST. MARYS RIVER NEAR FORT WAYNE, IND.--Continued

Particle-size analyses of suspended sediment, water year October 1966 to September 1967
(Methods of analysis: B, bottom withdrawal tube; C, chemically dispersed; D, decantation; N, in native water; P, pipet; S, sieve; V, visual accumulation tube; W, in distilled water)

Date of collection	Time (24 hour)	Water temperature (°F)	Sampling point	Discharge (cfs)	Sediment concentration (ppm)	Sediment discharge (tons per day)	Suspended sediment											Method of analysis
							Percent finer than size indicated, in millimeters											
							0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
Dec. 10, 1966.....	1040			7110	501		83	84	90	94	96	96	100	--	--			SBWC
Dec. 10.....	1040			7110	501		51	58	81	92	92	94	94	100	--			SBN
Feb. 16, 1967.....	1815			2820	570		68	94	95	95	96	97	100	--	--			SBWC
Mar. 29.....	1900			2720	575		79	91	94	97	97	98	99	99	100			SBWC
Apr. 8.....	1700			1730	500		81	90	91	95	97	98	98	99	100			SBWC

MISCELLANEOUS ANALYSES OF STREAMS IN OHIO RIVER BASIN

Periodic determinations of suspended-sediment discharge, water year October 1966 to September 1967
(Methods of analysis: B, bottom withdrawal tube; C, chemically dispersed; D, decantation; N, in native water; P, pipet; S, sieve; V, visual accumulation tube; W, in distilled water)

Date of collection	Time (24 hour)	Water temperature (°F)	Sampling point	Discharge (cfs)	Sediment concentration (ppm)	Sediment discharge (tons per day)	Suspended sediment: Percent finer than size indicated, in millimeters											Method of analysis
							0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
GREAT MIAMI RIVER BASIN																		
3-2756. EAST FORK WHITEWATER RIVER AT ABINGTON, IND. (LAT 39°43'57", LONG 84°57'35")																		
Apr. 20, 1967	1435			186	11	6												
Apr. 28	1530			224	16	10												
May 16	1130			774	44	92												
May 18	1230			502	32	43												
June 14	1315			108	14	4												
July 11	1500			90	11	3												
Aug. 10	1445			41	24	3												
Sept. 14	1325			31	12	1												
3-2760. EAST FORK WHITEWATER RIVER AT BROOKVILLE, IND. (LAT 39°26'02", LONG 85°00'12")																		
Oct. 13, 1966	1200			74	75	15												
Oct. 17	1135			141	58	22												
Nov. 28	1045			1270	229	785												
Dec. 3	0930			295	22	18												
Jan. 12, 1967	1150			199	4	2												
Jan. 16	1215			168	1	1												
Feb. 14	1220			250	59	40												
Mar. 15	1420			845	89	203												
Mar. 20	1110			560	48	73												
Apr. 19	1525			360	20	19												
Apr. 28	1435			405	16	17												
May 16	1230			1860	134	673												
May 17	0940			1450	134	525												
June 14	1305			205	8	4												
June 15	0930			230	20	12												
July 12	1410			222	29	17												
Aug. 9	1630			123	31	10												
Sept. 15	0945			95	31	8												
ANDERSON RIVER BASIN																		
3-3033. MIDDLE FORK ANDERSON RIVER AT BRISTOW, IND. (LAT 38°08'19", LONG 86°43'16")																		
Oct. 17, 1966	1620			0.7	8	T												
Oct. 25	0945			.1	14	T												
Nov. 28	1540			26	16	1												
Nov. 29	1425			19	45	2												
Dec. 17	1545			20	20	1												
Dec. 29	0930			97	46	12												
Jan. 24, 1967	1320			10	28	1												
Feb. 23	1210			15	62	2												
Mar. 20	1550			50	12	2												
Apr. 6	0945			18	8	T												
Apr. 28	0730			43	44	5												
May 4	1010			104	37	10												
May 25	1605			9	18	T												
July 12	1545			1.2	6	T												

T Less than 0.50 ton.

MISCELLANEOUS ANALYSES OF STREAMS IN OHIO RIVER BASIN--Continued

Periodic determinations of suspended-sediment discharge, water year October 1966 to September 1967--Continued
(Methods of analysis: B, bottom withdrawal tube; C, chemically dispersed; D, decantation; N, in native water; P, pipet; S, sieve; V, visual accumulation tube; W, in distilled water)

Date of collection	Time (24 hour)	Water temperature (°F)	Sampling point	Discharge (cfs)	Sediment concentration (ppm)	Sediment discharge (tons per day)	Suspended sediment: Percent finer than size indicated, in millimeters											Method of analysis
							0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
WABASH RIVER BASIN																		
3-3243. SALAMONIE RIVER NEAR WARREN, IND. (LAT 40°42'45", LONG 85°27'13")																		
Oct. 5, 1966	1530			12	56	2												
Nov. 9	0945			312	90	76												
Dec. 6	1625			2010	292	1580												
Dec. 21	1545			236	27	17												
Jan. 10, 1967	0935			83	53	12												
Jan. 24	1300			80	159	34												
Feb. 8	1820			130	10	4												
Mar. 5	1430			429	60	69												
Mar. 21	0830			3790	448	4580												
Apr. 8	1530			810	228	499												
May 3	1535			177	22	11												
May 18	1000			280	48	36												
June 9	1525			57	57	9												
July 13	1500			13	46	2												
July 19	0930			6.2	41	1												
Aug. 11	0805			17	53	2												
Sept. 11	1645			5.8	82	1												
3-3515. FALL CREEK NEAR FORTVILLE, IND. (LAT 39°57'15", LONG 85°52'05")																		
Oct. 27, 1966	1225			18	6	T												
Dec. 2	1115			82	13	3												
Dec. 16	1020			248	42	28												
Jan. 5, 1967	1025			75	66	13												
Jan. 31	1635			179	14	7												
Mar. 31	1040			329	60	53												
May 26	1415			115	53	16												
July 31	1445			30	133	11												
Aug. 30	0835			21	50	3												
Sept. 28	1250			18	22	1												
3-3680. BRUSH CREEK NEAR NEBRASKA, IND. (LAT 39°04'13", LONG 85°29'10")																		
Oct. 17, 1966	1315			0.2	10	T												
Nov. 22	1030			1.0	20	T												
Nov. 28	1235			7.6	11	T												
Dec. 19	1125			3.0	16	T												
Dec. 19	1200			3.0	21	T												
Jan. 16, 1967	1400			1.8	1	T												
Feb. 1	1310			5.8	5	1												
Feb. 23	0830			1.6	1	T												
Mar. 1	1440			3.2	23	T												
Mar. 20	1300			14	11	T												
Mar. 30	1430			11	10	T												
May 16	1400			23	11	1												

T Less than 0.50 ton.

MISCELLANEOUS ANALYSES OF STREAMS IN OHIO RIVER BASIN--Continued

Periodic determinations of suspended-sediment discharge, water year October 1966 to September 1967--Continued
(Methods of analysis: B, bottom withdrawal tube; C, chemically dispersed; D, decantation; N, in native water; P, pipet; S, sieve; V, visual accumulation tube; W, in distilled water)

Date of collection	Time (24 hour)	Water temperature (°F)	Sampling point	Discharge (cfs)	Sediment concentration (ppm)	Sediment discharge (tons per day)	Suspended sediment: Percent finer than size indicated, in millimeters											Method of analysis
							0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
WABASH RIVER BASIN--Continued																		
3-3680. BRUSH CREEK NEAR NEBRASKA, IND. (LAT 39°04'13", LONG 85°29'10")--Continued																		
June 2, 1967	0915			1.1	6	T												
June 14	1440			.3	20	T												
June 26	1505			.2	27	T												
July 31	1530			.0	11	T												
3-3765. PATOKA RIVER NEAR PRINCETON, IND. (LAT 38°23'30", LONG 87°32'55")																		
Oct. 17, 1966	1805			30	10	1												
Nov. 1	1300			11	8	T												
Nov. 28	1735			98	34	9												
Dec. 6	1500			258	182	127												
Dec. 19	1730			2000	78	421												
Dec. 27	0950			182	18	9												
Feb. 1, 1967	1000			472	82	105												
Feb. 22	1300			190	28	14												
Feb. 27	1005			126	68	23												
Apr. 12	1400			282	46	35												
Apr. 28	0150			937	183	463												
May 3	1435			2200	136	808												
May 16	1845			4840	28	366												
May 26	1015			2550	40	275												
June 14	2030			900	12	29												
July 5	0945			45	12	2												
Aug. 1	1500			158	14	6												
Sept. 18	1330			30	4	T												

T Less than 0.50 ton.

MISCELLANEOUS ANALYSES OF LAKES AND STREAMS IN ST. LAWRENCE RIVER BASIN

Periodic determinations of suspended-sediment discharge, water year October 1966 to September 1967
(Methods of analysis: B, bottom withdrawal tube; C, chemically dispersed; D, decantation; N, in native water; P, pipet; S, sieve; V, visual accumulation tube; W, in distilled water)

Date of collection	Time (24 hour)	Water temperature (°F)	Sampling point	Discharge (cfs)	Sediment concentration (ppm)	Sediment discharge (tons per day)	Suspended sediment: Percent finer than size indicated, in millimeters											Method of analysis
							0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
STREAMS TRIBUTARY TO LAKE MICHIGAN																		
4-1005. ELKHART RIVER AT GOSHEN, IND. (LAT 41°35'36", LONG 85°50'55")																		
Oct. 27, 1966	1145			132	12	4												
Dec. 2	1320			412	6	7												
Jan. 6, 1967	1000			605	4	6												
Feb. 9	1505			530	34	49												
Mar. 9	0945			530	12	17												
Apr. 7	0950			1180	18	57												
May 1	1210			735	30	60												
June 8	0855			305	32	26												
Aug. 2	0845			141	12	5												
Aug. 28	1340			124	4	1												

MISCELLANEOUS ANALYSES OF LAKES AND STREAMS IN HUDSON BAY AND UPPER MISSISSIPPI RIVER BASIN

Periodic determinations of suspended-sediment discharge, water year October 1966 to September 1967
(Methods of analysis: B, bottom withdrawal tube; C, chemically dispersed; D, decantation; N, in native water; P, pipet; S, sieve; V, visual accumulation tube; W, in distilled water)

Date of collection	Time (24 hour)	Water temperature (°F)	Sampling point	Discharge (cfs)	Sediment concentration (ppm)	Sediment discharge (tons per day)	Suspended sediment: Percent finer than size indicated, in millimeters										Method of analysis
							0.002	0.004	0.008	0.016	0.031	0.062	0.125	0.250	0.500	1.000	2.000	
ILLINOIS RIVER BASIN																	
5-5180. KANKAKEE RIVER AT SHELBY, IND. (LAT 41°10'58", LONG 87°20'33")																	
Oct. 25. 1966.....	1445			582	20	31											
Dec. 1.....	1510			2090	10	56											
Jan. 4, 1967.....	1810			2120	14	80											
Feb. 9.....	1000			2000	23	124											
Mar. 7.....	1615			2000	23	124											
Apr. 4.....	1100			4360	30	353											
May 1.....	1520			3960	22	235											
May 31.....	1345			1750	38	180											
June 26.....	1435			1640	82	363											
July 24.....	1600			846	108	247											
Aug. 21.....	1500			717	37	72											
Sept. 18.....	1500			530	18	26											

WABASH RIVER BASIN

MISCELLANEOUS ANALYSES OF STREAMS IN WABASH RIVER BASIN

Chemical analyses, in parts per million, water year October 1966 to September 1967

Date of collection	Discharge (cfs)	Silica (SiO_2)	Iron (Fe) A/	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved solids (residue at 180°C)	Hardness as $CaCO_3$		Specific conductance (micromhos at 25°C)	pH	Dissolved oxygen A/	Temperature (°F)
														Calcium, magnesium	Noncarbonate				
3-3363.7. VERMILION RIVER NEAR ARMSTRONG, ILL. (LAT 40°17'57", LONG 87°52'38")																			
Oct. 12, 1966.....	2.70		0.2					324	60	10		1.6	345	304	38	608	7.5	7	53
3-3366.14. VERMILION RIVER NEAR COLLISON, ILL. (LAT 40°12'09", LONG 87°44'03")																			
Oct. 12, 1966.....	8.01		0.2					328	114	18		0.8	439	344	74	724	7.7	9	59
3-3366.33. VERMILION RIVER NEAR GLENBURN, ILL. (LAT 40°09'36", LONG 87°44'24")																			
Oct. 12, 1966.....	8.54		0.2					300	139	21		1.0	464	352	106	743	7.6	9	60
3-3366.7. VERMILION RIVER ABOVE CATLIN, ILL. (LAT 40°06'27", LONG 87°43'27")																			
Oct. 13, 1966.....	9.37		0.2					302	198	22		1.0	554	402	154	850	7.6	4	58
3-3380. SALT FORK NEAR HOMER, ILL. (LAT 40°03'20", LONG 87°57'30")																			
Oct. 12, 1966.....	33.1		0.4					374	129	80		0.8	602	260	0	1080	7.4	5	53
3-3380.22. SALT FORK NEAR FAIRMOUNT, ILL. (LAT 40°03'52", LONG 87°52'50")																			
Oct. 12, 1966.....	35.2		0.3					334	159	80		3.6	658	270	0	1080	7.3	5	52
3-3380.97. SALT FORK NEAR OAKWOOD, ILL. (LAT 40°04'56", LONG 87°46'53")																			
Oct. 12, 1966.....	42.5		0.3					313	117	74		18	558	270	13	953	7.4	6	53
3-3381.14. SALT FORK NEAR CATLIN, ILL. (LAT 40°06'26", LONG 87°43'35")																			
Oct. 13, 1966.....	39.0		0.3					306	116	74		27	600	276	24	951	7.3	6	57
3-3381.32. VERMILION RIVER NEAR VERMILION HEIGHTS, ILL. (LAT 40°07'05", LONG 87°38'32")																			
Oct. 13, 1966.....	47.5		0.2					308	141	63		21	580	310	57	944	7.4	7	59
3-3414.09. BROUILLETTS CREEK NORTH OF PARIS, ILL. (LAT 39°42'43", LONG 87°37'57")																			
Oct. 5, 1966.....	6.44		0.3					290	69	14		8.6	356	308	70	606	7.7	10	54
3-3414.1. BROUILLETTS CREEK NEAR SCOTTLAND, ILL. (LAT 39°42'19", LONG 87°33'16")																			
Oct. 5, 1966.....	9.45		0.3					286	68	15		7.7	358	304	69	596	7.6	8	56
3-3414.13. NORTH FORK BROUILLETTS CREEK NEAR SCOTTLAND, ILL. (LAT 39°42'38", LONG 87°33'10")																			
Oct. 5, 1966.....	3.67		0.3					308	65	19		2.7	362	306	53	623	7.6	11	56
3-3414.14. BROUILLETTS CREEK NEAR ST. BERNICE, IND. (LAT 39°40'53", LONG 87°31'15")																			
Oct. 5, 1966.....	13.8		0.3					246	76	16		6.3	334	278	76	557	7.7	13	59
3-3414.17. BROUILLETTS CREEK AT UNIVERSAL, IND. (LAT 39°37'48", LONG 87°27'48")																			
Oct. 5, 1966.....	18.4		0.3					242	107	14		5.5	365	302	103	606	7.7	11	

A/ Values reported for iron (Fe) and dissolved oxygen (DO) are field determinations.

MISCELLANEOUS ANALYSES OF STREAMS IN WABASH RIVER BASIN

Chemical analyses, in parts per million, water year October 1966 to September 1967--Continued

Date of collection	Discharge (cfs)	Silica (SiO_2)	Iron (Fe) A/	Calcium (Ca)	Magnesium (Mg)	Sodium (Na)	Potassium (K)	Bicarbonate (HCO_3)	Sulfate (SO_4)	Chloride (Cl)	Fluoride (F)	Nitrate (NO_3)	Dissolved solids (residue at 180°C)	Hardness as $CaCO_3$		Specific conductance (micromhos at 25°C)	pH	Dissolved oxygen A/	Temperature (°F)
														Calcium, magnesium	Noncarbonate				
3-3414.21. BROUILLETTS CREEK AT SHEPHERDSVILLE, IND. (LAT 39°36'16", LONG 87°24'57")																			
Oct. 5, 1966.....	18.5		0.3					194	107	16		4.4	338	260	101	542	7.7	10	57
3-3648. SAND CREEK NEAR GREENSBURG, IND. (LAT 39°20'55", LONG 85°26'51")																			
Oct. 27, 1966.....	0.028		0.3					348	31	26		0.8	345	305	20	623	7.4	7	45
3-3648.5. MUDDY CREEK NEAR GREENSBURG, IND. (LAT 39°16'39", LONG 85°31'44")																			
Oct. 27, 1966.....	1.56		0.2					228	77	42		0.4	352	234	47	627	7.4	11	51
3-3649. SAND CREEK NEAR LETTS, IND. (LAT 39°14'01", LONG 85°31'37")																			
Oct. 27, 1966.....	3.38		0.2					306	65	36		2.5	382	294	42	682	7.4	13	52
3-3649.5. SAND CREEK UPSTREAM FROM BREWERSVILLE, IND. (LAT 39°06'14", LONG 85°36'14")																			
Oct. 27, 1966.....	3.80		0.2					254	53	30		0.5	316	241	33	571	7.2	9	48
3-3650. SAND CREEK NEAR BREWERSVILLE, IND. (LAT 39°05'03", LONG 85°39'32")																			
Oct. 28, 1966.....	3.82		0.1					252	46	28		0.5	303	229	22	546	7.3	8	46
3-3651. SAND CREEK NEAR SCIPIO, IND. (LAT 39°04'42", LONG 85°45'07")																			
Oct. 28, 1966.....	2.95		0.2					230	38	23		0.6	262	206	18	478	7.6	8	50
3-3652. SAND CREEK NEAR AZALIA, IND. (LAT 39°04'06", LONG 85°47'54")																			
Oct. 28, 1966.....	3.88		0.2					238	37	25		0.5	268	214	19	495	7.2	7	54
3-3652.5. SAND CREEK NEAR REDDINGTON, IND. (LAT 39°03'29", LONG 85°50'51")																			
Oct. 28, 1966.....	6.61		0.1					276	34	16		0.5	279	249	23	511	7.4	11	54
3-3695. VERNON FORK AT VERNON, IND. (LAT 38°58'34", LONG 85°37'13")																			
Oct. 7, 1966.....	2.14		0.2					164	69	30		8.9	289	186	52	505	7.5	9	
3-3696. VERNON FORK NEAR HAYDEN, IND. (LAT 38°57'15", LONG 85°41'06")																			
Oct. 7, 1966.....	3.45		0.2					168	32	14		0.9	206	154	16	360	7.6	11	60
3-3698. VERNON FORK NEAR SEYMOUR, IND. (LAT 38°54'22", LONG 85°49'17")																			
Oct. 7, 1966.....	5.41		0.3					178	25	12		0.7	206	166	20	373	7.6	9	54
3-3700. VERNON FORK NEAR CROTHERSVILLE, IND. (LAT 38°47'36", LONG 85°53'03")																			
Oct. 7, 1966.....	6.19		0.3					193	40	18		0.4	252	190	32	423	7.4	10	54

A/Values reported for iron (Fe) and dissolved oxygen (DO) are field determinations.

Part 1. Surface Water Records

Part 2. Water Quality Records