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Geological Survey - Water Resources Division

WATER RESOURCES DATA
FOR
INDIANA

1966

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

1967

CALENDAR FOR WATER YEAR 1966

OCTOBER 1965

S	M	T	W	T	F	S
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31						

NOVEMBER 1965

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JANUARY 1966

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FEBRUARY 1966

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MARCH 1966

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JUNE 1966

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JULY 1966

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AUGUST 1966

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SEPTEMBER 1966

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WATER RESOURCES DATA FOR INDIANA, 1966

Part 1. Surface Water Records

INTRODUCTION

The surface-water records for the 1966 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. 1966

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 64 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.

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

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

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

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

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

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

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

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

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

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

DOWNSTREAM ORDER AND STATION NUMBERS

Stations are listed in the same downstream order used in the water-supply papers. Records are listed in a downstream direction along the main stem with all stations on a tributary entering above a main-stem station listed before that station. If a tributary enters between two main-stem stations, it is listed between them.

SURFACE WATER RECORDS. 1966

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 indentation in the listing of gaging stations in the table of contents of this report represents one rank. This downstream order and system of indentation 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 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.

EXPLANATION OF DATA

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.

SURFACE WATER RECORDS, 1966

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 1966 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 table of daily discharge, the figures for the maximum day and the minimum day for each month are underlined. If the figure is repeated, it is underlined only on the first day of its occurrence.

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

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

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

SURFACE WATER RECORDS, 1966

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 the nearest tenth of a cfs.

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.

A compilation of records for the area covered by this report through September 1950 has been published as Water-Supply Papers 1305 (3A), 1307 (4), and 1308 (5). These reports contain a summary of monthly and annual discharges for all previously published records as

OTHER DATA AVAILABLE

well as some records not contained in the annual series of water-supply papers. All records were re-examined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical.

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

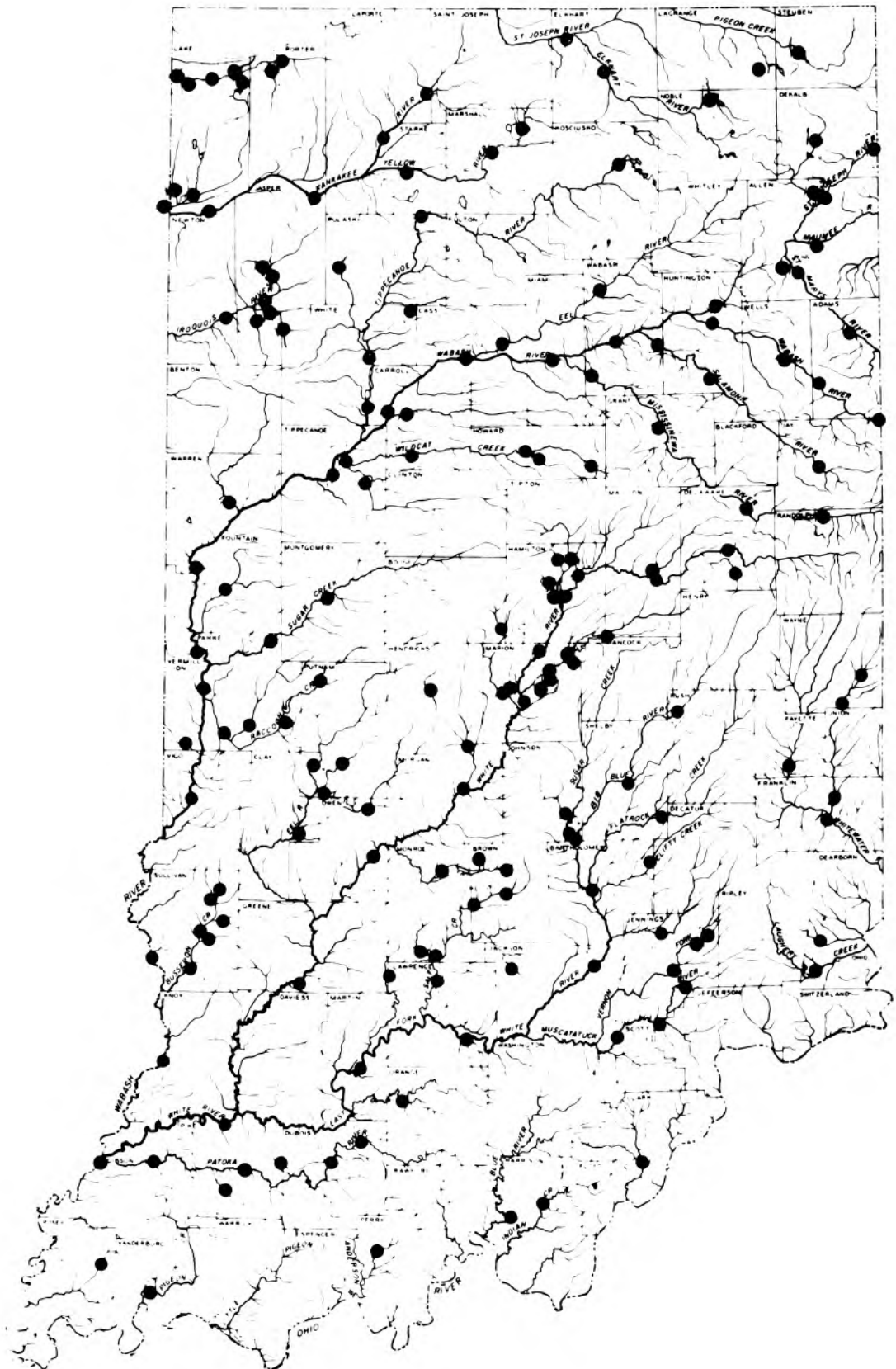
At or near some gaging stations, water-quality records also are collected. Data are obtained on the chemical quality of the stream water, on water temperature, on suspended-sediment concentration, and on the particle-size distribution of suspended sediment and bed material. These data are given in Part 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

The precipitation ranged from normal to three inches below normal throughout the state except for the western third which was slightly above normal. The heaviest rains occurred in December with some minor flooding in the northwest.

Streamflow throughout the state was normal to slightly below until February. Deficient conditions exist in the north from March to September and in the south from June to September.

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 1966. 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.--38 years, 524 cfs.

Extremes.--Maximum discharge during year, 5,080 cfs Feb. 11 (gage height, 8.84 ft); minimum daily, 53 cfs Sept. 18.
1928-66: 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.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	110	123	115	455	121	384	212	1,330	200	112	66	62
2	106	120	114	1,490	117	401	210	925	193	106	82	68
3	105	119	114	1,340	117	402	205	716	187	100	72	60
4	105	118	112	765	116	492	201	589	181	106	68	75
5	105	116	111	569	117	527	196	503	176	142	65	70
6	105	115	111	576	122	431	193	443	187	129	63	65
7	114	116	111	505	136	351	191	385	184	118	60	65
8	110	120	110	404	319	310	189	357	175	112	60	60
9	112	122	109	345	1,130	295	188	486	177	104	55	59
10	112	120	113	331	2,530	295	182	378	177	100	72	57
11	108	118	117	290	3,610	302	183	344	164	95	115	56
12	108	119	122	270	1,350	304	207	522	158	92	92	55
13	108	124	144	260	1,020	306	223	556	160	102	87	55
14	110	119	135	240	904	314	227	494	178	104	304	55
15	118	119	135	230	722	310	219	434	183	109	134	56
16	120	121	133	220	716	290	209	396	191	95	109	54
17	118	120	131	205	725	270	200	364	181	89	97	54
18	118	118	127	195	570	266	194	396	164	87	89	53
19	114	117	124	185	470	265	195	716	154	85	84	63
20	130	116	126	175	365	248	193	523	150	82	83	92
21	188	114	126	170	322	244	188	439	146	76	80	113
22	215	115	124	165	298	291	182	468	143	71	82	100
23	215	115	122	158	278	287	175	429	134	72	85	85
24	168	114	121	152	266	272	199	366	132	80	84	75
25	162	112	128	148	257	253	349	319	127	84	80	78
26	160	113	127	141	243	242	389	284	118	84	72	81
27	139	148	129	138	232	234	543	262	119	78	68	86
28	135	124	129	133	270	226	1,450	245	124	74	67	84
29	132	120	128	129	-----	220	1,010	228	126	77	65	79
30	125	118	128	126	-----	223	905	216	120	70	65	82
31	123	-----	138	123	-----	219	-----	207	-----	65	63	-----
TOTAL	8,998	3,573	3,814	10,633	17,443	9,474	9,407	14,320	4,809	2,900	2,668	2,097
MEAN	129	119	123	343	623	306	314	462	160	93.5	86.1	69.9
CFSM	.244	.225	.233	.648	1.18	.578	.594	.873	.303	.177	.163	.132
IN	.28	.25	.27	.75	1.23	.67	.66	1.01	.34	.20	.19	.15

CALENDAR YEAR 1965 MAX 8,460 MIN 61 MEAN 413 CFSM .781 INCHES 10.59
WATER YEAR 1965-66 MAX 3,610 MIN 53 MEAN 233 CFSM .441 INCHES 5.99

Peak discharge (base, 6,500 cfs).--No peak above base.

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 1966.

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.--17 years, 112 cfs.

Extremes.--Maximum discharge during year, 1,920 cfs Feb. 11 (gage height, 4.94 ft); minimum, 6.0 cfs July 1, 18, Sept. 6, 8-11, 13; minimum gage height, 0.76 ft Oct. 4, 5.

1949-66: 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 cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	22	20	16	130	14	80	38	270	43	8.9	12	14
2	18	20	15	325	14	84	37	171	41	8.3	16	14
3	17	20	15	152	15	85	37	125	41	8.0	13	30
4	17	20	15	118	15	112	35	100	40	91	13	30
5	17	20	14	110	15	99	32	85	40	33	13	10
6	17	20	15	170	16	76	33	77	45	26	14	7.4
7	40	20	14	149	24	58	33	69	43	15	14	7.4
8	26	30	15	98	76	51	32	81	39	11	16	7.4
9	20	24	14	76	329	49	35	95	53	10	16	7.4
10	20	17	19	72	770	51	32	69	36	13	51	7.4
11	22	16	19	59	1,110	53	36	75	26	12	23	8.1
12	20	22	27	51	314	55	58	132	26	14	16	8.8
13	20	25	33	51	286	63	69	130	38	29	19	8.8
14	20	17	29	47	231	63	67	105	77	19	70	11
15	25	16	26	44	165	60	57	88	63	12	32	14
16	20	20	24	38	195	51	52	79	59	9.8	31	11
17	19	18	22	33	186	44	47	71	40	9.2	21	11
18	19	17	20	29	114	50	43	141	31	9.8	19	11
19	20	17	19	25	87	47	47	162	25	11	19	90
20	92	16	19	23	64	42	46	95	26	11	27	116
21	112	16	20	21	55	57	43	90	26	12	25	59
22	86	17	19	20	48	58	40	88	24	11	56	32
23	55	17	18	19	43	74	37	73	29	12	22	25
24	40	17	19	18	41	68	100	63	20	17	17	21
25	32	16	29	17	41	57	170	58	15	13	17	36
26	29	19	24	16	38	51	114	53	12	11	16	29
27	26	37	24	16	36	47	487	52	12	11	16	27
28	24	22	20	15	59	43	559	51	14	13	15	25
29	22	18	20	15	-----	39	285	48	12	14	15	24
30	20	16	20	15	-----	41	236	45	10	11	16	33
31	20	-----	33	15	-----	40	-----	44	-----	11	15	-----
TOTAL	957	590	636	1,987	4,401	1,849	2,937	2,885	1,000	497.0	685	735.7
MEAN	30.9	19.7	20.5	64.1	157	59.6	97.9	93.1	33.3	16.0	22.1	24.5
CFSM	.255	.163	.169	.530	1.30	.493	.809	.769	.275	.132	.183	.203
IN	.29	.18	.20	.61	1.35	.57	.90	.89	.31	.15	.21	.23
CALENDAR YEAR 1965	MAX	1,620	MIN	7.1	MEAN	76.2	CFSM	.630	INCHES	8.55		
WATER YEAR 1965-66	MAX	1,110	MIN	7.4	MEAN	52.5	CFSM	.434	INCHES	5.89		

Peak discharge (base, 2,000 cfs).--No peak above base.

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 1966.

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, 2,950 cfs Feb. 11 (gage height, 9.20 ft); minimum, 19 cfs Aug. 7, 8 (gage height, 1.94 ft).

Remarks.--Records good except those for the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	35	44	46	334	33	167	80	414	68	36	22	27
2	31	44	45	562	33	152	82	302	65	33	37	27
3	29	41	47	352	33	174	77	237	62	29	29	26
4	29	43	44	237	33	211	77	198	60	114	26	80
5	29	43	41	211	34	198	73	169	59	166	25	36
6	30	43	41	317	36	155	75	149	70	80	24	29
7	45	39	40	287	45	128	70	126	73	55	22	28
8	32	44	40	186	174	113	70	141	61	44	21	26
9	31	62	40	143	470	111	73	198	93	38	25	26
10	30	45	47	133	1,200	111	60	135	66	37	55	25
11	35	43	66	104	1,820	113	60	134	53	44	80	23
12	30	43	68	92	534	111	108	274	48	43	37	21
13	28	70	119	96	502	122	122	263	50	58	36	25
14	30	50	86	88	414	117	115	214	124	67	175	24
15	37	45	77	79	302	115	100	178	116	49	72	31
16	30	51	68	68	344	104	96	164	124	38	63	25
17	27	51	63	60	330	96	88	147	87	32	45	23
18	27	45	58	56	224	106	84	232	70	30	37	22
19	28	44	56	50	176	106	90	291	58	32	83	79
20	181	43	56	47	126	90	86	192	53	30	32	252
21	249	40	58	45	111	106	79	186	51	29	64	169
22	235	41	56	42	104	111	73	175	48	29	87	75
23	136	41	52	41	96	129	70	150	45	30	61	54
24	92	39	51	40	94	124	145	128	43	47	41	44
25	73	38	74	39	92	108	224	113	41	37	36	60
26	64	40	62	37	84	98	162	101	37	33	33	64
27	58	96	60	36	79	92	610	95	36	30	30	59
28	54	62	57	35	111	88	774	89	42	32	27	54
29	50	52	54	35	-----	84	470	79	43	33	25	46
30	47	50	57	35	-----	88	386	73	39	27	28	54
31	45	-----	58	34	-----	86	-----	70	-----	23	27	-----
TOTAL	1,877	1,432	1,787	3,921	7,634	3,714	4,679	5,417	1,885	1,405	1,355	1,534
MEAN	60.5	47.7	57.6	126	273	120	156	175	62.8	45.3	43.7	51.1
CFSM	.306	.241	.291	.636	1.38	.606	.788	.884	.317	.229	.221	.258
IN	.35	.27	.34	.74	1.43	.70	.88	1.02	.35	.26	.25	.29

Calendar year 1965 : Max - Min - Mean - Cfsm - In. -
 Water year 1965-66 : Max 1,820 Min 21 Mean 100 Cfsm 0.505 In. 6.88

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-11	0200	9.20	2,950				

MIAMI RIVER BASIN

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 1966.

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.--12 years, 348 cfs.

Extremes.--Maximum discharge during year, 4,400 cfs Feb. 11 (gage height, 7.00 ft); minimum, 29 cfs Sept. 12-14, 19; minimum gage height, 1.78 ft Oct. 5, 6.
1954-66: 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.--Records good. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	54	83	91	894	85	382	145	990	150	63	38	37
2	52	79	87	1,740	84	338	141	680	143	58	40	36
3	46	77	87	915	84	338	136	480	137	53	47	35
4	42	74	87	560	83	405	136	382	132	50	43	50
5	38	72	83	455	84	382	132	315	127	212	38	70
6	38	74	79	835	95	315	127	275	132	130	37	47
7	74	74	77	712	143	264	127	254	160	99	36	40
8	114	74	76	455	333	244	125	244	133	79	33	37
9	81	83	74	360	810	233	127	862	130	67	31	35
10	63	89	77	315	2,290	226	123	430	135	88	35	34
11	58	79	99	261	3,300	226	120	315	115	74	82	33
12	58	77	116	230	1,190	222	152	834	102	66	70	31
13	56	91	170	230	950	226	219	680	97	398	55	29
14	52	99	170	212	845	219	196	532	124	188	124	31
15	52	85	150	193	620	216	175	430	154	106	137	38
16	52	83	141	170	745	202	165	360	155	79	92	38
17	52	89	127	160	680	187	155	315	145	64	78	34
18	49	87	118	152	505	184	145	505	121	56	64	31
19	46	81	112	140	405	199	145	590	105	51	55	37
20	185	77	109	130	295	181	152	430	94	49	52	168
21	480	77	109	125	268	168	143	360	89	46	78	197
22	505	76	107	120	247	184	136	338	82	45	73	134
23	295	74	105	116	236	193	129	295	77	46	95	92
24	199	74	105	111	230	222	170	275	73	52	71	73
25	158	72	127	108	222	190	360	247	69	62	57	65
26	134	74	143	104	212	178	295	229	65	53	51	82
27	120	150	125	100	196	168	891	218	62	48	46	80
28	109	143	120	96	233	158	1,360	220	89	66	43	78
29	99	112	116	93	-----	150	880	210	82	53	40	70
30	91	99	116	90	-----	150	1,320	170	72	46	37	65
31	87	-----	138	88	-----	150	-----	159	-----	41	38	-----
TOTAL	3,539	2,578	3,441	10,270	15,470	7,100	8,627	12,624	3,351	2,588	1,816	1,827
MEAN	114	85.9	111	331	553	229	288	407	112	83.5	58.6	60.9
CFSM	.300	.226	.292	.871	1.46	.603	.758	1.07	.295	.220	.154	.160
IN	.35	.25	.34	1.01	1.51	.69	.84	1.24	.33	.25	.18	.18
CALENDAR YEAR 1965	MAX	4,280	MIN	30	MEAN	307	CFSM	.808	INCHES	10.98		
WATER YEAR 1965-66	MAX	3,300	MIN	29	MEAN	201	CFSM	.529	INCHES	7.17		

Peak discharge (base, 4,500 cfs).--No peak above base.

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 1966. 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.--45 years (1915-17, 1923-66), 1,239 cfs.

Extremes.--Maximum discharge during year, 13,800 cfs Feb. 10 (gage height, 10.42 ft); minimum, 75 cfs Sept. 13 (gage height, 0.44 ft). 1915-20, 1923-66: Maximum discharge, 81,800 cfs Jan. 21, 1959 (gage height, 27.78 ft); from rating curve extended above 45,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 49 cfs Jan. 5, 1935; minimum gage height, 0.12 ft Sept. 21, 1955. Maximum stage known, 39.0 ft Mar. 25, 1913 (present datum), from floodmarks (discharge not determined).

Remarks.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	220	288	274	3,560	278	1,350	520	3,740	541	219	138	128
2	230	274	257	6,120	284	1,150	520	2,450	515	206	143	115
3	227	265	253	3,270	291	1,100	492	1,820	491	197	152	115
4	214	253	249	1,910	293	1,250	542	1,470	472	191	146	135
5	189	245	245	1,480	290	1,200	477	1,260	460	306	135	170
6	177	245	233	2,640	292	1,050	460	1,120	478	329	130	143
7	382	237	225	1,810	301	870	456	987	598	275	128	130
8	560	241	218	1,290	758	790	445	918	485	233	122	125
9	340	261	214	1,030	2,460	790	451	3,270	451	212	118	122
10	282	274	222	966	7,710	752	442	1,580	495	250	125	115
11	248	249	253	833	9,420	752	432	1,210	420	282	194	113
12	230	241	306	760	3,840	752	769	2,650	375	231	219	109
13	230	270	535	700	3,320	790	1,180	2,130	354	571	194	88
14	218	292	530	650	2,590	790	828	1,730	423	446	208	97
15	218	261	442	600	2,010	752	717	1,430	459	266	415	132
16	214	257	415	560	2,590	715	654	1,260	450	218	272	118
17	208	257	388	530	2,130	680	603	1,130	444	194	244	111
18	200	253	350	500	1,550	645	563	1,950	386	180	212	105
19	194	241	325	460	1,350	715	566	2,330	344	170	191	122
20	627	237	320	440	1,000	645	605	1,500	315	167	180	252
21	1,610	229	325	410	870	612	558	1,220	299	160	256	324
22	1,750	214	311	390	830	645	526	1,150	287	160	219	272
23	920	222	306	370	790	680	506	1,050	274	167	240	233
24	695	218	313	350	752	752	1,190	932	261	167	216	202
25	530	218	470	340	715	680	1,790	835	249	177	184	188
26	442	222	509	320	680	612	1,220	763	237	174	167	202
27	415	487	410	310	645	580	3,880	718	234	164	158	208
28	415	458	390	300	715	550	3,510	695	285	180	149	205
29	350	350	361	280	-----	550	2,530	736	252	180	140	194
30	325	301	361	269	-----	550	6,820	617	235	158	132	188
31	306	-----	384	270	-----	550	-----	571	-----	146	130	-----
TOTAL	13,166	8,060	10,394	33,718	48,754	24,299	34,252	45,222	11,569	7,056	5,737	4,761
MEAN	425	269	335	1,088	1,741	784	1,142	1,459	386	228	185	159
CFSM	.347	.220	.274	.887	1.42	.641	.933	1.19	.315	.186	.151	.130
IN	.40	.24	.32	1.02	1.48	.74	1.04	1.37	.35	.21	.17	.14

CALENDAR YEAR 1965 MAX 12,000 MIN 129 MEAN 977 CFSM .798 INCHES 10.83
WATER YEAR 1965-66 MAX 9,420 MIN 88 MEAN 677 CFSM .553 INCHES 7.50

Peak discharge (base, 12,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-10	1915	10.42	13,800				
4-30	1645	10.17	13,300				

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

Location (revised).--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 1966. 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.--5 years, 33.4 cfs.

Extremes.--Maximum discharge during year, 2,930 cfs Jan. 2 (gage height, 7.17 ft); no flow for many days.
1961-66: 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.--Records good except for the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.7	3.4	7.4	346	4.0	90	10	156	3.4		0	0
2	4.0	3.2	7.1	1,110	4.2	47	10	81	2.7		0	0
3	2.6	2.7	6.8	144	4.4	40	12	54	2.6		0	0
4	1.7	2.7	6.5	52	4.7	61	12	37	2.3		0	0
5	1.5	2.6	6.0	45	5.3	40	8.6	30	2.0		0	0
6	1.2	2.4	5.4	423	6.0	30	7.7	23	2.5		0	0
7	107	2.1	4.7	80	7.1	23	7.4	19	3.6		0	0
8	50	2.0	4.2	37	195	20	6.2	15	3.2		0	0
9	14	3.6	3.8	29	352	21	7.4	14	2.4		0	0
10	8.3	3.8	4.2	21	1,180	21	7.1	14	2.0		0	0
11	6.0	3.2	4.4	16	349	19	16	12	1.7		0	0
12	4.7	2.9	5.4	14	96	25	492	39	1.3		0	0
13	4.0	4.8	8.0	12	396	107	164	37	.9		0	0
14	3.4	1.9	9.0	11	105	48	75	29	1.1		2.3	0
15	2.9	1.1	7.7	9.0	74	36	48	22	1.7		7.7	0
16	2.6	9.6	7.4	8.0	156	28	37	17	3.4		2.3	0
17	2.3	7.7	7.1	7.0	72	22	30	15	2.9		.8	0
18	2.3	6.2	6.5	6.2	42	22	26	77	2.0		.3	0
19	2.4	5.4	6.0	5.6	34	21	37	81	1.5		.1	0
20	24	5.2	6.0	5.2	28	17	32	34	.9		.3	0
21	198	4.4	6.2	4.8	24	15	25	22	.5		4.3	.2
22	55	4.4	6.2	4.7	20	14	20	20	.3		6.9	.2
23	31	4.2	6.2	4.5	17	23	20	15	.2		2.2	.1
24	17	3.8	7.1	4.4	14	44	147	12	.1		1.0	0
25	9.6	3.4	1.6	4.2	14	23	206	8.6	0		.5	0
26	7.7	3.4	1.6	4.1	13	20	64	7.1	0		.2	0
27	6.2	5.6	1.2	4.1	12	16	500	6.2	0		.1	.1
28	5.4	2.1	9.3	4.0	44	15	230	5.4	0		0	0
29	4.2	1.2	9.0	3.9	13	13	101	6.2	0		0	0
30	3.8	9.0	9.0	3.9	13	13	489	4.9	0		0	0
31	3.6	-----	9.0	3.9	-----	13	-----	3.8	-----		0	-----
Total	589.1	268.3	229.6	2,427.5	3,272.7	947	2,837.4	917.2	45.2	0	29.0	0.7
Mean	19.0	8.94	7.41	78.3	117	30.5	94.6	29.6	1.51	0	0.94	0.02
Cfsm	0.497	0.234	0.194	2.05	3.06	0.798	2.48	0.775	0.040	0	0.025	0.00052
In.	0.57	0.26	0.22	2.36	3.19	0.92	2.77	0.89	0.04	0	0.03	0.0006

Calendar year 1965: Max 564 Min 0 Mean 29.1 Cfsm 0.762 In. 10.33
Water year 1965-66: Max 1,180 Min 0 Mean 31.7 Cfsm 0.830 In. 11.25

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	0430	7.17	2,930				
2-10	1330	7.03	2,710				

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 1966.

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.--26 years, 270 cfs.

Extremes.--Maximum discharge during year, 8,560 cfs Jan. 2 (gage height, 9.93 ft); minimum discharge, 0.10 cfs Aug. 10, Sept. 17, 18 (gage height, 0.25 ft).

1940-66: Maximum discharge, 47,800 cfs Jan. 21, 1959 (gage height, 21.13 ft); from rating curve extended above 14,000 cfs on basis of slope-area measurement of peak flow; no flow at times in most years.

Remarks.--Records good except those for the winter period, which are fair. Some regulation at low flow by mill above the station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	21	33	51	944	28	469	64	3,910	41	2.6	1.0	3.8
2	25	31	41	5,360	28	540	66	1,110	35	2.4	.80	2.9
3	22	26	36	2,800	28	345	66	581	29	2.2	.60	2.0
4	14	24	32	737	30	323	78	379	25	1.9	.40	2.6
5	10	22	30	394	32	333	67	284	22	2.0	.30	3.0
6	9.4	21	26	1,890	36	252	61	224	22	1.7	.30	2.4
7	307	19	25	1,460	41	183	58	178	26	1.4	.30	1.7
8	245	19	23	474	298	150	55	144	31	1.1	.30	1.1
9	242	21	19	265	1,950	139	54	123	36	1.0	.20	1.0
10	130	24	20	184	4,700	136	54	512	40	.80	.20	1.0
11	77	24	21	150	5,160	134	72	263	37	.80	.70	.80
12	54	22	23	120	1,400	156	1,160	219	64	.80	.80	.60
13	42	69	28	103	2,240	358	1,980	669	45	.80	.80	.40
14	32	71	32	90	1,570	362	763	437	32	1.0	1.27	.20
15	26	50	40	78	665	272	417	337	28	1.2	17	.30
16	23	44	57	68	807	209	294	228	32	1.1	32	.20
17	20	44	49	62	1,390	167	229	174	49	.80	21	.20
18	18	41	42	53	493	144	185	249	34	.70	13	.10
19	14	31	37	48	315	138	175	821	24	3.8	12	.90
20	76	27	35	45	234	128	182	497	17	8.3	13	1.8
21	550	27	35	41	175	123	189	255	14	5.9	49	275
22	580	25	34	37	137	108	155	181	12	4.3	11	120
23	439	24	31	35	118	106	132	141	9.8	4.2	14	50
24	330	22	32	33	111	135	512	117	8.5	5.4	12	43
25	170	20	55	31	105	126	2,700	99	7.3	3.6	17	27
26	107	19	75	30	98	120	960	81	6.2	2.8	14	20
27	79	92	91	29	93	100	2,460	68	5.0	2.0	13	23
28	62	101	86	28	151	88	2,790	60	4.3	1.9	9.7	33
29	51	72	65	28	-----	80	1,140	52	3.6	2.6	7.7	30
30	43	68	56	27	-----	75	2,180	46	3.0	2.0	6.4	23
31	38	-----	52	27	-----	71	-----	40	-----	1.5	4.9	-----
TOTAL	3,806.4	1,133	1,279	15,671	22,433	6,072	19,298	12,479	742.7	72.60	408.40	671.00
MEAN	123	37.8	41.3	506	801	196	643	403	24.8	2.34	12.9	22.4
CFSM	.496	.152	.167	2.04	3.23	.790	2.59	1.63	.100	.0094	.052	.090
IN	.57	.17	.19	2.35	3.36	.91	2.89	1.87	.11	.01	.06	.10

CALENDAR YEAR 1965 MAX 3,440 MIN .40 MEAN 225 CFSM .907 INCHES 12.33
 WATER YEAR 1965-66 MAX 5,360 MIN .10 MEAN 230 CFSM .927 INCHES 12.61

Peak discharge (base, 6,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	0545	9.93	8,560				
2-10	1430	9.46	7,630				

SILVER CREEK BASIN

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 1966.

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.--12 years, 213 cfs.

Extremes.--Maximum discharge during year, 6,680 cfs Feb. 11 (gage height, 22.06 ft); minimum, 0.4 cfs Sept. 9, 13, 14 (gage height, 3.66 ft).
1954-66: 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.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	38	16	24	793	14	618	65	3,680	22	4.9	5.1	2.1
2	29	16	20	4,300	14	321	58	1,990	19	5.6	4.6	2.1
3	18	16	20	4,050	15	245	59	954	22	8.6	3.1	2.1
4	14	16	19	870	15	367	78	459	19	8.6	2.0	2.0
5	13	15	16	484	17	298	66	344	24	14	1.6	1.4
6	11	11	16	2,540	21	235	59	265	24	87	1.6	1.0
7	298	10	16	1,110	30	195	58	215	22	98	1.6	1.0
8	367	8.2	14	413	124	170	59	178	22	32	1.6	.8
9	301	12	12	275	708	170	68	144	16	16	1.2	.5
10	84	15	12	225	3,960	152	69	112	12	11	23	1.0
11	56	12	12	186	6,000	144	310	104	12	113	90	1.0
12	43	16	14	152	1,780	230	2,530	120	12	61	97	.8
13	39	16	24	144	2,190	1,310	2,120	127	12	30	72	.4
14	28	16	28	127	1,340	648	618	144	12	16	54	.4
15	27	16	27	112	590	390	390	104	8.6	10	41	1.2
16	22	16	21	97	563	286	286	84	8.6	7.0	30	2.1
17	22	16	16	84	511	340	225	84	7.6	5.1	23	2.1
18	20	15	16	70	367	232	195	262	5.6	4.9	14	2.1
19	16	12	16	53	298	195	186	278	5.6	4.0	9.2	2.4
20	19	12	16	52	215	152	265	120	6.1	3.1	10	11
21	48	12	16	52	186	136	195	90	7.6	3.1	16	14
22	84	12	16	52	170	136	170	104	5.6	3.1	25	14
23	64	12	16	50	152	127	152	84	5.6	3.1	22	12
24	47	13	16	44	136	170	463	72	5.6	3.1	12	8.2
25	35	13	16	36	136	120	2,350	63	4.9	2.7	8.2	5.6
26	33	14	16	28	136	104	789	58	3.5	1.6	6.1	3.8
27	28	44	16	23	127	90	2,150	44	3.5	1.9	6.1	4.2
28	27	69	16	18	345	90	1,780	37	3.5	3.1	6.1	6.1
29	20	36	15	16	16	78	954	36	3.5	4.2	6.1	5.3
30	18	26	14	15	-----	78	2,070	28	3.5	7.3	5.3	4.9
31	16	-----	12	14	-----	78	-----	24	-----	5.1	3.5	-----
Total	1,885	5,332	528	16,485	20,160	7,905	18,837	10,408	3,389	578.1	602.0	137.2
Mean	60.8	17.8	17.0	532	720	255	628	336	11.3	18.6	19.4	4.57
Cfsm	0.323	0.095	0.090	2.83	3.83	1.36	3.34	1.79	0.060	0.099	0.103	0.024
In.	0.37	0.11	0.10	3.26	3.99	1.57	3.73	2.06	0.07	0.11	0.12	0.03

Calendar year 1965: Max 2,500 Min 0.1 Mean 144 Cfsm 0.766 In. 10.37
Water year 1965-66: Max 6,000 Min 0.4 Mean 215 Cfsm 1.14 In. 15.52

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-3	0200	20.49	5,400	4-12	2100	15.40	2,870
1-6	1200	15.43	2,870	4-25	1000	16.10	3,080
2-11	0900	22.06	6,680	5-1	0900	18.77	4,230

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 1966. 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.--23 years, 168 cfs.

Extremes.--Maximum discharge during year, 7,360 cfs Jan. 2 (gage height, 15.62 ft); minimum, 1.2 cfs July 28 (gage height, 4.16 ft).
1943-66: 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.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	45	16	29	278	32	235	69	1,530	33	3.5	1.8	3.8
2	53	17	25	5,320	33	196	65	1,100	31	4.2	1.6	3.8
3	43	16	23	1,300	34	184	63	631	28	2.8	2.0	3.8
4	34	15	22	600	36	228	72	419	26	1.4	1.8	4.6
5	31	15	21	432	39	213	66	309	24	1.8	1.6	5.0
6	28	16	19	1,830	43	186	61	238	23	14	1.6	5.0
7	129	15	17	760	52	158	58	193	25	93	1.4	5.0
8	148	17	16	429	160	142	56	167	30	39	1.6	4.2
9	109	18	15	292	980	134	56	143	24	17	1.8	4.2
10	88	18	15	233	4,050	128	54	124	20	12	90	3.8
11	73	18	14	189	2,400	121	136	111	18	1.7	2.2	3.5
12	61	17	17	162	711	123	1,650	112	15	28	95	3.2
13	50	16	19	153	1,380	257	947	119	14	20	33	2.8
14	40	15	21	138	772	279	486	142	13	16	38	2.8
15	34	16	21	123	485	234	333	112	12	29	107	3.8
16	30	16	19	112	436	196	249	100	14	22	40	4.2
17	24	13	18	95	371	169	201	94	13	12	24	4.2
18	20	12	17	90	290	154	172	187	11	7.7	17	3.8
19	19	11	17	83	236	147	173	238	11	5.8	12	5.4
20	18	9.9	16	72	188	129	181	152	10	3.8	12	7.2
21	19	8.8	16	73	166	119	153	129	6.7	2.8	18	16
22	43	8.8	16	71	149	114	135	129	6.7	2.3	29	31
23	35	8.2	16	60	139	112	125	104	6.2	2.0	32	13
24	31	7.7	15	50	131	130	504	91	5.8	1.8	17	9.9
25	26	7.2	15	42	128	110	2,030	81	5.4	1.6	11	6.2
26	23	7.7	16	39	119	102	727	70	4.6	1.8	8.2	4.6
27	21	57	17	36	109	96	1,560	62	3.8	1.8	6.2	4.2
28	20	86	16	35	134	88	1,270	56	4.2	1.4	5.4	4.6
29	18	49	15	33	-----	82	1,160	47	3.8	2.0	4.6	3.8
30	17	35	15	32	-----	80	2,040	40	3.5	1.8	4.2	4.2
31	17	-----	16	32	-----	76	-----	36	-----	1.6	3.8	-----
TOTAL	1,347	582.3	554	13,194	13,803	4,722	14,852	7,066	445.7	355.6	844.6	181.6
MEAN	43.5	19.4	17.9	426	493	152	495	228	14.9	11.5	27.2	6.05
CFSM	.337	.150	.139	3.30	3.82	1.18	3.84	1.77	.116	.089	.211	.047
IN	.39	.17	.16	3.80	3.98	1.36	4.28	2.04	.13	.10	.24	.05
CALENDAR YEAR 1965 MAX 2,390 MIN .30 MEAN 111 CFSM .861 INCHES 11.73												
WATER YEAR 1965-66 MAX 5,320 MIN 1.4 MEAN 159 CFSM 1.23 INCHES 16.71												

Peak discharge (base, 4,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	1615	15.62	7,360				
2-10	2330	15.12	6,740				

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 1966. Monthly figures only for some periods, published in WSP 1305.

Gage.--Digital water-stage recorder. Datum of gage 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.--36 years, 602 cfs.

Extremes.--Maximum discharge, 11,100 cfs Jan. 3 (gage height, 13.01 ft); minimum, 29 cfs Sept. 21; minimum gage height, 1.68 ft Sept. 13-15.

1930-66: 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.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	169	146	135	600	150	804	346	7,010	246	69	75	42
2	156	140	117	8,360	148	959	334	4,570	230	65	57	40
3	158	133	108	8,290	145	841	323	3,010	217	63	46	41
4	147	126	102	2,890	147	863	319	2,040	205	63	40	41
5	127	122	98	1,850	150	870	324	1,530	195	62	37	43
6	116	117	95	4,140	158	772	316	1,260	197	78	34	40
7	279	114	90	4,060	176	671	281	1,040	202	122	32	38
8	745	111	86	2,100	326	595	280	892	188	192	32	37
9	695	112	82	1,410	2,110	549	273	771	187	166	32	35
10	490	137	80	1,110	5,710	528	264	655	170	115	44	33
11	383	101	79	916	10,200	509	373	590	154	171	202	33
12	323	99	87	764	4,110	522	3,640	557	144	280	200	31
13	280	109	104	669	2,790	1,300	5,120	547	156	156	234	30
14	245	105	107	612	3,380	1,960	2,450	539	134	121	221	30
15	221	102	117	552	2,060	1,440	1,620	497	126	131	392	32
16	203	103	122	498	1,660	1,140	1,250	456	123	100	291	31
17	187	103	113	445	1,760	928	1,000	427	125	92	149	32
18	175	96	107	401	1,420	806	850	548	116	78	96	32
19	163	92	103	375	1,190	724	774	1,010	110	69	73	32
20	163	88	100	342	971	654	758	744	106	60	64	31
21	176	85	99	320	809	583	686	595	98	53	86	33
22	190	84	96	319	706	546	610	530	93	49	84	33
23	255	82	94	306	634	522	563	481	88	46	152	49
24	259	80	93	287	593	507	1,040	437	84	44	111	49
25	246	78	98	262	564	491	3,840	406	80	43	78	42
26	219	80	96	247	533	448	2,960	395	75	41	61	35
27	200	172	94	220	488	427	4,180	368	73	40	54	31
28	188	158	93	200	496	399	4,450	340	70	39	49	32
29	175	215	95	180	-----	376	2,820	318	70	42	46	32
30	163	177	95	166	-----	364	4,340	293	75	43	45	32
31	154	-----	98	158	-----	356	-----	267	-----	67	42	-----
TOTAL	7,650	3,467	3,083	43,049	43,584	22,462	46,384	33,123	4,119	2,760	3,119	1,072
MEAN	247	116	99.5	1,389	1,557	725	1,546	1,068	137	89.0	101	35.7
CFSM	.536	.252	.216	3.01	3.38	1.57	3.35	2.32	.297	.193	.219	.077
IN	.62	.28	.25	3.47	3.52	1.81	3.74	2.67	.33	.22	.25	.09
CALENDAR YEAR 1965 MAX 4,440 MIN 29 MEAN 462 CFSM 1.00 INCHES 13.59												
WATER YEAR 1965-66 MAX 10,200 MIN 30 MEAN 586 CFSM 1.27 INCHES 17.25												

Peak discharge (base, 7,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-3	0500	13.01	11,100				
2-11	1330	12.93	11,000				
5-1	0800	10.97	8,170				

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 1966.

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.

Extremes.--Maximum discharge during year, 2,570 cfs Jan. 2 (gage height, 16.63 ft); no flow many days.

1961-66: 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.--Records poor except Jan. 2 - July 25, which are good. Records of suspended sediment loads for water year 1966 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.90	1.1	2.4	288	3.2	104	13	609	4.8	0.10	0	0
2	.90	1.1	2.2	1,550	3.2	55	11	312	4.4	.10	0	.10
3	.90	1.1	2.1	355	3.2	47	13	132	3.8	.10	0	.80
4	.80	1.0	2.0	89	3.2	87	29	83	3.6	.10	0	1.4
5	.80	1.0	2.1	107	3.2	57	21	61	3.2	.10	0	1.8
6	1.2	1.0	1.8	825	3.3	45	18	46	3.6	.10	0	.20
7	1.0	.90	1.6	154	10	38	15	35	4.0	.10	0	0
8	5.4	1.0	1.5	68	164	36	14	30	3.7	.10	0	0
9	2.8	1.0	1.4	45	587	34	14	24	3.4	.10	0	0
10	1.9	1.2	1.4	38	1,420	32	13	20	3.1	.10	29	0
11	1.6	1.1	1.4	30	687	28	45	19	2.6	.10	98	0
12	1.5	1.2	2.0	26	142	52	797	24	2.2	.10	4.6	0
13	1.4	1.6	3.1	25	356	214	399	68	1.8	.10	1.1	0
14	1.3	3.6	4.6	21	156	112	116	60	1.8	.10	6.2	0
15	1.2	2.5	4.2	19	94	73	77	37	1.7	.10	8.7	0
16	1.1	2.2	4.0	16	143	52	58	30	1.6	.10	2.1	0
17	1.1	1.7	3.8	12	100	41	46	26	1.6	.10	.30	0
18	1.1	1.4	3.7	11	66	37	38	111	1.2	.20	0	0
19	1.1	1.2	3.6	10	49	34	69	71	.80	.30	0	12
20	1.4	1.2	3.4	8.4	34	28	70	40	.60	8.7	2.5	22
21	1.6	1.4	3.2	8.1	30	26	58	46	.60	3.1	17	5.7
22	2.1	1.4	3.1	7.8	24	23	48	50	.40	1.4	7.9	2.8
23	2.1	1.4	3.0	7.4	23	28	42	32	.40	.60	6.2	1.5
24	1.7	1.4	3.0	7.0	24	36	518	24	.40	.10	4.0	.80
25	1.4	1.2	3.4	6.6	25	26	872	20	.20	0	2.6	.40
26	1.4	1.4	3.7	6.2	22	23	331	15	.10	0	1.2	.20
27	1.4	5.1	3.8	5.7	20	20	852	13	.10	0	.40	.20
28	1.2	5.1	3.6	5.1	57	17	216	10	.10	0	0	.20
29	1.0	3.4	3.4	4.8	-----	16	153	7.9	.10	0	.20	.30
30	1.2	3.0	3.4	3.8	-----	16	995	6.2	.10	0	.10	.30
31	1.2	-----	3.7	3.2	-----	14	-----	5.3	-----	0	0	-----
TOTAL	54.70	52.90	89.6	3,763.1	4,252.3	1,451	5,961	2,067.4	56.00	45.80	192.10	50.70
MEAN	1.77	1.76	2.89	121	152	46.8	199	66.7	1.87	1.48	6.20	1.69
CFSM	.042	.042	.069	2.89	3.63	1.12	4.75	1.59	.045	.035	.148	.040
IN	.05	.05	.08	3.34	3.77	1.29	5.29	1.84	.05	.04	.17	.05

CALENDAR YEAR 1965 MAX 580 MIN 0 MEAN 33.0 CFSM .788 INCHES 10.69
 WATER YEAR 1965-66 MAX 1,550 MIN 0 MEAN 49.4 CFSM 1.18 INCHES 16.01

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	0800	16.63	2,570				
2-10	1730	16.26	2,210				

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 1966.

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.--5 years, 232 cfs.

Extremes.--Maximum discharge during year, 2,710 cfs Feb. 10, 11; maximum gage height, 18.01 ft May 7; minimum daily discharge (unaffected by backwater), 2.6 cfs Oct. 23, 24; zero or reverse flow may have occurred during extreme stages on the Ohio River. 1960-66: 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.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	15	5.9	6.8	192	9.5	795	46	1,140	49	13	6.0	5.0
2	13	6.3	6.8	1,480	7.7	725	41	975	38	11	8.0	5.0
3	12	6.3	7.2	1,120	7.7	396	37	781	35	10	8.0	11
4	12	6.3	6.3	977	7.7	366	44	305	30	9.0	8.0	17
5	11	6.3	6.8	471	7.7	311	50	14	27	136	8.0	104
6	12	6.3	9.5	329	9.1	237	48	15	26	373	8.0	44
7	84	6.3	8.6	192	24	186	42	0	24	546	8.0	14
8	126	6.3	7.7	11	359	154	38	15	30	610	8.0	8.0
9	74	6.3	7.2	5.0	1,170	134	25	336	26	317	9.0	6.0
10	36	6.3	6.8	25	2,150	112	35	499	21	123	16	4.0
11	20	6.3	6.3	29	2,430	101	48	545	20	60	89	4.0
12	12	6.3	11	148	2,270	150	862	369	16	34	273	13
13	8.2	6.3	9.1	79	2,390	663	1,080	543	22	20	99	40
14	6.8	6.3	8.6	56	1,930	868	939	644	73	15	49	16
15	5.4	6.3	11	51	961	748	479	501	189	13	44	24
16	3.8	6.8	14	42	44	380	282	289	81	41	33	17
17	3.3	6.8	13	33	94	262	221	238	48	49	23	13
18	3.3	6.8	11	26	0	193	134	1,150	38	19	17	14
19	3.8	6.8	9.1	20	0	161	227	1,080	28	12	16	32
20	3.6	6.8	8.6	22	0	126	370	920	23	10	30	49
21	3.0	6.8	9.5	20	0	101	302	740	20	8.0	27	151
22	3.0	6.8	9.5	19	0	90	247	600	17	7.0	87	58
23	2.8	6.8	9.1	18	0	87	180	470	15	7.0	46	25
24	2.6	6.8	8.6	16	0	90	170	360	14	6.0	24	14
25	3.8	6.8	10	14	0	88	880	280	14	6.0	9.0	11
26	6.3	6.8	9.1	14	0	73	1,000	214	14	8.0	8.0	9.0
27	7.2	6.8	9.1	14	99	64	1,100	143	14	8.0	8.0	8.0
28	7.2	6.8	9.1	12	537	56	1,300	104	13	8.0	7.0	6.0
29	6.8	6.8	9.1	10	-----	52	1,210	95	16	8.0	6.0	5.0
30	6.3	6.8	9.5	8.2	-----	49	1,420	136	16	8.0	6.0	7.0
31	5.4	-----	14	6.8	-----	48	-----	73	-----	6.0	6.0	-----
TOTAL	519.6	196.1	282.0	5,460.0	14,507.4	7,866	12,867	13,574	997	2,501.0	994.0	734.0
MEAN	16.8	6.54	9.10	176	518	254	429	438	33.2	80.7	32.1	24.5
CFSM	.052	.020	.028	.540	1.59	.779	1.32	1.34	.102	.248	.099	.075
IN	.06	.02	.03	.62	1.66	.90	1.47	1.55	.11	.29	.11	.08

CALENDAR YEAR 1965 Max 3,660 Min 0 Mean 193 Cfsm .592 In. 8.05
 WATER YEAR 1965-66 Max 2,430 Min 0 Mean 166 Cfsm .509 In. 6.90

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 1966.

Gage.--Digital water-stage recorder. Datum of gage is 830.10 ft above mean sea level, datum of 1929. Prior to June 23, 1953, wire-weight gage, and June 24, 1953 to Aug. 25, 1964, graphic water-stage recorder, at same site and datum.

Average discharge.--15 years, 171 cfs.

Extremes.--Maximum discharge during year, 1,140 cfs Feb. 11 (gage height, 14.01 ft); minimum, 1.1 cfs Sept. 19 (gage height, 6.68 ft). 1951-66: Maximum discharge, 8,720 cfs Jan. 22, 1959 (gage height, 20.47 ft, from floodmarks); minimum, 0.7 cfs Sept. 13, 1954; minimum gage height, 5.40 ft Aug. 18, 1951.

Remarks.--Records good above 10 cfs and fair below except those for winter period, which are poor. Flow slightly affected by regulation of Grand Lake Reservoir, diversion from or into St. Marys River basin, and into Miami and Erie Canal.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	12	3.2	5.4	363	4.5	73	27	333	10	11	7.4	5.2
2	13	3.0	5.4	472	4.5	71	25	170	17	10	6.0	5.1
3	9.9	3.4	5.6	408	4.5	69	24	92	16	10	7.2	4.8
4	8.7	3.2	5.4	153	4.5	173	21	58	15	10	6.0	16
5	7.2	2.4	5.6	70	4.5	147	18	42	14	18	6.0	14
6	8.4	2.8	5.2	49	4.5	74	18	39	13	16	5.4	6.4
7	10	3.4	5.0	29	8.2	46	18	32	13	11	5.6	4.0
8	12	3.0	5.2	20	10	37	18	36	14	12	5.6	5.2
9	12	3.0	5.4	14	172	38	18	58	14	11	4.4	4.4
10	9.9	3.2	5.4	10	473	42	18	72	14	12	8.8	3.2
11	9.6	3.2	5.6	8.0	911	47	17	51	13	14	17	4.4
12	16	3.2	6.6	7.0	405	44	16	464	12	17	11	3.2
13	9.0	3.6	8.4	6.5	209	78	16	380	11	25	7.0	2.0
14	7.2	4.2	7.8	6.0	218	77	17	200	100	81	9.2	3.6
15	6.9	4.2	6.6	6.0	129	59	17	123	54	50	9.2	4.8
16	10	3.8	6.3	6.0	109	45	16	86	40	28	8.4	8.4
17	8.1	6.6	6.3	5.5	101	36	15	82	39	20	8.9	4.0
18	5.6	5.4	6.0	5.5	68	33	14	116	23	13	8.0	3.2
19	4.2	3.8	5.6	5.0	50	32	14	285	17	11	7.0	1.4
20	9.6	3.4	5.4	5.0	28	29	14	119	14	10	6.4	10
21	129	3.6	5.4	5.0	21	67	14	83	12	8.0	6.8	30
22	121	3.8	5.8	5.0	17	233	13	220	12	8.0	8.2	21
23	80	4.4	5.8	5.0	14	117	13	120	12	6.4	6.0	17
24	40	4.6	5.6	5.0	13	98	16	68	12	6.8	5.5	12
25	19	4.2	6.3	5.0	13	62	37	45	11	6.4	3.6	9.2
26	10	4.4	6.6	4.5	12	49	37	34	11	5.4	4.4	9.6
27	7.8	5.2	5.8	4.5	14	41	66	33	0.8	6.8	4.4	8.4
28	5.6	9.3	5.2	4.5	20	33	442	29	10	7.6	4.0	6.0
29	4.8	5.8	5.4	4.5	-----	30	304	27	12	8.0	2.4	5.2
30	4.2	5.0	5.6	4.5	-----	29	199	25	13	6.8	2.0	5.2
31	4.0	-----	9.9	4.5	-----	28	-----	21	-----	7.2	4.8	-----
TOTAL	614.7	122.3	185.6	1,700.5	3,042.2	2,037	1,502	3,543	584.8	467.2	207.3	236.9
MEAN	19.8	4.08	5.99	54.9	109	65.7	50.1	114	19.5	15.1	6.69	7.90
CFSM	.076	.016	.023	.210	.416	.251	.191	.435	.074	.058	.026	.030
IN	.09	.02	.03	.24	.43	.29	.21	.50	.08	.07	.03	.03

CALENDAR YEAR 1965 MAX 2,460 MIN 2.4 MEAN 120 CFSM .458 INCHES 6.20
WATER YEAR 1965-66 MAX 911 MIN 1.4 MEAN 39.0 CFSM .149 INCHES 2.02

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

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 1966.

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, 1,260 cfs Feb. 12 (gage height, 7.22 ft); minimum, 5.1 cfs Sept. 1, 2 (gage height, 3.15 ft).
1964-66: Maximum discharge, 2,740 cfs Apr. 8, 1965 (gage height, 10.13 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.--Records good except those for winter period, which are fair. Flow slightly affected by regulation of Grand Lake Reservoir, diversion from or into St. Marys River basin, and into Miami and Erie Canal.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	8.5	6.8	9.9	550	8.0	59	57	510	39	17	8.4	5.3
2	9.2	6.2	9.2	725	8.0	123	52	452	34	16	8.5	5.3
3	9.9	6.0	8.5	770	8.0	144	47	278	31	14	8.5	6.0
4	9.9	6.0	8.8	570	8.0	235	42	182	29	14	7.8	8.2
5	9.2	6.0	8.8	278	8.0	308	38	125	27	18	7.8	7.8
6	8.2	6.0	8.5	146	8.0	221	36	96	25	24	7.8	13
7	7.8	6.5	8.5	108	14	136	35	77	24	26	7.2	11
8	7.5	6.2	8.2	88	15	92	35	77	22	18	6.8	7.8
9	6.8	6.8	8.2	60	78	77	35	121	25	23	6.8	6.5
10	7.2	7.2	7.8	48	420	84	34	182	24	123	7.8	6.5
11	8.8	7.2	8.5	39	1,150	98	33	108	22	70	9.4	6.5
12	9.2	7.2	9.6	33	1,250	103	31	554	20	94	12	6.0
13	8.5	7.2	11	28	860	142	30	860	19	62	15	6.2
14	9.9	7.2	12	24	452	194	29	680	24	60	12	6.5
15	12	7.2	12	21	338	169	29	400	169	114	9.9	7.5
16	11	7.2	12	19	249	127	27	278	131	86	10	7.2
17	9.9	7.8	10	17	221	96	26	221	116	47	9.9	7.2
18	10	8.2	9.6	16	182	78	25	194	86	30	8.8	8.5
19	11	8.5	8.8	14	127	71	25	338	52	22	8.5	7.8
20	12	9.6	8.8	13	90	66	25	368	36	16	8.2	10
21	16	8.5	8.8	12	65	68	25	249	30	14	7.8	14
22	68	8.2	8.8	12	50	388	24	435	23	12	7.2	26
23	112	7.8	8.5	11	38	384	23	400	20	11	7.2	24
24	68	7.8	8.5	10	32	264	24	235	19	10	8.2	19
25	40	7.5	12	10	29	194	26	158	18	9.9	7.2	16
26	25	8.2	12	9.0	28	138	41	106	18	9.9	6.8	13
27	16	8.8	12	9.0	27	108	62	82	16	9.2	6.2	12
28	12	8.8	11	9.0	35	88	254	70	16	9.9	6.0	11
29	9.9	9.2	9.9	8.0	-----	70	680	58	16	9.9	5.7	11
30	8.5	9.9	9.6	8.0	-----	64	452	50	16	9.9	5.7	9.2
31	7.2	-----	24	8.0	-----	60	-----	45	-----	8.8	5.5	-----
TOTAL	569.1	225.7	313.8	3,673.0	5,798.0	4,449	2,302	7,989	1,147	1,008.5	254.2	306.0
MEAN	18.4	7.52	10.1	118	207	144	76.7	258	38.2	32.5	8.20	10.2
CFSM	.041	.017	.022	.260	.456	.317	.169	.568	.084	.072	.018	.023
IN	.05	.02	.03	.30	.47	.36	.19	.65	.09	.08	.02	.03

CALENDAR YEAR 1965 MAX 2,640 MIN 6.0 MEAN 226 CFSM .498 INCHES 6.76
WATER YEAR 1965-66 MAX 1,250 MIN 5.3 MEAN 76.8 CFSM .169 INCHES 2.30

Peak discharge (base, 1,900 cfs).--No peak above base.

3-3230. Wabash River at Bluffton, Ind.

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

Drainage area.--506 sq mi.

Records available.--October 1930 to September 1966. 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.--36 years, 383 cfs.

Extremes.--Maximum discharge during year, 1,480 cfs Feb. 11 (gage height, 5.84 ft); minimum, 7.8 cfs Sept. 14 (gage height, 0.85 ft). 1930-66: 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.--Records good except those for winter period, which are 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	14	13	585	11	67	73	475	58	17	13	9.3
2	10	12	15	880	11	113	70	510	53	18	13	9.0
3	10	12	13	880	11	171	65	336	48	18	12	8.7
4	10	11	13	720	11	240	57	215	45	17	12	9.0
5	12	9.9	12	410	11	321	53	160	40	18	11	10
6	12	9.6	12	228	11	278	48	121	35	24	11	11
7	12	9.9	14	171	14	204	47	102	33	29	11	15
8	11	10	12	130	28	130	46	107	30	29	11	15
9	10	10	11	95	76	103	45	131	31	71	12	12
10	10	10	11	75	404	110	45	193	31	350	16	9.9
11	14	10	14	55	1,400	119	43	204	30	252	13	9.0
12	13	11	28	45	1,360	125	43	545	25	240	13	9.0
13	13	11	35	35	1,120	165	41	920	23	192	16	8.7
14	12	11	26	32	615	220	39	800	33	149	21	7.6
15	13	11	23	29	410	210	39	510	80	145	17	8.2
16	16	12	24	25	321	170	37	365	193	149	15	9.3
17	15	11	19	23	265	130	35	278	149	96	15	8.7
18	14	11	17	21	200	109	33	240	129	59	14	8.7
19	12	14	14	19	150	98	33	252	86	41	13	9.9
20	26	15	14	18	110	91	34	410	55	29	13	17
21	21	17	15	17	95	84	36	292	42	21	13	15
22	80	17	14	16	65	256	35	350	34	18	12	17
23	204	16	13	15	50	410	33	440	26	16	12	26
24	160	13	16	14	45	292	33	306	22	15	11	25
25	103	11	63	13	40	228	35	204	21	14	11	22
26	67	13	46	13	39	171	39	149	19	13	11	18
27	47	18	31	12	38	131	73	113	18	13	11	14
28	32	15	23	12	51	109	109	94	18	19	10	12
29	22	13	19	12		93	615	84	19	19	9.9	12
30	18	12	18	11		83	510	70	18	16	9.6	12
31	16		43	11		79		63		16	9.3	
Total	1,026	370.4	641	4,622	6,952	5,110	2,444	9,039	1,444	2,113	391.8	378.2
Mean	33.1	12.3	20.7	149	248	165	81.5	292	48.1	68.2	12.6	12.6
Cfsm	0.065	0.024	0.041	0.294	0.490	0.326	0.161	0.577	0.095	0.135	0.025	0.025
In.	0.07	0.03	0.05	0.34	0.51	0.38	0.18	0.67	0.11	0.16	0.03	0.03

Calendar year 1965: Max 3,450 Min 7.0 Mean 282 Cfsm 0.557 In. 7.55
 Water year 1965-66: Max 1,400 Min 7.8 Mean 94.6 Cfsm 0.187 In. 2.54

Peak discharge (base, 3,000 cfs).--No peak above base.

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, ¾ miles upstream from Little River, and at mile 409.

Drainage area.--710 sq mi.

Records available.--January 1951 to September 1966.

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.--15 years, 542 cfs.

Extremes.--Maximum discharge during year, 2,470 cfs Feb. 11 (gage height, 12.12 ft); minimum, 5.5 cfs Sept. 6, 7 (gage height, 9.00 ft).

1951-66: 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.--Records good except those for winter period or those for period of no gage-height record, which are fair. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16	44	38	516	35	70	146	600	42	49	33	8.7
2	17	40	38	1,090	35	156	146	645	77	40	27	18
3	18	33	36	1,140	35	202	127	558	79	33	27	16
4	15	31	33	940	35	348	118	345	74	31	23	15
5	13	33	31	735	35	472	106	268	59	31	23	12
6	11	27	29	472	35	472	98	212	62	36	23	8.7
7	15	33	27	328	43	355	90	165	62	40	21	7.9
8	16	33	25	255	52	249	90	165	62	31	20	12
9	16	38	25	212	42	136	86	131	62	40	20	12
10	18	36	25	181	257	165	82	202	59	408	23	15
11	18	38	31	155	2,050	170	42	287	62	506	29	21
12	21	33	40	130	2,030	207	42	600	59	362	36	18
13	21	31	136	110	1,620	268	77	1,140	57	341	36	18
14	21	33	160	90	1,090	307	77	1,140	57	341	29	16
15	29	29	118	90	690	335	74	830	62	301	29	20
16	33	29	90	70	532	314	74	690	119	212	31	15
17	31	25	77	60	415	255	72	549	229	175	27	13
18	27	33	72	55	335	218	69	438	212	122	25	16
19	27	33	62	50	237	191	69	370	170	86	27	16
20	40	33	57	47	191	131	72	438	136	67	25	23
21	74	33	54	45	141	160	72	498	106	49	23	38
22	170	36	52	43	110	160	72	392	74	42	23	42
23	321	36	49	41	90	508	67	524	64	38	23	36
24	314	36	54	39	75	645	69	498	64	36	21	31
25	223	36	202	38	65	456	69	335	59	25	20	42
26	165	33	348	37	63	348	69	249	47	23	20	49
27	118	42	218	36	61	231	72	186	40	23	20	44
28	94	54	146	36	60	218	102	160	42	23	20	40
29	74	57	114	35	-----	191	304	132	62	25	20	33
30	62	52	94	35	-----	170	735	118	59	33	18	31
31	52	-----	98	35	-----	160	-----	102	-----	40	15	-----
Total	2,090	1,040	2,579	7,176	10,599	4,418	5,468	15,107	2,468	5,609	757	6873
Mean	67.4	36.0	83.2	231	379	272	116	423	82.3	116	24.4	22.9
Cfs/m	0.095	0.051	0.117	0.325	0.534	0.383	0.163	0.596	0.116	0.163	0.034	0.032
In.	0.11	0.06	0.13	0.37	0.56	0.44	0.18	0.69	0.13	0.19	0.04	0.04

Calendar year 1965: Max 4,240 Min 6.0 Mean 406 Cfs/m 0.572 In. 7.76
 Water year 1965-66: Max 2,080 Min 7.9 Mean 154 Cfs/m 0.217 In. 2.94

Peak discharge (base, 5,000 cfs).--No peak above base.

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 1966. 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.--23 years, 217 cfs.

Extremes.--Maximum discharge during year, 1,350 cfs May 12 (gage height, 9.19 ft); minimum, 5.1 cfs Sept. 14 (gage height, 1.47 ft). 1943-66: Maximum discharge, 5,990 cfs Jan. 4, 1950; maximum gage height, 18.43 ft Feb. 11, 1959; minimum discharge, 1.0 cfs Oct. 8, 1946, site and datum then in use; minimum gage height since October 1948, 1.30 ft Oct. 1, 1949.

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	11	17	24	873	20	152	69	308	50	20	11	8.3
2	13	16	22	586	20	101	64	191	46	18	12	8.0
3	13	16	25	347	20	94	55	132	43	16	12	8.1
4	11	15	29	198	20	184	50	99	41	15	11	6.6
5	11	15	25	140	20	207	48	84	39	15	9.0	7.7
6	13	15	18	120	20	135	50	77	37	17	8.8	7.6
7	14	19	13	104	20	93	50	67	35	19	8.1	7.0
8	12	30	10	86	30	79	48	72	33	16	8.0	8.3
9	12	29	10	75	68	69	45	214	33	16	9.3	8.7
10	13	26	12	65	315	72	43	187	32	165	12	8.5
11	13	22	17	60	1,150	90	40	134	30	98	16	7.0
12	14	21	32	50	584	109	38	1,040	28	113	16	8.1
13	11	21	137	45	298	201	38	1,060	27	104	12	6.4
14	10	20	101	40	207	181	37	653	27	86	15	6.2
15	9.2	19	64	40	141	142	35	429	27	51	17	4.0
16	10	21	45	35	115	111	35	820	36	34	15	25
17	12	22	36	35	95	93	36	640	41	26	15	14
18	12	21	33	30	75	88	35	399	36	22	13	12
19	11	19	31	30	60	89	37	314	34	20	13	10
20	16	19	29	30	48	79	40	203	32	18	12	18
21	34	18	27	30	40	67	50	177	27	16	17	34
22	118	19	26	25	34	83	60	196	24	15	119	21
23	114	18	26	25	31	253	53	149	23	14	36	15
24	60	18	30	25	30	256	102	147	22	14	20	12
25	37	17	686	25	29	144	100	136	20	14	16	14
26	30	18	626	22	28	126	78	103	19	13	14	19
27	24	41	268	22	27	101	68	89	18	13	12	16
28	21	47	142	22	49	83	117	78	18	15	10	13
29	19	30	104	20	-----	76	163	68	22	15	10	13
30	18	28	87	20	-----	78	161	59	23	13	9.5	13
31	17	-----	100	20	-----	75	-----	53	-----	11	9.2	-----
TOTAL	733.2	657	2,835	3,245	3,594	3,711	1,845	8,378	923	1,042	517.9	397.3
MEAN	23.7	21.9	91.5	105	128	120	61.5	270	30.8	33.6	16.7	13.2
CFSM	.089	.082	.344	.395	.481	.451	.231	1.02	.116	.126	.063	.050
IN	.10	.09	.40	.45	.50	.52	.26	1.17	.13	.15	.07	.06
CALENDAR YEAR	1965	MAX	2,690	MIN	7.7	MEAN	173	CFSM	.650	INCHES	8.84	
WATER YEAR	1965-66	MAX	1,150	MIN	6.2	MEAN	76.4	CFSM	.287	INCHES	3.90	

Peak discharge (base, 2,800 cfs).--No peak above base.

3-3242. Salamonie River at Portland, Ind.

Location.--Lat 40°25'40", long 85°02'20", in SE $\frac{1}{4}$ 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 1966.

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

Average discharge.--7 years, 58.0 cfs.

Extremes.--Maximum discharge during year, 800 cfs Feb. 11 (gage height, 7.59 ft); minimum, 0.3 cfs Sept. 12, 19; minimum gage height, 1.34 ft Sept. 19.

1959-66: 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.--Records good except those for winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2	1.3	2.9	474	2.5	36	12	172	7.7	2.2	1.9	3.0
2	2.0	1.8	3.2	394	2.5	39	12	82	6.5	2.2	2.6	3.2
3	1.2	1.2	3.2	196	3.0	47	9.9	47	6.5	2.2	2.6	3.4
4	.8	1.2	2.7	73	3.5	100	9.0	32	5.4	2.2	1.9	6.8
5	.9	1.3	2.2	43	4.0	61	8.6	25	4.6	3.0	1.7	1.9
6	.6	1.5	1.6	35	7.0	32	8.6	21	4.6	4.1	1.9	2.0
7	3.5	1.2	2.9	29	18	23	9.4	16	4.8	1.7	1.5	2.2
8	2.2	1.3	2.7	19	30	20	8.2	23	5.1	1.4	1.5	1.7
9	1.3	2.9	2.7	14	141	20	8.6	54	5.1	2.6	1.9	1.0
10	1.0	1.6	2.9	9.9	184	26	7.5	54	4.6	7.4	3.6	1.2
11	7.4	1.3	2.9	6.0	592	29	7.5	50	4.1	9.0	5.6	1.2
12	18	1.0	3.7	4.5	152	28	7.5	410	3.2	24	1.7	.6
13	14	2.2	4.8	4.0	91	44	8.2	152	3.2	31	1.7	1.2
14	5.4	1.6	4.2	3.5	86	47	7.9	104	12	36	3.4	1.5
15	4.8	1.0	4.0	3.0	50	34	7.9	69	19	22	1.7	6.2
16	5.7	2.2	4.5	3.0	47	27	7.1	108	14	6.5	3.4	1.7
17	7.9	2.7	4.5	3.0	34	18	6.8	78	8.0	3.6	2.0	1.3
18	4.0	2.2	3.7	3.0	18	17	7.1	73	6.5	3.0	1.7	1.0
19	2.7	2.2	3.2	2.5	16	16	7.5	86	4.6	3.2	1.9	.9
20	12	1.8	2.9	2.5	11	14	7.5	39	3.8	2.0	1.7	19
21	154	1.0	4.2	2.5	9.4	85	7.9	100	3.8	1.5	1.7	16
22	105	1.8	4.2	2.5	8.6	142	7.1	152	3.8	1.3	1.3	15
23	46	2.2	3.7	2.5	7.5	65	6.4	65	3.4	1.3	2.0	6.5
24	24	2.2	2.9	2.5	7.1	42	10	40	3.2	1.2	2.8	3.0
25	13	1.8	5.1	2.5	7.1	29	29	28	2.2	1.0	2.0	2.6
26	7.1	1.3	3.7	2.5	7.1	23	25	19	2.2	1.3	1.9	3.2
27	4.8	2.0	4.5	2.5	6.1	18	72	15	2.6	1.5	2.2	2.6
28	3.7	2.0	4.8	2.5	10	15	426	14	4.1	1.9	2.0	2.2
29	2.7	1.8	4.8	2.5	14	14	188	10	7.4	3.2	1.5	2.4
30	2.2	2.9	4.8	2.5	-----	14	119	86	2.6	2.4	2.2	3.0
31	1.6	-----	9.4	2.5	-----	13	-----	8.3	-----	2.4	2.6	-----
Total	463.9	52.5	117.7	1,349.4	1,555.4	1,138.0	1,059.2	2,154.9	168.6	238.5	68.1	117.5
Mean	15.0	1.75	3.80	43.5	55.6	36.7	35.3	69.5	5.62	7.69	2.20	3.92
Cfs/m	0.174	0.020	0.044	0.506	0.647	0.427	0.410	0.808	0.065	0.089	0.026	0.046
In.	0.20	0.02	0.05	0.58	0.67	0.49	0.46	0.93	0.07	0.10	0.03	0.05

Calendar year 1965: Max 1,940 Min 0.4 Mean 55.7 Cfs/m 0.648 In. 8.80
 Water year 1965-66: Max 592 Min 0.6 Mean 23.2 Cfs/m 0.270 In. 3.65

Peak discharge (base, 1,400 cfs).--No peak above base.

3-3243. Salamonie River near Warren, Ind.

Location.--Lat 40°42'45", long 85°27'13", in SE $\frac{1}{4}$ 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 1966.

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.--9 years, 337 cfs.

Extremes.--Maximum discharge during year, 2,430 cfs Feb. 11 (gage height, 9.12 ft); minimum daily, 11 cfs Oct. 19, Sept. 6-11; minimum gage height, 5.01 ft Sept. 5.

1957-66: Maximum discharge, 13,200 cfs Feb. 10, 1959 (gage height, 17.05 ft); minimum, 5.0 cfs Sept. 18, 19, 1959; minimum gage height, that of Sept. 5, 1966.

Remarks.--Records fair except those for winter period or those for periods of indefinite stage-discharge relation, which are poor. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	28	16	19	1,010	21	98	98	378	56	44	18	12
2	26	15	19	1,510	21	124	98	395	47	38	20	12
3	24	15	17	1,230	20	138	90	248	47	30	18	12
4	22	14	16	658	20	295	33	177	38	25	17	14
5	22	14	16	325	20	362	77	132	36	21	16	12
6	22	16	17	226	20	260	74	110	36	19	16	11
7	22	16	17	132	20	172	74	98	62	18	16	11
8	20	16	16	142	25	124	71	102	53	17	18	11
9	19	17	16	106	35	110	65	137	96	50	33	11
10	19	19	17	60	656	110	65	216	110	124	24	11
11	22	19	22	35	2,320	128	65	226	59	110	20	11
12	26	19	44	28	1,860	146	62	709	34	90	19	12
13	26	19	80	27	758	177	62	1,170	28	110	23	16
14	22	19	71	26	456	221	62	614	30	166	22	19
15	15	20	50	25	340	226	62	440	53	106	21	17
16	26	22	47	25	265	177	62	319	153	90	20	15
17	22	20	36	25	221	142	62	289	248	68	19	14
18	15	19	32	25	132	119	71	283	137	36	17	16
19	11	19	26	24	132	110	71	216	90	30	16	20
20	39	19	26	24	94	106	65	232	65	26	16	22
21	157	20	24	24	77	98	71	188	53	24	16	20
22	296	22	22	23	77	445	65	289	38	22	15	19
23	498	22	22	23	65	569	62	400	36	21	15	21
24	243	20	30	23	62	400	65	238	28	20	14	26
25	124	22	124	22	62	293	71	172	25	19	14	24
26	74	26	106	22	59	216	90	132	23	18	14	22
27	50	41	77	22	56	172	110	110	22	18	13	19
28	34	50	59	21	65	137	132	98	21	18	13	17
29	24	30	44	21		119	701	96	24	17	13	16
30	20	22	36	21	-----	110	432	30	40	17	13	15
31	19	-----	90	21	-----	106	-----	71	-----	17	12	-----
Total	1,937	628	1,228	6,006	3,009	6,050	3,228	3,345	1,778	1,439	531	478
Mean	64.1	20.9	39.6	194	286	195	108	269	59.3	46.4	17.1	15.9
Cfsm	0.152	0.050	0.094	0.460	0.678	0.462	0.256	0.637	0.140	0.110	0.040	0.038
In.	0.17	0.06	0.11	0.53	0.71	0.53	0.29	0.73	0.16	0.13	0.05	0.04

Calendar year 1965 : Max 4,080 Min 6.0 Mean 270 Cfsm 0.640 In. 8.69
 Water year 1965-66 : Max 2,320 Min 11 Mean 109 Cfsm 0.258 In. 3.53

Peak discharge (base, 3,000 cfs).--No peak above base.

Note.--Stage-discharge relation indefinite June 25-28, 30, July 1, 3-9, July 19 to Sept. 30.

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 1966. 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.--42 years (1924-66), 493 cfs.

Extremes.--Maximum discharge during year, 3,040 cfs Feb. 12 (gage height, 7.05 ft); minimum, 6.0 cfs Apr. 23 (gage height, 2.00 ft). 1923-66: 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, 6.0 cfs Apr. 23, 1966 (gage height, 2.00 ft).

Remarks.--Records good except those for winter period, which are poor. Flow is regulated at times at Corps of Engineers dam about ½ mile upstream.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	34	52	50	576	47	113	146	517	73	59	23	22
2	30	48	46	1,850	46	142	136	505	67	59	26	22
3	28	43	42	1,860	46	178	121	412	61	59	26	22
4	27	42	40	1,370	46	301	110	285	57	52	25	21
5	27	39	38	630	46	420	99	218	55	44	25	20
6	27	38	37	400	46	400	92	161	52	48	25	20
7	27	38	36	309	46	278	87	133	50	40	25	20
8	28	37	36	270	50	203	85	178	65	38	23	20
9	29	38	36	239	80	161	82	182	75	36	27	21
10	29	37	34	175	341	152	77	203	47	73	30	21
11	32	34	37	142	2,350	158	73	313	136	152	30	22
12	33	36	48	120	2,880	185	73	660	89	142	27	22
13	31	36	110	100	1,890	243	73	1,500	63	142	27	22
14	31	34	139	84	811	274	69	1,440	55	282	29	23
15	33	33	121	74	514	297	67	690	55	317	29	27
16	38	34	94	66	395	274	65	520	69	210	29	23
17	39	34	77	60	317	221	65	390	192	130	28	22
18	46	34	67	56	262	178	65	405	321	110	27	21
19	42	34	59	52	221	168	65	329	232	75	28	22
20	49	32	54	50	172	155	70	286	142	55	26	30
21	50	33	52	49	130	152	89	293	100	43	27	32
22	234	34	50	49	127	172	46	239	75	37	25	29
23	490	33	46	49	107	689	30	485	61	34	25	28
24	480	32	52	48	82	666	71	435	50	32	23	34
25	289	33	335	48	80	470	32	301	44	31	22	37
26	199	36	289	48	73	341	34	206	40	28	24	39
27	142	46	221	48	63	270	27	165	39	28	23	36
28	107	80	168	48	69	221	145	134	40	29	23	32
29	82	79	142	47	-----	185	338	116	40	29	23	31
30	71	63	121	47	-----	168	1,150	99	44	27	22	29
31	59	-----	121	47	-----	152	-----	87	-----	24	22	-----
TOTAL	2,863	1,222	2,798	9,011	11,337	7,987	3,682	11,687	2,529	2,465	794	770
MEAN	92.4	40.7	90.3	291	405	258	123	377	84.3	79.5	25.6	25.7
CFSM	.167	.074	.163	.526	.732	.467	.222	.682	.152	.144	.046	.047
IN	.19	.08	.19	.61	.76	.54	.25	.79	.17	.17	.05	.05

CALENDAR YEAR 1965	MAX	4,380	MIN	24	MEAN	396	CFSM	.716	INCHES	9.72
WATER YEAR 1965-66	MAX	2,880	MIN	20	MEAN	157	CFSM	.284	INCHES	3.84

Peak discharge (base, 4,000 cfs).--No peak above base.

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 1966. 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.--43 years, 1,430 cfs.

Extremes.--Maximum discharge during year, 6,270 cfs Feb. 12 (gage height, 10.61 ft); minimum, 32 cfs Sept. 8, 9 (gage height, 1.92 ft). 1923-66: Maximum discharge, 49,600 cfs May 18, 1943; maximum gage height, 24.44 ft Feb. 11, 1959, (ice jam); minimum discharge observed, 17 cfs Aug. 4, 5, 9, 1934, July 21, 22, 1936; minimum gage height, 1.66 ft Aug. 4, 5, 9, 1934. Maximum stage known, 28.7 ft Mar. 26, 1913, from Floodmark, determined by Corps of Engineers (discharge, 90,000 cfs, from rating curve extended above 49,000 cfs).

Remarks.--Records good except those for winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	89	155	161	1,820	152	417	443	1,720	300	141	70	44
2	83	140	142	3,640	152	523	419	1,530	201	142	71	41
3	92	129	135	3,640	152	505	392	1,160	259	128	67	39
4	104	123	131	2,890	152	760	357	072	246	119	61	41
5	94	112	133	1,880	152	1,130	331	696	247	107	58	37
6	75	112	128	1,210	152	1,120	320	564	214	118	56	37
7	64	110	116	892	152	866	319	483	201	112	54	36
8	67	118	108	713	200	647	310	551	200	106	52	34
9	70	120	108	563	305	520	296	644	215	102	53	33
10	70	125	104	526	563	466	280	772	210	153	71	36
11	78	120	113	399	4,390	483	271	794	246	858	76	36
12	83	116	136	410	5,600	563	263	1,500	241	715	78	36
13	78	116	268	365	4,000	756	256	3,050	185	697	80	41
14	76	110	513	330	2,540	872	245	2,900	168	810	88	46
15	75	106	418	300	1,560	862	235	2,500	161	741	88	66
16	83	107	322	275	1,170	800	228	1,830	204	547	83	66
17	91	102	265	255	926	677	226	1,450	326	396	80	73
18	92	101	230	235	778	579	227	1,180	545	337	78	58
19	94	103	211	215	700	541	229	1,060	456	262	76	48
20	104	106	199	200	491	501	237	1,020	350	197	70	60
21	143	103	186	190	404	454	279	1,130	273	161	68	84
22	305	104	174	180	360	622	290	974	220	133	67	90
23	830	107	163	175	330	1,440	237	1,120	161	116	167	97
24	875	107	173	170	310	1,770	350	1,280	159	104	100	91
25	650	107	742	165	235	1,250	363	984	140	94	76	91
26	440	113	1,270	160	265	920	311	737	125	85	63	109
27	352	140	1,020	160	274	755	279	600	112	75	56	109
28	275	182	654	155	274	625	397	509	108	77	51	99
29	230	214	499	155	-----	538	614	436	137	80	50	86
30	202	192	425	152	-----	510	1,780	387	138	75	47	78
31	175	-----	414	152	-----	477	-----	341	-----	72	46	-----
TOTAL	6,139	3,700	9,661	22,572	26,979	22,957	10,784	34,774	6,816	7,660	2,201	1,844
MEAN	198	123	312	728	964	741	359	1,122	227	254	71.0	61.5
CFSM	.114	.071	.180	.420	.556	.428	.207	.647	.131	.147	.041	.036
IN	.13	.08	.21	.48	.58	.49	.23	.75	.15	.17	.05	.04

CALENDAR YEAR 1965 MAX 12,400 MIN 52 MEAN 1,085 CFSM .626 INCHES 6.50
 WATER YEAR 1965-66 MAX 5,680 MIN 33 MEAN 428 CFSM .247 INCHES 3.35

Peak discharge (base, 11,000 cfs).--No peak above base.

3-3255. Mississinewa River near Ridgeville, Ind.

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

Drainage area.--130 sq mi.

Records available.--August 1946 to September 1966.

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. 4, 1950, wireweight gage, and Oct. 5, 1950 to Apr. 24, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--20 years, 124 cfs.

Extremes.--Maximum discharge during year, 1,220 cfs Feb. 11 (gage height, 8.29 ft); minimum, 1.0 cfs Oct. 4; minimum gage height, 1.98 ft Aug. 30, Sept. 13.
1946-66: Maximum discharge, 13,900 cfs June 10, 1958 (gage height, 16.25 ft), from rating curve extended above 5,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.1 cfs Oct. 24, 1946; minimum gage height, 1.65 ft Sept. 11, 1953.

Remarks.--Records good except those for winter period and those for periods of doubtful gage-height record, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.2	5.4	8.6	471	10	96	25	320	28	7.9	3.0	3.0
2	1.5	4.6	8.2	781	10	83	24	187	26	6.1	3.2	2.8
3	1.2	5.1	8.6	358	10	115	20	141	23	5.1	4.6	8.2
4	1.1	4.7	9.0	160	10	178	19	104	21	4.1	3.6	267
5	1.5	4.5	8.2	116	10	116	19	90	19	4.9	3.6	45
6	3.9	4.8	8.0	106	10	76	19	76	18	6.8	3.6	17
7	4.2	5.5	7.4	90	10	49	19	60	17	5.5	3.4	8.3
8	6.1	5.1	7.6	66	20	50	18	66	15	4.5	3.4	5.2
9	2.6	4.9	7.5	54	227	53	18	81	15	4.3	4.2	3.9
10	1.7	4.8	7.7	48	521	63	16	67	14	6.2	6.4	3.6
11	3.4	4.4	9.1	37	805	63	16	63	11	9.5	9.0	2.8
12	8.2	4.4	11	31	249	57	20	462	11	47	6.1	2.2
13	3.9	8.7	16	37	226	84	20	216	11	31	5.2	1.5
14	2.6	7.4	18	27	190	76	19	169	57	45	9.5	3.4
15	2.4	5.2	15	22	141	65	18	132	30	21	8.2	10
16	301	5.8	14	21	157	51	19	111	25	10	5.8	4.4
17	81	14	12	17	130	42	17	92	19	6.1	5.2	2.6
18	24	9.5	11	15	86	42	15	296	14	4.4	3.0	2.2
19	10	7.4	9.7	13	67	41	17	251	11	3.6	3.0	1.8
20	141	6.8	9.5	12	45	34	17	144	8.8	4.2	3.2	103
21	287	6.4	10	12	30	33	16	163	8.4	3.9	4.2	108
22	169	9.5	10	11	28	54	13	213	8.1	3.6	3.6	41
23	113	5.5	9.3	11	25	47	13	133	8.0	3.6	2.6	16
24	64	5.5	9.3	11	23	48	69	102	8.2	3.6	3.2	7.8
25	34	5.5	12	11	22	35	171	78	6.8	3.9	3.2	6.4
26	23	6.1	11	11	21	35	99	66	6.8	3.4	2.8	14
27	18	15	9.0	11	20	28	303	59	5.9	3.4	2.8	11
28	12	19	9.1	10	28	23	532	52	7.2	3.9	2.8	8.4
29	8.5	11	9.8	10	-----	25	266	44	28	4.2	2.0	6.4
30	8.2	10	10	10	-----	28	280	33	14	4.2	1.2	7.0
31	7.4	-----	37	10	-----	25	-----	29	-----	3.4	2.6	-----
TOTAL	1,347.6	216.5	342.6	2,600	3,131	1,815	2,137	4,100	495.2	278.3	128.2	723.9
MEAN	43.5	7.22	11.1	83.9	112	58.5	71.2	132	16.5	8.98	4.14	24.1
CFSM	.335	.056	.085	.645	.862	.450	.548	1.02	.127	.069	.032	.185
IN	.39	.06	.10	.74	.90	.52	.61	1.17	.14	.08	.04	.21
CALENDAR YEAR 1965	MAX 2,480		MIN 1.1		MEAN 84.7		CFSM .652		INCHES 8.85			
WATER YEAR 1965-66	MAX 805		MIN 1.1		MEAN 47.4		CFSM .365		INCHES 4.95			

Peak discharge (base, 2,400 cfs).--No peak above base.

3-3260. Mississinewa River near Eaton, Ind.

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

Drainage area.--304 sq mi.

Records available.--March 1952 to September 1966.

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. 11, 1965, graphic water-stage recorder, at same site and datum.

Average discharge.--14 years, 262 cfs.

Extremes.--Maximum discharge during year, 2,160 cfs Feb. 12 (gage height, 7.92 ft); minimum, 2.8 cfs Sept. 13; minimum gage height, 2.33 ft Sept. 2, 3.

1952-66: Maximum discharge, 19,400 cfs June 10, 1958 (gage height, 18.53 ft) from rating curve extended above 6,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 2.0 cfs Sept. 23, 27, 1954 (gage height, 2.23 ft).

Remarks.--Records good except those for winter period and those for period of no gage-height record, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	12	40	29	1,140	40	108	68	811	40	47	8.4	5.6
2	12	35	25	1,640	40	205	64	546	37	30	8.8	5.2
3	20	32	24	1,820	39	214	59	337	35	22	8.7	5.6
4	16	30	24	882	39	426	55	234	32	18	8.1	6.5
5	13	28	23	410	39	422	52	167	31	17	7.3	171
6	12	27	23	307	38	242	52	142	30	20	6.7	56
7	13	27	22	259	38	169	50	114	34	20	6.7	21
8	14	27	21	198	50	128	49	103	31	18	7.1	12
9	12	29	20	193	110	121	48	111	31	18	6.5	8.2
10	12	28	20	131	675	144	46	121	27	18	10	6.5
11	18	27	20	157	1,820	157	44	109	25	20	12	4.9
12	22	27	23	91	1,640	150	44	465	22	30	10	3.8
13	38	29	27	78	597	186	46	830	21	42	9.0	3.0
14	31	27	38	66	528	240	49	445	74	68	11	4.0
15	22	28	45	58	356	195	48	342	97	74	12	9.7
16	22	32	40	52	300	159	47	265	81	58	12	8.2
17	553	30	36	47	317	125	45	225	62	30	14	6.2
18	171	27	32	45	208	112	44	181	48	20	12	8.2
19	83	34	29	44	137	111	43	601	36	17	10	7.5
20	98	32	28	43	110	103	42	323	28	14	9.0	17
21	650	28	28	43	70	106	45	229	24	12	8.2	65
22	1,180	28	26	42	68	171	40	459	21	10	8.2	125
23	475	26	26	42	65	164	37	300	21	11	7.5	56
24	283	26	26	42	62	142	45	230	19	11	6.8	29
25	171	24	35	42	60	118	150	180	19	10	6.8	20
26	114	23	46	41	57	98	232	130	18	9.9	6.8	17
27	86	28	48	41	52	89	152	100	17	10	6.5	14
28	69	28	41	41	51	77	912	70	28	10	6.5	16
29	57	33	36	40	-----	70	1,140	52	68	10	6.2	17
30	48	35	34	40	-----	69	609	47	52	9.8	5.6	15
31	43	-----	96	40	-----	70	-----	43	-----	9.0	5.2	-----
TOTAL	4,370	875	991	8,115	7,606	4,891	4,357	8,312	1,109	713.7	263.6	744.1
MEAN	141	29.2	32.0	262	272	158	145	268	37.0	23.0	8.50	24.8
CFSM	.464	.096	.105	.862	.895	.520	.477	.882	.122	.076	.028	.082
IN	.53	.11	.12	.99	.93	.60	.53	1.02	.14	.09	.03	.09
CALENDAR YEAR 1965	MAX	4,240	MIN	3.9	MEAN	211	CFSM	.694	INCHES	9.42		
WATER YEAR 1965-66	MAX	1,820	MIN	3.0	MEAN	116	CFSM	.382	INCHES	5.18		

Peak discharge (base, 3,000 cfs).--No peak above base.

3-3265. Mississinewa River at Marion, Ind.

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

Drainage area.--677 sq mi.

Records available.--September 1923 to September 1966. 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.--43 years, 625 cfs.

Extremes.--Maximum discharge during year, 4,250 cfs Feb. 11 (gage height, 6.56 ft); minimum, 12 cfs July 1, 2 (gage height, 0.68 ft), caused by taintor gates above gage being temporarily closed.

1923-66: Maximum discharge, 25,000 cfs Mar. 21, 1927 (gage height, 17.4 ft from graph based on gage readings), from rating curve extended above 18,000 cfs; minimum, 1.1 cfs Apr. 17, 1959; minimum daily, 3.8 cfs Oct. 23, 1940, Oct. 9, 1943; minimum gage height, -0.27 ft Sept. 25, 1935.

Flood of March 1913 reached a stage of 19.2 ft, from information by Indiana Flood Control and Water Resources Commission.

Remarks.--Records good except those for winter period, which are poor. Flow periodically regulated by dam above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	68	108	78	1,720	75	213	191	890	141	114	33	27
2	65	102	30	2,380	78	265	183	955	127	14	42	26
3	65	96	78	2,310	80	364	163	610	120	64	34	28
4	65	93	72	1,780	85	520	155	460	114	70	32	33
5	65	85	65	890	82	670	148	352	105	65	30	28
6	72	82	68	610	80	520	141	300	99	68	30	29
7	30	30	68	624	38	358	141	270	99	57	29	90
8	75	82	68	430	108	280	138	295	93	57	29	80
9	75	82	68	330	159	245	130	468	111	61	33	57
10	72	80	70	163	851	240	127	370	90	55	44	44
11	111	80	70	208	3,070	260	127	352	32	61	32	40
12	99	80	90	195	2,540	285	127	890	78	55	34	38
13	111	78	90	208	1,580	315	130	1,220	32	65	40	36
14	108	75	99	183	913	370	127	1,020	124	65	42	39
15	117	78	99	163	730	382	124	700	163	70	36	38
16	138	78	105	134	459	325	120	580	430	90	34	32
17	138	75	105	130	520	275	120	490	460	82	34	40
18	392	80	93	130	460	250	117	430	275	75	34	40
19	225	78	38	237	346	231	117	394	191	61	34	44
20	231	75	88	138	250	226	117	640	152	51	34	35
21	295	75	85	120	190	343	124	460	127	45	34	53
22	1,310	80	32	114	170	670	117	520	114	42	33	68
23	1,250	80	32	110	160	530	124	640	105	40	32	78
24	610	78	90	110	155	520	120	460	102	39	30	111
25	400	70	120	111	150	400	183	340	93	40	28	96
26	300	90	148	105	145	330	260	275	38	38	28	70
27	231	105	152	56	140	275	346	240	32	36	27	63
28	191	82	141	20	140	240	376	208	93	36	27	55
29	159	32	127	75		218	1,220	197	105	33	26	51
30	138	80	114	75	-----	208	1,030	163	105	32	26	45
31	120	-----	174	78	-----	204	-----	152	-----	32	26	-----
Total	7,376	2,489	2,957	13,937	13,804	10,582	5,693	15,331	4,150	1,703	1,007	1,564
Mean	238	83.0	95.4	450	493	341	223	494	138	54.9	32.5	52.1
Cfsm	0.352	0.122	0.141	0.665	0.728	0.504	0.329	0.730	0.204	0.081	0.048	0.077
In.	0.40	0.14	0.16	0.77	0.76	0.58	0.37	0.84	0.23	0.09	0.06	0.09

Calendar year 1965 : Max 5,860 Min 39 Mean 444 Cfsm 0.655 In. 8.96
 Water year 1965-66 : Max 3,070 Min 14 Mean 224 Cfsm 0.331 In. 4.48

Peak discharge (base, 5,600 cfs).--No peak above base.

3-3270. Mississinewa River at Peoria, Ind.

Location.--Lat 40°42'24", 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, upstream from mouth and 6½ miles southeast of Peru.

Drainage area.--810 sq mi.

Records available.--October 1952 to September 1966.

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

Average discharge.--14 years, 662 cfs.

Extremes.--Maximum discharge during year, 3,420 cfs Feb. 12 (gage height, 6.58 ft); minimum, 48 cfs Aug. 30 (gage height, 0.73 ft). 1952-66: Maximum discharge, 28,000 cfs June 11, 1958 (gage height, 19.26 ft, site then in use); minimum, 13 cfs Mar. 15, 1960; minimum daily, 24 cfs Mar. 14, 1960.

Remarks.--Records good except those for winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	92	146	108	528	96	230	252	1,010	197	123	54	53
2	89	135	104	2,200	120	279	248	960	185	139	63	52
3	79	128	108	2,640	120	338	238	880	175	114	66	53
4	75	122	106	2,460	115	462	218	618	165	59	69	53
5	72	118	102	1,720	115	655	208	466	158	69	61	58
6	74	116	98	950	110	695	200	395	152	91	58	60
7	79	114	93	695	110	532	196	327	149	96	57	53
8	83	113	96	675	115	394	191	354	151	100	55	64
9	80	108	94	462	158	324	189	362	170	95	55	117
10	76	108	93	372	330	285	182	506	225	95	65	98
11	82	102	98	200	2,050	292	176	414	167	98	76	81
12	96	100	106	180	3,340	324	172	596	138	97	87	70
13	105	102	131	270	2,740	366	170	1,170	124	98	67	62
14	96	102	142	230	1,500	390	166	1,330	120	101	74	66
15	100	99	137	200	950	442	162	985	157	105	82	113
16	111	98	133	150	795	426	162	760	210	99	73	102
17	113	100	131	140	510	366	162	627	525	95	69	69
18	122	96	131	130	564	313	158	537	514	99	66	59
19	282	98	124	130	502	292	158	466	344	102	65	66
20	252	98	118	238	376	276	153	490	234	97	61	81
21	238	98	116	178	279	261	173	640	191	81	63	130
22	400	96	114	152	250	470	173	510	166	72	62	110
23	1,430	99	113	142	232	795	168	591	147	68	62	91
24	1,000	99	114	140	215	690	173	660	133	67	60	96
25	591	98	168	130	205	582	167	510	121	67	57	133
26	418	99	230	125	200	458	202	410	112	62	55	133
27	310	121	200	120	191	383	298	332	105	63	54	114
28	248	174	191	115	187	327	375	285	99	63	53	97
29	210	129	176	76	-----	288	586	252	104	61	52	90
30	182	113	162	65	-----	276	1,240	225	119	59	50	83
31	162	-----	158	80	-----	261	-----	208	-----	57	51	-----
TOTAL	7,347	3,329	3,995	15,893	16,475	12,472	7,316	17,876	5,537	2,692	1,942	2,507
MEAN	237	111	129	513	588	402	244	577	185	86.8	62.6	83.6
CFSM	.293	.137	.159	.633	.726	.496	.301	.712	.228	.107	.077	.103
IN	.34	.15	.18	.73	.76	.57	.34	.82	.25	.12	.09	.12
CALENDAR YEAR 1965	MAX	6,580	MIN	58	MEAN	536	CFSM	.662	INCHES	8.98		
WATER YEAR 1965-66	MAX	3,340	MIN	50	MEAN	267	CFSM	.330	INCHES	4.47		

Peak discharge (base, 6,000 cfs).--No peak above base.

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 1966. 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.--23 years, 2,272 cfs.

Extremes.--Maximum discharge during year, 9,880 cfs Feb. 12 (gage height, 9.62 ft); minimum, 97 cfs Sept. 7, 8 (gage height, 1.79 ft).
1943-66: Maximum discharge, 68,000 cfs May 18, 1943 (gage height, 24.46 ft, from floodmark); minimum, 62 cfs Sept. 19, 1945; minimum gage height, 1.70 ft Oct. 5, 26, 1946.
Flood of Mar. 26, 1913, reached a stage of 28.1 ft (discharge, about 115,000 cfs, from rating curve extended above 63,000 cfs).

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	210	348	324	2,690	270	630	835	3,400	598	324	164	127
2	210	300	286	5,880	270	872	800	2,770	536	300	173	122
3	199	286	260	6,680	270	910	765	2,650	506	300	177	120
4	195	272	240	5,880	270	1,260	695	1,960	478	228	180	120
5	192	254	230	4,230	270	1,960	630	1,440	450	203	173	122
6	184	250	220	2,650	270	2,180	598	1,170	424	259	167	125
7	180	245	215	1,960	270	1,740	598	950	398	263	158	102
8	180	241	210	1,740	300	1,350	565	1,090	398	254	146	102
9	180	245	210	1,260	398	1,040	536	1,090	424	236	146	125
10	180	245	200	1,090	765	910	536	1,440	478	223	167	130
11	188	236	200	765	5,400	872	506	1,440	478	695	180	133
12	203	236	250	695	5,520	990	478	3,150	424	990	192	125
13	219	232	324	740	7,720	1,260	478	5,560	398	910	184	115
14	206	232	598	610	4,950	1,530	450	5,400	373	990	192	127
15	210	228	662	530	3,140	1,530	450	4,090	373	950	195	155
16	223	232	536	490	2,410	1,530	424	3,400	450	800	195	184
17	228	232	450	450	1,850	1,260	424	3,400	695	598	180	158
18	236	228	398	410	1,630	1,080	424	2,530	1,170	536	177	146
19	300	223	373	380	1,440	990	424	2,180	950	506	177	140
20	424	228	348	360	1,090	950	424	1,850	765	373	152	161
21	373	228	348	340	760	872	506	2,070	630	300	149	184
22	495	223	324	330	690	1,090	536	1,850	478	263	146	223
23	2,160	223	324	320	640	2,770	506	1,960	398	228	164	195
24	2,290	228	324	310	580	2,890	536	2,180	373	206	199	203
25	1,530	228	1,000	300	560	2,290	598	1,630	348	199	161	219
26	1,080	236	2,530	300	520	1,740	598	1,170	300	188	146	245
27	800	272	1,630	300	510	1,440	630	990	232	184	135	254
28	630	348	1,090	290	500	1,170	800	835	263	173	127	232
29	506	373	835	280	-----	1,040	1,080	765	268	177	120	223
30	424	348	695	280	-----	950	3,270	695	300	170	120	203
31	373	-----	662	270	-----	872	-----	662	-----	170	125	-----
Total	15,008	7,700	15,286	42,790	47,243	41,968	20,100	65,747	14,406	12,196	5,067	4,820
Mean	484	257	525	1,380	1,687	1,354	670	2,121	480	393	163	161
Cfsm	0.182	0.097	0.198	0.520	0.635	0.510	0.252	0.799	0.181	0.148	0.061	0.061
In.	0.21	0.11	0.23	0.60	0.66	0.59	0.28	0.92	0.20	0.17	0.07	0.07

Calendar year 1965: Max 18,000 Min 146 Mean 1,756 Cfsm 0.661 In. 8.96
Water year 1965-66: Max 9,520 Min 102 Mean 804 Cfsm 0.303 In. 4.11

Peak discharge (base, 18,000 cfs).--No peak above base.

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

Location.--Lat 40°59', long 85°46', in NE¼ sec. 5, T. 29 N., R. 7 E., on right bank, 200 ft downstream from Main Street Bridge at North Manchester and 1½ 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 1966. 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 23, 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.--37 years, 340 cfs.

Extremes.--Maximum discharge during year, about 2,700 cfs Dec. 26 (gage height, unknown); minimum, 31 cfs July 31, Aug. 1, 4-9 (gage height, 1.52 ft).

1929-66: Maximum discharge observed, 7,500 cfs Feb. 27, 1936 (gage height, 14.00 ft); minimum not determined, occurred Oct. 7, 1957, due to unusual regulation; minimum daily, 16 cfs Oct. 19, 1956.

Remarks.--Records good except those for winter period, which are poor. Diurnal fluctuation caused by grist mill above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	76	95	105	1,200	85	197	135	782	143	86	31	52
2	65	92	95	1,500	80	211	131	582	133	75	38	52
3	59	90	95	900	80	185	124	446	124	68	36	51
4	56	88	90	580	80	215	118	350	116	64	34	57
5	56	85	86	420	80	255	117	292	97	70	32	56
6	54	88	83	370	80	213	120	253	95	91	31	52
7	57	106	82	330	90	176	122	218	100	81	31	56
8	62	112	79	300	95	154	120	246	95	68	31	51
9	62	138	76	270	130	149	115	601	101	75	34	51
10	59	148	77	240	369	148	108	566	116	114	48	51
11	59	142	84	220	1,220	162	104	462	107	210	65	48
12	59	127	107	200	815	187	103	1,660	97	214	48	46
13	57	125	217	190	508	345	99	2,090	90	304	42	50
14	60	112	325	170	368	413	95	1,770	88	289	67	60
15	62	104	241	160	279	331	94	1,260	90	210	78	106
16	70	106	187	150	263	265	93	1,290	115	140	90	87
17	70	105	171	140	219	253	92	1,020	104	112	96	68
18	67	111	150	130	183	236	97	856	102	93	145	59
19	71	109	130	130	166	226	110	759	98	82	268	54
20	92	104	120	120	150	210	119	573	89	69	166	73
21	114	101	110	110	130	175	153	506	85	58	166	80
22	127	98	100	110	110	168	178	496	80	51	207	70
23	170	85	110	100	100	173	239	423	77	45	179	68
24	207	69	350	100	90	180	663	384	74	40	83	68
25	186	68	1,400	95	85	174	605	349	69	38	62	83
26	156	74	2,500	90	80	164	435	295	68	36	59	90
27	136	113	1,500	90	80	154	352	254	66	35	57	83
28	119	151	1,100	85	85	144	494	223	84	49	56	83
29	110	143	700	85	-----	139	748	200	122	45	54	87
30	106	122	520	85	-----	142	695	174	101	36	54	88
31	99	-----	680	85	-----	139	-----	161	-----	32	52	-----
TOTAL	2,803	3,211	11,670	8,755	6,100	6,283	6,778	19,541	2,926	2,980	2,440	1,980
MEAN	90.4	107	376	282	218	203	226	630	97.5	96.1	78.7	66.0
CFSM	.217	.257	.904	.678	.524	.488	.543	1.51	.234	.231	.189	.159
IN	.25	.29	1.04	.78	.55	.56	.61	1.75	.26	.27	.22	.18
CALENDAR YEAR	1965	MAX	2,960	MIN	50	MEAN	330	CFSM	.793	INCHES	10.76	
WATER YEAR	1965-66	MAX	2,500	MIN	31	MEAN	207	CFSM	.498	INCHES	6.75	

Peak discharge (base, 2,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-26	Unknown	Unknown	About 2,700				

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 1966. 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 Aug. 10, 1964 graphic water-stage recorder, at same site and datum.

Average discharge.--23 years, 683 cfs.

Extremes.--Maximum discharge during year, 3,820 cfs Dec. 26 (gage height, 7.22 ft); minimum, 90 cfs Sept. 14 (gage height, 2.86 ft). 1943-66: Maximum discharge, 13,100 cfs Jan. 5, 1950 (gage height, 11.80 ft); minimum, 65 cfs Mar. 16, 1960, result of freezeup (gage height, 2.60 ft).

Flood of May 18, 1943, reached a stage of 13.2 ft, from floodmark (discharge, 17,000 cfs, from rating curve extended above 9,900 cfs by logarithmic plotting).

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	140	160	237	2,160	180	376	244	1,270	326	188	115	104
2	138	156	218	2,380	180	415	237	1,120	314	163	116	103
3	138	150	206	1,690	180	380	230	820	293	150	113	102
4	129	148	198	1,220	180	371	220	642	278	141	111	100
5	125	146	194	947	180	415	213	535	262	141	109	96
6	123	146	188	802	180	415	210	467	248	157	107	95
7	125	146	182	707	180	348	217	415	237	155	106	96
8	125	153	177	622	180	297	217	484	230	152	104	95
9	125	169	174	571	246	274	217	629	234	142	104	95
10	125	174	171	526	385	266	210	956	226	145	122	94
11	131	194	182	441	1,450	278	201	828	220	208	138	93
12	131	201	197	400	1,570	318	191	1,620	217	238	135	93
13	125	194	229	350	956	415	188	2,740	201	342	130	92
14	123	180	365	330	696	584	183	2,410	188	416	128	96
15	123	177	484	300	553	584	180	2,040	183	458	125	105
16	120	169	404	290	462	489	177	1,570	204	325	132	118
17	120	163	333	270	395	425	174	1,790	217	243	135	128
18	125	160	290	260	357	385	171	1,350	207	205	143	113
19	125	158	262	250	335	367	180	1,210	194	327	257	106
20	129	163	246	240	293	348	194	988	183	202	189	114
21	131	160	236	240	266	331	244	820	171	161	157	113
22	185	160	226	230	240	314	297	752	163	146	136	118
23	266	156	218	220	220	314	385	696	156	139	142	115
24	285	153	293	210	210	326	752	612	148	135	126	108
25	281	153	2,270	210	200	314	1,010	616	143	132	124	111
26	266	160	3,560	200	200	297	812	553	136	127	118	113
27	234	188	2,770	200	200	281	655	501	134	124	114	120
28	207	223	2,100	200	210	262	703	457	131	125	111	117
29	188	258	1,410	190	-----	251	996	415	136	138	109	112
30	174	254	1,080	190	-----	248	1,080	380	191	132	106	109
31	166	-----	989	190	-----	251	-----	348	-----	120	104	-----
TOTAL	4,928	5,172	20,089	17,036	10,884	10,939	10,988	30,034	6,171	5,977	3,966	3,174
MEAN	159	172	648	550	389	353	366	969	206	193	128	106
CFSM	.201	.217	.819	.695	.492	.446	.463	1.23	.260	.244	.162	.134
IN	.23	.24	.94	.80	.51	.51	.52	1.41	.29	.28	.19	.15
CALENDAR YEAR 1965 MAX 5,520 MIN 112 MEAN 596 CFSM .754 INCHES 10.23												
WATER YEAR 1965-66 MAX 3,560 MIN 92 MEAN 354 CFSM .448 INCHES 6.08												

Peak discharge (base, 5,000 cfs).--No peak above base.

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 1965. 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.--43 years (1923-66), 3,128 cfs.

Extremes.--Maximum discharge during year, about 14,000 cfs Feb. 12 (gage height not determined); minimum, 162 cfs Sept. 5 (gage height, 2.52 ft).

1903-6, 1923-66: Maximum discharge, 89,800 cfs May 18, 1943 (gage height, 21.32 ft); minimum, 97 cfs Sept. 25, 1941; minimum daily, 135 cfs Sept. 26, 1941; minimum gage height, 2.27 ft July 23, 1936.

Maximum stage known, 25.3 ft Mar. 26, 1913, from floodmarks (discharge, 140,000 cfs, estimated).

Remarks.--Records good except those for winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	418	562	624	3,090	720	1,150	1,250	4,730	1,220	592	232	208
2	410	520	573	7,480	720	1,340	1,180	3,960	1,150	549	299	205
3	390	488	546	4,230	710	1,520	1,130	3,560	1,080	563	293	200
4	375	470	524	7,030	710	1,490	1,050	2,810	1,020	501	292	195
5	340	452	509	5,380	700	2,090	991	2,150	974	439	293	181
6	375	447	498	3,730	700	2,550	958	1,750	922	494	278	179
7	396	445	434	2,870	700	2,170	945	1,520	890	489	265	192
8	389	455	468	2,430	700	1,660	936	1,660	852	487	254	178
9	382	472	460	2,060	800	1,360	922	1,780	901	488	247	176
10	382	463	456	1,730	1,320	1,220	893	2,310	958	467	326	242
11	410	492	476	1,300	3,850	1,190	856	2,310	914	586	390	248
12	426	487	515	1,100	12,400	1,290	830	3,850	861	1,270	365	221
13	418	487	579	1,200	3,800	1,550	804	7,920	739	1,250	363	203
14	434	470	792	1,100	6,420	1,930	786	3,100	716	1,300	354	212
15	410	456	1,160	960	3,940	2,080	767	6,490	698	1,470	348	252
16	418	450	1,010	900	3,050	1,930	754	4,960	843	1,250	365	301
17	426	445	853	860	2,530	1,750	744	5,430	1,050	978	360	341
18	426	440	758	820	2,090	1,550	738	4,020	1,530	837	355	282
19	434	433	692	800	1,960	1,420	770	3,450	1,530	880	450	257
20	620	438	656	790	1,720	1,340	814	2,890	1,230	656	435	296
21	580	445	628	730	1,350	1,260	936	2,890	1,010	523	365	310
22	724	439	603	770	1,150	1,250	1,030	2,690	867	459	327	346
23	1,570	431	580	760	1,150	2,730	1,240	2,470	759	418	319	347
24	2,590	435	718	760	1,100	2,230	1,410	2,990	684	388	361	316
25	1,780	441	2,530	750	1,030	2,790	1,780	2,690	637	361	363	342
26	1,430	469	3,660	740	975	2,150	1,610	2,130	590	342	307	363
27	1,100	533	4,460	740	975	1,770	1,500	1,780	551	321	279	333
28	900	606	3,190	740	1,000	1,520	1,720	1,600	520	318	257	331
29	772	688	2,170	730	-----	1,350	2,110	1,440	508	331	242	356
30	677	676	1,660	730	-----	1,260	3,810	1,320	575	327	228	329
31	614	-----	1,550	720	-----	1,210	-----	1,220	-----	298	216	-----
Total	21,016	14,525	36,382	62,130	64,270	53,200	35,264	93,920	25,829	19,632	9,878	3,044
Mean	678	484	1,174	2,004	2,295	1,716	1,175	3,191	894	633	319	268
Cfsm	0.181	0.129	0.313	0.534	0.612	0.457	0.313	0.851	0.238	0.169	0.085	0.071
In.	0.21	0.14	0.36	0.62	0.64	0.53	0.35	0.98	0.27	0.19	0.10	0.08

Calendar year 1965: Max 26,400 Min 298 Mean 2,632 Cfsm 0.702 In. 9.40
 Water year 1965-66: Max 12,400 Min 176 Mean 1,233 Cfsm 0.329 In. 4.47

Peak discharge (base, 22,000 cfs).--No peak above base.

Note.--No gage-height record Feb. 8 to Mar. 3.

WABASH RIVER BASIN

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 1966. 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 19, 1942, wire-weight gage, and July 20, 1942 to May 18, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--27 years, 3,264 cfs.

Extremes.--Maximum discharge during year, 11,300 cfs Feb. 12 (gage height, 10.40 ft); minimum, 210 cfs Sept. 6, 9, 10 (gage height, 0.97 ft).

1939-66: Maximum discharge, 85,300 cfs May 19, 1943 (gage height, 25.60 ft); maximum gage height, 27.48 ft Feb. 11, 1959 (ice jam); minimum daily discharge, 158 cfs Sept. 19, 20, 1941.

Maximum stage known, 28.4 ft Mar. 26, 1913, from information by State Highway Commission (discharge, about 145,000 cfs, from rating curve extended above 82,000 cfs by logarithmic plotting).

Remarks.--Records good except those for winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	505	660	692	2,750	800	1,300	1,300	4,750	1,190	590	320	248
2	475	605	654	6,170	800	1,430	1,280	4,230	1,100	585	330	241
3	430	570	621	7,910	790	1,640	1,210	3,720	1,030	575	330	237
4	425	540	585	7,160	780	1,670	1,120	3,170	968	574	330	233
5	395	515	565	5,830	780	2,050	1,050	2,460	921	561	320	218
6	400	510	540	4,210	770	2,620	988	2,050	883	551	310	211
7	405	510	535	3,170	770	2,540	973	1,760	850	550	300	213
8	390	510	515	2,550	770	2,060	945	2,090	817	550	290	221
9	380	535	510	2,440	770	1,680	952	2,190	874	550	280	213
10	380	525	505	1,970	1,200	1,460	910	2,290	908	549	360	213
11	400	515	510	1,570	3,070	1,360	882	2,690	909	545	420	252
12	420	535	545	1,280	10,000	1,420	847	3,310	870	769	409	256
13	410	545	595	1,360	9,120	1,660	804	6,850	833	1,190	382	241
14	410	545	654	1,520	6,570	2,010	780	8,030	775	1,200	388	235
15	415	515	973	1,100	4,290	2,270	768	6,920	718	1,300	375	264
16	410	505	1,140	760	3,290	2,230	750	5,420	779	1,290	367	269
17	410	485	952	720	2,680	2,040	726	5,310	841	1,070	371	319
18	410	485	840	800	2,170	1,800	714	4,670	1,170	849	365	350
19	420	485	756	850	2,010	1,640	732	3,820	1,460	845	425	311
20	475	465	726	880	1,770	1,540	744	3,370	1,310	864	460	331
21	626	475	687	880	1,360	1,450	917	3,060	1,080	640	440	361
22	692	490	665	860	1,200	1,400	966	3,110	907	540	376	355
23	896	480	638	840	1,160	2,200	1,220	2,760	796	480	339	382
24	2,420	470	703	840	1,120	3,290	1,610	3,070	726	450	326	376
25	2,300	470	2,650	830	1,010	3,130	1,820	3,110	679	410	354	380
26	1,740	500	5,520	830	931	2,520	1,830	2,570	631	390	368	393
27	1,360	600	5,230	820	896	2,070	1,640	2,120	604	360	322	415
28	1,100	610	3,900	820	896	1,810	1,930	1,840	601	360	296	424
29	910	676	2,870	810	-----	1,600	2,260	1,620	592	370	277	410
30	792	726	2,190	810	-----	1,480	3,130	1,450	577	370	263	383
31	709	-----	1,990	800	-----	1,400	-----	1,300	-----	340	255	-----
TOTAL	21,910	16,057	40,456	64,140	61,773	58,770	35,798	105,110	26,419	20,267	10,748	8,955
MEAN	707	535	1,305	2,069	2,206	1,896	1,193	3,391	881	654	347	299
CFSM	.175	.133	.324	.513	.547	.470	.296	.841	.219	.162	.086	.074
IN	.20	.15	.37	.59	.57	.54	.33	.97	.24	.19	.10	.08
CALENDAR YEAR 1965	MAX	22,600	MIN	335	MEAN	2,537	CFSM	.629	INCHES	8.54		
WATER YEAR 1965-66	MAX	10,000	MIN	211	MEAN	1,289	CFSM	.320	INCHES	4.34		

Peak discharge (base, 24,000 cfs).--No peak above base.

3-3297. Deer Creek near Delphi, Ind.

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

Drainage area.--278 sq mi.

Records available.--October 1943 to September 1966. 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.--23 years, 226 cfs.

Extremes.--Maximum discharge during year, 590 cfs June 27 (gage height, 4.25 ft); minimum, 8.0 cfs Sept. 11-13.

1943-66: Maximum discharge, 14,400 cfs June 10, 1958 (gage height, 18.26 ft); minimum, 5.6 cfs Sept. 27, 1954.

Flood in May 1943 reached a stage of 19.8 ft, from floodmarks (discharge, 18,000 cfs, from rating curve extended above 8,000 cfs by logarithmic plotting).

Remarks.--Records good except those for winter period and those for period of no gage-height record, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	38	31	37	232	45	125	88	157	76	48	13	9.0
2	34	30	33	276	40	130	87	140	71	39	17	9.0
3	30	29	33	239	40	114	79	123	68	32	15	9.0
4	29	25	31	187	40	132	75	109	64	29	13	12
5	27	28	30	154	40	155	71	99	61	27	13	10
6	27	29	29	137	40	135	70	95	59	27	12	9.0
7	27	31	28	121	40	106	68	89	57	25	12	9.0
8	28	33	27	90	60	89	67	115	55	25	12	9.0
9	27	37	26	80	91	84	67	156	61	25	12	9.0
10	27	37	27	75	142	79	64	124	81	25	22	9.0
11	32	34	29	70	288	83	63	122	68	30	17	8.0
12	33	34	32	65	258	93	62	197	55	25	14	8.0
13	34	33	38	60	171	109	60	308	50	23	13	8.0
14	32	31	42	60	130	125	58	271	48	23	13	10
15	30	31	43	55	105	122	56	226	46	23	12	12
16	28	31	40	55	93	111	55	211	60	21	11	9.0
17	27	30	37	50	86	100	54	187	58	20	11	8.4
18	26	29	34	50	75	95	54	183	53	19	11	8.7
19	24	29	32	50	70	91	57	171	52	21	21	9.5
20	29	28	32	50	65	83	60	147	48	19	15	16
21	30	27	32	50	65	83	89	162	43	20	12	15
22	46	28	31	50	63	94	94	176	39	21	11	16
23	58	28	30	45	59	185	100	159	36	19	10	14
24	53	27	42	45	57	232	126	173	33	17	10	14
25	48	27	122	45	54	166	128	182	31	16	10	18
26	45	30	167	45	53	141	116	149	29	15	9.0	18
27	42	42	123	45	53	122	120	131	89	15	9.0	18
28	39	49	97	45	69	106	149	116	245	15	9.0	17
29	36	49	84	45	-----	98	174	102	120	13	9.0	17
30	33	42	76	45	-----	98	160	90	65	14	9.0	16
31	32	-----	90	45	-----	93	-----	82	-----	19	9.0	-----
TOTAL	1,051	969	1,554	2,661	2,392	3,579	2,571	4,752	1,921	710	386.0	354.6
MEAN	33.9	32.3	50.1	85.8	85.4	115	85.7	153	64.0	22.9	12.5	11.8
CFSM	.122	.116	.180	.309	.307	.414	.308	.550	.230	.082	.045	.042
IN	.14	.13	.21	.36	.32	.48	.34	.64	.26	.09	.05	.05

CALENDAR YEAR 1965 MAX 1,850 MIN 20 MEAN 165 CFSM .594 INCHES 8.04
WATER YEAR 1965-66 MAX 308 MIN 8.0 MEAN 62.7 CFSM .226 INCHES 3.06

Peak Discharge (base, 2,000 cfs).--No peak above base.

Note.--No gage-height record Aug. 2 to Sept. 14.

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 1966.

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.--17 years, 97.0 cfs.

Extremes.--Maximum discharge during year, 286 cfs Jan. 4 (gage height, 7.80 ft); minimum, 1.1 cfs Aug. 10 (gage height, 4.57 ft).
1949-66: Maximum discharge, 700 cfs Oct. 17, 1954 (gage height, 8.64); minimum, 1.1 cfs October (date unknown) 1964, Aug. 10, 1966; minimum gage height, 4.30 ft June 21, 22, 1965.

Remarks.--Records fair except those for period of no gage-height record, which are poor. Occasional regulation by flashboards at lake outlet.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	48	37	42	270	71	78	69	181	24	18	5.3	9.7
2	45	37	42	279	68	72	69	184	30	17	4.8	8.9
3	43	37	42	282	66	71	69	185	34	16	4.0	7.8
4	40	37	41	286	64	70	66	183	37	17	3.4	6.8
5	39	37	40	285	61	70	64	176	39	16	2.7	5.6
6	38	37	40	280	59	68	61	172	41	15	2.3	5.4
7	38	37	39	273	57	67	60	165	43	14	1.9	5.0
8	38	37	39	266	58	68	57	163	41	13	1.4	5.0
9	38	37	38	256	60	69	54	158	44	13	1.3	5.2
10	38	37	38	244	68	71	52	150	43	16	2.6	4.7
11	38	37	40	235	73	72	51	150	40	18	4.8	4.3
12	38	37	43	227	73	78	50	162	37	19	6.0	4.1
13	38	37	46	218	78	82	48	168	36	24	6.0	3.8
14	38	37	49	209	87	82	28	174	34	24	7.2	3.6
15	38	37	50	200	98	83	13	182	33	23	8.4	3.6
16	38	37	51	189	109	83	13	190	35	21	9.1	2.7
17	38	38	51	179	117	82	13	198	33	19	8.5	2.6
18	38	37	50	169	119	82	9.4	204	31	21	7.8	2.6
19	38	37	51	158	116	83	6.8	207	29	18	7.5	2.6
20	38	37	51	149	112	84	7.0	210	29	18	6.2	3.3
21	38	37	51	140	108	85	7.0	214	28	15	9.7	3.2
22	38	37	51	132	105	87	7.2	213	26	14	21	2.9
23	38	37	50	125	102	87	20	205	24	13	18	2.6
24	38	36	65	117	99	88	65	198	23	13	16	2.4
25	38	36	124	110	96	87	85	189	22	11	14	3.4
26	38	37	143	104	85	86	98	180	20	11	13	3.7
27	38	37	160	99	82	82	130	170	21	12	12	4.1
28	38	40	185	92	81	79	154	163	19	12	12	4.4
29	38	41	210	87	-----	76	161	155	19	11	11	4.1
30	38	42	231	81	-----	76	171	134	18	8.3	11	5.6
31	38	-----	252	76	-----	73	-----	76	-----	6.6	10	-----
TOTAL	1,203	1,121	2,405	5,817	2,372	2,421	1,758.4	5,459	933	486.9	248.9	133.7
MEAN	38.8	37.4	77.6	188	84.7	78.1	58.6	176	31.1	15.7	8.03	4.46
CFSM	.337	.325	.675	1.63	.737	.679	.510	1.53	.270	.137	.070	.039
IN	.39	.36	.78	1.88	.77	.78	.57	1.77	.30	.16	.08	.04
CALENDAR YEAR 1965 MAX 252 MIN 2.1 MEAN 101 CFSM .878 INCHES 11.97												
WATER YEAR 1965-66 MAX 286 MIN 1.3 MEAN 66.7 CFSM .580 INCHES 7.88												

Peak discharge (base, 200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-4	1000-2145	7.80	286				
5-21	1830	7.19	215				

Note.--No gage-height record Oct. 8 to Nov. 15.

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 1966. 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.--23 years, 760 cfs.

Extremes.--Maximum discharge during year, 3,120 cfs Dec. 27 (gage height, 12.13 ft); minimum, 86 cfs Sept. 14 (gage height, 4.45 ft). 1943-66: 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.--Records good except those for winter period, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	433	411	489	2,020	450	603	544	1,600	700	244	183	134
2	461	390	457	2,170	450	715	530	1,580	655	231	183	131
3	452	375	445	2,120	450	712	516	1,440	609	220	176	125
4	420	364	448	1,890	450	768	504	1,300	541	210	169	120
5	389	358	442	1,610	450	864	492	1,200	485	215	165	115
6	366	352	430	1,400	450	818	487	1,080	461	238	160	108
7	354	356	411	1,200	450	723	490	978	439	225	158	107
8	352	376	402	1,100	450	664	484	974	417	210	154	102
9	349	469	393	1,000	450	628	476	1,170	431	212	150	98
10	344	533	378	1,000	945	619	464	1,280	433	231	165	96
11	335	490	384	900	1,220	633	449	1,210	418	254	183	92
12	323	474	431	850	1,340	671	437	1,510	407	265	183	91
13	311	460	546	800	1,190	800	422	1,090	395	266	183	87
14	302	438	655	750	1,050	874	405	1,990	380	286	190	88
15	304	413	640	700	957	850	391	1,950	363	305	205	134
16	302	402	598	700	876	805	379	1,920	392	294	195	136
17	297	388	560	650	786	756	361	1,950	411	277	185	110
18	291	368	524	600	732	730	345	1,930	394	266	183	99
19	287	350	491	600	684	721	356	1,820	381	356	180	91
20	309	340	472	600	648	698	402	1,670	368	356	171	98
21	337	336	463	550	600	675	597	1,550	351	295	169	129
22	422	333	449	550	600	692	831	1,510	327	267	195	102
23	643	330	446	550	586	714	850	1,410	310	231	178	101
24	719	324	548	500	538	710	1,080	1,350	298	241	176	98
25	734	324	1,420	500	522	680	1,210	1,310	287	246	174	102
26	675	335	2,390	500	505	655	1,120	1,220	275	218	169	108
27	607	414	3,070	500	488	630	1,030	1,120	266	200	165	107
28	549	601	2,910	500	494	597	1,120	1,030	266	205	158	102
29	500	575	2,660	500	---	573	1,350	942	276	202	150	102
30	462	527	2,390	500	---	568	1,410	851	271	195	146	102
31	435	---	2,150	450	---	559	---	778	---	185	138	---
TOTAL	13,064	12,206	28,492	28,260	18,811	21,705	19,532	43,513	12,007	7,646	5,339	3,215
MEAN	421	407	919	912	672	700	651	1,404	400	247	172	107
CFSM	.502	.485	1.10	1.09	.801	.834	.776	1.67	.477	.294	.205	.128
IN	.58	.54	1.26	1.25	.83	.96	.87	1.93	.53	.34	.24	.14

CALENDAR YEAR 1965 MAX 3,070 MIN 217 MEAN 746 CFSM .889 INCHES 12.07
 WATER YEAR 1965-66 MAX 3,070 MIN 87 MEAN 586 CFSM .699 INCHES 9.48

Peak discharge (base, 2,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-27	1730	12.13	3,120				

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

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

Drainage area.--35.0 sq mi.

Records available.--July 1959 to September 1966.

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

Average discharge.--7 years, 21.6 cfs.

Extremes.--Maximum discharge during year, 354 cfs Dec. 25 (gage height, 6.15 ft); minimum, 1.5 cfs Sept. 17, 18 (gage height, 0.79 ft).
1959-66: 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.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	10	7.6	8.4	155	12	40	12	92	20	8.0	2.7	1.7
2	8.4	7.1	7.6	92	12	34	11	60	21	5.8	3.2	1.7
3	6.2	7.1	8.4	60	12	28	11	48	21	3.8	3.0	1.7
4	4.6	6.6	8.0	50	12	35	11	40	22	3.5	2.5	1.7
5	4.2	6.2	7.6	45	12	29	10	36	22	3.8	2.7	1.6
6	3.8	6.6	6.6	42	12	22	10	32	22	5.0	2.5	1.7
7	4.2	7.1	5.4	36	12	20	11	31	22	3.5	2.5	1.7
8	4.6	8.0	5.4	30	11	18	9.6	62	22	3.0	2.3	1.6
9	4.6	8.4	5.0	27	11	17	10	63	23	2.7	2.2	1.6
10	4.2	7.1	5.0	25	40	18	9.4	48	22	2.7	3.0	1.6
11	5.4	6.6	7.1	25	66	21	9.4	63	21	6.2	3.8	1.6
12	5.4	7.1	11	21	36	27	8.9	148	21	3.5	2.5	1.6
13	4.6	7.1	19	20	28	35	8.4	99	21	3.5	2.3	1.6
14	4.2	6.2	17	19	22	30	8.0	63	22	3.8	2.5	1.7
15	4.2	6.2	14	18	19	26	8.0	50	22	3.2	2.7	1.8
16	4.2	6.6	12	17	16	22	8.0	63	26	2.7	2.5	1.7
17	4.2	5.8	11	17	14	20	8.0	50	24	2.3	2.5	1.6
18	3.8	5.4	9.4	16	12	20	8.0	42	25	2.5	2.3	1.5
19	3.8	5.4	8.4	16	10	19	10	36	24	7.6	2.7	1.6
20	5.0	5.4	8.9	15	9.0	17	12	29	24	3.5	2.5	2.5
21	5.4	5.8	8.4	15	8.0	17	48	30	22	2.7	2.7	3.0
22	14	5.8	7.6	15	7.0	17	34	28	21	2.5	2.5	2.3
23	30	6.2	8.0	14	7.0	18	39	25	20	2.7	2.3	1.9
24	20	5.4	4.1	14	7.0	18	66	32	18	3.0	2.2	1.9
25	18	5.8	338	14	6.0	14	52	28	17	3.0	2.0	2.3
26	15	7.6	290	14	6.0	14	38	25	14	3.0	1.9	2.5
27	12	24	204	13	6.0	12	38	23	13	3.2	1.9	1.9
28	11	17	120	13	18	12	101	22	15	3.5	1.9	1.8
29	9.4	13	78	13	12	12	85	21	19	3.5	1.9	1.8
30	8.9	9.4	72	13	-----	12	92	20	11	3.2	1.9	1.8
31	8.4	-----	85	13	-----	12	-----	20	-----	2.7	1.8	-----
Total	251.7	233.6	1,437.2	897	443	656	786.9	1,429	617	113.6	75.9	55.0
Mean	8.12	7.79	46.4	28.9	15.8	21.2	26.2	46.1	20.6	3.66	2.45	1.83
Cfs/m	0.232	0.223	1.33	0.826	0.451	0.606	0.749	1.32	0.589	0.105	0.070	0.052
In.	0.27	0.25	1.53	0.95	0.47	0.70	0.84	1.52	0.66	0.12	0.08	0.06

Calendar year 1965 : Max 338 Min 1.3 Mean 23.0 Cfs/m 0.657 In. 8.95
Water year 1965-66 : Max 338 Min 1.5 Mean 19.2 Cfs/m 0.549 In. 7.45

Peak discharge (base, 250 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	1600	6.15	354				

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

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

Drainage area.--145 sq mi.

Records available.--August 1959 to September 1966.

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.--7 years, 119 cfs.

Extremes.--Maximum discharge during year, 2,750 cfs Dec. 25 (gage height, 15.14 ft, from floodmarks); minimum, 10 cfs Sept. 12, 13 (gage height, 1.37 ft).

1959-66: 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.--Records good except those for winter period, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	111	73	65	620	80	90	113	394	108	55	20	14
2	103	70	62	456	80	131	106	268	103	51	20	14
3	93	68	71	337	80	119	100	208	102	48	20	13
4	85	65	71	267	75	357	93	172	97	46	19	13
5	81	62	69	236	75	247	89	155	95	50	18	12
6	79	63	63	225	75	140	91	137	91	78	17	12
7	82	68	58	196	75	110	93	125	87	57	16	12
8	86	71	60	180	80	100	88	390	86	45	16	11
9	83	77	57	170	140	123	86	625	102	44	16	11
10	77	72	56	150	238	135	81	371	94	43	23	12
11	77	69	69	140	224	158	80	405	86	48	26	11
12	79	68	94	130	125	228	76	1,180	85	44	21	11
13	76	66	150	120	107	307	70	972	88	61	21	11
14	72	60	133	120	96	242	64	688	81	54	21	20
15	68	59	110	110	84	201	64	493	81	47	21	36
16	67	61	97	110	80	172	64	682	131	38	20	16
17	64	56	87	100	75	153	61	542	106	35	19	13
18	63	54	80	100	70	149	63	613	92	33	19	14
19	61	54	75	100	65	149	76	462	82	38	20	18
20	67	53	75	90	60	131	90	303	75	32	17	29
21	78	54	67	90	60	127	289	302	69	29	18	25
22	162	54	65	90	55	175	218	279	63	27	22	19
23	238	53	71	90	55	213	534	220	58	27	19	17
24	172	51	384	85	55	173	850	244	53	26	19	15
25	138	52	2,510	85	55	139	522	226	50	24	18	19
26	118	59	2,500	80	50	136	322	184	48	23	17	21
27	104	110	1,420	80	50	118	297	160	50	23	15	22
28	94	89	764	80	50	107	550	140	59	24	14	18
29	86	75	526	80	-----	110	493	125	74	23	14	18
30	83	70	540	80	-----	129	405	118	62	23	14	17
31	79	-----	626	80	-----	115	-----	111	-----	21	14	-----
TOTAL	2,926	1,956	11,075	4,877	2,414	4,984	6,128	11,294	2,458	1,217	574	494
MEAN	94.4	65.2	357	157	86.2	161	204	364	81.9	39.3	18.5	16.5
CFSM	.651	.450	2.46	1.08	.595	1.11	1.41	2.51	.565	.271	.128	.114
IN	.75	.50	2.84	1.25	.62	1.28	1.57	2.90	.63	.31	.15	.13

CALENDAR YEAR 1965	MAX	2,510	MIN	10	MEAN	164	CFSM	1.13	INCHES	15.35
WATER YEAR 1965-66	MAX	2,510	MIN	11	MEAN	138	CFSM	.952	INCHES	12.93

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	Unknown	15.14	2,750				
5-12	1700	10.05	1,290				

3-3325. Tippecanoe River near Monticello, Ind.

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

Drainage area.--1,710 sq mi.

Records available.--October 1931 to September 1966.

Average discharge.--35 years, 1,420 cfs.

Extremes.--Maximum daily discharge during year, 9,830 cfs Dec. 25; minimum daily, 131 cfs Sept. 10.
1931-65: Maximum daily discharge, 16,800 cfs June 13, 1958; minimum daily, 103 cfs July 27, 1934.

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

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1,600	521	636	5,690	702	1,200	1,110	3,660	1,300	584	326	153
2	1,000	521	850	4,770	703	1,450	1,060	3,190	1,110	488	219	293
3	1,000	521	735	4,210	695	1,490	1,090	2,800	1,130	573	218	217
4	600	523	751	3,890	751	1,930	916	2,210	916	521	261	196
5	1,000	636	751	3,170	636	1,940	916	2,120	1,060	369	348	283
6	1,000	603	718	3,030	653	1,940	916	1,930	972	434	283	196
7	750	686	636	2,700	751	1,430	1,060	1,720	916	521	239	174
8	700	685	686	2,310	702	1,430	916	2,840	734	391	261	153
9	700	702	587	2,090	867	1,340	916	3,030	980	413	196	174
10	650	751	817	2,190	1,490	1,260	916	2,700	916	391	304	131
11	650	784	653	1,680	2,310	1,340	916	2,850	850	521	326	283
12	600	768	768	1,430	2,310	1,680	916	4,710	867	521	322	153
13	650	768	916	1,630	1,960	2,030	869	4,760	916	371	326	261
14	700	702	1,130	1,970	1,700	2,000	791	4,250	751	521	239	218
15	700	702	1,110	1,800	1,500	1,810	791	4,240	746	413	304	326
16	700	751	1,150	1,330	1,430	1,720	791	4,240	916	391	304	391
17	700	521	916	1,020	1,430	1,650	791	3,790	817	369	261	304
18	400	702	916	1,090	1,170	1,430	634	3,750	916	466	326	239
19	300	521	882	916	1,110	1,600	969	3,640	916	521	304	304
20	300	718	867	916	1,090	1,430	981	3,120	570	304	283	348
21	300	521	735	1,220	801	1,290	1,930	2,860	857	521	283	261
22	429	636	867	1,290	980	1,540	1,950	2,820	632	413	347	326
23	521	521	751	1,150	1,150	1,480	2,350	2,440	567	369	283	282
24	521	637	1,740	1,090	916	1,510	3,060	2,420	565	369	283	174
25	603	521	3,830	901	1,020	1,340	2,900	2,160	686	233	283	304
26	521	636	3,910	835	850	1,220	2,390	2,040	521	478	261	283
27	521	751	2,670	916	734	1,300	2,310	1,940	521	261	239	304
28	751	734	2,150	686	980	1,130	3,500	1,590	456	261	239	348
29	686	916	3,560	669	-----	1,150	3,550	1,570	834	434	261	218
30	521	916	5,230	603	-----	1,170	3,640	1,530	371	283	218	325
31	521	-----	5,060	669	-----	1,060	-----	1,330	-----	261	283	-----
Total	20,595	19,925	67,978	57,741	31,441	42,330	45,745	83,250	24,359	13,016	3,630	7,612
Mean	664	664	2,193	1,863	1,123	1,495	1,525	2,847	812	420	278	254
Cfs/m	0.388	0.388	1.28	1.09	0.657	0.874	0.892	1.66	0.475	0.246	0.163	0.149
In.	0.45	0.43	1.48	1.26	0.68	1.01	1.00	1.91	0.53	0.28	0.19	0.17

Calendar year 1965: Max 9,830 Min 300 Mean 1,528 Cfs/m 0.894 In. 12.13
Water year 1965-66: Max 9,830 Min 131 Mean 1,183 Cfs/m 0.692 In. 9.39

3-3330. Tippecanoe River near Delphi, Ind.

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

Drainage area.--1,857 sq mi.

Records available.--March to December 1903, March to December 1904, March 1905 to July 1906, November and December 1908, July 1939 to September 1966. 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.--27 years (1939-66), 1,533 cfs.

Extremes.--Maximum discharge during year, 11,800 cfs Dec. 25 (gage height, 10.69 ft); minimum daily, 60 cfs Nov. 1, 2. 1903-6, 1908, 1939-66: Maximum discharge, 22,600 cfs Feb. 10, 1959 (gage height, 15.10 ft); minimum daily, 1 cfs Nov. 2, 3, 1954, caused by repair work at Oakdale Dam, 6½ miles upstream.

Remarks.--Records good except those for period of no gage-height record, which are fair. Flow regulated by powerplant above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1,390	60	706	5,590	1,200	1,350	1,330	3,800	1,470	400	529	301
2	1,320	60	1,030	4,500	812	1,620	1,100	3,200	1,480	500	633	367
3	1,250	61	735	4,160	764	1,560	1,200	3,000	1,220	600	329	288
4	945	733	857	3,590	920	2,030	1,050	2,100	1,180	550	329	286
5	625	753	799	3,380	692	2,170	1,040	2,200	1,460	400	572	388
6	629	689	1,020	3,040	869	1,810	1,050	2,100	1,190	400	330	258
7	660	776	573	2,970	943	1,550	1,100	1,800	1,150	550	330	194
8	833	797	705	2,310	724	1,490	1,040	3,100	908	400	363	194
9	843	874	776	2,270	1,080	1,380	1,040	2,800	1,330	400	384	194
10	830	895	893	2,400	1,620	1,360	1,040	2,900	1,110	500	440	195
11	817	726	738	1,840	2,420	1,410	1,040	2,900	862	500	559	406
12	667	913	814	1,550	2,570	2,020	1,040	4,800	1,090	650	474	197
13	581	884	1,080	1,770	2,060	2,140	949	5,000	1,100	950	316	405
14	596	776	1,390	2,080	1,810	2,040	868	4,500	800	600	354	356
15	632	821	1,010	2,040	1,700	2,150	985	4,000	450	486	477	420
16	699	784	1,360	1,310	1,410	1,780	857	4,500	1,200	486	597	570
17	699	650	1,030	1,330	1,630	1,770	858	4,100	903	691	304	199
18	466	886	966	1,270	1,110	1,580	697	3,900	1,080	613	686	352
19	185	455	957	1,080	1,230	1,770	1,010	3,600	1,080	696	469	363
20	192	808	968	1,070	1,080	1,380	1,060	2,960	700	673	476	502
21	175	575	887	1,300	954	1,390	2,000	3,020	850	603	306	439
22	132	800	802	1,460	1,050	1,690	2,000	2,980	600	683	435	284
23	141	442	799	1,250	1,320	1,640	2,400	2,500	900	554	433	266
24	127	810	1,710	1,110	1,040	1,670	3,000	2,710	450	555	371	230
25	100	494	10,200	1,090	988	1,390	3,100	2,260	800	423	460	523
26	89	817	8,290	849	994	1,370	2,400	2,290	700	636	294	406
27	82	848	6,410	1,080	960	1,390	2,200	2,090	450	329	373	271
28	76	961	5,870	955	1,100	1,240	3,800	1,790	500	496	416	443
29	68	887	5,380	808	-----	1,240	3,800	1,820	900	543	292	307
30	64	1,070	4,880	985	-----	1,380	4,000	1,550	700	532	291	270
31	63	-----	5,170	1,230	-----	1,100	-----	1,590	-----	334	413	-----
TOTAL	15,976	21,105	68,805	61,667	35,050	49,860	49,054	91,860	28,613	16,733	13,035	9,874
MEAN	515	704	2,220	1,989	1,252	1,608	1,635	2,963	954	540	420	329
CFSM	.277	.379	1.20	1.07	.674	.866	.881	1.60	.514	.291	.226	.177
IN	.32	.42	1.38	1.24	.70	1.00	.98	1.84	.57	.34	.26	.20
CALENDAR YEAR 1965	MAX	10,200	MIN	60	MEAN	1,673	CFSM	.901	INCHES	12.23		
WATER YEAR 1965-66	MAX	10,200	MIN	60	MEAN	1,265	CFSM	.681	INCHES	9.25		

Note.--No gage-height record Apr. 20 to May 20.

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 1966.

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.--5 years, 91.9 cfs.

Extremes.--Maximum discharge during year, 632 cfs Jan. 1 (gage height, 5.34 ft); minimum, 1.2 cfs Sept. 13; minimum gage height, 1.37 ft Aug. 29, Sept. 13.

1961-66: Maximum discharge, 4,160 cfs Apr. 20, 1964 (gage height, 11.80 ft); minimum, that of Sept. 13, 1966. Maximum stage known, about 18 ft March 1913, from information by local residents.

Remarks.--Records fair prior to July 10, poor thereafter.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	36	37	37	510	19	59	57	110	35	20	4.4	1.5
2	34	32	32	528	19	63	53	97	33	18	5.3	1.8
3	29	28	30	382	20	83	46	85	31	17	5.3	9.6
4	27	27	29	239	22	130	43	71	30	15	4.7	8.4
5	25	25	27	188	23	146	40	64	29	15	4.7	3.7
6	23	25	26	170	25	117	39	63	29	15	4.4	2.2
7	25	25	22	151	28	85	38	56	28	14	4.2	1.9
8	26	26	20	125	31	69	35	62	26	13	4.2	1.8
9	26	27	19	107	37	62	34	67	25	12	4.7	1.8
10	25	25	18	90	141	62	32	65	24	11	5.6	1.5
11	26	24	18	79	500	66	31	67	21	11	6.6	1.5
12	33	25	23	71	351	73	32	172	20	10	5.9	1.5
13	47	25	43	64	228	79	30	197	19	9.7	2.3	1.4
14	45	23	55	56	175	86	28	162	19	9.2	2.6	1.2
15	41	22	49	51	149	86	27	137	119	8.8	3.0	1.6
16	57	23	42	48	115	76	26	126	246	8.4	4.7	1.6
17	58	23	38	44	96	69	26	112	228	8.0	4.2	1.5
18	46	22	34	40	82	68	26	109	153	8.4	3.9	1.5
19	40	21	30	37	64	65	28	112	112	9.2	3.7	1.9
20	39	20	30	35	50	54	29	94	85	8.8	3.2	4.2
21	46	20	31	32	46	69	35	92	66	7.6	3.0	4.7
22	75	21	26	30	43	119	37	90	53	6.9	2.8	3.4
23	89	21	22	28	40	114	36	85	46	6.6	2.6	2.8
24	91	20	22	26	38	112	42	87	40	6.2	2.4	2.4
25	97	19	55	25	36	94	84	73	34	5.6	2.1	2.8
26	95	20	106	24	35	88	79	65	29	5.0	1.8	3.4
27	77	57	83	22	32	75	77	62	26	5.3	1.6	2.8
28	61	92	63	21	38	64	103	58	26	5.6	1.5	2.4
29	50	61	52	20	-----	61	117	49	25	5.3	1.4	2.1
30	43	45	49	19	-----	65	116	42	23	5.0	1.5	1.8
31	40	-----	60	19	-----	58	-----	38	-----	4.7	1.5	-----
TOTAL	1,472	881	1,191	3,281	2,483	2,527	1,426	2,769	1,780	305.9	117.8	80.8
MEAN	47.5	29.4	38.4	106	88.7	81.5	47.5	89.3	57.3	9.87	3.80	2.69
CFSM	.321	.199	.260	.716	.599	.551	.321	.603	.401	.067	.026	.010
IN	.37	.22	.30	.82	.62	.63	.36	.70	.45	.08	.03	.02

CALENDAR YEAR 1965 MAX 1,260 MIN 4.2 MEAN 94.0 CFSM .635 INCHES 8.63
 WATER YEAR 1965-66 MAX 528 MIN 1.4 MEAN 50.2 CFSM .339 INCHES 4.60

Peak discharge (base, 1,200 cfs).--No peak above base.

3-3336. Kokomo Creek near Kokomo, Ind.

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

Drainage area.--24.3 sq mi.

Records available.--July 1959 to September 1966.

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.--7 years, 15.2 cfs.

Extremes.--Maximum discharge during year, 112 cfs Jan. 1 (gage height, 3.36 ft); minimum, 0.4 cfs Aug. 29 (gage height, 1.44 ft).
1959-66: Maximum discharge, 1,040 cfs Apr. 20, 1964 (gage height, 9.88 ft); minimum, 0.3 cfs Oct. 4-7, 1964, Aug. 31, Sept. 4, 7, 8, 1965; minimum gage height, 1.30 ft Aug. 12, 27, 1959.

Remarks.--Records fair above 10 cfs except for winter period and discharges below 10 cfs, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	2.6	6.3	8.9	9.4	3.2	8.2	9.7	20	9.5	4.2	0.40	0.50
2	2.3	5.7	7.9	6.9	3.2	7.7	8.8	18	8.8	3.7	.60	.70
3	2.3	5.5	7.7	4.9	3.2	9.8	7.7	16	8.2	3.5	.40	9.4
4	2.3	5.0	7.1	3.6	3.3	17	7.7	14	7.9	3.3	.40	6.5
5	3.2	5.0	6.8	30	3.5	18	7.1	13	7.7	3.0	.40	1.1
6	2.5	4.8	6.3	26	3.8	13	6.8	13	7.9	3.5	.40	.50
7	2.5	5.0	5.5	22	4.5	9.8	6.8	11	7.4	3.0	.40	.50
8	3.8	5.5	5.0	16	5.6	8.2	6.3	13	6.8	2.7	.50	.50
9	2.8	5.7	5.0	14	7.6	7.9	6.3	12	6.5	2.5	.70	.50
10	2.5	5.5	5.0	12	21	8.2	5.7	10	5.5	2.3	1.1	.50
11	3.7	5.0	5.3	10	4.8	9.1	5.7	12	5.0	2.3	1.2	.50
12	4.7	5.0	6.8	9.0	30	10	6.0	29	4.6	2.3	.90	.60
13	5.0	5.0	9.1	8.4	23	11	5.5	31	4.4	1.9	.80	.60
14	5.0	5.0	9.8	7.7	17	12	5.3	26	11	2.2	.80	.70
15	4.6	4.8	9.1	7.2	14	12	5.0	23	13	1.9	.80	.80
16	10	5.0	8.2	6.8	12	10	5.3	22	6.8	1.8	.60	.70
17	10	5.0	7.7	6.5	9.8	9.8	5.0	20	4.5	1.6	.70	.70
18	8.5	4.8	7.1	6.1	8.3	9.5	5.3	45	28	1.6	.50	.70
19	7.4	4.6	6.5	5.9	7.1	8.8	5.7	44	19	1.8	.70	1.0
20	7.1	4.6	7.1	5.6	6.3	7.7	5.5	30	13	1.1	.50	1.9
21	8.2	4.6	6.8	5.3	5.8	1.4	14	27	12	1.1	.60	1.2
22	9.5	4.6	6.0	4.9	5.5	25	13	25	9.4	1.2	.70	.90
23	11	4.6	5.5	4.6	5.3	24	12	22	8.3	1.5	.50	.80
24	12	4.4	5.7	4.4	5.0	21	14	20	7.2	1.1	.50	.70
25	14	4.2	19	4.1	4.9	17	17	17	6.5	.60	.50	1.4
26	13	4.6	21	3.9	4.8	16	15	15	5.7	.60	.50	1.0
27	11	30	17	3.7	4.8	13	17	15	5.3	.60	.50	.80
28	9.5	23	13	3.5	6.3	11	21	14	5.0	.60	.50	.70
29	7.9	15	12	3.4	-----	11	22	12	5.3	.70	.40	.70
30	7.4	11	11	3.3	-----	12	23	10	4.8	.50	.40	.80
31	7.1	-----	18	3.3	-----	9.8	-----	9.8	-----	.40	.50	-----
TOTAL	203.4	208.8	276.9	485.6	276.8	368.9	295.2	608.8	356.7	59.10	18.40	37.90
MEAN	6.56	6.96	8.93	15.7	9.89	11.9	9.84	19.6	11.9	1.91	.59	1.26
CFSM	.270	.286	.368	.646	.407	.490	.405	.807	.490	.079	.024	.052
IN	.31	.32	.42	.74	.42	.56	.45	.93	.55	.09	.03	.06

CALENDAR YEAR 1965	MAX 265	MIN .40	MEAN 15.8	CFSM .650	INCHES 8.82
WATER YEAR 1965-66	MAX 94	MIN .40	MEAN 8.76	CFSM .361	INCHES 4.89

Peak discharge (base, 260 cfs).--No peak above base.

3-3337. Wildcat Creek at Kokomo, Ind.

Location (revised).--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 1966.

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

Average discharge.--11 years, 200 cfs.

Extremes.--Maximum discharge during year, 846 cfs June 15 (gage height, 4.01 ft); minimum, 11 cfs Aug. 28 (gage height, 0.99 ft). 1955-66: Maximum discharge, 8,100 cfs Feb. 10, 1959 (gage height, 10.83 ft); minimum, 5.0 cfs Sept. 30, 1956; minimum gage height, 0.94 ft Sept. 7, 1964.

Remarks.--Records fair except for periods of no gage-height record or the winter period, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	61	57	66	450	39	117	98	184	61	43	26	25
2	53	63	56	775	40	122	93	153	58	35	46	26
3	43	76	53	690	41	140	86	133	55	29	24	130
4	36	88	50	534	43	165	79	119	51	28	23	49
5	35	87	49	398	46	178	70	96	46	39	23	27
6	31	110	48	326	54	145	51	101	59	36	19	31
7	33	103	47	278	67	130	42	92	59	31	16	33
8	32	114	46	234	103	120	41	157	52	29	22	30
9	27	112	45	194	128	108	37	110	51	25	22	30
10	24	86	44	165	200	103	36	93	55	22	49	28
11	73	50	45	116	330	110	42	147	39	40	28	22
12	53	42	64	108	520	116	41	218	30	29	25	28
13	41	38	54	100	525	120	39	389	37	39	21	30
14	42	33	68	90	466	120	38	322	50	31	19	37
15	63	33	79	83	368	120	37	255	194	30	23	37
16	67	34	73	76	247	113	34	234	380	26	25	29
17	69	30	65	69	207	108	31	199	489	20	24	28
18	68	30	58	64	178	103	36	223	302	49	25	22
19	57	31	53	58	147	94	42	211	185	67	24	44
20	59	32	57	54	114	100	71	174	127	26	21	66
21	59	31	56	52	100	170	73	189	106	26	21	34
22	86	31	53	49	92	190	50	150	88	25	30	31
23	86	31	52	46	86	203	57	139	77	22	25	29
24	117	31	74	44	80	177	62	156	68	18	24	27
25	106	31	97	42	80	155	62	127	59	24	24	52
26	116	59	109	40	81	140	120	110	51	26	24	31
27	105	86	132	39	87	124	171	100	52	25	19	32
28	89	96	119	38	105	113	127	94	60	35	15	30
29	74	109	99	37	-----	110	187	77	65	28	19	30
30	63	84	86	37	-----	107	197	67	50	23	21	28
31	56	-----	153	38	-----	105	-----	65	-----	18	25	-----
TOTAL	1,924	1,838	2,150	5,324	4,574	4,026	2,150	4,884	3,056	944	782	1,076
MEAN	62.1	61.3	69.4	172	163	130	71.7	158	102	30.5	25.2	35.9
CFSM	.254	.250	.283	.702	.665	.531	.293	.645	.416	.125	.103	.147
IN	.29	.28	.33	.81	.69	.61	.33	.74	.46	.14	.12	.16

CALENDAR YEAR 1965 MAX 2,460 MIN 24 MEAN 154 CFSM .629 INCHES 8.52
 WATER YEAR 1965-66 MAX 775 MIN 15 MEAN 89.7 CFSM .366 INCHES 4.97

Peak discharge (base, 2,100 cfs).--No peak above base.

Note.--No gage-height record Feb. 27 to Apr. 5.

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 1966. 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.--23 years, 351 cfs.

Extremes.--Maximum discharge during year, 1,060 cfs Jan. 3 (gage height, 4.16 ft); minimum, 30 cfs Aug. 31, Sept. 1 (gage height, 0.95 ft).

1943-66: 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.--Records good above 45 cfs, fair below.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	116	116	173	479	62	217	193	326	126	84	38	31
2	146	101	148	871	64	217	182	298	120	73	37	33
3	101	107	131	992	66	213	179	265	113	62	44	34
4	85	116	121	808	70	256	169	236	106	55	49	68
5	74	133	101	600	75	312	150	217	99	50	40	107
6	74	137	98	474	80	336	141	193	91	51	37	51
7	74	160	90	394	83	276	114	185	91	58	36	38
8	78	166	89	332	107	236	103	194	111	54	36	36
9	74	175	87	298	140	209	99	246	102	49	35	37
10	72	173	83	266	240	191	106	212	88	50	46	38
11	74	166	83	235	597	191	98	192	86	49	69	40
12	142	109	89	210	824	198	98	278	85	44	50	38
13	133	90	120	180	722	213	103	367	68	54	49	35
14	104	85	140	160	519	220	96	463	64	48	51	36
15	96	74	141	150	405	223	94	396	81	53	40	42
16	118	75	150	130	336	226	91	349	235	46	44	41
17	106	83	144	120	296	212	85	325	450	43	41	40
18	121	75	140	110	277	199	78	321	400	42	39	34
19	114	73	126	110	251	193	78	325	327	40	37	35
20	111	78	120	100	207	173	88	304	243	80	38	38
21	103	75	119	90	177	184	149	295	192	61	39	71
22	150	68	119	85	150	312	201	300	163	50	37	54
23	188	64	112	80	140	339	157	263	137	45	35	43
24	171	64	112	75	135	374	172	259	117	42	35	37
25	210	62	183	72	135	337	187	277	105	40	37	39
26	210	69	281	70	134	302	174	236	96	37	39	43
27	210	132	256	68	134	262	232	213	79	38	34	52
28	198	228	251	66	144	234	325	193	76	39	35	39
29	175	203	223	66	-----	214	297	177	80	41	35	39
30	152	203	199	62	-----	209	325	155	89	47	32	37
31	133	-----	204	62	-----	202	-----	136	-----	43	30	-----
TOTAL	3,913	3,460	4,433	7,815	6,570	7,480	4,564	8,196	4,300	1,566	1,268	1,306
MEAN	126	115	143	252	235	241	152	264	143	50.5	40.9	43.5
CFSM	.323	.295	.367	.646	.603	.618	.390	.677	.367	.130	.105	.112
IN	.37	.33	.42	.75	.63	.71	.44	.78	.41	.15	.12	.12

CALENDAR YEAR 1965 MAX 2,460 MIN 32 MEAN 273 CFSM .700 INCHES 9.51
 WATER YEAR 1965-66 MAX 992 MIN 30 MEAN 150 CFSM .385 INCHES 5.23

Peak discharge (base, 3,000 cfs).--No peak above base.

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

Location.--Lat 40°25'04", long 86°46'05", in SW $\frac{1}{4}$ 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, $\frac{1}{4}$ miles upstream from mouth, and 5 miles east of Lafayette.

Drainage area.--246 sq mi.

Records available.--October 1943 to September 1966. 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.--23 years, 226 cfs.

Extremes.--Maximum discharge during year, 944 cfs Feb. 11 (gage height, 4.26 ft); minimum, 17 cfs Sept. 12 (gage height, 1.30 ft). 1943-66: Maximum discharge, 12,600 cfs June 10, 1958 (gage height, 15.28 ft), from rating curve extended above 6,000 cfs on basis of contracted-opening measurement at 16.8 ft; minimum, 15 cfs Sept. 18, 19, 22, 1944. Flood in May 1943 reached a stage of 16.8 ft, from floodmarks (discharge, 17,900 cfs, by contracted-opening method).

Remarks.--Records good except for the winter period, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	104	67	86	534	55	137	109	272	95	55	30	21
2	107	65	79	664	55	160	108	225	92	51	29	21
3	104	63	76	495	55	157	102	199	88	49	30	21
4	93	61	74	358	55	204	95	177	85	46	29	21
5	86	60	71	286	57	247	92	161	81	49	27	21
6	80	63	68	251	60	203	90	153	79	72	26	20
7	78	65	65	219	66	158	89	144	79	57	26	19
8	77	65	63	178	80	134	87	148	77	52	26	20
9	76	78	61	150	110	127	86	158	74	44	26	20
10	72	72	62	125	225	127	82	144	69	41	38	20
11	78	69	65	110	832	130	80	141	64	41	47	19
12	91	65	70	100	537	135	83	200	60	40	42	18
13	96	63	87	92	331	139	82	261	60	42	34	18
14	102	63	115	86	251	138	78	251	92	44	37	18
15	98	60	115	82	198	139	75	222	86	49	35	22
16	94	62	105	76	177	134	74	204	335	42	29	20
17	85	60	96	74	162	125	73	188	345	36	28	20
18	78	58	89	70	146	123	71	198	227	34	27	20
19	74	57	84	68	135	121	76	186	164	32	26	26
20	78	57	81	65	103	112	81	163	131	31	26	39
21	80	56	82	62	97	118	158	169	112	30	25	56
22	131	56	80	60	90	143	194	168	98	29	24	37
23	178	57	75	58	86	144	163	153	87	29	23	27
24	128	55	76	58	84	149	169	159	79	29	23	22
25	107	55	137	57	80	140	233	156	72	34	22	25
26	94	59	239	56	80	134	226	158	66	28	21	26
27	85	109	199	55	81	127	225	141	60	28	22	30
28	81	132	162	55	87	117	360	132	59	31	22	24
29	76	116	139	55	-----	113	383	120	58	39	21	23
30	72	97	128	55	-----	118	318	108	57	56	21	23
31	69	-----	135	55	-----	115	-----	100	-----	37	21	-----
TOTAL	2,852	2,065	3,064	4,709	4,375	4,368	4,142	5,359	3,131	1,277	863	717
MEAN	92.0	68.8	98.8	152	156	141	138	173	104	41.2	27.8	23.9
CFSM	.374	.280	.402	.618	.634	.573	.561	.703	.423	.168	.113	.097
IN	.43	.31	.46	.71	.66	.66	.63	.81	.47	.19	.13	.11

CALENDAR YEAR 1965	MAX	2,510	MIN	33	MEAN	188	CFSM	.764	INCHES	10.38
WATER YEAR 1965-66	MAX	832	MIN	18	MEAN	101	CFSM	.411	INCHES	5.58

Peak discharge (base, 3,000 cfs).--No peak above base.

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 1966.

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.--12 years, 687 cfs.

Extremes.--Maximum discharge during year, 1,950 cfs Feb. 11 (gage height, 6.02 ft); minimum discharge, 49 cfs Sept. 3, 4 (gage height, 2.22 ft).

1954-66: 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.--Records good except for the winter period, which are fair. There is evidence of minor regulation or diversion above the gage.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	340	260	340	1,160	170	422	360	770	275	178	78	54
2	340	245	305	1,610	170	512	360	670	275	175	76	51
3	305	245	275	1,690	170	468	340	580	260	145	70	51
4	275	245	260	1,320	170	558	320	535	245	129	90	51
5	260	260	245	1,080	180	670	305	490	245	129	78	122
6	245	275	230	870	190	670	290	468	230	148	71	103
7	245	275	215	770	200	558	275	422	215	129	68	70
8	245	305	215	670	220	468	260	445	230	135	68	56
9	230	305	215	580	300	422	260	490	230	116	70	56
10	230	320	200	500	450	400	245	468	215	109	88	56
11	230	305	215	430	1,690	400	245	445	197	111	145	61
12	260	305	215	370	1,460	400	245	558	189	103	137	61
13	320	245	245	330	1,200	422	245	720	175	101	114	58
14	320	230	320	310	920	445	245	870	200	114	106	56
15	290	215	320	290	770	445	230	770	192	103	103	70
16	275	215	305	270	625	445	230	670	468	106	96	76
17	275	215	305	260	558	422	230	670	820	119	86	80
18	260	215	290	240	512	400	215	670	770	86	83	68
19	260	200	275	230	490	380	215	625	625	80	83	83
20	260	200	275	220	380	360	245	580	445	86	73	111
21	260	200	260	210	340	360	340	580	360	119	70	135
22	360	197	260	200	320	512	512	580	305	103	70	153
23	512	186	245	190	320	580	422	512	290	86	66	106
24	445	183	260	190	305	625	422	512	245	80	61	88
25	380	183	400	180	290	580	535	535	215	93	63	90
26	360	194	670	170	275	558	535	490	200	70	66	93
27	360	305	580	170	275	490	558	445	189	70	63	114
28	360	445	512	170	290	422	820	400	169	76	61	98
29	340	400	468	170	-----	400	870	360	175	86	58	86
30	305	360	422	170	-----	400	770	320	178	103	56	93
31	290	-----	445	170	-----	400	-----	290	-----	93	56	-----
Total	9,437	7,733	9,787	15,190	13,240	14,594	11,144	16,940	3,827	3,381	2,473	2,440
Mean	304	258	316	490	473	471	371	546	294	109	79.8	81.3
Cfsm	0.384	0.326	0.399	0.619	0.598	0.595	0.469	0.690	0.372	0.138	0.101	0.103
In.	0.44	0.36	0.46	0.71	0.62	0.69	0.52	0.80	0.42	0.16	0.12	0.12

Calendar year 1965 : Max 6,100 Min 89 Mean 613 Cfsm 0.775 In. 10.52
 Water year 1965-66 : Max 1,690 Min 51 Mean 316 Cfsm 0.399 In. 5.42

Peak discharge (base, 6,300 cfs).--No peak above base.

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 1966. 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.--43 years (1923-66), 6,142 cfs.

Extremes.--Maximum discharge during year, 14,600 cfs Feb. 13 (gage height, 9.82 ft); minimum, 505 cfs Sept. 10, 11; minimum gage height, 0.55 ft Sept. 11.

1901-3, 1923-66: Maximum discharge, 131,000 cfs May 19, 1943 (gage height, 28.47 ft); minimum, 265 cfs Jan. 12, 1954; minimum gage height, 0.24 ft Aug. 15, 18, 1901.

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

Remarks.--Records good. Flow regulated at low stages by powerplants upstream. Records of suspended sediment loads for water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,170	1,190	2,300	2,370	1,700	3,230	3,230	9,720	3,370	1,400	730	730
2	2,300	1,140	2,040	11,600	1,700	3,650	3,230	9,040	3,230	1,400	1,090	650
3	2,170	1,040	1,920	13,800	1,700	4,100	2,950	7,850	2,950	1,450	770	690
4	1,920	1,040	1,920	13,200	1,700	4,250	2,950	6,890	2,820	1,450	690	610
5	1,560	1,800	1,800	11,400	1,700	5,300	2,820	5,930	2,820	1,450	690	650
6	1,290	1,800	1,920	9,210	1,700	5,150	2,690	5,450	2,690	1,240	860	690
7	1,340	1,560	1,680	7,690	1,700	5,150	2,690	4,550	2,690	1,190	690	575
8	1,340	1,690	1,560	6,250	1,900	4,550	2,560	5,300	2,430	1,340	650	540
9	1,450	1,800	1,800	5,450	2,100	3,950	2,560	4,090	2,430	1,190	730	540
10	1,450	1,920	1,450	5,450	2,900	3,510	2,560	5,930	2,690	1,240	730	505
11	1,560	1,920	1,800	4,400	5,930	3,650	2,430	5,090	2,430	1,450	950	610
12	1,560	1,800	1,560	4,250	11,600	3,800	2,430	7,370	2,300	1,290	1,040	650
13	1,450	1,800	2,040	3,650	13,400	4,400	2,430	11,100	2,430	2,170	995	575
14	1,400	1,800	2,300	4,100	10,700	4,850	2,170	15,200	2,170	2,170	860	730
15	1,340	1,800	2,820	4,400	7,850	5,000	2,300	12,500	2,170	2,170	950	815
16	1,340	1,560	2,690	3,510	6,090	5,000	2,170	10,700	2,690	2,040	815	905
17	1,340	1,680	2,820	2,950	5,150	4,700	2,040	10,400	2,820	1,920	1,040	730
18	1,340	1,290	2,430	2,690	4,550	4,400	2,040	9,720	3,090	1,800	860	690
19	1,040	1,680	2,300	2,400	4,250	4,100	1,920	3,870	3,370	1,680	1,190	860
20	950	1,240	2,170	2,200	3,650	3,800	2,430	7,690	3,230	1,680	995	905
21	995	1,680	2,170	2,400	3,370	3,650	3,370	7,050	2,560	1,560	995	1,040
22	1,190	1,290	1,920	2,600	2,170	3,800	3,950	7,210	2,430	1,290	815	995
23	1,680	1,560	2,170	2,350	2,950	4,550	4,250	6,250	2,300	1,190	905	815
24	2,170	1,240	2,170	2,100	2,950	5,610	5,450	6,570	1,920	1,090	815	815
25	3,230	1,560	2,220	1,900	2,690	5,770	5,930	6,410	1,800	1,040	770	905
26	2,690	1,400	14,000	1,800	2,690	5,150	5,610	6,090	1,680	905	860	995
27	2,300	1,800	12,800	1,800	2,300	4,550	5,000	5,150	1,680	995	730	950
28	1,920	2,430	10,900	1,800	2,560	4,100	5,770	4,850	1,450	905	815	905
29	1,680	2,040	9,380	1,800	-----	3,650	7,690	4,100	1,920	815	690	1,040
30	1,450	2,430	7,850	1,750	-----	3,650	7,530	3,800	2,040	905	690	860
31	1,290	-----	7,850	1,700	-----	3,510	-----	3,510	-----	905	650	-----
Total	50,905	44,970	120,750	149,470	113,650	134,530	105,150	225,380	74,600	43,320	25,060	22,970
Mean	1,642	1,632	3,895	4,822	4,059	4,340	3,505	7,270	2,487	1,397	841	766
Cfsm	0.227	0.225	0.538	0.665	0.560	0.599	0.484	1.00	0.343	0.193	0.116	0.106
In.	0.26	0.25	0.62	0.77	0.58	0.69	0.54	1.15	0.38	0.22	0.13	0.12

Calendar year 1965: Max 36,000 Min 950 Mean 5,265 Cfsm 0.726 In. 9.85
 Water year 1965-66: Max 14,000 Min 505 Mean 3,057 Cfsm 0.422 In. 5.71

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 1966.

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

Average discharge.--11 years, 234 cfs.

Extremes.--Maximum discharge during year, 2,130 cfs Dec. 25 (gage height, 7.7 ft, from graph based on gage readings); minimum daily, 7.5 cfs Sept. 12, 13, 14, 30, may have been less during periods of no gage-height record.
1955-66: Maximum discharge, 12,600 cfs Feb. 10, 1959 (gage height, 16.00 ft from floodmark), from rating curve extended above 6,000 cfs on basis of contracted-opening measurement; minimum daily, 7.0 cfs Oct. 10, 1956.

Remarks.--Records poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	114	105	95	580	55	160	212	770	180	24	14	35
2	102	90	80	670	57	270	212	580	163	24	14	35
3	93	82	72	720	60	422	191	490	149	24	12	35
4	92	82	72	720	64	340	170	422	149	13	12	35
5	85	80	69	670	70	300	155	380	146	13	12	35
6	70	80	64	580	90	264	145	340	129	93	11	35
7	62	73	64	512	110	240	140	320	103	73	11	35
8	80	73	60	445	160	235	130	300	85	53	11	35
9	90	80	56	400	220	225	120	235	116	42	11	35
10	85	74	60	340	320	212	115	212	129	36	14	35
11	83	70	117	250	380	191	110	225	105	32	23	30
12	102	66	160	215	463	193	174	300	90	32	25	75
13	117	66	149	190	300	252	117	320	73	31	22	75
14	132	64	146	170	203	280	95	320	92	23	13	75
15	114	53	133	155	174	264	92	300	60	20	17	10
16	90	53	132	140	145	235	90	280	225	13	17	12
17	83	53	120	130	133	225	95	280	170	17	16	11
18	83	53	103	115	130	225	83	340	100	16	16	10
19	83	56	102	100	120	222	86	360	80	16	15	98
20	90	56	95	90	115	193	150	320	72	15	15	14
21	103	56	83	80	110	180	540	280	64	13	15	15
22	189	56	83	70	105	212	750	320	62	12	15	14
23	257	56	82	65	100	300	1,300	490	62	12	15	12
24	256	56	396	60	95	280	1,520	512	60	14	12	12
25	236	56	1,580	56	94	264	1,070	445	60	14	9.8	12
26	212	73	1,580	56	92	243	625	360	60	14	9.2	12
27	184	133	1,170	54	93	233	535	320	55	14	9.2	11
28	163	125	870	52	120	233	770	263	42	14	3.5	9.8
29	145	111	580	52	-----	225	625	236	26	14	3.5	9.5
30	132	102	535	52	-----	219	820	219	24	14	3.5	7.5
31	117	-----	490	52	-----	216	-----	194	-----	14	3.5	-----
Total	3,875	2,274	9,417	7,841	4,200	7,574	11,242	10,740	2,942	790	4,312	297.1
Mean	125	75.8	304	253	150	244	375	346	98.1	25.5	13.9	9.90
Cfs/m	0.380	0.230	0.924	0.769	0.456	0.742	1.14	1.05	0.298	0.078	0.042	0.030
In.	0.44	0.26	1.07	0.89	0.47	0.86	1.27	1.21	0.33	0.09	0.05	0.03

Calendar year 1965 : Max 2,000 Min 14.0 Mean 253 Cfs/m 0.769 In. 10.47
 Water year 1965-66 : Max 1,580 Min 7.5 Mean 169 Cfs/m 0.514 In. 6.97

Peak discharge (base, 2,800 cfs).--No peak above base.

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 1966. 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.--27 years, 6,813 cfs.

Extremes.--Maximum discharge during year, 16,100 cfs Dec. 27 (gage height, 13.29 ft); minimum daily, 660 cfs Sept. 15.
1939-66: Maximum discharge, 147,000 cfs May 20, 1943 (gage height, 32.44 ft); minimum observed, 487 cfs Sept. 29, 1941 (gage height, 1.81 ft).
Maximum stage known, 35.1 ft in March 1913, from floodmark determined by U.S. Weather Bureau (discharge, 200,000 cfs estimated).

Remarks.--Records good above 3,000 cfs, fair below.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2,520	1,850	2,880	3,330	2,000	2,330	3,740	10,700	4,150	1,750	1,080	920
2	2,760	1,650	2,760	11,900	2,000	4,300	3,600	11,600	3,380	1,750	1,080	880
3	2,760	1,550	2,520	14,400	2,000	4,580	3,600	10,200	3,740	1,750	1,080	880
4	2,520	1,450	2,400	13,500	2,000	4,720	3,480	9,080	3,600	1,550	1,000	880
5	2,400	1,350	2,400	14,000	2,000	5,700	3,240	7,800	3,120	1,450	1,080	880
6	2,180	1,350	2,290	12,600	2,000	5,400	3,120	5,960	3,000	1,550	1,080	820
7	1,750	2,070	2,180	9,880	2,000	5,980	3,000	5,540	3,000	1,650	1,080	900
8	1,750	1,960	2,070	3,600	2,300	4,580	3,240	5,560	3,000	1,650	1,080	900
9	1,650	2,070	1,850	7,650	2,700	4,160	3,240	5,400	2,880	1,550	1,080	800
10	1,650	2,070	1,750	5,400	3,000	4,720	3,000	5,820	2,760	1,350	1,080	790
11	1,650	2,070	1,850	5,980	4,200	4,580	3,000	5,960	2,640	1,350	1,080	740
12	1,940	2,180	2,070	5,280	3,440	4,160	3,000	7,660	2,520	1,250	1,160	700
13	1,960	2,180	1,960	4,860	14,100	4,160	3,120	3,080	2,520	1,350	1,160	700
14	1,850	2,180	2,070	4,580	13,300	5,140	2,760	13,300	2,290	1,750	1,250	670
15	1,750	2,070	2,520	4,530	10,700	5,280	2,520	14,600	2,640	1,850	1,160	660
16	1,750	2,070	2,520	4,000	3,280	5,700	2,400	13,700	3,120	1,850	1,160	840
17	1,650	2,070	2,640	3,700	5,820	5,560	2,520	10,500	3,240	1,750	1,080	840
18	1,650	1,960	2,640	3,500	5,700	5,140	2,290	11,700	3,240	1,960	1,080	840
19	1,650	1,850	2,640	3,000	5,140	5,000	2,290	11,000	3,360	1,850	1,080	840
20	1,550	1,850	2,760	2,800	4,720	4,580	2,640	9,980	3,240	1,650	1,080	1,160
21	1,450	1,750	2,640	2,600	4,160	4,300	3,740	9,080	3,360	1,650	1,250	1,160
22	1,350	1,850	2,400	2,500	3,880	4,300	4,580	3,600	3,240	1,650	1,250	1,250
23	1,450	1,960	2,290	2,400	3,480	4,300	5,140	3,280	2,640	1,550	1,160	1,160
24	1,960	1,960	2,640	2,300	3,360	5,700	5,260	7,520	2,400	1,450	1,160	1,160
25	2,880	1,850	5,840	2,200	3,120	5,680	7,240	7,100	2,290	1,350	1,080	1,080
26	3,480	1,850	15,000	2,100	3,120	6,540	7,380	6,960	2,180	1,250	1,080	1,080
27	3,220	1,960	15,900	2,000	3,000	6,120	7,240	5,540	1,960	1,250	1,080	1,080
28	2,940	2,290	13,700	2,000	2,760	5,140	7,380	6,120	1,850	1,250	1,080	1,080
29	2,760	2,640	11,700	2,000		4,580	3,280	5,280	1,850	1,160	1,000	1,080
30	2,180	2,880	9,880	2,000	-----	4,300	10,000	4,720	1,850	1,080	1,000	1,000
31	2,070	-----	3,760	2,000	-----	3,880	-----	4,440	-----	1,080	1,000	-----
Total	65,080	53,840	135,520	177,200	130,280	153,160	127,040	264,880	85,570	47,330	34,150	27,570
Mean	2,099	1,961	4,372	5,716	4,653	4,941	4,235	8,545	2,852	1,527	1,102	919
Cfs/m	0.256	0.239	0.533	0.696	0.567	0.602	0.516	1.04	0.347	0.186	0.134	0.112
In.	0.30	0.27	0.61	0.80	0.59	0.69	0.58	1.20	0.39	0.21	0.15	0.12

Calendar year 1965 : Max 37,800 Min 1,350 Mean 6,126 Cfs/m 0.746 In. 10.13
Water year 1965-66 : Max 15,900 Min 660 Mean 3,581 Cfs/m 0.436 In. 5.91

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 1966. 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.--45 years, 879 cfs.

Extremes.--Maximum discharge during year, 5,520 cfs Apr. 29 (gage height, 10.17 ft); minimum, 44 cfs Sept. 13, 14.
1914-21, 1928-66: 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 period, 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	456	320	193	2,070	130	450	520	2,930	540	100	70	33
2	633	300	225	2,350	130	732	500	2,220	511	100	05	34
3	596	230	224	2,070	130	1,060	475	1,640	417	107	05	34
4	491	267	220	1,320	130	1,950	436	1,530	398	105	06	34
5	408	255	218	903	200	3,230	400	1,420	345	110	04	33
6	362	247	210	938	204	2,430	332	1,320	367	120	57	30
7	367	245	195	959	210	1,500	368	1,140	339	102	57	49
8	357	241	158	738	258	994	359	1,100	328	132	57	50
9	357	229	153	606	372	396	338	1,030	315	116	57	49
10	338	178	160	694	558	332	303	332	330	100	62	47
11	337	130	162	552	875	966	314	328	396	95	77	48
12	327	176	183	470	1,190	1,060	330	966	367	95	35	48
13	394	163	189	600	994	1,120	346	1,030	325	101	37	47
14	334	158	278	570	340	1,290	322	1,040	299	106	75	54
15	358	157	275	470	720	1,200	254	994	274	96	65	92
16	334	153	237	370	672	1,090	244	903	402	39	60	111
17	313	144	210	330	540	959	247	328	440	30	69	140
18	288	144	195	320	426	340	250	1,140	433	75	63	39
19	271	143	186	300	390	768	250	1,100	354	74	141	109
20	272	138	189	230	278	720	322	310	317	57	136	192
21	236	139	189	290	247	654	1,440	347	291	63	158	341
22	341	140	183	280	240	636	2,500	1,030	274	65	102	243
23	495	158	178	270	275	334	2,550	1,170	255	64	76	172
24	647	156	219	250	239	1,130	4,210	1,310	340	63	66	130
25	582	155	1,440	230	268	1,110	4,670	1,300	229	63	60	117
26	512	166	3,270	210	258	396	3,300	1,130	221	62	56	100
27	467	194	2,800	200	244	744	2,350	1,020	204	64	54	91
28	432	245	1,500	190	292	630	4,110	933	131	59	57	35
29	393	274	1,300	130	-----	540	3,300	324	195	64	55	30
30	355	217	1,160	130	-----	545	4,330	695	207	30	55	79
31	335	-----	1,130	130	-----	540	-----	575	-----	35	53	-----
Total	12,538	5,962	17,479	13,400	11,560	32,546	42,270	35,776	3,324	2,957	2,252	3,330
Mean	404	199	564	626	413	1,050	1,409	1,154	327	95.4	72.6	96.0
Cfs/m	0.316	0.156	0.441	0.489	0.323	0.821	1.10	0.902	0.256	0.075	0.057	0.075
In.	0.36	0.17	0.51	0.56	0.34	0.95	1.23	1.04	0.29	0.09	0.07	0.08

Calendar year 1965 : Max 7,280 Min 56 Mean 861 Cfs/m 0.673 In. 9.14
Water year 1965-66 : Max 5,300 Min 47 Mean 535 Cfs/m 0.418 In. 5.68

Peak discharge (base, 6,000 cfs).--No peak above base.

3-3391.2 Coal Creek at Coal Creek, Ind.

Location.--Lat 40°01'42", long 87°22'30", in SW $\frac{1}{4}$ 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 1966.

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, 2,110 cfs June 16 (gage height, 7.91 ft), from rating curve extended above 1,500 cfs; minimum, 6.0 cfs Sept. 12, 13 (gage height, 0.80 ft).

Remarks.--Records poor. Record of chemical analyses is published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	43	45	590	22	109	49	206	46	31	10	8.0
2	69	42	37	400	22	134	47	163	35	31	9.5	8.0
3	60	42	32	262	24	143	46	132	30	31	9.0	8.0
4	59	40	32	210	25	200	45	105	27	31	9.0	10
5	52	39	33	180	25	190	44	98	27	42	8.5	9.2
6	47	37	35	152	26	143	43	92	52	102	7.8	8.0
7	42	36	33	130	31	87	42	86	67	47	7.0	7.6
8	37	37	30	100	52	87	42	86	42	31	6.5	7.2
9	33	39	29	87	262	80	46	79	31	31	6.2	7.0
10	37	42	29	74	410	80	49	79	30	28	7.8	6.8
11	67	44	37	66	560	80	51	81	30	24	13	6.2
12	72	42	53	59	450	94	51	174	30	22	13	6.0
13	60	39	70	50	350	117	46	146	39	20	14	6.0
14	47	42	66	45	210	94	46	113	309	17	15	6.5
15	42	37	63	40	126	87	42	105	162	16	15	26
16	37	33	59	37	101	87	42	105	971	15	16	17
17	33	32	55	35	94	80	37	105	350	13	14	16
18	30	32	52	33	76	80	37	146	214	12	11	19
19	29	31	50	31	66	80	37	160	140	12	10	121
20	33	31	47	30	56	74	37	132	102	10	10	102
21	37	31	44	29	52	63	219	105	82	10	10	62
22	59	30	42	27	49	63	153	105	63	10	10	33
23	74	30	41	26	47	67	139	105	52	10	10	23
24	72	29	70	26	46	74	163	105	45	10	10	20
25	69	29	237	25	46	69	160	99	39	10	9.2	20
26	63	93	210	24	46	69	222	86	39	10	9.2	20
27	59	87	143	24	43	63	292	79	38	10	9.2	18
28	52	72	94	23	54	63	273	62	34	13	9.2	19
29	49	69	87	23	-----	60	222	59	34	12	9.2	16
30	47	59	80	22	-----	59	206	56	31	12	9.2	14
31	45	-----	196	22	-----	52	-----	51	-----	10	9.0	-----
Total	1580	1287	2135	2881	3376	2827	2933	3314	3190	683	315.5	649.5
Mean	51.0	42.9	68.9	92.9	121	91.2	97.8	107	106	22.0	10.2	21.6
Cfs/m	0.238	0.200	0.322	0.434	0.561	0.426	0.457	0.500	0.495	0.103	0.048	0.101
In.	0.27	0.22	0.37	0.50	0.58	0.49	0.51	0.58	0.55	0.12	0.06	0.11

Calendar year 1965: Max 3,540 Min 19 Mean 177 Cfs/m 0.827 In. 11.23
 Water year 1965-66: Max 971 Min 6.0 Mean 69.0 Cfs/m 0.322 In. 4.36

Peak discharge (base, 2,600 cfs).--No peak above base.

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 1966.

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, 674 cfs Apr. 28 (gage height, 5.45 ft); minimum observed, 0.1 cfs Sept. 1 (gage height, 0.58 ft).
1965-66: Maximum discharge, 4,270 cfs Apr. 6, 1965 (gage height, 10.51 ft); no flow Oct. 3-6, 1964.

Remarks.--Records poor. Record of chemical analyses is published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	84	13	14	332	34	75	52	472	106	25	3.0	2
2	66	15	14	450	34	95	52	346	100	23	3.6	2
3	52	16	15	346	34	112	46	291	95	20	4.3	2
4	45	16	13	260	34	146	42	245	90	19	3.6	2
5	41	14	12	231	35	177	40	231	84	13	3.0	2
6	35	13	11	203	35	152	39	217	106	72	2.8	2
7	44	15	9.0	177	39	112	33	190	100	83	2.4	2
8	52	16	3.6	152	47	100	33	177	84	40	2.4	2
9	43	16	9.4	140	80	94	35	164	74	31	1.9	2
10	41	16	3.9	120	152	90	34	146	69	26	3.0	2
11	39	14	15	105	260	95	39	146	60	23	4.6	2
12	40	17	21	95	260	110	56	203	56	20	2.8	2
13	34	16	23	85	190	130	60	203	56	16	2.5	2
14	32	19	33	80	130	115	52	203	70	14	3.8	2
15	31	16	27	74	110	95	43	190	56	13	2.8	2
16	30	16	23	63	85	95	41	190	82	11	1.9	2
17	30	14	20	64	70	90	44	177	69	10	1.9	2
18	23	13	17	60	64	90	43	423	56	3.8	1.5	2
19	24	12	17	56	55	90	43	423	46	7.5	1.2	3
20	25	13	16	53	50	84	72	291	42	6.2	.9	5.7
21	26	11	17	49	47	74	303	260	39	4.1	.8	5.4
22	35	11	16	46	45	79	544	245	36	2.8	.8	3.4
23	33	12	17	44	45	84	386	217	34	2.4	.7	1.5
24	29	12	19	40	44	79	346	231	32	2.2	.5	3.2
25	25	11	106	38	43	64	450	203	31	1.9	.5	5.6
26	24	13	165	39	43	56	346	190	29	1.9	.4	5.1
27	22	21	140	37	45	56	495	177	25	1.9	.3	4.8
28	19	36	110	36	52	52	596	164	29	2.1	.2	3.8
29	16	27	94	35	52	52	495	146	29	3.8	.2	3.6
30	16	19	89	35	-----	52	472	122	26	3.6	.2	3.6
31	16	-----	130	34	-----	56	-----	117	-----	4.1	.2	-----
Total	1,081	472	1,233.9	3,582	2,163	2,852	5,352	7,010	1,811	522.3	53.7	147.3
Mean	34.9	15.7	39.8	116	77.2	92.0	178	226	60.4	16.8	1.89	4.91
Cfsm	0.145	0.065	0.166	0.481	0.322	0.383	0.743	0.942	0.252	0.070	0.008	0.020
In.	0.17	0.07	0.19	0.55	0.34	0.44	0.83	1.09	0.28	0.08	0.01	0.02

Calendar year 1965: Max 3,910 Min 3.2 Mean 204 Cfsm 0.850 In. 11.54
Water year 1965-66: Max 596 Min 0.2 Mean 72 Cfsm 0.300 In. 4.07

Peak discharge (base, 2,000 cfs).--No peak above base.

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 1966.

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.--28 years, 456 cfs.

Extremes.--Maximum discharge during year, 2,130 cfs Feb. 11 (gage height, 3.36 ft); minimum, 6.5 cfs Sept. 12-14 (gage height, 0.98 ft).

1938-66: 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.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	87	56	63	<u>1,610</u>	<u>59</u>	204	120	<u>1,050</u>	146	64	<u>41</u>	0.0
2	96	53	61	<u>1,600</u>	57	269	115	701	119	57	40	7.5
3	78	51	60	<u>1,090</u>	59	290	115	525	112	54	18	7.5
4	69	51	58	696	62	455	104	389	108	47	18	7.5
5	62	48	57	508	64	<u>474</u>	99	330	104	56	16	16
6	59	49	56	430	66	354	98	503	105	<u>113</u>	16	14
7	60	51	52	355	68	259	98	265	104	60	15	11
8	61	51	49	257	78	222	95	253	100	54	14	0.6
9	61	55	<u>48</u>	220	147	206	93	266	95	46	13	7.5
10	57	62	52	200	578	200	89	231	91	44	14	7.5
11	63	57	57	170	<u>1,860</u>	208	89	231	60	41	17	7.5
12	67	57	70	150	<u>1,090</u>	217	97	446	74	38	18	<u>0.5</u>
13	65	57	105	130	634	219	105	616	75	35	18	<u>0.5</u>
14	61	57	131	115	458	230	99	519	125	50	19	14
15	57	53	118	105	357	216	94	450	231	29	19	12
16	57	52	104	95	300	207	92	396	<u>737</u>	28	19	0.6
17	54	51	93	90	240	185	92	340	736	32	19	0.6
18	50	49	86	85	200	178	<u>88</u>	360	397	26	18	9.7
19	<u>47</u>	48	80	80	170	171	93	422	204	26	18	19
20	51	48	79	77	145	158	107	338	201	23	17	63
21	53	48	79	73	135	151	430	328	162	21	16	<u>74</u>
22	63	48	77	70	128	151	447	355	138	18	16	47
23	89	49	72	67	124	154	332	325	121	<u>16</u>	16	37
24	<u>114</u>	<u>46</u>	77	65	122	149	594	296	107	24	14	37
25	96	46	174	63	120	136	1,190	251	96	44	13	35
26	83	51	<u>262</u>	62	120	131	824	220	84	24	11	35
27	76	95	214	61	122	126	791	204	76	19	11	35
28	70	<u>100</u>	175	60	137	120	<u>1,270</u>	188	74	17	11	35
29	64	85	147	59	-----	<u>119</u>	1,050	169	77	35	11	35
30	60	71	135	58	-----	124	937	148	<u>68</u>	32	<u>9.7</u>	34
31	58	-----	180	<u>57</u>	-----	127	-----	<u>134</u>	-----	30	<u>9.7</u>	-----
TOTAL	2,088	1,695	3,071	8,758	7,697	6,418	9,847	11,109	4,907	1,187	485.4	653.1
MEAN	67.4	56.5	99.1	283	275	207	328	358	166	38.5	15.7	21.8
CFSM	.132	.111	.195	.556	.540	.407	.644	.703	.326	.075	.031	.043
IN	.15	.12	.22	.64	.56	.47	.72	.81	.36	.09	.04	.05

CALENDAR YEAR 1965 MAX 4,780 MIN 25 MEAN 389 CF5M .764 INCHES 10.36
 WATER YEAR 1965-66 MAX 1,860 MIN 6.5 MEAN 159 CF5M .312 INCHES 4.24

Peak discharge (base, 4,000 cfs).--No peak above base.

3-3400. Sugar Creek near Byron, Ind.

Location.--Lat 39°55'52", long 87°07'33", in SW $\frac{1}{4}$ sec. 8, T. 17 N., R. 6 W., on right bank, 30 ft upstream from highway bridge, $2\frac{1}{2}$ miles northwest of Byron and 5 miles downstream from Indian Creek.

Drainage area.--668 sq mi.

Records available.--October 1940 to September 1966.

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.--26 years, 620 cfs.

Extremes.--Maximum discharge during year, 3,360 cfs Feb. 11 (gage height, 6.91 ft); minimum, 17 cfs Sept. 12, 13 (gage height, 1.69 ft).
1940-66: Maximum discharge, 32,200 cfs June 28, 1957 (gage height, 22.98 ft); minimum observed, 12 cfs Sept. 21, 1941; minimum gage height, that of Sept. 12, 13, 1966.

Remarks.--Records good except those for the winter period, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	118	89	113	1,900	76	270	171	1,280	183	92	43	24
2	130	86	107	2,000	76	344	162	961	174	83	39	24
3	118	85	104	1,350	78	388	159	717	165	77	38	24
4	104	83	102	1,000	80	572	152	563	157	71	35	24
5	96	82	99	650	85	589	143	469	150	81	34	22
6	92	82	96	540	92	536	139	424	390	253	32	24
7	96	84	94	450	100	397	137	369	240	128	28	30
8	91	83	92	370	160	323	136	339	182	92	26	25
9	90	86	89	300	275	293	132	364	165	78	27	23
10	89	92	96	270	641	281	128	330	148	70	31	19
11	96	101	96	240	2,460	286	131	334	135	96	44	18
12	101	105	113	220	1,500	298	147	529	120	75	39	17
13	100	111	137	200	883	304	152	791	113	64	44	17
14	95	106	180	180	655	304	149	718	221	59	54	21
15	91	104	180	170	509	299	139	619	292	53	42	48
16	89	103	158	160	453	283	135	548	943	50	38	31
17	88	100	142	145	350	262	132	479	1,090	50	36	24
18	86	97	130	140	275	252	131	528	626	51	33	24
19	85	96	120	130	230	243	151	555	404	49	30	60
20	90	97	120	125	200	230	190	490	297	45	29	120
21	92	102	121	120	180	216	679	484	244	41	29	96
22	98	103	117	110	170	214	719	491	208	39	29	85
23	109	103	114	105	170	225	525	459	182	38	34	58
24	145	102	110	95	160	217	738	427	162	38	28	46
25	144	101	150	90	160	203	1,430	359	144	50	28	46
26	125	107	330	86	160	188	1,050	306	126	54	27	51
27	113	145	270	84	160	183	869	284	113	42	26	47
28	106	161	230	80	190	174	1,490	265	106	42	25	47
29	101	142	200	78	-----	171	1,320	243	107	44	24	44
30	96	124	170	76	-----	175	1,130	218	102	51	24	42
31	92	-----	220	76	-----	179	-----	197	-----	48	24	-----
TOTAL	3,166	3,062	4,400	11,540	10,528	8,899	12,866	15,140	7,689	2,104	1,020	1,181
MEAN	102	102	142	372	376	287	429	488	256	67.9	32.9	39.4
CFSM	.153	.153	.213	.557	.563	.430	.642	.731	.383	.102	.049	.059
IN	.18	.17	.24	.64	.59	.50	.72	.84	.43	.12	.06	.07

CALENDAR YEAR 1965	MAX	6,900	MIN	48	MEAN	522	CFSM	.781	INCHES	10.61
WATER YEAR 1965-66	MAX	2,460	MIN	17	MEAN	224	CFSM	.335	INCHES	4.54

Peak discharge (base, 6,500 cfs).--No peak above base.

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 1966 in reports of Geological Survey. July 1924 to September 1927 (gage heights only) in reports of Indiana Department of Conservation.

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

Average discharge.--39 years, 9,143 cfs.

Extremes.--Maximum discharge during year, 17,700 cfs Jan. 4 (gage height, 11.29 ft); minimum, 774 cfs Sept. 13 (gage height, 1.57 ft).
1927-66: 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.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,430	2,630	3,110	12,600	2,300	4,200	5,050	15,600	5,560	2,920	1,460	1,050
2	3,590	2,470	3,110	12,900	2,300	2,050	4,710	16,200	5,520	2,690	1,460	1,050
3	3,910	2,190	2,950	17,200	2,300	5,090	4,540	14,700	4,990	2,400	1,330	1,000
4	3,590	2,190	2,950	17,500	2,300	5,990	4,370	12,900	4,540	2,260	1,460	1,000
5	3,430	2,050	2,790	15,400	2,300	3,990	4,200	11,400	4,370	2,260	1,330	960
6	3,110	2,190	2,790	14,500	2,300	10,100	3,990	9,930	4,370	2,540	1,200	940
7	2,790	2,470	2,630	12,400	2,700	9,170	3,990	9,990	4,710	2,540	1,200	940
8	2,630	2,630	2,790	10,300	3,000	7,990	3,720	7,990	4,040	2,120	1,330	940
9	2,630	2,470	2,470	9,600	3,700	7,160	3,720	7,990	3,990	2,120	1,330	810
10	2,630	2,470	2,470	7,700	4,700	6,440	3,560	9,600	3,560	2,120	1,330	810
11	2,630	2,470	2,630	7,160	6,300	5,090	3,560	9,420	3,990	2,540	1,330	810
12	2,790	2,630	2,630	5,260	10,300	5,090	3,560	9,170	3,720	2,120	1,330	810
13	2,950	2,630	2,790	5,560	14,300	5,260	3,560	10,700	3,560	2,120	1,460	810
14	2,790	2,470	2,950	5,390	15,000	6,990	3,400	13,700	3,720	2,120	1,590	940
15	2,790	2,630	3,270	5,390	13,900	7,340	3,250	16,000	3,720	2,540	1,330	940
16	2,630	2,470	3,590	5,000	10,900	7,340	3,100	15,600	4,540	2,540	1,330	1,070
17	2,630	2,470	3,430	4,600	9,790	7,340	3,100	14,300	5,390	2,540	1,200	1,070
18	2,470	2,330	3,430	4,200	7,520	6,990	3,100	14,300	5,220	2,400	1,200	1,330
19	2,470	2,330	3,110	3,500	5,900	6,620	3,100	14,500	4,710	2,400	1,330	1,200
20	2,330	2,190	2,950	3,250	6,000	6,090	3,100	13,000	4,710	2,120	1,330	1,300
21	2,190	2,190	2,950	3,000	5,500	5,900	3,320	11,600	4,540	2,120	1,590	1,720
22	2,190	2,190	2,790	2,900	5,100	5,560	7,990	11,100	4,040	2,120	1,590	1,850
23	2,470	2,330	2,790	2,800	4,800	5,560	9,600	10,900	3,720	1,990	1,330	1,590
24	2,270	2,190	2,630	2,700	4,600	5,900	10,700	10,300	3,250	1,850	1,330	1,460
25	3,750	2,190	3,430	2,500	4,400	7,990	14,100	10,100	3,250	1,720	1,250	1,330
26	4,390	2,190	10,300	2,400	4,200	3,060	13,500	9,930	2,920	1,590	1,250	1,200
27	4,230	2,330	12,900	2,300	4,040	7,340	13,400	9,170	2,920	1,590	1,200	1,330
28	3,750	2,790	15,200	2,300	4,040	6,440	13,700	9,240	2,690	1,460	1,200	1,330
29	3,270	3,110	15,700	2,300		5,900	15,600	7,340	2,540	1,590	1,150	1,330
30	2,950	3,270	11,800	2,300		5,390	17,200	6,620	2,690	1,590	1,150	1,200
31	2,790		11,500	2,300		5,220		5,090		1,460	1,100	
Total	93,470	73,160	152,830	211,110	162,390	209,190	194,460	345,040	120,940	66,370	41,000	34,120
Mean	3,015	2,439	4,930	6,810	5,907	6,748	6,482	11,163	4,031	2,141	1,323	1,137
Cfsm	0.272	0.220	0.444	0.614	0.532	0.608	0.584	1.01	0.363	0.193	0.119	0.102
In.	0.31	0.25	0.51	0.71	0.55	0.70	0.65	1.16	0.40	0.22	0.14	0.11

Calendar year 1965 : Max 44,400 Min 1,500 Mean 8,350 Cfsm 0.752 In. 10.22
Water year 1965-66 : Max 17,500 Min 810 Mean 4,680 Cfsm 0.422 In. 5.71

3-3408. Big Raccoon Creek near Fincastle, Ind.

Location.--Lat 39°48'45", long 86°57'14", in SW $\frac{1}{4}$ 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 1966. Prior to October 1963, published as Raccoon Creek near Fincastle.

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

Average discharge.--9 years, 117 cfs.

Extremes.--Maximum discharge during year, 756 cfs Feb. 11 (gage height, 5.64 ft); minimum discharge, 2.3 cfs Sept. 13, 14 (gage height, 1.58 ft).

1957-66: 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.--Records good except those for the winter period, which are poor. Records of water temperature and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	5.5	9.1	311	12	62	27	300	26	8.8	3.7	2.6
2	18	8.0	8.5	240	13	76	26	213	23	8.3	3.7	2.6
3	17	7.5	8.5	204	13	96	25	158	22	7.8	3.7	3.7
4	14	7.2	8.5	144	13	130	23	123	21	6.0	3.7	4.2
5	12	7.2	9.5	116	13	123	21	102	20	8.1	3.1	3.2
6	12	7.2	9.1	102	13	96	21	96	20	24	3.0	2.5
7	12	7.2	8.5	42	15	70	21	76	27	21	3.0	2.7
8	13	7.5	8.5	60	34	60	20	76	27	14	2.7	2.7
9	13	7.5	8.5	48	62	57	20	70	21	11	3.0	2.6
10	15	7.2	9.5	40	339	56	19	62	18	8.0	3.1	2.6
11	14	7.0	10	34	540	58	20	63	16	65	3.7	2.6
12	13	7.5	15	30	240	59	26	96	14	63	3.4	2.6
13	13	5.5	23	27	158	63	33	102	14	20	3.7	2.6
14	12	5.5	24	25	123	62	29	109	23	11	4.7	2.5
15	12	8.3	22	23	96	60	24	96	35	8.3	4.3	3.4
16	11	8.5	19	22	76	56	22	39	76	7.0	4.0	3.4
17	11	8.5	15	21	58	50	22	32	130	6.0	3.6	3.0
18	11	8.5	13	19	48	50	21	32	32	5.6	3.1	3.0
19	13	8.5	12	18	43	49	22	32	50	5.4	3.4	6.1
20	15	8.5	12	17	38	42	33	70	35	5.1	3.1	2.1
21	16	8.5	12	16	36	38	218	76	26	4.5	3.1	6.5
22	18	8.5	11	15	34	38	151	39	20	4.3	3.0	5.7
23	21	8.5	11	15	33	40	109	76	17	4.2	3.0	4.5
24	17	8.3	11	14	32	39	300	70	15	4.3	2.5	3.5
25	14	8.3	26	14	31	34	450	58	14	4.2	2.7	4.0
26	12	9.1	58	13	30	31	240	49	12	4.0	2.7	4.2
27	11	12	50	13	30	30	222	44	11	3.8	2.7	4.3
28	10	11	38	12	36	27	230	42	11	4.0	2.7	4.3
29	9.5	10	30	12	27	27	240	38	10	5.4	2.7	4.2
30	8.5	10	27	12	-----	27	243	33	9.5	4.9	2.6	4.5
31	8.5	-----	43	12	-----	29	-----	28	-----	3.5	2.6	-----
Total	414.5	253.3	570.4	1,771	2,209	1,735	2,928	2,750	445.5	350.5	99.1	113.1
Mean	13.4	8.44	18.4	57.1	78.9	56.0	97.6	88.7	28.2	11.6	3.20	3.77
Cfsm	0.102	0.064	0.139	0.433	0.598	0.424	0.739	0.672	0.214	0.088	0.024	0.029
In.	0.12	0.07	0.16	0.50	0.62	0.49	0.82	0.77	0.24	0.10	0.03	0.03

Calendar year 1965 : Max 2,300 Min 4.6 Mean 103 Cfsm 0.780 In. 10.58

Water year 1965-66 : Max 540 Min 2.4 Mean 38.5 Cfsm 0.292 In. 3.95

Peak discharge (base, 1,900 cfs).-- No peak above base.

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 1966. Prior to October 1963, published as Raccoon Creek at Ferndale.

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

Average discharge.--10 years, 208 cfs (adjusted for change in contents).

Extremes.--Maximum discharge during year, 775 cfs Feb. 11 (gage height, 4.59 ft); minimum, 11 cfs Apr. 9, 10; minimum gage height, 1.26 ft June 11.

1956-66: 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.--Records good. Flow regulated since October 1960 by Mansfield Reservoir (capacity, 132,840 acre-ft).

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	205	350	30	394	26	58	33	25	15	15	14	15
2	216	144	26	520	26	33	37	21	15	15	14	15
3	227	147	25	520	26	102	34	21	15	15	14	15
4	227	147	25	335	26	193	21	21	15	15	14	14
5	216	147	24	135	29	227	13	21	14	15	14	15
6	206	147	23	130	26	175	12	20	17	19	14	15
7	206	147	23	105	27	105	12	19	14	17	13	15
8	206	147	21	113	28	91	12	18	13	16	14	15
9	206	147	19	113	41	65	11	17	13	16	15	15
10	206	147	20	94	204	65	11	17	13	16	15	15
11	216	147	20	78	585	76	12	17	12	45	16	15
12	206	135	38	64	775	34	14	19	13	17	15	15
13	206	206	45	53	640	145	14	18	13	16	16	16
14	206	227	44	53	399	147	13	18	17	15	16	17
15	206	227	44	53	185	34	13	17	13	15	16	17
16	216	227	44	52	121	33	13	17	15	14	16	16
17	227	216	44	53	121	33	13	17	14	14	15	14
18	227	216	44	55	121	34	13	18	13	14	15	14
19	227	206	44	37	97	34	13	16	13	14	15	17
20	227	206	44	28	59	72	29	16	13	14	15	19
21	227	206	44	28	58	66	38	18	13	14	15	16
22	227	206	30	28	56	66	21	16	14	14	15	14
23	216	206	23	28	56	68	20	17	15	14	15	14
24	216	206	28	28	56	68	50	17	15	14	15	13
25	206	238	51	27	55	66	26	16	15	14	15	15
26	227	250	46	27	55	66	21	15	15	14	15	14
27	235	250	77	27	55	49	30	15	15	15	15	15
28	235	250	34	29	58	40	39	14	16	15	15	15
29	235	250	34	32		39	24	14	16	15	15	15
30	235	94	65	33	-----	40	26	14	15	15	14	16
31	310	-----	73	29	-----	30	-----	14	-----	14	15	-----
Total	7,055	3,999	1,277	3,351	4,011	2,709	638	543	429	495	460	457
Mean	228	197	41.2	108	143	87.4	21.3	17.5	14.3	16.0	14.8	15.2
(#)	-194	-170	+1.6	-3	0	+1.6	+163	+111	+16.8	+8.1	-21.1	-8.4

Adjusted for change in contents in Mansfield Reservoir

	34	27	42.8	105	143	89.0	184	128	31.1	24.1	-6.3	6.8
Mean	34	27	42.8	105	143	89.0	184	128	31.1	24.1	-6.3	6.8
Cfsm	0.158	0.126	0.199	0.488	0.665	0.414	0.856	0.595	0.145	0.112	0.029	0.032
In.	0.18	0.14	0.23	0.56	0.69	0.48	0.96	0.69	0.16	0.13	0.03	0.04

Observed

Adjusted

Calendar year 1965 :	Max 1,800	Min 15	Mean 154	Mean 152	Cfsm 0.707	In. 9.60
Water year 1965-66 :	Max 775	Min 11	Mean 74.9	Mean 66.9	Cfsm 0.311	In. 4.22

* 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 1966 (fragmentary prior to October 1957).

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

Average discharge.--9 years (1957-1966), 110 cfs.

Extremes.--Maximum discharge during year, 1,110 cfs Apr. 21 (gage height, 6.49 ft); minimum, 4.2 cfs Sept. 12-14, 17, 18 (gage height, 1.25 ft).

1956-66: 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, that of Sept. 12-14, 17, 18, 1966.

Remarks.--Records fair except for the winter period, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	13	3.7	11	403	3.0	67	23	380	40	21	11	4.9
2	14	3.2	11	204	3.0	67	27	233	33	20	10	4.9
3	14	3.7	10	131	3.0	72	25	186	33	20	10	4.9
4	13	3.7	9.6	83	3.5	110	25	145	35	20	9.6	21
5	12	3.2	9.2	72	3.0	104	24	131	34	19	9.6	9.6
6	12	3.2	3.2	62	12	77	24	110	43	101	9.2	7.5
7	12	9.2	3.2	53	23	67	24	93	177	56	9.2	5.7
8	12	9.2	3.7	39	53	60	24	93	67	25	3.7	5.4
9	11	3.7	3.7	37	62	56	23	93	59	21	3.7	6.0
10	11	3.7	9.6	34	200	55	22	82	51	13	9.2	5.6
11	11	3.2	11	32	660	55	24	83	45	262	7.8	5.2
12	11	9.2	15	31	177	59	39	145	38	72	7.5	4.9
13	10	11	19	27	117	67	43	117	31	35	7.2	4.2
14	10	11	19	24	83	59	34	117	72	26	3.4	4.9
15	10	10	17	22	72	55	30	104	59	21	9.6	6.7
16	10	10	15	20	60	50	27	93	83	13	9.0	4.9
17	9.6	9.2	14	13	47	45	26	83	67	17	3.5	4.5
18	9.2	3.7	12	17	42	45	25	131	60	15	7.8	4.5
19	9.2	3.7	12	15	37	44	31	104	53	15	6.4	3.8
20	10	3.7	12	15	35	40	107	83	45	15	7.1	2.4
21	11	3.7	12	14	34	33	662	104	39	14	6.7	15
22	11	3.7	12	13	32	33	223	104	34	14	6.4	9.6
23	11	3.7	12	12	31	39	163	83	31	13	6.0	7.1
24	9.6	3.7	15	11	31	42	639	93	29	12	5.6	5.6
25	9.2	3.7	43	11	30	35	380	82	25	12	5.6	6.0
26	9.2	9.6	42	10	29	34	213	72	25	12	5.6	6.4
27	9.2	14	30	9.5	29	32	352	67	24	12	5.2	6.4
28	9.2	15	24	9.0	33	31	352	60	24	12	5.2	6.0
29	3.7	12	22	9.0	-----	23	233	55	24	12	5.2	5.6
30	3.7	12	20	9.0	-----	31	502	50	22	11	5.2	6.0
31	9.2	-----	10.0	9.0	-----	31	-----	45	-----	11	4.9	-----
Total	330	287.3	574.2	1,466.5	1,979.5	1,637	4,353	3,456	1,420	955	235.1	223.8
Mean	10.6	9.58	18.5	47.3	70.7	52.8	145	111	47.3	30.8	7.58	7.46
Cfsm	0.080	0.072	0.139	0.356	0.532	0.397	1.09	0.835	0.356	0.232	0.057	0.056
In.	0.09	0.08	0.16	0.41	0.55	0.46	1.22	0.96	0.40	0.27	0.07	0.06

Calendar year 1965 : Max 2,300 Min 5.2 Mean 85.2 Cfsm 0.641 In. 8.70

Water year 1965-66 : Max 662 Min 4.2 Mean 46.4 Cfsm 0.349 In. 4.73

Peak discharge (base, 1,900 cfs).--No peak above base.

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 1966. Prior to October 1963, published as Raccoon Creek at Coxville.

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

Average discharge.--10 years, 427 cfs (adjusted for change in contents).

Extremes.--Maximum discharge during year, 1,820 cfs Apr. 24 (gage height, 8.27 ft); minimum daily, 27 cfs Sept. 12 (gage height, 1.73 ft).
1956-66: Maximum discharge, 108,000 cfs June 28, 1957 (gage height, 21.23 ft) from rating curve extended above 35,000 cfs on basis of an estimate made by a slope-area study; minimum daily, 6.5 cfs Oct. 10, 1956.

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	255	364	103	980	70	131	81	635	83	53	35	23
2	235	313	83	830	72	177	83	435	83	55	37	23
3	245	177	73	710	75	215	83	341	81	54	35	23
4	245	185	73	635	73	275	83	275	75	53	34	40
5	245	185	70	364	75	387	75	245	75	54	34	34
6	235	185	67	341	74	341	63	215	83	132	34	32
7	245	185	65	245	73	235	67	195	244	103	33	33
8	235	185	64	215	102	205	65	177	103	63	33	23
9	235	177	61	215	134	177	64	163	83	53	33	23
10	235	177	61	205	443	163	62	153	81	55	34	32
11	235	177	60	163	1300	163	63	153	75	323	34	23
12	235	185	63	153	920	185	83	245	71	177	34	23
13	235	235	94	142	860	215	102	205	71	81	33	23
14	225	235	94	134	660	275	83	205	134	64	41	30
15	225	245	83	125	411	195	77	177	83	57	33	33
16	235	255	81	117	297	177	73	163	134	53	37	31
17	245	245	80	125	255	163	63	150	103	43	35	23
18	245	235	80	117	245	153	65	225	81	43	32	23
19	245	235	73	100	235	153	74	195	75	47	34	35
20	245	235	73	90	143	150	133	150	71	44	35	61
21	245	235	73	83	120	134	1140	177	63	43	33	54
22	245	235	74	79	113	134	411	185	65	43	34	47
23	245	235	65	75	117	134	297	150	65	43	34	33
24	245	235	65	72	117	134	1040	177	61	42	34	35
25	245	235	117	72	115	125	685	142	61	41	31	35
26	235	265	125	72	112	125	411	125	53	33	33	34
27	275	275	103	75	117	117	770	117	65	33	33	35
28	297	275	125	85	120	102	685	103	64	40	32	35
29	297	275	134	83		94	485	102	61	40	31	35
30	313	235	125	73		94	713	94	53	33	32	37
31	313		163	73		94		83		37	30	
Total	7,743	6,931	2,726	6,865	7,463	5,454	8,231	6,195	2,556	2,091	1,065	1,033
Mean	250	231	87.9	221	267	176	274	200	85.2	67.5	34.4	34.6
(f)	-194	-170	+1.6	-3	0	+2	+163	+111	+16.8	+8.1	-21.1	-8.4

Adjusted for change in contents in Mansfield Reservoir

Mean	56	61	89.5	218	267	178	437	311	102	75.6	13.3	26.2
Cfsm	0.127	0.139	0.203	0.495	0.607	0.405	0.993	0.707	0.232	0.172	0.030	0.060
In.	0.15	0.16	0.23	0.57	0.63	0.47	1.11	0.82	0.26	0.20	0.03	0.07

Observed

Adjusted

Calendar year 1965 :	Max 2,790	Min 42	Mean 295	Mean 293	Cfsm 0.666	In. 9.02	f -2
Water year 1965-66 :	Max 1,300	Min 28	Mean 160	Mean 152	Cfsm 0.345	In. 4.70	f -8

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

3-3414.2 Brouillets 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 to September 1966.

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, 1,860 cfs Sept. 20 (gage height, 8.71 ft); minimum observed, 1.0 cfs Sept. 7 (gage height, 1.46 ft).

Remarks.--Records poor July 1 to Aug. 15 and fair thereafter.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										6.0	2.6	2.1
2										6.4	2.1	1.9
3										6.2	1.6	1.9
4										5.3	1.8	1.6
5										5.3	1.6	1.5
6										8.1	1.3	1.3
7										6.6	1.2	1.3
8										5.7	1.2	1.5
9										4.4	1.2	1.3
10										2.9	2.8	1.3
11										2.7	3.8	1.3
12										2.0	3.1	1.3
13										1.5	4.5	1.3
14										1.5	6.1	1.6
15										1.5	5.7	2.4
16										1.3	4.1	1.1
17										1.2	3.6	1.7
18										3.2	3.6	1.1
19										7.3	3.1	9.3
20										5.7	3.1	1.1
21										5.3	5.0	3.1
22										4.5	2.3	1.6
23										4.5	3.3	1.0
24										3.8	6.5	7.0
25										1.3	4.9	4.3
26										3.9	4.1	4.6
27										6.9	3.6	4.4
28										5.7	3.1	4.1
29										4.9	2.9	3.5
30										4.1	2.6	3.3
31										3.1	2.1	
Total										784.9	170.2	2542.2
Mean										25.3	5.49	84.7
Cfsm										0.076	0.017	0.256
In.										0.09	0.02	0.29
Calendar year	: Max		Min		Mean		Cfsm		In.			
Water year	: Max		Min		Mean		Cfsm		In.			

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 1966. Gage-height records collected at site 3,300 ft upstream June 1891 to June 1897 and since December 1904 are contained in reports of U.S. Weather Bureau.

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

Average discharge.--39 years (1927-66), 10,070 cfs.

Extremes.--Maximum discharge during year, 20,400 cfs May 1 (gage height, 13.58 ft); minimum, 899 cfs Sept. 13 (gage height, 3.19 ft). 1927-66: Maximum discharge, 189,000 cfs May 20, 1943 (gage height, 30.50 ft); minimum, 690 cfs Aug. 10, 1934 (gage height, 2.40 ft). Maximum stage known, 31.1 ft Mar. 27, 1913, present site and datum (discharge, 245,000 cfs, estimated).

Remarks.--Records fair. 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.050	3.170	3.350	13.600	2.500	4.430	5.740	19.800	5.430	2.860	1.720	1.160
2	4.050	3.000	3.350	16.800	2.500	5.020	5.380	13.400	5.920	2.860	1.720	1.160
3	4.220	2.820	3.350	14.200	2.500	6.100	5.020	17.200	5.740	2.700	1.580	1.160
4	4.220	2.470	3.170	19.000	2.500	7.240	4.840	15.000	5.330	2.700	1.530	1.160
5	3.870	2.470	3.000	14.600	2.500	5.600	4.660	13.400	5.020	2.700	1.720	1.160
6	3.520	2.300	2.820	17.000	2.500	10.600	4.480	11.800	4.840	2.700	1.510	1.100
7	3.350	2.650	2.820	14.800	2.600	10.400	4.300	10.400	5.740	2.860	1.450	1.030
8	3.170	2.820	2.820	12.600	2.900	9.000	4.300	9.600	5.200	2.560	1.430	1.100
9	3.000	2.820	2.650	10.600	3.520	3.000	4.120	9.000	4.660	2.290	1.500	1.030
10	3.000	2.820	2.650	9.400	4.940	7.240	3.940	9.400	4.120	2.140	1.550	970
11	3.000	2.820	2.650	3.600	9.200	5.860	3.940	9.600	4.120	2.420	1.440	970
12	3.000	2.820	2.650	7.800	11.200	6.670	4.120	10.000	4.120	2.860	1.510	910
13	3.170	3.000	2.820	7.010	13.000	6.860	4.120	11.000	3.940	2.560	1.570	910
14	3.170	2.820	2.820	6.630	16.200	7.050	3.940	13.000	3.940	2.420	1.680	1.100
15	3.000	2.820	3.000	6.250	16.000	7.620	3.940	15.000	4.300	2.560	1.800	1.160
16	2.820	2.820	3.350	6.250	13.400	3.000	3.580	15.800	4.300	2.560	1.720	1.160
17	2.820	2.820	3.700	5.680	10.800	3.000	3.580	15.800	5.740	2.700	1.580	1.100
18	2.820	2.650	3.700	5.120	9.000	7.810	3.400	15.600	5.740	2.700	1.580	1.230
19	2.650	2.470	3.700	4.220	7.810	7.430	3.400	15.800	5.380	2.560	1.510	1.510
20	2.650	2.470	3.350	3.500	5.860	5.860	3.580	15.400	5.020	2.420	1.580	2.560
21	2.470	2.470	3.170	3.300	5.100	6.480	5.740	13.800	5.020	2.280	1.790	2.140
22	2.300	2.650	3.170	3.200	5.380	6.290	3.400	12.800	4.660	2.280	1.790	2.000
23	2.470	2.650	3.170	3.100	5.020	6.100	9.800	12.400	4.120	2.280	1.650	1.860
24	3.170	2.470	3.000	3.000	5.020	6.670	10.800	12.000	3.760	2.140	1.440	1.650
25	3.870	2.650	3.350	2.900	5.020	7.810	14.400	11.400	3.580	2.140	1.370	1.440
26	4.220	2.470	7.400	2.800	4.660	3.400	15.200	11.200	3.220	2.000	1.370	1.370
27	4.580	2.820	15.400	2.700	4.480	3.000	15.400	10.400	3.040	1.860	1.300	1.370
28	4.220	3.000	17.600	2.600	4.300	7.240	15.000	9.600	3.220	1.860	1.300	1.440
29	4.050	3.350	15.800	2.600		6.670	16.800	3.600	3.040	1.860	1.300	1.440
30	3.700	3.520	13.800	2.500	-----	5.100	13.800	7.810	2.860	1.790	1.230	1.370
31	3.350	-----	12.200	2.500	-----	5.740	-----	7.050	-----	1.790	1.300	-----
Total	103.950	82.900	159.780	242.860	182.410	225.340	216.720	391.060	135.220	74.400	47.570	39.720
Mean	3.353	2.763	5.154	7.834	6.515	7.269	7.224	12.615	4.541	2.400	1.535	1.324
Cfs/m	0.275	0.226	0.422	0.642	0.534	0.596	0.592	1.03	0.372	0.197	0.126	0.109
In.	0.32	0.25	0.49	0.74	0.56	0.69	0.66	1.19	0.42	0.23	0.15	0.12

Calendar year 1965: Max 43,100 Min 1,190 Mean 8,990 Cfs/m 0.737 In. 10.00
 Water year 1965-66: Max 19,800 Min 910 Mean 5,214 Cfs/m 0.427 In. 5.82

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 1966. 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.--28 years, 10,790 cfs.

Extremes.--Maximum discharge during year, 24,000 cfs May 1 (gage height, 13.32 ft); minimum daily, 1,180 cfs Sept. 13, 14; minimum gage height observed, 0.62 ft Sept. 14.

1938-66: Maximum discharge, 201,000 cfs May 21, 1943 (gage height, 29.36 ft); minimum observed, 858 cfs Sept. 27 to Oct. 1, 1941 (gage height, 0.02 ft).

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

Remarks.--Records fair above 3,000 cfs and poor below. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,120	2,220	3,340	12,700	2,930	4,740	2,630	23,500	7,220	3,060	1,990	1,420
2	3,990	3,100	3,220	15,700	2,930	4,880	2,430	21,200	2,590	3,060	1,890	1,420
3	3,990	2,430	3,220	17,700	2,930	3,330	3,330	19,600	2,260	3,060	1,690	1,420
4	4,120	2,860	3,100	13,500	2,930	2,260	2,180	17,600	2,940	2,800	1,690	1,510
5	4,120	2,620	2,980	13,000	2,930	7,220	4,880	15,600	5,480	2,670	1,690	1,510
6	3,350	2,500	2,980	13,400	2,930	3,740	4,740	13,800	5,330	2,670	1,690	1,420
7	3,730	2,500	2,360	12,800	3,060	10,200	4,600	12,200	5,330	2,670	1,690	1,420
8	3,470	2,740	2,740	14,800	3,340	3,820	4,460	13,300	5,780	2,930	1,600	1,260
9	3,340	2,360	2,740	12,400	3,760	3,740	4,320	3,820	5,180	2,670	1,510	1,260
10	3,220	2,360	2,740	10,600	5,030	7,860	4,180	3,280	4,740	2,420	1,600	1,340
11	3,100	2,360	2,620	3,280	7,860	7,220	4,320	3,460	4,460	2,420	1,990	1,260
12	3,220	2,360	2,740	3,560	10,400	6,740	5,030	3,820	4,320	2,540	1,990	1,260
13	3,220	2,930	2,740	7,700	11,400	6,740	5,180	10,600	4,460	2,930	1,990	1,180
14	3,220	2,930	2,860	7,060	13,800	5,900	4,740	11,300	4,320	2,540	2,090	1,180
15	3,220	2,360	2,860	2,580	13,200	7,220	4,460	14,200	4,460	2,420	1,890	1,420
16	3,220	2,360	2,980	6,420	15,200	7,700	4,180	15,400	4,600	2,540	1,890	1,600
17	3,100	2,360	3,220	6,260	12,800	7,860	3,900	15,800	4,740	2,670	1,790	1,510
18	2,930	2,360	3,470	5,780	10,200	7,700	3,760	17,300	5,630	2,670	1,690	1,510
19	2,930	2,740	3,470	5,180	3,560	7,540	3,760	17,600	5,780	2,670	1,990	1,510
20	2,930	2,740	3,470	4,460	7,700	7,060	3,900	17,200	5,330	2,540	2,190	3,100
21	2,860	2,620	3,340	4,180	6,740	6,740	4,880	15,800	5,030	2,420	2,090	5,630
22	2,740	2,620	3,220	3,900	5,100	5,420	7,060	14,800	5,030	2,300	1,890	2,930
23	2,620	2,620	3,100	3,620	5,480	2,100	3,920	13,400	4,740	2,300	1,790	2,300
24	2,740	2,620	3,100	3,480	5,030	2,940	10,400	12,800	4,320	2,190	1,690	2,190
25	3,100	2,620	3,100	3,200	5,030	5,590	13,600	12,400	4,040	2,090	1,690	1,990
26	3,600	2,620	3,600	3,060	5,030	7,700	15,400	11,800	3,760	2,090	1,690	1,890
27	4,120	2,620	7,950	3,060	4,740	3,200	12,000	11,400	3,620	2,090	1,600	1,890
28	4,260	2,740	2,800	2,330	4,740	7,700	21,500	10,600	3,620	2,090	1,600	1,890
29	4,120	2,360	15,500	2,930	---	7,060	19,000	3,640	3,620	1,990	1,510	1,890
30	3,730	3,220	13,900	2,930	---	6,420	20,000	3,740	3,340	1,890	1,510	1,790
31	3,470	---	12,300	2,930	---	5,940	---	7,860	---	1,890	1,510	---
Total	102,560	84,000	132,260	260,000	189,780	221,270	223,790	424,420	147,060	77,290	55,110	56,900
Mean	3,437	2,800	4,460	8,387	6,778	7,138	7,626	13,690	4,902	2,493	1,778	1,897
Cfsm	0.262	0.214	0.340	0.640	0.517	0.545	0.582	1.05	0.374	0.190	0.136	0.145
In.	0.30	0.24	0.39	0.74	0.54	0.63	0.65	1.21	0.42	0.22	0.16	0.16

Calendar year 1965: Max 42,200 Min 1,800 Mean 9,052 Cfsm 0.691 In. 9.38
 Water year 1965-66: Max 23,600 Min 1,180 Mean 5,451 Cfsm 0.416 In. 5.66

WABASH RIVER BASIN

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 3, 1966 to Sept. 30, 1966.

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 period, 552 cfs Sept. 20 (gage height, 14.09 ft); no flow many days.

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

Discharge, in cubic feet per second, water year October to September												
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1										0	0	0
2										0	0	0
3									.70	0	0	0
4									.50	0	0	0
5									.40	0	0	0
6									.50	0	0	0
7									.30	0	0	0
8									.30	0	0	0
9									.10	0	0	0
10									.10	0	.10	0
11									.10	0	.10	0
12									.10	0	.10	0
13									.20	0	.10	0
14									.40	0	.10	.20
15									.30	0	.20	2.4
16									.40	0	.20	0
17									.30	.10	.20	0
18									.10	.20	.20	0
19									0	.20	.20	4.3
20									0	.20	1.0	10.0
21									0	.10	.30	5.2
22									0	.20	.20	3.3
23									0	.20	.20	2.4
24									0	.20	.20	1.5
25									0	.20	.10	9.1
26									0	.20	0	5.4
27									0	.20	0	4.4
28									0	5.4	0	2.7
29									0	.30	0	1.7
30									0	0	0	2.4
31										0	0	
Total										7.70	3.50	300.30
Mean										0.25	0.11	10.0
Cfs										0.015	0.0065	0.588
In.										0.02	0.007	0.66
Calendar year	: Max		Min	Mean		Cfs	In.					
Water year	: Max		Min	Mean		Cfs	In.					

WABASH RIVER BASIN

71

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, 2.5 miles northwest of Dugger, and 0.9 mile south of Big Branch.

Drainage area.--12.0 sq mi.

Records available.--June 3, 1966 to Sept. 30, 1966.

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, 186 cfs Sept. 20 (gage height, 9.15 ft); minimum, 0.7 cfs Aug. 19, 23, 24, 26, 27, Sept. 8; minimum gage height, 6.06 ft July 20-23, 31, Aug. 6, 8, 9, 19, 23, 24, 26, 27, Sept. 8.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1										2.6	1.1	0.90
2										2.2	2.1	.90
3									3.0	2.1	1.3	4.6
4									3.1	2.8	1.1	1.7
5									2.9	2.8	1.1	.90
6									4.0	7.4	1.1	.90
7									3.6	2.9	1.1	.80
8									3.0	2.1	1.1	.80
9									2.8	1.9	1.1	.80
10									2.4	1.7	2.9	1.0
11									2.2	3.3	1.2	1.0
12									2.2	1.6	.90	.90
13									2.3	1.6	2.3	.90
14									3.7	1.5	1.6	9.0
15									2.6	1.4	1.7	10
16									3.4	1.2	1.1	2.6
17									2.5	1.1	.90	2.5
18									2.1	1.2	.80	2.4
19									1.9	1.4	.80	2.1
20									1.8	1.1	1.0	2.7
21									1.7	1.0	1.0	4.3
22									1.7	1.0	.90	2.4
23									1.7	2.5	.80	1.6
24									1.6	2.7	.80	1.4
25									1.5	1.6	.80	1.4
26									1.5	1.4	.80	1.5
27									1.0	1.3	.80	7.4
28									7.1	1.5	.80	3.3
29									4.0	1.6	.90	2.1
30									3.1	1.2	.90	4.3
31										1.1	.90	-----
TOTAL										61.0	35.70	150.30
MEAN										1.97	1.15	4.34
CFSM										.164	.096	.362
IN										.19	.11	.40

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, 1½ miles southeast of Sullivan on State Road 54, 1.6 miles east of intersections of State Roads 41 and 54.

Drainage area.--138 sq mi.

Records available.--June 3, 1966 to Sept. 30, 1966.

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 period, 408 cfs Sept. 20 (gage height, 6.57 ft); minimum, 0.8 cfs Sept. 8, 9 (gage height, 1.82 ft).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1										3.6	1.1	1.1
2										3.3	2.0	1.2
3									7.8	3.1	1.0	1.4
4									7.0	3.4	1.4	4.9
5									8.3	4.5	1.1	1.2
6									9.9	8.6	1.1	1.0
7									10	4.6	1.1	1.0
8									8.3	3.0	1.1	1.0
9									7.8	2.6	1.2	9.0
10									6.2	2.4	2.1	1.1
11									5.5	4.2	4.1	1.2
12									5.1	2.8	1.4	1.1
13									4.8	2.0	2.6	1.0
14									8.2	1.8	4.5	11
15									6.4	1.7	2.8	25
16									13	1.5	3.3	5.2
17									9.1	1.4	1.8	3.2
18									6.2	1.4	1.4	2.9
19									5.7	1.6	1.4	13
20									4.5	1.5	2.2	303
21									3.9	1.2	1.7	107
22									3.7	1.2	1.2	35
23									3.8	2.0	1.3	21
24									3.7	7.7	1.1	14
25									3.5	1.8	1.1	10
26									3.1	1.5	1.2	8.2
27									5.5	1.4	1.1	18
28									13	1.7	1.1	12
29									5.6	2.3	1.1	8.7
30									4.6	1.9	1.1	9.8
31		-----								1.2	1.1	-----
TOTAL										82.9	52.5	625.10
MEAN										2.67	1.67	20.8
CFSM										.019	.012	.151
IN										.02	.01	.17

WABASH RIVER BASIN

73

3-3423.5 Buttermilk Creek near Paxton, Ind.

Location.--Lat 39°03'43", long 87°20'37", in SE $\frac{1}{4}$ NW $\frac{1}{4}$ 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 1, 1966 to Sept. 30, 1966.

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 this period, 81 cfs Sept. 20 (gage height, 8.49 ft); no flow many days.

Remarks.--Records good. Flow affected at times by strip mined areas.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1									3.7	1.0	0.10	0
2									3.6	.80	.30	0
3									3.4	.70	.10	0
4									3.4	1.0	.10	0
5									3.3	1.2	0	0
6									3.6	3.2	0	0
7									3.1	1.4	0	0
8									2.8	1.0	0	0
9									2.7	.80	0	0
10									2.4	.60	.50	0
11									2.2	1.3	.10	0
12									2.0	.50	.10	0
13									1.9	.50	.40	0
14									2.0	.40	.40	5.3
15									1.8	.30	0	7.0
16									2.4	.20	0	.40
17									1.8	.20	0	.20
18									1.8	.10	0	.10
19									1.5	.10	0	6.7
20									1.4	.10	0	21
21									1.3	.10	.10	2.5
22									1.1	0	.10	1.2
23									1.0	.30	.10	.70
24									.90	.30	0	.40
25									.80	.20	0	.40
26									.70	.10	0	.40
27									1.1	.10	0	3.9
28									2.4	.90	0	1.4
29									1.5	.40	0	.70
30									1.3	.10	0	1.0
31		--	---							.10	0	-----
TOTAL									62.90	18.00	2.40	53.30
MEAN									2.10	.58	.08	1.78
CFSM									.127	.035	.0047	.108
IN									.14	.04	.01	.12

3-3425. Busseron Creek near Carlisle, Ind.

Location.--Lat 38°58'30", long 87°25'35", in W $\frac{1}{2}$ sec. 17, T. 6 N., R. 9 W., on right bank 10 ft downstream from bridge on State Highway 58, $1\frac{1}{2}$ miles northwest of Carlisle, and 6 $\frac{3}{4}$ miles upstream from mouth.

Drainage area.--228 sq mi.

Records available.--October 1943 to September 1966.

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.--23 years, 204 cfs.

Extremes.--Maximum discharge during year, 1,920 cfs Apr. 27 (gage height, 13.30 ft); minimum, 0.20 cfs Sept. 9-11; minimum gage height, 2.23 ft Aug. 8-10.

1943-66: Maximum discharge, 8,800 cfs Jan. 5, 1950 (gage height, 20.05 ft); maximum gage height, 20.30 ft May 9, 1961; no flow many days in 1954.

Remarks.--Records good above 100 cfs, fair from 30 to 100 cfs, and poor below 30 cfs and for winter period. Flow regulated at times by mining operations above gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	17	7.3	2.5	581	6.0	194	36	1,730	32	2.5	1.7	1.5
2	14	5.0	3.2	926	6.5	145	30	1,590	24	1.3	1.1	1.5
3	13	6.5	3.1	613	7.3	108	25	736	20	1.3	3.8	1.7
4	11	7.6	2.3	229	10	220	24	275	18	3.2	2.5	4.8
5	9.3	7.3	2.1	156	12	192	23	204	16	3.8	1.9	6.1
6	8.0	7.4	2.0	132	12	107	22	164	20	6.4	1.5	1.7
7	11	8.5	1.6	107	20	81	22	136	26	8.5	1.5	.40
8	19	9.0	1.5	71	250	68	20	116	18	2.3	1.3	.30
9	18	11	2.5	71	391	65	20	238	15	1.3	1.3	.20
10	15	12	2.4	70	792	65	19	257	12	.80	3.0	.20
11	9.5	11	4.8	51	1,140	68	168	176	8.8	1.2	9.2	.20
12	7.3	13	66	49	612	72	706	369	7.6	3.5	5.0	.40
13	6.6	23	134	57	265	168	575	319	6.4	1.3	4.2	.50
14	5.8	14	80	52	185	152	269	284	20	.70	11	6.1
15	6.2	11	49	46	144	108	164	192	12	1.0	7.6	150
16	5.0	10	38	34	154	88	124	149	18	.80	5.8	14
17	4.0	8.4	30	31	152	73	93	133	20	.70	5.8	2.3
18	3.0	6.7	25	27	106	66	77	880	9.9	.50	3.2	1.0
19	3.9	6.2	20	23	92	64	104	814	7.0	.50	2.1	5.8
20	4.8	5.9	22	20	68	56	136	260	5.8	1.0	2.3	3.9
21	7.2	6.2	20	17	57	52	97	181	4.8	1.0	4.0	.29
22	7.6	6.5	18	15	51	50	73	212	4.5	1.0	2.8	70
23	6.9	6.7	16	13	50	50	74	144	4.0	1.0	2.1	37
24	6.4	6.1	16	12	50	50	97	115	3.8	8.8	1.7	20
25	6.1	5.4	47	10	50	43	160	98	3.2	5.5	1.5	12
26	5.7	6.2	69	9.0	48	40	162	79	3.0	1.9	1.2	8.8
27	6.6	18	42	9.0	44	38	1,720	62	3.0	1.3	1.5	34
28	7.6	13	30	8.0	71	34	1,680	52	18	1.9	1.5	47
29	6.1	9.4	30	7.0	-----	32	1,530	280	16	5.8	1.5	13
30	5.8	4.5	30	6.0	-----	34	1,550	112	4.2	3.5	1.3	8.8
31	6.6	-----	33	5.5	-----	33	-----	58	-----	2.8	1.5	-----
TOTAL	264.6	272.8	843.0	3,457.5	4,845.8	2,616	9,800	10,395	381.0	77.10	106.3	682.20
MEAN	8.54	9.09	27.2	112	173	84.4	327	335	12.7	2.49	3.43	22.7
CFSM	.038	.040	.119	.491	.759	.370	1.43	1.47	.056	.011	.015	.100
IN	.04	.04	.14	.56	.79	.43	1.60	1.70	.06	.01	.02	.11

CALENDAR YEAR 1965	MAX	2,310	MIN	1.5	MEAN	107	CFSM	.469	INCHES	6.40
WATER YEAR 1965-66	MAX	1,730	MIN	.20	MEAN	92.4	CFSM	.405	INCHES	5.50

Peak discharge (base, 2,200 cfs).--No peak above base.

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 1966. 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.--37 years, 11,080 cfs.

Extremes.--Maximum discharge during year, 24,200 cfs May 1; maximum gage height, 12.47 ft May 2; minimum daily discharge, 1,240 cfs Sept. 9, 12-14; minimum gage height, 2.02 ft Sept. 14.
1929-66: Maximum discharge, 189,000 cfs May 22, 23, 1943 (gage height, 29.33 ft, present datum); minimum observed, 770 cfs Aug. 4, 5, 1934 (gage height, 1.40 ft, present datum).
Flood of Mar. 29, 1913, reached a stage of 26.3 ft, present datum, from floodmarks, determined by Corps of Engineers (discharge, 255,000 cfs, estimated).

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,740	3,670	3,460	13,000	3,000	3,400	3,530	23,500	3,370	3,320	2,040	1,440
2	4,520	3,460	3,670	13,200	3,000	3,620	3,300	23,700	7,630	3,670	2,240	1,440
3	4,520	3,250	3,460	17,400	3,000	3,620	3,070	21,700	7,220	3,670	2,240	1,440
4	4,520	3,040	3,460	13,100	3,000	3,300	3,340	23,700	3,750	3,570	2,040	1,640
5	4,740	3,040	3,460	13,600	3,000	7,450	3,620	17,100	3,300	3,460	1,340	1,440
6	4,520	3,040	3,250	13,500	3,000	3,600	3,400	14,500	3,070	3,250	1,340	1,440
7	4,300	2,640	3,040	17,000	3,100	10,000	3,130	14,300	3,340	3,250	2,040	1,440
8	4,090	2,640	3,040	13,300	3,460	13,300	3,130	12,500	3,070	3,250	1,340	1,440
9	3,830	2,840	2,340	14,000	4,520	10,000	4,960	11,200	3,300	3,460	1,340	1,240
10	3,670	3,040	3,040	12,000	4,960	3,030	4,740	10,500	3,620	3,250	1,640	1,440
11	3,460	3,040	2,340	10,500	3,340	3,370	4,740	10,300	3,130	3,040	2,040	1,440
12	3,460	3,040	2,340	3,320	11,500	7,630	3,340	10,300	4,960	2,340	1,340	1,240
13	3,460	3,040	3,040	3,340	12,700	7,450	3,990	11,200	4,740	3,250	1,340	1,240
14	3,460	3,040	3,250	3,140	13,000	7,630	3,530	12,000	4,960	3,460	1,340	1,240
15	3,460	3,040	3,250	7,450	13,500	7,630	3,620	13,200	4,740	3,040	2,040	1,340
16	3,460	3,040	3,250	3,990	13,700	3,140	3,130	13,700	4,960	2,340	2,240	2,040
17	3,460	3,040	3,460	3,990	14,300	3,370	4,520	17,000	3,130	3,040	2,040	1,340
18	3,250	3,040	3,670	3,530	12,200	3,370	4,520	17,000	3,400	3,250	1,340	1,640
19	3,250	3,040	3,380	3,300	10,300	3,370	4,300	13,200	3,300	3,250	1,340	1,640
20	3,250	2,340	3,330	3,400	3,340	7,910	4,520	13,400	3,300	3,040	1,340	3,040
21	3,040	2,340	3,330	4,740	7,910	7,450	4,520	17,200	3,340	3,040	1,340	7,910
22	3,040	2,640	3,670	4,520	7,220	7,220	3,300	13,100	3,620	2,340	1,340	3,130
23	3,040	2,340	3,460	4,200	3,530	3,760	3,600	13,600	3,620	2,340	2,040	3,250
24	2,340	2,640	3,460	3,300	3,070	3,760	10,300	13,300	3,130	2,340	2,040	2,640
25	3,040	2,340	3,460	3,600	3,620	3,530	13,000	13,300	4,960	2,540	1,340	2,440
26	3,460	2,640	3,460	3,500	3,620	7,630	14,900	13,000	4,520	2,440	1,340	2,240
27	4,090	2,640	4,520	3,200	3,620	3,370	13,300	12,500	4,300	2,440	1,640	2,040
28	4,740	2,640	11,500	3,100	3,400	3,600	23,300	13,700	4,090	2,240	1,640	2,040
29	4,740	3,040	13,600	3,000		3,140	21,600	11,000	4,300	2,240	1,640	2,040
30	4,300	3,250	13,300	3,000		7,450	21,300	13,500	4,300	2,240	1,640	1,340
31	3,330		14,000	3,000		3,990		4,320		2,240	1,640	
Total	117,680	83,870	143,390	275,220	207,410	240,340	252,700	451,520	167,630	93,900	35,540	63,220
Mean	3,796	2,962	4,787	8,878	7,408	7,769	8,423	14,890	5,589	3,029	1,892	2,107
Cfsm	0.277	0.216	0.349	0.648	0.541	0.567	0.615	1.09	0.408	0.221	0.138	0.154
In.	0.32	0.24	0.40	0.75	0.56	0.65	0.69	1.26	0.46	0.25	0.16	0.17

Calendar year 1965 : Max 41,200 Min 2,240 Mean 9,373 Cfsm 0.684 In. 9.30
Water year 1965-66 : Max 23,800 Min 1,240 Mean 5,962 Cfsm 0.435 In. 5.91

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 1966. Prior to October 1963, published as Embarras River at Ste. Marie.

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

Average discharge.--55 years, 1,167 cfs.

Extremes.--Maximum discharge during year, 6,050 cfs May 2 (gage height, 14.92 ft); minimum daily, 29 cfs Sept. 8-15.
1909-12, 1914-66: Maximum discharge, 44,800 cfs Jan. 4, 1950 (gage height, 24.95 ft), from rating curve extended above 29,000 cfs; maximum gage height, 25.54 ft June 30, 1957; minimum discharge, 1 cfs Oct. 5-9, 1914.

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	526	96	69	1,240	100	300	217	4,880	716	273	53	34
2	480	95	64	2,430	100	344	205	5,880	641	312	54	44
3	332	93	61	1,490	100	348	205	5,810	585	282	50	38
4	269	89	60	1,100	100	402	199	2,280	542	236	50	34
5	243	88	61	1,020	100	501	199	1,850	507	254	50	31
6	223	86	61	952	100	542	189	1,550	478	176	49	30
7	217	85	61	822	100	606	185	1,360	472	153	50	30
8	321	82	58	704	150	722	179	1,210	480	143	50	29
9	319	80	57	600	250	746	176	1,110	430	133	50	29
10	229	78	58	512	1,300	650	168	1,020	408	120	55	29
11	201	77	58	435	2,760	550	195	906	380	114	63	29
12	203	78	68	400	1,890	501	1,100	934	348	117	55	29
13	199	80	77	350	987	550	1,060	1,070	332	120	51	29
14	183	77	86	300	906	569	569	952	314	110	61	29
15	168	76	96	260	875	498	420	924	418	99	120	29
16	156	78	85	230	770	452	365	896	337	95	86	31
17	149	78	76	210	671	422	328	892	314	89	54	55
18	142	76	71	190	580	402	291	2,570	326	82	46	50
19	134	76	70	170	523	378	287	4,570	282	78	42	52
20	126	75	72	150	480	360	368	4,950	265	74	41	70
21	120	72	74	140	425	342	1,670	2,270	251	69	40	159
22	115	72	71	130	360	328	3,090	2,520	225	67	39	151
23	115	71	68	120	320	314	2,470	2,190	211	63	38	145
24	112	71	68	110	291	302	3,060	1,820	195	60	37	156
25	110	70	152	110	280	289	4,080	1,830	183	59	36	155
26	109	69	276	100	298	280	3,660	1,580	174	57	35	138
27	110	122	232	100	291	267	4,600	1,420	166	55	35	127
28	114	94	164	100	284	256	5,780	1,260	162	53	35	112
29	114	71	147	100		240	4,680	1,100	172	53	34	90
30	106	75	130	100	-----	229	3,660	945	203	54	34	81
31	102	-----	200	100	-----	221	-----	816	-----	53	33	-----
Total	5,047	2,430	2,951	14,775	15,391	12,911	43,655	61,355	10,517	3,703	1,526	2,045
Mean	195	81.0	95.2	477	550	416	1,455	1,979	351	119	49.2	68.2
Cfs/m	0.129	0.054	0.063	0.315	0.364	0.275	0.962	1.31	0.232	0.079	0.033	0.045
In.	0.15	0.06	0.07	0.36	0.38	0.32	1.07	1.51	0.26	0.09	0.04	0.05

Calendar year 1965: Max 4,540 Min 34 Mean 585 Cfs/m 0.387 In. 5.25
Water year 1965-66: Max 5,880 Min 29 Mean 486 Cfs/m 0.321 In. 4.36

Peak discharge (base, 6,500 cfs).--No peak above base.

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 1966. Prior to October 1963, published as North Fork Embarras 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 datum.

Average discharge.--26 years, 230 cfs.

Extremes.--Maximum discharge during year, 1,880 cfs Apr. 28 (gage height, 14.25 ft); minimum daily, 0.1 cfs Sept. 11-16.

1940-66: Maximum discharge, 27,100 cfs Jan. 4, 1950 (gage height, 22.38 ft), from rating curve extended above 16,000 cfs; no flow for many days in 1953-54, 1964-65.

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5.5	1.8	7.5	135	5.0	55	17	1,340	55	33	1.6	0.2
2	19	2.0	6.3	474	5.0	94	16	1,430	50	24	2.3	
3	24	2.3	5.4	299	5.0	79	14	596	47	18	2.0	.2
4	13	2.2	4.7	164	5.0	76	13	256	43	21	1.6	.2
5	8.2	2.2	4.2	100	5.0	120	12	191	40	23	1.3	.2
6	6.2	2.2	3.9	74	5.0	88	12	155	38	13	1.1	
7	6.0	2.3	3.6	62	5.0	62	11	131	63	12	.9	.2
8	6.1	2.3	3.2	47	4.5	48	11	112	170	11	.9	.2
9	7.4	2.5	3.1	40	148	42	11	104	76	8.8	.8	.2
10	15	2.7	3.7	39	323	40	10	105	55	7.5	3.8	.2
11	10	2.7	4.0	28	314	40	33	95	45	6.7	4.1	.1
12	7.5	3.3	6.0	27	609	43	360	117	37	6.2	3.6	.1
13	5.8	4.1	8.4	31	211	30	332	204	34	5.9	3.7	.1
14	4.7	5.8	16	25	131	120	217	169	33	5.1	8.8	.1
15	4.7	5.8	14	20	101	86	131	142	116	7.9	19	.1
16	4.1	5.8	11	15	24	66	96	115	71	6.2	9.3	.1
17	3.3	6.7	8.8	15	77	56	78	119	106	4.6	3.8	7.0
18	2.9	5.3	7.5	10	66	51	66	842	70	4.0	2.2	9.5
19	2.3	4.5	7.2	10	55	46	65	1,690	47	3.6	1.4	9.3
20	2.2	4.1	6.4	9.0	45	42	107	696	37	3.2	.9	314
21	1.8	4.1	5.7	8.0	35	37	432	236	30	2.7	6	493
22	1.8	5.5	5.1	7.0	30	33	821	536	26	2.7	6	109
23	1.8	5.5	4.9	7.0	30	32	359	303	23	2.7	.8	55
24	2.0	5.3	5.2	6.0	35	29	563	205	20	2.9	.3	34
25	1.8	5.3	7.1	6.0	37	28	1,250	284	18	2.7	.2	24
26	1.4	5.3	42	6.0	34	25	551	172	16	2.6	.2	18
27	1.2	5.0	55	5.0	33	23	1,220	119	15	2.3	.2	40
28	1.2	33	37	5.0	36	21	1,800	99	72	2.3	.2	40
29	1.6	19	26	5.0	5.0	19	1,050	34	134	2.2	.2	15
30	1.4	9.8	22	5.0	-----	18	743	71	52	2.0	.2	10
31	1.1	-----	23	5.0	-----	18	-----	61	-----	1.8	.2	-----
Total	175.0	168.4	367.9	1,639.0	3,014.0	1,609	10,451	10,799	1,639	251.6	76.8	1,180.40
Mean	5.65	5.61	11.9	54.5	108	51.9	348	348	54.6	8.12	2.48	39.3
Cfsm	0.018	0.018	0.037	0.171	0.339	0.163	1.09	1.09	0.171	0.026	0.0078	0.123
In.	0.02	0.02	0.04	0.20	0.35	0.19	1.22	1.26	0.19	0.03	0.01	0.14

Calendar year 1965: Max 2,530 Min 0.10 Mean 79.7 Cfsm 0.250 In. 3.39

Water year 1965-66: Max 1,800 Min 0.10 Mean 86.1 Cfsm 0.270 In. 3.66

Peak discharge (base, 4,000 cfs).--No peak above base.

3-3470. White River at Muncie, Ind.

Location.--Lat 40°12', long 85°23', 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 1966. 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 at datum 3.00 ft higher.

Average discharge.--35 years (1931-66), 212 cfs (adjusted for diversion after September 1937).

Extremes.--Maximum discharge during year, 1,740 cfs Feb. 11 (gage height, 6.05 ft); minimum, 2.7 cfs Aug. 9 (gage height, 2.35 ft). 1930-66: 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.--Records good except those below 20 cfs, which are fair, and those for winter period, which are poor. 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 CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	72	30	20	289	15	97	44	701	44	15	6.8	3.3
2	76	17	19	772	15	116	44	523	45	11	6.0	3.3
3	70	16	18	773	15	137	42	322	41	13	4.3	3.4
4	63	16	18	371	15	216	39	223	41	11	4.5	4.6
5	59	14	20	225	15	212	37	174	41	8.4	4.0	9.4
6	59	15	18	174	15	160	40	144	37	7.9	4.6	12
7	67	19	16	144	15	119	39	122	33	12	8.7	6.6
8	64	18	16	117	15	97	39	116	29	10	6.5	5.0
9	68	14	16	90	150	93	41	113	31	12	3.6	4.2
10	68	15	16	80	507	100	43	99	29	15	6.9	3.6
11	63	16	18	60	1,540	113	40	97	29	14	8.5	4.0
12	15	16	26	60	727	118	42	226	29	21	6.0	3.8
13	11	20	35	50	396	128	64	267	34	15	9.4	3.8
14	12	26	42	40	341	133	118	211	73	16	18	3.8
15	15	23	37	35	237	123	67	186	74	17	18	4.0
16	14	20	31	30	211	107	67	156	61	11	11	4.0
17	15	19	29	30	221	93	64	132	60	8.6	7.0	3.8
18	18	19	27	30	162	90	49	188	45	6.2	4.3	3.9
19	14	19	28	25	120	88	47	452	32	4.0	3.3	5.8
20	61	16	25	25	98	82	46	358	25	4.0	3.3	26
21	140	19	24	25	86	75	48	258	19	3.6	3.7	25
22	473	20	23	25	64	69	44	310	15	3.5	5.1	16
23	222	17	23	20	56	76	41	237	11	3.4	3.7	7.9
24	131	16	24	20	57	68	62	172	9.2	4.6	3.2	6.8
25	90	18	36	20	51	64	502	134	11	4.6	3.7	9.1
26	65	23	45	20	50	60	381	106	12	4.5	4.8	8.4
27	54	24	37	20	50	53	283	92	8.9	4.6	3.7	7.5
28	45	30	31	20	57	47	1,080	86	9.6	9.4	5.2	7.0
29	40	28	28	20	-----	44	849	76	15	14	5.2	8.1
30	40	23	28	15	-----	44	536	64	17	12	3.6	6.4
31	37	-----	44	15	-----	46	-----	49	-----	12	3.4	-----
TOTAL	2,241	590	818	3,640	5,261	3,070	4,838	6,394	960.7	308.3	190.0	220.5
MEAN	72.3	19.7	26.4	117	168	99.0	161	206	32.0	9.95	6.13	7.35
($\bar{y}$)	17.6	17.0	16.3	17	17	16.7	16	16	19.1	19.41	19.48	19.99

Adjusted for diversion

	Mean	Cfs	In.	Mean	Cfs	In.	Mean	Cfs	In.	Mean	Cfs	In.
Mean	89.9			36.7			42.7			134		
Cfs	0.371			0.152			0.176			0.554		
In.	0.43			0.17			0.20			0.64		

Observed

Adjusted

Calendar year 1965 :	Max 2,820	Min 1.9	Mean 138	Mean 156	Cfs 0.645	In. 8.69	$\bar{y}$ 18
Water year 1965-66 :	Max 1,520	Min 3.2	Mean 78.2	Mean 95.9	Cfs 0.396	In. 5.38	$\bar{y}$ 17.7

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

$\bar{y}$ Diversion above station for municipal supply, equivalent in cubic feet per second, furnished by Muncie Water Works Co.

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 1966.

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.--12 years, 32.8 cfs.

Extremes.--Maximum discharge during year, 207 cfs Feb. 10 (gage height, 4.93 ft); minimum, 6.2 cfs July 4 (gage height, 2.22 ft); minimum gage height, 2.11 ft Aug. 8, 28-31, Sept. 1, 11-13, 17, 18, 1954-66: 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.--Records good except those for winter period, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	13	13	12	47	14	19	12	47	15	7.0	8.5	8.4
2	12	13	12	98	14	18	11	32	15	6.9	9.4	8.4
3	12	13	12	51	14	19	11	26	14	6.5	9.1	9.2
4	12	12	12	34	14	23	11	23	14	7.1	8.9	10
5	12	12	11	30	14	23	11	21	14	6.9	8.8	8.6
6	12	12	11	28	14	19	11	19	17	7.1	8.7	8.4
7	13	12	11	27	14	17	11	18	17	7.3	8.5	8.4
8	13	12	11	24	20	16	11	19	16	8.0	8.4	8.5
9	12	12	11	22	37	17	11	19	16	8.7	8.6	8.5
10	12	12	11	21	98	18	10	17	15	8.7	9.4	8.0
11	12	12	11	20	112	18	10	19	16	9.7	9.9	7.0
12	12	12	13	19	48	18	11	33	15	9.2	9.0	7.8
13	12	13	15	19	38	19	13	26	17	9.2	9.0	7.8
14	12	12	14	18	31	19	12	24	19	9.2	20	8.0
15	12	12	13	18	27	18	11	22	15	9.2	11	8.1
16	12	13	13	16	28	17	11	21	18	9.5	9.9	8.5
17	12	12	12	15	26	16	11	20	15	9.2	9.4	8.5
18	12	12	12	15	22	16	10	31	14	9.0	9.1	8.5
19	12	12	12	16	20	16	11	30	13	9.0	9.1	9.5
20	20	12	12	16	18	15	10	25	12	10	9.2	15
21	29	12	12	15	17	15	10	25	12	10	10	11
22	55	12	11	15	16	14	9.6	25	11	9.5	9.2	9.0
23	25	12	11	15	15	15	9.6	25	10	9.0	9.0	8.5
24	20	12	12	14	15	14	26	20	10	9.0	8.9	8.1
25	17	12	14	14	15	14	30	20	9.7	9.0	8.8	9.0
26	16	12	14	14	14	14	20	18	9.2	9.0	8.7	9.1
27	15	11	13	14	14	12	27	17	8.7	9.0	8.5	8.8
28	14	15	13	14	16	12	57	16	8.5	9.0	8.4	8.5
29	14	13	12	14	-----	12	39	15	9.4	9.0	8.5	8.6
30	14	13	12	14	-----	12	52	15	7.7	9.0	8.5	8.9
31	13	-----	14	14	-----	12	-----	14	-----	9.0	8.3	-----
TOTAL	483	369	379	711	753	507	500.2	702	403.2	267.9	290.3	264.4
MEAN	15.6	12.3	12.2	22.9	24.9	16.4	16.7	22.6	13.4	8.64	9.37	8.81
CFSM	.425	.335	.332	.624	.733	.447	.455	.616	.365	.235	.255	.240
IN	.49	.37	.38	.72	.76	.51	.51	.71	.41	.27	.29	.27

CALENDAR YEAR 1965 MAX 373 MIN 6.8 MEAN 22.9 CFSM .624 INCHES 8.46
 WATER YEAR 1965-66 MAX 112 MIN 6.5 MEAN 15.4 CFSM .420 INCHES 5.71

Peak discharge (base, 400 cfs).--No peak above base.

3-3480. White River at Anderson, Ind.

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

Drainage area.--401 sq mi.

Records available.--July 1925 to September 1926, October 1931 to September 1966. 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.--36 years, 365 cfs.

Extremes.--Maximum discharge during year, 1,750 cfs Feb. 11 (gage height, 9.76 ft); minimum, 27 cfs Sept. 14 (gage height, 7.18 ft). 1925-26, 1931-66: 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.--Records fair except those for winter period, which are 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	128	113	39	344	50	138	128	320	145	59	52	47
2	130	102	91	750	50	196	122	300	136	53	52	43
3	130	39	39	1040	60	200	119	610	128	44	58	50
4	122	36	39	760	60	259	113	435	152	62	57	54
5	125	39	36	476	60	365	113	330	119	40	52	50
6	122	36	31	312	60	294	116	270	115	57	57	44
7	136	36	39	254	60	254	116	232	102	49	57	42
8	139	39	36	238	60	204	113	217	110	51	57	33
9	130	94	34	138	100	168	119	228	105	40	54	42
10	136	91	31	155	524	165	108	217	113	40	42	47
11	139	39	91	150	1,510	162	110	228	116	49	152	35
12	139	39	100	150	1,130	168	125	294	108	62	60	31
13	36	110	113	140	630	238	145	434	94	71	57	31
14	74	94	113	130	526	228	133	336	133	31	52	23
15	79	91	125	120	407	228	155	337	152	62	39	33
16	36	100	110	110	351	204	168	232	162	62	77	47
17	31	97	108	110	351	198	168	254	145	53	71	42
18	71	91	108	100	300	168	122	276	139	40	62	33
19	69	97	100	100	270	133	116	540	128	51	62	23
20	124	94	94	90	270	158	119	540	39	55	57	119
21	204	94	102	90	217	149	125	456	39	62	52	144
22	432	91	100	90	162	155	113	449	70	62	42	39
23	498	91	97	90	160	158	110	442	59	50	52	65
24	276	36	91	40	155	158	158	351	62	58	47	60
25	195	36	122	30	136	152	469	232	62	62	47	40
26	168	34	113	30	136	142	610	232	51	52	47	44
27	149	128	116	70	130	128	477	209	59	57	47	44
28	136	102	113	70	113	130	936	209	55	62	50	40
29	128	97	113	70	---	130	1,160	200	66	163	47	50
30	128	100	108	70	---	136	760	196	51	40	47	44
31	119	---	108	70	---	128	---	152	---	57	47	---
Total	4,730	2,336	3,110	5,657	4,158	7,734	7,446	11,114	3,116	1,966	1,922	1,505
Mean	153	94.5	100	215	291	187	248	359	104	60.2	58.8	50.2
Cfsm	0.382	0.236	0.249	0.536	0.726	0.466	0.618	0.895	0.259	0.150	0.147	0.125
In.	0.44	0.26	0.29	0.62	0.76	0.54	0.69	1.03	0.29	0.17	0.17	0.14

Calendar year 1965: Max 3,100 Min 54 Mean 263 Cfsm 0.656 In. 8.90
 Water year 1965-66: Max 1,510 Min 29 Mean 159 Cfsm 0.396 In. 5.38

Peak discharge (base, 2,700 cfs).--No peak above base.

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 1966.

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, 404 cfs Feb. 11 (gage height, 5.25 ft); minimum daily, 10 cfs Sept. 11-15.
1964-66: Maximum discharge, 1,340 cfs Feb. 10, 1965 (gage height, 7.08 ft); minimum daily, 8.0 cfs Dec. 6, 1964; minimum gage height, 2.17 ft Sept. 11, 1965.

Remarks.--Records poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	15	32	30	307	25	56	37	36	37	37	14	11
2	17	34	28	345	25	60	36	69	37	30	14	11
3	18	34	25	271	25	65	36	61	34	22	13	12
4	17	30	29	180	25	92	33	52	33	22	13	14
5	20	25	28	130	25	86	31	46	24	23	13	13
6	22	32	24	104	25	68	31	46	29	28	13	12
7	27	31	23	92	25	54	31	44	32	26	12	11
8	25	30	25	74	46	46	30	39	31	22	12	11
9	27	31	22	70	50	44	31	46	33	24	12	11
10	25	33	29	60	80	48	30	46	30	19	12	11
11	25	31	29	50	345	48	28	44	25	22	12	10
12	27	30	24	50	254	46	30	68	23	18	12	10
13	33	31	31	45	151	50	31	36	23	20	13	10
14	32	34	44	40	117	55	33	69	92	25	20	10
15	28	30	37	35	92	52	31	61	86	24	25	10
16	25	30	28	35	80	48	31	58	69	21	15	11
17	31	28	27	35	30	44	32	53	65	16	14	11
18	28	25	25	30	65	44	30	48	60	17	13	11
19	25	24	23	30	58	43	30	48	37	19	13	11
20	38	20	24	30	65	42	30	44	33	18	13	20
21	188	21	23	30	48	44	29	48	33	18	13	15
22	345	24	20	30	43	51	28	57	33	18	13	13
23	188	24	21	30	39	56	27	56	33	19	13	12
24	124	21	22	25	37	52	28	51	31	16	12	12
25	96	20	28	25	37	49	44	48	30	18	12	11
26	67	22	41	25	36	44	41	45	22	16	12	11
27	59	30	38	25	34	44	41	43	27	15	12	11
28	47	38	32	25	37	40	65	39	22	15	12	11
29	39	33	31	25	36	74	74	27	44	14	12	12
30	39	31	30	25	-----	40	69	36	44	14	12	12
31	35	-----	57	25	-----	39	-----	32	-----	14	11	-----
Total	1,722	859	897	2,303	1,969	1,586	1,078	1,596	1,152	630	414	351
Mean	55.5	28.6	28.9	74.3	70.3	51.2	35.9	51.5	38.4	20.3	13.3	11.7
Cfsm	0.563	0.290	0.293	0.754	0.714	0.520	0.364	0.523	0.390	0.206	0.135	0.119
In.	0.65	0.32	0.34	0.87	0.74	0.60	0.41	0.60	0.44	0.24	0.16	0.13

Calendar year 1965 : Max 850 Min 9.4 Mean 66.3 Cfsm 0.673 In. 9.14
Water year 1965-66 : Max 345 Min 10 Mean 39.9 Cfsm 0.405 In. 5.50

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

Note.--No gage-height record Sept. 1-30.

3-3485. White River near Noblesville, Ind.

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

Drainage area.--814 sq mi.

Records available.--May 1915 to September 1926, October 1928 to September 1966. 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.--49 years, 786 cfs.

Extremes.--Maximum discharge during year, 3,700 cfs Feb. 11 (gage height, 9.26 ft); minimum, 63 cfs Sept. 13 (gage height, 3.77 ft, from recorded range line).

1915-26, 1928-66: 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.--Records good except those for winter period, which are fair. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	268	217	160	1,100	140	405	235	1,230	250	157	86	79
2	250	205	148	1,890	130	428	235	1,210	235	142	93	90
3	220	193	148	2,170	130	495	250	945	235	127	103	70
4	211	181	136	1,500	130	635	250	690	220	121	93	80
5	205	175	136	1,010	130	750	235	535	208	193	84	80
6	199	169	130	750	130	635	235	518	199	136	77	80
7	217	172	133	635	120	518	235	450	211	133	72	65
8	235	175	130	540	120	428	235	428	202	124	69	70
9	214	178	124	428	150	332	235	450	199	127	69	70
10	202	175	127	428	935	360	220	428	196	115	88	70
11	208	166	151	382	5,000	360	217	405	181	118	190	70
12	235	166	157	320	5,000	405	250	610	163	127	169	70
13	184	187	190	300	1,720	428	235	880	160	130	115	70
14	154	190	190	280	1,210	428	250	782	376	163	100	70
15	154	163	199	270	945	450	302	635	450	145	93	80
16	157	175	202	250	815	428	285	535	495	127	121	91
17	154	169	181	250	750	382	250	540	495	109	109	38
18	142	166	160	285	662	360	250	495	360	95	95	75
19	136	157	148	235	540	360	250	535	268	124	88	82
20	188	154	145	250	428	340	250	750	220	112	84	220
21	360	145	157	230	340	320	268	720	202	95	103	285
22	588	139	154	210	340	405	250	662	187	91	86	202
23	945	142	151	190	302	428	235	635	172	93	79	145
24	635	145	148	130	302	450	268	562	160	88	86	106
25	472	136	184	130	285	405	450	472	145	98	84	95
26	405	133	211	170	250	360	815	405	124	98	82	130
27	340	175	211	160	250	320	720	382	115	91	82	124
28	302	175	211	160	268	302	945	340	118	93	77	112
29	268	151	199	150	-----	302	1,640	302	181	127	75	98
30	250	160	190	150	-----	302	1,280	235	175	166	75	95
31	235	-----	223	140	-----	295	-----	268	-----	100	79	-----
Total	3,733	5,034	5,134	15,243	17,522	12,856	11,925	14,294	5,902	3,745	2,906	5,052
Mean	282	168	166	492	626	415	398	590	230	121	93.7	102
Cfs/m	0.346	0.206	0.204	0.604	0.769	0.510	0.489	0.725	0.283	0.149	0.115	0.125
In.	0.40	0.23	0.24	0.70	0.80	0.59	0.55	0.84	0.32	0.17	0.13	0.14

Calendar year 1965 : Max 6,440 Min 82 Mean 555 Cfs/m 0.682 In. 9.27
 Water year 1965-66 : Max 3,000 Min 65 Mean 305 Cfs/m 0.375 In. 5.11

Peak discharge (base, 5,500 cfs).--No peak above base.

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 1966. 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.--20 years, 801 cfs.

Extremes.--Maximum discharge during year, 3,950 cfs Feb. 12 (gage height, 9.61 ft); minimum, 63 cfs Aug. 29 (gage height, 3.74 ft). 1946-66: 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.--Records good except those for winter period, which are fair. Flow regulated by powerplant above station. Records of water temperatures for water year 1966 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	267	196	157	897	140	377	298	1,240	206	199	101	79
2	268	186	164	1,880	130	425	296	1,240	271	177	104	75
3	236	178	163	2,290	130	477	271	1,010	261	160	102	73
4	214	162	158	1,640	130	607	259	776	250	155	102	81
5	210	163	158	1,030	130	736	246	639	238	216	97	83
6	194	158	155	801	130	644	257	556	239	166	92	70
7	221	156	155	671	130	510	254	493	222	160	89	71
8	261	161	158	562	130	433	249	453	222	147	83	76
9	236	170	152	473	130	383	246	455	226	142	81	76
10	217	170	155	425	803	368	246	443	199	139	97	76
11	235	169	163	390	2,940	365	247	414	199	135	128	76
12	245	150	173	330	3,300	392	269	570	180	137	195	76
13	233	176	211	340	1,880	414	289	814	174	144	139	73
14	162	186	190	326	1,260	417	273	786	293	165	121	77
15	165	157	212	305	995	437	309	647	480	162	108	94
16	167	166	215	295	854	420	289	578	551	135	119	85
17	155	167	190	248	776	389	273	525	584	125	126	95
18	154	161	163	220	704	368	251	502	440	107	109	94
19	141	163	166	210	576	374	254	542	347	122	103	88
20	152	163	166	200	464	345	258	729	285	131	98	236
21	334	160	163	190	384	329	262	706	241	112	107	274
22	552	155	168	190	354	385	262	660	231	103	109	254
23	942	155	168	180	340	420	240	650	221	104	91	152
24	720	158	163	170	324	435	247	592	213	103	97	135
25	531	155	183	170	316	402	393	512	190	100	94	128
26	431	155	216	160	278	369	780	450	188	104	90	158
27	361	171	218	150	261	339	762	393	160	101	89	171
28	301	190	242	150	267	314	870	372	163	106	87	147
29	254	161	217	150	-----	305	1,630	337	245	117	79	139
30	231	172	204	140	-----	309	1,360	307	249	182	77	131
31	205	-----	208	140	-----	304	-----	285	-----	126	79	-----
TOTAL	8,995	4,990	5,574	15,323	18,256	12,792	12,140	18,676	7,988	4,282	3,193	3,551
MEAN	290	166	180	494	652	413	405	602	266	138	103	118
CFSM	.347	.198	.215	.590	.779	.493	.484	.719	.318	.165	.123	.141
IN	.40	.22	.25	.68	.81	.57	.54	.83	.35	.19	.14	.16

CALENDAR YEAR 1965	MAX 6,680	MIN 85	MEAN 605	CFSM .723	INCHES 9.81
WATER YEAR 1965-66	MAX 3,300	MIN 71	MEAN 317	CFSM .379	INCHES 5.14

Peak discharge (base, 6,000 cfs).--No peak above base.

3-3495. Cicero Creek near Arcadia, Ind.

Location.--Lat 40°11', long 86°00', 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 1966.

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 at same site and datum. Prior to Jan. 18, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--12 years, 112 cfs.

Extremes.--Maximum discharge during year, 769 cfs Jan. 1 (gage height, 6.28 ft); minimum, 1.0 cfs Sept. 7 (gage height, 1.65 ft).
1954-66: Maximum discharge, 6,720 cfs June 29, 1957 (gage height, 11.86 ft); minimum, 0.4 cfs Oct. 10, 1956.
Maximum stage known, 15.6 ft (probably the flood of January 1937), from information by local residents.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	15	16	12	767	10	56	32	164	33	11	2.4	1.9
2	13	14	11	558	10	65	30	139	30	9.4	2.6	2.6
3	11	13	10	382	10	93	25	123	27	8.3	3.1	2.3
4	9.7	12	10	228	10	157	25	99	24	7.7	2.0	14
5	8.2	11	9.7	176	10	153	24	89	22	8.6	1.9	3.1
6	7.1	11	9.4	151	10	110	23	81	20	9.1	1.9	1.4
7	9.0	10	9.0	127	10	75	23	68	18	8.2	1.7	1.0
8	9.7	10	7.9	96	15	61	20	73	17	6.7	1.4	1.7
9	9.0	11	7.1	80	43	58	20	83	16	5.9	1.1	2.0
10	7.9	10	8.2	65	272	56	17	73	14	5.0	2.4	2.3
11	8.2	9.7	9.7	45	630	59	17	73	12	4.5	4.1	2.1
12	12	9.4	18	40	360	60	20	228	11	5.0	2.9	1.8
13	12	10	34	35	222	61	20	228	13	5.6	2.4	1.9
14	12	8.6	40	30	156	60	18	175	82	16	2.3	2.3
15	12	7.9	34	25	127	60	17	148	103	12	1.8	3.7
16	12	8.2	29	25	127	55	17	127	250	7.0	1.3	4.0
17	11	8.6	25	20	102	46	16	106	218	5.1	2.0	2.9
18	10	8.6	22	20	94	46	16	122	130	4.1	1.9	2.6
19	9.7	7.9	19	19	75	42	18	127	91	10	1.7	3.2
20	10	7.5	19	17	49	36	18	97	67	6.5	1.8	15
21	14	7.2	19	16	60	40	30	100	53	3.9	3.6	8.4
22	22	6.4	16	15	52	53	43	110	42	2.5	3.1	4.2
23	31	6.8	14	15	45	56	38	103	36	2.3	1.8	2.1
24	30	6.4	17	14	38	54	86	94	31	2.1	1.8	1.8
25	34	6.4	66	13	36	49	172	78	24	1.6	1.7	2.8
26	36	6.4	88	12	31	43	124	70	20	1.6	1.6	6.0
27	30	18	70	11	29	38	134	62	17	1.8	1.7	3.0
28	25	23	54	11	32	33	272	56	14	2.3	1.8	2.7
29	21	16	45	11	-----	32	250	46	16	11	1.5	2.2
30	19	14	41	10	-----	36	185	38	15	9.0	1.2	2.1
31	17	-----	119	10	-----	33	-----	34	-----	3.7	1.4	-----
TOTAL	487.5	315.0	893.0	3,044	2,665	1,876	1,750	3,214	1,466	197.5	63.5	106.9
MEAN	15.7	10.5	28.8	98.2	95.2	60.5	58.3	104	48.9	6.37	2.05	3.36
CFSM	.120	.080	.220	.750	.727	.462	.445	.794	.373	.049	.016	.027
IN	.14	.09	.25	.86	.76	.53	.50	.91	.42	.06	.02	.03
CALENDAR YEAR 1965	MAX	1,270	MIN	1.9	MEAN	85.7	CFSM	.654	INCHES	8.88		
WATER YEAR 1965-66	MAX	767	MIN	1.0	MEAN	44.1	CFSM	.337	INCHES	4.56		

Peak discharge (base, 1,100 cfs).--No peak above base.

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

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

Drainage area.--44.7 sq mi.

Records available.--October 1955 to September 1966.

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

Average discharge.--11 years, 36.8 cfs.

Extremes.--Maximum discharge during year, 329 cfs Feb. 11 (gage height, 3.87 ft); no flow Aug. 12 to Sept. 20.

1955-66: 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, 1966.

Remarks.--Records fair except those for winter period, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.2	2.9	2.1	151	2.0	15	8.1	56	5.0	1.8	0.6	0
2	4.0	2.7	1.9	129	2.0	18	7.8	45	4.8	1.5	.5	0
3	3.1	2.5	1.9	87	2.0	26	6.8	38	4.4	1.4	.5	0
4	2.5	2.4	1.9	56	2.0	52	6.5	29	4.0	1.5	.1	0
5	2.1	2.5	1.9	43	2.0	45	6.2	26	3.8	2.3	.1	0
6	1.5	2.7	1.9	36	2.0	32	6.2	22	4.0	1.7	.1	0
7	2.6	2.7	1.8	29	2.0	22	6.5	18	4.2	1.3	.1	0
8	3.4	2.7	1.6	18	2.0	17	5.9	19	3.8	1.0	.1	0
9	3.8	2.9	1.6	12	5.0	17	5.9	19	3.5	.7	.1	0
10	2.5	2.9	1.8	9.0	12.5	17	5.6	14	3.3	.6	.1	0
11	2.5	2.9	2.1	8.0	22.6	19	5.6	18	2.4	.5	.1	0
12	3.1	2.7	5.0	7.0	10.7	20	6.5	52	2.0	.4	0	0
13	3.2	2.9	10	6.0	6.9	20	8.1	48	3.7	.3	0	0
14	2.7	2.7	9.1	5.0	4.6	19	8.1	40	4.3	2.6	0	0
15	2.9	2.7	7.6	4.0	3.7	18	8.1	34	2.3	2.9	0	0
16	2.9	2.7	6.0	4.0	3.6	16	7.8	29	6.8	1.7	0	0
17	2.9	2.5	5.4	3.0	2.6	14	7.1	23	4.1	1.7	0	0
18	2.7	2.4	4.9	3.0	1.3	14	6.8	24	2.2	1.7	0	0
19	2.5	2.2	4.4	3.0	1.2	12	7.5	24	1.4	1.8	0	0
20	2.7	2.1	4.6	3.0	9.2	10	7.5	19	1.1	1.8	0	0
21	3.4	2.1	4.9	3.0	7.8	11	14	22	8.1	1.0	0	3.0
22	4.6	2.4	4.4	3.0	6.6	10	14	28	5.9	.3	0	2.9
23	6.0	2.4	4.0	2.0	6.0	13	12	24	5.0	.3	0	1.6
24	5.4	2.2	4.1	2.0	6.2	14	31	21	4.4	.3	0	1.0
25	5.7	2.1	18	2.0	6.0	11	48	15	3.7	.2	0	.8
26	5.2	2.2	20	2.0	5.0	11	35	13	3.2	.1	0	1.0
27	4.2	4.2	13	2.0	4.4	9.6	56	13	2.8	.1	0	.8
28	3.8	4.6	9.9	2.0	6.6	8.1	90	12	2.5	.1	0	1.4
29	3.4	3.0	8.8	2.0	7.8	7.8	69	9.2	2.4	.2	0	1.1
30	3.2	2.5	7.9	2.0	9.6	9.6	60	6.5	2.3	.8	0	.9
31	3.1	-----	28	2.0	-----	8.5	-----	5.6	-----	1.1	0	-----
Total	106.2	30.4	200.5	640.0	779.8	536.6	567.6	766.3	344.5	33.7	2.4	14.5
Mean	3.43	2.68	6.47	20.6	27.8	17.3	18.9	24.7	11.5	1.09	0.08	0.48
Cfsm	0.077	0.060	0.145	0.461	0.622	0.387	0.423	0.553	0.257	0.024	0.0018	0.011
In.	0.09	0.07	0.17	0.53	0.65	0.45	0.47	0.64	0.29	0.03	0.002	0.01

Calendar year 1965: Max 716 Min 0.1 Mean 25.1 Cfsm 0.562 In. 7.64
 Water year 1965-66: Max 226 Min 0 Mean 11.2 Cfsm 0.251 In. 3.40

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

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 1966.

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.--11 years, 18.5 cfs.

Extremes.--Maximum discharge during year, 278 cfs Feb. 10 (gage height, 2.76 ft); minimum, 0.1 cfs Aug. 31, Sept. 5-15, 18; minimum gage height, 0.88 ft Sept. 6.

1955-66: Maximum discharge, 4,920 cfs June 28, 1957 (gage height, 8.45 ft); minimum, 0.1 cfs Sept. 27, 28, 1956, and Aug. 31, Sept. 5-15, 18, 1966; minimum gage height, 0.88 ft Sept. 6, 1966.

Remarks.--Records fair except those for winter period, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1.8	2.0	2.2	78	1.0	13	5.8	36	4.6	1.6	0.70	0.20
2	1.6	2.2	2.2	58	1.0	13	5.8	26	4.3	1.3	.90	.20
3	1.1	1.8	2.2	34	1.0	16	5.5	20	4.3	1.4	.80	.20
4	1.2	1.8	2.0	20	1.0	28	5.5	16	4.1	2.0	.70	.20
5	1.1	1.8	1.7	15	1.0	21	5.2	14	3.9	1.8	.60	.10
6	1.2	1.8	1.7	12	1.0	16	5.5	13	4.4	1.7	.50	.10
7	1.4	1.8	1.5	10	1.0	13	5.5	12	4.5	1.4	.50	.10
8	1.8	2.2	1.5	7.4	1.0	11	4.9	13	3.6	1.0	.40	.10
9	1.7	2.4	1.5	6.0	1.0	11	5.2	14	4.3	.90	.40	.10
10	1.4	1.8	1.6	5.0	1.0	11	4.9	11	3.5	.90	.50	.10
11	1.4	1.8	1.7	4.0	1.16	13	4.9	13	3.1	.90	.50	.10
12	1.4	2.2	3.4	4.0	56	11	7.0	31	3.0	.80	.40	.10
13	1.4	2.2	3.8	3.0	40	11	10	24	3.1	.90	.40	.10
14	1.6	2.2	3.2	3.0	27	11	7.4	19	5.1	1.2	.40	.10
15	1.7	2.4	2.4	3.0	22	9.4	7.0	16	3.6	.80	.40	.20
16	1.7	2.4	2.0	3.0	20	8.4	6.2	13	16	.70	.40	.20
17	1.4	2.2	1.7	2.0	16	7.9	5.5	11	8.2	.70	.30	.20
18	1.3	2.2	1.6	2.0	15	7.9	4.9	22	5.4	.70	.30	.10
19	1.2	2.2	1.6	2.0	9.8	7.0	5.2	16	4.1	.80	.30	.90
20	1.4	2.3	1.7	2.0	7.7	6.2	4.6	12	3.4	.70	.30	4.0
21	1.8	2.2	1.8	2.0	6.9	6.6	7.9	19	3.1	.60	.30	3.3
22	1.7	2.2	1.7	2.0	6.1	6.2	6.2	19	2.8	.70	.30	1.7
23	1.7	2.1	1.8	2.0	6.2	8.4	6.2	14	2.6	.70	.30	1.2
24	2.0	2.0	2.2	2.0	6.2	8.4	25	11	2.4	.70	.20	1.0
25	2.0	1.9	6.2	2.0	6.2	7.0	25	8.9	2.4	.80	.20	1.5
26	1.8	2.4	5.5	2.0	5.5	7.0	15	7.9	2.0	.70	.20	1.9
27	2.0	4.1	4.6	1.0	5.2	5.8	47	7.2	2.0	.70	.20	2.0
28	1.8	3.0	4.1	1.0	7.8	5.5	56	6.6	2.0	.90	.20	1.5
29	1.8	2.4	3.8	1.0	-----	5.5	41	5.6	2.0	1.4	.20	1.2
30	2.0	2.4	3.8	1.0	-----	6.2	40	5.1	1.8	1.0	.20	.90
31	2.0	-----	1.4	1.0	-----	5.5	-----	4.7	-----	.70	.10	-----
TOTAL	49.4	66.4	90.7	290.4	498.6	317.9	385.8	461.0	119.6	31.10	12.10	23.60
MEAN	1.59	2.21	2.93	9.37	17.8	10.3	12.9	14.9	3.99	1.00	.39	.79
CFSM	.098	.136	.180	.575	1.09	.632	.791	.914	.245	.061	.024	.048
IN	.11	.15	.21	.66	1.14	.73	.88	1.05	.27	.07	.03	.05

CALENDAR YEAR 1965 MAX 319 MIN .30 MEAN 12.0 CFSM .736 INCHES 9.98
 WATER YEAR 1965-66 MAX 116 MIN .10 MEAN 6.43 CFSM .395 INCHES 5.35

Peak discharge (base, 400 cfs).--No peak above base.

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 1966.

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.--16 years, 181 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 1,100 cfs Feb. 11 (gage height, 8.38 ft); minimum, 1.0 cfs Sept. 22-24 (gage height, 3.59 ft). 1950-66: Maximum discharge, 9,800 cfs June 28, 1957 (gage height, 15.26 ft); minimum, 0.5 cfs Sept. 25, 1954.

Remarks.--Records good except those for winter period, which are poor. Flow regulated by Morse Reservoir located approximately 1.2 miles upstream beginning Dec. 9, 1955 (capacity, 6,900,000,000 gal).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	31	14	1.6	610	17	92	85	308	30	26	84	66
2	14	7.2	1.6	849	17	99	44	240	29	26	85	61
3	28	9.4	2.0	653	17	110	58	210	32	29	85	61
4	12	17	3.8	424	17	174	44	156	33	38	84	61
5	4.7	8.4	2.8	304	17	225	30	128	33	33	84	55
6	2.0	13	13	248	17	187	27	142	36	33	74	43
7	8.2	17	3.3	201	17	138	42	102	44	34	67	43
8	18	26	1.6	144	17	103	31	137	35	32	67	42
9	14	23	1.6	112	35	93	40	132	44	37	67	38
10	6.8	69	2.4	90	324	90	29	99	49	42	68	33
11	8.6	115	2.2	80	1,050	91	32	117	7.2	43	57	33
12	14	115	2.9	60	731	100	62	220	8.6	42	33	33
13	7.7	115	6.1	60	444	106	61	328	14	44	1.7	44
14	9.6	114	11	50	306	95	38	290	71	42	1.4	52
15	15	78	23	40	231	97	38	233	107	38	8.6	32
16	17	3.4	27	40	204	87	40	205	228	31	21	16
17	16	5.3	30	40	175	80	36	169	300	37	20	14
18	15	1.8	30	35	146	84	32	193	206	47	16	14
19	14	1.6	23	35	128	86	44	181	135	57	15	11
20	21	1.8	26	30	86	68	45	154	97	61	20	1.9
21	26	1.8	30	30	73	69	69	178	76	60	23	1.4
22	30	2.0	24	25	70	76	66	169	60	71	23	1.1
23	57	2.0	22	25	65	93	66	151	48	78	27	1.0
24	28	2.0	25	20	63	103	107	147	36	78	32	1.1
25	11	2.0	112	20	66	79	220	118	28	77	32	1.4
26	28	2.2	64	20	51	92	218	100	23	81	33	1.4
27	26	5.8	84	18	48	65	238	90	29	85	34	1.3
28	37	3.6	77	17	70	62	361	98	36	85	38	1.2
29	14	3.0	68	16	-----	57	414	72	39	84	45	1.3
30	13	1.8	58	16	-----	82	369	56	26	84	44	1.6
31	29	-----	98	15	-----	48	-----	47	-----	84	54	-----
TOTAL	575.6	781.1	876.9	4,327	4,502	3,037	2,986	4,970	1,939.8	1,639	1,343.7	762.7
MEAN	18.6	26.0	28.3	140	161	98.0	99.5	160	64.7	52.9	43.3	25.4
(f)	-0.4	-10.1	+11.5	-1	+1	+0.2	-4.7	-5	-2.2	-48.4	-46.6	-19.4

Adjusted for change in contents in Morse Reservoir

Mean	18.2	15.9	39.8	139	162	98.2	94.8	155	62.5	4.5	-3.3	+6.0
Cfsm	0.083	0.073	0.182	0.635	0.740	0.448	0.433	0.708	0.285	0.021	-0.015	0.027
In.	0.10	0.08	0.21	0.73	0.77	0.52	0.48	0.82	0.32	0.02	-0.02	0.03

Observed

Adjusted

Calendar year 1965 :	Max 1,940	Min 1.3	Mean 127	Mean 127	Cfsm 0.580	In. 8.08	f 0
Water year 1965-66 :	Max 1,050	Min 1.0	Mean 76.0	Mean 66.2	Cfsm 0.302	In. 4.06	f -9.8

Peak discharge (base, 2,000 cfs).--No peak above base.

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

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 1966. 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.--37 years, 1,053 cfs.

Extremes.--Maximum discharge during year, 4,870 cfs Feb. 12 (gage height, 7.68 ft); minimum, 124 cfs Sept. 17 (gage height, 1.82 ft). 1929-66: Maximum discharge, 32,400 cfs May 19, 1943 (gage height, 18.19 ft); minimum, 40 cfs Sept. 2, 1934; minimum daily, 49 cfs Sept. 17, 1941.

Flood of Mar. 26, 1913, reached a stage of 22.4 ft, from floodmark, determined by State Highway Department of Indiana (discharge, 58,500 cfs, estimated).

Remarks.--Records good except those for winter period, which are fair. Flow slightly regulated by Morse Reservoir. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	295	278	200	991	210	491	428	1,720	367	259	197	151
2	350	260	188	2,710	220	531	407	1,640	348	227	197	162
3	295	245	188	3,150	230	630	387	1,400	348	212	197	159
4	278	230	182	2,710	230	789	367	1,100	329	212	212	162
5	260	230	179	1,700	220	1,030	329	900	293	227	197	173
6	245	215	173	1,230	220	960	348	739	293	243	192	159
7	245	215	173	1,060	230	789	329	708	293	212	175	148
8	278	215	167	870	270	656	329	656	293	197	167	141
9	295	230	164	690	350	581	329	632	293	189	159	148
10	260	215	161	590	310	535	329	630	293	197	167	148
11	260	278	170	565	3,700	535	311	606	259	197	212	143
12	260	295	200	470	4,630	535	348	734	227	194	259	138
13	278	295	215	430	3,590	581	407	1,180	212	194	194	129
14	230	312	230	400	1,900	581	407	1,320	232	212	151	133
15	200	295	230	360	1,480	581	387	1,100	531	227	133	173
16	215	230	260	330	1,250	581	407	960	656	197	129	138
17	200	194	260	300	1,100	558	387	844	900	186	154	126
18	191	185	245	280	960	513	367	844	734	178	146	126
19	185	179	230	260	844	513	367	844	558	189	136	126
20	188	173	215	250	656	491	367	960	428	197	129	159
21	260	173	215	250	558	470	367	1,030	367	189	138	293
22	470	167	215	240	470	491	387	1,030	311	181	154	276
23	833	161	215	230	470	558	367	960	293	186	141	197
24	810	158	215	220	449	581	407	900	259	197	133	154
25	615	164	260	220	428	581	581	734	243	194	156	138
26	490	167	312	210	407	513	900	656	212	186	148	136
27	450	182	295	210	367	491	1,180	531	212	192	143	159
28	390	215	312	200	387	449	1,250	513	197	197	143	148
29	370	200	312	200	-----	428	2,000	491	259	197	143	136
30	312	194	295	200	-----	428	2,000	428	311	227	136	133
31	278	-----	278	200	-----	428	-----	387	-----	243	133	-----
Total	10,286	6,550	6,954	21,776	22,636	17,929	12,776	27,327	10,651	2,335	5,071	4,712
Mean	332	218	224	702	951	578	559	882	355	204	164	157
Cfsm	0.277	0.182	0.187	0.585	0.792	0.482	0.466	0.735	0.296	0.170	0.137	0.131
In.	0.32	0.20	0.22	0.67	0.82	0.56	0.52	0.85	0.33	0.20	0.16	0.15

Calendar year 1965: Max 8,870 Min 132 Mean 859 Cfsm 0.716 In. 9.73
 Water year 1965-66: Max 4,630 Min 126 Mean 441 Cfsm 0.368 In. 5.00

Peak discharge (base, 7,000 cfs).--No peak above base.

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 1966.

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

Average discharge.--25 years, 161 cfs.

Extremes.--Maximum discharge during year, 773 cfs Feb. 11 (gage height, 4.58 ft); minimum, 12 cfs Aug. 29 to Sept. 3, Sept. 10-14; minimum gage-height, 1.18 ft Aug. 8.
1941-66: 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.--Records good except those for winter period, which are poor. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	42	36	39	188	40	103	56	368	51	33	21	12
2	41	35	38	393	40	105	57	256	49	29	22	12
3	34	34	38	375	40	111	60	195	47	28	20	17
4	32	34	37	210	45	129	57	148	46	27	18	30
5	31	33	36	157	46	126	55	125	45	29	17	19
6	31	33	36	133	48	107	54	113	45	30	15	16
7	35	35	35	112	52	88	54	95	46	26	15	15
8	37	44	34	99	66	80	53	94	44	24	14	14
9	35	43	34	92	118	77	53	93	46	22	15	14
10	33	39	36	83	272	81	52	80	47	21	16	12
11	33	37	38	72	676	86	52	79	40	23	29	13
12	34	38	45	67	365	90	58	141	38	22	25	13
13	32	47	60	67	253	99	67	154	38	24	22	13
14	31	47	61	64	202	105	67	134	43	35	22	12
15	31	43	56	59	163	101	61	117	44	28	28	14
16	32	43	52	54	157	91	62	104	56	24	26	15
17	31	42	48	52	155	83	60	92	56	22	22	15
18	29	39	45	50	127	80	64	98	47	20	21	15
19	30	37	43	47	105	82	61	147	43	29	18	17
20	41	37	42	50	80	75	63	102	39	27	19	34
21	79	36	42	48	75	71	64	97	37	21	21	35
22	87	36	40	47	72	73	60	121	36	20	19	26
23	86	35	40	47	67	73	60	103	35	17	17	20
24	66	34	41	42	64	72	62	92	35	19	17	17
25	55	33	55	47	63	66	208	82	33	21	15	18
26	50	35	62	45	61	65	158	74	31	25	15	24
27	45	51	60	42	58	63	166	70	31	21	14	25
28	42	51	55	38	67	60	265	66	31	23	13	25
29	39	43	51	40	---	58	245	60	36	29	14	25
30	38	40	50	37	---	60	224	56	35	25	12	23
31	37	---	55	37	---	58	---	53	---	22	12	---
TOTAL	1,299	1,170	1,404	2,894	3,577	2,618	2,698	3,609	1,250	766	572	558
MEAN	41.9	39.0	45.3	93.4	128	84.5	89.9	116	41.7	24.7	18.5	18.6
CFSM	.244	.227	.263	.543	.744	.491	.523	.674	.242	.144	.108	.108
IN	.28	.25	.30	.63	.77	.57	.58	.78	.27	.17	.12	.12
CALENDAR YEAR 1965	MAX	1,450	MIN	19	MEAN	124	CFSM	.721	INCHES	9.79		
WATER YEAR 1965-66	MAX	676	MIN	12	MEAN	61.4	CFSM	.357	INCHES	4.85		

Peak discharge (base, 1,300 cfs).--No peak above base.

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 1966.

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

Average discharge.--13 years, 5.07 cfs.

Extremes.--Maximum discharge during year, 194 cfs Sept. 3 (gage height, 4.30 ft); minimum, 1.1 cfs July 31, Aug. 7, 9, 10 (gage height, 2.57 ft).
1952-56, 1957-66: Maximum discharge, 2,650 cfs May 28, 1956 (gage height, 9.32 ft); minimum, 0.1 cfs Aug. 1, 2, 1952, Oct. 29, 30, 1953.

Remarks.--Records fair prior to Apr. 19, good thereafter, except those for the winter period, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.8	2.4	2.6	2.4	1.5	8.9	5.6	5.6	2.4	2.6	1.6	1.8
2	1.6	2.4	2.6	2.9	1.5	8.5	6.2	5.0	2.4	2.0	2.6	1.6
3	1.6	2.6	2.6	1.4	1.5	7.3	7.3	4.4	2.4	2.0	1.6	9.8
4	1.6	2.4	2.2	8.0	1.5	6.9	6.9	4.2	2.2	2.0	1.6	3.9
5	1.6	2.4	2.4	6.0	1.5	6.2	5.9	4.2	2.2	2.0	1.6	2.0
6	1.6	2.4	2.4	5.0	1.5	5.3	5.6	4.2	3.9	2.0	1.6	2.4
7	2.6	2.4	2.4	5.0	1.5	5.6	5.9	3.9	2.2	2.0	1.6	2.2
8	1.8	4.2	2.2	3.5	2.0	5.0	5.3	3.6	2.2	2.0	1.6	2.0
9	1.6	2.0	2.4	3.0	4.0	5.0	5.0	5.0	2.6	2.0	1.6	1.6
10	1.6	1.8	4.2	2.5	6.4	5.0	4.7	3.4	2.2	2.0	5.6	2.0
11	2.4	1.8	3.1	2.5	5.0	5.3	4.7	7.3	2.6	3.0	1.6	1.8
12	1.6	3.4	8.1	2.5	28	5.3	4.7	6.2	2.4	2.2	1.6	2.0
13	1.6	2.4	4.7	2.0	19	5.9	4.7	5.3	3.6	2.0	2.6	2.0
14	1.6	1.6	3.4	2.0	8.5	6.9	4.2	4.2	3.9	1.8	2.8	2.2
15	1.8	1.4	3.1	2.0	5.0	11	3.6	3.6	3.4	1.8	1.6	3.1
16	1.8	1.6	2.8	2.0	6.2	12	3.6	3.6	5.3	1.6	1.6	2.2
17	1.8	1.8	2.6	2.0	6.2	12	3.1	3.4	2.8	1.6	1.6	2.0
18	2.0	1.8	2.6	2.0	5.6	12	3.4	4.4	2.6	2.0	1.6	1.8
19	2.4	1.6	2.6	1.5	5.0	12	3.6	3.1	2.2	2.8	1.4	8.1
20	5.3	1.8	2.8	1.5	5.3	11	3.4	3.1	2.6	1.8	5.5	9.7
21	2.0	1.8	3.4	1.5	7.3	11	4.2	5.3	2.6	1.8	1.6	3.4
22	2.4	1.8	2.8	1.5	8.5	11	2.8	3.1	2.4	2.0	1.4	2.2
23	2.4	1.8	2.8	1.5	7.7	9.7	2.8	2.8	2.4	1.8	1.6	2.0
24	2.4	1.8	3.9	1.5	5.6	9.7	9.3	2.6	2.8	2.8	1.4	1.8
25	2.4	1.8	8.1	1.5	5.6	8.9	5.0	2.6	2.8	2.0	1.4	3.9
26	2.4	4.3	3.9	1.5	5.9	8.5	4.2	2.6	2.4	1.6	1.6	2.0
27	2.2	4.7	3.9	1.5	6.9	8.1	2.2	2.8	3.6	2.0	1.4	4.7
28	2.4	2.6	3.1	1.5	7.3	8.1	11	2.6	2.6	1.8	1.4	2.2
29	2.2	2.4	2.8	1.5	-----	6.9	7.3	2.2	2.6	1.6	1.4	2.0
30	2.4	2.8	2.8	1.5	-----	6.2	7.3	2.4	2.6	1.6	1.4	2.0
31	2.4	-----	1.4	1.5	-----	6.6	-----	2.6	-----	1.4	1.6	-----
Total	65.3	70.0	113.3	136.5	274.1	251.8	173.3	119.3	82.9	61.8	59.3	90.6
Mean	2.11	2.33	3.65	4.40	9.79	8.12	5.78	3.85	2.76	1.99	1.91	2.81
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1965: Max 100 Min 0.2 Mean 5.01 Cfsm - In. -
Water year 1965-66: Max 64 Min 1.4 Mean 4.10 Cfsm - In. -

Peak discharge (base, 350 cfs).--No peak above base.

3-3522. Mud Creek at Indianapolis, Ind.

Location.--Lat 39°53'30", long 86°00'57", in NE¼ sec. 25, T. 17 N., R. 4 E., on left bank at downstream side of Lantern Road Bridge at Indianapolis, 0.2 miles northeast of intersection of 75th Street and Sargent Road, 2.0 miles southeast of Castleton and 1.5 miles upstream from mouth.

Drainage area.--42.5 sq mi.

Records available.--May 1958 to September 1966.

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.--8 years, 31.4 cfs.

Extremes.--Maximum discharge during year, 242 cfs Feb. 11 (gage height, 4.36 ft); minimum, 0.2 cfs Sept. 9, 10, 13, 14, 17, 18; minimum gage height, 1.48 ft Sept. 13, 14.

1958-66: 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.--Records good except those prior to Feb. 10, which are fair, and those for winter period, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.4	0.70	2.4	28	4.0	18	9.3	50	8.8	3.0	0.70	0.40
2	2.9	.60	2.3	43	4.0	19	9.1	43	8.4	2.8	.80	.40
3	2.5	.60	2.4	32	4.0	22	8.6	35	8.1	2.6	.80	.40
4	2.2	.60	2.3	21	4.0	27	8.3	28	7.6	2.5	.60	.80
5	1.8	.60	2.3	16	5.0	25	7.9	24	7.1	2.4	.60	.60
6	1.6	.70	2.2	14	5.5	21	8.1	22	7.3	2.2	.60	.50
7	1.8	.70	2.1	11	6.0	16	8.0	20	7.0	2.0	.50	.40
8	1.6	1.2	2.1	7.7	9.8	14	7.8	19	6.5	1.8	.50	.30
9	1.4	2.0	2.1	8.0	15	13	7.7	18	6.4	1.6	.40	.20
10	1.2	1.6	2.4	6.3	110	14	7.2	15	5.8	1.6	.60	.20
11	1.1	1.5	2.7	5.4	196	13	7.3	16	5.3	2.0	2.2	.30
12	1.1	1.6	4.4	5.0	100	14	8.3	26	5.0	1.6	1.6	.30
13	1.0	2.2	5.2	5.0	65	16	9.5	28	5.1	1.5	1.2	.20
14	.80	1.8	5.2	4.0	47	16	9.1	25	6.1	1.8	1.3	.20
15	.70	1.6	4.9	4.0	36	15	8.6	22	5.4	1.8	1.1	.40
16	.60	2.4	4.1	4.0	37	14	8.9	21	7.5	1.4	.90	.30
17	.70	1.8	3.3	4.0	31	14	8.5	19	7.0	1.3	.70	.20
18	1.0	1.6	3.2	4.0	26	14	7.9	19	6.1	1.2	.60	.20
19	1.2	1.8	3.0	4.0	21	13	8.2	17	5.4	1.5	.60	.60
20	2.0	1.8	3.2	4.0	15	12	8.2	15	4.9	1.9	3.1	1.0
21	2.2	2.0	3.1	4.0	14	12	7.9	17	4.8	1.3	2.0	1.3
22	2.6	2.1	2.5	4.0	12	12	7.1	17	4.5	1.1	1.5	.80
23	1.6	2.0	2.4	2.0	11	12	6.8	16	4.2	1.1	1.1	.50
24	1.4	1.6	2.4	3.0	11	12	16	15	4.0	1.3	.80	.50
25	.80	1.6	5.5	3.0	11	10	31	14	3.7	1.2	.70	.60
26	.80	2.1	6.3	3.0	9.8	11	25	13	3.4	1.0	.60	.60
27	.80	3.0	5.5	3.0	9.2	10	45	12	3.2	1.0	.60	1.0
28	.70	3.0	4.3	3.0	11	9.4	72	12	3.5	1.1	.60	.80
29	.60	2.7	4.1	3.0	-----	9.4	59	11	3.3	1.2	.50	.80
30	.60	2.4	3.4	3.0	-----	10	51	10	3.2	.90	.50	.90
31	.60	-----	4.6	4.0	-----	9.6	-----	9.3	-----	.70	.50	-----
TOTAL	43.30	49.90	105.9	266.4	830.3	447.4	487.3	628.3	168.6	50.40	28.80	15.70
MEAN	1.40	1.66	3.42	8.59	29.7	14.4	16.2	20.3	5.62	1.63	.93	.52
CFSM	.033	.039	.081	.202	.699	.339	.381	.478	.132	.038	.022	.012
IN	.04	.04	.09	.23	.73	.39	.43	.55	.15	.04	.03	.01

CALENDAR YEAR 1965 MAX 612 MIN .60 MEAN 27.1 CFSM .638 INCHES 8.66
 WATER YEAR 1965-66 MAX 196 MIN .20 MEAN 8.55 CFSM .201 INCHES 2.73

Peak discharge (base, 450 cfs).--No peak above base.

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 1966. 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.--37 years, 268 cfs (unadjusted).

Extremes.--Maximum discharge during year, 768 cfs Feb. 10 (gage height, 4.45 ft); minimum, 33 cfs Sept. 29 (gage height, 1.71 ft). 1929-66: Maximum discharge, 12,900 cfs May 28, 1956 (gage height, 13.53 ft); minimum, 7.0 cfs Sept. 28, 1941 (gage height, 0.84 ft). Maximum stage known, 16.3 ft Mar. 26, 1913, from floodmarks (discharge, 22,000 cfs, by slope-area measurement).

Remarks.--Records good except those for winter period, which are poor. Flow regulated by Geist Reservoir, 8.5 miles upstream, since January 1943 (capacity, 6,900,000,000 gal).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	64	69	59	253	60	201	85	431	70	60	59	64
2	61	61	57	332	70	214	93	407	64	66	62	62
3	60	70	52	207	70	220	103	317	58	67	59	68
4	59	71	50	129	70	224	91	269	58	67	59	75
5	58	75	51	98	80	234	70	208	57	66	58	65
6	58	75	50	84	80	208	69	200	60	66	58	66
7	66	74	51	83	80	175	75	173	62	66	58	65
8	63	79	51	71	92	154	78	185	62	66	60	63
9	60	75	52	73	110	139	79	185	61	67	70	63
10	58	71	56	71	385	139	76	114	91	66	77	63
11	62	70	57	65	545	144	78	129	61	80	78	64
12	56	78	69	61	602	158	137	198	52	63	74	64
13	56	84	68	60	531	191	130	237	51	62	75	63
14	56	99	69	58	415	181	84	230	60	63	79	64
15	58	99	66	57	333	183	81	201	53	62	73	64
16	58	99	62	55	304	176	88	182	70	63	63	63
17	58	92	58	55	287	149	89	166	66	63	62	57
18	69	72	56	59	251	147	85	164	67	63	63	57
19	71	65	54	63	215	146	92	164	67	65	64	70
20	82	60	55	59	164	146	95	162	58	63	67	76
21	73	60	55	57	138	137	107	181	51	62	109	61
22	76	59	55	57	126	124	109	175	62	62	65	54
23	76	58	55	57	118	135	78	153	66	61	63	50
24	73	57	55	63	114	129	142	141	67	68	61	47
25	73	58	77	60	111	124	144	134	67	64	61	48
26	72	60	79	56	106	117	261	115	67	61	60	38
27	70	73	72	56	100	103	393	125	67	61	59	36
28	70	66	68	60	129	100	450	110	65	61	58	34
29	69	57	65	60	-----	94	438	107	66	62	60	34
30	69	61	65	60	-----	106	385	80	65	60	65	43
31	69	-----	85	60	-----	104	-----	79	-----	58	65	-----
TOTAL	2,023	2,147	1,874	2,639	5,686	4,802	4,382	5,722	1,491	1,990	2,064	1,741
MEAN	65.3	71.6	60.5	85.1	203	155	146	185	63.0	64.2	66.6	58.0
CFSM	-	-	-	-	-	-	-	-	-	-	-	-
IN.	-	-	-	-	-	-	-	-	-	-	-	-
(A)	-14.3	-11.9	+7.6	+69.8	+33	0	+7	-9	-13.3	-37.4	-42.1	-30.1

CALENDAR YEAR 1965	MAX	2,750	MIN	50	MEAN	227	CFSM	0.725	INCHES	9.84	A	-3
WATER YEAR 1965-66	MAX	602	MIN	34	MEAN	101	CFSM	0.323	INCHES	4.38	A	-4

Peak discharge (base, 2,000 cfs).--No peak above base.

A 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 1966. 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 (revised) above mean sea level, datum of 1929. March 1904 to July 1906, chain gage at railroad bridge three-quarters of a mile upstream at datum approximately 2.9 ft higher. April 1930 to July 20, 1931, float gage at Indianapolis sanitation plant 2½ miles downstream at datum 660 ft lower. July 21, 1931, to Mar. 2, 1932, staff gage at present site at datum 660 ft lower. Prior to May 14, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--37 years (1904-5, 1930-66), 1,376 cfs (adjusted for diversion and change in content since October 1955; includes sewage effluent, April 1930 to September 1931).

Extremes.--Maximum discharge during year, 4,760 cfs Feb. 12 (gage height, 7.59 ft); minimum, 55 cfs Sept. 1 (gage height, 1.90 ft). 1904-6, 1930-66: Maximum discharge, 37,200 cfs May 18, 1943; maximum gage height, 21.57 ft Jan. 16, 1937; minimum, 6.8 cfs Sept. 21, 1941.

Flood of Mar. 26, 1913, reached a stage of 30.0 ft, from floodmarks determined by Indianapolis Water Co. (discharge, 70,000 cfs, estimated).

Remarks.--Records good except those below 200 cfs and those for winter period, which are fair. During the year the Indianapolis Water Co. diverted 30,009,000,000 gal of water for municipal use, most of which was returned 3 miles below the gage at sanitation plant. Slight fluctuation at low flow due to this diversion. Flow slightly regulated by Morse and Geist Reservoirs (combined usable capacity, 13,800,000,000 gal).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	265	270	159	1,050	160	670	426	1,780	368	207	148	81
2	285	251	150	2,740	160	717	445	1,740	342	167	103	75
3	275	220	142	2,890	160	775	430	1,500	315	205	97	124
4	245	207	135	2,640	160	906	405	1,230	293	212	101	280
5	210	195	131	1,820	170	1,080	370	998	276	196	97	127
6	205	192	109	1,340	180	1,140	340	810	279	189	99	116
7	290	197	109	1,100	190	936	340	774	262	158	93	90
8	245	245	103	908	342	767	350	679	233	121	95	76
9	240	221	103	763	447	669	360	775	244	131	62	60
10	235	209	155	653	1,590	627	355	657	207	121	138	72
11	270	217	127	596	3,860	628	370	711	209	250	146	75
12	225	442	265	531	4,790	691	445	831	123	197	156	74
13	215	398	235	460	3,580	722	470	1,060	143	113	210	59
14	205	339	175	400	2,390	731	430	1,310	245	91	217	59
15	171	378	171	350	1,750	714	365	1,160	280	97	115	68
16	147	353	175	320	1,510	720	395	996	588	138	78	79
17	159	235	201	300	1,310	681	395	907	653	113	60	67
18	155	203	186	283	1,160	686	365	889	672	114	75	63
19	119	174	177	263	982	635	360	890	512	216	68	425
20	163	169	166	250	806	612	355	944	400	87	57	550
21	151	172	161	240	637	561	370	1,140	300	98	110	315
22	305	176	151	220	549	544	345	1,110	260	97	88	188
23	566	150	147	210	506	694	340	993	230	89	70	128
24	786	137	170	210	477	679	522	935	171	189	68	95
25	641	147	339	200	469	664	592	827	171	264	64	149
26	485	186	259	190	439	598	812	724	170	119	79	102
27	430	297	250	180	415	575	1,570	653	167	86	78	194
28	380	173	246	180	562	486	1,600	570	137	97	57	104
29	381	186	257	170	-----	462	1,860	521	127	103	80	82
30	313	168	245	170	-----	457	2,120	462	211	119	77	99
31	286	-----	449	160	-----	463	-----	383	-----	164	87	-----
TOTAL	9,048	6,907	5,848	21,767	29,751	21,290	17,902	28,959	8,588	4,550	3,073	4,084
MEAN	292	230	189	702	1,063	687	597	934	286	147	99.1	136
(f)	+117	+114	+114	+112	+115	+114	+116	+123	+150	+161	+152	+138
(ff)	-15	-21	+20	+68	+31	0	+11	-14	-15	-87	-89	-49

Adjusted for diversion and change in reservoir contents

Mean	394	323	323	882	1,209	801	724	1,043	421	221	162	225
Cfsm	0.242	0.199	0.199	0.542	0.743	0.492	0.445	0.641	0.259	0.136	0.100	0.138
In.	0.28	0.22	0.23	0.62	0.77	0.57	0.50	0.74	0.29	0.16	0.12	0.15

Observed

Adjusted

Calendar year 1965 :	Max 11,400	Min 58	Mean 1,054	Max 1,172	Cfsm 0.720	In. 9.83	A +121	AA -3
Water year 1965-66 :	Max 4,790	Min 57	Mean 1,443	Max 556	Cfsm 0.342	In. 4.65	A +127	AA -14

Peak discharge (base, 8,500 cfs).--No peak above base.

A Diversion above station for municipal supply, equivalent in cubic feet per second, furnished by Indianapolis Water Co.

AA 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 1966.

Gage.--Water-stage recorder. Datum of gage is 780.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Average discharge.--6 years (1960-66), 6.01 cfs.

Extremes.--Maximum discharge during year, 262 cfs Feb. 10 (gage height, 4.95 ft); minimum, 0.1 cfs on many days; minimum gage height, 2.99 ft Aug. 7, 8.

1959-66: 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.--Records good except those for winter period, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.1	1.9	1.3	46	1.0	12	1.3	6.0	0.6	0.8	0.3	0.1
2	.4	2.3	1.1	52	1.0	5.0	1.1	5.6	.4	.6	1.1	.1
3	.3	2.3	.6	14	1.0	4.4	1.0	3.1	1.9	.6	.5	6.6
4	.1	1.9	.5	6.3	1.0	5.0	1.0	2.3	.6	.7	.3	3.9
5	.3	2.1	.4	5.0	1.0	3.1	1.0	2.1	.4	.6	.4	.4
6	.3	2.1	.6	4.2	2.0	2.7	1.1	1.5	1.9	1.1	.2	.3
7	3.4	3.6	.5	3.1	5.0	2.1	1.1	1.5	.8	.8	.1	.5
8	2.7	3.9	.3	2.7	20	1.9	1.1	1.5	.5	.7	.1	.4
9	.7	5.0	.4	2.3	20	1.7	1.5	4.4	2.1	2.7	.7	.3
10	.5	1.3	3.4	2.1	90	1.9	1.0	1.5	.6	1.0	13	.3
11	2.5	.6	2.3	1.5	25	1.7	2.9	4.7	.3	3.4	3.4	.2
12	1.0	15	12	1.0	8.1	3.9	5.6	6.6	.2	1.1	1.1	.4
13	.5	6.6	7.7	1.0	7.3	4.2	3.9	4.7	4.7	1.1	3.4	.5
14	.3	1.7	2.3	1.0	4.4	2.7	1.9	2.5	6.6	.7	3.9	.4
15	.4	1.5	1.7	1.0	3.4	2.3	1.5	1.7	1.1	.8	1.1	1.9
16	.3	2.9	1.3	1.0	7.3	1.9	1.1	1.5	8.9	.8	.7	.6
17	.2	2.1	1.1	1.0	4.2	1.7	1.3	1.5	3.1	1.0	.8	.4
18	.2	1.9	1.0	1.0	2.3	5.0	1.1	2.5	1.1	1.7	.6	.4
19	.3	2.5	1.1	1.0	1.9	2.3	2.1	1.3	.6	4.3	.7	22
20	7.7	1.5	1.3	1.0	1.5	1.7	1.7	1.1	.5	2.5	.5	23
21	1.9	1.0	2.7	1.0	1.1	1.5	5.3	6.3	1.0	2.3	.4	5.6
22	4.7	1.3	2.1	1.0	1.1	1.3	1.3	2.5	.6	3.1	.6	2.3
23	2.5	1.9	2.1	1.0	1.1	3.4	1.3	2.9	.7	3.6	.5	1.9
24	2.5	2.7	2.9	1.0	1.1	1.9	22	1.3	.8	6.9	.2	1.9
25	1.5	1.5	14	1.0	1.1	1.9	7.3	.8	.6	3.9	.2	6.3
26	1.1	1.7	3.9	1.0	.8	1.5	3.1	1.0	.5	2.7	.2	2.3
27	1.1	12	2.7	1.0	.8	1.1	51	.6	.8	2.5	.2	7.7
28	1.1	2.1	2.1	1.0	16	1.1	17	.5	.8	1.5	.2	1.9
29	1.7	2.7	2.1	1.0		1.5	6.9	.5	.8	1.5	.1	1.0
30	1.9	1.0	2.1	1.0	-----	2.3	9.8	.6	.7	.7	.1	5.6
31	1.9	-----	29	1.0	-----	1.1	-----	.7	-----	.4	.1	-----
Total	45.1	90.6	106.6	159.2	230.5	35.8	159.3	75.3	44.2	56.1	35.7	99.2
Mean	1.45	3.02	3.44	5.14	8.23	2.77	5.31	2.43	1.47	1.81	1.15	3.31
Cfsm	0.189	0.394	0.449	0.670	1.07	0.361	0.692	0.317	0.192	0.236	0.150	0.432
In.	0.22	0.44	0.52	0.77	1.11	0.42	0.77	0.35	0.21	0.27	0.17	0.48

Calendar year 1965 : Max 188 Min 0.1 Mean 6.12 Cfsm 0.798 In. 9.83
 Water year 1965-66 : Max 90 Min 0.1 Mean 3.25 Cfsm 0.424 In. 5.73

Peak discharge (base, 450 cfs).--No peak above base.

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 1966.

Gage.--Water-stage recorder. Datum of gage is 752.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Average discharge.--6 years (1960-66), 7.70 cfs.

Extremes.--Maximum discharge during year, 367 cfs Sept. 20 (gage height, 4.50 ft); no flow for many days.
1959-66: Maximum discharge, 2,010 cfs Mar. 4, 1963 (gage height, 9.22 ft); no flow at times during most years.

Remarks.--Records fair, except those for winter period, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.0	0.8	0.6	54	0	12	1.1	5.5	0.3	1.0	0.1	0
2	.1	.8	.8	60	0	4.0	1.0	5.5	.3	.6	.6	0
3	.1	1.1	.3	14	.1	3.6	.8	2.7	2.0	.8	.6	12
4	.1	.6	.2	7.1	.1	4.0	.8	2.0	1.0	1.9	.2	4.0
5	.1	.6	.2	5.1	.1	2.7	.8	1.9	.5	.6	.2	.4
6	.1	.8	.4	4.0	2.0	2.2	.8	1.6	2.0	.8	.1	0
7	3.0	1.4	.4	3.4	10	1.9	.7	1.3	1.4	.8	.1	0
8	1.0	3.6	.2	2.2	26	1.6	.7	1.4	.8	.5	0	0
9	.1	3.6	.2	1.7	25	1.4	1.0	4.7	2.0	1.3	.6	.2
10	.1	1.1	2.2	1.0	103	1.4	.7	1.3	1.4	.8	.26	0
11	2.0	.4	2.0	.9	28	1.4	2.0	3.4	.8	1.9	2.2	0
12	.1	7.9	9.9	.6	8.9	3.4	3.0	6.3	.8	1.1	.1	0
13	0	6.3	7.9	.3	8.4	3.6	2.0	2.9	7.2	.8	.6	.2
14	0	1.6	2.0	.2	5.1	2.2	1.0	1.7	12	.5	1.9	.2
15	0	1.2	1.4	.1	3.6	2.0	1.0	1.3	2.5	.3	.1	1.4
16	0	2.0	1.2	.1	8.4	1.9	1.0	1.1	12	.6	0	.6
17	0	1.3	1.0	.1	4.7	1.7	1.0	1.0	3.4	.4	0	.2
18	0	1.1	.8	.1	3.1	2.9	1.0	1.7	2.4	.8	0	.1
19	0	1.2	.8	.1	2.5	1.9	2.0	1.2	1.6	6.4	0	32
20	5.9	1.2	1.1	.1	3.4	1.3	1.0	.8	.8	1.2	0	4.4
21	1.6	.5	1.7	.1	2.5	1.3	3.0	3.6	1.4	1.2	0	7.5
22	2.2	.5	1.7	.1	2.0	1.2	1.0	1.3	.8	1.7	0	2.2
23	1.9	1.1	1.4	0	1.3	2.2	.8	1.3	1.2	2.5	0	1.9
24	1.2	1.7	3.1	0	1.1	1.7	2.5	.8	1.2	6.7	0	1.9
25	.8	1.2	13	0	1.2	1.4	5.5	.5	1.0	3.6	0	5.1
26	.4	3.4	2.7	0	2.0	1.2	2.2	.6	1.6	2.2	0	2.5
27	.4	7.5	1.9	0	1.0	1.0	5.9	.4	1.2	2.0	0	12
28	.2	1.3	1.7	0	17	.8	16	.2	1.1	1.4	0	2.2
29	.3	1.3	1.4	0	0	1.1	6.3	.2	.8	1.2	0	1.3
30	.6	.8	1.3	0	-----	2.0	10	.2	.6	.6	0	3.6
31	.6	-----	3.6	0	-----	1.1	-----	.4	-----	.2	0	-----
Total	24.1	57.9	99.5	155.3	270.5	72.1	152.2	58.8	66.1	46.4	33.6	135.5
Mean	0.78	1.93	3.21	5.01	9.66	2.33	5.07	1.90	2.20	1.50	1.08	4.52
Cfsm	0.076	0.187	0.312	0.486	0.938	0.226	0.492	0.184	0.214	0.146	0.105	0.439
In.	0.09	0.21	0.36	0.56	0.98	0.26	0.55	0.21	0.24	0.17	0.12	0.49

Calendar year 1965 : Max 214 Min 0 Mean 7.29 Cfsm 0.708 In. 9.61

Water year 1965-66 : Max 103 Min 0 Mean 3.21 Cfsm 0.312 In. 4.24

Peak discharge (base, 380 cfs).--No peak above base.

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 1966.

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.--9 years, 90.2 cfs.

Extremes.--Maximum discharge during year, 890 cfs Feb. 10 (gage height, 5.48 ft); no flow July 23 to Sept. 30.
1957-66: 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 1966.
Flood of June 28, 1957, reached a stage of 19.20 ft, from floodmark.

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.1	3.0	5.2	246	5.0	32	16	153	30	6.1		
2	3.9	2.7	5.0	246	5.0	35	16	105	30	5.0		
3	3.9	2.7	5.0	183	5.0	46	14	72	30	4.5		
4	3.2	2.3	4.7	102	5.0	81	13	50	30	3.9		
5	2.9	2.3	4.7	63	5.0	66	12	44	30	3.2		
6	2.3	2.3	4.7	53	5.0	46	11	39	25	3.9		
7	2.4	2.3	4.7	43	8.0	34	11	33	25	4.3		
8	2.1	3.0	4.5	35	14	27	11	32	22	3.9		
9	1.9	4.3	4.5	29	19	27	11	32	20	2.7		
10	1.9	4.3	5.0	25	353	27	10	29	19	1.9		
11	2.4	4.5	5.5	20	455	29	10	29	17	1.8		
12	2.6	4.7	8.3	18	231	30	13	63	16	1.4		
13	2.6	5.2	15	16	147	31	19	75	13	.9		
14	2.3	5.0	19	14	90	30	20	63	17	.7		
15	2.3	4.7	17	12	81	29	19	53	28	.7		
16	2.1	4.7	13	11	81	27	17	48	129	.6		
17	2.1	4.5	11	10	78	24	17	42	150	.5		
18	2.0	3.9	9.7	9.0	66	24	15	75	75	.4		
19	1.9	4.3	8.3	8.0	61	23	16	114	46	.2		
20	1.8	3.7	7.6	8.0	40	20	16	58	35	.2		
21	1.9	3.7	8.3	7.0	40	19	24	64	29	.1		
22	2.3	3.7	8.3	7.0	40	19	32	102	24	.1		
23	2.1	3.7	7.9	7.0	40	21	26	66	19	0		
24	3.0	3.7	7.6	6.0	30	25	85	60	17	0		
25	4.3	3.7	12	6.0	25	19	177	50	13	0		
26	3.9	4.3	34	6.0	20	18	87	50	11	0		
27	3.7	4.7	27	6.0	20	17	192	40	9.0	0		
28	3.0	5.2	20	6.0	25	16	246	40	7.9	0		
29	3.0	5.8	17	5.0		15	171	40	7.0	0		
30	3.0	5.5	15	5.0	-----	17	141	40	6.7	0		
31	3.0	-----	17	5.0	-----	17	-----	30	-----	0		-----
Total	83.9	118.4	336.5	1,217.0	1,994.0	891	1,468	1,791	930.6	47.0	0	0
Mean	2.71	3.95	10.9	39.3	71.2	28.7	48.9	57.8	31.0	1.52	0	0
Cfsm	0.027	0.039	0.107	0.385	0.698	0.281	0.479	0.567	0.304	0.015	0	0
In.	0.03	0.04	0.12	0.44	0.73	0.32	0.53	0.65	0.34	0.02	0	0

Calendar year 1965: Max 2,090 Min 0.2 Mean 66.7 Cfsm 0.654 In. 9.02
Water year 1965-66: Max 455 Min 0 Mean 24.3 Cfsm 0.238 In. 3.22

Peak discharge (base, 1,500 cfs).--No peak above base.

3-3535. Eagle Creek at Indianapolis, Ind.

Location.--Lat 39°46'33", long 86°15'01", in NE $\frac{1}{4}$ sec. 1, T. 15 N., R. 2 E., on downstream side of bridge on Lynnhurst Drive, approximately 600 ft south of intersection of West 10th Street and Lynnhurst Drive, 0.5 mile downstream from West 10th Street Bridge, 1.0 mile upstream from Vermont Street Bridge, 2.9 miles upstream from mouth of Little Eagle Creek, and 6.9 miles upstream from mouth.

Drainage area.--179 sq mi.

Records available.--November 1938 to September 1966.

Gage.--Wire-weight gage. Datum of gage is 706.21 ft above mean sea level, datum of 1929. Prior to Aug. 7, 1957, and July 1, 1958 to Mar. 9, 1966, graphic water-stage recorder on right bank at same datum. Temporary site during reconstruction of bridge on Lynnhurst Drive, a wire-weight gage on downstream side of 10th Street Bridge, approximately half a mile upstream at same datum, Aug. 8, 1957 to June 30, 1958.

Average discharge.--27 years (1939-66); 148 cfs.

Extremes.--Maximum discharge during year about 1,100 cfs Feb. 11 (gage height unknown); minimum, 0.1 cfs July 31, Aug. 17, 18, 20-31 (gage height, 4.45 ft).
1938-66: Maximum discharge, 28,800 cfs June 28, 1957 (gage height, 16.38 ft), from rating curve extended above 9,000 cfs on basis of a combined current-meter measurement and slope-area measurement; no flow for several days in August 1941. Flood of March 1913 reached a stage of 16.0 ft, from information by local residents.

Remarks.--Records poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	1.8	5.0	80	11	50	30	174	26	11	0.2	1.0
2	8.6	1.8	4.0	300	10	60	30	174	26	10	.7	1.0
3	8.6	.4	4.0	300	10	80	30	112	26	8.7	.7	1.0
4	4.7	.4	4.0	170	10	100	30	127	26	7.4	.7	2.0
5	2.9	.4	4.0	100	9.0	90	25	100	23	8.7	.2	1.0
6	4.7	1.0	4.0	80	9.0	70	25	90	22	10	.6	1.0
7	17	1.0	3.0	70	9.0	70	25	80	22	11	1.1	1.0
8	12	4.0	3.0	60	15	60	20	90	22	6.2	1.0	1.0
9	8.6	7.0	4.0	50	30	60	20	110	22	5.0	.6	1.0
10	8.6	8.0	4.0	40	500	59	20	106	21	4.2	1.0	1.0
11	8.6	8.0	6.0	40	600	57	20	112	20	5.4	1.1	1.0
12	5.7	9.0	10	30	400	60	25	137	20	7.0	1.1	1.0
13	7.0	9.0	20	30	200	76	40	179	20	6.2	1.0	1.0
14	10	9.0	30	30	150	92	40	162	22	6.2	2.0	1.7
15	7.0	8.0	25	25	120	79	42	157	22	5.8	1.1	5.0
16	7.0	7.0	17	25	120	59	62	157	38	5.8	.5	9.8
17	5.7	7.0	13	20	120	50	44	150	73	4.2	.1	8.7
18	4.7	7.0	11	20	90	44	34	110	67	3.8	.1	7.0
19	2.1	6.0	10	19	80	47	30	198	41	4.2	.2	8.2
20	1.6	6.0	8.0	18	70	48	25	266	27	3.8	.1	16
21	1.1	6.0	10	18	60	60	23	115	23	3.8	.1	12
22	2.5	6.0	12	17	60	36	22	103	22	3.4	.1	7.4
23	10	6.0	11	16	50	36	19	98	20	2.0	.1	5.4
24	8.6	6.0	11	15	50	47	24	92	16	1.5	.1	4.2
25	2.9	6.0	15	14	40	44	79	94	2.0	1.7	.1	7.4
26	2.2	6.0	40	14	40	40	64	85	10	2.0	.1	6.2
27	2.2	7.0	30	13	30	40	158	59	9.2	1.5	.1	6.2
28	2.9	8.0	30	12	40	30	380	42	10	1.3	.1	5.8
29	2.9	10	25	12		30	502	33	12	2.0	.1	4.6
30	2.5	8.0	25	11	-----	40	197	31	12	.5	.1	4.2
31	2.5	-----	25	11	-----	40	-----	28	-----	.1	.1	-----
Total	187.4	170.8	423.0	1,660	2,933.0	1,754	2,085	3,571	722.2	154.4	15.2	133.8
Mean	6.05	5.69	13.6	53.5	105	56.6	69.5	115	24.1	4.98	0.490	4.46
Cfsm	0.034	0.032	0.076	0.299	0.587	0.316	0.388	0.642	0.135	0.028	0.0027	0.025
In.	0.04	0.04	0.09	0.34	0.61	0.36	0.43	0.74	0.15	0.03	0.003	0.03

Calendar year 1965: Max 3,160 Min 0.3 Mean 109 Cfsm 0.609 In. 8.28
Water year 1965-66: Max 600 Min 0.1 Mean 37.8 Cfsm 0.211 In. 2.96

Peak discharge (base, 2,000 cfs).--No peak above base.

Note.--No gage-height record Nov. 5 to Mar. 9.

3-3536. Little Eagle Creek at Speedway, Ind.

Location.--Lat 39°47'15", long 86°13'41", in NW¼ sec. 32, T. 16 N., R. 3 E., on right bank at downstream side of 16th Street Bridge in Speedway, 0.5 mile east of 500-Mile Track, 0.6 mile upstream from tributary from the right and 2.4 miles upstream from mouth.

Drainage area.--18.6 sq mi.

Records available.--October 1959 to September 1966.

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.--7 years, 14.8 cfs.

Extremes.--Maximum discharge during year, 361 cfs Feb. 10 (gage height, 3.52 ft); no flow July 8, Aug. 3-5, Sept. 7-10. 1959-66: Maximum discharge, 1,940 cfs Apr. 25, 1961 (gage height, 7.44 ft); no flow at times most years.

Remarks.--Records good except those for winter period and those for period of no gage-height record, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.6	0.8	0.9	50	2.0	18	3.6	18	1.6	0.2	0.4	0.1
2	2.0	.8	1.0	58	2.0	14	3.0	13	1.4	.1	.2	.2
3	1.4	.8	1.0	23	2.0	15	2.5	10	1.2	.2	0	.1
4	1.2	.8	.8	13	2.0	15	2.5	6.8	1.0	1.0	0	.8
5	1.6	.8	.8	10	2.0	12	2.0	5.8	.9	.8	0	.6
6	1.6	.9	1.0	7.8	2.0	9.0	2.0	5.0	1.2	.5	.1	.1
7	3.9	.9	.9	5.8	2.0	9.6	2.0	4.2	1.2	.2	.1	0
8	2.2	2.1	1.0	5.0	3.0	6.8	2.0	5.0	.9	0	.1	0
9	1.8	1.6	.9	4.0	4.0	4.6	2.0	7.8	.9	.2	.2	0
10	1.4	1.4	2.5	4.0	160	5.4	1.8	4.2	.7	.3	.1	0
11	2.5	1.2	2.8	4.0	122	5.8	2.8	12	.7	7.4	.6	.5
12	2.0	2.6	11	3.0	41	8.4	6.3	21	.7	1.2	.3	.1
13	1.4	2.0	5.8	3.0	30	12	7.3	13	1.0	.5	.1	.1
14	1.2	1.6	2.8	3.0	19	10	4.2	12	5.0	.3	.1	.1
15	1.6	1.2	2.0	3.0	15	8.4	3.6	9.0	1.4	.2	.1	.1
16	1.0	1.4	1.4	3.0	18	6.3	4.2	7.8	5.8	.1	.1	.1
17	1.2	1.2	1.2	3.0	10	5.4	4.2	6.8	1.6	.1	.1	.1
18	1.0	1.2	1.2	3.0	9.0	5.8	3.6	15	.8	.2	.1	.1
19	1.0	1.2	1.4	3.0	8.4	5.0	4.2	9.6	.6	3.0	.1	.1
20	1.8	1.2	1.4	3.0	7.8	3.9	3.6	6.8	.5	.5	.1	.7
21	1.6	1.2	2.0	2.0	7.0	3.9	3.9	16.0	.5	.3	.4	.7
22	4.1	1.2	1.2	2.0	6.0	3.9	3.0	9.6	.5	.2	.3	.5
23	2.8	1.6	1.2	2.0	5.0	10	2.8	7.3	.4	.2	.1	.1
24	1.8	1.4	1.8	2.0	4.2	6.3	21	6.8	.4	.4	.1	.1
25	1.4	1.4	9.6	2.0	3.9	4.6	16	5.0	.4	.2	.1	.1
26	1.0	4.2	4.2	2.0	3.7	4.2	9.0	3.9	.4	.3	.1	.1
27	.9	3.9	3.0	2.0	3.6	3.6	54	3.6	.5	.5	.1	.1
28	.8	1.8	3.3	2.0	10	3.0	59	2.8	.4	.7	.1	.1
29	.9	1.2	2.8	2.0		3.6	42	2.2	.3	.4	.1	.1
30	.9	1.2	1.6	2.0		4.6	26	1.8	.3	.3	.1	.1
31	.9		11	2.0		3.6		1.8		.4	.1	
Total	51.7	45.0	83.5	233.6	504.6	231.7	304.1	253.6	33.2	20.9	4.5	5.9
Mean	1.67	1.50	2.69	7.54	18.0	7.47	10.1	8.18	1.11	0.67	0.15	0.20
Cfsm	0.090	0.081	0.145	0.405	0.968	0.402	0.543	0.440	0.060	0.036	0.0081	0.011
In.	0.10	0.09	0.17	0.47	1.01	0.46	0.61	0.51	0.07	0.04	0.009	0.01

Calendar year 1965: Max 542 Min 0.4 Mean 12.7 Cfsm 0.683 In. 9.28
 Water year 1965-66: Max 160 Min 0 Mean 4.86 Cfsm 0.261 In. 3.55

Peak discharge (base, 450 cfs).--No peak above base.

Note.--No gage-height record Aug. 10 to Sept. 19, Sept. 22-30.

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

Location.--Lat 39°45'36", long 86°30'47", in NW 1/4 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 1966.

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.--8 years, 21.7 cfs.

Extremes.--Maximum discharge during year, 340 cfs Feb. 10 (gage height, 3.62 ft, from graph based on gage readings); no flow many days.

1958-66: 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.--Records poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.5	0.1	0.2	11.0	0.3	1.2	4.7	2.6	3.6	0.4	0.1	0
2	.4	.1	.2	10.0	.4	2.0	4.7	2.1	3.4	.3	.1	0
3	.2	.1	.2	4.9	.4	2.6	4.1	1.7	3.0	.2	0	0
4	.1	.1	.2	2.9	.5	3.3	3.6	1.3	3.0	.2	0	0
5	.1	.1	.2	2.0	.9	2.6	3.6	1.2	2.8	.7	0	0
6	.1	.2	.2	1.6	2.0	1.9	3.4	1.1	3.2	7.4	0	0
7	.3	.2	.2	1.3	3.0	3.0	3.4	9.8	4.1	1.8	0	0
8	.3	.2	.2	1.1	6.0	7.5	3.6	1.3	2.8	.7	0	0
9	.4	.2	.4	3.0	1.4	9.0	3.4	1.0	2.6	.1	0	0
10	.3	.2	1.0	5.8	20.2	1.2	3.2	6.8	2.1	.1	0	0
11	.2	.2	.8	4.2	14.4	1.3	3.2	9.8	1.8	2.1	.1	.2
12	.4	.2	6.7	3.1	6.6	1.6	5.0	1.4	1.6	3.6	0	0
13	.2	.2	5.4	2.4	4.6	2.0	9.8	1.1	1.6	1.2	0	0
14	.2	.3	2.9	1.9	2.9	1.9	5.9	1.2	3.0	.3	0	0
15	.5	.3	2.0	1.6	2.2	1.6	5.3	1.1	4.5	.1	0	.1
16	.8	.3	1.4	1.3	1.5	1.3	5.3	1.1	5.9	0	0	0
17	.2	.2	.8	1.1	9.0	1.1	4.7	9.8	5.0	0	0	0
18	.2	.2	.6	1.0	7.0	1.1	4.7	1.6	3.0	0	0	.3
19	.2	.2	.7	.9	6.0	9.2	5.3	1.1	2.3	0	0	1.2
20	.3	.2	.8	.7	5.0	9.0	5.3	9.4	1.8	0	0	3.2
21	.2	.2	1.0	.7	5.0	7.4	5.0	1.4	1.6	0	0	.4
22	.2	.2	.6	.6	4.0	6.8	4.7	9.2	1.4	0	0	.1
23	.3	.2	.8	.5	4.0	9.8	5.3	9.8	1.2	0	0	0
24	.2	.1	.8	.4	4.0	7.7	4.4	1.2	.9	0	0	0
25	.2	.2	4.0	.4	4.0	5.9	4.0	7.4	.9	0	0	0
26	.1	.3	9.1	.4	4.0	5.9	2.4	6.8	.7	0	0	.1
27	.1	.4	8.0	.3	5.0	5.3	4.1	6.5	.4	0	0	.9
28	.1	.6	5.4	.3	9.2	5.3	5.9	6.2	1.6	.1	0	.2
29	.1	.4	3.6	.3		4.7	4.4	5.5	1.2	.2	0	.1
30	.1	.3	3.2	.3		6.5	3.6	4.5	.7	.1	0	.3
31	.1		1.3	.3		5.0		3.6		.1	0	
Total	7.6	6.6	74.6	383.5	616.7	382.0	393.2	335.1	71.7	39.6	0.8	7.1
Mean	0.25	0.22	2.41	12.4	22.0	12.3	13.1	10.8	2.39	1.25	0.03	0.24
Cfsm	0.0087	0.0076	0.083	0.429	0.761	0.426	0.453	0.374	0.083	0.043	0.0010	0.0083
In.	0.01	0.008	0.10	0.49	0.79	0.49	0.51	0.43	0.09	0.05	0.001	0.009

Calendar year 1965 : Max 605 Min 0 Mean 15.2 Cfsm 0.526 In. 7.16
 Water year 1965-66 : Max 202 Min 0 Mean 6.35 Cfsm 0.220 In. 2.98

Peak discharge (base, 700 cfs).--No peak above base.

WABASH RIVER BASIN

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 1966.

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.--9 years, 182 cfs.

Extremes.--Maximum discharge during year, 2,670 cfs Feb. 10 (gage height, 14.18 ft); minimum, 1.8 cfs Sept. 3 (gage height, 8.02 ft). 1957-66: 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.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	9.8	12	412	13	134	57	194	33	13	4.2	2.3
2	14	11	12	560	13	133	57	155	31	12	4.7	2.0
3	12	11	13	320	13	150	54	127	31	11	4.7	3.0
4	11	12	12	193	13	271	50	103	30	10	4.2	14
5	11	12	12	146	13	143	43	97	23	15	3.8	4.2
6	11	12	12	120	13	121	47	90	23	70	3.8	3.0
7	16	13	12	97	17	92	45	82	30	27	3.6	2.6
8	13	13	12	69	30	80	43	73	30	19	3.3	3.3
9	16	14	12	50	53	81	42	82	23	14	3.0	3.3
10	13	14	14	35	1,230	89	40	74	27	11	4.2	3.6
11	14	12	19	31	1,150	89	43	70	25	11	9.0	3.0
12	14	21	26	27	550	99	64	101	23	14	3.3	2.8
13	13	23	40	25	405	134	76	96	24	12	9.0	2.8
14	13	19	35	22	259	125	66	94	34	11	14	3.8
15	12	16	31	20	194	117	57	89	32	9.0	10	5.2
16	12	16	23	13	150	99	53	82	31	7.8	7.4	3.8
17	11	13	23	16	110	89	43	73	23	7.4	6.0	3.3
18	3.8	13	22	15	80	87	47	73	23	6.5	5.6	3.0
19	9.8	13	19	14	64	75	43	80	26	6.5	4.7	7.4
20	11	12	19	13	59	75	43	63	22	5.6	4.7	4.2
21	12	12	19	12	56	70	43	70	20	5.6	4.7	5.2
22	12	12	21	12	54	70	47	73	20	5.6	4.2	3.3
23	12	12	21	12	52	82	47	70	13	5.6	4.2	1.7
24	11	12	21	12	50	84	75	64	13	7.4	4.7	1.2
25	12	12	33	12	47	74	173	62	13	6.0	4.2	1.1
26	13	13	45	12	45	63	115	53	17	5.6	3.8	1.1
27	13	23	44	12	45	63	271	43	20	6.5	3.3	1.4
28	12	13	33	12	80	53	405	45	25	7.8	2.8	1.4
29	12	17	32	12	-----	53	307	42	13	7.8	2.6	1.2
30	12	14	31	12	-----	62	224	33	15	6.0	2.8	1.2
31	11	-----	46	12	-----	62	-----	34	-----	5.6	2.6	-----
Total	387.6	429.8	73.4	2,341	4,853	3,044	2,747	2,527	760	362.3	153.1	305.4
Mean	12.5	14.3	23.7	75.5	174	98.2	91.6	81.5	25.3	11.7	5.10	10.2
Cfsm	0.059	0.067	0.112	0.356	0.821	0.463	0.432	0.384	0.119	0.055	0.024	0.048
In.	0.07	0.07	0.13	0.41	0.85	0.53	0.48	0.44	0.13	0.06	0.03	0.05

Calendar year 1965: Max 3,270 Min 6.8 Mean 124 Cfsm 0.585 In. 7.95
 Water year 1965-66: Max 1,230 Min 2.0 Mean 51.1 Cfsm 0.241 In. 3.25

Peak discharge (base, 3,000 cfs).--No peak above base.

3-3540. White River near Centerton, Ind.

Location.--Lat 39°30'02", long 86°24'24", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 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 1966. Prior to March 1932, published as West Fork White River at Martinsville and November 1946 to September 1948, published as West Fork White River near Centerton. Monthly discharge only for October 1947, published in WSP 1305. Daily chain-gage readings of gage height from July 1925 to September 1930 are available in the district office.

Gage.--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 8 $\frac{1}{2}$ miles downstream at datum 17.72 ft lower. November 1946 to July 1953, wire-weight gage three-eighths of a mile upstream at present datum. July 1953 to Nov. 25, 1962, graphic water-stage recorder at present site and datum.

Average discharge.--21 years (1930-31, 1946-66) 2,255 cfs (unadjusted).

Extremes.--Maximum discharge during year, 7,610 cfs Feb. 11 (gage height, 7.34 ft); minimum discharge, 267 cfs Aug. 26, 29, Sept. 4; minimum gage height, 1.00 ft Dec. 9, 10.

1930-32, 1946-66: 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.--Records good. Flow slightly regulated by Morse and Geist Reservoirs (combined capacity, 13,800,000,000 gal). Records of suspended sediment loads for water year 1966 published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	602	486	399	2,370	421	1,500	844	3,500	660	500	349	309
2	565	491	384	4,140	416	1,410	823	3,020	618	442	357	298
3	560	468	389	4,360	436	1,450	795	2,750	597	391	354	292
4	525	449	380	3,850	496	1,540	773	2,320	556	488	337	403
5	524	448	366	3,040	471	1,680	745	1,920	529	637	339	428
6	499	436	351	2,280	466	1,800	703	1,630	529	676	339	326
7	546	414	365	1,860	507	1,620	680	1,460	597	511	328	319
8	609	414	352	1,560	722	1,380	668	1,320	536	426	307	309
9	534	494	348	1,340	910	1,220	665	1,480	529	376	335	298
10	513	459	364	1,190	3,500	1,150	662	1,330	522	358	346	298
11	499	439	441	1,070	6,680	1,120	659	1,200	484	403	444	298
12	567	458	444	979	6,080	1,130	844	1,530	458	533	397	287
13	505	737	610	920	5,760	1,360	999	1,580	421	433	401	314
14	500	572	549	858	4,120	1,310	925	1,950	780	370	519	320
15	480	539	501	832	3,120	1,290	848	1,930	590	353	406	353
16	462	583	481	774	2,720	1,240	788	1,690	844	331	350	364
17	436	549	484	705	2,410	1,190	796	1,530	948	326	325	342
18	409	472	474	671	2,060	1,120	765	1,540	1,090	298	288	320
19	424	433	444	629	1,810	1,130	756	1,490	940	386	313	348
20	432	407	431	603	1,520	1,040	758	1,420	764	403	317	1,340
21	512	382	455	580	1,280	998	802	1,580	653	314	301	1,570
22	472	374	453	560	1,120	956	771	1,690	563	309	315	868
23	609	394	435	530	1,020	980	760	1,550	529	298	327	625
24	848	381	422	520	989	1,180	858	1,430	509	331	300	446
25	906	374	561	500	948	1,070	1,360	1,340	452	422	293	386
26	799	358	606	480	916	1,040	1,400	1,190	415	403	284	471
27	703	487	573	460	868	972	2,760	1,070	503	336	305	415
28	659	477	568	450	908	908	3,500	972	724	326	299	536
29	600	396	564	440	-----	876	3,270	860	477	336	274	409
30	569	418	559	430	-----	884	3,920	788	428	326	306	370
31	518	-----	571	420	-----	868	-----	700	-----	309	330	-----
TOTAL	17,386	13,789	14,324	39,401	52,674	37,412	34,897	49,760	18,245	12,351	10,485	13,662
MEAN	561	460	462	1,271	1,881	1,207	1,163	1,605	608	398	338	455
CFSM	.230	.189	.190	.522	.773	.496	.478	.659	.250	.163	.139	.187
IN	.27	.21	.22	.60	.80	.57	.53	.76	.28	.19	.16	.21

CALENDAR YEAR 1965	MAX	15,000	MIN	305	MEAN	1,747	CFSM	.718	INCHES	9.74
WATER YEAR 1965-66	MAX	6,680	MIN	274	MEAN	861	CFSM	.354	INCHES	4.80

3-3545. Beanblossom Creek at Beanblossom, Ind.
(Formerly published as Bean Blossom Creek at Bean Blossom)

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 1966. Prior to October 1965, published as Bean Blossom Creek at Bean Blossom.

Gage.--Graphic water-stage recorder. Datum of gage is 673.65 ft above mean sea level, datum of 1929. Apr. 14, 1964 to Jan. 21, 1965, digital water-stage recorder at same site and datum.

Average discharge.--15 years, 14.6 cfs.

Extremes.--Maximum discharge during year, 1,340 cfs Apr. 30 (gage height, 7.31 ft); no flow for many days.

1951-66: 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.--Records good except those for the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4.3	1.9	2.0	1.71	1.0	3.5	4.3	100	1.4	0.1	0.0	0.1
2	3.1	1.9	2.0	2.08	1.0	2.2	4.0	49	1.4	0	0	.1
3	2.7	1.7	2.0	4.1	1.0	1.9	4.0	30	1.3	.1	0	0
4	2.2	1.7	1.9	1.9	1.3	2.3	3.6	23	1.2	.1	0	0
5	2.0	1.6	1.9	1.5	2.0	1.6	3.8	19	1.2	.3	0	0
6	1.9	1.6	1.7	1.3	3.0	1.4	3.6	15	4.0	1.6	0	0
7	3.8	1.6	1.7	9.8	4.5	1.5	3.3	13	2.5	.5	0	0
8	9.3	1.7	1.6	8.2	7.0	1.3	3.3	11	2.0	.2	0	0
9	4.6	1.7	1.6	6.7	1.0	1.1	3.3	147	1.6	.2	0	0
10	3.6	1.6	2.2	5.6	4.65	1.3	3.1	37	1.2	.3	0	0
11	3.3	1.6	2.7	5.1	13.9	1.2	6.9	30	1.1	.3	0	0
12	2.5	1.7	3.6	4.6	4.1	1.3	2.7	119	.6	.2	0	0
13	2.7	2.2	4.6	4.3	4.4	1.5	3.3	73	5.1	.1	1.0	0
14	2.5	2.0	4.3	3.8	3.0	1.4	2.1	50	5.4	0	2.1	0
15	2.4	2.0	4.0	3.5	2.4	1.3	1.6	30	2.0	0	1.2	0
16	2.4	2.0	3.8	3.2	2.9	1.1	1.3	22	2.0	0	.4	0
17	2.4	1.6	3.6	2.9	2.3	9.3	1.1	17	1.4	0	.1	0
18	2.0	1.6	3.3	2.7	1.7	9.3	9.8	25	1.2	0	.1	0
19	2.0	1.6	3.3	2.5	1.3	9.3	1.1	18	.8	0	.1	1.5
20	3.6	1.6	3.1	2.2	1.0	8.4	9.3	14	.6	.1	.3	1.9
21	3.6	1.7	3.1	2.1	8.5	7.1	9.8	14	.5	0	.3	7.5
22	3.3	1.7	3.1	1.9	7.5	6.7	8.0	12	.2	0	.1	1.7
23	3.3	1.6	2.9	1.7	6.7	8.0	8.0	8.8	.2	0	.1	1.1
24	2.9	1.6	3.1	1.6	6.0	7.1	9.8	7.1	.2	0	.2	.6
25	2.5	1.6	1.0	1.5	5.5	6.4	9.8	5.6	.1	0	.2	.7
26	2.5	1.7	5.0	1.3	5.3	6.0	9.2	4.3	.1	0	.2	.9
27	2.4	3.3	4.0	1.2	5.3	5.6	17.4	3.6	0	0	.2	1.2
28	2.2	2.5	3.5	1.1	2.3	5.0	6.8	2.9	0	.1	.2	1.2
29	2.0	2.4	3.1	1.0	1.0	5.0	4.1	2.2	.3	.1	.2	.8
30	2.0	2.0	2.9	1.0	1.0	5.0	3.94	2.0	.1	0	.2	1.2
31	2.0	-----	1.2	1.0	-----	4.6	-----	1.9	-----	0	.2	-----
Total	92.4	55.0	107.6	547.5	933.6	361.8	916.1	906.4	39.9	4.3	26.3	37.6
Mean	2.98	1.83	3.47	17.7	33.3	11.7	30.5	29.2	1.33	0.14	0.85	1.25
Cfsm	0.204	0.125	0.238	1.21	2.28	0.801	2.09	2.00	0.091	0.0096	0.058	0.086
In.	0.24	0.14	0.27	1.40	2.37	0.92	2.33	2.31	0.10	0.01	0.07	0.10

Calendar year 1965: Max 403 Min 0 Mean 11.7 Cfsm 0.801 In. 10.86
Water year 1965-66: Max 465 Min 0 Mean 11.0 Cfsm 0.753 In. 10.26

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-10	1400	6.39	1,070				
4-30	1100	7.31	1,340				

3-3550. Bear Creek near Trevlac, Ind.

Location.--Lat 39°16'40", long 86°20'45", in NE¼ sec. 30, T. 10 N., R. 2 E., on left bank, 15 ft west of county road at footbridge, 1.1 miles northwest of Trevlac, and 1.3 miles upstream from mouth.

Drainage area.--7.00 sq mi.

Records available.--May 1952 to September 1966.

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

Average discharge.--14 years, 6.20 cfs.

Extremes.--Maximum discharge during year, 494 cfs Apr. 30 (gage height, 4.77 ft); no flow for many days.

1952-66: Maximum discharge, 1,830 cfs June 12, 1957 (gage height, 7.62 ft), from rating curve extended above 290 cfs on basis of slope-area measurement of peak flow at gage height, 6.43 ft; no flow for many days.

Remarks.--Records poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.2	0.6	0.2	73	0.2	20	0.5	45	0.8	0	0	0
2	2	.6	.2	93	.2	13	.1	24	.8	0	0	0
3	2	.5	.2	22	.4	10	.1	18	.7	0	0	0
4	2	.5	.2	16	.7	10	0	14	.6	.1	0	0
5	.5	.4	.2	13	1.2	8.2	0	12	.5	.1	0	0
6	.7	.4	.3	11	2.2	7.2	0	11	.5	.5	0	0
7	2.3	.4	.4	9.0	4.0	3.6	0	9.3	.4	.1	0	0
8	2.3	.4	.5	6.5	8.0	.2	0	9.0	.3	.1	0	0
9	1.5	.3	.6	5.3	13	3.6	0	100	.3	.1	0	0
10	1.0	.3	.7	3.9	178	5.6	0	30	.2	0	0	0
11	1.0	.3	.8	3.2	70	6.2	2.5	20	.2	.4	0	0
12	.7	.3	1.0	2.7	30	7.2	21	40	.2	.1	0	0
13	.6	.2	4.4	1.9	20	9.7	24	31	.6	0	0	0
14	.6	.2	4.2	1.7	16	8.6	14	20	.5	0	.8	0
15	.6	.2	3.2	1.3	13	7.2	12	13	.3	0	.4	.1
16	.6	.2	2.3	1.1	16	5.9	9.3	9.7	.3	.2	.3	0
17	.7	.2	1.7	1.0	11	4.7	6.8	7.6	.2	.2	.1	0
18	.6	.2	1.2	.9	7.2	4.7	2.7	20	.2	0	0	0
19	.5	.2	1.2	.8	4.2	4.5	5.6	12	.2	0	0	3.4
20	1.5	.2	.8	.7	3.0	4.5	3.2	8.2	.1	0	2.0	8.4
21	1.7	.2	.7	.6	2.0	4.2	6.2	7.9	0	0	.8	4.1
22	1.7	.2	.6	.6	1.4	4.1	1.3	7.2	0	0	.3	1.5
23	1.9	.2	.5	.5	.9	4.0	2.5	6.8	0	0	.2	.9
24	1.5	.2	.9	.4	.6	3.9	3.2	5.3	0	0	.1	.6
25	1.3	.2	5.6	.4	.4	3.8	3.4	3.9	0	0	0	.6
26	1.2	.5	6.8	.3	.3	3.6	7.5	3.4	0	0	0	.6
27	1.0	1.4	3.9	.3	.2	3.5	112	2.7	0	0	0	.7
28	1.0	.2	2.9	.2	2.0	3.4	4.4	2.3	0	0	0	.7
29	.8	.2	2.1	.2		2.3	29	1.7	0	0	0	.5
30	.7	.2	1.2	.2	-----	2.7	163	1.5	0	0	0	.8
31	.6	-----	6.1	.2	-----	1.0	-----	1.2	-----	0	0	-----
Total	29.9	10.1	55.6	261.9	406.1	181.1	473.9	497.7	7.9	1.9	5.0	22.9
Mean	0.96	0.34	1.79	8.45	14.5	5.84	15.8	16.1	0.26	0.06	0.16	0.76
Cfsm	0.137	0.049	0.256	1.21	2.07	0.834	2.26	2.30	0.037	0.0086	0.023	0.109
In.	0.16	0.05	0.30	1.40	2.16	0.96	2.52	2.65	0.04	0.01	0.03	0.12

Calendar year 1965: Max 132 Min 0 Mean 5.73 Cfsm 0.819 In. 11.11
 Water year 1965-66: Max 178 Min 0 Mean 5.35 Cfsm 0.764 In. 10.40

Peak discharge (base, 200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-10	1230	4.39	366				
4-27	0600	3.64	210				
4-30	0800	4.77	494				
5-9	0300	3.70	223				

WABASH RIVER BASIN

3-3560. Beanblossom Creek at Dolan, Ind.
(Formerly published as Bean Blossom Creek at Dolan)

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 1966. 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.--20 years, 111 cfs (unadjusted).

Extremes.--Maximum discharge during year, 1,940 cfs May 1 (gage height, 13.54 ft); minimum, 14 cfs Aug. 29 (gage height, 1.74 ft).
1946-66: Maximum discharge, 9,420 cfs June 2, 1947; maximum gage height, 17.9 ft Jan. 5, 1949; no flow at times during 1946-49, 1953.

Remarks.--Records good. Flow regulated since April 1953 by Lake Lemon (capacity, 4,640,000,000 gal) 8.1 miles upstream.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	32	18	22	295	19	157	33	1,680	22	18	15	15
2	27	26	22	722	19	182	32	643	20	18	16	15
3	24	20	20	648	19	164	34	311	20	18	15	15
4	22	18	19	345	20	153	30	207	20	18	15	15
5	21	18	20	218	21	129	29	143	20	18	15	15
6	20	19	20	163	23	108	27	111	22	20	15	15
7	25	19	20	120	26	92	23	92	21	18	15	15
8	31	19	20	87	30	83	22	76	20	18	15	15
9	28	19	20	78	42	77	22	620	20	17	15	15
10	27	19	21	59	782	82	22	509	19	18	16	15
11	27	19	21	49	1,720	85	29	316	19	19	16	15
12	25	19	25	61	828	85	87	407	19	18	15	15
13	24	19	30	49	382	112	177	518	20	18	16	15
14	22	19	28	39	261	113	176	439	23	18	17	15
15	24	19	27	38	195	104	145	305	19	17	15	16
16	21	19	26	35	174	92	117	218	20	17	15	15
17	21	19	25	30	159	82	99	166	19	17	15	15
18	20	19	24	28	129	80	83	238	18	17	15	15
19	20	19	23	26	108	65	86	225	18	17	15	17
20	18	19	23	25	82	61	83	166	18	17	20	24
21	22	19	23	23	66	62	69	137	19	17	24	24
22	22	19	22	22	57	58	60	116	18	16	15	17
23	21	19	22	21	51	58	62	96	18	16	15	16
24	20	19	22	20	48	47	59	74	18	17	15	16
25	20	19	29	20	47	47	64	59	18	16	15	16
26	20	20	27	20	44	45	65	48	18	16	15	16
27	19	24	26	19	47	41	573	42	18	16	15	16
28	18	22	25	19	67	38	624	37	18	16	15	16
29	18	22	24	19	-----	37	422	33	18	16	15	16
30	18	22	24	19	-----	36	1,150	28	18	15	15	17
31	18	-----	24	19	-----	35	-----	23	-----	15	15	-----
TOTAL	695	590	734	3,336	5,466	2,610	4,504	8,083	578	532	485	482
MEAN	22.4	19.7	23.7	108	195	84.2	150	261	19.3	17.2	15.6	16.1
CFSM	-	-	-	-	-	-	-	-	-	-	-	-
IN	-	-	-	-	-	-	-	-	-	-	-	-
(%)	-8.1	-16.8	+3.3	+13	+11	-1.6	+32	-34	-18.5	-21.1	-14.6	-6.7
CALENDAR YEAR 1965	MAX	1,020	MIN	12	MEAN	67.2	CFSM	0.672	IN	9.12	A	+9.0
WATER YEAR 1965-66	MAX	1,720	MIN	15	MEAN	77.0	CFSM	0.770	IN	10.45	A	-5.4

Peak discharge (base, 1,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-11	1300	13.25	1,840				
5-1	0745	13.54	1,940				

A 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 1966. 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.--Water-stage recorder. Datum of gage is 526.04 ft above mean sea level, datum of 1929. Prior to Dec. 26, 1940, wire-weight gage at same site and datum.

Average discharge.--41 years, 2,958 cfs, (unadjusted).

Extremes.--Maximum discharge during year, 10,200 cfs Feb. 11 (gage height, 13.05 ft); minimum, 215 cfs Sept. 13 (gage height, 1.59 ft).
1925-66: Maximum discharge, 59,400 cfs May 15, 1933, Jan. 16, 1937 (gage height, 23.2 ft); minimum, 133 cfs Sept. 25, 30, 1941;
minimum gage height, 0.88 ft Sept. 25, 30, Oct. 1, 1941.
Maximum stage known, 28.5 ft Mar. 26, 1913, from floodmarks (discharge, 100,000 cfs, estimated).

Remarks.--Records good. Flow slightly regulated by three reservoirs above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	720	600	530	2,270	530	1,790	1,130	7,350	1,010	600	415	310
2	720	565	495	5,300	575	2,090	1,130	3,000	955	600	438	310
3	680	565	495	3,600	550	2,090	1,070	5,100	900	575	438	310
4	640	565	495	5,400	575	2,090	1,070	3,720	800	550	438	310
5	640	565	495	4,440	600	2,170	1,010	2,970	800	700	415	370
6	600	530	495	3,450	575	2,250	1,010	2,890	800	900	415	392
7	620	530	495	2,810	600	2,170	955	2,090	800	850	392	330
8	310	530	495	2,330	800	1,930	900	2,010	850	700	392	310
9	765	530	495	2,010	1,250	1,790	900	2,490	750	600	370	270
10	680	565	495	1,790	3,220	1,650	900	3,050	750	550	392	250
11	640	565	495	1,530	3,230	1,650	900	2,410	700	528	438	232
12	640	565	565	1,440	3,280	1,650	1,190	2,490	700	575	432	232
13	640	565	640	1,370	3,290	1,790	1,650	2,890	700	625	432	215
14	600	720	720	1,310	5,600	1,930	1,720	3,050	800	550	528	232
15	600	680	630	1,190	4,530	1,860	1,530	2,970	1,010	505	575	232
16	565	640	640	1,130	3,720	1,790	1,370	2,650	950	432	432	250
17	530	640	600	1,010	3,450	1,720	1,310	2,410	1,070	460	415	270
18	530	640	600	955	2,970	1,650	1,250	2,250	1,130	460	392	250
19	530	565	600	900	2,570	1,580	1,190	2,410	1,190	438	350	270
20	530	565	565	850	2,250	1,510	1,130	2,250	1,010	505	370	540
21	565	530	565	800	1,930	1,440	1,130	2,090	900	505	370	1,440
22	600	495	565	770	1,720	1,370	1,190	2,170	800	460	370	1,310
23	565	495	565	740	1,580	1,370	1,130	2,090	750	460	350	800
24	680	495	565	720	1,510	1,510	1,130	1,930	700	460	350	625
25	910	495	600	690	1,440	1,510	1,510	1,790	650	460	330	528
26	910	495	720	670	1,370	1,440	1,790	1,650	625	528	330	432
27	860	495	765	640	1,310	1,370	2,330	1,510	600	505	310	528
28	765	565	720	630	1,310	1,310	3,000	1,370	750	432	310	505
29	720	565	720	600	-----	1,250	4,800	1,250	800	505	310	575
30	680	530	720	590	-----	1,190	5,500	1,190	650	460	290	482
31	640	-----	720	580	-----	1,190	-----	1,070	-----	438	310	-----
Total	20,575	16,850	14,315	55,565	74,435	52,100	43,875	82,060	24,300	17,016	12,249	13,160
Mean	664	562	591	1,792	2,658	1,681	1,629	2,647	827	549	395	439
Cfs/m	0.223	0.189	0.198	0.601	0.892	0.564	0.547	0.888	0.278	0.184	0.133	0.147
In.	0.26	0.21	0.23	0.69	0.93	0.65	0.61	1.02	0.31	0.21	0.15	0.16

Calendar year 1965: Max 18,700 Min 430 Mean 2,133 Cfs/m 0.716 In. 9.73
Water year 1965-66: Max 9,280 Min 215 Mean 1,195 Cfs/m 0.401 In. 5.43

Peak discharge (base, 11,000 cfs).--No peak above base.

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

Location.--Lat 39°32'11", long 86°58'35", in NW¼ 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 1966. Published as Eel River near Reelsville, October 1952 to September 1956.

Gage.--Water-stage recorder. Datum of gage is 588.24 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Dec. 10, 1949, wire-weight gage at same site and datum.

Average discharge.--17 years, 320 cfs.

Extremes.--Maximum discharge during year, 1,820 cfs Feb. 10 (gage height, 7.35 ft); minimum, 3.7 cfs Sept. 13 (gage height, 2.71 ft). 1949-66: Maximum discharge, 30,700 cfs June 28, 1957 (gage height, 18.63 ft); minimum, 1.2 cfs Sept. 8, 1954 (gage height, 1.56 ft).

Remarks.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	40	23	35	1,240	38	188	96	445	63	26	10	4.7
2	39	23	34	922	38	194	84	358	62	26	1	4.7
3	35	23	32	606	39	200	80	288	56	24	11	5.9
4	31	25	31	392	40	252	80	235	55	21	10	11
5	30	27	30	305	42	252	76	197	53	20	9.4	8.7
6	30	3	30	252	43	210	72	178	55	78	9.4	5.9
7	34	29	30	221	44	169	71	161	55	65	9.4	5.3
8	40	2	30	188	80	147	71	147	50	38	9.4	5.3
9	36	29	30	181	160	147	69	150	48	28	8.7	8.7
10	34	26	31	158	1,170	153	69	137	45	23	11	4.2
11	32	23	36	130	1,380	156	76	140	41	257	12	4.2
12	34	22	84	120	630	191	120	221	39	136	11	5.3
13	32	27	102	104	428	235	153	191	38	62	13	4.2
14	31	31	80	98	322	200	120	181	56	39	17	4.7
15	30	31	68	88	252	178	103	166	52	30	14	8.8
16	30	30	60	82	190	158	92	153	50	25	12	5.9
17	27	29	53	75	150	145	86	142	50	23	9.4	5.3
18	25	27	49	69	130	137	82	178	56	20	9.4	4.7
19	25	27	46	63	115	135	90	166	53	18	8.6	8.7
20	25	26	46	60	105	123	96	137	45	17	11	3.3
21	26	26	47	55	100	114	288	158	39	15	10	22
22	26	26	46	53	95	111	235	178	37	14	9.4	14
23	29	27	44	50	90	114	172	147	35	14	8.7	14
24	29	27	47	48	98	116	590	135	33	14	7.3	12
25	26	25	116	46	85	107	805	118	33	14	6.6	11
26	26	27	108	45	84	100	515	103	31	14	6.6	10
27	26	55	87	43	88	98	515	94	28	14	5.9	15
28	26	51	77	41	118	94	630	88	28	15	6.6	17
29	25	44	69	40		90	515	80	28	14	5.9	11
30	25	39	68	39		88	445	72	28	14	5.9	11
31	25		194	38		90		69		11	5.3	
Total	929	834	1,840	5,852	2,144	4,692	2,436	5,213	1,342	1,127	294.1	282.2
Mean	30.0	29.5	59.4	189	219	151	216	168	44.7	36.4	9.49	9.41
Cfsm	0.089	0.087	0.176	0.559	0.648	0.447	0.639	0.497	0.132	0.108	0.028	0.028
In.	0.10	0.10	0.20	0.64	0.67	0.52	0.71	0.57	0.15	0.12	0.03	0.03

Calendar year 1965 : Max 4,570 Min 8.0 Mean 205 Cfsm 0.608 In. 8.26
 Water year 1965-66 : Max 1,380 Min 4.2 Mean 96.1 Cfsm 0.284 In. 3.84

Peak discharge (base, 2,800 cfs).--No peak above base.

3-3580. Mill Creek near Cataract, Ind.

Location (revised).--Lat 39°26'00", long 86°45'48", in SE $\frac{1}{4}$ 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 1966.

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.--17 years, 241 cfs.

Extremes.--Maximum discharge during year, 2,780 cfs Feb. 11 (gage height, 13.15 ft); minimum, 1.2 cfs Sept. 12, 13 (gage height, 2.90 ft).

1949-66: Maximum discharge, 11,400 cfs June 24, 1960 (gage height, 22.58 ft); minimum, 0.1 cfs Sept. 3, 6, 7, 28, 29, 1954.

Remarks.--Records good above 100 cfs and fair below except those for the winter period, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	13	6.2	12	1,530	14	239	60	383	24	8.4	4.4	2.6
2	13	6.5	12	1,470	15	238	57	222	22	7.7	3.9	2.2
3	11	6.2	12	741	17	228	53	159	22	7.2	3.8	2.2
4	8.7	6.5	11	366	19	237	51	115	21	7.2	3.9	2.8
5	6.8	7.1	10	262	22	185	46	95	20	8.0	3.8	13
6	6.5	7.1	10	223	26	140	45	84	19	5.6	3.6	6.1
7	8.4	7.7	8.7	176	33	110	44	70	22	4.0	3.2	4.1
8	13	8.7	7.7	111	189	98	42	67	21	12	3.1	2.9
9	14	9.8	7.7	87	274	101	41	99	19	8.2	3.1	2.0
10	12	10	9.0	73	1,860	114	39	81	17	6.8	3.2	1.9
11	9.0	11	13	63	2,640	134	54	70	15	22	4.8	1.7
12	10	15	67	57	1,020	147	172	156	14	13	6.3	1.4
13	10	39	136	51	492	366	245	118	13	8.0	6.1	1.4
14	9.4	24	82	46	354	261	151	110	23	6.6	7.7	1.7
15	8.0	16	56	42	254	203	110	87	32	5.8	8.4	2.4
16	8.4	13	44	39	200	161	94	76	22	5.3	7.0	2.6
17	8.4	11	36	36	150	133	79	66	22	4.9	5.4	2.7
18	7.7	9.0	32	33	120	123	72	71	17	4.9	4.4	2.6
19	8.4	8.0	27	30	100	120	73	64	14	5.1	3.8	4.3
20	9.0	7.7	28	28	88	100	77	52	12	5.1	3.9	130
21	10	8.0	28	25	80	89	70	55	11	4.9	3.9	80
22	12	8.4	25	23	72	88	61	68	10	4.4	3.8	55
23	12	8.4	24	21	66	102	56	54	9.8	4.4	3.2	40
24	12	7.7	26	19	63	154	138	47	9.6	4.9	3.1	25
25	11	7.4	128	17	61	102	266	40	9.0	5.4	2.9	17
26	9.0	8.0	128	16	61	91	143	37	8.6	5.4	2.7	23
27	8.7	22	74	15	61	79	347	34	9.0	4.9	2.6	15
28	8.4	32	54	14	85	70	612	33	10	6.6	2.6	10
29	8.0	19	47	14	-----	65	397	31	9.8	9.8	2.4	7.0
30	7.4	14	45	14	-----	70	424	27	9.4	7.8	2.2	12
31	6.8	-----	102	14	-----	67	-----	24	-----	5.8	2.4	-----
TOTAL	300.0	364.4	1,302.1	5,656	8,416	4,415	4,119	2,695	487.2	306.5	125.4	499.6
MEAN	9.68	12.1	42.0	182	301	142	137	86.9	16.2	9.89	4.05	16.7
CFSM	.040	.050	.174	.755	1.25	.589	.569	.361	.067	.041	.017	.069
IN	.05	.06	.20	.87	1.30	.68	.64	.42	.08	.05	.02	.08
CALENDAR YEAR 1965 MAX 3,830 MIN 5.0 MEAN 144 CFSM .598 INCHES 8.09												
WATER YEAR 1965-66 MAX 2,640 MIN 1.4 MEAN 78.6 CFSM .326 INCHES 4.43												

Peak discharge (base, 2,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-11	0700	13.15	2,780				

3-3590. Mill Creek near Manhattan, Ind.

Location (revised).--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 1966. 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.--28 years (1938-66), 279 cfs (unadjusted).

Extremes.--Maximum discharge during year, 2,130 cfs Feb. 23 (gage height, 7.19 ft); minimum discharge, 1.5 cfs Aug. 9, 10 (gage height, 1.11 ft).
1931, 1938-66: Maximum discharge, 8,960 cfs Jan. 5, 1950 (gage height, 18.38 ft); no flow Aug. 7, 1953.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	8.2	3.2	15	117	36	110	51	474	33	3.2	14	2.6
2	8.2	3.2	15	295	36	310	51	472	15	5.0	14	2.6
3	8.2	3.2	15	506	36	464	51	115	5.0	12	6.7	2.6
4	7.4	3.2	15	1,120	36	325	80	115	9.4	12	3.4	2.6
5	7.0	3.2	15	1,610	36	108	91	117	6.4	4.3	2.6	2.6
6	7.4	3.2	15	1,550	28	250	91	394	15	3.9	2.3	2.6
7	7.8	3.2	15	880	7.4	226	62	576	15	9.8	2.1	2.6
8	7.8	3.2	15	19	3.7	108	52	572	15	14	1.9	2.6
9	7.8	3.4	15	50	76	110	51	436	15	15	1.7	2.6
10	7.8	3.4	15	107	404	110	51	150	14	15	2.4	2.6
11	8.2	3.4	15	107	260	260	75	121	14	86	7.8	2.7
12	7.8	4.1	18	107	126	172	114	121	14	74	6.7	2.7
13	16	12	83	107	124	302	114	121	14	13	12	2.7
14	20	33	255	107	110	464	112	121	14	13	6.0	2.7
15	16	40	310	84	104	322	260	121	14	13	4.6	2.7
16	8.2	40	154	50	104	198	310	121	14	13	3.9	2.7
17	9.0	40	3.4	50	104	215	308	121	14	13	3.6	2.7
18	9.8	40	3.4	50	104	141	144	81	22	13	3.4	2.7
19	9.8	40	3.2	50	104	110	74	172	25	13	3.2	3.4
20	10	40	10	23	104	110	110	378	25	13	2.7	68
21	19	40	77	14	104	110	110	212	25	13	8.2	108
22	22	40	105	14	104	110	112	54	17	7.4	3.4	108
23	22	39	35	14	1,130	112	112	54	13	3.4	2.9	107
24	14	21	3.6	29	2,070	188	117	54	13	2.7	2.7	64
25	8.6	6.7	4.3	36	2,010	215	117	54	13	2.3	2.5	48
26	8.2	3.4	152	36	1,940	176	265	53	13	2.1	2.1	48
27	8.2	3.4	308	36	930	112	312	53	10	2.0	2.0	23
28	7.8	3.2	107	36	108	112	436	52	3.7	1.8	2.1	13
29	5.3	10	3.4	36	-----	104	474	52	3.6	2.1	2.7	13
30	3.4	15	3.4	36	-----	64	478	51	3.4	10	2.7	14
31	3.4	-----	40	36	-----	50	-----	51	-----	14	2.6	-----
TOTAL	314.3	506.6	1,843.7	7,312	10,339.1	5,768	4,785	5,439	427.5	419.0	138.9	665.0
MEAN	10.1	16.9	59.5	236	369	186	160	175	14.3	13.5	4.48	22.2
($\bar{y}$)	0	+3.4	+4.9	-7	+2	-3	+42	-41	0	+1.6	-3.25	+1.7

Adjusted for change in contents in Cagles Mill Reservoir

Mean	10.1	20.3	64.4	229	371	183	202	134	14.3	15.1	1.23	23.9
Cfsm	0.035	0.070	0.221	0.784	1.27	0.627	0.692	0.460	0.049	0.052	0.0042	0.081
In.	0.04	0.08	0.25	0.90	1.30	0.72	0.77	0.53	0.05	0.06	0.005	0.09

Calendar year 1965 :	Max 2,790	Min 1.9	Mean 171	Mean 177	Cfsm 0.606	In. 8.22	$\bar{y}$ +6
Water year 1965-66 :	Max 2,070	Min 1.7	Mean 104	Mean 104	Cfsm 0.356	In. 4.80	$\bar{y}$ 0

$\bar{y}$ 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 NW 1/4 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 1966. 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 5 1/2 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.--35 years, 821 cfs (adjusted for storage December 1952 to September 1956).

Extremes.--Maximum discharge during year, 3,740 cfs Feb. 11 (gage height, 11.07 ft); minimum, 17 cfs Sept. 11-14, minimum gage height, 0.81 ft Sept. 12-14.
1931-66: Maximum discharge, 34,000 cfs Jan. 4, 1950 (gage height, 23.53 ft); minimum, 11 cfs Oct. 7, 8, 1954 (gage height, 0.32 ft).
Maximum stage known, about 30.0 ft in 1875, present datum, from information by Corps of Engineers.

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

DISCHARGE, IN CUBIC FEET PER SECOND. WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	85	49	75	2,690	183	513	205	1,350	154	51	40	19
2	90	48	72	2,110	169	561	195	978	131	49	42	19
3	81	47	70	1,670	187	796	187	600	114	49	40	18
4	72	48	66	1,450	165	838	189	519	108	52	35	35
5	67	48	66	2,180	200	513	205	462	103	55	31	49
6	64	49	64	2,080	191	510	203	522	108	120	29	28
7	71	51	63	1,830	172	552	191	810	117	175	28	22
8	85	51	61	461	278	370	169	792	109	93	27	20
9	81	53	62	360	412	352	165	810	102	70	26	18
10	69	51	65	415	1,970	362	161	438	94	60	30	18
11	70	51	75	381	2,720	435	209	368	90	468	35	17
12	75	65	244	356	1,130	522	441	513	86	459	35	17
13	71	88	399	358	757	723	504	471	81	156	35	17
14	77	77	389	351	618	848	380	444	87	99	58	18
15	77	99	473	332	516	764	380	396	110	79	45	28
16	66	98	411	266	504	453	468	368	100	67	35	23
17	59	92	159	257	477	468	447	350	94	62	22	20
18	57	92	125	264	411	420	370	382	90	58	30	18
19	56	92	112	250	385	358	237	330	106	55	29	30
20	56	91	106	247	335	332	282	561	96	51	29	570
21	58	90	129	195	300	312	342	552	87	49	41	223
22	67	88	202	193	285	308	414	358	84	47	35	158
23	69	88	183	175	585	310	345	295	63	41	27	134
24	71	85	105	170	2,150	348	729	261	68	40	25	118
25	60	58	263	180	2,150	380	1,200	243	65	37	24	80
26	56	55	319	170	2,090	360	844	223	63	35	23	78
27	55	104	491	200	1,660	272	1,200	209	61	35	21	80
28	54	123	391	190	405	259	1,500	199	60	66	21	63
29	54	88	180	180	-----	251	1,350	185	57	136	20	58
30	51	82	159	178	-----	235	1,940	173	24	49	21	57
31	50	-----	230	187	-----	211	-----	165	-----	44	20	-----
Total	2,074	2,201	5,811	20,306	21,445	13,936	15,452	14,327	2,742	2,907	959	2,053
Mean	66.9	73.4	187	655	766	450	515	462	91.4	93.8	30.9	68.4
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
(#)	0	+3.4	+5	-7	+2	-3	+42	-41	0	+1.6	-3.2	+1.7
Calendar year 1965 :	Max 7,730	Min 34	Mean 533	Cfsm 0.632	In. 8.58	# +6						
Water year 1965-66 :	Max 2,720	Min 17	Mean 286	Cfsm 0.339	In. 4.60	# 0						

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

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 1966. 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.--38 years, 4,453 cfs (unadjusted).

Extremes.--Maximum discharge during year, 14,800 cfs Feb. 12 (gage height, 12.45 ft); minimum, 358 cfs Sept. 13, 14 (gage height, 0.53 ft).
1928-66: Maximum discharge, 76,900 cfs May 21, 1943 (gage height, 24.19 ft); minimum, 193 cfs Oct. 1, 1941; minimum gage height, 0.29 ft Sept. 30, Oct. 7, 8, 1954.
Maximum stage since at least 1875, 27.5 ft Mar. 27, 1913, from floodmarks by State Highway Department of Indiana (discharge, 130,000 cfs, estimated).

Remarks.--Records good. Flow slightly regulated by four reservoirs above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1,230	872	762	3,200	920	2,500	1,800	12,900	1,630	877	584	383
2	1,160	828	741	8,620	900	3,450	1,720	12,000	1,540	808	590	394
3	1,230	798	727	10,400	900	3,490	1,670	8,510	1,460	793	558	401
4	1,070	783	707	8,820	900	3,630	1,630	6,610	1,380	816	551	419
5	1,020	762	700	7,100	900	3,720	1,590	5,150	1,320	818	544	395
6	978	741	688	6,650	900	3,380	1,560	4,310	1,280	1,540	518	409
7	978	734	668	5,830	960	3,190	1,530	3,720	1,250	1,730	499	502
8	1,020	720	648	4,960	1,200	3,160	1,480	3,570	1,260	1,300	490	436
9	1,280	707	648	3,510	2,390	2,850	1,430	4,010	1,240	1,060	478	406
10	1,190	700	662	2,810	5,150	2,630	1,390	4,910	1,160	884	471	395
11	1,070	741	694	2,560	13,200	2,540	1,550	4,410	1,110	788	496	387
12	990	748	820	2,350	14,600	2,560	3,390	4,390	1,070	849	527	377
13	962	755	1,430	2,190	12,700	3,040	4,570	5,130	1,040	1,240	589	367
14	962	812	1,610	2,070	10,200	3,440	3,720	5,190	1,050	1,060	771	368
15	932	978	1,490	1,970	7,860	3,460	3,050	4,760	1,150	854	741	454
16	910	925	1,430	1,850	6,100	3,270	2,620	4,380	1,320	741	795	429
17	880	895	1,360	1,700	5,380	2,870	2,440	3,910	1,210	688	688	403
18	840	895	1,190	1,560	4,750	2,700	2,270	4,230	1,330	655	590	409
19	812	865	1,030	1,450	4,130	2,610	2,190	4,390	1,370	648	538	415
20	783	812	978	1,360	3,630	2,460	2,100	3,740	1,420	616	508	474
21	775	776	940	1,340	3,160	2,320	2,040	3,420	1,310	629	522	1,230
22	783	755	910	1,340	2,800	2,220	1,970	3,390	1,200	662	512	1,630
23	798	727	902	1,310	2,520	2,190	2,020	3,270	1,110	648	496	1,500
24	805	707	910	1,250	2,450	2,250	2,020	2,990	1,030	707	482	1,070
25	858	707	910	1,190	2,300	2,270	2,840	2,740	977	636	471	868
26	1,080	700	1,150	1,160	2,200	2,280	3,470	2,530	917	590	450	743
27	1,140	727	1,340	1,150	2,100	2,190	4,470	2,350	862	622	432	684
28	1,080	762	1,380	1,140	2,100	2,060	6,420	2,180	879	681	419	694
29	1,010	850	1,390	1,050	-----	1,940	7,410	2,010	983	966	409	659
30	962	858	1,250	950	-----	1,880	8,890	1,860	1,040	762	406	695
31	918	-----	1,160	920	-----	1,810	-----	1,730	-----	674	396	-----
TOTAL	30,506	23,640	31,225	93,760	117,300	84,360	85,250	138,690	35,899	26,342	16,521	17,996
MEAN	984	788	1,007	3,025	4,189	2,721	2,842	4,474	1,197	850	533	600
CFSM	.210	.168	.214	.644	.892	.579	.605	.953	.255	.181	.114	.128
IN	.24	.19	.25	.74	.93	.67	.68	1.10	.28	.21	.13	.14

CALENDAR YEAR 1965 MAX 22,400 MIN 526 MEAN 3,086 CFSM .657 INCHES 8.92
WATER YEAR 1965-66 MAX 14,600 MIN 367 MEAN 1,922 CFSM .409 INCHES 5.56

WABASH RIVER BASIN

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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 1966. 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.--16 years, 185 cfs.

Extremes.--Maximum discharge during year, 1,460 cfs Feb. 11 (gage height, 6.18 ft); minimum, 24 cfs Aug. 9, 29, 30, Sept. 1-3; minimum gage height, 1.19 ft Aug. 9.

1950-66: 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.--Records good except those for the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	82	82	75	657	55	140	84	390	61	49	27	25
2	69	81	75	1,020	55	140	82	255	60	45	32	25
3	65	80	75	670	55	150	80	199	76	43	33	27
4	61	78	75	415	55	189	76	169	75	41	30	165
5	61	76	74	303	55	179	76	150	72	55	29	50
6	61	76	72	243	57	140	76	140	74	49	29	39
7	75	75	71	199	60	121	75	121	78	43	27	36
8	76	80	71	169	139	114	74	121	72	42	26	33
9	71	82	71	140	390	119	75	130	96	41	28	31
10	68	76	72	130	690	121	72	116	78	40	38	29
11	68	75	81	119	1,200	130	71	114	71	40	56	28
12	69	75	84	109	550	121	82	140	66	41	55	27
13	68	86	102	105	415	130	90	140	64	41	55	27
14	65	81	101	100	315	130	84	130	66	49	62	28
15	66	75	94	95	255	130	80	121	75	46	58	29
16	66	80	90	92	255	116	80	118	94	40	43	29
17	65	78	86	90	243	109	75	114	78	36	36	28
18	64	72	82	87	179	109	74	236	69	34	33	27
19	64	69	78	83	159	109	75	199	62	38	32	36
20	136	68	78	80	121	101	74	140	58	35	31	84
21	189	66	80	76	116	104	74	150	58	33	33	108
22	617	65	78	75	109	109	71	150	55	32	33	61
23	340	68	78	73	107	109	69	130	54	33	33	50
24	209	65	80	70	104	107	97	118	53	35	30	45
25	159	64	109	78	104	101	179	109	50	36	30	47
26	130	64	114	64	99	99	140	102	48	33	28	60
27	114	101	101	60	96	89	197	97	48	31	28	56
28	106	90	96	58	107	86	365	96	49	32	27	56
29	97	80	90	56	-----	86	303	87	61	34	25	50
30	92	76	87	56	-----	90	279	84	54	31	26	49
31	87	-----	115	55	-----	89	-----	81	-----	29	26	-----
TOTAL	3,560	2,284	2,635	5,617	6,145	3,667	3,329	4,447	2,035	1,207	1,057	1,385
MEAN	115	76.1	85.0	181	219	118	111	143	67.8	38.9	34.1	46.4
CFSM	.615	.407	.455	.968	1.17	.631	.594	.765	.363	.208	.182	.247
IN	.71	.45	.52	1.12	1.22	.73	.66	.88	.40	.24	.21	.28
CALENDAR YEAR 1965	MAX	2,930	MIN	36	MEAN	156	CFSM	.834	INCHES	11.33		
WATER YEAR 1965-66	MAX	1,200	MIN	25	MEAN	102	CFSM	.546	INCHES	7.43		

Peak discharge (base, 2,000 cfs).--No peak above base.

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 1966. 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.--23 years, 444 cfs.

Extremes.--Maximum discharge during year, 3,290 cfs Feb. 11 (gage height, 9.60 ft); minimum, 40 cfs Sept. 18, 19 (gage height, 2.35 ft). 1943-66: 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.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	122	172	141	1,640	120	329	190	880	133	107	48	44
2	133	159	134	2,690	120	366	184	683	130	91	51	43
3	120	152	133	2,730	120	375	177	517	127	84	50	43
4	111	146	132	1,530	120	425	172	412	123	92	51	67
5	104	140	129	975	120	437	166	353	120	91	48	134
6	102	136	126	768	125	379	162	318	123	98	46	75
7	114	135	120	632	125	318	160	281	125	88	44	61
8	133	136	117	513	174	282	157	262	121	81	43	56
9	138	142	116	423	560	268	155	297	117	75	42	51
10	130	150	123	380	1,210	279	152	272	137	77	52	49
11	122	139	131	336	3,110	287	152	244	117	76	77	48
12	118	137	149	295	2,160	287	163	276	109	73	79	46
13	116	141	199	288	1,260	297	179	313	108	73	71	43
14	112	152	238	268	943	307	179	292	115	190	92	42
15	108	147	219	250	716	306	168	268	130	113	128	45
16	106	145	199	226	663	285	163	251	131	95	98	42
17	104	153	184	202	683	263	159	235	144	79	79	42
18	99	152	171	198	528	256	152	250	125	72	69	41
19	95	140	161	179	435	259	153	392	111	71	63	48
20	155	135	158	175	355	243	155	288	103	64	67	79
21	583	134	159	168	304	227	155	254	97	61	64	122
22	781	132	151	165	282	242	151	276	95	57	72	125
23	979	128	149	160	262	244	145	248	92	56	64	88
24	662	126	157	155	253	240	155	221	89	57	59	76
25	469	122	197	150	247	224	249	203	86	58	55	78
26	364	124	283	143	237	214	280	188	83	58	53	76
27	295	150	255	135	223	207	294	177	94	54	51	86
28	250	204	223	125	234	196	637	169	144	54	50	83
29	217	173	202	122	-----	190	678	158	233	60	49	82
30	196	152	191	120	-----	195	663	146	136	55	46	82
31	185	-----	217	120	-----	196	-----	138	-----	51	45	-----
TOTAL	7,323	4,354	5,264	16,261	15,709	8,623	6,705	9,262	3,598	2,411	1,906	1,997
MEAN	236	145	170	525	561	278	224	299	120	77.8	61.5	66.6
CFSM	.555	.341	.400	1.24	1.32	.654	.527	.704	.282	.183	.145	.157
IN	.64	.38	.46	1.42	1.37	.75	.59	.81	.31	.21	.17	.17

CALENDAR YEAR 1965 MAX 6,320 MIN 57 MEAN 393 CFSM .925 INCHES 12.55
 WATER YEAR 1965-66 MAX 3,110 MIN 41 MEAN 229 CFSM .539 INCHES 7.30

Peak discharge (base, 3,400 cfs).--No peak above base.

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 1966. 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.--24 years, 105 cfs.

Extremes.--Maximum discharge during year, 1,230 cfs Feb. 10 (gage height, 6.81 ft); minimum, 1.8 cfs Sept. 5, 6, 12, 13, 18, 19; minimum gage height, 0.68 ft Sept. 5, 6.

1942-66: Maximum discharge, 10,700 cfs Jan. 27, 1952 (gage height, 13.4 ft); minimum, 0.4 cfs Sept. 14, 1954.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	34	13	15	556	16	115	30	325	22	7.8	3.3	3.1
2	29	12	14	883	16	175	30	196	21	6.7	3.5	3.2
3	25	12	14	531	16	148	26	136	20	5.6	3.2	3.4
4	21	11	14	305	16	141	26	99	19	35	2.9	2.8
5	19	11	13	228	16	113	25	84	18	92	2.8	2.0
6	18	11	12	186	16	87	25	73	20	44	2.8	2.0
7	23	11	12	143	18	68	24	63	24	46	2.5	2.5
8	47	12	11	102	116	61	24	60	21	26	2.3	2.7
9	40	15	11	83	218	58	23	121	19	18	2.8	2.8
10	30	14	13	75	750	60	21	96	16	13	4.0	3.3
11	26	14	18	62	1,000	62	24	78	15	187	9.5	2.6
12	25	14	20	56	500	62	39	109	13	112	4.7	2.0
13	23	15	38	52	330	72	43	120	13	53	7.7	2.6
14	20	16	44	50	250	78	37	103	25	35	21	2.9
15	20	15	38	45	180	75	32	85	23	25	10	4.1
16	19	15	33	39	165	65	30	76	22	18	7.9	4.4
17	17	13	29	36	170	58	29	67	19	13	5.6	3.2
18	17	13	27	33	130	54	29	83	16	11	4.7	2.2
19	15	12	25	31	105	51	29	89	14	12	4.2	5.6
20	24	12	25	29	85	44	29	64	12	17	4.2	31
21	46	11	26	27	70	41	28	58	11	10	8.8	61
22	41	12	24	25	60	41	25	55	10	7.1	4.4	26
23	36	12	23	24	56	41	23	48	9.4	6.0	5.0	14
24	28	12	23	22	53	39	24	44	9.1	6.0	5.0	8.6
25	23	11	47	21	50	34	28	43	8.2	5.5	4.6	6.2
26	20	12	58	20	48	33	28	36	7.4	5.6	3.9	7.6
27	19	37	49	19	47	32	145	34	7.0	5.0	3.7	8.0
28	18	28	42	18	52	30	188	33	9.2	4.7	3.2	8.2
29	16	20	38	17	-----	29	128	30	9.8	5.0	2.6	7.5
30	14	17	36	17	-----	32	309	27	9.3	4.5	2.9	8.1
31	14	-----	41	17	-----	30	-----	24	-----	4.0	3.0	-----
TOTAL	767	433	833	3,752	4,549	2,029	1,501	2,559	462.4	840.5	156.7	243.6
MEAN	24.7	14.4	26.9	121	162	65.5	50.0	82.5	15.4	27.1	5.06	8.12
CFSM	.227	.132	.247	1.11	1.49	.601	.459	.757	.141	.249	.046	.075
IN	.26	.15	.28	1.28	1.55	.69	.51	.87	.16	.29	.05	.08

CALENDAR YEAR 1965 MAX 2,960 MIN 3.6 MEAN 85.5 CFSM .784 INCHES 10.65
 WATER YEAR 1965-66 MAX 1,000 MIN 2.0 MEAN 49.7 CFSM .456 INCHES 6.18

Peak discharge (base, 1,300 cfs).--No peak above base.

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 1966. 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.--24 years, 468 cfs.

Extremes.--Maximum discharge during year, 3,120 cfs Feb. 11 (gage height, 9.23 ft); minimum, 22 cfs Sept. 18; minimum gage height, 3.56 ft Sept. 6.
1942-66: Maximum discharge, 27,600 cfs May 29, 1956 (gage height, 18.38 ft); minimum, 8.0 cfs Sept. 18, 1954 (gage height, 3.04 ft).

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	91	67	76	1,020	90	527	149	1,090	110	69	41	34
2	89	66	72	2,310	90	667	146	800	105	61	40	34
3	83	62	68	2,470	90	617	140	625	100	57	40	32
4	77	62	67	1,610	90	610	134	491	98	67	39	30
5	72	61	66	1,110	90	555	129	404	95	255	36	29
6	69	61	66	852	95	459	124	353	101	251	37	26
7	75	62	64	683	100	367	120	307	107	241	36	29
8	98	64	62	545	253	307	118	279	102	131	35	36
9	90	68	61	438	492	271	117	404	91	91	35	36
10	80	67	64	382	1,230	266	114	357	85	75	36	35
11	72	68	68	335	2,900	265	117	297	82	237	44	32
12	70	72	74	283	2,290	270	139	359	79	252	41	29
13	70	76	90	263	1,560	292	152	403	77	135	41	26
14	62	86	147	252	1,150	316	151	377	09	93	76	26
15	58	110	151	229	858	324	139	336	102	76	60	28
16	55	105	128	204	767	301	133	299	114	66	56	26
17	52	95	112	177	800	269	129	272	99	59	51	24
18	51	88	100	170	617	253	124	297	96	54	46	24
19	51	82	92	155	502	245	127	406	87	64	44	31
20	66	76	90	145	395	226	127	309	79	95	46	70
21	92	74	88	140	326	209	129	273	76	71	53	115
22	121	72	86	130	288	203	122	265	70	55	48	109
23	128	70	80	125	261	204	119	241	66	50	46	70
24	115	68	78	120	246	200	121	218	63	49	46	53
25	105	66	100	110	239	185	153	193	61	47	45	48
26	90	66	177	105	227	172	225	171	57	46	43	48
27	82	88	209	100	211	166	419	159	54	44	40	50
28	78	84	181	95	246	156	857	149	57	50	38	49
29	74	86	166	92	-----	152	868	138	77	56	37	48
30	68	84	155	90	-----	152	1,000	129	86	48	36	50
31	67	-----	164	90	-----	155	-----	117	-----	45	35	-----
TOTAL	2,451	2,256	3,202	14,830	16,503	9,361	6,642	10,518	2,565	2,990	1,345	1,277
MEAN	79.1	75.2	103	478	589	302	221	339	85.5	96.5	43.4	42.6
CFSM	.171	.163	.223	1.03	1.27	.654	.478	.734	.185	.209	.094	.092
IN	.20	.18	.26	1.19	1.33	.75	.53	.85	.21	.24	.11	.10

CALENDAR YEAR 1965 MAX 6,760 MIN 35 MEAN 366 CFSM .792 INCHES 10.74

WATER YEAR 1965-66 MAX 2,900 MIN 24 MEAN 203 CFSM .439 INCHES 5.95

Peak discharge (base, 4,200 cfs).--No peak above base.

3-3630. Wabash 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 1966. 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.--26 years, 1,089 cfs.

Extremes.--Maximum discharge during year, 5,620 cfs Feb. 12 (gage height, 10.24 ft); minimum, 98 cfs Sept. 17, 18 (gage height, 1.59 ft).

1940-66: 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.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	290	345	296	1,650	290	943	477	2,120	368	278	141	113
2	293	320	277	4,370	290	1,190	466	1,810	356	241	138	111
3	284	295	265	5,180	300	1,160	451	1,420	345	216	138	108
4	260	295	257	4,300	305	1,180	438	1,130	336	226	133	105
5	244	270	248	2,910	307	1,170	423	951	335	448	130	125
6	233	260	242	2,170	323	1,040	409	851	348	446	126	150
7	253	255	233	1,760	330	886	403	767	351	405	122	128
8	291	255	225	1,440	457	781	396	709	339	297	119	123
9	304	255	220	1,170	798	719	391	877	344	250	117	118
10	293	259	229	1,010	2,270	708	383	601	316	222	123	114
11	273	263	242	909	5,000	714	389	710	316	411	138	109
12	261	262	264	809	5,290	720	421	774	297	393	149	106
13	260	267	317	751	3,810	740	445	854	290	286	163	103
14	245	277	455	722	2,780	768	452	825	303	275	223	103
15	234	336	492	673	2,110	781	434	765	317	286	206	108
16	226	332	454	623	1,820	758	416	710	345	245	217	104
17	218	315	419	559	1,840	710	407	670	332	215	186	100
18	213	312	388	542	1,540	677	397	716	336	195	164	98
19	207	295	361	497	1,260	663	396	840	311	233	150	117
20	244	274	348	487	1,030	638	397	775	292	247	156	211
21	419	263	343	450	872	603	401	682	279	206	163	306
22	745	256	332	420	788	590	387	660	264	181	154	317
23	955	248	317	400	731	605	379	646	254	174	159	253
24	928	238	315	380	693	588	381	592	245	171	148	198
25	745	230	363	350	671	566	438	544	235	165	142	178
26	620	230	496	330	647	538	614	502	222	161	135	177
27	520	288	582	320	613	521	824	473	214	156	128	183
28	470	319	532	305	642	501	1,360	450	245	175	124	182
29	420	355	486	300	-----	485	1,680	427	331	175	121	174
30	395	326	450	290	-----	484	1,950	406	339	163	118	177
31	370	-----	453	290	-----	487	-----	384	-----	149	114	-----
TOTAL	11,713	8,495	10,901	36,367	37,807	22,914	16,805	24,841	9,185	7,691	4,545	4,499
MEAN	378	283	352	1,173	1,350	739	560	801	306	248	147	150
CFSM	.359	.269	.334	1.11	1.28	.701	.531	.760	.290	.235	.140	.142
IN	.41	.30	.38	1.28	1.33	.81	.59	.88	.32	.27	.16	.16

CALENDAR YEAR 1965 MAX 12,900 MIN 128 MEAN 922 CFSM .875 INCHES 11.87
 WATER YEAR 1965-66 MAX 5,290 MIN 98 MEAN 536 CFSM .509 INCHES 6.91

Peak discharge (base, 7,000 cfs).--No peak above base.

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 1966. 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.--36 years, 306 cfs.

Extremes.--Maximum discharge during year, 2,240 cfs Feb. 11 (gage height, 3.88 ft); minimum, 3.8 cfs Sept. 13, 14, 24; minimum gage height, 0.22 ft Aug. 10.

1930-66: 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.--Records good except those for the winter period, which are fair. Slight diversion occasionally by quarry above gage.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	40	82	74	786	50	234	117	635	90	29	11	11
2	40	75	66	1,470	60	278	115	513	86	25	10	10
3	38	70	63	1,310	60	295	109	388	82	22	9.5	10
4	35	67	61	966	60	331	105	300	78	25	11	12
5	32	63	59	661	60	338	99	246	74	30	9.5	15
6	30	62	56	620	60	292	97	220	80	30	9.0	14
7	44	61	53	579	70	237	94	200	84	25	7.4	11
8	89	62	49	454	275	209	92	183	76	22	6.8	8.6
9	83	62	47	350	511	195	91	433	69	19	6.0	6.5
10	67	61	51	302	1,340	198	89	305	64	29	7.9	5.4
11	57	58	58	255	1,900	202	91	232	63	58	24	4.9
12	52	57	71	217	1,590	205	107	366	58	23	58	4.5
13	47	63	127	213	1,050	218	124	456	55	20	34	4.1
14	44	63	154	198	789	225	121	378	68	20	51	4.2
15	41	60	140	179	628	224	111	310	68	59	217	6.2
16	40	58	123	155	600	211	104	265	65	35	89	5.2
17	38	56	109	140	614	193	99	231	64	23	52	4.6
18	35	55	97	125	457	190	94	248	59	19	35	4.7
19	33	58	91	110	373	195	97	270	50	18	25	6.1
20	66	55	89	100	275	179	97	256	45	15	20	11
21	147	52	88	90	230	165	93	224	42	13	26	16
22	270	52	82	75	226	165	89	210	38	12	52	18
23	379	50	80	65	194	177	86	196	36	13	42	16
24	294	48	84	58	186	166	96	172	34	13	31	14
25	213	45	103	50	178	150	122	152	31	13	23	12
26	167	46	127	45	170	142	125	135	29	12	18	13
27	139	120	134	42	154	137	174	126	27	12	16	14
28	120	147	125	40	158	128	285	122	38	11	15	14
29	102	109	112	40	-----	123	324	114	36	11	14	14
30	91	87	105	40	-----	126	480	101	37	11	13	14
31	86	-----	110	40	-----	125	-----	94	-----	12	12	-----
OTAL	2,959	2,004	2,788	9,775	12,318	6,253	3,927	8,081	1,726	679	955.1	304.0
MEAN	95.5	66.8	89.9	315	440	202	131	261	57.5	21.9	30.8	10.1
CFSM	.321	.224	.302	1.06	1.48	.678	.440	.876	.193	.074	.103	.034
IN	.37	.25	.35	1.22	1.54	.78	.49	1.01	.22	.08	.12	.04

CALENDAR YEAR 1965 MAX 4,980 MIN 12 MEAN 261 CFSM .876 INCHES 11.89
 WATER YEAR 1965-66 MAX 1,900 MIN 4.1 MEAN 142 CFSM .477 INCHES 6.46

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

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 1966. Prior to January 1948 monthly discharge only, published in WSP 1305.

Gage.--Water-stage recorder. Datum of gage is 603.12 ft above mean sea level, datum of 1929. Prior to Oct. 22, 1952, wire-weight gage, 600 ft upstream at same datum.

Average discharge.--19 years, 1,773 cfs.

Extremes.--Maximum discharge during year, 8,750 cfs Feb. 12 (gage height, 4.60 ft); minimum, 155 cfs Sept. 17, 18, 19 (gage height, 1.04 ft).

1947-66: Maximum discharge, 52,300 cfs Mar. 6, 1963 (gage height, 16.23 ft); minimum, 87 cfs Sept. 29, Oct. 7, 1954.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	435	530	456	1,560	440	1,440	712	3,760	618	310	212	194
2	410	530	446	5,600	440	1,320	657	3,060	579	310	206	198
3	380	498	427	7,150	450	1,220	657	2,400	553	310	206	132
4	355	479	403	6,270	450	1,220	644	1,820	530	330	200	176
5	350	456	395	4,520	460	1,320	618	1,550	519	420	194	165
6	360	446	387	3,400	470	1,620	605	1,320	553	550	198	224
7	380	427	379	2,900	490	1,440	579	1,220	566	440	132	218
8	411	419	371	2,400	605	1,220	599	1,070	540	379	176	200
9	456	419	363	1,220	1,220	1,120	579	1,630	498	379	176	200
10	477	419	363	1,550	3,650	1,090	566	1,630	456	355	200	194
11	446	427	379	1,440	7,350	1,090	579	1,320	456	400	218	138
12	420	427	395	1,220	1,300	1,090	740	1,690	427	700	242	176
13	400	435	427	1,100	3,530	1,120	310	1,960	466	427	278	170
14	380	435	519	1,060	4,890	1,220	740	1,960	466	379	671	170
15	370	446	657	992	3,760	1,220	698	1,550	446	379	427	176
16	350	466	644	915	3,230	1,220	644	1,320	477	355	438	165
17	335	456	605	825	3,060	1,100	631	1,220	446	296	419	160
18	330	446	566	792	2,730	1,060	605	1,440	446	278	348	155
19	330	446	540	726	2,100	1,020	592	1,550	419	342	310	200
20	390	427	519	670	1,630	1,010	592	1,320	395	327	290	311
21	540	419	508	630	1,440	976	592	1,220	355	348	348	519
22	840	419	498	600	1,220	930	579	1,090	348	296	322	435
23	1,100	411	488	530	1,220	930	566	1,060	329	272	303	395
24	1,220	395	477	560	1,090	915	631	992	310	266	296	322
25	1,120	337	508	540	1,060	935	670	930	310	254	234	303
26	930	387	566	520	1,020	955	768	855	290	242	260	296
27	840	411	579	500	976	810	2,000	810	270	236	242	290
28	754	466	726	430	1,040	732	1,820	768	272	248	230	296
29	670	508	694	460		754	2,250	726	370	290	218	284
30	618	519	592	450	-----	740	3,420	694	390	248	212	284
31	566	-----	618	440	-----	740	-----	657	-----	230	206	-----
Total	16,963	13,356	15,495	52,660	61,921	35,737	26,193	44,672	13,090	10,716	4,552	7,236
Mean	547	445	500	1,699	2,211	1,153	873	1,441	436	346	276	241
Cfsm	0.323	0.263	0.296	1.00	1.31	0.682	0.516	0.852	0.258	0.205	0.163	0.143
In.	0.37	0.29	0.34	1.15	1.36	0.79	0.58	0.98	0.29	0.24	0.19	0.16

Calendar year 1965 : Max 19,100 Min 188 Mean 1,388 Cfsm 0.820 In. 11.13
 Water year 1965-66 : Max 8,300 Min 155 Mean 840 Cfsm 0.496 In. 6.74

Peak discharge (base, 10,000 cfs).--No peak above base.

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 1966.

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.--18 years, 96.9 cfs.

Extremes.--Maximum discharge during year, 1,460 cfs Feb. 10 (gage height, 5.35 ft); no flow for many days.
1948-66: 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.--Records good except those for the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	8.1	10	18	279	10	86	30	428	30	2.6	0.70	0.60
2	8.1	9.5	15	554	12	90	29	238	20	2.2	.70	.40
3	7.4	8.6	14	318	12	90	28	160	26	1.7	.50	.20
4	6.8	8.1	14	187	12	110	27	122	25	2.4	.30	.10
5	5.6	8.1	13	146	12	100	26	99	24	2.8	.20	.10
6	5.6	7.4	13	197	12	77	25	83	27	8.8	.20	.10
7	12	7.4	11	190	14	61	25	66	31	11	.10	0
8	28	8.1	10	126	108	53	24	63	29	7.1	.10	0
9	51	8.8	9.5	98	302	50	24	288	24	4.2	.10	0
10	34	8.8	10	82	786	52	23	226	21	20	2.6	0
11	22	8.1	12	65	802	50	26	149	19	158	1.6	0
12	16	8.1	17	54	298	53	36	235	17	46	1.2	0
13	12	13	47	57	254	55	48	272	24	25	2.9	0
14	8.8	13	82	50	210	56	46	205	39	17	9.5	0
15	8.1	13	58	45	168	56	39	158	24	14	15	0
16	6.8	13	46	37	208	50	36	127	22	8.5	9.8	0
17	6.2	13	38	30	189	46	34	104	10	6.0	6.2	0
18	6.2	10	34	25	123	46	31	123	15	5.1	3.7	0
19	5.6	8.8	31	22	100	49	33	217	12	70	2.2	0
20	16	8.1	31	20	71	40	33	137	10	8.6	4.7	2.7
21	64	7.4	31	17	61	41	31	107	8.5	4.2	4.4	40
22	92	8.1	28	15	54	41	28	90	7.4	2.7	11	12
23	76	7.4	27	13	51	41	27	75	6.6	2.5	19	5.5
24	53	7.4	29	11	48	41	49	66	5.9	3.1	11	2.8
25	37	6.8	38	10	47	36	105	56	5.3	2.4	7.7	2.0
26	29	7.4	50	9.0	44	34	80	50	4.5	2.2	5.1	1.7
27	22	21	48	8.5	39	34	154	46	4.1	1.9	3.0	2.6
28	19	51	42	8.0	47	31	196	43	3.6	30	1.8	3.4
29	16	36	37	8.0	-----	30	140	41	3.3	7.2	1.3	2.7
30	13	24	35	8.0	-----	31	609	35	2.9	1.7	.90	3.7
31	11	-----	36	8.0	-----	32	-----	32	-----	.90	.80	-----
TOTAL	706.3	369.6	924.5	2,697.5	4,174	1,686	2,042	4,151	517.1	479.80	128.50	80.40
MEAN	22.8	12.3	29.8	87.0	149	54.4	68.1	134	17.2	15.5	4.14	2.68
CFSM	.207	.139	.336	.980	1.66	.613	.767	1.51	.194	.175	.047	.030
IN	.30	.15	.39	1.13	1.75	.71	.86	1.74	.22	.20	.05	.03
CALENDAR YEAR 1965	MAX	2,360	MIN	.40	MEAN	80.7	CFSM	.909	INCHES	12.34		
WATER YEAR 1965-66	MAX	882	MIN	0	MEAN	49.2	CFSM	.554	INCHES	7.52		

Peak discharge (base, 1,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-10	2230	5.35	1,460				

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 Wyalosung Creek and 16 miles upstream from mouth.

Drainage area.--156 sq mi.

Records available.--February 1948 to September 1966.

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.--18 years, 166 cfs.

Extremes.--Maximum discharge during year, 4,920 cfs Apr. 30 (gage height, 11.78 ft); minimum, 0.60 cfs Sept. 19; minimum gage height, 0.67 ft Sept. 18.

1948-66: 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.--Records good except those during the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	6.5	12	22	333	10	231	40	1,570	30	5.6	8.9	4.1
2	6.1	11	19	1,350	10	167	37	531	20	4.9	6.5	3.8
3	6.5	10	17	588	10	135	36	322	26	4.8	4.8	3.9
4	7.6	10	16	258	10	142	35	217	24	5.3	3.5	3.4
5	10	9.9	15	180	11	130	35	160	22	5.3	2.0	3.0
6	6.5	9.8	15	548	15	100	34	130	27	5.4	2.3	2.5
7	27	10	14	335	29	84	32	106	73	12	1.9	1.8
8	89	9.9	13	191	172	70	32	91	40	12	1.0	1.6
9	84	11	12	124	641	60	31	297	30	9.5	1.9	1.5
10	47	12	11	116	1,880	67	31	297	23	7.7	1.9	1.4
11	30	13	11	93	1,720	68	34	166	20	6.4	3.0	1.2
12	22	14	12	72	541	72	343	421	10	59	17	1.3
13	17	15	19	70	671	117	468	545	16	45	30	1.2
14	14	16	71	66	433	106	183	416	31	24	22	1.1
15	13	20	56	58	310	80	120	247	36	15	15	1.3
16	12	19	42	50	710	77	96	180	31	11	24	1.1
17	12	17	33	38	452	67	81	145	23	12	17	1.0
18	13	15	28	33	218	64	69	376	22	8.7	12	0.90
19	14	14	25	29	159	60	69	544	18	88	8.5	1.6
20	20	13	23	25	117	60	83	272	14	36	7.7	2.5
21	27	13	22	22	87	57	73	171	13	16	154	3.2
22	68	12	22	19	78	54	62	137	11	10	66	23
23	95	12	21	17	73	56	56	107	10	8.5	29	20
24	76	11	21	15	62	71	786	90	9.5	13	17	9.8
25	42	11	31	13	56	65	865	75	9.1	9.4	15	6.2
26	29	11	75	11	54	54	304	63	8.6	9.4	12	4.6
27	23	16	50	11	54	49	1,140	55	7.8	8.5	9.0	3.9
28	20	14	44	10	77	45	742	50	6.9	6.8	6.9	3.0
29	18	32	39	10	-----	41	372	43	6.5	6.5	5.9	2.3
30	15	26	34	10	-----	41	2,100	40	6.0	5.4	5.1	3.5
31	13	-----	33	10	-----	41	-----	33	-----	9.8	4.5	-----
TOTAL	883.2	419.6	874	4,705	8,660	2,557	8,389	7,097	640.4	480.9	516.9	119.70
MEAN	28.5	14.0	28.2	152	309	82.5	280	255	21.6	15.5	16.7	3.99
CFSM	.163	.090	.181	.974	1.98	.529	1.79	1.63	.139	.099	.107	.026
IN	.21	.10	.21	1.12	2.06	.61	2.00	1.88	.15	.11	.12	.05

CALENDAR YEAR 1965 MAX 2,800 MIN 1.9 MEAN 112 CFSM .716 INCHES 9.74
 WATER YEAR 1965-66 MAX 2,100 MIN .90 MEAN 99.0 CFSM .635 INCHES 8.62

Peak discharge (base, 2,900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-10	1945	9.75	3,420				
4-30	1915	11.78	4,920				

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 1966. 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.--39 years, 2,336 cfs.

Extremes.--Maximum discharge during year, 10,900 cfs Feb. 12 (gage height, 12.77 ft); minimum, 225 cfs Sept. 18, 19 (gage height, 0.27 ft).

1923-66: Maximum discharge, 78,500 cfs Jan. 5, 1949 (gage height, 19.67 ft).

1927-66: Minimum, 84 cfs Sept. 15, 1941.

Maximum stage known, 21.0 ft Mar. 26, 1913, from information by Corps of Engineers and State Highway Department of Indiana (discharge, 120,000 cfs).

Remarks.--Records good. Some regulation of low flow by Seymour Water Co. at dam above station. Records of water temperatures and suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	513	663	587	947	620	1,970	1,060	9,340	976	534	310	282
2	489	630	537	4,080	620	2,440	1,030	6,510	930	486	305	275
3	492	606	530	7,290	620	2,500	997	4,450	895	448	294	268
4	472	576	512	7,650	620	2,490	974	3,400	861	432	285	261
5	456	555	495	6,760	620	2,530	947	2,770	831	451	278	250
6	440	538	487	5,240	630	2,390	921	2,350	823	698	270	247
7	475	522	475	4,710	660	2,130	894	2,040	865	662	263	281
8	512	508	467	3,830	726	1,870	870	1,820	890	609	257	266
9	600	507	455	3,040	1,890	1,690	854	1,910	832	518	252	258
10	628	501	453	2,510	3,670	1,600	832	3,150	770	467	254	252
11	608	499	461	2,210	9,320	1,580	837	2,550	725	478	297	246
12	563	503	479	1,930	10,600	1,580	1,090	2,440	696	982	280	240
13	525	513	503	1,750	9,720	1,640	2,020	3,870	663	823	300	236
14	503	507	559	1,630	8,450	1,720	1,490	3,710	808	640	542	235
15	483	517	765	1,530	6,200	1,710	1,270	3,030	798	548	725	250
16	462	558	812	1,410	5,220	1,680	1,150	2,500	775	525	574	238
17	446	557	776	1,280	5,450	1,600	1,060	2,160	754	485	566	230
18	429	537	734	1,170	4,350	1,520	1,000	2,140	708	454	490	226
19	417	527	693	1,110	3,500	1,480	971	3,000	680	448	428	241
20	435	510	662	1,030	2,920	1,450	968	2,710	639	839	407	288
21	530	501	647	980	2,430	1,390	962	2,190	602	608	452	446
22	686	491	633	930	2,090	1,340	922	1,900	575	479	534	493
23	1,020	471	622	880	1,890	1,320	886	1,740	550	423	460	483
24	1,300	498	608	830	1,760	1,330	1,230	1,610	528	395	409	442
25	1,340	474	625	780	1,670	1,300	2,800	1,470	507	375	397	387
26	1,160	471	666	740	1,590	1,240	1,790	1,370	483	361	370	360
27	1,010	462	798	700	1,520	1,180	2,770	1,280	463	346	348	359
28	900	499	882	670	1,470	1,140	4,690	1,210	451	340	326	355
29	814	590	849	650	-----	1,100	3,530	1,140	458	377	309	349
30	754	558	804	637	-----	1,070	4,250	1,080	510	386	299	340
31	707	-----	776	620	-----	1,060	-----	1,040	-----	347	290	-----
OTAL	20,169	15,849	19,352	69,524	90,826	51,040	45,065	81,880	21,046	15,964	11,571	9,084
MEAN	651	528	624	2,243	3,244	1,646	1,502	2,641	702	515	373	303
CFSM	.279	.226	.268	.961	1.39	.706	.644	1.13	.301	.221	.160	.130
IN	.32	.25	.31	1.11	1.45	.81	.72	1.31	.34	.25	.18	.14

CALENDAR YEAR 1965 MAX 25,000 MIN 283 MEAN 1,868 CFSM .801 INCHES 10.87
 WATER YEAR 1965-66 MAX 10,600 MIN 226 MEAN 1,237 CFSM .530 INCHES 7.20

Peak discharge (base, 12,000 cfs).--No peak above base.

3-3660. Graham Creek near Vernon, Ind.

Location (revised).--Lat 38°55'47", long 85°33'45", in SE $\frac{1}{4}$ 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 1966.

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.--11 years, 86.9 cfs.

Extremes.--Maximum discharge during year, 4,080 cfs Feb. 10 (gage height, 10.23 ft); no flow for many days.
1955-66: Maximum discharge, 18,600 cfs June 23, 1960 (gage height, 21.37 ft) from rating curve extended above 6,000 cfs on basis of contracted-opening measurements of peak flow; no flow at times during most years.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.2	8.9	17	766	5.5	290	34	577	6.0	0.80	1.4	0.80
2	2.5	8.3	15	2,610	5.5	124	35	165	6.0	.80	.90	.60
3	3.4	7.7	13	590	5.5	79	36	110	5.5	.70	.60	.50
4	3.1	7.1	12	180	5.5	81	40	77	5.6	.70	.60	.40
5	2.4	6.8	12	116	6.0	86	42	58	5.2	.70	.40	.20
6	1.8	6.5	10	1,050	7.0	54	41	48	5.0	.60	.20	.20
7	86	6.0	9.6	290	8.3	45	37	38	5.1	.40	.20	.10
8	218	6.2	8.9	116	31	30	34	32	6.6	.20	.10	0
9	60	6.2	8.3	65	419	34	33	28	6.7	.10	.10	0
10	28	6.2	8.0	51	2,390	34	33	24	5.9	.10	.10	0
11	17	7.1	8.0	42	1,400	33	39	22	4.5	.10	.10	0
12	13	8.0	8.6	35	290	35	593	30	3.8	.10	.10	0
13	10	13	12	31	789	174	642	72	3.4	.10	.10	0
14	8.6	33	22	30	354	119	170	62	3.1	0	.66	0
15	7.7	26	22	27	192	74	99	49	2.6	0	.56	0
16	6.8	19	18	23	322	55	71	36	3.2	0	.33	0
17	6.2	16	16	19	260	46	56	30	3.2	0	.12	0
18	5.7	15	15	18	112	41	47	177	2.9	0	.5.9	0
19	5.0	13	13	16	82	42	45	244	2.9	7.1	.3.6	.10
20	5.4	12	12	15	59	43	73	91	2.7	3.4	2.9	.20
21	123	12	13	13	46	35	58	56	2.7	1.6	2.6	.50
22	190	11	12	12	37	33	44	43	2.3	.80	2.2	1.5
23	157	11	12	10	35	39	57	53	1.9	.80	2.1	2.4
24	85	10	13	9.0	31	73	87	27	1.6	1.4	1.5	1.2
25	33	10	19	8.0	31	64	511	22	1.4	2.0	1.2	1.0
26	21	9.6	46	7.0	30	48	146	18	1.3	2.4	1.2	.90
27	17	46	34	6.5	28	42	910	15	1.1	1.4	1.3	1.0
28	14	88	23	6.0	42	37	482	13	1.0	2.0	1.2	1.2
29	12	33	19	5.7	-----	37	218	11	.90	.9.9	1.0	1.0
30	10	22	17	5.5	-----	36	954	8.8	.80	6.5	.90	1.7
31	9.6	-----	22	5.5	-----	36	-----	7.5	-----	2.7	.80	-----
TOTAL	1,165.4	484.6	490.4	6,178.2	7,023.3	2,001	5,647	2,244.3	105.70	43.40	200.50	15.50
MEAN	37.6	16.2	15.8	199	221	64.7	188	72.4	3.52	1.40	6.47	.52
CFSM	.485	.209	.204	2.56	3.23	.834	2.42	.933	.045	.018	.083	.0067
IN	.56	.23	.24	2.96	3.57	.96	2.71	1.08	.05	.02	.10	.01

CALENDAR YEAR 1965 MAX 1,490 MIN 0 MEAN 63.0 CFSM .812 INCHES 11.02
WATER YEAR 1965-66 MAX 2,610 MIN 0 MEAN 70.2 CFSM .905 INCHES 12.27

Peak discharge (base, 2,300 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	0900	10.22	4,080				
2-10	1900	10.23	4,080				

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 1966.

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.--18 years (1948-66), 341 cfs.

Extremes.--Maximum discharge during year, 12,700 cfs Feb. 10 (gage height, 21.69 ft); minimum, 1.4 cfs Sept. 27; minimum gage height, 0.60 ft July 21.

1947-66: Maximum discharge, 52,200 cfs Jan. 21, 1959 (gage height, 33.1 ft, from floodmarks), from rating curve extended above 25,000 cfs on basis of contracted-opening measurement of peak flow; no flow at times in most years.

Remarks.--Records good except those for the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	12	35	71	910	41	875	89	2,730	34	5.6	20	4.5
2	14	31	51	7,430	21	587	82	1,210	30	5.3	14	4.3
3	14	28	42	3,280	21	370	84	660	27	4.1	11	4.3
4	12	26	36	969	21	386	152	420	25	3.9	8.6	4.5
5	9.5	25	33	542	21	404	141	305	23	7.5	7.3	4.3
6	8.7	23	30	2,760	22	291	116	239	23	41	6.3	4.3
7	224	22	28	1,610	26	225	102	197	24	11	5.5	4.0
8	515	22	26	666	140	190	90	166	36	8.8	4.9	3.8
9	347	23	26	404	1,250	174	85	139	26	8.1	4.4	3.9
10	205	22	26	305	6,790	167	80	116	22	6.7	4.2	3.8
11	134	23	26	249	7,270	164	115	101	20	7.5	4.9	3.6
12	92	23	27	209	1,530	182	1,670	105	19	6.4	6.1	3.3
13	67	30	32	189	2,350	1,020	2,450	124	17	6.1	7.0	3.4
14	51	43	37	173	1,640	702	913	164	15	5.3	2.8	3.4
15	41	87	60	158	804	437	528	143	14	4.2	183	4.6
16	33	82	71	141	970	321	376	122	14	3.9	85	3.6
17	29	56	57	112	1,150	249	292	100	15	3.7	56	3.0
18	25	42	50	104	577	217	240	463	13	3.6	31	2.9
19	21	36	44	83	419	210	225	861	12	3.6	20	3.2
20	21	31	40	65	315	200	263	428	11	3.3	15	3.6
21	79	28	39	58	242	183	276	237	10	3.0	13	2.2
22	447	26	37	50	204	165	214	179	9.1	4.0	12	2.3
23	303	24	36	45	183	160	183	145	8.4	5.8	11	2.7
24	277	22	35	40	170	215	271	117	7.8	7.4	9.2	2.8
25	185	21	44	35	164	230	1,980	101	7.5	6.0	8.5	2.5
26	127	21	74	31	157	182	885	84	7.2	4.9	7.6	2.4
27	96	39	158	27	147	147	2,680	72	6.7	4.8	6.7	1.8
28	75	155	118	25	203	127	2,190	62	6.4	40	6.0	2.3
29	58	181	84	23	-----	110	1,090	52	6.1	218	5.5	2.5
30	48	107	68	22	-----	103	2,520	45	5.8	99	5.1	2.6
31	40	-----	61	21	-----	96	-----	39	-----	33	4.8	-----
TOTAL	3,610.2	1,334	1,567	20,750	27,000	9,115	20,382	9,926	499.0	575.5	821.6	100.4
MEAN	116	44.5	50.5	669	967	294	679	320	16.6	18.6	26.5	3.35
CFSM	.392	.150	.171	2.26	3.27	.993	2.29	1.08	.056	.063	.090	.011
IN	.45	.17	.20	2.61	3.40	1.15	2.56	1.25	.06	.07	.10	.01

CALENDAR YEAR 1965 MAX 5,820 MIN 1.2 MEAN 231 CFMS .780 INCHES 10.57
WATER YEAR 1965-66 MAX 7,430 MIN 1.8 MEAN 262 CFMS .885 INCHES 12.03

Peak discharge (base, 7,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	1645	20.45	10,300				
2-10	2400	21.69	12,700				

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 1966 (high-water records only since October 1943).

Average discharge.--10 years (1932-35, 1936-43), 387 cfs.

Gage.--Water-stage recorder. Datum of gage is 513.96 ft above mean sea level, datum of 1929. Prior to June 22, 1934, chain gage at same site and datum. Nov. 8 to Dec. 30, 1939, staff gage approximately half a mile upstream at different datum. Aug. 1, 1940, to Sept. 30, 1943, auxiliary gage (for low flows) at Slate-Ford bridge 2½ miles upstream at different datum.

Extremes.--Maximum discharge during year, 10,400 cfs Feb. 11 (gage height, 22.92 ft).
1932-66: Maximum discharge, 53,900 cfs Jan. 22, 1959 (gage height, 29.20 ft).

Remarks.--Records fair. Daily discharge not computed when gage height is below 13.0 ft.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								3,420				
2				2,540				3,420				
3				3,950				1,520				
4				4,380								
5				1,570								
6				1,970								
7				3,090								
8				1,810								
9					730							
10					2,520							
11					7,980							
12					3,740							
13					3,250	715	925					
14					3,330	730	2,660					
15					2,160		2,280					
16							845					
17					1,060							
18					1,240							
19					745							
20												
21												
22												
23												
24												
25							1,490					
26							1,570					
27							1,890					
28							3,420					
29							2,900					
30							2,110					
31												
Total	-	-	-	-	-	-	-	-	-	-	-	-
Mean	-	-	-	-	-	-	-	-	-	-	-	-
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1965: Max 6,340 Min - Mean - Cfsm - In. -
Water year 1965-66: Max 7,980 Min - Mean - Cfsm - In. -

Peak discharge (base, 5,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-3	1430	21.84	7,700				
2-11	1800	22.92	10,400				

WABASH RIVER BASIN

3-3680. Brush Creek near Nebraska, Ind.

Location (revised).--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 1966.

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.--11 years, 12.6 cfs.

Extremes.--Maximum discharge during year, 990 cfs Jan. 2 (gage height, 6.86 ft); no flow for many days.

1955-66: 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.--Records good except those for the winter period, which are fair. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.6	1.6	1.1	.92	.06	.23	3.2	.31	1.1	0	0	0
2	.4	1.4	1.1	2.44	.6	11	3.4	17	1.0	0	0	0
3	.3	1.2	1.1	24	.6	9.0	3.4	12	.9	0	0	0
4	.3	1.2	.9	12	.6	12	3.4	9.0	.6	0	0	0
5	.2	1.6	.9	11	.6	7.3	3.2	7.6	.6	0	0	0
6	.3	1.2	7	83	.6	6.4	3.0	6.7	.9	0	0	0
7	28	1.2	.6	16	1.0	5.5	3.0	5.5	1.0	0	0	0
8	11	1.6	.6	8.6	72	4.4	2.8	5.0	.6	0	0	0
9	4.4	4.1	.6	6.7	42	5.0	3.2	5.5	2.2	0	0	0
10	3.0	2.2	.7	5.8	299	5.0	2.8	4.7	5.6	0	0	0
11	2.2	1.6	.8	4.7	55	4.7	6.8	4.7	1.0	0	0	0
12	1.8	1.6	1.4	4.0	20	13	118	17	.6	0	0	0
13	1.6	4.0	7.8	4.2	70	19	34	13	.4	0	0	0
14	1.4	3.0	4.0	4.0	23	11	16	11	.5	2.5	1.5	0
15	1.4	2.2	3.4	3.6	18	8.2	11	7.9	.4	2.5	.1	0
16	1.4	1.8	3.0	3.0	65	6.4	8.6	6.7	1.2	.1	0	0
17	1.4	1.6	2.6	2.6	16	5.8	7.3	5.8	.7	0	0	0
18	1.4	1.4	2.2	2.2	11	5.5	6.4	26	.4	0	0	0
19	1.4	1.2	1.8	1.8	9.0	6.1	7.6	17	.3	7.5	0	0
20	9.7	1.2	2.0	1.6	6.1	4.7	7.3	9.7	.2	.2	0	0
21	18	1.1	2.0	1.4	5.5	4.4	6.1	7.9	.2	.1	3.8	1.1
22	37	1.1	1.8	1.3	4.7	4.2	5.2	6.7	.1	0	.4	0
23	27	1.0	2.6	1.1	4.2	5.5	5.0	5.5	.1	2.6	.2	0
24	7.3	1.0	2.4	.9	3.5	6.1	86	5.0	.1	.4	.1	0
25	4.4	1.0	5.7	.8	3.0	4.7	35	4.0	.1	.1	0	0
26	3.6	1.1	4.0	.7	3.0	4.2	17	3.6	.1	.1	0	0
27	2.8	13	3.0	.6	4.0	3.8	180	3.2	0	0	0	0
28	2.4	3.6	2.4	.6	26	3.6	57	2.6	0	.1	0	0
29	2.0	2.4	2.2	.6	---	3.4	26	2.0	0	.2	0	0
30	1.6	1.8	2.2	.6	---	3.4	110	1.6	0	0	0	0
31	1.6	---	2.9	.6	---	3.2	---	1.4	---	0	0	---
Total	179.9	64.0	68.5	534.0	764.6	219.5	781.7	266.3	21.1	16.4	6.1	1.1
Mean	5.80	2.13	2.21	17.2	27.3	7.08	26.1	8.59	0.70	0.53	0.20	0.04
Cfsm	0.496	0.182	0.189	1.47	2.33	0.605	2.23	0.734	0.060	0.045	0.017	0.0034
In.	0.57	0.20	0.22	1.70	2.43	0.70	2.49	0.85	0.07	0.05	0.02	0.004

Calendar year 1965: Max 149 Min 0 Mean 8.13 Cfsm 0.695 In. 9.43
 Water year 1965-66: Max 299 Min 0 Mean 8.01 Cfsm 0.685 In. 9.30

Peak discharge (base, 950 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	0500	6.86	990				

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, 1½ miles downstream from Brush Creek, and 2 miles northwest of Butlerville.

Drainage area.--87.3 sq mi.

Records available.--February 1942 to September 1966. 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.--24 years, 92.5 cfs (unadjusted).

Extremes.--Maximum discharge during year, 3,470 cfs Feb. 10 (gage height, 9.70 ft); minimum, 1.1 cfs Sept. 18, 19 (gage height, 0.54 ft).

1942-66: Maximum discharge, 26,200 cfs Jan. 21, 1959 (gage height, 25.41 ft), from rating curve extended above 10,000 cfs on basis of slope-area measurement of peak flow; no flow at times in most years.

Remarks.--Records good. 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 CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	3.4	13	8.0	375	4.7	201	18	399	10	20	2.4	1.7
2	3.6	18	7.1	1,350	4.7	107	17	181	9.8	21	2.0	3.3
3	4.1	32	6.8	315	4.7	70	17	150	9.2	20	1.9	3.2
4	4.3	31	6.3	146	4.7	90	17	101	8.5	3.0	1.9	1.5
5	3.1	31	6.0	102	5.0	70	17	72	8.0	2.5	1.9	1.5
6	3.0	20	5.8	498	5.5	55	17	68	9.1	2.5	1.9	1.4
7	106	7.1	4.8	201	6.0	43	16	62	24	2.4	1.0	1.5
8	84	6.7	5.0	109	1.3	30	15	50	13	4.3	1.0	2.1
9	41	7.1	4.8	69	310	40	15	150	10	2.2	1.0	3.1
10	26	9.6	5.0	58	1,760	43	15	78	11	2.3	2.0	3.3
11	19	8.4	5.2	46	806	68	18	53	8.7	2.2	2.0	3.3
12	15	7.8	7.2	37	227	74	485	198	6.9	2.2	6.0	3.6
13	13	9.5	12	37	451	135	329	191	5.2	2.1	2.2	11
14	10	11	20	33	223	86	181	172	64	2.0	4.2	11
15	8.8	12	15	29	171	52	126	101	27	2.0	3.2	3.2
16	7.3	11	13	24	508	41	84	72	10	1.9	2.0	1.5
17	6.6	11	12	21	222	35	70	58	13	1.9	2.6	1.4
18	5.2	8.8	12	19	131	30	62	159	9.5	2.0	2.4	1.5
19	4.1	8.3	12	16	94	30	66	208	6.7	15	2.2	1.0
20	6.5	7.9	11	14	66	31	68	109	5.0	6.8	2.3	2.3
21	104	7.2	11	12	55	27	53	66	4.0	2.0	2.4	2.2
22	80	7.2	11	11	50	26	50	52	3.5	1.9	1.8	1.9
23	252	6.3	10	9.5	39	27	48	37	3.1	3.0	8.6	1.9
24	84	5.9	12	8.0	29	38	772	35	2.9	5.0	4.5	1.9
25	47	5.4	20	7.0	27	31	459	31	2.7	3.7	2.7	1.0
26	34	6.2	37	6.0	24	27	205	22	9.9	2.6	2.2	1.7
27	27	9.3	23	5.5	23	25	1,050	20	31	2.1	1.0	1.0
28	22	11	19	5.2	66	22	411	10	32	2.2	1.7	1.0
29	19	11	16	5.0	-----	20	201	14	15	7.6	1.0	1.5
30	16	9.3	16	4.8	-----	20	1,220	13	12	12	19	1.0
31	13	-----	17	4.7	-----	19	-----	12	-----	4.0	34	-----
Total	1,072.0	350.0	371.0	3,577.7	5,450.3	1,651	6,122	2,952	394.7	163.0	108.2	139.4
Mean	34.6	11.7	12.0	115	195	53.3	204	95.2	13.2	5.26	6.07	4.65
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
(f)	+1.8	-1.2	+1.5	0	+1.0	-0.3	+3	-3.3	-3.9	-1.46	-3.26	-3.03

CALENDAR YEAR 1965 MAX 982 MIN 1.70 MEAN 60.1 CFSM 0.688 IN 9.35 A +0.7
 WATER YEAR 1965-66 MAX 1,760 MIN 1.3 MEAN 61.5 CFSM 0.704 IN 9.56 A -0.8

Peak discharge (base, 4,000 cfs).--No peak above base.

A 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 1966. 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.--27 years, 216 cfs.

Extremes.--Maximum discharge during year, 7,630 cfs Feb. 10 (gage height, 13.23 ft); minimum, 0.70 cfs Aug. 8 (gage height, 0.05 ft). 1939-66: Maximum discharge, 56,800 cfs Jan. 21, 1959 from rating curve extended above 24,000 cfs on basis of slope-area measurement of peak flow (gage height, 32.83 ft from high-water mark). No flow at times in 1940, 1943-44.

Remarks.--Records good. Diversion above station for municipal water supply of North Vernon and Vernon. Part of this diversion returned above gage as sewage effluent by North Vernon Sewage Treatment Plant.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	12	27	31	897	13	538	53	1,280	28	9.5	9.1	27
2	8.2	23	25	3,770	13	301	50	482	25	21	5.9	7.0
3	9.0	29	22	933	13	206	50	302	23	20	4.2	15
4	7.7	42	20	385	13	200	52	220	21	21	2.7	31
5	7.1	39	18	255	13	211	51	175	20	15	2.1	7.2
6	7.1	39	18	1,310	14	135	49	146	20	6.9	1.7	3.2
7	129	29	17	577	17	107	45	119	25	4.8	1.5	1.7
8	333	16	15	291	150	91	43	103	35	3.0	.90	1.5
9	164	16	14	176	943	85	43	115	28	2.7	.90	1.4
10	84	13	14	142	3,890	88	42	170	26	2.5	1.0	2.7
11	57	19	15	112	2,300	102	48	102	31	2.7	1.7	1.9
12	43	21	18	88	606	119	1,030	206	28	2.2	2.7	1.3
13	35	31	34	81	1,110	333	1,200	410	20	2.6	3.0	.90
14	31	38	64	79	639	267	415	310	64	2.1	75	1.1
15	23	36	62	71	431	164	252	211	84	1.8	19	5.3
16	20	32	48	63	933	125	189	148	46	1.5	9.9	8.6
17	16	27	41	52	630	102	151	126	33	1.3	5.6	4.0
18	14	23	37	48	317	91	125	293	23	1.3	3.7	2.6
19	12	19	33	41	234	94	120	587	19	1.6	2.4	3.2
20	12	18	31	37	164	93	149	259	15	63	2.7	4.5
21	75	17	30	34	118	79	129	178	12	18	23	4.8
22	230	16	29	29	104	73	105	127	9.2	10	48	3.0
23	495	16	29	25	98	75	98	104	7.6	6.1	32	3.4
24	235	15	31	21	76	94	783	92	6.7	9.5	16	3.4
25	116	14	37	18	73	94	1,490	82	5.8	7.6	9.9	2.4
26	77	14	96	17	71	76	436	69	4.8	7.7	6.3	2.0
27	60	51	78	15	65	69	2,520	60	4.3	5.5	4.6	2.5
28	50	92	54	14	99	63	1,410	52	30	4.1	3.4	4.9
29	41	50	46	13	-----	58	658	44	31	36	2.6	3.7
30	37	38	41	13	-----	59	2,080	36	23	10	2.1	3.0
31	33	-----	41	13	-----	55	-----	31	-----	10	2.5	-----
TOTAL	2,473.1	860	1,089	9,620	13,147	4,247	13,866	6,639	748.4	311.0	306.10	164.20
MEAN	79.8	28.7	35.1	310	470	137	462	214	24.9	10.0	9.87	5.47
CFSM	.397	.143	.175	1.54	2.34	.682	2.30	1.06	.124	.050	.049	.027
IN	.46	.16	.20	1.78	2.43	.79	2.57	1.23	.14	.06	.06	.03
CALENDAR YEAR 1965 MAX 2,590 MIN 1.5 MEAN 146 CFSM .726 INCHES 9.87												
WATER YEAR 1965-66 MAX 3,890 MIN .90 MEAN 146 CFSM .726 INCHES 9.89												

Peak discharge (base, 6,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	1200	12.53	6,930				
2-10	1745	13.23	7,630				

3-3715. East Fork White River near Bedford, Ind.

Location.--Lat 38°46'10", long 86°24'30", in NE $\frac{1}{4}$ sec. 21, T. 4 N., R. 1 E., on downstream side of center pier of bridge on county road, 0.4 mile upstream from Mill Creek, 2.9 miles downstream from Sugar Creek, 3.9 miles northeast of Mitchell, and 7.8 miles southeast of Bedford.

Drainage area.--3,870 sq mi.

Records available.--May 1939 to September 1966 (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.--13 years (1939-43, 1957-66), 3,391 cfs.

Extremes.--Maximum discharge during year, 19,500 cfs Feb. 15; maximum gage height, 19.96 ft Feb. 16; minimum 285 cfs Sept. 14, 15 (gage height, 2.43 ft).

1939-66: Maximum discharge, 75,700 cfs Mar. 12, 1964; maximum gage height, 35.97 ft May 11, 1961.

Flood in March 1913 reached a stage of 47.5 ft, from floodmark determined by Corps of Engineers (discharge, 155,000 cfs) at former site.

Remarks.--Records good.

Discharge in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	812	1,100	998	1,440	1,250	3,400	1,620	11,800	1,570	651	671	386
2	775	1,040	987	4,130	1,250	4,340	1,560	12,300	1,490	688	611	371
3	736	984	952	6,780	1,250	5,020	1,520	14,800	1,410	707	561	367
4	710	939	890	7,750	1,250	4,860	1,500	14,900	1,350	694	515	357
5	697	900	850	8,780	1,260	4,480	1,490	12,200	1,280	681	489	337
6	679	865	818	10,000	1,280	4,300	1,490	10,200	1,270	925	467	323
7	821	838	788	10,900	1,350	4,050	1,460	8,030	1,360	1,010	447	316
8	1,020	819	765	10,700	2,000	3,620	1,410	5,490	1,320	1,170	434	311
9	1,210	803	748	10,100	3,130	3,200	1,360	4,010	1,270	1,010	418	324
10	1,420	785	737	9,180	5,620	2,870	1,310	3,410	1,230	864	412	317
11	1,390	770	724	7,890	9,630	2,660	1,390	3,870	1,210	770	416	308
12	1,210	762	729	5,990	9,910	2,600	3,260	4,280	1,140	713	416	303
13	1,060	763	750	4,140	11,500	3,080	6,510	4,220	1,080	859	456	295
14	968	774	799	3,280	16,900	4,180	6,850	5,050	1,050	1,040	469	289
15	887	769	829	2,870	19,200	4,680	6,880	5,760	1,040	949	502	315
16	825	776	911	2,620	19,000	4,230	6,660	5,460	1,140	829	739	360
17	781	796	1,040	2,390	17,000	3,570	5,820	4,600	1,110	758	853	329
18	744	835	1,090	2,200	14,800	3,120	4,030	4,430	1,080	717	787	307
19	709	849	1,070	2,030	12,100	2,830	2,800	5,990	1,030	676	712	309
20	698	830	1,040	1,880	10,300	2,630	2,390	6,340	988	635	631	355
21	714	811	1,000	1,760	8,180	2,500	2,280	6,140	939	652	583	389
22	756	784	966	1,690	5,670	2,370	2,190	4,920	893	793	566	428
23	849	765	937	1,630	4,190	2,260	2,070	3,850	854	736	614	490
24	1,180	751	915	1,580	3,570	2,180	2,230	3,250	820	671	641	531
25	1,620	738	920	1,500	3,240	2,150	3,900	2,850	787	620	570	533
26	1,810	741	927	1,500	3,010	2,130	6,100	2,560	755	583	530	505
27	1,700	784	931	1,450	2,810	2,080	8,890	2,320	723	555	501	486
28	1,530	840	985	1,400	2,740	1,960	10,600	2,120	696	539	470	464
29	1,370	838	1,120	1,350	-----	1,840	10,500	1,940	671	537	443	445
30	1,250	903	1,200	1,300	-----	1,750	11,100	1,790	657	528	431	433
31	1,160	-----	1,180	1,280	-----	1,670	-----	1,670	-----	654	411	-----
OTL	32,091	24,952	28,596	131,490	193,390	96,610	121,170	180,550	32,213	23,214	16,766	11,283
MEAN	1,035	832	922	4,242	6,907	3,116	4,039	5,824	1,074	749	541	376
CFSM	.267	.215	.238	1.10	1.78	.805	1.04	1.50	.278	.194	.140	.097
IN	.31	.24	.27	1.26	1.66	.93	1.16	1.74	.31	.22	.16	.11
CALENDAR YEAR 1965	MAX 30,300	MIN 438	MEAN 3,050	CFSM .788	INCHES 10.70							
WATER YEAR 1965-66	MAX 19,200	MIN 289	MEAN 2,445	CFSM .632	INCHES 8.58							

Peak discharge (base, 13,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-15	1800-2000	a 19.96	19,500				
5-3	2200-0115	b 17.61	15,500				

a Feb. 16

b May 4

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 1966.

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.--6 years, 35.0 cfs.

Extremes.--Maximum discharge during year, 2,250 cfs Apr. 27 (gage height, 10.04 ft); no flow for many days.
1960-66: 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.--Records good except those for the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	12	1.4	1.4	165	1.0	114	8.2	195	4.2	0.10	0.10	0
2	5.8	1.4	1.4	395	1.1	63	7.8	111	3.6	.10	.10	0
3	2.7	1.5	1.5	74	1.2	50	7.8	67	3.1	.10	0	0
4	1.6	1.2	1.4	39	1.7	61	7.4	45	2.7	.10	0	0
5	1.1	1.2	1.2	33	2.0	42	7.0	35	2.3	.10	0	0
6	.90	1.2	1.2	66	2.3	34	6.6	27	5.3	1.8	0	0
7	35	1.1	1.1	36	3.5	27	6.3	22	8.0	1.8	0	0
8	26	1.5	.90	22	72	23	6.0	18	3.5	.60	0	0
9	10	1.8	.60	18	75	23	6.3	22	2.5	.30	0	0
10	6.9	1.5	.90	17	1.100	23	6.0	18	1.8	.20	.10	0
11	5.5	1.4	2.0	13	252	21	90	16	1.5	.10	2.6	0
12	5.2	1.5	2.7	10	105	45	560	224	1.2	.10	1.1	0
13	4.0	2.0	4.0	10	151	77	195	137	1.2	.10	1.4	0
14	3.5	2.1	3.8	9.5	86	54	81	95	20	0	15	0
15	3.3	2.0	3.5	8.6	77	41	50	60	4.7	0	2.2	0
16	3.1	2.0	3.3	7.0	259	31	38	45	5.7	0	.70	0
17	3.1	1.5	3.1	6.3	98	26	29	36	6.1	0	.30	0
18	2.7	1.2	2.7	5.6	57	27	23	404	2.8	0	.10	0
19	2.1	1.0	2.3	5.0	38	28	27	146	1.8	0	.10	4.9
20	8.0	1.0	2.3	4.4	26	22	25	74	1.2	0	.10	127
21	19	1.0	2.5	4.0	20	20	25	49	.90	0	.10	22
22	12	1.0	2.3	3.5	16	18	23	36	.70	0	.90	2.7
23	15	.90	2.1	3.0	14	18	22	27	.60	0	1.3	.80
24	7.6	.80	2.1	2.5	14	16	397	20	.50	0	.40	.30
25	5.2	.80	5.2	2.0	14	14	206	16	.40	0	.20	.10
26	3.5	1.0	4.8	1.8	13	13	174	14	.30	0	.10	.10
27	2.7	5.2	4.0	1.6	14	12	1.370	12	.20	0	.10	.10
28	2.1	3.3	3.5	1.4	109	11	300	9.7	.20	.10	0	4.4
29	1.5	2.1	3.1	1.3	-----	10	173	7.2	.20	.30	0	1.6
30	1.5	1.6	3.3	1.0	-----	10	578	5.9	.20	.70	0	.80
31	1.5	-----	4.2	1.0	-----	9.0	-----	5.0	-----	.30	0	-----
TOTAL	214.10	47.20	78.40	967.5	2,622.8	983.0	4,455.4	1,998.8	87.40	6.90	27.00	164.80
MEAN	6.91	1.57	2.53	31.2	93.7	31.7	149	64.5	2.91	.22	.87	5.49
CFSM	.181	.041	.066	.819	2.46	.832	3.91	1.69	.076	.0059	.023	.144
IN	.21	.05	.08	.94	2.56	.96	4.35	1.95	.09	.01	.03	.16
CALENDAR YEAR 1965 MAX 1.670 MIN 0 MEAN 30.1 CFSM .790 INCHES 10.71												
WATER YEAR 1965-66 MAX 1.370 MIN 0 MEAN 31.9 CFSM .837 INCHES 11.37												

Peak discharge (base, 1,500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-10	1500	9.87	2,200				
4-27	0930	10.04	2,250				

3-3716.5 North Fork Salt Creek at Nashville, Ind.

Location.--Lat 39°12'05", long 86°14'50", in SW $\frac{1}{4}$ 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 1966.

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.

Extremes.--Maximum discharge during year, 2,620 cfs Feb. 10 (gage height, 11.25 ft); no flow Sept. 14, 18.

1962-66: 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.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	17	8.5	6.6	434	3.7	159	19	478	9.3	1.4	0.30	0.50
2	15	7.6	6.2	672	3.9	127	17	251	8.3	1.0	.40	.60
3	12	7.6	6.5	217	3.9	108	16	170	7.9	.70	.30	.50
4	9.9	7.2	6.3	123	4.2	113	15	125	6.9	.80	.20	.50
5	9.0	6.8	6.1	95	4.1	94	13	97	6.5	3.2	.10	.40
6	8.0	6.4	5.6	83	4.4	81	12	76	9.9	7.2	.10	.40
7	17	6.0	5.3	67	5.9	69	11	59	14	3.9	.10	.30
8	38	6.0	5.0	50	26	59	11	51	11	2.7	.10	.20
9	32	5.7	4.8	42	88	56	11	350	9.1	1.5	.10	.20
10	24	5.7	5.7	39	1,380	64	9.5	212	7.4	.80	.30	.10
11	19	5.6	6.8	33	606	66	20	155	6.5	1.0	.20	.10
12	16	5.7	8.4	27	228	71	209	423	5.5	.70	.10	.10
13	14	6.5	11	28	180	89	293	419	5.2	.40	15	.10
14	12	6.4	15	24	150	86	168	328	8.9	.50	311	0
15	10	6.1	16	21	121	77	122	209	10	.60	41	.10
16	9.9	6.1	16	17	141	65	93	152	9.9	.50	14	.10
17	8.5	5.9	15	15	126	57	74	116	8.3	.50	7.4	.10
18	7.2	5.6	14	14	97	54	61	196	6.8	.50	4.6	0
19	6.5	5.4	12	10	80	50	59	173	5.6	.50	3.4	1.4
20	17	5.4	12	9.2	59	44	53	122	4.9	.40	3.7	119
21	51	5.4	12	8.0	48	45	54	97	4.2	.40	2.8	120
22	37	5.3	11	7.0	43	39	50	78	3.8	.30	2.6	36
23	29	5.0	11	6.0	36	40	49	60	3.1	.30	2.0	16
24	23	4.7	12	5.0	34	39	102	49	2.7	.30	1.2	9.0
25	20	4.5	25	4.5	31	36	148	38	2.3	.30	.70	6.9
26	17	4.9	37	4.0	27	32	112	30	1.9	.30	.50	6.0
27	15	7.3	31	3.7	27	29	951	24	1.5	.30	.40	6.6
28	13	9.3	29	3.5	73	27	393	20	1.4	.60	.40	6.8
29	12	7.1	25	3.3	-----	24	266	16	1.7	.40	.40	5.4
30	10	7.1	24	3.1	-----	23	1,220	13	1.5	.40	.30	5.6
31	9.4	-----	29	3.1	-----	20	-----	11	-----	.30	.40	-----
TOTAL	538.4	186.8	430.3	2,071.4	3,631.1	1,943	4,631.5	4,598	186.0	32.70	414.10	343.00
MEAN	17.4	6.23	13.9	66.8	130	62.7	154	148	6.20	1.06	13.4	11.4
CFSM	.229	.082	.183	.880	1.71	.826	2.03	1.95	.082	.014	.177	.150
IN	.26	.09	.21	1.01	1.78	.95	2.27	2.25	.09	.02	.20	.17

CALENDAR YEAR 1965 MAX 2,380 MIN .80 MEAN 58.4 CFSM .769 INCHES 10.44
 WATER YEAR 1965-66 MAX 1,380 MIN 0 MEAN 52.1 CFSM .686 INCHES 9.31

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-10	1615	11.25	2,620				
4-30	1400	11.03	2,520				

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 1966.

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.--20 years, 126 cfs.

Extremes.--Maximum discharge during year, 2,710 cfs Feb. 11 (gage height, 17.58 ft); minimum, 0.20 cfs Aug. 8-10; minimum gage height, 2.44 ft Aug. 10.

1946-66: 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.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	24	14	8.0	722	6.0	311	42	1,340	20	2.6	0.70	1.3
2	23	13	8.0	1,160	9.6	233	36	437	17	2.4	.70	1.2
3	21	11	8.0	539	8.0	184	35	260	15	2.1	.50	1.2
4	16	10	8.0	233	7.6	184	35	179	14	2.1	.40	1.1
5	13	9.9	8.0	160	7.3	160	30	141	13	2.6	.30	1.0
6	12	9.6	8.3	132	7.3	127	26	117	13	8.3	.30	.90
7	15	9.0	7.3	102	9.0	102	26	94	21	8.3	.30	.90
8	33	9.0	6.5	80	30	88	23	85	20	5.4	.30	.90
9	46	9.0	5.7	64	138	88	24	455	17	3.7	.20	.80
10	37	8.3	6.5	64	1,380	88	21	350	16	2.7	.30	.80
11	31	7.6	9.3	54	1,970	92	46	215	11	2.7	.50	.70
12	26	8.0	14	46	532	102	378	549	9.5	1.7	.50	.70
13	21	9.0	27	46	324	132	609	702	8.8	1.4	5.6	.70
14	18	9.3	31	41	259	132	298	590	11	1.2	4.32	.70
15	16	9.3	31	37	208	117	198	332	13	1.0	.78	.90
16	14	9.6	30	32	208	102	155	227	16	.70	34	1.0
17	13	12	29	27	220	88	125	168	14	.40	19	.90
18	11	9.0	28	25	160	84	107	363	11	.40	11	.90
19	9.3	8.0	25	21	127	80	101	308	9.0	.40	7.5	1.6
20	11	7.6	24	19	88	72	97	187	7.5	.40	6.2	25
21	36	7.6	25	17	72	68	94	146	6.5	.40	7.7	162
22	54	7.6	24	15	64	64	86	124	5.8	.40	7.3	56
23	46	7.6	22	13	57	68	83	101	5.1	.40	5.7	30
24	39	7.3	22	12	54	76	106	85	4.3	.50	4.3	19
25	30	7.0	42	11	50	64	224	70	3.9	.50	3.3	12
26	27	7.0	54	9.0	46	60	171	56	3.4	.50	2.7	9.9
27	24	8.3	54	8.0	43	54	1,170	48	3.3	.40	2.4	9.3
28	21	9.9	50	7.0	80	50	893	42	3.3	.60	2.0	9.6
29	18	12	43	6.5	-----	43	422	36	2.9	.80	1.8	9.2
30	16	9.3	41	6.0	-----	46	1,190	30	2.6	.60	1.6	8.7
31	15	-----	45	6.0	-----	41	-----	25	-----	.50	1.4	-----
TOTAL	736.3	275.8	744.6	3,714.5	6,164.8	3,200	6,851	7,862	317.9	56.10	638.50	368.90
MEAN	23.8	9.19	24.0	120	220	103	228	254	10.6	1.81	20.6	12.3
CFSM	.198	.077	.200	1.00	1.83	.858	1.90	2.12	.088	.015	.172	.103
IN	.23	.09	.23	1.15	1.91	.99	2.12	2.44	.10	.02	.20	.11

CALENDAR YEAR 1965 MAX 3,640 MIN 1.8 MEAN 95.1 CFSM .793 INCHES 10.76
 WATER YEAR 1965-66 MAX 1,970 MIN .20 MEAN 84.7 CFSM .706 INCHES 9.59

Peak discharge (base, 2,000 cfs)

a May 1.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-11	0300	17.58	2,710				
4-30	2400	16.33	2,150				

3-3725. Salt Creek near Harrodsburg, Ind.

Location.--Lat 39°00'16", long 86°30'31", in NW 1/4 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 1966.

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.--11 years, 465 cfs (adjusted for storage).

Extremes.--Maximum discharge during year, 2,860 cfs May 13 (gage height, 19.55 ft); minimum daily, 3.3 cfs Apr. 21-27. 1955-66: 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.--Records good except those for periods of backwater, which are fair. Flow regulated by Monroe Reservoir (capacity, 418,700 acre-ft), since January 1963. Records of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	28	25	743	24	6.7	3.5	1,940	68	57	53	257
2	30	28	25	1,530	24	6.7	3.5	1,320	50	59	54	385
3	30	28	25	1,200	24	6.7	3.5	331	50	60	34	513
4	30	28	25	610	25	6.7	3.5	195	50	62	51	346
5	28	28	26	1,540	27	6.7	3.5	235	50	64	54	513
6	30	28	26	1,520	33	6.7	3.5	911	50	70	63	504
7	57	28	25	1,500	30	6.7	3.5	2,040	50	59	54	504
8	60	28	25	1,320	28	6.7	3.5	2,070	50	52	110	579
9	84	28	25	360	26	6.7	3.5	2,000	50	52	153	641
10	140	28	25	52	24	6.7	3.5	2,300	50	52	162	639
11	154	28	26	104	23	6.7	3.4	2,500	50	54	90	637
12	77	28	27	235	21	6.7	3.4	2,590	50	54	37	614
13	28	30	26	208	20	6.7	3.4	2,740	46	52	50	470
14	30	28	26	171	19	6.7	3.4	2,770	52	52	46	230
15	30	28	26	171	18	6.7	3.4	2,600	50	53	46	120
16	30	30	26	171	17	4.1	3.4	2,220	50	53	46	40
17	30	30	26	77	16	4.1	3.4	1,100	50	54	47	94
18	30	28	26	37	15	4.1	3.4	592	50	55	46	194
19	30	28	25	36	15	4.1	3.4	1,590	51	58	46	220
20	46	26	25	35	14	4.1	3.4	1,610	51	55	47	115
21	76	28	25	35	13	4.1	3.3	1,050	51	57	50	55
22	76	30	25	35	12	4.1	3.3	379	51	54	49	50
23	72	33	25	35	12	4.1	3.3	81	52	55	50	48
24	76	26	25	33	11	4.1	3.3	57	53	56	49	47
25	63	26	64	34	10	4.1	3.3	90	54	55	122	46
26	34	26	104	33	10	4.1	3.3	126	54	54	168	47
27	41	26	99	33	9.8	4.1	3.3	120	54	54	161	50
28	30	25	99	33	9.2	4.1	1,080	120	54	55	152	50
29	30	25	99	32	---	4.1	1,340	114	55	54	165	50
30	28	25	99	31	---	4.1	1,200	114	56	64	203	50
31	28	---	94	30	---	4.1	---	109	---	53	219	---
Total	1,560	834	1,269	12,984	530.0	166.1	3,712.1	35,014	1,552	1,738	2,677	3,108
Mean	50.3	27.8	40.9	19	18.9	5.35	124	1,162	51.7	56.1	86.4	270
(f)	+3.3	-16.8	+32.5	-18	+800	+6.52	+1,232	-237	-43.7	-82.9	-66.8	-274

Adjusted for change in contents in Monroe Reservoir

	Mean	Cfs	In.
Oct.	+47.0	0.107	0.12
Nov.	+11.0	0.025	0.03
Dec.	+73.4	0.166	0.19
Jan.	+401	0.909	1.05
Feb.	+819	1.86	1.94
Mar.	+11.9	0.027	0.03
Apr.	+1,356	3.07	3.42
May	+925	2.10	2.42
June	+8.0	0.018	0.02
July	-26.8	-0.061	-0.07
Aug.	+19.6	0.044	0.05
Sept.	-4	-0.0091	-0.01

Observed

	Max	Min	Mean
Calendar year 1965 :	3,330	10	265
Water year 1965-66 :	2,770	3.3	195

Adjusted

	Max	Min	Mean	Cfs	In.
Calendar year 1965 :	3,330	10	265	354	0.803
Water year 1965-66 :	2,770	3.3	195	299	0.678

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

Note.--Backwater from Clear Creek or East Fork White River Feb. 8 to Apr. 27.

3-3727. Clear Creek near Harrodsburg, Ind.

Location.--Lat 39°02'03", long 86°34'01", in MW $\frac{1}{4}$ 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 1966.

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.--6 years, 60.0 cfs.

Extremes.--Maximum discharge during year, 2,530 cfs Feb. 10 (gage height, 8.91 ft); minimum, 7.4 cfs Aug. 29 (gage height, 3.28 ft).
1960-66: 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.--Records 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 cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	35	15	13	243	13	101	28	342	29	16	12	12
2	27	16	13	448	16	84	27	204	28	16	16	12
3	24	16	13	192	15	80	26	146	27	15	15	13
4	23	15	14	118	15	86	27	113	26	34	14	13
5	23	16	13	94	15	75	27	96	23	27	15	11
6	22	16	12	85	15	66	26	82	108	231	16	11
7	47	16	13	69	62	58	25	70	44	37	15	13
8	50	16	13	54	227	53	25	63	33	24	15	12
9	29	16	13	47	96	51	25	157	26	21	16	13
10	24	16	22	45	1,160	52	23	80	22	17	22	14
11	24	15	29	39	513	49	95	73	20	35	26	13
12	24	16	38	36	239	57	211	157	18	20	16	13
13	22	22	45	36	180	65	177	252	25	16	94	15
14	22	16	31	33	135	62	116	210	50	15	185	16
15	22	15	28	30	113	60	94	148	25	14	29	35
16	21	16	24	27	123	54	79	120	39	13	21	14
17	19	15	23	24	105	50	67	100	24	12	17	12
18	18	15	20	23	91	52	60	271	20	12	15	11
19	20	15	18	21	77	49	65	166	17	14	15	46
20	23	14	17	20	61	43	55	120	16	12	15	93
21	22	13	19	19	55	42	58	100	15	11	21	50
22	21	14	17	18	49	41	48	82	16	11	15	24
23	20	14	16	17	46	49	47	71	16	12	14	18
24	18	14	16	16	46	42	56	64	16	29	11	15
25	17	12	35	16	44	38	63	56	16	13	11	14
26	18	11	25	15	39	36	58	50	15	12	11	18
27	18	22	22	14	36	32	334	47	15	12	11	30
28	17	14	21	14	72	31	211	42	16	17	9.7	24
29	16	13	19	13	-----	31	174	36	16	23	9.5	18
30	16	14	19	12	-----	31	514	33	16	14	11	26
31	16	-----	25	12	-----	29	-----	31	-----	12	11	-----
TOTAL	718	458	646	1,850	3,658	1,649	2,841	3,582	777	767	724.2	629
MEAN	23.2	15.3	20.8	59.7	131	53.2	94.7	116	25.9	24.7	23.4	21.0
CFSM	420	277	377	1,08	2,37	964	1,72	2,10	469	448	424	380
IN	4.48	3.31	4.44	1.25	2.46	1.11	1.91	2.41	5.52	5.52	4.49	4.42

CALENDAR YEAR 1965 MAX 1,500 MIN 6.5 MEAN 58.3 CFSM 1.06 INCHES 14.35
WATER YEAR 1965-66 MAX 1,160 MIN 9.5 MEAN 50.1 CFSM .908 INCHES 12.33

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-10	1445	8.91	2,530				
7-6	0200	6.88	1,020				

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 1966.

Gage.--Wire-weight gage read twice daily. Datum of gage is 476.02 ft above mean sea level, datum of 1929. Feb. 1-10, 1939 chain gage and Feb. 11, 1939 to Sept. 30, 1950, water-stage recorder, at same site and datum.

Average discharge.--20 years, 639 cfs (adjusted for storage)

Extremes.--Maximum discharge during year, 3,360 cfs Jan. 4 (gage height, 18.15); minimum, 45 cfs Apr. 11 (gage height, 1.99 ft).
1939-50, 1957-66: Maximum discharge, 25,100 cfs May 10, 1961 (gage height, 35.33 ft, from graph based on gage readings); minimum, 0.7 cfs Aug. 18, 1940.
Flood of January 1937 reached a stage of 34.3 ft (information by Corps of Engineers).

Remarks.--Records good except those for the winter period, which are fair. 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	72	48	48	879	52	298	72	2,320	142	67	65	298
2	67	48	48	1,900	52	274	63	1,900	97	67	67	380
3	62	46	48	1,690	53	230	61	900	92	67	67	551
4	62	50	48	2,270	54	241	50	470	92	71	66	373
5	60	47	46	1,810	58	252	53	520	87	118	67	517
6	56	50	46	1,920	62	200	53	873	112	346	66	568
7	77	50	46	1,920	142	150	53	2,120	166	134	65	551
8	142	49	46	1,490	331	134	53	2,250	116	92	65	621
9	116	48	46	922	485	116	50	2,300	107	82	65	694
10	166	48	47	311	1,440	116	48	2,400	97	82	115	713
11	158	48	62	220	2,180	107	354	2,550	87	82	116	713
12	77	49	72	252	827	125	960	2,640	87	97	65	675
13	58	55	116	274	700	298	922	2,890	90	77	297	603
14	157	53	92	298	560	285	534	2,880	220	72	578	311
15	57	49	77	252	460	263	365	2,700	150	72	125	230
16	57	48	72	200	390	220	274	2,400	158	72	87	87
17	55	48	72	166	340	182	220	1,580	158	72	77	96
18	52	48	66	77	300	166	182	1,210	120	67	67	209
19	49	49	58	77	250	166	174	1,690	102	67	66	298
20	54	48	59	77	220	150	166	1,810	87	67	65	274
21	116	46	55	72	200	134	166	1,450	82	67	67	140
22	112	48	48	66	166	125	150	732	82	63	72	97
23	112	48	48	62	134	120	134	285	77	64	67	77
24	107	49	48	60	120	134	226	200	77	97	67	72
25	82	48	55	57	116	112	568	182	77	67	71	62
26	60	46	174	56	107	102	425	210	77	67	191	67
27	56	67	158	54	97	92	1,380	210	72	67	200	72
28	52	48	158	54	147	82	1,780	200	72	67	191	02
29	52	49	158	53	77	77	1,760	191	72	87	210	77
30	50	48	158	52	-----	77	1,920	182	67	67	241	72
31	49	-----	166	52	-----	72	-----	174	-----	67	274	-----
Total	2,502	1,476	2,441	17,643	10,043	5,100	13,226	42,409	3,122	2,651	3,902	9,600
Mean	80.7	49.2	78.7	569	359	165	441	1,368	104	85.5	126	320
($\bar{x}$)	-3.3	-16.8	+32.5	-18	+800	+7	+1,232	-237	-4	-82.9	-67	-274

Adjusted for change in contents in Monroe Reservoir

Mean	+77.4	+32.4	+111	+551	+1,159	+172	+1,673	+1,131	+60	+2.6	+59	+46
Cfsm	0.133	0.056	0.191	0.947	1.99	0.296	2.87	1.94	0.103	0.0045	0.101	0.079
In.	0.15	0.06	0.22	1.09	2.07	0.34	3.20	2.24	0.11	0.005	0.12	0.09

Observed

Adjusted

Calendar year 1965 :	Max 4,780	Min 26	Mean 377	Mean 466	Cfsm 0.801	In. 10.86
Water year 1965-66 :	Max 2,880	Min 46	Mean 313	Mean 417	Cfsm 0.716	In. 9.70

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

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 1966.

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.--5 years, 43.4 cfs.

Extremes.--Maximum discharge during year, 2,570 cfs Feb. 10 (gage height, 8.11 ft); minimum, 0.40 cfs Aug. 10, Sept. 9, 10, 12-14; minimum gage height, 1.35 ft Aug. 10, Sept. 10, 12, 13.
1961-66: 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.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	11	2.9	2.6	277	4.2	120	14	262	9.4	1.8	1.7	0.80
2	9.0	2.9	2.6	548	4.6	74	13	150	8.6	1.6	2.9	.70
3	7.4	2.7	2.6	182	4.5	50	12	99	7.9	1.5	1.9	.70
4	6.4	2.7	2.6	93	4.5	63	12	72	7.4	2.4	1.3	.80
5	5.5	2.8	2.6	68	4.1	51	11	57	6.8	2.2	1.0	.80
6	5.2	2.8	2.5	70	4.6	41	11	47	40	60	.80	.70
7	11	3.0	2.2	54	13	34	10	38	22	16	.70	.60
8	23	3.2	2.2	40	143	32	9.4	33	12	7.5	.60	.50
9	13	3.1	2.1	32	109	32	9.1	58	8.9	6.6	.50	.40
10	9.8	3.0	3.3	29	1,470	32	8.5	47	7.2	4.9	.70	.50
11	8.2	2.9	5.5	25	4.3	30	126	40	6.1	3.7	1.8	.50
12	7.4	3.4	16	23	195	49	351	171	5.2	3.7	1.5	.40
13	6.7	3.8	31	23	150	95	217	227	4.9	3.2	1.10	.40
14	6.4	3.5	21	20	103	65	109	160	6.1	3.3	1.88	.40
15	5.8	3.3	15	19	85	51	74	96	5.4	4.2	1.9	1.2
16	5.5	3.2	13	16	103	41	59	74	4.2	1.9	8.9	1.1
17	5.5	2.9	11	14	82	34	48	56	6.3	1.4	5.6	.80
18	5.5	2.6	9.9	13	59	31	41	245	4.5	1.2	4.1	.80
19	5.8	2.6	9.0	11	47	32	43	130	3.5	1.6	3.4	1.2
20	5.8	2.6	8.6	10	35	28	41	77	3.0	1.4	9.9	4.3
21	5.8	2.7	8.4	9.0	28	25	44	58	2.8	1.0	9.3	17
22	5.5	2.8	7.5	7.8	25	24	37	45	2.3	.90	4.9	7.1
23	4.4	2.7	6.9	7.0	22	26	35	36	2.0	.90	3.3	4.3
24	3.5	2.6	6.8	6.0	21	27	137	32	1.9	1.0	2.6	3.0
25	3.3	2.6	17	5.5	21	23	145	27	1.7	1.0	2.1	2.5
26	3.3	3.0	19	5.0	19	22	92	22	1.5	.80	1.7	2.4
27	3.5	3.9	16	4.5	18	19	330	19	1.4	.80	1.5	3.8
28	3.5	3.4	13	4.0	57	16	214	17	1.8	25	1.3	4.0
29	3.3	3.2	12	3.7	-----	17	151	14	2.3	32	1.1	3.0
30	3.1	2.9	12	3.4	-----	17	496	12	1.8	6.1	1.0	3.3
31	2.9	-----	13	3.1	-----	15	-----	11	-----	2.7	.90	-----
TOTAL	206.0	89.7	296.9	1,626.0	3,284.5	1,226	2,900.0	2,432	203.9	202.30	394.00	106.50
MEAN	6.65	2.99	9.58	52.5	117	39.5	96.7	78.5	6.60	6.53	12.7	3.55
CFSM	.109	.049	.157	.862	1.92	.644	1.59	1.29	.112	.107	.209	.058
IN	.13	.05	.18	.99	2.01	.75	1.77	1.49	.12	.12	.24	.07
CALENDAR YEAR 1965	MAX 1.610	MIN .50	MEAN 40.1	CFSM .659	INCHES 8.93							
WATER YEAR 1965-66	MAX 1.470	MIN .40	MEAN 35.5	CFSM .583	INCHES 7.92							

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-10	1245	8.11	2,570				
8-13	2315	5.95	1,360				

3-3735. East Fork White River at Shoals, Ind.

Location.--Lat 38°40'02", long 86°47'32", in sec. 30, T. 3 N., R. 3 W., in first pier from left bank on highway bridge at Shoals, 400 ft upstream from Baltimore and Ohio Railroad bridge, 1 mile upstream from Beaver Creek, and at mile 107.6.

Drainage area.--4,954 sq mi.

Records available.--June 1903 to July 1906, October 1908 to September 1916, June 1923 to September 1966. 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.--52 years (1903-5, 1909-16, 1923-66), 5,291 cfs.

Extremes.--Maximum discharge during year, 19,600 cfs Feb. 17 (gage height, 13.32 ft); minimum, 465 cfs Sept. 18 (gage height, 2.30 ft).
1903-6, 1908-16, 1923-66: Maximum discharge, 160,000 cfs Mar. 28, 1913 (gage height, 42.2 ft), from rating curve extended above 100,000 cfs by logarithmic plotting; minimum, 44 cfs Oct. 6, 1935, as a result of filling Williams Reservoir.

Remarks.--Records good. Flow regulated by Monroe Reservoir (capacity, 418,700 acre-ft), since January 1963.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	960	1170	915	1680	1200	3420	1820	16800	1820	870	745	705
2	960	1120	960	5460	1200	4440	1820	15700	1680	828	745	705
3	915	1060	960	9690	1200	5220	1680	15200	1620	828	745	785
4	870	1010	960	9910	1200	5700	1680	15200	1550	870	665	870
5	828	960	915	10600	1200	5460	1620	15500	1550	870	625	870
6	828	915	870	11600	1200	4980	1620	13300	1480	1060	585	828
7	870	915	828	12900	1250	4720	1620	11400	1820	1960	585	915
8	1010	915	828	13500	1400	4160	1550	3030	1820	1550	585	870
9	1230	870	785	12900	2410	3660	1550	6830	1620	1360	545	870
10	1420	870	785	11200	7050	3180	1480	5940	1480	1170	625	960
11	1620	870	785	9470	16000	2960	1550	5940	1420	1010	705	960
12	1620	828	785	7930	15500	2960	3420	7050	1420	915	665	960
13	1420	828	828	5940	13300	3180	7930	7710	1360	870	585	960
14	1170	828	870	4160	15200	4160	9590	7930	1480	915	705	915
15	1060	828	915	3420	17700	5220	7930	3370	1420	1010	1170	745
16	960	828	915	2960	19200	5220	7710	3370	1360	1010	828	665
17	915	828	960	2760	19500	4440	7050	7490	1360	915	828	545
18	870	870	1060	2410	17900	3900	5940	6610	1360	870	915	465
19	870	870	1120	2250	15600	3420	4160	7930	1290	828	870	545
20	828	870	1120	1960	13300	3180	3180	3370	1230	785	828	665
21	828	870	1060	1820	10400	2760	2760	3370	1170	745	785	745
22	870	870	1060	1820	7490	2760	2580	7050	1120	705	705	665
23	915	870	1010	1680	5460	2580	2580	5460	1060	785	705	625
24	960	828	1010	1620	4160	2410	2580	4160	1010	828	705	585
25	1290	828	1010	1620	3660	2410	4720	3420	1010	785	705	625
26	1680	828	1010	1480	3180	2410	6390	2960	960	705	705	625
27	1820	828	1060	1420	2960	2250	9030	2760	915	665	745	625
28	1680	370	1060	1380	2960	2250	14400	2410	915	665	745	665
29	1550	870	1120	1300		2100	14400	2250	915	1010	705	625
30	1420	870	1230	1250		1960	14600	2100	870	960	705	585
31	1290		1360	1200		1960		1960		745	705	
Total	35527	2785	30154	159290	222780	109430	147940	246570	40085	29092	22464	22173
Mean	1.146	.893	.973	5.138	7.956	3.530	4.931	7.954	1.336	.938	.725	.739
Cfs/m	0.231	0.180	0.196	1.04	1.61	0.713	0.995	1.61	0.270	0.189	0.146	0.149
In.	0.27	0.20	0.23	1.20	1.68	0.82	1.11	1.86	0.30	0.22	0.17	0.17

Calendar year 1965: Max 25,500 Min 585 Mean 3,734 Cfs/m 0.754 In. 10.23
Water year 1965-66: Max 19,500 Min 465 Mean 2,993 Cfs/m 0.604 In. 8.23

Peak discharge (base, 20,000 cfs).--No peak above base.

WABASH RIVER BASIN

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 1966. 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, 2,780 cfs Feb. 11 (gage height, 21.14 ft); minimum, 6.4 cfs Sept. 27 (gage height, 2.58 ft); minimum, due to unusual regulation, 3.4 cfs July 20 (gage height, 2.47 ft).

1964-66: Maximum discharge, 3,020 cfs Feb. 10, 1965 (gage height, 22.04 ft); minimum, that of July 20, 1965, due to unusual regulation.

Maximum stage known, 28.1 ft, March 1964, from floodmarks.

Remarks.--Records fair except for the winter period, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	37	29	32	243	46	430	123	2,320	121	30	19	23
2	39	27	27	1,620	52	440	121	1,640	114	30	17	22
3	33	27	24	1,810	46	380	114	1,350	100	29	17	22
4	39	27	23	1,050	42	360	123	950	100	29	17	23
5	39	27	22	564	39	340	128	640	90	70	16	23
6	39	26	21	683	36	304	121	576	83	52	15	23
7	93	26	21	772	46	259	114	480	86	220	15	21
8	213	25	20	540	351	234	107	420	80	163	15	21
9	186	26	20	420	996	213	100	380	70	121	14	20
10	150	24	19	360	1,860	210	93	340	70	67	14	20
11	120	24	19	304	2,750	194	263	304	64	49	17	20
12	95	23	20	250	2,500	287	1,550	304	53	42	20	19
13	80	26	22	210	1,650	930	1,820	340	55	39	23	17
14	64	24	24	186	1,250	823	1,290	322	55	35	52	17
15	55	25	26	163	860	612	763	295	55	33	49	21
16	43	29	29	142	720	500	540	259	49	31	29	20
17	43	26	26	129	720	420	450	234	49	29	24	19
18	33	26	24	114	650	360	390	865	46	26	21	17
19	39	24	24	100	540	322	360	1,100	43	24	19	15
20	41	21	23	86	450	295	340	751	42	19	19	15
21	44	20	21	83	380	263	304	564	39	20	157	15
22	50	20	21	77	340	242	277	490	36	20	135	15
23	60	20	21	74	304	226	250	370	35	19	55	15
24	56	20	20	67	269	213	336	286	35	20	39	12
25	50	19	21	61	250	202	983	242	34	19	26	11
26	46	20	21	53	226	186	829	210	32	19	26	10
27	43	26	23	55	202	170	1,670	194	30	19	26	9.2
28	40	45	22	49	234	156	2,350	170	30	19	25	10
29	35	46	21	46		149	2,380	156	30	18	24	12
30	32	40	20	49		142	2,280	142	30	18	24	14
31	30		26	40		135		123		19	23	
Total	1,983	783	702	10,404	17,807	10,017	20,583	16,822	1,761	1,345	989	520.2
Mean	64.0	26.3	22.6	336	696	323	686	543	58.7	43.4	31.9	17.3
Cfsm	0.223	0.092	0.079	1.17	2.22	1.13	2.39	1.89	0.205	0.151	0.111	0.060
In.	0.26	0.10	0.09	1.35	2.31	1.30	2.67	2.18	0.23	0.17	0.13	0.07

Calendar year 1965: Max 2,900 Min 12.0 Mean 239 Cfsm 0.833 In. 11.30
 Water year 1965-66: Max 2,750 Min 9.2 Mean 229 Cfsm 0.798 In. 10.86

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	2100	18.20	2,070				
2-11	0900	21.14	2,780				
4-28	2400	19.75	2,440				

3-3740. White River at Petersburg, Ind.

Location.--Lat 38°30'39", long 87°17'22", in SW $\frac{1}{4}$ 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 1966. 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.--39 years, 11,180 cfs.

Extremes.--Maximum discharge during year, 32,100 cfs May 3 (gage height, 16.67 ft); minimum, 1,200 cfs Sept. 19 (gage height, 0.92 ft).

1927-66: Maximum discharge, 183,000 cfs Jan. 22, 1937 (gage height, 28.3 ft, present datum, 31.58 ft site and datum then in use); minimum, 553 cfs Oct. 2, 1941 (gage height, 0.05 ft).

Maximum stage known, 29.5 ft (present site and datum) in March 1913, from floodmarks, by Corps of Engineers (discharge, 235,000 cfs, estimated).

Remarks.--Records good except those for the winter period, which are fair. Flow slightly regulated by reservoirs. Record of water temperatures for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3,140	2,720	2,120	3,420	2,700	9,500	4,630	27,600	4,990	2,360	2,000	1,300
2	2,860	2,600	2,120	7,430	2,700	9,230	4,540	30,300	4,690	2,240	1,760	1,400
3	2,720	2,480	2,240	14,200	2,700	9,570	4,400	31,800	4,400	2,120	1,760	1,400
4	2,600	2,360	2,240	13,400	2,700	10,200	4,260	31,200	4,120	2,120	1,760	2,240
5	2,480	2,240	2,120	19,400	2,700	10,600	4,120	23,500	3,990	2,240	1,640	1,760
6	2,360	2,240	2,120	13,800	2,750	10,200	3,930	24,600	3,840	2,240	1,520	1,640
7	2,480	2,240	2,000	13,600	2,900	9,570	3,930	20,400	3,990	2,430	1,520	1,520
8	2,600	2,120	2,000	13,800	3,300	9,060	3,840	17,400	3,980	3,840	1,400	1,520
9	2,720	2,120	2,000	13,400	3,000	3,550	3,840	14,900	3,930	3,560	1,400	1,520
10	3,000	2,000	2,000	16,600	12,200	3,040	3,700	12,800	3,700	3,230	1,400	1,520
11	3,140	2,000	2,000	14,400	22,300	7,380	3,840	12,300	3,420	2,860	1,890	1,520
12	3,280	2,000	2,000	12,500	27,900	7,220	3,420	12,700	3,280	2,430	1,760	1,640
13	3,140	2,000	2,120	10,800	30,300	3,890	11,400	14,200	3,560	2,240	1,640	1,640
14	3,000	2,000	2,360	3,720	30,600	9,400	15,100	15,300	4,120	2,360	1,760	1,640
15	2,720	2,000	2,720	7,220	30,600	10,100	15,300	15,300	3,560	2,480	1,890	1,760
16	2,600	2,120	2,720	6,420	30,900	10,400	15,600	15,300	3,420	2,480	2,240	1,760
17	2,480	2,120	2,720	5,940	30,000	9,910	12,000	14,800	3,280	2,360	2,120	1,520
18	2,360	2,120	2,720	5,460	29,500	9,060	10,900	16,600	3,230	2,120	1,890	1,300
19	2,240	2,120	2,720	4,990	25,100	3,210	9,740	13,400	3,230	2,000	1,890	1,250
20	2,120	2,120	2,600	4,540	22,300	7,540	3,210	16,600	3,280	2,000	1,890	2,240
21	2,120	2,120	2,600	4,400	19,600	7,060	7,220	15,700	3,140	1,890	1,760	2,120
22	2,000	2,120	2,480	4,120	15,500	6,530	6,580	14,400	3,000	1,760	1,640	2,000
23	2,120	2,000	2,480	3,990	12,300	6,420	5,260	12,700	2,860	1,760	1,640	2,240
24	2,120	2,000	2,360	3,840	10,600	5,100	6,420	10,800	2,720	1,890	1,640	2,240
25	2,120	2,000	2,480	3,560	3,380	5,940	3,380	9,230	2,600	2,000	1,520	2,120
26	2,240	2,000	2,360	3,400	3,000	5,780	10,100	3,210	2,600	1,890	1,520	1,890
27	2,720	2,000	2,480	3,100	7,300	5,620	13,800	7,380	2,480	1,760	1,520	1,760
28	3,140	2,000	2,720	3,000	7,200	5,460	17,200	3,900	2,360	1,640	1,400	1,760
29	3,280	2,000	2,860	2,900		5,300	21,800	5,580	2,360	1,760	1,400	1,760
30	3,000	2,120	2,860	2,800		4,990	24,900	5,940	2,360	2,000	1,400	1,760
31	2,860		2,860	2,700		4,840		5,460		2,360	1,400	
Total	81,760	64,080	74,180	272,840	403,030	245,720	270,510	494,300	102,610	70,540	51,920	51,730
Mean	2,637	2,136	2,393	8,801	14,572	7,926	9,017	15,945	3,420	2,275	1,675	1,724
Cfsm	0.237	0.192	0.215	0.790	1.31	0.712	0.809	1.43	0.207	0.204	0.150	0.155
In.	0.27	0.21	0.25	0.91	1.36	0.82	0.90	1.65	0.34	0.24	0.17	0.17

Calendar year 1965: Max 47,500 Min 1,640 Mean 8,149 Cfsm 0.732 In. 9.94
 Water year 1965-66: Max 31,800 Min 1,250 Mean 5,995 Cfsm 0.634 In. 7.29

Peak discharge (base, 30,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
2-16	0700	16.30	30,900				
5-3	1800	16.67	32,100				

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 1966. 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.--5 years, 167 cfs.

Extremes.--Maximum discharge during year, 2,780 cfs Feb. 11 (gage height, 14.18 ft); minimum, 0.5 cfs Aug. 9, 10 (gage height, 1.79 ft).
1961-66: 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.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	7.6	13	22	403	15	420	65	1,620	30	6.7	2.2	2.4
2	11	22	18	1,580	15	369	58	1,530	28	6.7	1.8	1.9
3	11	14	16	1,990	15	265	58	1,370	24	6.5	1.7	3.0
4	11	8.5	15	2,110	16	264	84	646	22	6.2	1.4	3.4
5	10	6.5	14	1,700	17	248	88	309	20	6.2	1.0	2.6
6	10	6.0	13	1,260	19	216	86	228	18	5.8	.70	4.0
7	82	7.7	11	1,230	32	185	78	182	19	5.6	.70	1.9
8	215	8.5	11	828	222	165	70	149	20	5.7	.80	1.7
9	161	8.5	9.9	291	870	156	68	124	21	34	.50	1.5
10	97	9.2	9.9	215	1,700	150	63	102	17	22	.80	1.5
11	64	8.5	9.9	179	2,620	142	281	86	14	15	3.0	1.3
12	44	9.2	12	149	2,480	205	1,260	88	12	6.6	2.8	1.3
13	33	11	18	135	2,040	758	1,470	113	11	4.5	3.0	1.2
14	26	11	25	122	1,330	761	1,470	169	11	3.8	4.4	1.2
15	23	12	33	109	678	452	1,010	152	11	3.4	8.1	2.4
16	19	12	40	95	512	303	363	124	9.2	2.8	4.3	2.4
17	16	12	46	79	529	233	268	106	9.2	2.3	3.2	2.2
18	14	12	32	69	367	200	228	841	0.5	2.0	2.6	2.0
19	14	9.9	27	53	263	187	235	998	6.5	15	2.4	2.2
20	14	9.2	22	48	205	163	261	397	5.8	6.6	3.0	2.4
21	17	9.2	21	45	166	145	247	241	5.3	2.8	11	2.4
22	22	9.2	20	43	144	132	222	232	5.2	1.8	5.0	2.2
23	24	9.2	18	41	129	124	204	180	4.4	1.7	3.2	2.0
24	36	8.5	19	38	124	126	373	143	3.9	1.7	2.8	1.7
25	51	8.5	18	35	125	115	1,230	119	3.7	1.5	2.6	1.5
26	40	9.2	24	32	122	105	1,250	96	3.5	1.4	2.4	1.3
27	32	17	33	30	112	94	1,430	78	3.5	1.4	2.2	1.2
28	24	25	34	25	195	86	1,630	67	3.7	1.4	2.2	.70
29	21	25	30	22	-----	78	1,640	54	4.6	1.4	2.2	.70
30	17	25	28	18	-----	74	1,670	44	6.1	1.5	2.2	.80
31	14	-----	29	15	-----	68	-----	36	-----	2.3	2.4	-----
TOTAL	1,180.6	356.5	678.7	12,989	15,064	6,989	17,460	10,624	361.1	186.3	104.20	55.00
MEAN	38.1	11.9	21.9	419	538	225	582	343	12.0	6.01	3.36	1.83
CFSM	.223	.070	.128	2.45	3.15	1.32	3.40	2.01	.070	.035	.020	.011
IN	.26	.08	.15	2.82	3.28	1.52	3.80	2.31	.08	.04	.02	.01
CALENDAR YEAR 1965 MAX 1,890 MIN .90 MEAN 142 CFSM .830 INCHES 11.26												
WATER YEAR 1965-66 MAX 2,620 MIN .50 MEAN 181 CFSM 1.06 INCHES 14.36												

Peak discharge (base, 1,200 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-4	1500	13.48	2,170	4-30	2400	12.73	1,720
2-11	0415	14.18	2,780	5-18	2230	10.43	1,300
4-13	1400	11.73	1,480				

3-3755. Patoka River at Jasper, Ind.

Location.--Lat 38°24'49", long 86°52'36", in SE¼ sec. 20, T. 1 S., R. 4 W., on left bank 0.3 mile upstream from unnamed outlet of Jasper Lake, 1.0 mile downstream from Coon Seitz bridge, 1.2 miles downstream from Beaver Creek, and 3.3 miles northeast of Jasper.

Drainage area.--257 sq mi.

Records available.--November 1947 to September 1966.

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, 1966, 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.--18 years (1948-66), 350 cfs.

Extremes.--Maximum discharge during year, 3,190 cfs Feb. 14 (gage height, 10.11 ft observer at supplementary gage); maximum gage height at base gage, 15.26 ft Feb. 13; 1.7 cfs Sept. 12, 13; minimum gage height, 3.32 ft Aug. 1, 2.
1947-66: 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.--Records fair 330 to 1,500 cfs, poor above and below. Low flow slightly regulated by Beaver Creek Reservoir.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14	20	28	197	20	471	71	2,210	47	9.0	2.2	4.8
2	13	18	26	983	20	578	67	2,470	44	5.3	7.2	7.4
3	13	16	24	1,200	20	476	64	2,500	40	4.1	5.0	5.9
4	13	19	23	1,340	20	403	70	2,390	38	4.3	3.1	17
5	13	18	21	1,390	24	379	85	2,180	34	3.8	7.8	14
6	14	14	20	1,740	29	342	87	1,200	31	9.6	5.2	7.6
7	55	11	19	2,080	37	286	85	550	29	5.9	3.3	5.7
8	132	9.7	18	2,210	160	236	78	301	28	4.3	8.0	4.6
9	257	8.7	17	1,520	708	208	71	214	27	3.6	4.8	7.8
10	301	8.4	17	1,100	1,280	196	68	166	25	4.1	3.8	4.3
11	52	9.4	16	542	1,520	182	140	127	23	32	9.7	2.3
12	67	9.7	17	311	2,040	245	946	125	20	19	6.8	1.8
13	51	10	18	233	2,880	814	1,190	149	17	13	7.5	4.9
14	43	10	20	164	3,180	1,010	1,340	216	15	8.4	15	2.6
15	36	10	19	137	3,060	976	1,360	257	14	6.6	4.2	3.0
16	31	11	30	115	2,680	650	1,520	215	14	5.1	32	3.4
17	27	14	37	95	1,400	430	1,240	164	12	4.8	15	2.3
18	23	15	40	80	1,070	331	586	715	11	3.1	10	2.5
19	19	15	40	67	677	287	359	1,150	9.0	6.7	7.8	3.0
20	17	15	32	61	418	250	364	1,250	8.1	20	6.6	4.3
21	17	15	29	57	293	205	349	1,040	7.1	12	7.3	6.4
22	24	14	28	52	210	176	307	590	6.2	10	9.0	4.8
23	26	14	26	50	169	154	262	396	5.7	7.1	15	3.6
24	26	13	26	48	151	141	343	260	5.3	6.8	11	2.8
25	23	13	26	46	148	132	886	194	5.1	7.1	8.1	2.3
26	37	13	27	43	146	120	1,120	143	4.8	5.7	6.4	5.5
27	40	17	27	40	138	108	1,280	109	4.1	5.1	5.5	3.6
28	34	20	31	34	193	96	1,420	88	3.8	4.3	5.0	2.0
29	29	27	37	30		86	1,520	72	3.6	8.9	4.4	2.3
30	26	28	37	25	-----	81	1,790	62	3.6	5.0	4.1	6.2
31	22	-----	37	20	-----	76	-----	54	-----	2.6	7.6	-----
Total	1,495	4,35.9	813	16,010	22,691	10,125	19,068	21,557	535.4	247.3	286.2	148.9
Mean	48.2	14.5	26.2	516	810	327	636	695	17.8	8.01	9.23	4.96
Cfsm	0.188	0.056	0.102	2.01	3.15	1.27	2.47	2.70	0.069	0.031	0.036	0.019
In.	0.22	0.06	0.12	2.32	3.28	1.46	2.76	3.11	0.08	0.04	0.04	0.02

Calendar year 1965: Max 3,020 Min 1.1 Mean 204 Cfsm 0.794 In. 10.78
Water year 1965-66: Max 3,180 Min 1.8 Mean 256 Cfsm 0.996 In. 13.53

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 1966.

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, 1,040 cfs Feb. 10 (gage height, 11.33 ft); no flow for many days.

1965-66: 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.--Records fair except those below one cfs, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	0.40	0.30	0.40	48	0.80	58	0.90	52	3.1	0.60	0	0
2	.50	.30	.30	252	.80	32	.50	26	2.9	.50	0	0
3	.40	.30	.30	44	.80	23	1.0	17	2.7	.30	0	.90
4	.30	.30	.30	26	.80	46	2.3	13	2.4	.30	0	7.6
5	.30	.30	.30	22	.80	26	1.4	10	2.2	.30	0	1.1
6	.30	.30	.30	34	1.1	20	1.0	8.7	2.9	.20	0	.30
7	7.3	.30	.30	25	6.7	16	.70	7.0	4.3	.20	0	.20
8	6.3	.30	.30	14	161	14	.50	6.0	3.0	.20	0	.10
9	4.0	.30	.20	8.0	182	12	.60	5.1	2.5	.20	0	.10
10	2.0	.30	.20	7.8	762	12	.50	4.7	2.0	.10	0	0
11	1.0	.30	.30	6.3	222	10	37	4.6	1.7	.10	0	0
12	.70	.30	.70	5.5	50	179	136	79	1.5	.10	0	0
13	.60	.40	2.4	6.1	61	109	44	45	6.5	0	0	0
14	.50	.40	1.4	5.8	42	38	22	27	4.8	0	0	0
15	.50	.40	.90	5.3	40	28	14	16	2.0	0	1.7	0
16	.40	.40	.70	4.3	83	19	10	12	1.9	0	.80	0
17	.40	.30	.60	2.7	38	14	7.5	10	2.1	0	.30	.10
18	.40	.30	.50	2.1	29	13	5.9	6.9	1.5	0	.20	.10
19	.30	.30	.50	1.7	22	12	29	82	1.2	0	.10	1.4
20	.30	.30	.50	1.3	10	7.0	20	16	1.0	0	.10	8.5
21	.30	.30	.40	1.1	5.5	5.9	20	65	.80	0	.10	1.1
22	.90	.30	.40	1.0	5.5	4.9	10	28	.70	0	.10	.50
23	.80	.30	.40	.90	7.5	5.9	8.6	13	.60	0	.10	.30
24	.50	.30	.30	.90	9.2	7.0	105	10	.50	0	0	.20
25	.50	.30	.70	.90	13	4.1	70	8.0	.50	0	0	.20
26	.40	.30	.80	.80	11	3.3	72	6.1	.40	0	0	.10
27	.40	2.8	.70	.80	11	2.4	316	5.3	.40	0	0	.20
28	.40	2.0	.50	.80	105	1.9	33	4.7	.50	0	0	.40
29	.30	.90	.50	.80	-----	1.6	37	5.0	.80	0	0	.50
30	.30	.50	.80	.80	-----	1.9	166	4.2	.80	0	0	.30
31	.30	-----	.80	.80	-----	1.3	-----	3.6	-----	0	0	-----
TOTAL	32.00	14.40	17.40	531.50	1,881.50	728.2	1,172.40	1,243.0	58.20	3.10	3.50	24.20
MEAN	1.03	.48	.56	17.1	67.2	23.5	39.1	40.1	1.94	.10	.11	.81
CFSM	.048	.022	.026	.799	3.14	1.10	1.83	1.87	.091	.0047	.0053	.038
IN	.06	.03	.03	.92	3.27	1.27	2.04	2.16	.10	.01	.01	.04

CALENDAR YEAR 1965 MAX 880 MIN 0 MEAN 12.3 CFSM .575 INCHES 7.81
 WATER YEAR 1965-66 MAX 762 MIN 0 MEAN 15.6 CFSM .729 INCHES 9.92

Peak discharge (base, 350 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	0445	9.75	500	4-27	0315	10.48	694
2-10	1415	11.33	1,040	5-18	1115	11.09	920
3-12	1945	9.58	462				

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 1966. 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.--Water-stage recorder. Prior to Nov. 21, 1963, wire-weight gage on downstream side of bridge, 65 ft downstream at same datum. Datum of gage is 400.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission).

Extremes.--Maximum discharge during year, 3,800 cfs Feb. 18 (gage height, 23.76 ft); minimum, 5.9 cfs Aug. 9, 10 (gage height, 5.75 ft).
1963-66: 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.--Records poor. An average of 0.13 cfs is diverted for municipal water supply 100 ft above gage.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	26	72	61	256	44	972	157	2700	136	12	10	12
2	24	54	36	1200	44	1040	143	2800	106	12	7.2	12
3	30	47	36	1430	46	983	136	2900	89	12	7.2	13
4	27	45	39	1420	43	940	143	3000	74	12	7.0	20
5	19	35	37	1460	50	850	157	3150	65	11	6.5	40
6	16	29	36	1520	56	745	157	3200	65	12	6.5	84
7	64	25	31	1560	90	653	157	3250	65	13	6.1	63
8	199	25	20	1580	191	562	157	3150	54	13	6.1	36
9	289	30	16	1620	824	480	157	2700	52	12	6.1	22
10	299	30	16	1660	2060	423	143	2050	46	12	7.2	17
11	343	24	19	1690	2550	383	174	1500	42	11	14	15
12	307	16	22	1720	2400	436	805	900	39	12	23	14
13	235	8.7	26	1740	2550	500	1300	650	44	12	50	13
14	173	9.7	23	1730	2820	1100	1700	500	117	11	6.3	13
15	133	7.8	26	1600	3070	1700	1900	430	52	20	56	19
16	103	12	34	1360	3350	1900	2150	380	46	20	50	16
17	86	23	31	1010	3560	2000	2250	471	40	16	52	16
18	63	25	24	680	3800	1800	2300	1280	30	13	58	16
19	50	19	26	478	3700	1400	2200	1720	27	11	56	20
20	36	13	41	298	3450	900	1900	1630	27	11	40	43
21	29	13	54	252	3200	562	1500	1660	23	12	32	172
22	32	15	56	222	3000	460	1200	1760	22	12	25	143
23	64	17	50	194	2620	383	1000	1660	19	27	20	79
24	103	19	52	140	2120	340	900	1570	19	17	20	44
25	96	19	47	110	1600	300	800	1420	17	13	17	23
26	89	20	43	90	1200	263	1300	1140	17	11	16	16
27	72	30	40	70	884	244	1700	814	14	10	16	14
28	50	36	36	56	719	223	2100	550	16	10	16	13
29	50	64	36	50		204	2400	420	15	8.8	15	10
30	72	78	37	46		189	2600	324	14	11	14	15
31	75		35	44		172		204		8.5	13	
Total	3.257	859.2	1.084	27.286	50.045	23.141	33.686	49.883	1.389	418.3	735.9	1.032
Mean	105	28.6	35.0	880	1,787	746	1,123	1,609	46.3	13.5	23.7	34.4
Cfs/m	0.174	0.047	0.058	1.46	2.96	1.24	1.86	2.67	0.077	0.022	0.039	0.057
In.	0.20	0.05	0.07	1.68	3.08	1.43	2.08	3.08	0.09	0.03	0.04	0.06

Calendar year 1965: Max 4,240 Min 3.3 Mean 454 Cfs/m 0.753 In. 10.21
Water year 1965-66: Max 3,800 Min 6.1 Mean 528 Cfs/m 0.876 In. 11.89

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 1966.

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, 1,140 cfs Feb. 10 (gage height, 10.91 ft); minimum, 3.2 cfs Sept. 8 (gage height, 1.21 ft).
1965-66: 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.--Records fair except for the winter period, which are poor. Some slight regulation by coal-washing operation and strip mining above gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	14	5.8	6.4	182	5.3	84	18	139	23	7.8	4.7	4.3
2	11	5.8	5.5	315	5.3	50	15	94	21	8.2	4.8	4.1
3	11	5.9	5.3	72	5.4	44	23	62	20	7.8	4.7	9.4
4	9.9	6.0	5.0	41	5.4	74	21	47	19	7.3	4.9	12
5	8.8	6.4	5.4	39	5.5	44	18	40	19	8.3	5.0	5.7
6	11	7.3	5.2	66	7.0	42	17	34	20	7.1	5.0	5.4
7	6.3	6.5	5.3	36	13	36	16	31	19	7.7	5.0	4.1
8	19	7.7	4.9	22	200	32	17	29	18	7.1	5.4	3.9
9	14	9.7	4.5	19	290	30	18	27	17	6.6	5.2	3.8
10	12	7.2	5.0	16	738	28	17	23	16	6.6	25	4.6
11	8.8	6.7	5.3	14	226	25	58	25	16	6.1	27	8.2
12	8.3	7.4	12	13	117	136	285	53	17	6.5	6.1	5.2
13	7.8	16	7.8	12	151	188	122	103	25	6.7	17	4.4
14	7.8	7.2	6.4	10	86	91	65	62	21	6.0	11	4.9
15	7.7	6.8	6.9	9.0	65	58	47	44	15	9.3	6.9	29
16	7.6	6.9	6.4	8.5	132	43	39	40	21	6.2	5.8	6.8
17	7.2	6.0	6.0	7.2	67	38	32	37	17	5.2	4.8	5.1
18	6.5	5.6	5.6	6.6	52	35	29	515	15	5.3	4.5	5.2
19	6.5	6.3	6.4	6.0	43	32	86	152	14	5.6	4.3	28
20	7.4	6.0	5.6	5.9	33	30	59	83	13	4.9	22	20
21	7.4	6.4	5.4	5.7	29	28	69	165	12	4.6	13	9.1
22	17	6.4	5.0	5.6	26	27	43	105	11	4.8	6.6	7.0
23	11	6.1	4.7	5.5	26	40	41	64	11	4.9	5.3	6.1
24	7.8	6.1	5.0	5.5	30	24	223	55	10	5.0	4.7	5.2
25	6.8	6.6	9.0	5.4	30	21	208	43	9.4	4.8	4.5	5.8
26	6.5	7.9	5.7	5.4	25	21	181	35	9.8	4.1	4.3	6.0
27	6.2	19	6.0	5.4	31	21	276	32	9.6	3.9	4.3	6.1
28	6.2	7.3	6.0	5.4	136	19	112	31	9.2	4.3	4.7	6.2
29	5.9	5.9	6.8	5.3	-----	18	106	29	11	4.7	5.2	5.9
30	7.1	5.7	5.6	5.3	-----	18	215	26	9.2	4.4	5.2	9.0
31	6.5	-----	12	5.3	-----	17	-----	25	-----	4.9	4.8	-----
TOTAL	337.7	220.6	192.1	960.0	2,579.9	1,394	2,476	2,250	468.2	186.7	241.7	240.5
MEAN	10.9	7.35	6.20	31.0	92.1	45.0	82.5	72.6	15.6	6.02	7.80	8.02
CFSM	.254	.171	.144	.721	2.14	1.05	1.92	1.69	.363	.140	.181	.187
IN	.29	.19	.17	.83	2.23	1.21	2.14	1.95	.40	.16	.21	.21

CALENDAR YEAR 1965 MAX 710 MIN 2.3 MEAN 30.0 CFSM .698 INCHES 9.47
WATER YEAR 1965-66 MAX 738 MIN 3.8 MEAN 31.6 CFSM .735 INCHES 9.99

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	0400	6.79	627	5-18	0730	10.44	1,080
2-10	1300	10.91	1,140				
4-27	0115	6.32	570				

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 1966. 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 (revised) 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.--32 years, 971 cfs.

Extremes.--Maximum discharge during year, 3,410 cfs Feb. 23 (gage height, 13.57 ft); minimum, 6.7 cfs Aug. 5 (gage height, 0.78 ft). 1934-66: Maximum discharge, 18,700 cfs Jan. 26, 1937 (gage height, 26.80 ft, site and datum then in use); no flow Aug. 29 to Sept. 12, 1936.

Remarks.--Records fair except those for the winter period, which are poor. Records of suspended sediment loads for water year 1966 published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	43	54	72	249	60	2,620	230	2,340	496	37	12	16
2	40	50	62	956	60	2,380	210	2,410	318	30	11	15
3	33	45	53	1,060	61	2,150	194	2,460	254	26	11	26
4	33	40	52	1,110	62	1,960	210	2,480	202	24	9.8	158
5	31	37	52	1,160	64	1,780	210	2,480	138	410	9.8	50
6	26	33	52	1,190	66	1,590	214	2,470	120	45	11	57
7	99	30	50	1,240	79	1,390	210	2,460	135	30	9.8	83
8	151	28	47	1,290	435	1,220	210	2,470	115	28	8.7	62
9	204	26	43	1,370	990	1,040	210	2,480	101	26	8.7	41
10	239	30	41	1,430	1,500	872	206	2,490	90	22	88	28
11	260	32	40	1,470	1,710	700	226	2,530	83	19	190	20
12	281	32	52	1,510	1,840	692	732	2,680	80	17	70	19
13	236	29	63	1,570	2,040	1,090	1,140	2,770	222	17	77	17
14	177	38	60	1,590	2,220	1,210	1,230	2,800	745	16	132	13
15	134	32	53	1,630	2,370	1,290	1,320	2,740	326	60	109	48
16	104	29	52	1,660	2,510	1,360	1,410	2,620	186	37	72	67
17	82	28	55	1,660	2,630	1,440	1,490	2,430	154	32	67	32
18	70	34	54	1,590	2,730	1,490	1,520	2,500	112	28	65	22
19	58	37	49	1,400	2,840	1,500	1,590	2,480	88	24	65	43
20	49	35	49	990	2,960	1,460	1,620	2,410	72	22	60	150
21	44	30	58	472	3,100	1,350	1,660	2,480	62	19	70	123
22	42	25	66	308	3,220	1,150	1,680	2,540	55	17	60	166
23	51	25	69	239	3,280	888	1,690	2,540	48	37	39	126
24	59	26	67	187	3,400	652	1,710	2,520	43	39	32	80
25	76	26	62	134	3,340	492	1,710	2,460	39	30	28	53
26	70	25	62	110	3,210	407	1,690	2,390	39	24	24	37
27	65	33	57	88	3,050	365	1,880	2,290	35	19	20	30
28	57	58	50	72	2,870	334	1,910	2,130	60	16	19	26
29	49	46	49	63	-----	298	2,010	1,890	53	15	19	22
30	45	59	50	61	-----	266	2,210	1,450	43	15	19	20
31	49	-----	59	60	-----	250	-----	960	-----	12	19	-----
TOTAL	2,957	1,052	1,700	27,919	52,697	35,686	32,532	74,150	4,514	1,193	1,435.8	1,650
MEAN	95.4	35.1	54.8	901	1,882	1,151	1,084	2,392	150	38.5	46.3	55.0
CFSM	.117	.043	.067	1.11	2.31	1.41	1.33	2.94	.184	.047	.057	.068
IN	.13	.05	.08	1.27	2.40	1.63	1.48	3.38	.21	.05	.07	.08

CALENDAR YEAR 1965 MAX 3,890 MIN 7.7 MEAN 562 CFSM .690 INCHES 9.36
 WATER YEAR 1965-66 MAX 3,400 MIN 8.7 MEAN 651 CFSM .799 INCHES 10.84

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 1908 to September 1913 (gage heights only), October 1927 to September 1966. 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.--39 years, 25,940 cfs.

Extremes.--Maximum discharge during year, 62,000 cfs May 3 (gage height, 14.78 ft); minimum, 2,960 Aug. 10; minimum gage height, 0.36 ft Sept. 13, 14.

1927-66: 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, 1884-66: 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.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	8,680	6,930	5,680	16,600	7,200	18,300	12,300	57,200	15,900	6,490	4,260	3,150
2	8,210	6,590	6,000	19,800	7,200	18,700	11,800	60,600	14,400	6,260	3,940	3,100
3	7,920	6,280	5,950	27,900	7,200	18,200	11,400	61,800	13,300	6,140	3,670	3,190
4	7,570	5,990	5,820	35,300	7,200	19,000	11,000	61,300	12,500	6,220	3,580	3,810
5	7,500	5,750	5,820	39,000	7,200	20,200	10,700	58,800	11,700	6,260	3,490	4,270
6	7,440	5,510	5,610	40,100	7,200	21,400	10,500	52,900	11,200	6,080	3,350	3,620
7	7,440	5,320	5,480	39,300	7,600	22,200	10,100	45,700	11,000	5,750	3,330	3,280
8	7,340	5,210	5,320	38,000	9,560	22,600	9,840	39,200	10,700	5,920	3,210	3,120
9	7,090	5,200	5,160	36,300	12,500	21,800	9,550	34,200	11,000	7,100	3,050	3,070
10	7,020	5,390	5,180	33,800	16,900	20,200	9,310	30,300	10,500	6,880	3,200	3,110
11	7,180	5,370	5,210	30,300	28,500	18,600	9,310	27,800	9,700	6,220	4,160	3,110
12	7,220	5,380	5,340	26,900	38,200	17,000	11,000	28,200	9,140	5,820	3,920	3,070
13	7,220	5,400	5,420	24,200	43,000	17,400	17,000	29,800	8,820	5,550	3,750	3,050
14	7,120	5,400	5,530	21,600	44,300	19,000	22,300	31,600	9,860	5,710	3,920	3,080
15	6,960	5,500	5,770	18,900	46,400	19,800	24,200	33,000	9,950	5,560	4,300	3,390
16	6,740	5,490	6,110	16,900	49,000	20,600	23,100	34,800	9,200	5,450	4,240	4,240
17	6,480	5,410	6,310	15,700	48,900	21,400	21,000	36,400	9,070	5,380	4,520	4,040
18	6,190	5,450	6,510	14,900	46,400	21,000	19,100	39,600	8,930	5,400	4,310	3,460
19	6,000	5,380	6,680	14,000	42,900	19,800	17,700	45,500	9,560	5,280	3,930	3,200
20	5,940	5,300	6,740	12,700	39,200	18,600	16,300	45,700	9,630	5,060	3,900	3,760
21	5,810	5,260	6,680	11,100	35,000	17,400	15,100	43,900	9,210	4,870	3,860	8,240
22	5,680	5,360	6,450	10,000	30,500	16,200	15,100	41,300	8,810	4,670	3,840	8,580
23	5,550	5,040	6,290	9,670	26,400	15,500	18,600	37,200	8,520	4,450	3,760	6,640
24	5,360	5,040	6,240	9,240	22,700	14,400	21,400	33,700	8,070	4,430	3,790	5,360
25	5,390	5,040	6,200	9,050	19,900	14,100	24,400	30,200	7,600	4,450	3,780	5,040
26	5,650	5,040	6,060	8,840	18,200	14,100	28,700	27,700	7,240	4,380	3,580	4,720
27	6,500	5,040	6,450	8,430	17,800	14,800	37,500	25,800	6,950	4,230	3,430	4,400
28	7,350	5,040	10,700	8,000	17,900	15,200	45,200	24,000	6,720	4,040	3,360	4,400
29	7,930	5,040	16,300	7,800	-----	14,800	50,400	22,400	6,730	3,820	3,290	4,400
30	7,850	5,360	18,000	7,600	-----	13,800	53,700	20,500	6,730	3,690	3,270	4,090
31	7,380	-----	17,200	7,500	-----	13,000	-----	18,000	-----	3,900	3,250	-----
TOTAL	213,710	163,510	222,210	619,430	704,960	559,100	597,610	1,179M	292,640	165,460	115,240	123,990
MEAN	6,894	5,450	7,168	19,980	25,180	18,040	19,920	38,040	9,755	5,337	3,717	4,133
CFSM	.241	.191	.251	.699	.880	.631	.697	1.33	.341	.187	.130	.145
IN	.28	.21	.29	.81	.92	.73	.78	1.53	.38	.22	.15	.16
CALENDAR YEAR 1965	MAX	80,800	MIN	4,400	MEAN	19,240	CFSM	.673	INCHES	9.14		
WATER YEAR 1965-66	MAX	61,800	MIN	3,050	MEAN	13,580	CFSM	.475	INCHES	6.45		

3-3780. Bonpas Creek at Browns, Ill.

Location.--Lat 38°22'50", long 87°58'35", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ 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 1966.

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.--26 years, 213 cfs.

Extremes.--Maximum discharge during year, 1,830 cfs Apr. 29 (gage height, 14.41 ft); no flow for many days.
1940-66: 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.7	0.4	0.4	317	1.0	353	18	1,440	12	1.8	0	0
2	2.0	.4	.3	696	1.0	303	16	1,150	10	1.5	0	0
3	1.6	.3	.3	699	1.0	170	16	809	9.6	1.2	0	0
4	1.7	.3	.3	515	1.0	94	16	400	8.2	1.5	0	0
5	1.3	.3	.2	234	1.0	72	15	148	6.8	2.4	0	0
6	1.2	.3	.2	95	2.0	57	15	74	55	2.1	0	0
7	5.9	.3	.2	65	3.3	44	15	56	78	4.8	0	0
8	2.6	.3	.2	45	277	38	14	40	40	21	0	0
9	2.0	.4	.2	33	702	36	9.8	35	24	8.5	0	0
10	12	.6	.7	29	1,020	36	9.6	30	15	5.9	0	0
11	7.3	.6	.9	25	1,100	35	12	30	9.7	3.4	4.5	0
12	4.8	.8	9.4	21	970	134	139	60	9.6	2.1	15	0
13	3.6	.8	42	21	811	437	459	100	8.2	1.4	6.0	0
14	2.8	.6	50	20	582	315	372	150	7.1	1.1	3.0	0
15	2.0	.6	39	18	267	188	153	100	6.1	1.2	8.9	0
16	1.6	.8	26	17	212	102	75	100	12	1.1	8.1	0
17	1.3	.8	18	13	254	73	55	500	6.2	.8	4.3	0
18	1.1	.8	13	10	193	58	46	900	4.5	.6	2.2	.1
19	.9	.8	9.6	9.0	129	48	60	1,000	4.0	.5	1.1	.3
20	.8	.6	8.2	8.0	67	38	99	500	3.2	.3	.6	.9
21	.7	.8	6.8	6.0	50	34	180	150	2.8	.2	.3	5.1
22	1.0	.8	5.6	5.0	39	32	110	100	2.4	.1	.2	4.8
23	3.5	.6	4.0	4.0	33	31	72	200	2.4	.1	.1	3.0
24	4.5	.6	5.1	3.0	31	30	348	210	2.1	.1	0	1.4
25	2.8	.6	4.5	2.5	33	26	701	125	2.1	.1	0	.6
26	1.8	.6	8.2	2.0	33	24	801	65	2.4	.1	0	.3
27	1.2	1.0	18	1.5	31	22	1,570	42	5.6	.1	0	.3
28	.9	.8	26	1.0	118	20	1,620	30	2.4	0	0	.2
29	.7	.4	23	1.0	19	19	1,720	22	1.8	0	0	.9
30	.6	.3	18	1.0	-----	20	1,710	16	2.4	0	0	1.8
31	.5	-----	18	1.0	-----	19	-----	13	-----	0	0	-----
Total	117.6	17.3	356.8	2,918.0	6,952.3	2,908	10,496.4	3,595	355.6	107.2	54.3	19.7
Mean	3.80	0.58	11.5	94.1	248	93.8	350	277	11.9	3.46	1.75	0.66
Cfsm	0.017	0.0025	0.050	0.413	1.09	0.411	1.54	1.21	0.052	0.015	0.0077	0.0029
In.	0.02	0	0.06	0.48	1.13	0.47	1.71	1.40	0.06	0.02	0.01	0

Calendar year 1965: Max 1,900 Min 0 Mean 83.6 Cfsm 0.367 In. 4.98
Water year 1965-66: Max 1,720 Min 0 Mean 90.1 Cfsm 0.395 In. 5.37

3-3785.50 Big Creek near Wadesville, Ind.

Location (revised).--Lat 38°04'58", long 87°46'10", in SW $\frac{1}{4}$ 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 1966.

Gage.--Digital water-stage recorder. Datum of gage is 370.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 3,130 cfs May 18 (gage height, 17.27 ft); no flow many days.
1965-66: Maximum discharge, that of May 18, 1966; no flow at times each year.

Remarks.--Records poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	4.9	0.30	0.40	117	1.0	230	11	269	11	0.20	0	0
2	4.0	.20	.20	943	1.0	96	8.6	179	10	.20	0	0
3	2.6	.20	.20	109	1.0	70	12	94	9.5	.10	0	0
4	1.7	.20	.20	52	1.0	87	14	60	9.0	.10	0	37
5	1.0	.30	.20	45	1.0	53	10	47	8.2	17	0	6.4
6	1.2	.30	.10	52	5.5	41	9.4	38	7.8	220	0	1.9
7	91	.50	.10	40	73	38	8.9	32	7.4	202	0	.50
8	24	.60	.10	23	777	38	8.6	29	7.2	14	0	.20
9	11	1.6	.10	20	329	38	9.2	23	7.2	6.2	0	.10
10	6.6	2.2	.10	17	1,730	38	8.0	19	7.2	3.8	7.5	.10
11	4.6	2.7	.10	13	502	45	15	21	7.2	2.6	131	14
12	3.5	2.7	.40	11	178	141	397	273	7.2	1.8	7.0	23
13	2.7	2.3	1.8	9.8	221	312	158	324	35	1.3	3.2	3.2
14	2.3	2.0	1.5	8.0	118	141	74	186	80	5.0	4.6	1.1
15	1.8	1.8	.80	7.0	94	88	50	95	25	3.7	6.0	1.2
16	1.5	1.6	.50	5.8	218	44	40	103	15	1.1	2.9	.30
17	1.1	1.1	.40	4.5	105	32	33	106	11	.40	1.2	.20
18	1.0	1.0	.30	3.5	72	29	28	2,230	7.6	.20	.50	.60
19	1.0	.60	.20	2.9	53	28	176	775	5.8	.20	.20	.70
20	.50	.50	.20	2.5	41	21	72	174	4.5	.10	.40	.30
21	1.0	.50	.10	2.0	36	19	58	178	3.6	.10	92	3.3
22	1.3	.60	.10	1.6	35	18	40	137	2.8	0	6.9	1.5
23	1.3	.40	.10	1.3	35	18	37	80	2.2	0	2.4	.50
24	1.5	.30	.10	1.1	34	17	151	108	1.8	.20	.90	.20
25	1.1	.30	.10	1.0	34	14	274	75	1.5	.30	.40	.10
26	.80	.30	.20	1.0	35	14	193	40	1.2	.10	.20	.10
27	.60	.60	.20	1.0	35	12	615	29	.80	.10	.10	.10
28	.40	1.3	.10	1.0	80	12	166	23	.50	.10	0	.10
29	.30	1.1	.10	1.0	-----	12	185	19	.40	0	0	0
30	.30	.60	.10	1.0	-----	12	752	16	.30	0	0	.10
31	.20	-----	.30	1.0	-----	11	-----	13	-----	0	0	-----
TOTAL	176.80	28.70	9.40	1,499.0	4,845.5	1,769	3,613.7	5,795	297.90	480.90	267.40	96.80
MEAN	5.70	.96	.30	48.4	173	57.1	120	187	9.93	15.5	8.63	3.23
CFSM	.055	.0092	.0029	.465	1.66	.549	1.15	1.80	.096	.149	.083	.031
IN	.06	.01	0	.54	1.73	.63	1.29	2.07	.11	.17	.10	.03
CALENDAR YEAR 1965 MAX MIN MEAN CFSM INCHES												
WATER YEAR 1965-66 MAX MIN MEAN CFSM INCHES												
MAX 2,230 MIN 0 MEAN 51.7 CFSM .497 INCHES 6.75												

Peak discharge (base, 1,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
1-2	0615	15.16	1,960	4-30	1215	14.42	1,620
2-10	1400	16.81	2,860	5-18	1345	17.27	3,130
4-27	0330	13.44	1,230				

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 1966.

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.--27 years, 2,401 cfs.

Extremes.--Maximum discharge during year, 10,400 cfs May 2; maximum gage height, 24.25 ft May 3; minimum discharge, 3.5 cfs Sept. 14, 1939-66: Maximum discharge, 46,900 cfs May 12, 1961; maximum gage height, 36.70 ft May 13, 1961; no flow Sept. 15-17, 1952, result of temporary dam upstream; minimum unregulated discharge, 0.6 cfs Sept. 9, 1953, July 31, 1954.

Remarks.--Records good except those for winter periods, which are poor. At extremely high stages, there is diversion six miles above the gage through McHenry Slough to the Wabash River.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	328	39	32	819	45	778	216	10,200	605	53	18	37
2	557	35	32	2,750	45	1,050	201	10,400	429	49	17	30
3	476	33	33	3,910	45	964	196	10,300	343	44	18	24
4	308	32	37	4,510	45	824	190	10,100	291	44	16	27
5	240	33	61	4,490	47	792	178	9,640	255	54	13	232
6	227	32	86	3,910	50	796	170	9,090	237	67	12	242
7	247	33	80	3,240	122	800	163	4,510	329	69	11	108
8	245	35	69	2,510	839	857	160	3,000	305	94	13	40
9	300	35	58	1,570	2,080	825	159	7,090	249	188	18	15
10	289	35	50	912	4,590	715	151	6,090	227	190	24	8.0
11	245	36	47	582	5,820	578	166	4,870	203	154	34	7.0
12	203	39	69	391	5,330	531	578	4,000	189	136	28	6.0
13	250	47	117	308	6,630	884	1,520	3,730	322	133	38	5.0
14	276	44	300	276	6,890	1,150	2,170	4,020	360	107	56	7.0
15	247	43	361	258	7,010	1,160	2,440	3,540	211	97	54	21
16	206	44	297	245	5,960	1,240	2,300	3,280	179	74	55	12
17	170	42	227	227	5,720	1,310	1,880	3,460	167	72	59	8.0
18	132	36	192	203	5,290	1,170	1,390	5,150	157	82	58	6.0
19	102	34	215	180	5,630	914	1,080	7,140	137	94	58	8.0
20	88	34	212	161	4,650	674	988	7,190	125	79	90	12
21	76	36	184	150	3,190	532	1,350	7,200	116	57	132	28
22	65	36	156	140	1,690	452	1,890	7,320	109	44	162	21
23	58	38	128	130	836	401	2,710	7,100	103	36	120	29
24	75	42	38	120	589	354	3,860	6,850	101	35	77	736
25	126	48	103	100	513	316	5,360	6,430	94	33	52	870
26	128	50	110	90	485	288	5,820	5,820	83	30	37	609
27	104	55	304	80	537	264	4,510	5,170	83	27	34	348
28	80	46	362	70	522	245	3,340	4,350	69	27	67	229
29	61	41	415	60	242	242	3,420	3,330	63	30	90	147
30	49	35	575	50	-----	234	9,760	1,980	59	29	74	118
31	43	-----	577	45	-----	221	-----	1,050	-----	21	52	-----
Total	6,001	1,168	5,577	32,377	79,190	21,561	74,316	193,390	5,200	2,239	1,587	3,990.0
Mean	194	38.9	180	1,044	2,828	696	2,477	6,238	207	72.2	51.2	133
Cfs/m	0.062	0.013	0.058	0.336	0.909	0.224	0.796	2.01	0.067	0.023	0.017	0.043
In.	0.07	0.01	0.07	0.39	0.95	0.26	0.89	2.31	0.07	0.03	0.02	0.05

Calendar year 1965 : Max 9,000 Min 19 Mean 919 Cfs/m 0.295 In. 4.01
 Water year 1965-66 : Max 10,400 Min 5.0 Mean 1,171 Cfs/m 0.376 In. 5.11

4-0875. Hart ditch at Munster, Ind.

Location.--Lat 41°33'40", long 87°28'50", In N $\frac{1}{2}$ 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 1966.

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.--24 years, 55.6 cfs.

Extremes.--Maximum discharge during year, 2,500 cfs Dec. 25 (gage height, 7.30 ft); minimum, 3.0 cfs Sept. 4-6; minimum gage height, 0.48 ft July 22, 23.

1942-66: 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.--Records good except those for the winter period, which are fair. Flow from this ditch discharges into Little Calumet River near Munster. Practically all of this flow discharges into the Calumet Sag Canal or Grand Calumet River.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	290	20	14	270	7.2	43	33	155	24	7.2	7.2	4.0
2	188	18	15	210	7.4	140	36	104	20	6.4	7.2	4.0
3	107	17	18	140	7.6	430	35	78	22	6.4	5.8	3.5
4	78	16	19	101	8.0	570	33	60	19	7.2	5.2	3.0
5	62	16	18	88	9.0	378	30	50	18	8.6	5.8	3.0
6	52	16	16	98	10	170	33	43	17	7.9	5.8	3.0
7	46	16	15	52	13	95	33	39	13	5.8	6.4	3.5
8	45	16	14	36	52	66	33	64	10	5.8	2.9	3.5
9	38	16	14	34	206	62	32	64	18	6.4	11	4.0
10	33	15	16	29	448	58	27	43	16	5.8	12	4.0
11	29	15	33	26	439	72	26	329	12	15	9.4	4.6
12	24	16	50	24	258	131	23	1,080	12	6.4	7.2	4.6
13	22	15	88	29	128	196	22	1,100	37	12	6.4	5.2
14	20	14	60	29	92	137	22	700	23	8.6	5.8	7.2
15	19	14	43	27	68	104	20	500	23	7.2	5.8	7.9
16	23	14	32	23	54	82	22	448	19	5.8	5.8	5.2
17	21	13	24	20	39	66	19	255	17	5.8	5.2	1.6
18	20	13	20	16	35	64	23	202	14	6.4	4.6	4.0
19	19	13	18	14	31	62	36	146	12	5.8	4.6	4.0
20	28	12	22	13	28	50	312	101	10	5.8	4.6	5.8
21	38	12	19	12	25	46	780	78	9.4	5.2	12	5.8
22	110	12	19	12	23	60	570	62	8.6	5.8	18	4.0
23	107	12	22	11	21	88	360	56	8.6	5.8	6.4	4.0
24	78	12	638	10	20	68	342	104	8.6	5.8	5.2	4.6
25	56	12	2,030	10	19	50	206	75	7.9	5.8	4.0	9.4
26	45	23	1,700	9.5	18	48	131	54	7.9	11	4.0	5.8
27	38	30	830	9.0	22	43	164	46	7.9	7.4	4.0	5.2
28	32	26	400	8.5	26	39	395	39	7.9	26	4.0	4.0
29	26	17	225	8.0	---	36	360	35	7.9	14	4.0	7.2
30	24	17	325	7.6	---	43	216	30	7.2	10	4.0	7.2
31	22	---	400	7.4	---	39	---	27	---	8.6	4.0	---
Total	1,740	478	7,157	1,384.0	2,114.2	3,526	4,374	5,167	4,37.9	3,18.3	2,24.4	145.8
Mean	56.1	15.9	231	44.6	75.5	114	146	199	14.6	10.3	7.24	4.86
Cfsm	0.811	0.230	3.34	0.645	1.09	1.65	2.11	2.88	0.211	0.149	0.105	0.070
In.	0.94	0.26	3.85	0.74	1.14	1.90	2.35	3.32	0.24	0.17	0.12	0.08

Calendar year 1965: Max 2,030 Min 3.5 Mean 90.4 Cfsm 1.31 In. 17.74
 Water year 1965-66: Max 2,030 Min 3.0 Mean 76.9 Cfsm 1.11 In. 15.11

Peak discharge (base, 800 cfs)

a May 13.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	2100	7.30	2,500				
5-12	0700	a 5.54	1,270				

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 1966.

Gage.--Water-stage recorder. Datum of gage is 580.72 ft above mean sea level, datum of 1929.

Average discharge.--8 years, 58.8 cfs.

Extremes.--Maximum discharge, 1,010 cfs Dec. 25 (gage height, 14.43 ft); minimum, 2.8 cfs Sept. 5-8 (gage height, 2.93 ft).
1958-66: Maximum discharge, 1,510 cfs Apr. 28, 1959 (gage height, 13.67 ft); minimum, 0.7 cfs Oct. 10, 1963; minimum gage height, 2.87 ft Oct. 10, 1963, Sept. 4, 1964.

Remarks.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	304	29	20	375	12	56	39	189	31	7.8	9.5	4.2
2	258	26	20	287	12	104	41	140	27	7.4	12	4.2
3	166	24	23	228	13	284	41	109	27	7.2	6.9	4.2
4	106	24	23	182	14	395	37	91	26	7.4	6.0	4.0
5	74	23	22	154	16	335	37	74	22	13	5.3	3.0
6	68	23	21	133	20	196	35	62	24	15	5.1	3.2
7	62	24	19	115	25	121	35	54	19	11	11	3.2
8	59	22	18	97	81	91	33	85	14	8.8	30	3.8
9	53	22	17	85	196	85	33	85	19	9.0	27	4.0
10	47	22	20	74	315	79	29	59	19	9.6	24	4.2
11	40	21	47	67	335	91	27	206	16	29	17	4.5
12	34	29	60	61	220	121	26	693	15	14	9.6	5.1
13	32	25	85	56	147	175	26	751	66	23	7.6	5.6
14	29	20	71	49	115	147	24	575	41	17	6.5	8.5
15	27	19	56	44	91	115	22	445	27	13	6.5	11
16	26	20	42	38	74	97	22	395	26	11	6.2	5.3
17	25	18	34	34	62	79	24	305	20	9.0	5.6	4.9
18	23	17	31	31	54	74	31	269	17	8.8	4.9	4.0
19	24	17	26	27	48	74	48	204	15	9.3	4.7	4.5
20	58	17	26	25	43	62	224	154	13	8.6	4.5	7.6
21	66	17	25	22	38	57	455	121	13	7.2	16	8.1
22	146	17	25	20	34	69	405	97	11	7.2	38	6.2
23	166	16	25	18	31	97	315	85	10	6.7	11	5.3
24	106	15	330	17	28	79	296	133	10	6.7	6.9	6.0
25	74	15	895	16	26	62	228	103	9.3	8.3	5.3	15
26	62	35	860	15	24	54	168	79	12	8.1	4.9	7.2
27	53	42	650	14	22	50	186	64	10	10.9	4.7	5.3
28	44	30	535	14	29	46	325	54	9.8	4.6	4.5	4.2
29	40	24	425	13	-----	46	315	46	9.0	18	4.5	5.1
30	34	22	405	13	-----	48	252	39	8.6	12	4.5	4.9
31	32	-----	425	12	-----	46	-----	35	-----	8.1	4.5	-----
Total	2,338	675	5,281	2,336	2,125	3,435	3,779	5,801	586.7	476.2	314.7	166.3
Mean	75.4	22.5	170	75.4	75.9	111	126	187	19.6	15.4	10.2	5.54
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-

Calendar year 1965 : Max 895 Min 4.1 Mean 97.5 Cfsm - In. -
Water year 1965-66 : Max 895 Min 3.0 Mean 74.8 Cfsm - In. -

4-0905. Thorn Creek at Thornton, Ill..

Location.--Lat 41°34'05", long 87°36'30", near center of $\frac{1}{2}$ 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 1966.

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.--18 years, 89.5 cfs.

Extremes.--Maximum discharge during year, 3,240 cfs Dec. 25 (gage height, 14.18 ft); minimum daily, 14 cfs Sept. 18.
1948-66: 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	323	41	38	359	31	134	63	260	51	32	23	22
2	214	43	38	244	30	287	63	172	51	29	31	19
3	123	42	43	194	28	612	63	131	54	26	25	20
4	85	38	37	150	28	898	62	103	55	25	23	18
5	72	41	32	124	27	510	65	92	52	45	23	16
6	69	38	35	112	27	203	60	85	55	46	22	20
7	68	36	36	100	30	122	59	76	48	36	23	21
8	72	38	32	79	167	100	59	139	44	34	30	20
9	56	39	33	74	378	90	60	104	48	32	31	20
10	47	36	35	70	696	86	60	85	44	28	43	20
11	49	36	98	62	612	110	52	389	36	56	41	16
12	44	49	122	60	255	171	54	2070	33	24	28	18
13	42	44	204	67	157	229	51	1360	139	34	25	19
14	41	35	147	63	126	182	48	673	78	26	25	26
15	39	33	94	54	104	139	48	376	54	22	29	32
16	38	35	77	49	90	110	49	494	59	18	30	18
17	33	33	63	49	76	92	49	319	44	17	30	16
18	37	32	51	48	70	97	79	384	40	18	34	14
19	39	36	46	46	62	90	134	276	32	21	32	16
20	62	33	47	45	55	76	417	178	32	20	28	16
21	122	32	49	44	54	72	1010	142	36	19	31	22
22	215	36	43	42	49	100	532	116	36	20	75	18
23	212	35	43	40	48	121	430	109	33	18	32	17
24	141	32	554	40	49	100	365	237	33	17	27	19
25	96	30	2980	40	51	81	235	156	29	18	29	36
26	78	67	1720	39	48	78	169	118	27	20	28	22
27	66	94	782	38	44	72	238	102	28	162	27	17
28	57	58	441	36	63	65	607	90	32	65	23	17
29	51	47	318	34	70	70	462	74	33	39	25	26
30	47	42	394	33	---	78	376	65	30	31	26	20
31	43	---	511	32	---	69	---	52	---	24	27	---
Total	2,681	1,231	9,143	2,467	3,455	5,234	5,019	9,034	1,366	1,022	926	601
Mean	86.5	41.0	295	79.6	123	169	201	291	45.5	33.0	29.9	20.0
Cfsm	0.832	0.394	2.84	0.765	1.18	1.63	1.93	2.80	0.438	0.317	0.288	0.192
In.	0.96	0.44	3.27	0.88	1.24	1.87	2.15	3.23	0.49	0.37	0.33	0.21

Calendar year 1965: Max 2,980 Min 20 Mean 133 Cfsm 1.28 In. 17.38
Water year 1965-66: Max 2,980 Min 14 Mean 118 Cfsm 1.13 In. 15.44

Peak discharge (base, 900 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	1300	14.18	3,240	4-21	1245	9.46	1,120
3-4	1800	9.02	1,000	5-12	1445	12.99	2,440

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[illegible]

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 1966.

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.--19 years, 92.8 cfs.

Extremes.--Maximum discharge during year, 2,400 cfs Dec. 25 (gage height, 13.88 ft); minimum, 5.0 cfs Sept. 20 (gage height, 3.76 ft). 1947-66: Maximum discharge, 3,880 cfs Oct. 11, 1954 (gage height, 19.48 ft, present datum, site then in use); minimum, 2.0 cfs (regulated) Oct. 8, 1956; minimum gage height, 3.35 ft Sept. 21, 1956.

Remarks.--Records good except those for the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	397	59	39	726	28	67	66	390	52	17	16	7.2
2	446	57	37	581	27	107	63	300	48	15	12	9.1
3	347	54	43	452	25	365	62	225	44	15	13	9.4
4	240	45	42	352	25	651	62	176	43	13	12	9.4
5	174	47	41	283	25	637	60	150	40	20	11	8.4
6	137	44	36	235	26	464	59	119	36	22	11	5.9
7	114	44	40	199	30	284	57	103	32	16	11	6.8
8	104	41	35	159	43	196	56	116	28	15	17	8.8
9	92	41	35	131	220	161	55	127	37	14	16	11
10	83	38	35	135	365	145	53	111	39	11	19	11
11	74	36	51	100	498	150	50	180	34	16	21	11
12	66	42	65	93	419	169	47	1,200	29	16	19	12
13	60	38	96	83	279	222	46	1,410	88	17	16	14
14	57	33	114	75	199	227	44	1,070	119	17	15	15
15	52	37	102	68	159	191	41	809	79	18	15	17
16	52	38	85	62	133	161	39	671	63	15	13	20
17	51	30	72	57	109	138	40	538	52	12	13	20
18	49	32	61	53	92	125	49	451	46	12	11	15
19	46	31	54	49	78	112	63	466	40	8.9	9.6	6.2
20	55	31	52	46	68	102	144	406	33	8.5	9.9	6.9
21	68	31	51	43	62	96	472	298	29	10	19	10
22	138	33	48	41	57	105	549	221	26	9.9	31	9.1
23	255	31	49	39	52	120	536	175	23	9.3	26	8.4
24	237	30	313	37	50	106	557	166	21	8.3	20	8.8
25	174	31	2,090	35	49	96	501	158	19	10	15	14
26	127	45	1,920	34	51	87	381	134	18	13	9.8	11
27	103	60	1,300	33	52	82	308	110	19	53	8.4	11
28	86	56	1,000	32	56	76	397	90	21	63	7.5	12
29	78	47	708	31	-----	72	521	77	20	45	7.5	14
30	72	42	693	30	-----	66	487	67	19	27	6.8	9.1
31	64	-----	847	29	-----	71	-----	59	-----	18	6.8	-----
TOTAL	4,098	1,224	10,154	4,323	3,247	5,649	5,865	10,573	1,197	564.9	438.3	331.5
MEAN	132	40.8	328	139	118	182	196	341	37.9	18.2	14.1	11.1
CFSM	1.06	.326	2.62	1.11	.944	1.46	1.57	2.73	.319	.146	.113	.089
IN	1.22	.36	3.02	1.29	.98	1.60	1.74	3.15	.36	.17	.13	.10

CALENDAR YEAR 1965 MAX 2,090 MIN 5.3 MEAN 142 CFSM 1.14 INCHES 15.47
 WATER YEAR 1965-66 MAX 2,090 MIN 5.9 MEAN 131 CFSM 1.05 INCHES 14.20

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	1830	13.88	2,400				
3-4	2030	8.58	715				
5-12	2300	11.61	1,560				

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 1966.

Gage.--Water-stage recorder. Datum of gage is 580.00 ft above mean sea level, datum of 1929.

Average discharge.--8 years, 16.2 cfs.

Extremes.--Maximum daily discharge during year, 158 cfs Dec. 28-30; maximum gage height, 10.74 ft Dec. 26; minimum, 0.1 cfs Sept. 12, 24.
1958-66: 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.--Records poor. During times of flood on Deep River, reverse flow may occur at the gage.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	19	9.6	146	3.2	23	18	54	24	2.1	5.2	1.7
2	52	16	10	134	3.0	30	18	52	22	2.0	5.2	1.5
3	48	15	12	122	2.9	34	18	50	18	1.7	3.6	1.4
4	43	14	12	116	2.8	40	16	42	15	2.1	3.2	1.3
5	41	12	11	104	2.8	47	15	38	12	3.4	2.8	1.0
6	37	11	11	98	3.0	52	15	34	9.6	3.2	2.6	.8
7	35	11	9.9	86	5.0	52	16	32	10	2.3	3.6	.6
8	33	11	8.8	74	8.0	50	15	25	8.1	1.8	9.6	.5
9	31	10	8.0	65	25	47	15	19	11	2.4	1.3	.4
10	27	9.6	7.7	54	38	44	14	18	8.5	2.1	11	.3
11	25	9.0	13	45	42	42	11	27	7.0	4.4	12	.3
12	23	9.0	16	40	44	42	8.1	62	5.9	3.4	10	.2
13	21	10	19	36	47	40	7.3	98	20	3.6	8.5	.3
14	19	9.6	21	34	47	38	6.6	121	21	3.4	7.3	.4
15	17	9.0	23	30	44	36	6.2	130	26	2.6	7.0	2.0
16	16	8.8	22	25	40	34	5.9	134	30	2.3	5.9	.7
17	14	8.2	21	23	36	34	5.7	129	23	2.3	5.2	.4
18	13	7.7	20	19	33	32	8.1	125	12	2.4	4.4	.2
19	11	7.4	18	17	31	30	10	118	10	2.4	3.6	.2
20	13	7.2	16	14	29	29	18	110	8.5	2.1	3.2	.4
21	14	6.7	16	12	32	32	38	100	7.7	1.8	4.1	1.0
22	20	6.2	16	10	24	26	44	96	6.2	1.5	8.5	.5
23	25	5.7	16	8.8	22	27	52	92	25	1.4	5.9	.3
24	25	5.5	29	7.8	20	27	57	86	4.9	1.4	4.1	.1
25	25	5.5	65	7.0	19	25	54	80	4.1	1.4	3.6	1.3
26	25	8.2	100	6.2	18	24	50	72	3.9	2.1	3.2	1.5
27	27	13	130	5.4	17	22	47	66	3.9	1.2	3.0	.9
28	25	13	158	5.0	18	20	52	58	3.6	10	2.8	.6
29	23	11	158	4.5		20	54	53	3.0	7.0	2.4	1.2
30	21	10	158	4.0	-----	20	54	50	2.3	5.7	2.3	1.1
31	20	-----	152	3.5	-----	19	-----	43	-----	5.2	2.0	-----
Total	824	299.3	1,287.0	1,356.2	656.7	1,038	748.9	2,214	366.2	101.5	168.8	23.1
Mean	26.6	9.98	41.5	43.7	23.5	33.5	25.0	71.4	12.2	3.27	5.44	0.770
Cfsm	-	-	-	-	-	-	-	-	-	-	-	-
In.	-	-	-	-	-	-	-	-	-	-	-	-
Calendar year 1965	Max 158	Min 0.4	Mean 22.5	Cfsm -	In. -							
Water year 1965-66	Max 158	Min 0.1	Mean 24.9	Cfsm -	In. -							

STREAMS TRIBUTARY TO LAKE MICHIGAN

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 1966 (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.--18 years (1943-50, 1955-66), 130 cfs.

Extremes.--Maximum discharge during year, 2,010 cfs Dec. 26 (gage height, 13.26 ft); minimum daily, 11 cfs Sept. 7.
1943-66: Maximum discharge, 3,430 cfs Oct. 11, 1954; maximum gage height, 16.44 ft Mar. 16, 1944, from graph based on gage readings; minimum discharge determined, 1.8 cfs, Oct. 14, 1946.

Remarks.--Records good except those for the winter period, which are fair. Burns ditch is an artificial channel which reverses the direction of flow of part of Little Calumet River and flows into Lake Michigan at Wickliffe.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	427	91	60	994	32	89	100	559	89	28	25	14
2	535	84	59	842	32	128	94	451	80	26	32	14
3	499	78	64	690	31	361	93	343	72	25	20	14
4	373	70	65	559	31	633	93	253	66	23	18	13
5	283	66	64	469	32	652	89	211	60	32	17	12
6	221	63	60	397	33	633	87	171	56	38	17	14
7	189	63	59	325	37	433	85	149	53	28	18	11
8	165	60	58	271	65	307	80	164	51	24	33	12
9	141	58	54	219	271	235	80	179	63	24	36	14
10	133	57	55	203	433	211	79	156	59	23	37	14
11	119	53	83	179	559	219	73	232	55	29	40	14
12	105	53	98	156	541	253	70	957	49	31	31	15
13	98	59	126	142	415	307	68	1,540	114	33	26	15
14	90	52	149	128	289	325	66	1,400	151	29	24	17
15	83	52	149	115	227	271	62	1,130	128	26	23	19
16	81	52	133	102	179	227	60	975	106	23	21	20
17	78	51	112	90	156	195	60	823	86	20	20	17
18	73	46	98	80	128	179	73	709	73	18	19	15
19	71	46	91	75	112	164	89	652	66	19	17	14
20	81	44	85	66	98	149	201	595	57	15	15	14
21	91	44	84	58	86	142	559	487	54	14	21	16
22	181	45	81	53	76	149	671	361	44	14	49	16
23	319	45	81	48	70	156	690	271	40	13	34	15
24	355	44	312	46	68	156	709	253	37	14	29	14
25	265	44	1,570	43	66	142	671	227	35	13	24	21
26	205	60	1,980	41	66	128	559	195	34	19	21	20
27	165	83	1,720	39	64	121	487	171	32	82	18	18
28	133	78	1,370	37	68	107	541	142	32	84	16	18
29	119	71	1,090	35	-----	107	633	128	31	62	15	20
30	112	65	956	34	-----	100	652	114	30	41	15	18
31	98	-----	1,050	32	-----	100	-----	99	-----	29	14	-----
TOTAL	5,888	1,777	12,016	6,568	4,265	7,379	7,874	14,097	1,903	899	745	464
MEAN	190	59.2	388	212	152	238	262	455	63.4	29.0	24.0	15.5
CFSM	1.19	0.370	2.42	1.32	0.950	1.49	1.64	2.84	0.396	0.181	0.150	0.097
IN	1.37	0.41	2.79	1.52	0.99	1.72	1.83	3.27	0.44	0.21	0.17	0.11
CALENDAR YEAR 1965	MAX	1,980	MIN	10	MEAN	191	CFSM	1.19	INCHES	16.17		
WATER YEAR 1965-66	MAX	1,980	MIN	11	MEAN	175	CFSM	1.09	INCHES	14.83		

4-0940. Little Calumet River at Porter, Ind.

Location (revised).--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 1966.

Gage.--Digital water-stage recorder. Datum of gage is 603.48 ft above mean sea level, datum of 1929. Prior to June 26, 1952, wire-weight gage, July 26, 1952 to May 3, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--21 years, 68.3 cfs.

Extremes.--Maximum discharge during year, 1,990 cfs Dec. 25 (gage height, 9.92 ft); minimum, 22 cfs Sept. 10-14, 17-20, 24; minimum gage height, 2.56 ft Sept. 12.
1945-66: Maximum discharge, 3,110 cfs Oct. 10, 1954 (gage height, 11.66 ft); minimum, 15 cfs Dec. 6, 1958, result of freezeup; minimum gage height, 2.14 ft Aug. 22, 1949.

Remarks.--Records good except those during the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	156	48	39	258	27	58	56	208	46	28	28	24
2	137	46	39	168	27	79	63	140	44	26	30	24
3	87	46	44	131	27	150	65	94	44	26	20	24
4	67	44	42	100	27	296	65	76	44	28	26	23
5	57	42	40	88	27	316	58	67	41	29	26	23
6	52	42	39	82	27	168	58	61	39	42	26	23
7	50	42	37	77	36	107	63	55	37	31	28	23
8	60	44	37	68	82	82	65	62	34	29	42	23
9	60	48	35	72	158	88	63	65	42	29	60	23
10	52	44	37	65	240	94	56	57	41	30	37	22
11	48	42	75	56	384	100	52	93	36	31	43	22
12	44	42	100	56	258	107	48	644	32	30	37	22
13	42	42	146	56	149	122	46	697	63	30	31	22
14	40	40	168	54	114	107	44	400	52	30	30	22
15	40	39	104	52	94	82	44	263	42	29	29	23
16	42	39	78	48	82	72	42	223	46	28	28	23
17	44	37	64	46	68	68	42	221	41	26	27	22
18	44	35	57	44	60	66	56	156	36	26	26	22
19	42	35	52	42	53	77	72	149	32	44	25	22
20	50	35	50	40	49	66	131	107	31	32	24	22
21	67	35	50	39	45	65	360	88	30	29	25	26
22	137	35	48	37	43	77	434	72	29	28	70	25
23	296	35	54	36	41	88	240	65	28	28	43	23
24	240	34	172	34	41	82	296	82	28	26	32	22
25	137	34	1,620	33	40	72	240	72	28	26	29	20
26	90	40	1,020	31	41	68	140	63	26	28	27	28
27	70	67	490	31	42	65	107	58	28	57	26	24
28	60	54	316	30	46	58	149	54	28	59	25	24
29	54	44	224	29	-----	56	384	50	29	38	24	26
30	52	40	194	28	-----	61	240	48	28	32	24	27
31	50	-----	296	27	-----	58	-----	48	-----	29	24	-----
TOTAL	2,467	1,250	5,767	1,958	2,328	3,067	3,779	4,538	1,105	984	980	707
MEAN	79.6	41.7	186	63.2	83.1	98.9	126	146	36.8	31.7	31.6	23.6
CFSM	1.27	.663	2.96	1.00	1.32	1.57	2.00	2.32	.505	.504	.502	.375
IN	1.46	.74	3.41	1.16	1.38	1.81	2.23	2.68	.05	.58	.50	.42
CALENDAR YEAR 1965	MAX 1,620		MIN 17		MEAN 82.5		CFSM 1.31		INCHES 17.81			
WATER YEAR 1965-66	MAX 1,620		MIN 22		MEAN 79.3		CFSM 1.26		INCHES 17.11			

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	1330	9.92	1,990				
5-12	2115	8.19	1,030				

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, 1½ 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 1966.

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.--21 years, 67.4 cfs.

Extremes.--Maximum discharge during year, 1,610 cfs Dec. 25 (gage height, 11.53 ft); minimum, 21 cfs Sept. 12 (gage height, 2.23 ft). 1945-66: Maximum discharge, 3,180 cfs Oct. 11, 1954 (gage height, 14.12 ft); minimum, 6.3 cfs Aug. 24, 1955; minimum gage height, 2.23 ft Sept. 12, 1966.

Remarks.--Records good except those for the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	188	46	38	203	26	52	55	157	44	28	24	24
2	140	44	38	141	26	86	58	110	42	27	29	23
3	86	44	42	110	26	197	60	87	42	27	25	23
4	64	44	43	92	26	270	59	74	41	26	24	23
5	56	40	41	83	26	260	55	67	39	28	24	22
6	54	40	39	77	28	145	55	61	38	35	24	22
7	51	40	38	71	35	95	56	56	38	30	32	22
8	54	44	36	61	96	79	54	71	38	27	62	22
9	54	44	36	62	177	78	54	84	43	27	37	22
10	48	40	36	60	193	83	52	68	42	27	31	22
11	46	38	58	51	228	97	50	105	39	32	40	22
12	44	38	77	41	152	111	49	628	37	32	30	22
13	44	38	150	54	100	140	47	633	88	34	27	23
14	42	38	131	52	83	114	46	323	78	33	27	23
15	42	36	88	50	71	93	45	208	54	29	31	23
16	44	36	68	46	64	81	45	196	66	26	29	23
17	44	36	59	43	54	75	44	158	50	25	26	23
18	44	34	54	42	52	73	52	149	43	25	25	23
19	42	35	51	40	48	82	63	186	40	28	24	22
20	48	35	49	38	44	73	114	140	36	26	24	24
21	78	36	49	37	42	66	261	96	35	24	26	26
22	168	38	49	36	41	73	290	79	34	24	52	25
23	221	36	52	34	40	85	198	69	33	24	41	23
24	158	35	180	33	40	82	228	84	32	24	31	22
25	98	35	1,350	32	40	69	200	75	31	23	28	28
26	74	40	925	31	40	66	124	62	29	24	26	29
27	64	62	458	30	40	60	105	56	29	48	25	25
28	56	57	260	28	43	56	165	51	30	42	24	24
29	51	46	168	27	-----	55	304	48	30	30	23	24
30	48	40	183	27	-----	58	235	46	29	27	23	26
31	48	-----	253	26	-----	56	-----	45	-----	25	24	-----
TOTAL	2,299	1,215	5,099	1,758	1,881	3,010	3,223	4,272	1,250	887	918	705
MEAN	74.2	40.5	164	56.7	67.2	97.1	107	138	41.7	28.6	29.6	23.5
CFSM	.943	.515	2.08	.721	.854	1.23	1.36	1.75	.530	.363	.376	.299
IN	1.09	.57	2.41	.83	.89	1.42	1.52	2.02	.59	.42	.43	.33

CALENDAR YEAR 1965 MAX 1,350 MIN 20 MEAN 81.9 CFSM 1.04 INCHES 14.13
WATER YEAR 1965-66 MAX 1,350 MIN 22 MEAN 72.6 CFSM .923 INCHES 12.53

Peak discharge (base, 600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	1300	11.53	1,610				
5-12	1945	9.60	984				

STREAMS TRIBUTARY TO LAKE MICHIGAN

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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 1966.

Gage.--Water-stage recorder. Datum of gage is 805.4 ft above mean sea level, datum of 1929.

Average discharge.--9 years, 136 cfs.

Extremes.--Maximum discharge during year, 419 cfs Dec. 29 (gage height, 4.35 ft); maximum gage height, 4.65 ft Jan. 9 (backwater from ice); minimum discharge, 69 cfs Sept. 19 (gage height, 2.16 ft).
1957-66: Maximum discharge, 488 cfs Mar. 15, 1962 (gage height, 4.37 ft); maximum gage height, that of Jan. 9, 1966; 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 except those for winter period, which are fair. Small diurnal fluctuation caused by powerplants above station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	99	142	145	355	163	175	208	267	225	93	110	118
2	102	122	140	355	153	188	203	273	201	93	106	115
3	99	112	138	353	163	199	201	267	190	88	103	112
4	101	119	138	348	161	190	199	263	183	81	103	112
5	106	131	130	348	168	178	203	257	170	78	99	106
6	97	131	130	350	168	183	203	249	170	81	93	107
7	93	132	143	341	171	195	210	243	164	75	97	102
8	95	130	148	320	188	194	203	243	146	84	94	94
9	102	130	130	300	210	182	187	231	148	93	84	93
10	106	126	122	280	237	182	187	219	148	97	86	92
11	101	121	137	270	255	185	187	223	142	97	94	90
12	93	128	150	260	259	185	183	263	137	107	93	92
13	85	125	161	250	263	187	171	297	126	121	98	90
14	85	128	180	240	255	195	164	323	126	132	97	84
15	86	134	188	230	243	195	166	337	137	146	106	81
16	90	125	197	230	231	194	150	362	143	148	124	81
17	84	128	199	220	218	194	143	364	145	145	125	79
18	81	128	199	210	206	187	130	355	146	142	137	78
19	74	122	188	210	190	194	143	339	134	134	145	71
20	81	122	178	200	170	192	161	323	131	118	150	75
21	104	124	168	200	170	178	178	308	126	102	148	83
22	146	107	166	190	180	192	176	301	122	99	158	84
23	164	117	166	180	182	208	197	297	110	103	166	78
24	197	114	188	180	190	233	216	290	111	106	201	78
25	206	107	251	170	182	241	237	288	111	103	218	74
26	208	124	319	160	163	237	245	288	102	95	204	74
27	201	126	355	150	171	235	253	280	98	98	185	80
28	203	145	396	140	158	233	261	271	93	104	173	78
29	190	154	417	130	-----	225	261	265	94	112	151	74
30	168	150	396	140	-----	219	263	249	97	118	124	78
31	159	-----	364	150	-----	214	-----	233	-----	114	119	-----
Total	3,806	3,804	5,327	7,460	5,468	6,189	5,889	9,768	4,176	3,307	3,991	2,653
Mean	123	127	204	241	195	200	196	283	139	107	129	88.4
Cfsm	0.644	0.665	1.07	1.26	1.02	1.05	1.03	1.48	0.728	0.560	0.675	0.463
In.	0.74	0.74	1.23	1.45	1.06	1.21	1.15	1.71	0.81	0.64	0.78	0.52

Calendar year 1965: Max 417 Min 45 Mean 147 Cfsm 0.770 In. 10.47
Water year 1965-66: Max 417 Min 71 Mean 169 Cfsm 0.885 In. 12.04

Location.--Lat 41°48'05", long 85°45'15", in SW¹/₄ 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.

Records available.--October 1923 to September 1966. 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.

Extremes.--Maximum discharge during year, 4,190 cfs May 18 (gage height, 6.20 ft); minimum, 145 cfs July 17 (gage height, 1.14 ft); minimum dolly, 400 cfs Sept. 18.

1923-66: 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.

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1180	1020	1200	3910	1710	1670	2090	2910	1840	1090	835	844
2	1060	1020	1080	3760	1630	1760	2000	2840	1830	972	825	1070
3	620	951	1400	3590	1510	1770	2000	2890	1750	696	787	856
4	874	986	762	3600	1480	1940	2080	2590	1470	580	764	428
5	902	1170	1020	3370	1200	1790	2040	2550	1500	1040	786	447
6	902	638	1480	3050	880	1760	1970	2470	1660	820	437	963
7	853	937	1130	3070	1500	2120	1910	2350	1610	908	445	936
8	1140	1140	1130	2740	1460	2060	1850	2240	1310	1190	833	836
9	811	1060	1120	2530	1530	2080	1800	2350	1220	518	915	846
10	888	1160	1250	2550	1770	1960	1730	2130	1530	505	774	445
11	895	1010	1100	2470	2180	1860	2010	1980	1220	1260	795	474
12	909	1140	992	2120	2360	1860	1950	2370	1210	1110	803	900
13	909	916	1430	2080	2390	1900	1760	2790	1480	1050	448	785
14	888	916	1390	2080	2440	2020	1730	3140	1570	1020	435	804
15	909	1210	1560	2110	2460	2010	1720	3510	1630	1080	814	759
16	748	1050	1570	1980	2430	2080	1400	3840	1460	603	861	742
17	488	1020	1680	1900	2370	1970	1120	3720	1470	553	954	401
18	699	872	1390	2060	2160	1850	1600	3890	1040	997	945	400
19	958	968	1480	2010	1860	1910	1860	3620	974	1180	964	738
20	916	861	1720	1810	1830	1780	1720	3430	1390	1000	615	792
21	986	818	1610	1960	1650	1930	1950	3500	1370	1020	855	793
22	1380	1040	1550	1700	1710	2010	1860	3120	1120	978	1310	754
23	1100	1020	1450	1680	1690	1820	2010	3000	1120	434	1100	774
24	650	948	1420	1660	1540	1980	2350	2980	1240	465	857	415
25	1040	795	2320	1800	1620	1960	2620	2700	1140	920	974	449
26	1250	1080	2560	1700	1480	1920	2940	2660	533	764	1090	723
27	1060	868	2780	1390	772	1960	3020	2350	1080	758	730	724
28	1030	1110	3050	1510	1730	2090	2940	2450	1060	809	836	781
29	1060	1290	3320	1130		2220	2880	2360	1030	778	1000	712
30	1040	1160	3790	1350		2180	3110	1890	1010	425	1030	857
31	986		3750	1820		2070		2190		421	918	
Total	29,131	30,174	53,484	70,490	49,349	60,290	62,020	85,810	39,867	25,944	25,635	21,448
Mean	940	1,006	1,725	2,274	1,762	1,945	2,067	2,800	1,329	837	827	715
Cfsm	0.504	0.539	0.924	1.22	0.944	1.04	1.11	1.50	0.712	0.449	0.443	0.383
In.	0.58	0.60	1.07	1.40</								

Calendar year 1965 :	Max	3,790	Min	420	Mean	1,334	Cfsm	0.715	In.	9.71
Water year 1965-66 :	Max	3,910	Min	400	Mean	1,520	Cfsm	0.815	In.	11.05

STREAMS TRIBUTARY TO LAKE MICHIGAN

4-0996.10 Pretty Lake Inlet near Stroh, Ind.

Location.--Lat 41°34'45", long 85°14'44", in NW¼ sec. 15, T. 36 N., R. 12 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 1966.

Gage.--Water-stage recorder. Datum of gage is 960.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 21.1 cfs Dec. 25 (gage height, 8.12 ft); minimum daily, 0.01 cfs Jan. 26-31. 1963-66: Maximum discharge, that of Dec. 25, 1965; no flow for many days in most years.

Remarks.--Records poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.17	0.13	0.11	1.2	0.02	0.37	0.42	0.72	0.22	0.11	0.09	0.09
2	.11	.12	.11	.95	.03	.31	.37	.62	.22	.11	.10	.08
3	.08	.11	.13	.83	.04	.37	.40	.51	.20	.11	.09	.08
4	.07	.10	.13	.67	.04	.58	.40	.45	.17	.23	.09	.09
5	.07	.11	.13	.62	.06	.48	.35	.40	.17	.17	.08	.08
6	.07	.11	.12	.54	.06	.25	.35	.35	.16	.15	.08	.08
7	.08	.17	.11	.48	.06	.15	.40	.33	.16	.12	.08	.08
8	.09	.17	.10	.31	.10	.13	.40	.40	.16	.11	.08	.08
9	.11	.17	.09	.22	.29	.27	.37	.40	.39	.41	.08	.08
10	.11	.16	.09	.15	1.1	.27	.33	.35	.33	.23	.12	.07
11	.10	.13	.45	.11	.95	.31	.31	.66	.23	.17	.11	.07
12	.08	.13	.95	.11	.62	.70	.29	3.6	.17	.32	.10	.07
13	.07	.12	1.1	.10	.54	1.0	.29	1.8	.16	.33	.09	.07
14	.06	.11	.78	.09	.48	.72	.25	1.3	.16	.20	.13	.07
15	.06	.11	.58	.08	.23	.58	.23	1.1	.15	.16	.13	.07
16	.06	.11	.45	.06	.15	.48	.23	.95	.23	.13	.63	.07
17	.06	.10	.35	.04	.09	.45	.22	.78	.17	.12	.17	.06
18	.05	.10	.29	.03	.07	.48	.29	.78	.16	.12	.12	.06
19	.05	.10	.25	.03	.04	.48	.40	.67	.15	.11	.10	.07
20	.17	.10	.23	.03	.02	.42	.45	.54	.13	.11	.10	.08
21	.25	.09	.22	.04	.02	.42	.95	.54	.13	.11	.16	.08
22	.89	.09	.20	.05	.02	1.5	.67	.51	.13	.10	.62	.08
23	.95	.08	.22	.05	.03	1.3	1.4	.45	.13	.10	.25	.07
24	.67	.08	3.0	.04	.04	.95	1.7	.48	.12	.10	.17	.07
25	.45	.08	9.5	.03	.06	.72	1.0	.40	1.1	.10	.15	.08
26	.33	.13	2.7	.01	.08	.67	.78	.33	.11	.09	.11	.08
27	.25	.37	1.8	.01	.09	.54	.89	.29	.11	.15	.11	.08
28	.22	.23	1.3	.01	.17	.45	1.2	.27	.12	.11	.10	.08
29	.19	.19	1.1	.01		.42	.89	.25	.12	.10	.10	.09
30	.17	.13	1.1	.01		.48	.78	.23	.11	.10	.09	.08
31	.16	-----	1.2	.01	-----	.42	-----	.23	-----	.09	.09	-----
Total	6.25	3.93	28.69	6.92	5.50	16.67	17.01	20.69	5.08	4.67	4.52	2.29
Mean	0.202	0.131	0.932	0.223	0.196	0.538	0.567	0.667	0.169	0.151	0.146	0.076
Cfsm	0.103	0.067	0.476	0.114	0.100	0.274	0.289	0.340	0.086	0.077	0.074	0.039
In.	0.12	0.07	0.55	0.13	0.10	0.32	0.32	0.39	0.10	0.09	0.09	0.04

Calendar year 1965: Max 9.5 Min 0 Mean 0.401 Cfsm 0.205 In. 2.78
 Water year 1965-66: Max 9.5 Min 0.01 Mean 0.335 Cfsm 0.171 In. 2.32

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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.

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.

Extremes.--Maximum discharge during year, 394 cfs Jan. 1-3; maximum gage height, 8.03 ft Jan. 2; minimum, 9.2 cfs Sept. 24 (gage height, 4.66 ft).

1950-66: 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.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	76	45	<u>394</u>	90	99	139	218	<u>124</u>	31	26	<u>41</u>
2	55	71	43	<u>394</u>	78	109	134	218	<u>114</u>	<u>26</u>	25	<u>37</u>
3	55	69	43	<u>394</u>	76	109	134	206	109	<u>26</u>	20	<u>34</u>
4	42	71	43	<u>379</u>	75	119	134	206	99	29	17	<u>33</u>
5	46	76	42	<u>379</u>	<u>74</u>	124	129	194	99	35	16	<u>32</u>
6	43	76	43	364	74	119	124	194	94	31	15	28
7	42	82	42	349	74	119	124	183	89	27	14	25
8	47	88	42	334	74	119	124	172	84	29	<u>13</u>	22
9	45	98	<u>38</u>	306	84	114	119	172	89	32	<u>13</u>	19
10	42	115	<u>38</u>	293	114	114	119	161	94	41	14	17
11	45	120	48	267	139	114	114	161	94	45	19	16
12	42	115	65	242	<u>161</u>	119	109	194	89	47	19	16
13	42	142	88	230	161	134	109	218	84	53	19	15
14	40	<u>148</u>	98	230	150	144	99	254	74	58	22	<u>14</u>
15	39	<u>137</u>	104	218	150	150	94	<u>267</u>	74	<u>59</u>	22	12
16	38	126	93	206	144	150	94	267	79	57	27	10
17	37	115	88	194	139	144	<u>89</u>	267	74	54	30	10
18	<u>36</u>	93	88	183	134	139	89	267	74	52	31	9.9
19	<u>36</u>	76	82	172	129	139	89	254	67	49	31	10
20	39	68	82	161	119	139	94	254	65	49	29	11
21	42	59	71	144	114	139	109	242	59	45	29	12
22	52	53	71	139	109	144	119	230	54	40	55	11
23	71	47	69	129	104	150	129	218	50	38	63	9.9
24	<u>88</u>	42	110	116	99	150	161	218	47	37	<u>65</u>	<u>9.2</u>
25	<u>82</u>	<u>41</u>	225	109	95	<u>161</u>	183	206	43	36	<u>64</u>	12
26	88	42	319	102	94	161	183	194	42	35	61	12
27	82	45	349	97	94	161	183	183	40	35	57	13
28	82	49	364	93	94	150	194	172	36	35	53	12
29	82	51	364	89		150	206	161	35	34	51	12
30	82	48	<u>379</u>	85	-----	150	<u>218</u>	144	<u>33</u>	31	47	12
31	76	-----	379	<u>82</u>	-----	144	-----	<u>134</u>	-----	27	44	-----
Total	1.697	2.439	3.955	5.874	3.032	4.177	3.945	5.429	2.208	1.223	1.011	527.0
Mean	54.7	81.3	128	222	108	135	131	207	73.6	39.4	32.6	17.6
Cfsm	0.411	0.611	0.962	1.67	0.812	1.02	0.985	1.56	0.553	0.296	0.245	0.132
In.	0.47	0.68	1.11	1.92	0.85	1.18	1.10	1.80	0.62	0.34	0.28	0.15
Calendar year 1965:	Max	379	Min	17	Mean	111	Cfsm	0.835	In.	11.32		
Water year 1965-66:	Max	394	Min	9.2	Mean	103	Cfsm	0.774	In.	10.50		

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 1966.

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.--35 years, 490 cfs.

Extremes.--Maximum discharge during year 3,960 cfs Dec. 26 (gage height, 8.75 ft); minimum, 118 cfs Sept. 12, 20; minimum gage height, 1.97 ft July 1.

1931-66: 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.--Records good except those for the winter period, which are fair. The flow is regulated by three powerplants above station. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	412	345	277	1,670	330	456	522	1,060	565	165	156	214
2	435	325	271	1,680	325	474	509	953	527	173	160	193
3	412	325	271	1,550	320	475	495	885	493	171	154	188
4	368	325	273	1,460	320	568	490	840	461	153	151	186
5	390	325	269	1,390	330	662	481	798	431	199	150	181
6	345	305	265	1,340	340	573	480	757	403	211	138	175
7	345	305	261	1,290	350	511	478	712	377	194	134	173
8	325	325	272	1,200	368	477	467	697	359	187	134	166
9	345	325	284	1,070	520	463	452	706	353	167	140	166
10	305	325	280	1,150	790	471	445	670	359	216	152	159
11	305	325	325	980	1,130	488	430	700	348	204	201	154
12	285	325	413	960	1,090	521	416	1,280	331	243	184	133
13	285	325	561	947	868	672	416	1,920	321	252	173	124
14	258	325	614	907	771	722	397	1,690	311	269	168	133
15	237	345	555	830	689	634	384	1,370	301	247	177	136
16	216	342	513	791	642	587	376	1,230	324	235	216	134
17	223	334	484	715	577	560	364	1,170	319	224	208	131
18	226	323	467	700	538	562	357	1,140	299	215	185	130
19	234	312	455	680	518	567	371	1,120	261	208	178	124
20	237	301	450	638	471	567	387	1,060	271	213	170	121
21	258	287	438	607	432	564	530	1,020	257	186	190	126
22	345	243	435	571	461	651	699	981	221	184	646	134
23	530	280	427	539	452	823	709	941	242	174	1,050	134
24	580	257	564	498	423	753	1,180	907	237	166	702	131
25	530	240	2,460	470	412	663	1,250	877	191	165	459	133
26	458	232	3,550	440	399	620	940	840	227	170	374	136
27	458	303	2,350	400	383	597	829	793	186	176	326	141
28	435	333	1,890	380	395	570	1,030	742	193	183	291	136
29	435	310	1,670	360	-----	554	1,340	690	196	178	261	134
30	412	288	1,560	350	-----	549	1,230	650	196	165	242	132
31	368	-----	1,590	340	-----	541	-----	609	-----	158	229	-----
TOTAL	10,997	9,260	24,494	26,903	14,644	17,895	18,454	29,808	9,580	6,051	8,099	4,460
MEAN	355	309	790	868	523	577	615	962	319	195	261	149
CFSM	.612	.533	1.36	1.50	.902	.995	1.06	1.66	.550	.336	.450	.257
IN	.71	.59	1.57	1.73	.94	1.15	1.18	1.91	.61	.39	.52	.29

CALENDAR YEAR 1965 MAX 3,550 MIN 121 MEAN 523 CFSM .902 INCHES 12.25
 WATER YEAR 1965-66 MAX 3,550 MIN 121 MEAN 495 CFSM .853 INCHES 11.58

Peak discharge (base, 1,800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-26	0515	8.75	3,960				
5-13	1730	5.75	2,030				

STREAMS TRIBUTARY TO LAKE MICHIGAN

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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 1966. 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.--19 years, 2,907 cfs.

Extremes.--Maximum discharge during year, 9,670 cfs Dec. 26 (gage height, 23.36 ft); minimum daily, 968 cfs Sept. 18.
1947-66: Maximum discharge, 18,400 cfs Apr. 5, 1950 (gage height, 27.82 ft); minimum daily, 336 cfs Aug. 5, 1964.

Remarks.--Records 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 CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.			
1	2,240	2,310	2,080	7,750	3,480	3,450	3,930	5,950	3,730	1,900	1,400	1,650			
2	2,140	2,160	2,050	7,700	3,260	3,360	3,790	5,500	3,550	1,780	1,620	1,580			
3	1,890	2,130	2,110	7,360	3,170	3,390	3,600	5,460	3,370	1,680	1,530	1,800			
4	1,810	2,050	1,980	7,160	3,000	3,760	3,860	5,160	3,250	1,300	1,460	1,160			
5	2,400	2,100	1,760	6,930	2,960	4,010	3,780	4,940	3,000	1,910	1,450	1,070			
6	1,870	1,900	2,180	6,430	2,600	3,650	3,760	4,780	3,020	1,770	1,090	1,470			
7	1,820	1,890	2,030	6,300	2,500	3,750	3,610	4,560	3,110	1,730	1,040	1,670			
8	1,890	2,230	1,930	5,880	3,340	3,750	3,640	4,350	2,840	1,930	1,400	1,520			
9	1,990	2,120	1,970	5,290	3,450	3,680	3,380	4,450	2,570	1,670	1,510	1,460			
10	1,780	2,010	1,860	5,460	4,030	3,580	3,400	4,180	2,640	1,280	1,500	1,120			
11	1,970	2,180	2,000	5,170	5,030	3,590	3,430	4,110	2,670	2,100	1,570	1,050			
12	1,890	1,840	2,120	4,380	5,150	3,650	3,460	5,610	2,370	2,290	1,550	1,460			
13	1,640	2,100	2,640	4,850	4,830	3,880	3,300	7,030	2,820	2,150	1,140	1,430			
14	1,820	1,900	2,700	4,560	4,710	3,860	3,190	7,080	2,760	2,060	1,070	1,390			
15	1,430	1,900	2,790	4,530	4,570	3,840	3,090	7,140	2,930	2,130	1,590	1,450			
16	1,670	2,190	2,790	3,850	4,490	3,890	2,940	7,150	2,830	1,630	1,750	1,400			
17	1,410	1,990	2,710	4,100	4,340	3,710	2,520	7,150	2,780	1,410	1,820	1,060			
18	1,390	1,680	2,760	3,800	3,970	3,720	2,740	6,980	2,420	1,790	1,810	968			
19	1,680	1,800	2,530	3,810	3,700	3,640	3,350	6,820	2,140	2,100	1,710	1,330			
20	1,890	1,810	2,580	3,980	3,570	3,670	3,340	6,410	2,530	1,890	1,450	1,490			
21	1,850	1,680	2,730	3,950	3,190	3,680	3,820	6,400	2,590	1,890	1,680	1,500			
22	2,530	1,700	2,460	3,780	3,320	3,890	4,010	6,090	2,730	1,810	2,360	1,490			
23	2,720	1,900	2,570	3,720	3,310	4,310	4,230	5,690	2,150	1,230	3,210	1,450			
24	2,570	1,700	2,790	3,020	3,060	4,160	5,550	5,600	2,100	1,150	2,450	1,130			
25	2,370	1,620	6,370	3,430	3,090	4,100	5,630	5,350	2,040	1,600	2,240	1,150			
26	2,850	1,750	9,310	3,160	3,060	4,130	5,740	5,020	1,660	1,540	2,150	1,390			
27	2,510	2,070	8,310	2,760	2,350	3,890	5,640	4,680	1,500	1,700	1,760	1,450			
28	2,400	2,050	7,480	2,290	2,770	3,910	5,900	4,600	1,710	1,670	1,900	1,480			
29	2,320	2,270	7,480	2,540	-----	4,060	5,980	4,480	1,970	1,570	1,880	1,520			
30	2,160	2,170	7,480	2,940	-----	4,110	6,230	3,980	1,950	1,270	1,960	1,580			
31	2,250	-----	7,660	3,310	-----	4,000	-----	3,930	-----	1,150	1,790	-----			
TOTAL	63,150	59,200	110,210	144,190	100,300	118,070	120,840	170,630	77,730	53,080	52,840	41,668			
MEAN	2,037	1,973	3,555	4,651	3,582	3,809	4,028	5,504	2,591	1,712	1,705	1,389			
CFSM	.610	.591	1.06	1.39	1.07	1.14	1.21	1.65	.776	.513	.511	.416			
IN	.70	.66	1.23	1.61	1.12	1.32	1.35	1.90	.87	.59	.59	.46			
CALENDAR YEAR 1965	MAX		9,310	MIN		1,050	MEAN		2,799	CFSM		.838	INCHES		11.38
WATER YEAR 1965-66	MAX		9,310	MIN		968	MEAN		3,046	CFSM		.912	INCHES		12.38

STREAMS TRIBUTARY TO LAKE MICHIGAN

4-1015. St. Joseph River at Niles, Mich.

Location.--Lat 41°49'45", long 84°15'35", in SW $\frac{1}{4}$ 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 1966. 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.--36 years, 3,033 cfs.

Extremes.--Maximum discharge during year, 12,000 cfs Dec. 26 (gage height, 9.10 ft); minimum daily discharge, 581 cfs July 31. 1930-66: Maximum discharge, 20,200 cfs Apr. 5, 1950 (gage height, 13.10 ft); minimum daily, 420 cfs Aug. 30, 1931.

Remarks.--Records good. 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.680	2.840	2.130	7.810	3.520	3.870	4.320	6.700	3.870	2.060	1.730	2.020
2	2.500	2.820	2.590	3.110	3.020	3.530	4.390	5.980	3.680	2.080	1.640	2.160
3	2.280	2.090	2.370	7.740	3.220	3.850	3.880	5.860	4.040	1.980	1.750	1.690
4	2.040	2.530	2.610	7.220	3.300	3.860	3.410	5.420	2.900	1.650	1.730	1.360
5	2.250	2.260	1.780	7.200	2.960	4.670	3.810	5.100	3.230	1.900	1.670	1.360
6	2.460	2.570	2.640	6.750	2.770	3.820	3.910	5.060	3.370	2.350	1.670	1.750
7	2.050	1.870	2.600	6.410	2.780	4.150	3.740	4.830	3.090	1.920	1.170	1.790
8	2.090	2.410	2.080	6.190	3.280	4.070	3.780	4.430	3.480	1.900	1.570	1.900
9	2.500	2.630	2.480	4.970	3.740	3.900	3.830	4.690	2.400	2.190	1.690	1.750
10	1.330	2.350	2.300	5.740	4.580	3.630	3.220	4.540	2.990	1.530	1.710	1.200
11	2.130	2.440	2.350	5.190	5.890	3.970	3.680	4.260	3.150	1.930	1.780	1.000
12	1.770	2.290	2.580	4.760	5.620	3.850	3.590	6.360	2.420	2.530	1.700	1.370
13	2.040	2.370	3.010	4.670	5.340	4.120	3.520	3.840	3.330	2.290	1.800	1.500
14	1.900	1.970	3.520	4.670	4.980	4.230	3.320	3.020	3.090	2.250	1.180	1.500
15	2.060	2.320	3.340	4.300	4.840	4.260	3.240	7.440	3.250	2.250	1.630	1.330
16	1.670	2.290	3.360	4.030	4.720	4.350	3.060	3.020	3.230	2.120	1.970	1.590
17	1.570	2.250	3.430	4.100	4.540	3.570	2.870	7.590	2.800	1.520	1.750	1.560
18	1.780	2.280	3.140	3.840	4.250	3.850	2.760	7.740	2.760	1.900	1.850	747
19	1.850	1.920	2.870	3.660	3.880	3.660	3.530	7.620	2.210	1.990	1.970	1.480
20	2.390	2.190	3.160	4.100	3.650	3.950	3.700	3.790	2.640	2.120	1.690	1.500
21	2.430	1.890	3.280	3.950	3.320	3.740	4.450	6.510	3.120	2.710	1.580	1.680
22	2.740	2.090	2.820	4.130	3.380	4.060	5.150	6.310	3.040	2.620	3.040	1.630
23	3.740	2.110	3.160	3.400	3.440	4.530	4.920	6.110	2.610	2.310	3.290	1.630
24	3.900	2.280	3.440	3.700	3.430	4.570	6.780	5.940	2.390	1.740	2.790	1.590
25	3.040	1.830	3.640	3.200	3.190	4.690	6.480	5.550	2.520	1.510	2.320	969
26	3.260	1.980	11.100	3.590	3.360	4.130	6.190	5.030	2.070	1.790	2.190	1.660
27	3.060	2.650	10.300	2.900	2.890	4.290	5.970	4.990	1.920	2.240	2.290	1.560
28	2.770	2.170	3.250	2.740	2.430	3.810	6.540	4.600	1.440	1.020	1.640	1.590
29	2.650	2.630	7.770	2.590	-----	4.270	3.970	4.690	1.860	1.120	2.110	1.690
30	2.760	2.660	7.730	2.560	-----	4.130	6.380	4.220	2.090	1.080	2.070	1.740
31	2.460	-----	7.890	3.440	-----	4.200	-----	3.810	-----	581	1.900	-----
Total	74,150	68,980	123,720	147,660	106,320	125,580	131,390	181,050	84,990	59,181	53,870	45,296
Mean	2.391	2.299	4.152	4.763	3.797	4.051	4.380	5.905	2.833	1.909	1.899	1.543
Cfsm	0.652	0.627	1.13	1.30	1.04	1.11	1.19	1.61	0.773	0.521	0.518	0.421
In.	0.75	0.70	1.31	1.50	1.08	1.27	1.33	1.86	0.86	0.60	0.60	0.47

Calendar year 1965: Max 11,100 Min 901 Mean 3,043 Cfsm 0.830 In. 11.27
 Water year 1965-66: Max 11,100 Min 581 Mean 3,329 Cfsm 0.908 In. 12.33

4-1780. St. Joseph River near Newville, Ind.

Location (revised).--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 1966. 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.--20 years, 489 cfs.

Extremes.--Maximum discharge during year, 4,790 cfs Dec. 28 (gage height, 14.24 ft); minimum, 21 cfs Sept. 17 (gage height, 1.69 ft). 1946-66: 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.--Records good except those for the winter period, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	65	177	215	3,030	145	432	550	1,220	167	85	46	51
2	65	153	189	2,680	145	510	510	1,000	175	78	44	47
3	65	141	177	2,400	140	530	450	801	162	69	41	46
4	65	129	165	2,170	140	490	432	644	150	63	40	55
5	61	124	160	1,880	140	570	414	525	142	68	39	53
6	57	118	153	1,500	145	530	396	441	135	72	39	51
7	53	124	147	1,140	145	470	378	386	128	76	37	43
8	53	141	141	850	155	396	378	344	122	68	35	38
9	52	215	129	690	180	342	360	317	123	64	35	35
10	52	165	124	590	346	342	342	303	135	80	37	33
11	53	153	168	690	870	396	324	305	153	80	40	32
12	53	141	761	670	995	530	306	963	184	77	46	30
13	57	135	1,440	660	1,020	945	288	1,590	151	231	51	30
14	53	124	1,600	460	945	1,140	272	1,080	134	295	57	38
15	52	118	1,600	400	730	1,110	256	2,030	122	255	53	28
16	51	177	1,500	320	570	945	242	2,120	134	175	70	27
17	49	189	1,320	280	450	730	228	2,000	145	123	115	26
18	48	160	995	250	378	590	228	1,660	175	99	178	25
19	48	147	730	225	320	530	228	1,210	167	84	152	25
20	57	141	570	205	280	490	242	857	141	73	104	27
21	83	135	450	195	250	470	288	701	122	65	78	27
22	377	129	396	180	230	432	324	596	110	58	66	30
23	770	124	342	180	215	590	360	516	102	54	64	31
24	830	113	406	170	205	970	630	451	94	51	121	29
25	770	113	2,390	165	200	1,200	945	398	87	48	165	30
26	590	113	3,490	160	190	1,290	1,080	354	80	45	131	27
27	414	249	4,490	158	189	1,230	1,080	317	77	53	102	26
28	324	306	4,790	155	215	970	1,190	282	80	55	82	29
29	256	272	4,590	152	-----	770	1,340	250	79	54	69	29
30	215	256	4,010	150	-----	650	1,310	224	77	52	61	27
31	189	-----	3,330	148	-----	590	-----	204	-----	52	55	-----
TOTAL	5,927	4,782	40,968	22,903	9,933	21,180	15,371	24,889	3,873	2,802	2,253	1,017
MEAN	191	159	1,322	739	355	683	512	803	129	90.4	72.7	33.9
CFSM	.314	.261	2.17	1.21	.583	1.12	.841	1.32	.212	.148	.119	.056
IN	.36	.29	2.50	1.40	.61	1.29	.94	1.52	.24	.17	.14	.06

CALENDAR YEAR 1965 MAX 4,790 MIN 29 MEAN 531 CFSM .872 INCHES 11.83
 WATER YEAR 1965-66 MAX 4,790 MIN 25 MEAN 427 CFSM .701 INCHES 9.52

4-1790. St. Joseph River at Cedarville, Ind.

Location (revised).--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 1966.

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.--11 years (1955-66), 529 cfs.

Extremes.--Maximum daily discharge during year, 5,410 cfs Dec. 30; maximum gage height, 13.79 ft Dec. 27; minimum daily, 33 cfs Sept. 18, 1931-32, 1955-66: Maximum discharge, 10,100 cfs May 1, 1956 (gage height, 18.07 ft, from floodmarks); minimum daily, 1.6 cfs May 22, 27, 1958.

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

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	123	248	340	4,570	239	530	660	1,670	267	71	62	69
2	98	196	305	4,100	219	640	610	1,400	235	90	65	66
3	96	183	274	3,440	199	680	550	1,180	194	112	52	65
4	73	186	259	3,010	192	690	510	861	197	108	48	114
5	63	310	251	2,620	192	690	510	720	191	235	56	75
6	69	140	214	2,180	182	650	510	630	177	184	52	70
7	97	212	199	1,820	213	610	460	480	132	101	51	60
8	82	188	202	1,350	200	530	440	500	172	71	50	55
9	70	221	208	795	211	420	440	460	175	105	50	49
10	70	331	203	670	695	420	430	360	157	148	51	45
11	70	269	205	630	610	450	410	480	169	89	52	42
12	59	222	852	570	1,520	600	381	1,810	175	111	53	41
13	42	212	2,230	520	1,500	1,280	365	2,280	224	630	52	40
14	62	199	2,120	510	1,300	1,480	356	2,440	205	560	69	41
15	95	154	2,210	500	1,410	1,500	341	2,570	140	440	101	38
16	86	164	1,960	490	1,060	1,490	296	2,590	197	325	194	36
17	53	400	1,820	359	760	1,120	277	2,650	172	201	75	34
18	51	295	1,480	270	620	825	317	2,430	153	151	134	33
19	57	219	1,160	349	500	700	300	1,820	240	119	195	34
20	155	215	790	389	440	620	297	1,340	225	103	184	36
21	101	208	680	208	180	560	324	1,010	141	91	120	37
22	450	175	500	218	387	560	430	780	123	73	110	39
23	1,210	164	430	342	333	590	450	700	107	68	87	41
24	1,130	163	550	203	312	950	920	640	112	67	57	40
25	1,100	157	3,330	445	270	1,430	995	530	136	67	130	39
26	830	155	3,590	327	256	1,570	1,350	480	106	68	185	36
27	650	310	4,300	80	248	1,540	1,400	390	91	50	133	35
28	500	610	4,580	232	268	1,480	1,430	400	104	41	107	38
29	320	500	5,260	259	-----	950	1,320	323	215	55	97	39
30	285	370	5,410	267	-----	770	1,740	304	124	59	79	38
31	288	-----	5,090	258	-----	650	-----	294	-----	59	70	-----
TOTAL	8,435	7,376	51,002	31,981	14,516	26,975	18,819	34,542	5,036	4,652	2,821	1,425
MEAN	272	246	1,645	1,032	518	870	627	1,114	168	150	91.0	47.5
CFSM	.357	.323	2.16	1.35	.680	1.14	.823	1.46	.221	.197	.119	.062
IN	.41	.36	2.49	1.56	.71	1.32	.92	1.69	.25	.23	.14	.07
CALENDAR YEAR 1965	MAX	5,410	MIN	38	MEAN	722	CFSM	.948	INCHES	12.87		
WATER YEAR 1965-66	MAX	5,410	MIN	33	MEAN	569	CFSM	.747	INCHES	10.15		

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 1966.

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.--23 years, 66.9 cfs.

Extremes.--Maximum discharge during year, 1,080 cfs Dec. 26 (gage height, 8.92 ft); minimum, 5.9 cfs Sept. 18, 19, 24, 25, 30 (gage height, 0.77 ft).
1943-66: 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.--Records good.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	30	36	441	22	90	50	132	32	14	12	6.8
2	18	27	32	333	22	64	46	105	30	13	12	6.8
3	16	26	32	261	22	60	44	90	30	13	11	8.6
4	16	24	31	213	22	72	44	76	28	16	11	8.4
5	14	22	30	177	22	72	44	68	27	26	10	7.4
6	14	22	29	143	21	57	43	57	27	22	9.7	7.4
7	14	29	27	121	22	49	46	50	26	18	9.0	7.8
8	14	45	26	100	26	43	46	50	25	16	9.7	7.4
9	14	62	26	86	42	41	44	46	30	22	10	7.4
10	12	49	26	76	141	43	42	43	26	71	12	6.8
11	12	42	77	68	225	50	42	60	24	39	13	6.5
12	12	37	324	64	138	86	40	397	22	65	11	7.1
13	11	33	384	60	100	213	38	417	22	165	9.7	7.4
14	11	29	288	57	81	154	36	333	22	86	13	7.4
15	11	28	216	50	64	116	34	261	22	60	12	7.4
16	11	42	156	45	57	90	36	201	26	41	14	7.1
17	9.7	42	120	45	50	76	35	154	22	31	14	7.1
18	10	38	93	41	44	68	36	132	20	28	12	6.5
19	11	34	74	40	39	64	38	105	19	24	10	7.1
20	19	31	66	38	33	60	40	90	19	19	9.0	8.7
21	21	28	62	36	32	57	54	81	18	17	9.4	8.1
22	216	28	54	36	30	64	57	72	17	16	13	7.4
23	240	26	52	34	29	100	104	64	17	15	11	6.8
24	168	26	152	32	28	126	213	64	16	13	10	6.5
25	120	24	915	32	28	90	213	57	16	13	9.7	7.4
26	84	30	1,050	29	26	72	154	50	15	12	9.0	7.8
27	66	88	830	27	25	64	126	46	15	17	8.1	7.1
28	54	79	537	26	33	57	213	42	18	16	7.4	6.8
29	44	58	417	24		54	201	39	16	14	8.1	7.4
30	37	42	345	22		57	154	36	15	13	7.4	6.8
31	32		369	23		54		33		12	7.1	
Total	1,407.7	1,121	6,876	2,780	1,424	2,363	2,313	3,451	662	947	324.3	219.4
Mean	45.4	37.4	222	89.7	50.9	76.2	77.1	111	22.1	30.5	10.5	7.31
Cfsm	0.520	0.428	2.54	1.03	0.583	0.873	0.883	1.27	0.253	0.349	0.120	0.084
In.	0.60	0.47	2.93	1.19	0.61	1.01	0.98	1.46	0.28	0.40	0.14	0.09

Calendar year 1965: Max 1,050 Min 4.5 Mean 93.2 Cfsm 1.07 In. 14.48
Water year 1965-66: Max 1,050 Min 6.5 Mean 65.4 Cfsm 0.749 In. 10.16

Peak discharge (base, 700 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-26	1000	8.92	1,080				

4-1800. Cedar Creek near Cedarville, Ind.

Location.--Lat 41°13'08", long 85°04'35", in NW 1/4 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 1966.

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.--20 years, 230 cfs.

Extremes.--Maximum discharge during year, 3,460 cfs Dec. 26 (gage height, 9.55); minimum discharge, 20 cfs Sept. 11-13, 18, 19 (gage height, 1.30 ft).
1946-66: 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.--Records good except those for the winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	78	104	121	1,580	84	270	145	442	102	46	36	24
2	71	96	108	1,180	83	215	136	338	98	44	38	24
3	62	78	106	780	82	190	125	277	93	41	36	26
4	55	74	104	580	81	224	125	229	90	46	35	37
5	52	71	100	465	81	240	123	203	85	56	34	26
6	49	71	94	395	81	190	123	182	81	60	33	22
7	50	78	85	345	81	158	125	161	79	53	31	23
8	50	96	79	300	81	139	128	167	76	47	30	23
9	50	190	76	255	119	134	123	184	79	50	32	22
10	52	161	74	228	315	134	119	160	96	152	36	22
11	48	130	87	202	820	154	115	198	77	132	44	21
12	48	115	498	180	500	214	110	1,200	71	114	36	20
13	46	106	1,100	170	345	620	106	1,540	67	275	33	22
14	45	94	820	160	270	482	102	1,120	68	224	39	23
15	45	87	540	150	228	360	98	788	64	155	37	24
16	44	139	395	135	202	152	96	610	77	110	57	22
17	41	165	315	130	165	240	96	473	70	84	41	22
18	40	128	255	120	154	215	96	391	63	70	25	21
19	41	110	215	112	139	215	104	332	59	63	31	20
20	59	102	190	108	134	190	117	281	56	55	28	24
21	117	92	178	102	122	178	151	263	56	50	28	27
22	270	87	156	100	117	178	182	247	55	47	20	26
23	620	81	150	95	108	215	215	217	53	45	31	24
24	482	76	209	93	100	300	727	217	52	42	28	22
25	330	72	1,820	92	98	240	605	190	50	40	27	23
26	240	78	3,280	90	94	202	413	165	48	40	26	24
27	202	251	2,780	89	90	190	330	154	47	43	25	24
28	161	300	1,800	88	98	165	556	139	49	47	24	23
29	132	190	1,140	87	-----	158	751	125	65	42	23	24
30	123	145	900	86	-----	158	509	113	50	40	24	24
31	115	-----	860	85	-----	154	-----	106	-----	37	24	-----
TOTAL	3,818	3,567	18,635	8,582	4,872	6,874	6,751	11,212	2,076	2,350	1,010	709
MEAN	123	119	601	277	174	222	225	362	69.2	75.8	32.6	23.6
CFSM	.456	.441	2.23	1.03	.644	.822	.833	1.34	.256	.281	.121	.087
IN	.53	.49	2.57	1.18	.67	.95	.93	1.54	.29	.32	.14	.10

CALENDAR YEAR 1965 MAX 3,280 MIN 29 MEAN 273 CFSM 1.01 INCHES 13.75
WATER YEAR 1965-66 MAX 3,280 MIN 20 MEAN 193 CFSM .715 INCHES 9.71

Peak discharge (base, 2,000 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-26	1900	9.55	3,460				

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 Moltchouse ditch, and 1.3 miles north of Decatur.

Drainage area.--621 sq mi.

Records available.--October 1946 to September 1966. 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.--20 years, 476 cfs.

Extremes.--Maximum discharge during year, 1,910 cfs Feb. 11 (gage height, 12.3 ft, from graph based on gage readings); minimum, 11 cfs Aug. 7 (gage height, 1.89 ft).

1946-66: 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.--Records good except those for the winter period, which are fair. Flow regulated by Grand Lake Reservoir. Slight diversion from or into Wabash River and into Miami and Erie Canal.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	22	41	19	1,160	31	90	101	709	86	29	14	14
2	22	35	20	1,030	30	140	95	676	75	25	15	14
3	21	30	22	891	30	207	86	626	66	23	15	14
4	19	27	22	635	30	438	79	575	57	25	14	13
5	18	25	22	513	30	477	73	505	50	27	14	15
6	17	24	21	501	29	402	71	412	46	28	15	17
7	18	24	20	472	30	357	68	297	44	29	12	16
8	17	27	19	384	51	309	65	246	43	29	12	15
9	17	23	19	288	195	260	61	245	43	33	16	15
10	16	21	26	210	465	246	57	301	41	42	20	16
11	19	21	71	127	1,610	257	54	279	40	54	15	16
12	22	21	75	155	1,180	255	53	844	37	46	14	16
13	27	21	168	128	810	354	49	1,070	36	43	15	16
14	23	22	116	102	810	344	46	846	56	36	18	27
15	21	23	78	84	770	303	44	759	130	27	20	90
16	20	26	61	78	790	272	43	755	134	22	21	25
17	21	24	53	72	710	247	44	673	192	23	21	19
18	19	24	49	59	590	228	44	525	173	33	18	17
19	17	23	44	52	469	208	44	458	147	37	17	19
20	29	22	39	48	336	176	44	355	129	31	16	52
21	148	22	41	44	264	147	44	360	90	28	25	63
22	244	23	36	42	197	156	40	548	68	20	23	44
23	199	21	34	39	161	186	39	603	52	17	19	28
24	145	22	36	37	132	213	39	594	43	16	18	22
25	132	22	121	36	89	236	42	544	38	16	18	28
26	138	22	153	34	81	236	42	458	34	16	17	30
27	127	26	83	33	76	209	49	345	31	17	16	29
28	103	28	61	32	74	173	103	242	32	23	20	26
29	80	24	46	32	-----	143	313	173	31	21	17	23
30	63	21	46	31	-----	128	447	129	32	15	15	20
31	51	-----	114	31	-----	115	-----	102	-----	14	14	-----
TOTAL	1,835	735	1,735	7,380	10,070	7,512	2,379	15,254	2,076	845	524	759
MEAN	59.2	24.5	56.0	238	360	242	79.3	492	69.2	27.3	16.9	25.3
CFSM	.095	.040	.090	.383	.580	.390	.128	.792	.111	.044	.027	.041
IN	.11	.04	.10	.44	.60	.45	.14	.91	.12	.05	.03	.05
CALENDAR YEAR 1965	MAX 3,490	MIN 14	MEAN 325	CFSM .523	INCHES 7.11							
WATER YEAR 1965-66	MAX 1,610	MIN 12	MEAN 140	CFSM .225	INCHES 3.06							

Peak discharge (base, 2,900 cfs).--No peak above base.

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 1966. 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.--36 years, 538 cfs.

Extremes.--Maximum discharge during year, 2,250 cfs Feb. 11 (gage height, 7.76 ft); minimum discharge, 11 cfs Sept. 5, 6 (gage height, 0.57 ft).
1930-66: Maximum discharge, 13,600 cfs Feb. 11, 1959; maximum gage height, 19.42 ft Feb. 11, 1959 (ice jam); minimum observed, 3.4 cfs Oct. 19, 1934 (gage height, 0.28 ft).

Remarks.--Records good except those for the winter period, which are fair. 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 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	23	51	37	1,200	31	182	132	700	112	35	17	14
2	24	42	30	1,520	31	210	125	735	99	34	18	14
3	22	37	30	1,240	31	210	112	665	68	30	19	14
4	22	32	30	945	31	432	105	605	77	27	18	13
5	20	29	31	700	31	575	93	545	68	28	18	12
6	18	28	31	635	31	485	88	455	61	30	17	12
7	19	36	30	605	35	400	88	350	58	30	18	13
8	19	44	28	515	50	350	82	270	56	30	16	15
9	18	42	28	400	100	290	82	280	56	118	17	14
10	17	37	27	290	500	270	77	280	54	165	22	14
11	18	30	27	230	2,050	290	72	311	50	95	30	14
12	17	27	76	210	1,700	300	69	1,050	48	103	27	14
13	20	27	240	210	1,050	400	66	1,440	45	109	20	14
14	27	26	220	164	910	425	63	1,080	49	75	20	14
15	28	25	140	125	875	375	60	945	77	52	21	33
16	25	26	112	110	875	312	57	1,050	156	38	25	72
17	24	28	82	95	840	280	57	875	164	29	26	32
18	22	28	69	83	700	260	56	665	200	26	25	21
19	23	25	63	74	545	250	56	545	173	34	22	17
20	27	23	58	65	425	220	56	455	148	39	20	23
21	56	24	53	58	350	182	55	375	125	35	22	51
22	609	24	52	50	260	164	55	485	93	32	48	62
23	375	24	48	45	210	268	55	635	72	24	34	44
24	240	24	58	39	168	300	55	635	57	21	22	32
25	164	24	519	36	140	270	55	605	48	19	18	26
26	148	24	350	35	115	270	56	515	42	17	17	24
27	140	53	200	34	120	250	58	425	38	18	16	30
28	125	63	125	33	94	210	93	300	35	19	15	29
29	105	49	93	33	-----	182	240	230	35	23	16	25
30	82	40	77	32	-----	164	425	173	35	28	19	23
31	66	-----	128	32	-----	148	-----	132	-----	21	15	-----
TOTAL	2,543	992	3,092	9,843	12,298	8,924	2,743	17,811	2,419	1,384	658	739
MEAN	82.0	33.1	99.7	318	439	288	91.4	575	80.6	44.6	21.2	44.6
CFSM	.108	.043	.131	.417	.576	.378	.120	.755	.106	.059	.028	.032
IN	.12	.05	.15	.48	.60	.44	.13	.87	.12	.07	.03	.04

CALENDAR YEAR 1965	MAX 4,230	MIN 14	MEAN 404	CFSM .530	INCHES 7.19
WATER YEAR 1965-66	MAX 2,050	MIN 12	MEAN 174	CFSM .228	INCHES 3.10

Peak discharge (base, 4,000 cfs).--No peak above base.

4-1825.90 Harber ditch at Fort Wayne, Ind.

Location.--Lat 41°00'27", long 85°10'58", in SW $\frac{1}{4}$ 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 1966. 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, 249 cfs Oct. 21 (gage height, 6.63 ft); minimum daily, 0.2 cfs Oct. 10. 1964-66: Maximum discharge, 429 cfs Feb. 10, 1965 (gage height, 9.25 ft), from rating curve extended above 150 cfs; minimum, 0.1 cfs Sept. 7, 1964, several days in Oct., Nov., 1964; minimum gage height, 1.59 ft Nov. 1, 1964.

Remarks.--Records good except those for the winter period or no gage-height record, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.8	1.0	2.0	135	1.4	13	5.8	15	2.1	1.2	0.8	0.8
2	.7	1.0	1.7	62	1.4	8.7	4.6	12	2.0	1.0	1.1	.7
3	.5	1.4	2.0	38	1.4	13	3.4	9.0	1.9	.9	.9	.7
4	.5	.8	1.7	22	1.4	27	3.4	7.2	1.9	.9	.7	.8
5	.7	.8	1.4	17	1.4	21	3.9	6.4	1.8	1.5	.6	.7
6	.5	1.0	1.3	15	1.5	13	4.1	5.6	1.8	3.3	.6	.7
7	1.7	10	1.0	12	1.7	8.7	4.1	6.0	1.7	2.0	.6	.7
8	.5	4.8	1.4	10	3.0	6.8	3.0	35	1.6	1.5	.6	.7
9	.4	3.4	.9	9.0	27	7.6	3.0	29	1.6	1.9	1.3	.8
10	.2	2.4	.9	5.5	94	9.2	2.6	11	1.6	14	2.3	.7
11	.6	2.0	1.7	4.5	141	12	2.4	100	1.5	8.2	1.4	.7
12	.5	2.2	31	4.0	47	16	2.2	130	1.5	13	.9	.6
13	.5	2.4	40	3.5	29	21	2.4	68	1.4	8.8	.9	.6
14	.6	1.2	18	3.0	19	17	2.0	32	1.6	3.4	1.6	5.0
15	.9	1.2	11	2.8	14	17	1.8	33	4.2	1.7	1.1	3.7
16	.4	2.6	7.6	2.6	12	11	2.4	80	3.5	1.5	1.0	2.0
17	.3	1.7	5.8	2.4	9.5	9.5	2.0	50	2.7	1.3	1.3	1.1
18	.4	1.3	4.6	2.2	8.0	10	2.2	20	2.1	1.2	1.0	.8
19	.5	1.2	3.2	1.9	6.5	9.2	3.2	11	1.8	1.1	.9	1.0
20	14	.9	3.2	1.9	5.0	7.6	2.8	13	1.5	1.0	.9	3.2
21	52	.8	3.4	1.8	4.3	7.4	5.1	19	1.3	1.0	17	2.3
22	104	.8	3.4	1.7	3.7	18	2.6	16	1.1	1.0	13	1.4
23	34	1.2	2.6	1.6	3.3	37	5.5	10	1.0	1.0	3.1	.9
24	12	.9	35	1.5	3.2	34	4.8	6.6	1.0	1.0	1.6	1.0
25	6.3	.8	159	1.5	3.0	18	3.6	4.2	.9	1.0	1.2	2.0
26	3.9	3.3	52	1.4	3.0	14	3.1	3.4	.9	1.0	1.0	1.5
27	2.8	15	26	1.4	3.0	9.8	3.3	3.0	.9	1.5	1.0	.9
28	1.7	7.9	16	1.4	9.0	7.4	11	2.6	.9	1.2	.9	.7
29	1.4	4.8	13	1.4	-----	6.0	31	2.4	2.1	1.0	.9	.6
30	1.2	2.6	13	1.4	-----	6.0	28	2.2	1.5	.9	.8	.5
31	.9	-----	51	1.4	-----	5.8	-----	2.1	-----	.8	.8	-----
Total	248.4	81.4	514.8	370.9	457.7	421.7	159.3	744.7	51.4	97.9	61.8	37.8
Mean	8.01	2.71	16.6	12.0	16.3	13.6	5.31	24.0	1.71	3.16	1.99	1.26
Cfsm	0.366	0.124	0.758	0.548	0.744	0.621	0.242	1.10	0.078	0.144	0.091	0.058
In.	0.42	0.14	0.87	0.63	0.77	0.72	0.27	1.27	0.09	0.17	0.10	0.06

Calendar year 1965: Max 335 Min 0.2 Mean 14.9 Cfsm 0.680 In. 9.23
 Water year 1965-66: Max 159 Min 0.2 Mean 8.90 Cfsm 0.406 In. 5.51

Peak discharge (base, 200 cfs)

Note.--No gage-height record Apr. 26 to Sept. 30.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
10-21	2030	6.63	249				
2-11	0200	5.84	201				

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. Prior to Sept. 14, 1965, at site 500 ft downstream.

Drainage area.--1,966 sq mi.

Records available.--December 1946 to September 1956 (high-water records only), October 1956 to September 1966.

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.--10 years (1956-66), 1,354 cfs.

Extremes.--Maximum discharge during year, 8,420 cfs Jan. 2 (gage height, 13.60 ft); minimum daily, 85 cfs Aug. 7.
1946-66: Maximum discharge, 19,100 cfs Feb. 16, 1950 (gage height, 21.4 ft); minimum daily since Sept. 7, 1956, 48 cfs Oct. 6, 1963.

Remarks.--Records good except those for period of indefinite stage-discharge relation, which are fair. Flow regulated at low stage by powerplant above station. Flow slightly regulated by upstream reservoirs.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	285	425	510	7,780	296	940	1,070	3,140	550	206	126	124
2	203	360	490	8,040	300	1,200	1,000	2,900	460	196	135	127
3	206	320	450	6,090	281	1,260	880	2,340	415	223	126	128
4	195	305	400	4,900	299	1,520	820	1,920	395	228	104	177
5	151	285	400	3,960	279	1,780	732	1,590	375	351	110	184
6	165	260	360	3,340	272	1,590	820	1,460	375	508	93	118
7	215	395	320	3,030	290	1,400	790	1,200	335	307	85	140
8	193	430	310	2,470	374	1,200	650	1,330	300	211	94	114
9	160	400	310	1,710	426	1,070	678	1,520	395	509	101	119
10	170	480	310	1,370	1,150	880	678	1,070	375	1,050	105	126
11	173	495	350	1,040	5,000	1,000	650	1,330	318	655	132	141
12	158	395	1,060	952	4,640	1,140	600	5,000	375	540	118	122
13	113	355	3,680	950	3,220	2,200	550	6,260	335	1,340	100	122
14	173	340	3,660	914	2,830	2,690	528	5,630	460	1,140	175	121
15	173	295	3,210	852	2,410	2,480	505	4,820	355	791	137	151
16	180	340	2,740	755	2,130	2,200	505	4,730	550	541	378	135
17	156	450	2,390	730	1,920	1,780	438	4,460	575	412	202	146
18	152	560	2,020	483	1,590	1,520	460	3,780	482	265	123	119
19	113	370	1,490	505	1,330	1,400	505	3,220	575	239	304	114
20	340	335	1,200	650	1,070	1,200	482	2,200	575	207	225	267
21	385	320	971	524	732	1,000	600	1,990	460	199	274	179
22	1,420	335	809	334	625	1,140	600	1,720	375	168	293	154
23	2,250	280	653	532	760	1,330	880	1,720	300	158	161	129
24	2,120	265	890	455	625	1,590	1,330	1,720	282	135	135	140
25	1,650	290	5,640	299	575	1,920	1,850	1,590	265	130	113	142
26	1,360	305	7,510	677	505	1,990	1,920	1,400	265	137	202	138
27	1,050	520	7,960	237	438	2,060	1,990	1,140	293	133	191	112
28	1,050	850	7,180	242	550	1,920	2,200	1,000	225	173	171	105
29	620	800	6,620	339	-----	1,660	2,620	820	484	111	144	128
30	470	650	6,430	308	-----	1,400	2,900	625	375	143	142	97
31	470	-----	6,180	364	-----	1,070	-----	600	-----	147	121	-----
TOTAL	16,519	12,210	76,503	54,832	34,917	47,530	30,231	74,225	11,899	11,553	4,920	4,119
MEAN	533	407	2,468	1,769	1,247	1,533	1,008	2,394	397	373	159	137
CFSM	.271	.207	1.26	.900	.634	.780	.513	1.22	.202	.190	.081	.070
IN	.31	.23	1.45	1.04	.66	.90	.57	1.40	.23	.22	.09	.08
CALENDAR YEAR 1965	MAX	10,700	MIN	92	MEAN	1,549	CFSM	.788	INCHES	10.70		
WATER YEAR 1965-66	MAX	8,040	MIN	85	MEAN	1,040	CFSM	.529	INCHES	7.18		

Peak discharge (base, 9,500 cfs).--No peak above base.

Note.--Stage-discharge relation indefinite Oct. 1 to Dec. 11.

4-1835. Maumee River at Antwerp, Ohio

Location.--Lat $41^{\circ}11'56''$, long $84^{\circ}44'40''$, 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 1966.

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.--41 years, 1,617 cfs.

Extremes.--Maximum discharge during year, 7,920 cfs Jan. 2 (gage height, 11.20 ft); minimum, 91 cfs Sept. 13, 14 (gage height, 0.73 ft).
1921-35, 1939-66: 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 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	243	495	688	7,420	240	784	1,050	1,070	601	304	154	145
2	311	457	556	7,870	330	1,090	1,050	2,900	538	196	124	126
3	227	392	529	6,900	350	1,220	990	2,460	480	167	128	124
4	208	347	489	5,520	350	1,460	900	2,040	436	194	143	137
5	204	333	433	4,430	350	1,730	775	1,620	407	204	110	167
6	172	320	422	3,690	330	1,680	835	1,500	381	323	120	177
7	184	323	381	3,200	320	1,450	865	1,320	371	392	106	128
8	196	449	340	2,630	350	1,290	755	1,180	311	254	96	126
9	219	499	347	2,080	460	1,150	700	1,680	298	201	104	106
10	177	468	327	1,560	812	1,030	710	1,390	364	705	124	94
11	172	529	333	1,260	3,750	993	686	1,090	340	765	139	94
12	177	529	510	1,130	5,220	1,080	664	4,310	301	601	177	114
13	158	442	2,280	1,170	3,700	1,540	610	6,550	336	1,100	158	98
14	156	399	3,660	1,060	2,790	2,600	583	5,250	323	1,420	145	96
15	149	367	3,120	934	2,610	2,460	560	5,210	396	1,060	206	98
16	165	343	2,690	898	2,120	2,220	542	4,900	364	780	230	128
17	194	378	2,240	868	1,900	1,900	516	4,740	480	560	448	124
18	169	502	2,020	750	1,660	1,640	468	4,060	484	414	260	147
19	147	588	1,660	500	1,420	1,420	512	3,470	433	295	206	124
20	179	403	1,350	550	1,210	1,280	534	2,490	484	257	327	122
21	364	371	1,100	700	975	1,120	542	2,050	480	227	280	251
22	690	353	965	500	692	1,030	601	1,830	374	214	371	206
23	1,860	347	776	390	781	1,260	655	1,680	301	189	340	184
24	2,260	307	700	550	746	1,570	955	1,650	254	169	216	152
25	1,830	301	3,830	470	664	1,740	1,540	1,580	230	158	179	154
26	1,550	307	7,060	380	608	1,900	1,720	1,390	227	147	139	172
27	1,260	407	7,410	650	530	1,940	1,780	1,280	216	147	230	163
28	1,060	633	7,220	240	504	1,860	2,020	1,040	201	137	230	147
29	1,000	921	5,580	240		1,720	2,470	955	249	181	191	124
30	649	833	6,380	240	-----	1,470	2,540	755	385	124	165	147
31	502	-----	6,210	240	-----	1,240	-----	664	-----	124	149	-----
Total	16,832	13,343	72,606	59,020	35,772	46,867	29,128	77,104	11,045	12,009	5,995	4,175
Mean	543	445	2,342	1,904	1,278	1,512	971	2,487	368	387	193	139
Cfsm	.255	.209	1.10	.895	.601	.711	.456	1.17	.173	.182	.091	.065
In.	.29	.23	1.27	1.03	.63	.82	.51	1.35	.19	.21	.10	.07

Calendar year 1965: Max 11,400 Min 111 Mean 1,574 Cfsm .740 In. 10.04
Water year 1965-66: Max 7,870 Min 94 Mean 1,052 Cfsm .494 In. 6.71

Peak discharge (base, 8,000 cfs).--No peak above base.

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 1966.

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.--15 years, 139 cfs.

Extremes.--Maximum discharge during year, 644 cfs Dec. 25 (gage height, 8.46 ft); minimum, 78 cfs July 26 (gage height, 2.67 ft).
1951-66: Maximum discharge, 686 cfs Oct. 10, 1954; maximum gage height, 8.64 ft Oct. 12, 1954 (backwater from return of overbank flow); minimum discharge, 44 cfs Sept. 9, 10, 1964; minimum gage height, 1.60 ft Aug. 19, 1957.

Remarks.--Records fair except those for winter period, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	192	189	135	354	120	154	159	305	163	75	122	148
2	172	179	140	320	120	162	155	283	159	73	127	142
3	149	173	140	298	118	180	155	261	159	80	99	137
4	136	165	150	271	117	250	155	237	160	79	100	133
5	127	159	150	254	117	257	152	225	159	96	100	128
6	122	158	140	239	117	224	153	200	155	113	93	124
7	120	155	140	225	118	205	156	195	151	66	92	120
8	121	155	135	213	125	192	154	208	156	70	90	115
9	124	155	130	204	190	194	151	202	159	109	110	112
10	121	151	130	200	342	200	147	191	122	127	127	109
11	115	148	140	180	308	211	145	209	145	115	141	105
12	113	147	160	180	337	216	142	205	144	115	121	101
13	108	147	200	179	299	230	139	232	161	110	120	98
14	105	143	266	172	260	221	136	471	150	112	123	90
15	105	140	233	166	242	200	135	413	145	100	138	94
16	104	140	207	159	226	200	133	388	148	82	135	92
17	105	137	188	154	206	189	132	352	143	86	124	89
18	107	134	175	149	190	185	140	343	135	103	122	80
19	107	133	166	145	170	182	146	323	130	175	110	87
20	114	132	163	142	160	175	150	206	126	150	115	69
21	150	130	156	141	161	170	277	273	120	134	120	93
22	394	120	151	140	155	193	279	252	116	120	433	93
23	413	127	153	130	151	190	295	235	113	122	407	88
24	422	124	241	135	149	190	374	230	107	118	305	85
25	420	124	217	134	140	182	331	215	104	105	257	87
26	355	129	539	132	143	179	327	204	100	92	222	86
27	310	165	465	129	140	172	297	195	96	190	202	82
28	271	163	427	130	144	165	352	164	88	192	185	80
29	241	140	307	130	-----	163	355	175	77	162	172	83
30	224	142	386	125	-----	160	326	170	75	148	163	83
31	208	-----	388	120	-----	159	-----	165	-----	136	155	-----
TOTAL	5,875	4,420	7,198	5,672	5,177	6,000	6,150	8,385	4,002	3,575	4,900	3,067
MEAN	190	147	232	183	169	194	205	270	133	115	161	102
CFSM	1.25	.967	1.53	1.20	1.22	1.20	1.35	1.78	.675	.757	1.06	.671
IN	1.44	1.00	1.76	1.39	1.27	1.41	1.51	2.05	.98	.87	1.22	.75
CALENDAR YEAR 1965	MAX 617			MIN 50		MEAN 158		CFSM 1.04		INCHES 14.10		
WATER YEAR 1965-66	MAX 617			MIN 66		MEAN 177		CFSM 1.16		INCHES 15.78		

5-5155. Kankakee River at Davis, Ind.

Location.--Lat 41°24', long 86°42', in sec. 13, T. 34 N., R. 3 W., on left bank at downstream side of bridge on U.S. Highway 30 at Davis, half a mile downstream from Mill Creek and 4 miles east of Hanna.

Drainage area.--508 sq mi.

Records available.--July 1905 to July 1906 and October 1924 to September 1966. 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.--42 years (1924-66), 476 cfs.

Extremes.--Maximum discharge during year, 1,080 cfs Jan. 1 (gage height, 11.44 ft); minimum, 286 cfs Sept. 18, 19 (gage height, 5.85 ft).
1905-6, 1924-29, 1931-66: Maximum discharge observed, about 1,700 cfs Dec. 15, 1927 (gage height, 9.50 ft, site and datum then in use), from rating curve extended above 520 cfs; maximum gage height at present site and datum, 11.76 ft Oct. 16-18, 1954; minimum discharge observed, 154 cfs Aug. 30 to Sept. 3, 1941; minimum gage height observed, 2.97 ft Aug. 14, 1934.

Remarks.--Records fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	674	690	500	1,080	490	555	593	944	610	361	404	377
2	690	685	485	1,070	480	583	589	918	583	344	403	364
3	642	610	500	1,060	470	625	560	879	563	356	384	354
4	578	594	515	1,040	470	699	573	824	550	359	358	346
5	530	562	530	1,020	465	767	563	766	538	366	346	338
6	500	546	515	1,000	465	776	554	732	521	426	339	330
7	485	530	500	976	467	750	553	695	500	398	330	324
8	485	546	485	953	461	720	548	682	490	368	326	317
9	485	546	470	932	573	696	541	677	507	370	329	312
10	470	530	455	912	724	689	531	651	509	380	342	309
11	455	515	470	883	822	702	523	667	483	390	393	304
12	440	500	546	856	846	717	519	834	469	400	384	299
13	410	500	726	832	848	754	503	953	565	420	363	298
14	395	485	800	807	836	775	490	984	627	420	353	298
15	380	470	780	783	817	764	485	1,000	623	400	381	297
16	365	470	726	752	797	743	477	1,020	621	380	394	292
17	365	470	690	722	762	717	470	1,020	619	360	369	290
18	350	455	658	691	731	699	483	1,040	574	420	350	288
19	350	440	642	663	696	687	497	1,020	557	420	356	287
20	365	440	610	642	660	670	522	1,010	507	490	325	294
21	395	440	594	628	628	654	658	978	481	470	323	319
22	610	425	578	614	607	660	785	1,000	456	440	325	320
23	820	425	578	600	590	694	820	945	440	425	326	328
24	884	410	645	582	576	702	900	923	430	410	681	303
25	906	410	952	570	566	685	935	872	430	400	605	314
26	928	425	996	558	550	666	924	834	425	390	553	326
27	906	500	1,020	536	536	647	919	768	416	450	484	323
28	884	626	1,040	489	536	631	931	729	406	506	451	318
29	820	594	1,050	520	-----	614	951	682	378	490	424	322
30	780	530	1,060	510	-----	611	959	673	367	454	405	328
31	744	-----	1,070	500	-----	607	-----	638	-----	427	387	-----
TOTAL	18,091	15,369	21,186	23,781	17,491	21,263	19,376	26,338	15,225	12,790	12,753	9,499
MEAN	584	512	683	767	625	686	646	850	509	413	411	317
CFSM	1.15	1.01	1.34	1.51	1.23	1.33	1.27	1.67	1.00	0.813	0.809	0.624
IN	1.32	1.13	1.55	1.74	1.28	1.58	1.42	1.93	1.12	0.94	0.93	0.70

CALENDAR YEAR 1965 MAX 1,100 MIN 173 MEAN 561 CFSM 1.10 INCHES 15.00
WATER YEAR 1965-66 MAX 1,080 MIN 287 MEAN 584 CFSM 1.15 INCHES 15.61

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 1966.

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.--11 years, 92.8 cfs.

Extremes.--Maximum discharge during year, 1,650 cfs Dec. 26 (gage height, 13.99 ft); minimum, 10 cfs Sept. 29 (gage height, 1.49 ft). 1955-66: Maximum discharge, 1,650 cfs Dec. 26, 1965; maximum gage height, 13.99 ft Dec. 26, 1965; minimum, 6.2 cfs Aug. 23 and Oct. 11, 12, 13, 1957, Oct. 17, 1965; minimum gage height, 0.81 ft Sept. 10, 1955.

Remarks.--Records good except those for winter period, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	71	51	48	573	25	85	80	358	48	21	13	20
2	70	46	44	435	25	160	73	250	46	20	13	18
3	60	42	48	325	25	142	69	200	44	19	13	17
4	50	40	53	250	25	380	68	151	42	18	12	17
5	42	36	50	220	25	391	64	133	40	18	12	16
6	39	34	45	190	25	210	66	116	39	19	12	15
7	38	38	40	160	30	151	70	100	37	18	12	14
8	39	38	38	133	42	124	68	96	35	18	12	14
9	38	38	36	116	150	133	63	92	39	24	11	14
10	36	35	34	100	585	190	57	82	42	23	14	14
11	33	32	59	90	837	190	55	100	38	23	13	13
12	30	32	142	80	468	240	51	849	34	21	13	13
13	28	34	260	75	303	446	49	1,130	47	26	12	13
14	25	31	200	70	230	270	46	902	70	27	12	13
15	24	28	142	60	180	190	44	579	54	21	12	13
16	24	30	108	55	151	151	42	407	67	18	17	13
17	22	28	88	55	116	124	40	307	61	16	13	13
18	24	25	74	50	100	116	42	317	49	17	13	13
19	24	25	66	45	79	116	51	277	45	22	12	12
20	28	24	63	40	69	108	79	177	40	22	11	13
21	40	25	59	40	63	96	605	146	37	16	21	13
22	108	24	53	35	55	240	537	125	34	15	409	13
23	314	23	56	35	51	336	753	106	31	14	366	12
24	260	22	282	35	48	200	1,040	108	29	14	145	11
25	220	22	1,230	30	49	151	921	96	26	14	80	12
26	151	25	1,610	30	44	133	561	83	25	14	55	12
27	116	122	1,530	30	41	108	413	75	24	15	41	11
28	92	133	1,300	30	46	96	681	66	24	17	33	11
29	74	79	957	30	-----	88	693	60	23	15	28	11
30	66	58	741	25	-----	92	446	54	23	14	24	12
31	60	-----	681	25	-----	85	-----	51	-----	13	22	-----
TOTAL	2,246	1,220	10,137	3,467	3,887	5,542	7,827	7,593	1,193	572	1,476	406
MEAN	72.5	40.7	327	112	139	179	261	245	39.8	18.5	47.6	13.5
CFSM	.549	.308	2.48	.849	1.05	1.36	1.98	1.86	.302	.140	.361	.102
IN	.63	.34	2.86	.98	1.10	1.56	2.21	2.14	.34	.16	.42	.11
CALENDAR YEAR 1965 MAX 1,610 MIN 8.5 MEAN 135 CFSM 1.02 INCHES 13.91												
WATER YEAR 1965-66 MAX 1,610 MIN 11 MEAN 125 CFSM .947 INCHES 12.84												

Peak discharge (base, 800 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-26	1600	13.99	1,650	4-28	2230	10.02	851
2-11	0700	10.25	879	5-13	0930	12.04	1,140
4-24	1400	11.61	1,060				

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 foot-bridge in Plymouth, 1.1 miles downstream from Elmer Seldenright (formerly Baker) ditch and 8.1 miles upstream from Wolf Creek.

Drainage area.--284 sq mi.

Records available.--July 1948 to September 1966.

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.--18 years, 236 cfs.

Extremes.--Maximum discharge during year, 2,420 cfs Dec. 27 (gage height, 13.44 ft); minimum, 23 cfs (gage height, 4.21 ft).
1948-66: 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.--Records good except those for winter period, which are fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	131	114	97	1,400	62	172	161	1,020	131	66	40	54
2	138	119	92	1,150	62	298	153	694	119	66	40	51
3	125	119	92	894	62	298	145	487	119	66	37	47
4	114	108	92	622	62	570	145	382	108	66	33	44
5	102	102	92	508	62	842	138	298	102	66	31	41
6	97	97	92	445	62	556	138	266	97	71	28	41
7	97	97	86	382	71	361	138	225	97	71	29	40
8	92	102	91	319	101	298	138	225	92	71	30	40
9	92	102	81	277	409	277	138	235	92	76	26	39
10	92	102	81	266	782	361	125	205	92	81	45	38
11	97	97	97	225	1,130	424	125	231	86	86	49	37
12	92	92	174	205	1,240	445	119	930	81	92	41	37
13	81	92	403	186	895	737	108	1,470	81	125	36	38
14	76	86	466	165	574	742	102	1,710	114	114	34	49
15	71	81	340	145	424	508	97	1,650	108	86	35	35
16	71	81	246	130	361	382	97	1,350	114	76	39	32
17	71	81	186	115	277	319	92	1,020	125	66	43	28
18	71	76	153	110	215	277	92	790	97	76	38	27
19	66	71	131	100	170	266	108	742	86	92	36	27
20	71	71	125	95	140	256	160	574	81	76	32	27
21	123	71	119	90	120	225	586	445	71	61	57	28
22	205	71	114	85	110	293	946	382	71	53	464	28
23	510	66	108	80	105	550	972	340	66	46	742	28
24	598	66	200	65	100	466	1,260	340	65	46	466	24
25	508	66	1,100	75	98	340	1,530	298	63	46	195	26
26	382	71	1,800	72	96	277	1,500	246	61	46	131	28
27	235	125	2,380	70	96	246	1,130	215	61	48	97	28
28	169	215	2,380	68	96	205	1,020	186	63	48	76	26
29	161	153	2,240	66	-----	186	1,260	161	66	49	66	26
30	138	114	2,000	65	-----	177	1,290	145	66	46	60	26
31	131	-----	1,650	64	-----	177	-----	131	-----	44	56	-----
Total	5,007	2,908	17,298	4,539	7,982	11,531	14,013	17,393	2,675	2,122	3,132	1,040
Mean	162	96.9	558	275	285	372	467	561	89.2	68.5	101	34.7
Cfsm	0.570	0.341	1.96	0.968	1.00	1.31	1.64	1.98	0.314	0.241	0.356	0.122
In.	0.66	0.38	2.26	1.12	1.04	1.51	1.83	2.28	0.35	0.28	0.41	0.14

Calendar year 1965: Max 2,380 Min 21 Mean 277 Cfsm 0.975 In. 13.23
Water year 1965-66: Max 2,380 Min 24 Mean 257 Cfsm 0.905 In. 12.26

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 1966.

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.--23 years (1943-66), 369 cfs.

Extremes.--Maximum discharge during year, 2,810 cfs Dec. 29 (gage height, 9.31 ft); minimum, 93 cfs Sept. 1920 (gage height, 4.74 ft). 1905-6, 1943-66: Maximum discharge, 5,660 cfs Oct. 15, 16, 1954 (gage height, 13.75 ft); minimum, 39 cfs Jan. 11, 1957, result of freezeup; minimum gage height, 4.26 ft Jan. 12, 1954.

Remarks.--Records good except those for winter period, which are fair. Low flow is affected by pumpage at times.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	289	260	210	2,100	145	272	341	1,340	320	153	117	127
2	282	250	210	1,700	145	366	330	1,180	300	150	117	122
3	273	240	210	1,400	140	451	318	899	292	144	117	117
4	256	230	210	1,200	140	508	308	698	279	141	115	115
5	232	220	210	1,050	140	688	302	594	269	146	113	110
6	210	210	210	950	140	802	297	530	258	144	111	108
7	201	205	210	850	140	640	296	500	247	141	109	106
8	199	200	190	750	212	510	295	475	237	136	107	104
9	197	200	190	670	285	460	290	460	248	136	106	103
10	199	195	190	610	585	461	282	450	248	140	115	102
11	198	195	190	550	850	522	270	440	237	152	128	100
12	195	190	260	490	1,000	560	259	630	228	150	123	98
13	189	185	450	440	1,100	618	248	1,200	221	153	117	97
14	171	180	510	390	977	766	234	1,500	217	185	115	97
15	165	180	517	360	698	764	223	1,600	256	171	113	100
16	159	175	426	325	575	615	213	1,500	255	148	111	99
17	155	175	357	300	500	527	207	1,300	267	136	109	97
18	149	177	312	275	420	479	205	1,150	257	138	111	94
19	143	171	282	255	370	456	223	1,000	227	197	107	94
20	156	167	261	240	330	433	266	900	205	181	104	100
21	164	167	247	225	300	411	449	800	192	156	109	107
22	242	167	237	210	270	407	713	720	182	142	102	106
23	399	164	227	195	245	488	934	660	174	134	466	101
24	595	162	300	185	230	626	1,090	600	177	130	634	98
25	693	159	967	175	220	556	1,180	540	169	127	531	100
26	630	164	1,500	165	215	472	1,330	500	164	125	311	103
27	470	189	1,990	160	215	431	1,420	460	159	128	216	103
28	370	240	2,510	130	215	391	1,340	430	159	131	179	101
29	325	270	2,740	150	-----	364	1,200	400	159	128	156	99
30	300	220	2,600	145	-----	368	1,250	370	156	125	142	97
31	280	-----	2,500	145	-----	354	-----	340	-----	121	133	-----
TOTAL	8,486	5,907	21,423	16,790	10,802	15,766	16,313	24,166	6,759	4,489	5,304	3,105
MEAN	274	197	691	542	386	509	544	780	225	145	171	104
CFSM	.645	.464	1.63	1.28	.908	1.20	1.28	1.84	.529	.341	.402	.245
IN	.74	.52	1.87	1.47	.95	1.38	1.43	2.11	.59	.39	.46	.27

CALENDAR YEAR 1965 MAX 2,740 MIN 92 MEAN 391 CFSM .920 INCHES 12.50
WATER YEAR 1965-66 MAX 2,740 MIN 94 MEAN 382 CFSM .899 INCHES 12.19

Peak discharge (base, 1,600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-29	0145	9.31	2,810				
5-15	Unknown	Unknown	about 1,700				

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 1966.

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.--18 years, 1,210 cfs.

Extremes.--Maximum discharge during year, 3,360 cfs Jan. 2 (gage height, 11.07 ft); minimum, 448 cfs Sept. 14 (gage height, 2.60 ft). 1948-66: 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.--Records good except those for winter period or periods of no gage-height record, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	1,460	1,380	1,030	3,320	990	1,140	1,540	2,980	1,630	761	666	609
2	1,490	1,290	945	3,360	980	1,190	1,500	2,980	1,520	729	653	586
3	1,430	1,230	942	3,320	980	1,330	1,470	2,940	1,460	699	639	563
4	1,330	1,180	962	3,260	980	1,540	1,440	2,820	1,390	685	614	547
5	1,210	1,110	982	3,220	980	1,740	1,400	2,660	1,320	687	591	526
6	1,110	1,070	979	3,160	980	1,860	1,370	2,470	1,260	832	577	512
7	1,070	1,050	955	3,020	980	1,900	1,330	2,280	1,210	860	565	503
8	1,060	1,040	935	2,900	1,200	1,840	1,300	2,170	1,160	795	554	496
9	1,040	1,030	910	2,780	1,480	1,760	1,260	2,070	1,170	736	547	482
10	1,020	1,010	905	2,660	1,620	1,700	1,220	1,990	1,180	749	558	476
11	988	988	920	2,510	1,730	1,700	1,190	1,920	1,120	768	604	466
12	958	968	979	2,430	1,800	1,730	1,160	2,240	1,080	775	623	460
13	935	958	1,130	2,430	1,860	1,790	1,110	2,590	1,200	778	595	450
14	910	948	1,300	2,360	1,890	1,900	1,080	2,780	1,380	820	581	448
15	888	922	1,400	2,240	1,890	2,020	1,060	2,860	1,370	812	577	455
16	872	912	1,430	2,130	1,850	2,040	1,030	2,980	1,350	747	593	471
17	852	895	1,410	2,000	1,760	1,980	1,010	3,120	1,280	708	584	485
18	835	892	1,320	1,860	1,660	1,890	1,000	3,260	1,220	678	561	464
19	815	882	1,240	1,700	1,560	1,820	1,020	3,320	1,180	772	540	455
20	830	875	1,190	1,560	1,470	1,730	1,070	3,260	1,120	940	522	462
21	875	865	1,120	1,480	1,390	1,660	1,340	3,220	1,050	912	515	492
22	988	858	1,060	1,420	1,340	1,650	1,680	3,070	997	840	609	506
23	1,330	848	1,040	1,340	1,290	1,760	1,980	2,940	948	778	862	503
24	1,550	835	1,170	1,260	1,230	1,830	2,360	2,820	885	738	1,050	487
25	1,700	825	2,090	1,190	1,180	1,840	2,550	2,700	855	701	1,110	492
26	1,840	832	2,630	1,120	1,140	1,840	2,660	2,590	825	666	1,030	508
27	1,850	885	2,820	1,060	1,110	1,810	2,700	2,430	800	685	898	510
28	1,790	976	2,940	930	1,100	1,760	2,820	2,240	788	752	800	501
29	1,700	1,040	3,120	1,020	-----	1,700	2,900	2,080	795	770	733	478
30	1,570	1,050	3,220	1,000	-----	1,630	2,980	1,920	775	736	676	476
31	1,460	-----	3,260	990	-----	1,580	-----	1,780	-----	696	637	-----
TOTAL	37,756	29,644	46,334	65,030	38,420	53,660	48,530	81,480	34,318	23,605	20,664	14,869
MEAN	1,218	988	1,495	2,098	1,372	1,731	1,618	2,628	1,144	761	667	496
CFSM	.931	.755	1.14	1.60	1.05	1.32	1.24	2.01	.875	.582	.510	.379
IN	1.07	.84	1.32	1.85	1.09	1.53	1.38	2.32	.98	.67	.59	.42

CALENDAR YEAR 1965 MAX 3,260 MIN 361 MEAN 1,309 CFSM 1.00 INCHES 13.59
 WATER YEAR 1965-66 MAX 3,360 MIN 448 MEAN 1,354 CFSM 1.04 INCHES 14.05

Note.--No gage-height record Jan. 20 to Mar. 1.

5-5180. Kankakee 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 1966. Monthly discharge only for some periods, published in WSP 1308. Periodic sediment samples have been collected since 1963.

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.--44 years, 1,503 cfs.

Extremes.--Maximum discharge during year, 4,270 cfs May 19-22; maximum gage height, 10.04 ft May 21; minimum discharge, 575 cfs Sept. 12-21.

1922-66: 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.--Records good except those for winter period, which are fair. Records of suspended sediment loads for the water year 1966 are published in Part 2 of this report.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.000	1.730	1.100	3.920	1.310	1.500	1.880	3.840	2.630	995	790	705
2	2.080	1.630	1.060	3.920	1.310	1.540	1.880	3.760	2.390	960	760	680
3	2.000	1.580	1.060	4.000	1.300	1.880	1.830	3.760	2.210	925	760	655
4	1.920	1.540	1.060	3.920	1.300	2.160	1.780	3.620	2.040	890	730	655
5	1.680	1.450	1.060	3.920	1.300	2.330	1.730	3.480	1.880	890	730	635
6	1.580	1.410	1.060	3.920	1.300	2.330	1.680	3.340	1.830	890	705	615
7	1.500	1.370	1.030	3.760	1.300	2.330	1.680	3.200	1.730	1.030	680	615
8	1.500	1.330	1.030	3.690	1.500	2.270	1.630	3.070	1.680	1.030	680	615
9	1.450	1.330	995	3.550	1.870	2.210	1.680	3.000	1.630	960	680	615
10	1.410	1.330	995	3.410	2.040	2.160	1.630	2.940	1.630	925	655	595
11	1.370	1.290	995	3.200	2.160	2.160	1.580	2.810	1.580	890	705	595
12	1.330	1.290	1.030	3.070	2.270	2.210	1.540	3.200	1.500	925	705	575
13	1.250	1.250	1.170	2.940	2.330	2.390	1.500	3.840	1.630	960	705	575
14	1.250	1.250	1.370	2.810	2.390	2.510	1.450	3.920	1.880	960	705	575
15	1.210	1.210	1.450	2.630	2.450	2.570	1.370	3.920	1.880	995	680	575
16	1.170	1.210	1.500	2.510	2.450	2.570	1.330	4.000	1.880	960	680	575
17	1.140	1.170	1.500	2.270	2.330	2.570	1.330	4.000	1.880	890	680	575
18	1.100	1.170	1.450	2.160	2.160	2.510	1.290	4.090	1.730	820	655	575
19	1.100	1.140	1.410	2.040	2.040	2.450	1.330	4.270	1.630	820	655	575
20	1.100	1.140	1.330	1.990	1.880	2.330	1.450	4.270	1.540	960	635	575
21	1.140	1.140	1.290	1.880	1.830	2.210	1.780	4.270	1.500	1.030	635	575
22	1.290	1.140	1.250	1.780	1.730	2.270	2.160	4.270	1.410	995	655	595
23	1.540	1.100	1.170	1.680	1.680	2.450	2.450	4.180	1.330	925	760	595
24	1.780	1.100	1.250	1.580	1.630	2.450	2.880	4.090	1.250	890	995	595
25	1.940	1.100	2.450	1.500	1.580	2.450	3.140	3.920	1.170	820	1.100	595
26	1.990	1.100	3.620	1.450	1.500	2.390	3.200	3.550	1.140	790	1.140	615
27	2.100	1.100	3.840	1.390	1.500	2.270	3.340	3.690	1.100	790	1.060	615
28	2.100	1.140	3.760	1.200	1.450	2.160	3.480	3.480	1.060	820	925	615
29	2.040	1.140	3.760	1.340	-----	2.040	3.760	3.270	1.030	890	855	615
30	1.990	1.170	3.760	1.320	-----	1.990	3.760	2.940	1.030	855	790	615
31	1.880	-----	3.840	1.320	-----	1.990	-----	2.810	-----	820	760	-----
Total	49.930	39.050	53.645	80.070	49.890	69.650	61.520	112.800	48.800	28.300	23.650	13.185
Mean	1.578	1.268	1.730	2.583	1.782	2.247	2.051	3.639	1.627	913	763	606
Cfsm	0.900	0.723	0.987	1.47	1.02	1.28	1.17	2.08	0.928	0.521	0.435	0.346
In.	1.04	0.81	1.14	1.69	1.06	1.48	1.30	2.40	1.04	0.60	0.50	0.39

Calendar year 1965: Max 3,840 Min 535 Mean 1,720 Cfsm 0.981 In. 13.35
 Water year 1965-66: Max 4,270 Min 575 Mean 1,736 Cfsm 0.990 In. 13.45

5-5190. Singleton ditch at Schneider, Ind.

Location.--Lat 41°12'44", long 87°26'44", on line between NE $\frac{1}{4}$ sec. 21 and NW $\frac{1}{4}$ 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, $1\frac{1}{2}$ miles downstream from Cedar Creek, and $1\frac{2}{3}$ miles north of Schneider.

Drainage area.--122 sq mi.

Records available.--July 1948 to September 1966.

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.--18 years, 90.9 cfs.

Extremes.--Maximum discharge during year, 1,100 cfs Dec. 24 (gage height, 10.58 ft); minimum, 6.6 cfs Sept. 15 (gage height, 1.35 ft).
1948-66: 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.--Records good except those for winter period, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	384	48	50	485	55	54	108	384	91	35	17	10
2	289	42	48	408	50	131	100	289	83	34	17	9.8
3	201	42	48	360	50	433	87	234	83	34	16	9.5
4	160	38	48	324	50	578	83	190	79	34	16	9.5
5	140	35	45	300	50	372	79	160	75	34	15	9.2
6	122	35	45	256	55	245	83	140	71	33	14	8.6
7	113	34	45	234	70	180	79	122	71	32	14	8.3
8	104	32	42	180	87	140	75	278	68	30	14	11
9	95	30	42	160	104	122	71	256	71	30	14	8.3
10	83	29	40	140	212	113	68	201	68	29	13	7.7
11	91	28	42	108	289	122	64	278	60	30	17	7.4
12	79	27	57	100	180	180	64	1,030	60	29	16	7.4
13	64	28	122	95	150	234	57	952	87	29	14	7.1
14	60	25	122	90	131	201	57	795	79	30	14	7.1
15	57	25	95	85	108	180	54	606	68	29	15	8.9
16	51	26	87	80	90	150	54	511	68	27	15	8.3
17	42	24	75	75	80	140	51	408	57	26	14	8.0
18	40	23	68	70	70	140	51	592	54	25	13	7.7
19	38	22	64	65	65	140	54	537	51	26	13	7.7
20	42	22	60	65	65	113	71	384	48	23	12	8.0
21	57	22	57	60	60	108	472	324	42	22	11	8.0
22	95	22	54	60	60	234	372	267	42	22	16	8.6
23	150	21	54	60	60	256	348	223	40	22	22	8.3
24	122	20	335	60	57	212	433	300	40	21	16	8.0
25	95	20	1,030	55	57	170	312	245	38	19	14	8.6
26	87	22	1,050	55	54	150	234	201	38	18	13	9.8
27	75	87	936	55	51	131	212	170	42	22	13	9.5
28	68	71	765	55	51	122	662	150	40	24	12	8.9
29	57	65	592	55		113	620	131	40	21	12	8.6
30	54	55	550	55	-----	122	472	113	38	19	11	8.9
31	54	-----	564	55	-----	108	-----	95	-----	18	11	-----
Total	3,169	1,020	7,232	4,305	2,461	5,694	5,547	10,566	1,792	827	444	256.7
Mean	102	34.0	233	139	87.9	184	185	341	59.7	26.7	14.3	8.56
Cfsm	0.836	0.279	1.91	1.14	0.720	1.51	1.52	2.80	0.489	0.219	0.117	0.070
In.	0.96	0.31	2.20	1.31	0.75	1.74	1.70	3.23	0.55	0.25	0.13	0.08

Calendar year 1965: Max 1,050 Min 13 Mean 130 Cfsm 1.07 In. 14.43
Water year 1965-66: Max 1,050 Min 7.1 Mean 119 Cfsm 0.975 In. 13.21

Peak discharge (base, 730 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-24	2300	10.58	1,100				
4-28	1500	9.43	904				
5-12	1030	10.43	1,060				

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 1966.

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.--15 years, 38.1 cfs.

Extremes.--Maximum discharge during year, 1,510 cfs Dec. 25 (gage height, 7.51 ft); minimum, 6.6 cfs Sept. 5, 6, 10-13, 28; minimum gage height, 1.10 ft Dec. 10.
1948-51, 1954-66: Maximum discharge, 1,840 cfs Oct. 10, 11, 1954 (gage height, 8.06 ft, from graph based on gage readings); minimum, 1.3 cfs Feb. 17, 1957 (gage height, 0.32 ft), result of freezeup.

Remarks.--Records fair except those for winter period, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	168	18	15	135	9.0	20	32	125	30	12	8.6	7.2
2	113	17	13	110	9.0	120	30	94	27	12	8.7	7.1
3	85	16	13	91	10	230	28	76	26	12	8.3	7.0
4	68	15	13	74	11	302	27	60	24	12	8.1	7.0
5	55	15	13	68	12	136	26	51	22	12	8.1	6.8
6	47	15	13	64	15	91	24	44	21	12	8.2	6.7
7	40	14	12	59	17	62	24	38	20	11	7.9	7.0
8	36	14	11	51	34	50	23	127	19	10	7.9	7.0
9	32	14	11	45	71	45	22	80	19	10	7.8	7.1
10	28	14	10	41	151	40	22	54	19	10	8.3	6.9
11	26	13	11	38	126	42	21	218	17	10	8.8	6.8
12	24	13	15	34	80	76	21	1,300	16	9.5	8.2	6.8
13	22	13	24	34	64	91	20	630	17	9.7	7.9	6.8
14	21	13	29	32	52	72	19	311	17	10	8.1	7.3
15	21	13	26	30	41	60	18	188	17	10	8.6	8.0
16	19	13	22	28	30	55	18	151	17	9.6	8.3	7.2
17	19	13	19	25	25	45	17	119	16	9.2	7.7	6.9
18	18	12	18	20	22	45	17	218	15	9.2	7.6	6.8
19	17	12	17	20	20	45	19	136	15	9.3	7.5	6.8
20	19	12	16	15	20	38	74	104	15	8.9	7.3	6.9
21	21	12	15	15	19	38	341	94	14	8.9	7.5	7.1
22	25	12	15	15	18	73	169	84	14	8.7	15	7.1
23	44	12	14	13	18	71	212	73	13	8.6	11	7.0
24	38	11	395	11	17	60	216	100	13	8.5	8.3	6.9
25	31	11	1,440	11	18	48	144	77	12	8.4	7.4	7.4
26	28	13	922	10	17	45	110	67	12	8.6	7.4	7.7
27	25	22	846	10	17	40	94	58	14	9.7	7.3	7.5
28	22	21	246	10	18	35	424	49	14	11	7.2	7.0
29	20	19	168	9.0	-----	33	190	42	13	9.5	7.2	7.1
30	19	17	181	9.0	-----	36	164	36	13	8.9	7.1	7.0
31	19	-----	179	9.0	-----	33	-----	33	-----	8.9	7.1	-----
TOTAL	1,170	429	4,742	1,136.0	961.0	2,177	2,566	4,837	521	308.1	254.4	211.9
MEAN	37.7	14.3	153	36.6	34.3	70.2	85.5	156	17.4	9.94	8.21	7.06
CFSM	0.692	0.262	2.81	0.672	0.629	1.29	1.57	2.86	0.319	0.182	0.151	0.130
IN	0.80	0.29	3.24	0.77	0.66	1.49	1.75	3.30	0.36	0.21	0.17	0.14

CALENDAR YEAR 1965 MAX 1,440 MIN 3.1 MEAN 54.2 CFSM 0.994 INCHES 13.51
WATER YEAR 1965-66 MAX 1,440 MIN 6.7 MEAN 52.9 CFSM 0.971 INCHES 13.18

Peak discharge (base, 500 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	0100	7.51	1,510	4-28	1130	5.89	766
3-3	0500	5.31	564	5-12	0940	7.47	1,480
4-21	0530	5.20	557				

5-5200. Singleton ditch at Illinot, Ill.

Location.--Lat 41°11'20", long 87°31'35", in SW¼ sec. 8, T. 31 N., R. 15 E., on left bank 50 ft downstream from county highway bridge at Illinot, 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 1966.

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.--22 years, 161 cfs.

Extremes.--Maximum discharge during year, 1,870 cfs May 12 (gage height, 9.80 ft); maximum gage height, 9.93 ft Dec. 25; minimum discharge, 13 cfs Sept. 20, 24 (gage height, 1.57 ft).

1944-66: 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.--Records good except those for winter period or no gage-height record, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	600	75	83	824	70	90	197	692	168	60	32	19
2	500	70	57	692	70	209	179	503	155	56	34	18
3	350	63	55	585	70	714	164	405	147	56	32	18
4	280	61	55	483	75	1,030	155	343	144	56	30	18
5	240	54	54	405	80	670	148	294	134	56	29	16
6	220	53	53	367	100	424	147	258	128	56	28	16
7	200	52	49	317	140	305	140	236	127	56	27	16
8	180	51	49	341	204	246	130	523	120	54	27	18
9	160	49	47	339	298	216	127	463	124	54	26	16
10	150	49	46	231	405	204	121	367	116	52	29	15
11	160	48	49	210	503	212	116	523	109	51	32	15
12	140	47	62	200	319	301	114	1,810	106	51	28	14
13	120	49	138	180	250	424	105	1,740	128	50	26	14
14	110	46	152	177	209	348	99	1,490	136	52	27	17
15	100	46	124	168	176	310	97	1,170	120	51	28	19
16	85	48	105	153	168	271	94	983	116	47	27	16
17	75	45	93	130	172	246	92	780	108	45	25	15
18	70	43	84	120	156	243	93	960	99	44	24	14
19	65	44	77	110	121	246	102	891	95	44	23	14
20	70	44	73	95	161	214	171	670	95	42	22	13
21	90	43	70	90	134	202	891	543	92	40	23	14
22	130	43	63	85	130	405	670	463	86	39	39	15
23	230	41	61	80	111	443	648	386	83	39	34	14
24	210	41	424	80	93	386	802	523	81	37	28	13
25	160	41	1,710	80	92	301	564	443	78	36	24	14
26	140	44	1,680	80	86	272	405	367	75	35	23	15
27	120	99	1,580	75	84	244	367	317	80	39	22	15
28	110	97	1,360	75	86	219	1,150	280	77	43	21	15
29	95	118	1,080	75	-----	207	1,100	250	72	39	20	15
30	85	121	983	75	-----	217	868	227	63	36	20	15
31	80	-----	983	75	-----	202	-----	197	-----	34	19	-----
TOTAL	5,325	1,725	11,499	6,997	4,563	10,021	10,056	19,097	3,262	1,450	829	466
MEAN	172	57.5	371	226	163	323	335	616	109	46.8	26.7	15.5
CFSM	.785	.263	1.69	1.03	.744	1.47	1.53	2.81	.498	.214	.122	.071
IN	.90	.29	1.95	1.19	.77	1.70	1.71	3.24	.55	.25	.14	.08

CALENDAR YEAR 1965 MAX 1,710 MIN 24 MEAN 203 CFSM .927 INCHES 12.56
 WATER YEAR 1965-66 MAX 1,810 MIN 13 MEAN 206 CFSM .941 INCHES 12.79

Peak discharge (base, 1,100 cfs)

Note.--No gage-height record Oct. 1 to Nov. 3.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	0300	9.93	1,810				
3-4	1130	7.53	1,170				
4-28	1630	8.92	1,580				
5-12	1930	9.80	1,870				

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 1966.

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.--51 years (1915-66), 1,820 cfs.

Extremes.--Maximum discharge during year, 7,310 cfs May 12 (gage height, 3.70 ft); maximum gage-height, 5.25 ft Jan. 28 (ice jam); minimum discharge, 596 cfs Sept. 21.

1905-6, 1914-66: 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 period, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.730	2.360	1.500	5.540	1.500	1.840	2.930	5.950	3.710	1.250	973	840
2	3.500	2.300	1.530	5.340	1.500	2.270	2.830	5.530	3.480	1.180	940	808
3	3.280	2.100	1.530	5.140	1.500	3.350	2.730	5.180	3.260	1.170	920	776
4	3.100	2.000	1.500	4.980	1.500	4.100	2.650	4.870	3.030	1.120	870	746
5	2.890	1.900	1.480	4.840	1.600	3.710	2.550	4.650	2.830	1.080	860	725
6	2.710	1.800	1.470	4.760	1.700	3.370	2.450	4.390	2.650	1.050	832	697
7	2.560	1.800	1.470	4.640	2.000	3.260	2.370	4.190	2.550	1.120	808	690
8	2.410	1.760	1.470	4.660	2.200	3.160	2.350	4.650	2.390	1.180	808	676
9	2.290	1.700	1.440	4.820	3.000	3.120	2.290	4.650	2.270	1.180	794	662
10	2.150	1.600	1.410	4.360	4.000	3.080	2.260	4.320	2.220	1.120	800	662
11	2.080	1.600	1.410	4.600	3.500	3.060	2.240	4.650	2.120	1.120	808	627
12	2.000	1.600	1.460	4.880	3.180	3.290	2.160	5.870	2.030	1.120	816	620
13	2.000	1.580	1.650	4.010	3.080	3.600	2.070	6.670	2.000	1.120	824	614
14	1.760	1.540	1.860	3.820	3.060	3.580	2.020	5.520	2.090	1.120	824	608
15	1.750	1.530	1.940	3.610	3.060	3.600	1.980	5.410	2.200	1.120	824	620
16	1.700	1.480	2.040	3.450	3.060	3.580	1.910	5.430	2.330	1.120	800	602
17	1.650	1.470	2.050	3.300	2.990	3.580	1.850	5.080	2.330	1.090	792	602
18	1.500	1.360	2.050	3.100	2.950	3.580	1.840	5.150	2.350	1.050	832	608
19	1.530	1.400	2.040	3.000	2.990	3.560	1.910	6.230	2.240	995	776	608
20	1.560	1.400	2.000	2.900	2.830	3.480	2.240	5.970	2.070	984	753	602
21	1.640	1.400	1.910	2.700	2.730	3.450	3.810	5.750	1.980	1.120	746	602
22	1.750	1.360	1.840	2.400	2.490	4.000	3.790	5.590	1.910	1.180	800	608
23	1.900	1.320	1.780	2.200	2.160	4.060	3.920	5.420	1.730	1.130	816	620
24	2.360	1.320	2.520	2.100	2.070	3.940	4.540	5.730	1.630	1.080	940	620
25	3.200	1.310	5.650	2.000	2.070	3.790	4.500	5.620	1.530	1.040	1.120	634
26	3.200	1.320	5.500	1.900	1.890	3.680	4.470	5.330	1.440	1.000	1.210	620
27	3.100	1.310	5.690	1.800	1.800	3.580	4.540	5.090	400	1.050	1.210	627
28	3.000	1.470	6.010	1.600	1.820	3.430	5.930	4.760	1.320	1.050	1.150	627
29	2.800	1.420	5.920	1.500	-----	3.260	5.080	4.540	1.240	1.050	1.040	648
30	2.700	1.470	5.780	1.500	-----	3.180	6.060	4.250	1.280	1.030	962	634
31	2.500	-----	5.800	1.500	-----	3.060	-----	3.940	-----	1.010	900	-----
Total	74,300	47,980	81,700	105,950	63,230	105,600	93,270	165,380	64,610	34,029	27,538	19,633
Mean	2.397	1.599	2.635	3.450	2.437	3.406	3.109	5.367	2.187	1.098	888	654
Cfsm	1.02	0.683	1.13	1.47	1.04	1.46	1.33	2.29	0.935	0.469	0.379	0.279
In.	1.18	0.76	1.30	1.70	1.08	1.68	1.48	2.64	1.04	0.54	0.44	0.31
Calendar year 1965:	Max 6,010	Min 620	Mean 2,191	Cfsm 0.936	In. 12.71							
Water year 1965-66:	Max 6,870	Min 602	Mean 2,442	Cfsm 1.04	In. 14.16							

5-5210. Iroquois River at Rosebud, Ind.

Location (revised).--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 1966.

Gage.--Water-stage recorder. Datum of gage is 661.47 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 1, 1953, wire-weight gage on downstream side of county bridge at same datum.

Average discharge.--18 years, 23.0 cfs.

Extremes.--Maximum discharge during year, 233 cfs Dec. 25 (gage height, 7.02 ft); minimum, 1.9 cfs Sept. 1 (gage height, 0.87 ft).
1948-66: 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.--Records fair.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	32	13	10	75	9.0	17	23	83	30	10	4.8	2.7
2	25	16	10	67	9.0	25	26	63	23	9.6	4.4	2.7
3	22	16	11	55	9.0	39	26	51	23	9.2	3.7	2.9
4	19	15	11	43	9.0	63	25	44	26	9.2	3.4	3.1
5	16	14	11	43	10	44	24	40	25	3.5	3.2	2.7
6	16	14	11	44	11	32	22	36	24	7.6	3.1	2.6
7	13	16	9.7	39	11	23	22	31	22	6.3	3.4	2.5
8	13	16	3.4	35	12	22	21	79	22	6.3	3.3	2.6
9	13	16	9.4	32	14	21	21	95	25	6.4	3.7	2.6
10	16	15	9.5	31	24	24	20	71	24	5.2	4.7	2.5
11	13	14	11	23	23	23	20	79	22	7.4	5.1	2.6
12	13	14	15	25	23	37	13	143	21	6.6	4.2	2.4
13	13	14	32	26	20	44	13	135	13	6.3	3.7	2.4
14	16	13	25	24	13	40	16	113	13	6.3	4.1	3.7
15	15	12	22	24	16	36	15	99	13	5.7	3.9	4.4
16	16	14	20	21	15	31	16	131	30	5.3	3.6	4.9
17	13	12	13	13	15	30	15	107	25	5.6	3.6	3.7
18	16	12	16	13	14	31	16	103	22	5.1	3.3	3.5
19	15	11	15	16	14	31	20	83	20	5.3	3.1	3.1
20	19	11	16	15	13	26	22	67	13	4.6	3.2	3.8
21	24	11	15	14	13	26	67	67	17	4.7	3.5	4.2
22	41	11	14	13	13	37	55	59	16	5.0	4.6	4.2
23	67	10	15	12	12	43	99	51	14	4.9	3.2	3.0
24	45	9.5	76	11	12	44	127	99	13	4.6	3.1	3.0
25	34	9.7	223	10	12	36	95	83	13	4.4	3.1	3.7
26	30	11	203	9.5	12	34	91	63	12	4.6	2.9	3.7
27	25	14	163	9.0	12	30	63	51	12	4.9	3.0	3.3
28	22	12	115	9.0	12	23	99	44	12	5.3	2.7	3.2
29	20	12	87	9.0	9.0	23	91	39	11	4.6	3.1	3.3
30	20	11	87	9.0	9.0	31	91	34	11	4.3	3.1	3.7
31	19	---	83	9.0	---	23	---	32	---	4.2	2.8	---
Total	713	394.2	1379	804.5	392	1019	1290	2286	597	189	110.6	96.7
Mean	23.2	13.1	44.5	26.0	14.0	32.9	43.0	73.7	19.9	6.10	3.57	3.22
Cfsm	0.766	0.432	1.47	0.858	0.462	1.09	1.42	2.43	0.657	0.201	0.118	0.106
In.	0.88	0.48	1.70	0.99	0.48	1.26	1.58	2.80	0.73	0.23	0.14	0.12

Calendar year 1965: Max 228 Min 3.1 Mean 26.8 Cfsm 0.884 In. 12.00
Water year 1965-66: Max 228 Min 2.4 Mean 25.4 Cfsm 0.838 In. 11.39

Peak discharge (base, 150 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	0800	7.02	233				
5-12	1530	5.52	158				

5-5220. Iroquois River near North Marion, Ind.

Location (revised).--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 1966.

Gage.--Water-stage recorder. Datum of gage is 646.68 ft above mean sea level, datum of 1929. Prior to Sept. 6, 1955, wire-weight gage at same site and datum.

Average discharge.--17 years (1949-66) 110 cfs.

Extremes.--Maximum discharge during year, 1,020 cfs Dec. 27 (gage height, 12.44 ft); minimum, 1.9 cfs Sept. 6, 7, 8, 10, 11, 13, 14 (gage height, 1.20 ft).
1948-66: Maximum discharge, 2,040 cfs June 10, 1958 (gage height, 15.09 ft); minimum, 1.5 cfs Sept. 8, 1964.

Remarks.--Records fair except those for winter period, which are poor. Water is diverted from Oliver ditch, a tributary, into Ryan ditch. Ryan ditch enters the Iroquois River 1½ miles below this station.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	133	80	73	560	41	83	133	470	113	37	3.0	2.4
2	133	73	56	490	41	165	125	400	111	34	7.6	2.4
3	111	73	62	400	41	173	113	330	104	37	6.2	2.6
4	90	70	64	320	41	280	111	250	97	34	5.6	5.8
5	86	62	62	270	45	320	104	205	97	30	5.2	4.1
6	80	62	59	240	43	222	104	173	90	25	5.1	2.4
7	80	64	54	213	53	149	104	157	83	19	5.1	2.0
8	83	70	52	173	57	125	97	280	76	15	5.8	2.1
9	80	67	54	181	70	113	97	450	90	16	5.6	2.3
10	76	70	52	157	157	133	90	460	90	19	10	2.4
11	73	67	59	149	205	165	86	400	80	22	10	2.8
12	76	67	80	130	165	205	83	550	73	21	14	2.6
13	73	70	141	120	125	280	80	660	67	13	14	2.3
14	73	62	157	111	97	280	67	660	67	26	13	2.8
15	73	59	133	104	80	250	70	600	67	23	13	12
16	64	59	111	95	72	213	70	610	97	14	5.8	5.6
17	62	59	97	92	69	189	64	610	97	12	7.1	4.5
18	59	59	83	83	66	181	67	580	83	11	6.4	5.4
19	56	56	76	77	64	181	80	560	73	10	5.6	5.4
20	64	52	76	66	62	157	104	470	64	9.8	4.5	6.9
21	90	54	73	60	61	141	213	380	59	9.2	5.1	1.4
22	165	54	70	59	60	205	300	340	54	9.8	9.5	1.9
23	270	52	70	54	53	270	370	290	49	9.8	7.6	1.3
24	280	49	193	50	57	260	620	280	44	9.5	5.6	5.4
25	222	52	770	47	56	213	650	330	33	9.2	7.4	9.3
26	165	56	992	43	56	189	510	290	42	9.8	7.6	1.3
27	133	86	1,020	41	56	157	400	231	44	9.8	3.9	2.5
28	113	83	935	41	59	141	430	189	42	9.0	5.1	1.9
29	104	86	810	41		133	510	165	42	9.8	4.5	1.9
30	97	80	700	41		149	490	141	39	7.1	3.4	1.6
31	90		620	41		141		125		7.1	3.4	
Total	3,353	1,953	7,855	4,553	2,061	5,863	6,347	11,636	2,179	525.9	225.7	230.5
Mean	108	65.1	253	147	73.6	189	212	375	72.6	17.0	7.28	7.68
Cfsm	0.806	0.486	1.89	1.10	0.549	1.41	1.58	2.80	0.542	0.127	0.054	0.057
In.	0.93	0.54	2.18	1.27	0.57	1.63	1.76	3.23	0.60	0.15	0.06	0.06

Calendar year 1965 : Max 1,020 Min 7.6 Mean 143 Cfsm 1.07 In. 14.48
Water year 1965-66 : Max 1,020 Min 2.0 Mean 128 Cfsm 0.98 In. 12.98

Peak discharge (base, 420 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-27	0100	12.44	1,020	5-13	2100	10.18	760
4-25	0200	9.25	660				
4-29	1100	8.24	560				

5-5225. Iroquois River at Rensselaer, Ind.

Location (revised).--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 Big Slough Creek.

Drainage area.--194 sq mi.

Records available.--July 1948 to September 1966.

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.--18 years, 146 cfs.

Extremes.--Maximum discharge during year, 1,440 cfs Dec. 26 (gage height, 13.06 ft); minimum, 3.8 cfs Sept. 14 (gage height, 2.91 ft). 1948-66: 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.--Records good except those for the winter period, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1965 TO SEPTEMBER 1966

DAY	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.
1	137	89	79	720	55	105	156	620	150	39	10	5.0
2	136	84	67	604	55	176	148	515	143	37	11	5.2
3	115	83	72	482	55	185	140	392	137	38	8.7	5.2
4	95	80	77	381	56	296	133	300	130	37	7.6	7.5
5	88	71	77	316	58	321	128	247	121	32	7.2	6.9
6	83	69	72	286	60	229	125	207	105	29	7.6	5.2
7	83	73	64	262	64	162	126	190	99	22	7.1	4.6
8	88	78	62	201	68	145	121	349	91	16	7.4	4.2
9	85	73	64	216	75	141	120	599	103	17	8.1	4.2
10	80	75	62	196	161	153	115	608	104	20	12	4.9
11	77	70	70	181	237	183	111	536	94	25	15	4.6
12	83	69	96	165	192	220	106	813	88	25	15	5.3
13	80	70	159	150	155	290	104	1,030	82	21	16	4.8
14	79	64	173	135	131	288	94	1,000	80	26	22	4.9
15	79	68	151	125	115	257	93	880	78	26	15	18
16	69	70	129	115	111	221	92	934	126	15	10	9.0
17	66	67	115	105	93	194	87	909	125	12	8.5	4.5
18	61	63	104	95	115	186	91	850	105	12	9.1	6.1
19	60	62	95	90	88	187	102	782	90	11	8.0	5.8
20	64	55	96	80	93	170	125	631	80	11	7.6	7.5
21	89	56	93	75	90	158	248	487	69	10	7.6	12
22	191	60	88	70	86	202	334	414	63	9.9	12	18
23	308	54	90	66	83	274	452	352	56	10	12	11
24	298	52	272	63	82	278	807	356	50	9.7	8.7	4.2
25	238	54	1,160	60	82	234	819	401	45	10	8.3	4.0
26	183	62	1,410	58	76	204	674	354	43	11	11	6.6
27	150	104	1,400	57	75	180	508	283	50	9.8	7.4	16
28	129	100	1,280	56	82	161	595	231	46	11	5.7	9.5
29	117	73	1,080	55	-----	154	694	199	49	10	7.3	11
30	106	82	907	55	-----	168	655	177	45	9.2	6.2	9.3
31	100	-----	799	55	-----	167	-----	162	-----	8.2	5.9	-----
TOTAL	3,617	2,130	10,443	5,575	2,693	6,289	8,103	15,808	2,647	579.8	305.0	225.0
MEAN	117	71.0	338	180	96.2	203	270	510	88.2	18.7	9.84	7.50
CFSM	.603	.366	1.74	.928	.496	1.05	1.39	2.63	.455	.096	.051	.039
IN	.69	.41	2.01	1.07	.52	1.21	1.55	3.03	.51	.11	.06	.04

CALENDAR YEAR 1965 MAX 1,410 MIN 12 MEAN 176 CFSM .907 INCHES 12.34
WATER YEAR 1965-66 MAX 1,410 MIN 4.0 MEAN 160 CFSM .825 INCHES 11.20

Peak discharge (base, 650 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-26	2100	13.06	1,440	5-13	2230	10.72	1,040
4-24	2330	9.90	853				
4-29	0930	9.04	707				

5-5230. Blice ditch near South Marion, Ind.

Location (revised).--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 1966.

Gage.--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 to Sept. 30, 1965, water-stage recorder, at present site and datum 2.00 ft higher.

Average discharge.--17 years (1949-66), 15.8 cfs.

Extremes.--Maximum discharge during year, 440 cfs Dec. 25 (gage height, 8.97 ft); minimum observed, 0.2 cfs Sept. 5-13, 18.
1948-66: Maximum discharge, 780 cfs June 13, 1958 (gage height, 12.02 ft); no flow at times during 1952, 1955, and 1964.

Remarks.--Records poor. Dec. 15-23, 26-31, Jan. 1 - May 7, May 19 - Sept. 30, gage height obtained from twice-daily wire-weight gage readings.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.5	3.8	6.5	7.0	1.2	1.5	1.0	7.5	4.6	1.3	0.5	0.3
2	2.2	3.3	5.2	6.0	1.2	2.3	8.5	3.6	4.3	1.3	1.3	.3
3	1.7	3.3	6.2	4.3	1.2	2.6	8.5	2.6	4.3	1.1	.6	.3
4	1.4	2.9	5.5	2.7	1.2	6.0	7.0	1.9	4.1	1.1	.5	.3
5	1.1	2.5	5.0	2.1	1.3	2.9	6.6	1.4	3.9	1.1	.4	.3
6	1.1	3.1	4.2	2.2	1.4	1.9	6.6	1.2	3.6	1.1	.4	.2
7	1.5	4.2	3.5	1.9	1.5	1.5	7.0	9.5	3.2	.8	.4	.2
8	2.2	6.8	3.7	1.5	2.2	1.1	6.6	3.9	3.2	.7	.4	.2
9	2.3	1.6	4.0	1.1	3.6	1.4	9.5	3.2	5.4	.8	.4	.2
10	1.9	1.2	4.5	9.5	2.7	1.9	6.8	2.3	5.0	.6	.8	.2
11	2.5	9.4	6.5	9.0	3.6	2.9	6.6	3.3	3.6	1.4	.8	.2
12	3.8	9.6	1.0	6.4	1.7	5.3	6.0	8.0	3.9	.8	.5	.2
13	3.3	7.1	1.6	9.0	1.5	5.5	5.2	5.3	3.2	.9	.4	.2
14	2.5	4.0	1.4	6.0	1.2	4.1	4.6	5.0	2.9	1.0	.4	.3
15	2.3	3.3	1.3	4.7	7.5	3.2	4.8	3.9	3.6	.7	.5	.6
16	2.2	3.8	9.0	3.5	7.5	2.3	4.4	4.3	5.8	.6	.6	.3
17	1.9	3.1	9.2	3.1	7.8	1.9	4.3	3.6	5.4	.5	.5	.3
18	1.7	2.3	7.5	2.7	6.2	2.0	4.1	3.6	4.3	.4	.4	.2
19	1.7	2.5	6.2	2.3	5.0	1.3	6.2	2.1	3.6	.5	.6	.3
20	2.2	2.4	6.6	2.1	4.5	1.4	1.2	1.6	2.9	.4	.4	.8
21	3.1	2.2	6.4	1.9	4.0	1.6	6.2	2.3	2.4	.4	.4	.9
22	4.5	2.2	6.4	1.7	3.7	1.3	3.4	1.9	2.1	.4	.6	.6
23	8.2	2.3	7.0	1.5	3.5	2.3	7.4	1.5	2.0	.4	.5	.3
24	4.2	2.5	10.9	1.4	3.3	1.4	7.5	1.9	1.6	.4	.5	.3
25	2.6	2.8	3.62	1.3	3.2	1.5	5.0	1.4	1.6	.4	.4	.4
26	2.0	5.0	1.66	1.2	3.2	1.2	3.1	1.1	1.4	.4	.3	.4
27	1.4	1.3	10.0	1.2	3.4	9.5	3.4	9.5	1.6	.4	.3	.3
28	9.7	1.2	7.0	1.2	5.8	9.5	6.4	7.5	1.8	.6	.3	.4
29	6.2	1.3	6.0	1.2	9.2	9.2	4.6	6.2	1.5	.5	.3	.3
30	5.6	9.0	7.0	1.2	-----	1.4	5.5	5.4	1.3	.4	.3	.3
31	5.3	-----	7.0	1.2	-----	1.0	-----	5.0	-----	.4	.3	-----
Total	300.9	169.4	1172.1	360.3	190.4	689.2	659.3	840.1	99.1	21.8	1.5	1.0
Mean	9.71	5.61	37.8	11.6	6.80	22.2	22.0	27.1	3.27	0.70	0.48	0.33
Cfsm	0.429	0.248	1.67	0.513	0.301	0.982	0.973	1.20	0.145	0.031	0.021	0.015
In.	0.49	0.28	1.92	0.59	0.31	1.13	1.09	1.38	0.16	0.04	0.02	0.02

Calendar year 1965 : Max 362 Min 0.3 Mean 14.3 Cfsm 0.633 In. 8.60
Water year 1965-66 : Max 362 Min 0.2 Mean 12.4 Cfsm 0.549 In. 7.43

Peak discharge (base, 340 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	0700	8.97	440				

5-5235. Slough Creek near Collegeville, Ind.

Location (revised).--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 2¾ miles downstream from Bice ditch.

Drainage area.--84.1 sq mi.

Records available.--July 1948 to December 1951, October 1952 to September 1966. Prior to October 1965, published as Big Slough Creek near Collegeville.

Gage.--Water-stage recorder. Datum of gage is 634.75 ft above mean sea level, datum of 1929. Prior to Aug. 5, 1955, wire-weight gage and Aug. 5, 1955, to Oct. 8, 1958, water-stage recorder, at same site at datum 3.00 ft higher.

Average discharge.--17 years, 62.5 cfs.

Extremes.--Maximum discharge during year, about 2,130 cfs Dec. 25 (gage height, 14.27 ft, from rating curve extended above 1,680 cfs on basis of slope-area determination at gage height 14.27 ft); minimum, 2.3 cfs Sept. 8 (gage height, 3.27 ft).
1948-51, 1952-66: Maximum discharge, that of Dec. 25, 1965; maximum gage height, 16.46 ft Mar. 5, 1963 (backwater from ice); minimum daily discharge, 0.7 cfs Dec. 20-26, 1963.

Remarks.--Records good below 300 cfs, fair above except for winter period and backwater from Iroquois River, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	22	23	846	15	33	47	300	30	13	6.3	3.3
2	17	19	24	720	15	73	42	220	23	11	11	3.3
3	15	18	29	562	15	68	40	170	24	11	7.0	3.3
4	13	17	32	372	15	199	35	90	25	10	6.1	2.9
5	12	16	30	252	16	143	33	70	24	10	5.8	2.9
6	12	17	25	174	17	83	33	54	25	11	5.5	2.9
7	14	19	20	123	19	66	35	47	21	10	5.8	2.9
8	16	20	22	123	20	46	33	252	21	9.3	5.5	2.7
9	16	27	13	103	36	43	33	294	23	3.8	5.5	2.7
10	14	26	19	73	83	63	34	233	23	3.0	7.0	2.7
11	15	24	22	65	123	93	32	277	23	11	7.6	2.7
12	19	22	31	54	53	173	23	640	22	3.3	6.1	2.5
13	13	22	60	43	45	266	25	700	21	3.8	5.2	2.5
14	16	13	55	40	36	193	22	720	20	10	5.2	3.4
15	15	17	44	37	29	150	23	660	21	3.4	5.5	6.3
16	14	19	35	35	26	103	24	400	35	7.3	5.0	3.4
17	13	17	31	33	20	83	22	230	36	7.3	4.8	4.8
18	12	14	28	31	13	83	21	190	23	7.0	4.5	3.5
19	12	14	26	28	16	83	26	120	25	7.0	6.8	3.5
20	13	14	24	24	15	64	36	100	21	6.4	4.8	6.2
21	16	14	24	22	14	64	219	86	19	6.1	5.2	6.7
22	74	14	22	21	14	73	162	75	17	6.1	7.0	5.2
23	213	14	24	20	13	51	356	66	16	6.1	5.2	4.5
24	113	13	196	19	13	73	580	60	15	6.1	4.5	4.0
25	32	13	2020	17	12	56	580	54	14	6.1	4.0	5.0
26	53	16	1720	16	12	55	490	43	14	5.8	3.8	4.5
27	41	61	1530	15	13	45	372	45	13	6.1	3.8	4.8
28	34	54	1320	15	17	40	503	42	16	6.4	3.8	4.2
29	23	53	1140	15	-----	42	580	37	16	6.1	3.5	4.2
30	26	43	978	15	-----	53	544	34	14	5.5	3.3	4.0
31	25	-----	890	15	-----	50	-----	33	-----	5.5	3.3	-----
Total	959	681	10469	3943	755	2765	5022	6352	662	2505	1634	1205
Mean	30.9	22.7	338	127	27.0	89.2	167	205	22.1	8.08	5.43	4.02
Cfsm	0.367	0.270	4.02	1.51	0.321	1.06	1.99	2.44	0.263	0.096	0.065	0.048
In.	0.42	0.30	4.64	1.74	0.33	1.22	2.22	2.81	0.29	0.11	0.07	0.05

Calendar year 1965: Max 2,020 Min 4.8 Mean 80.0 Cfsm 0.951 In. 12.90
Water year 1965-66: Max 2,020 Min 2.5 Mean 88.1 Cfsm 1.05 In. 14.21

5-5240. Carpenter Creek at Egypt, Ind.

Location (revised).--Lat 40°51'58", long 87°12'20", on line between SW $\frac{1}{4}$ sec. 15 and NW $\frac{1}{4}$ 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 1966.

Gage.--Water-stage recorder. Datum of gage is 641.79 ft above mean sea level, datum of 1929. Prior to Sept. 6, 1955, wire-weight gage at same site and datum.

Average discharge.--17 years, 33.8 cfs.

Extremes.--Maximum discharge during year, 1,100 cfs Dec. 25 (gage height, 10.00 ft); no flow for many days.
1948-51, 1952-66: Maximum discharge, 3,720 cfs June 10, 1958 (gage height, 11.66 ft); no flow at times most years.

Remarks.--Records fair above 10 cfs, poor below 10 cfs and for winter period.

Discharge, in cubic feet per second, water year October 1965 to September 1966												
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.9	6.6	6.4	199	5.0	34	16	160	14	21	0.5	0
2	1.4	5.0	6.6	146	5.0	54	14	101	13	13	1.3	0
3	1.0	5.2	8.6	101	5.0	47	12	70	12	9.6	.8	0
4	.9	4.8	8.6	74	5.0	107	11	50	11	7.5	.4	0
5	.7	4.2	8.0	66	5.6	70	10	44	11	5.8	.3	0
6	.7	4.8	7.2	62	3.4	40	9.9	35	10	5.5	.2	0
7	1.2	6.0	5.4	52	10	25	9.9	31	9.2	4.2	.2	0
8	1.9	6.6	4.8	44	15	15	9.9	50	9.5	3.1	.1	0
9	1.8	7.2	5.5	39	22	20	10	46	32	2.7	.1	0
10	1.3	5.5	5.5	32	54	29	9.0	36	29	2.2	.1	0
11	1.6	4.8	6.8	27	101	44	9.5	47	19	2.9	.3	0
12	2.8	4.8	9.2	23	50	79	8.5	153	15	2.5	.1	0
13	2.0	5.5	14	21	35	119	7.1	119	12	2.2	.1	0
14	1.8	4.4	14	19	27	84	6.3	101	10	2.0	.1	0
15	1.6	4.0	12	16	17	66	6.0	79	9.6	1.9	.1	.4
16	1.6	4.7	11	15	14	52	6.3	79	21	1.5	.1	.4
17	1.4	5.0	9.4	13	13	44	5.8	62	20	1.2	.1	.4
18	1.2	4.1	8.4	12	12	40	5.7	59	15	1.1	0	.2
19	1.2	3.7	7.4	11	10	36	9.3	42	12	1.1	0	.2
20	1.6	3.7	8.6	9.0	10	29	11	34	9.9	.9	1.1	.6
21	5.4	4.4	9.4	9.2	9.5	29	121	41	3.2	.7	.3	1.6
22	40	5.2	7.0	7.5	9.2	32	79	41	7.1	.6	.2	.7
23	104	4.8	7.2	6.6	9.0	36	146	36	6.3	.6	.1	.3
24	53	4.4	80	6.4	9.0	29	214	47	5.7	.6	0	.2
25	32	4.2	936	6.0	9.0	22	146	41	4.8	.4	0	.3
26	24	4.0	442	5.6	9.0	24	89	34	4.2	.4	0	.6
27	17	21	265	5.4	9.0	19	79	29	6.8	.5	0	.3
28	13	17	182	5.0	11	16	182	24	7.3	.5	0	.3
29	10	10	139	5.0	---	16	160	20	7.3	.5	0	.3
30	9.6	8.2	146	5.0	---	22	160	17	40	.5	0	.2
31	9.6	---	167	5.0	---	17	---	15	---	.6	0	---
Total	345.2	183.8	254.7	1043.7	499.7	1295	1560.2	1742	455.6	97.8	9.9	7.0
Mean	11.1	6.13	82.2	33.7	17.8	41.8	52.0	56.2	15.2	3.15	0.29	0.23
Cfsm	0.231	0.127	1.71	0.701	0.370	0.869	1.08	1.17	0.316	0.065	0.006	0.005
In.	0.27	0.14	1.97	0.81	0.39	1.00	1.20	1.35	0.35	0.07	0.007	0.006

Calendar year 1965: Max 936 Min 0.2 Mean 33.8 Cfsm 0.703 In. 9.56
Water year 1965-66: Max 936 Min 0 Mean 26.8 Cfsm 0.557 In. 7.56

Peak discharge (base, 600 cfs)

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	1000	10.00	1,100				

5-5245. Iroquois River near Foresman, Ind.

Location (revised).--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 mile west of Foresman, and 3 miles east of Brook.

Drainage area.--452 sq mi.

Records available.--December 1948 to September 1966.

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.--17 years, 325 cfs.

Extremes.--Maximum discharge during year, 2,640 cfs Dec. 27 (gage height, 18.86 ft); minimum discharge, 8.9 cfs Sept. 11-14; minimum gage height, 3.08 ft Sept. 10-12.
1948-66: 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.--Records poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	169	179	153	1,810	72	157	302	1,390	311	103	22	12
2	205	155	147	1,700	74	327	279	1,330	273	73	23	12
3	192	144	144	1,540	77	385	259	1,220	256	65	23	11
4	163	137	156	1,360	73	531	241	1,080	233	61	23	11
5	137	129	161	1,200	80	654	221	913	216	57	20	11
6	123	123	153	1,060	82	611	209	743	196	53	19	11
7	125	125	141	925	87	493	206	581	181	49	13	10
8	135	133	129	753	94	384	200	613	170	42	13	9.9
9	143	146	126	606	110	313	197	834	185	33	13	9.6
10	136	150	125	522	224	319	195	947	227	37	22	9.1
11	130	150	126	415	443	373	191	985	205	42	29	9.0
12	135	143	150	370	495	470	181	1,160	176	47	26	9.0
13	142	140	240	330	391	630	163	1,380	159	42	24	9.0
14	137	134	339	280	299	713	157	1,500	144	40	24	9.0
15	133	123	343	230	233	703	142	1,540	134	43	26	11
16	130	122	299	190	199	642	142	1,530	184	40	23	17
17	122	121	254	170	153	560	139	1,540	242	34	20	16
18	117	113	221	160	132	493	134	1,520	223	30	13	13
19	111	109	194	150	120	457	146	1,460	195	30	19	12
20	113	106	184	140	119	414	182	1,360	165	29	19	14
21	135	102	180	130	111	370	455	1,240	137	27	19	17
22	246	104	169	120	110	373	705	1,140	113	25	19	20
23	585	104	164	110	109	440	802	1,030	103	24	22	22
24	711	100	281	105	109	489	1,210	983	95	24	20	13
25	690	96	1,520	95	105	474	1,350	971	82	24	17	16
26	604	101	2,390	90	105	423	1,360	897	72	23	16	16
27	480	145	2,640	86	105	385	1,300	804	75	24	16	13
28	370	223	2,560	80	113	330	1,320	674	82	23	16	24
29	289	194	2,320	76	-----	287	1,400	541	116	24	14	22
30	236	172	2,080	74	-----	302	1,410	436	151	23	14	22
31	205	-----	1,920	72	-----	324	-----	367	-----	22	13	-----
Total	7,354	4,023	20,012	14,950	4,439	13,846	15,203	32,719	5,127	1,223	629	4,206
Mean	237	134	646	482	159	447	507	1,055	171	39.6	20.3	14.0
Cfsm	0.524	0.296	1.43	1.07	0.352	0.989	1.12	2.33	0.378	0.088	0.045	0.031
In.	0.60	0.33	1.65	1.23	0.37	1.14	1.25	2.69	0.42	0.10	0.05	0.03

Calendar year 1965 : Max 2,640 Min 32 Mean 369 Cfsm 0.816 In. 11.10
Water year 1965-66 : Max 2,640 Min 9.0 Mean 329 Cfsm 0.728 In. 9.86

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 1966.

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.--22 years, 487 cfs.

Extremes.--Maximum discharge during year, 3,620 cfs Dec. 28 (gage height, 19.14 ft); minimum, 8.3 cfs Sept. 13.
1944-66: 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 period, which are poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	202	285	195	2,500	85	219	431	1,960	431	195	22	13
2	210	257	190	2,200	80	389	408	1,850	382	159	26	13
3	238	235	185	2,000	80	533	379	1,700	347	127	28	12
4	230	215	177	1,600	86	799	355	1,490	320	107	31	12
5	203	200	179	1,400	90	935	332	1,260	297	96	28	11
6	177	196	184	1,000	100	899	313	1,050	273	90	23	9.5
7	164	191	179	800	120	795	298	846	253	81	19	9.8
8	159	187	167	600	140	639	288	717	236	74	24	10
9	161	195	156	500	198	514	282	752	259	66	24	10
10	166	202	149	400	259	461	275	885	279	57	25	9.6
11	167	208	148	320	375	500	269	1,000	287	56	30	9.0
12	164	208	152	300	547	622	259	1,230	265	58	32	8.5
13	163	203	190	300	579	857	246	1,490	235	60	34	8.5
14	167	193	272	270	486	992	233	1,730	212	58	30	8.9
15	166	185	350	250	373	1,020	218	1,890	194	54	28	9.6
16	157	180	359	240	312	983	205	1,930	228	53	29	9.9
17	151	170	333	230	263	893	200	1,890	269	52	28	12
18	141	162	295	220	225	787	197	1,830	296	46	25	19
19	133	155	262	210	207	695	199	1,740	281	39	21	20
20	132	149	241	200	200	622	214	1,620	247	35	19	18
21	135	145	228	180	200	561	393	1,500	213	31	19	18
22	245	142	217	170	190	522	677	1,350	184	29	21	18
23	604	138	207	160	190	535	1,020	1,210	163	27	21	20
24	749	135	345	150	186	595	1,520	1,170	151	26	20	25
25	781	131	1,940	140	185	626	1,710	1,150	137	25	22	26
26	747	130	2,990	140	183	610	1,780	1,070	123	24	20	23
27	661	140	3,440	130	178	559	1,780	986	195	24	18	19
28	554	171	3,600	120	176	496	1,880	870	208	24	17	17
29	449	231	3,490	110	-----	441	2,050	726	186	23	16	21
30	373	228	3,270	100	-----	420	2,030	595	194	23	15	25
31	323	-----	2,800	92	-----	424	-----	498	-----	23	13	-----
Total	9,072	5,567	26,890	17,032	6,293	19,943	20,441	39,975	7,345	1,842	728	445.3
Mean	293	186	867	549	225	643	681	1,290	245	59.4	23.5	14.8
Cfsm	0.430	0.273	1.27	0.805	0.330	0.943	0.999	1.89	0.359	0.087	0.035	0.022
In.	0.49	0.30	1.47	0.93	0.34	1.09	1.11	2.18	0.40	0.10	0.04	0.02

Calendar year 1965: Max 3,600 Min 33 Mean 513 Cfsm 0.752 In. 10.21
Water year 1965-66: Max 3,600 Min 8.5 Mean 426 Cfsm 0.625 In. 8.48

5-5255. Sugar Creek at Milford, Ill.

Location.--Lat 40°37'50", long 87°43'25", in $\frac{1}{2}$ sec. 16, T. 25 N., R. 12 W., near right bank on downstream side of highway bridge, 200 ft downstream from Mud Creek and 1 mile west of Milford.

Drainage area.--430 sq mi.

Records available.--July 1948 to September 1966.

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.--18 years, 319 cfs.

Extremes.--Maximum discharge during year, 4,200 cfs Dec. 25 (gage height, undetermined); minimum daily, 3.1 cfs Sept. 18.

1948-66: Maximum discharge, 22,900 cfs Feb. 21, 1951 (gage height, 20.90 ft), from rating curve extended above 8,200 cfs; maximum gage height, 23.74 ft Feb. 10, 1959 (ice jam); minimum discharge observed, 2.8 cfs Dec. 14, 1952 result of freezeup.

Remarks.--Records poor.

Discharge, in cubic feet per second, water year October 1965 to September 1966

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	368	113	37	700	60	121	286	1,730	289	74	5.6	4.5
2	238	109	40	600	60	363	243	1,260	247	70	12	4.5
3	154	105	50	520	60	371	229	1,030	225	66	7.3	4.5
4	136	99	56	470	64	947	179	857	208	62	8.1	4.0
5	113	93	50	430	66	1,320	130	710	185	60	5.6	4.0
6	101	89	47	410	74	1,070	157	635	174	57	5.6	4.0
7	101	88	45	398	85	641	177	552	158	54	4.1	4.0
8	96	88	42	233	100	501	193	532	137	52	13	4.0
9	86	95	40	300	130	433	172	454	192	51	5.6	4.0
10	83	100	40	250	206	420	118	367	163	50	5.6	4.0
11	120	90	45	220	398	519	148	371	147	76	13	3.9
12	140	72	70	200	322	561	168	476	123	57	8.1	3.8
13	113	74	250	180	222	751	183	604	108	80	5.6	3.7
14	104	66	150	160	180	740	109	640	95	49	7.3	4.0
15	100	59	100	150	139	660	136	616	75	40	7.3	6.0
16	95	52	80	140	132	558	120	584	275	55	5.1	7.3
17	82	50	70	130	74	489	106	534	229	27	3.7	8.1
18	79	48	60	120	121	468	107	516	179	25	4.1	3.1
19	66	45	56	110	81	426	112	467	145	19	8.1	4.7
20	81	43	52	100	76	345	138	420	165	6.8	5.0	12
21	180	40	50	90	74	342	561	608	112	16	22	24
22	350	39	48	85	72	361	891	1,050	102	13	23	19
23	900	38	46	80	70	715	1,120	872	107	12	14	8.6
24	689	37	1,000	75	66	680	2,020	702	97	13	9.0	15
25	514	37	4,000	72	66	664	2,140	954	93	11	6.8	8.1
26	322	39	3,500	68	66	416	1,620	828	88	9.6	12	10
27	252	50	2,000	65	70	350	1,340	648	92	12	9.0	9.6
28	200	45	1,500	62	81	257	1,990	537	88	12	7.3	6.8
29	164	40	1,200	60	---	301	2,520	423	82	10	6.8	5.6
30	151	38	1,000	60	---	294	2,100	359	78	13	6.0	4.1
31	137	---	800	60	---	335	---	353	---	6.4	5.0	---
Total	6,315	1,981	15,524	6,598	3,215	16,419	19,513	20,689	4,458	1,158.8	260.7	208.9
Mean	204	66.0	533	213	115	530	650	667	149	37.4	8.41	6.96
Cfsm	0.474	0.153	1.24	0.495	0.267	1.23	1.51	1.55	0.347	0.087	0.020	0.016
In.	0.55	0.17	1.43	0.57	0.28	1.42	1.69	1.79	0.39	0.10	0.02	0.02

Calendar year 1965: Max 4,000 Min 11 Mean 365 Cfsm 0.849 In. 11.53
 Water year 1965-66: Max 4,000 Min 3.1 Mean 267 Cfsm 0.621 In. 8.42

Peak discharge (base, 2,500 cfs)

Note.--No gage-height record Dec. 9 to Jan. 6.

Date	Time	Gage height	Discharge	Date	Time	Gage height	Discharge
12-25	--	--	4,200				
4-29	1200	14.90	2,560				

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 measurements made at low-flow partial-record stations during water year 1966

Discharge measurements made at low-flow partial-record stations during water year 1960						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Blue River Basin						
3-3029.00	Spring Creek near White Cloud, Ind.	Lat 38°14'20", long 86°13'45", in SE¼ sec. 19, T. 3 S., R. 3 E., at county highway bridge, north of White Cloud and at mouth of Harrison Spring.		1951-52 1954-66	10-18-65	50.6
					11-17-65	29.2
					12-21-65	28.1
					1-25-66	99.7
					3-27-66	158
					3-24-66	129
					4-19-66	167
					5-19-66	190
					6-21-66	31.3
					7-19-66	30.5
					8-23-66	55.7
					9-27-66	15.2
					Wabash River Basin	
3-3232.00	Rock Creek near Markle, Ind.	Lat 40°47'47", long 85°21'28", in NE¼ sec. 14, T. 27 N., R. 10 E., at bridge on State Highway 3, 2¼ miles southwest of Markle.	a 92	1954 1960-66	9-8-66	0.30
3-3275.20	Pipe Creek near Bunker Hill, Ind.	Lat 40°40'06", long 86°05'44", in SE¼ sec. 29, T. 26 N., R. 4 E., at bridge on county highway, ½ mile northeast of Bunker Hill.	a 168	1953-54 1960-66	9-30-66	5.48
3-3277.70	Blue River near Columbia City, Ind.	Lat 41°10'52", long 85°27'24", in SW¼ sec. 35, T. 32 N., R. 9 E., at county highway bridge, 0.6 mile east of State Highway 9, 2¼ miles northeast of Columbia City and 2.5 miles downstream from Thorn Creek.	a 60	1961-66	9-26-66	3.64
3-3293.00	Rock Creek at Rockfield, Ind.	Lat 40°39'10", long 86°33'30", in SE¼ sec. 32, T. 26 N., R. 1 W., at bridge on State Highway 25, 1¼ miles northeast of Rockfield.	a 81	1954 1960-66	9-30-66	0.96
3-3296.00	Bachelor Run near Flora, Ind.	Lat 40°32'50", long 86°29'30", on line between secs. 2 and 11, T. 24 N., R. 1 W., at bridge on State Highway 18, 1¼ miles east of Flora.	a 13	1960-66	9-30-66	0.36
3-3314.30	Mud Creek near Bruce Lake, Ind.	Lat 41°03'10", long 86°19'39". on line between secs. 8 and 17, T. 30 N., R. 2 E., at bridge on State Highway 14, 4½ miles east of Bruce Lake, and 5½ miles west of Rochester.	a 69	1960-66	9-20-66	4.55
3-3343.00	Kilmore Creek at Kilmore, Ind.	Lat 40°21', long 86°30', in SW¼ sec. 14, T. 22 N., R. 1 W., at county highway bridge, 0.7 mile upstream from State Highway 75, at south edge of Kilmore.	a 62	1954 1960-66	9-30-66	0
3-3356.70	Big Wea Creek near Lafayette, Ind.	Lat 40°21'46", long 86°54'17", in SE¼ sec. 7, T. 22 N., R. 4 W., at bridge on State Highway 43, 2 3/4 miles south of Lafayette.	a 103	1960-66	9-30-66	10.8
3-3392.00	Sugar Creek near Kirklin, Ind.	Lat 40°12', long 86°22', in SE¼NW¼ sec. 1, T. 20 N., R. 1 E., at bridge on U.S. Highway 421, 1 mile north of Kirklin.	a 41	1960-66	9-30-66	0.51
3-3507.00	Stoney Creek near Noblesville, Ind.	Lat 40°01'44", long 85°59'42", in NE¼NE¼ sec. 7, T. 18 N., R. 5 E., at bridge on State Highway 37, 1.4 miles southeast of Post Office in Noblesville, and 1.4 miles upstream from mouth.	a 51	1946 1960-66	9-30-66	3.75
3-3519.00	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 mile northeast of State Highway 67 and Sunnyside Road intersection, and 1 mile southwest of Oaklandon.	a 18	1960-66	9-30-66	0.15

Discharge measurements made at low-flow partial-record stations during water year 1966--Continued

Discharge measurements made at low-flow partial-record stations during water year 1966--Continued						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Wabash River Basin--Continued						
3-3536.30	Little Buck Creek at Southport, Ind.	Lat 39°39'55", long 86°06'06", on line between secs. 8 and 17, T. 14 N., R. 4 E., at bridge on Southport Road, 200 ft east of Sherman Drive - Southport Road intersection, and $\frac{1}{2}$ mile east of Southport.	a 9	1960-66	9-30-66	0.1
3-3614.00	Little Blue River near Rays Crossing, Ind.	Lat 39°33'16", long 85°43'08", on line between secs. 23 and 26, T. 13 N., R. 7 E., at county highway bridge, 2.8 miles west of Rays Crossing.	a 94	1960-66	9-30-66	3.84
3-3617.00	Sugar Creek near Pleasant View, Ind.	Lat 39°38'49", long 85°55'09", in E $\frac{1}{2}$ sec. 24, T. 14 N., R. 5 E., at bridge on Interstate Highway 74, 1 $\frac{3}{4}$ miles southeast of Pleasant View.	a 121	1954 1960-66	9-30-66	12.7
3-3632.00	Flatrock River at Lewisville, Ind.	Lat 39°48'24", long 85°21'29", in NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T. 16 N., R. 10 E., at bridge on U.S. Highway 40 at Lewisville.				
3-3733.20	Indian Creek near Trinity Springs, Ind.	Lat 38°44'15", long 86°46'14", in W $\frac{1}{2}$ sec. 32, T. 4 N., R. 3 W., at bridge on county road, 1.3 miles south of Trinity Springs, and 2.3 miles above mouth.	a 240	1963-66	9-19-66	2.20
3-3736.00	Lick Creek near Paoli, Ind.	Lat 38°32'42", long 86°26'56", in SW $\frac{1}{4}$ sec. 6, T. 1 N., R. 1 E., at bridge on county road, 1.3 miles southeast of Paoli.	a 16	1954 1962-66	9-19-66	0.70
Streams Tributary to Lake Michigan						
4-0984.00	Fawn River near Howe, Ind.	Lat 41°44'55", long 85°25'05", in SW $\frac{1}{4}$ sec. 18, T. 38 N., R. 10 E., at county highway bridge, $\frac{1}{2}$ miles north of Howe.	a 161	1960-66	9-26-66	82.1

a About.

Discharge measurements made of streamflow in Pike County, Indiana, and the Patoka River basin during periods of base flow.

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Cup Creek	Patoka River	Lat 38°19'00", long 87°07'14", in NW¼ sec. 30, T. 2 S., R. 6 W., at bridge on State Road 257, ½ mile southwest of Pikeville, Ind.		1964-65	9-28-65 9-14-66	b0.26 0.46
Beadens Creek	Cup Creek	Lat 39°14'02", long 87°07'56", in NE¼ sec. 25, T. 2 S., R. 7 W., at county road bridge, 3½ miles southeast of Augusta, Ind.			9-14-66 9-28-66	b0.32 b0.35
Patoka River tributary	Patoka River	Lat 38°19'40", long 87°09'10", in SE¼ sec. 14, T. 2 S., R. 7 W., near Pike County State Forest, at bridge on unimproved road, 2 miles east of Augusta, Ind.			10-14-65 10-28-65	b0.36 b0.32
Lick Creek	...do.....	Lat 38°23'34", long 87°09'30", on line secs. 26 and 35, T. 1 S., R. 7 W., at bridge on Bruster Branch Road, 1½ miles southwest of White Oak, Ind.		1965	10-15-65 10-28-65	0.019 b0,008
Lick Creek tributary	Lick Creek	Lat 38°23'13", long 87°09'19", on line NE¼ and NW¼ sec. 35, T. 1 S., R. 7 W., at county road bridge 1½ miles south of White Oak, Ind.		1965	10-15-65	0.006
Bruster Branch	Patoka River	Lat 38°23'27", long 87°11'00", in NE¼ NE¼ sec. 33, T. 1 S., R. 7 W., at bridge on Bruster Branch Road, 1¾ miles east of Winslow, Ind.		1965	10-15-65	0
Mill Creek	...do.....	Lat 38°21'20", long 87°10'51", in W½ sec. 10, T. 2 S., R. 7 W., at culvert on State Road 364, 1¾ miles northeast of Augusta, Ind.		1965	10-14-65 10-28-65	b0.74 b0.40
Patoka River tributary	...do.....	Lat 38°21'20", long 87°11'45", near center sec. 9, T. 2 S., R. 7 W., at bridge on State Road 364, 1½ miles north of Augusta, Ind.			10-14-65 10-28-65	0.26 b0.31
Stone Coe Creek	...do.....	Lat 38°23'40", long 87°13'12", on line secs. 29 and 30, T. 1 S., R. 7 W., at bridge on State Road 61, 1 mile north of Winslow, Ind.		1964-65	10-14-65 10-28-65	b1.30 b1.04
Barren ditch	...do.....	Lat 38°21'16", long 87°14'12", in NW¼ SW¼ sec. 7, T. 2 S., R. 7 W., at bridge on State Road 61, 1½ miles northeast of Arthur, Ind.		1965	10-14-65	b0.57
Barren ditch tributary	Barren ditch	Lat 38°22'05", long 87°15'36", at east edge sec. 2, T. 2 S., R. 8 W., ½ mile east of Muren, Ind., and 200 ft upstream from mouth.			10-14-65	0.57
Barren ditch	Patoka River	Lat 38°22'07", long 87°15'37", in SE¼ sec. 2, T. 2 S., R. 8 W., downstream from bridge on unimproved road, ½ mile east of Muren, Ind.			10-14-65 10-28-65	b1.54 b0.81
Barren ditch tributary	Barren ditch	Lat 38°22'01", long 87°16'19", in SW¼ sec. 2, T. 2 S., R. 8 W., at county road bridge, 0.2 mile west of Muren, Ind.		1965	10-14-65	0.059
Flat Creek	Patoka River	Lat 38°24'10", long 87°18'03", in NE¼ sec. 28, T. 1 S., R. 8 W., at culverts on Winslow Patoka Road, 1 mile south of Glazen.		1964-65	10-14-65	a0.10
South Fork Patoka River	...do.....	Lat 38°14'39", long 87°11'22", in NW¼ NE¼ sec. 21, T. 3 S., R. 7 W., just above mouth of East Fork South Fork Patoka River.			10-13-65	b0.78
East Fork South Fork Patoka River	South Fork Patoka River	Lat 38°14'39", long 87°11'19", in NW¼ NE¼ sec. 21, T. 3 S., R. 7 W., just above mouth.			10-13-65	b1.04
South Fork Patoka River	Patoka River	Lat 38°14'45", long 87°11'24", on line secs. 16 and 21, T. 3 S., R. 7 W., at bridge on county road, 2¾ miles southwest of Stendal, Ind.		1965	10-27-65	b1.26
Houchin ditch	South Fork Patoka River	Lat 38°16'43", long 87°12'02", on line secs. 4 and 5, T. 3 S., R. 7 W., at bridge on county road, 1½ miles southeast of Scottsburg, Ind.		1964	10-13-65 10-27-65	0.36 b0.31
South Fork Patoka River	Patoka River	Lat 38°17'13", long 87°13'09", on line secs. 5 and 6, T. 3 S., R. 7 W., at bridge on Scottsburg Road, 0.15 mile south of cross-road at Scottsburg, Ind.		1965	10-15-65 10-27-65	3.73 b1.64
Durham ditch tributary	Durham ditch	Lat 38°18'41", long 87°13'10", at center of line between secs. 29 and 30, T. 2 S., R. 7 W., at bridge on Scottsburg Road, 1.5 miles north of Scottsburg, Ind.			10-13-65	0.93
Tributary to Durham ditch tributary	Durham ditch tributary	Lat 38°18'42", long 87°13'11", at east edge sec. 30, T. 2 S., R. 7 W., at culvert under "T" road, at Scottsburg Road, 1.5 miles north of Scottsburg, Ind.			10-13-65	0.45
Durham ditch	South Fork Patoka River	Lat 38°18'36", long 87°13'10", on line secs. 29 and 30, T. 2 S., R. 7 W., at bridge on Scottsburg Road, 1.4 miles north of Scottsburg, Ind.			10-13-65 10-27-65	0.52 b0.74

Discharge measurements made of streamflow in Pike County, Indiana, and the Patoka River basin during periods of base flow.

Stream	Tributary to	Location	Drainage area (sq. mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Durham ditch tributary	Durham ditch	Lat 38°18'06", long 87°13'10", on line secs. 31 and 32, T. 2 S., R. 7 W., at bridge on Scottsburg Road, 3/4 mile north of Scottsburg, Ind.			10-13-65	0.088
Durham ditch	South Fork Patoka River	Lat 38°17'34", long 87°13'26", in SE¼ sec. 31, T. 2 S., R. 7 W., at bridge on county road bridge, 0.4 mile northwest of Scottsburg, Ind.			10-13-65 10-27-65	b2.00 b2.14
Overflow from tipple	...do.....	Lat 38°17'24", long 87°15'21", in SW¼ sec. 36, T. 2 S., R. 8 W., at Enos Mine, ¼ mile east of Enos Corner, Ind.			10-15-65	b .113
Rough Creek	...do.....	Lat 38°17'08", long 87°14'32", on line sec. 6, T. 3 S., R. 7 W., and sec. 1, T. 3 S., R. 8 W., at county road bridge, 1¼ miles west of Scottsburg, Ind.		1965	10-13-65 10-27-65	b2.14 b1.98
Honey Creek	...do.....	Lat 38°17'22", long 87°15'57", in NE¼ sec. 2, T. 3 S., R. 8 W., at bridge on county road, ¼ mile west of Enos Corner, Ind.		1965	10-13-65 10-27-65	0.74 b0.52
Hat Creek	...do.....	Lat 38°18'42", long 87°16'12", near center sec. 26, T. 2 S., R. 8 W., at bridge on county road, ½ mile northwest of Coe, and 4 miles north of Spurgeon, Ind.		1965	10-13-65 10-27-65	0.20 b0.16
Wheeler Creek	...do.....	Lat 38°18'28", long 87°16'55", in SE¼ sec. 27, T. 2 S., R. 8 W., at Kays road, 1 3/4 miles northwest of Enos Corner, Ind.			10-13-65 10-27-65	0.046 b0.007
Lick Creek	...do.....	Lat 38°18'37", long 87°18'26", in S½ sec. 28, T. 2 S., R. 8 W., at bridge on Kays road, 3 miles southeast of Oakland City, Ind.			10-13-65 10-27-65	b1.05 b1.54
South Fork Patoka River	Patoka River	Lat 38°22'40", long 87°20'12", in SE¼ sec. 31, T. 1 S., R. 8 W., at bridge on State Road 57, 3½ miles southwest of Glezen, Ind.			10-13-65 10-27-65	10.4 b8.50
Patoka River	Wabash River	Lat 38°22'38", long 87°24'31", in NE¼ NE¼ sec. 4, T. 2 S., R. 9 W., 50 ft upstream from Keg Creek, 3½ miles southeast of Wheeling, Ind.			10-28-65	b61.2
East Fork Keg Creek	Keg Creek	Lat 38°19'42", long 87°22'06", in NW¼ sec. 24, T. 2 S., R. 9 W., at bridge on State Road 57, 1 mile southwest of Oakland City, Ind.			10-14-65	a0.005
East Fork Keg Creek tributary	East Fork Keg Creek	Lat 38°19'35", long 87°22'41", in E½ sec. 23, T. 2 S., R. 9 W., at bridge on State Road 64, 2 miles southwest of Oakland City, Ind.			10-14-65	0.26
Keg Creek	Patoka River	Lat 38°21'57", long 87°23'28", at corner secs. 3, 4, 9, and 10, T. 2 S., R. 9 W., at bridge on county road, 3 miles northeast of Francisco, Ind.			10-14-65 10-28-65	0.32 b0.038

a Estimate.

b Made by Indiana Department of Natural Resources

DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES
Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record
stations are given in the following table.

Discharge measurements made at miscellaneous sites during water year 1966

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Wabash River basin						
Pike Creek	Mississinewa River	Lat 40°21'47", long 85°27'26", in NW¼ sec. 13, T. 22 N., R. 9 E., at bridge on county road, 0.4 mile east of Wheeling, Ind., and 0.7 mile upstream from mouth.			9-6-66	0.81
Tippecanoe River	Wabash River	Lat 41°15'30", long 85°52'15", in NW¼ sec. 6, T. 32 N., R. 6 E., at Fox Farm Road, 1 mile northwest of city limits of Warsaw.			12-8-65 1-4-66 2-15-66	64.6 400 155
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 Road 29, at north edge of Burlington, Carroll Co., Ind.			5-11-66 6-6-66 7-29-66 8-8-66 9-12-66	141 67.0 45.7 22.6 23.9
Wabash River	Ohio River	Lat 40°20'06", long 87°10'05", in SE¼ sec. 23, T. 22 N., R. 7 W., at bridge on county road at south edge of Independence, Warren Co., Ind.			5-23-66 6-7-66 7-29-66 8-18-66 9-16-66	6,880 3,010 1,510 1,000 894
Coal Creek	Wabash River	Lat 40°11'59", long 87°14'37", in NE¼ sec. 7, T. 20 N., R. 7 W., 150 ft downstream from bridge on U.S. 41, 6 miles north of Sterling, Ind.	62.7		8-24-66	*d2.73
Dry Run	Coal Creek	Lat 40°07'36", long 87°14'56", in NE¼ sec. 6, T. 19 N., R. 7 W., at bridge on U.S. 41, ½ mile north of Chambersburg, Ind.			8-24-66	d0
Coal Creek	Wabash River	Lat 40°06'48", long 87°15'21", in NW¼ sec. 6, T. 19 N., R. 7 W., at bridge on U.S. 136, ½ mile east of Veedersburg, Ind.			4-1-66	d24.2
...Do.....	...do.....	Lat 40°06'16", long 87°15'38", in NW¼ sec. 7, T. 19 N., R. 7 W., at bridge on county road, ½ mile south of Veedersburg, Ind.			8-24-66	*d4.26
East Fork Coal Creek	Coal Creek	Lat 40°05'24", long 87°12'39", in E½ sec. 16, T. 19 N., R. 7 W., at county road bridge, 2½ miles southeast of Sterling, Ind.			4-1-66	d14.6
...Do.....	...do.....	Lat 40°05'53", long 87°14'43", in SE¼ sec. 7, T. 19 N., R. 7 W., at bridge on U.S. 41, 1 mile south of Sterling, Ind.	60.2		8-24-66	*d3.53
Graham Creek	Coal Creek	Lat 40°03'36", long 87°21'08", in W½ sec. 29, T. 19 N., R. 8 W., at bridge on State Road 32, 6 miles southwest of Veedersburg, Ind.	22.7		4-1-66 8-24-66	d4.67 *d0.26
Prairie Creek	...do.....	Lat 40°00'55", long 87°22'33", on line secs. 12 and 13, T. 18 N., R. 9 W., at county road bridge ½ miles south of Coal Creek.	24.9		4-1-66 8-24-66	d3.42 d0
Coal Creek	Wabash River	Lat 39°58'39", long 87°22'54", in NE¼ sec. 25, T. 18 N., R. 9 W., 2½ miles northeast of Lodi, Ind.	252		8-24-66	*d12.7
...Do.....	...do.....	Lat 39°56'46", long 87°24'23", in S½ sec. 2, T. 17 N., R. 9 W., 1,000 ft downstream from county road bridge at southeast edge of Lodi, Ind.	260		4-1-66 8-24-66	d62.8 *d12.6
Wabash River	Ohio River	Lat 39°57'09", long 87°25'12", on line sec. 3, T. 17 N., R. 9 W., at bridge on State Road 234, 2 miles east of Cayuga, Vermillion Co., Ind.			5-9-66 6-15-66 7-11-66 8-17-66 9-22-66	7,180 2,920 1,510 1,250 1,540
Little Vermillion River	Wabash River	Lat 39°56'01", long 87°41'49", in NE¼ sec. 15, T. 17 N., R. 12 W., 2 miles east of Indianola, Ill.			3-29-66 9-1-66	d26.3 d0
...Do.....	...do.....	Lat 39°58'13", long 87°36'50", on line sec. 33, T. 18 N., R. 11 W., and sec. 4, T. 17 N., R. 11 W., at bridge on county road ½ mile southeast of Georgetown, Ill.			3-29-66 9-1-66	d33.2 *ad0.001
...Do.....	...do.....	Lat 39°55'34", long 87°32'02", in NE¼ sec. 19, T. 17 N., R. 10 W., at bridge on county road, ½ mile downstream from Illinois state line, 3.6 miles southwest of Cayuga, Ind.	203		9-1-66	*d0.096
...Do.....	...do.....	Lat 39°53'04", long 87°28'34", in SE¼ sec. 30, T. 17 N., R. 9 W., at bridge on county road, 3½ miles west of Newport, Ind.			9-1-66	d0.023
Jonathan Creek	Little Vermillion River	Lat 39°52'48", long 87°28'18", in NE¼ sec. 31, T. 17 N., R. 9 W., at bridge on county road, 3½ miles west of Newport, Ind.	154		3-29-66	d3.36

Discharge measurements made at miscellaneous sites during water year 1966--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Wabash River basin--Continued						
Little Vermilion River	Wabash River	Lat 39°53'02", long 87°22'54", in SE¼ sec. 25, T. 17 N., R. 9 W., 0.4 mile above mouth, 1 mile east of Newport, Ind.			9-1-66	d0
Brouillets Creek	do.....	Lat 39°42'19", long 87°33'12", in NW¼ sec. 32, T. 15 N., R. 10 W., at county road bridge in Illinois, ¼ mile upstream from North Fork Brouillets Creek, and 1½ miles west of St. Bernice, Ind.	149		3-28-66	d16.8
North Fork Brouillets Creek	Brouillets Creek	Lat 39°42'38", long 87°33'10", in SW¼ sec. 29, T. 15 N., R. 10 W., at bridge on county road in Illinois, ½ mile upstream from mouth and 1½ mile west of St. Bernice, Ind.	98.6		3-28-66	d14.1
Coal Creek	do.....	Lat 39°38'24", long 87°30'05", in SE¼ sec. 22, T. 14 N., R. 10 W., 500 ft upstream from mouth, 2 miles southeast of Blanford, Ind.	23.6		3-28-66	d2.87
Brouillets Creek	Wabash River	Lat 39°36'17", long 87°25'00", in NE¼ sec. 4, T. 13 N., R. 9 W., at bridge on county road at north side of Shepherdsville, Ind., and 2½ miles above mouth.	334		3-28-66	d48.9
Wabash River	Ohio River	Lat 39°06'36", long 87°39'18", in NE¼ sec. 29, T. 8 N., R. 11 W., at State Road 154 bridge at east edge of Hutsonville, Crawford Co., Ill.			6-2-66 6-28-66 8-4-66 9-1-66 9-21-66	6,350 3,530 1,690 1,460 3,880
East Fork Busseron Creek	Busseron Creek	Lat 39°12'42", long 87°16'51", in NE¼ sec. 22, T. 9 N., R. 8 W., at Sullivan County 875 East Road, 2 miles north of Hymera, Ind.	9.97		11-23-65	0.083
Sulphur Creek	do.....	Lat 39°10'08", long 85°18'22", in NW¼ sec. 4, T. 8 N., R. 8 W., at Sullivan County 550 East Road, 1½ miles south of Hymera, Ind.	9.49		11-23-65	0.18
Big Branch	do.....	Lat 39°07'12", long 87°16'42", on line secs. 22 and 23, T. 8 N., R. 8 W., at Sullivan County 700 East Road, 3½ miles north of Dugger, Ind.	18.2		11-23-65	0.76
Mud Creek tributary	Mud Creek	Lat 39°05'47", long 87°15'34", on line secs. 35 and 36, T. 8 N., R. 8 W., at Sullivan County 800 East Road, 1½ miles north of Dugger, Ind.	2.5		4-27-66	b16.3
Kettle Creek	Busseron Creek	Lat 39°09'23", long 87°21'28", in NE¼ sec. 12, T. 8 N., R. 9 W., at Sullivan County 275 East Road, 3½ miles southwest of Hymera, Ind.	6.8		11-23-65	0.019
Middle Fork Creek	do.....	Lat 39°00'12", long 87°20'03", on line secs. 31 and 32, T. 7 N., R. 8 W., at Sullivan County 400 East Road, 3½ miles east of Paxton, Ind.			11-24-65	0.010
White River	Wabash River	Lat 40°10'55", long 84°58'08", in SW¼ sec. 16, T. 20 N., R. 14 E., at bridge on U.S. 27, 0.5 mile northeast of Winchester, Ind., and 0.8 mile upstream from Salt Creek.			12-14-65	c3.30
...Do.....	do.....	Lat 40°10'46", long 85°04'23", on line secs. 15 and 16, T. 20 N., R. 13 E., at county road bridge, 1.9 miles northeast of Maxville, Ind.			12-16-65	c8.52
...Do.....	do.....	Lat 40°10'13", long 85°07'38", on line secs. 19, T. 20 N., R. 13 E., and 24, T. 20 N., R. 12 E., at bridge on State Road 1, ¾ mile south of Farmland, Ind.	85.5		12-16-65	c13.3
...Do.....	do.....	Lat 40°08'57", long 85°18'17", in NW¼ sec. 32, T. 20 N., R. 11 E., 1,200 ft upstream from Medford drain, 0.4 mile downstream from Prairie Creek, and 2½ miles southeast of Muncie, Ind.	210		12-13-65	c39.1
...Do.....	do.....	Lat 40°11'01", long 85°20'47", in SE¼ sec. 14, T. 20 N., R. 10 E., 150 ft below dam at Muncie, Ind., Waterworks.	220		12-13-65	22.6
...Do.....	do.....	Lat 40°11'07", long 85°26'26", on line sec. 18, T. 20 N., R. 10 E., and sec. 13, T. 20 N., R. 9 E., 200 ft downstream from Muncie, Ind. sewage disposal plant outfall.	245	1954	12-13-65	c52.0
...Do.....	do.....	Lat 40°12'28", long 85°31'48", in S½ sec. 20, T. 20 N., R. 9 E., at bridge on county road 175 south, ¼ mile north of State Road 32, and 2 miles west of Yorktown, Ind.	349	1965	10-12-65 11-9-65	66.4 50.8
...Do.....	do.....	Lat 40°06'52", long 85°43'12", in NW¼ sec. 10, T. 19 N., R. 7 E., at county road bridge, 0.4 mile downstream from Anderson, Ind., sewage disposal plant.			10-26-65	c 217

Discharge measurements made at miscellaneous sites during water year 1966--Continued

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Wabash River basin--Continued						
White River	Wabash River	Lat 40°07'56", long 85°47'11", on line sec. 6, T. 19 N., R. 7 E., and sec. 1, T. 19 N., R. 6 E., at bridge on county road 600W, 4 miles east of Perkinsville, Ind.	549	1965	10-11-65 11-8-65	171 112
...Do.....	...do.....	Lat 40°08'32", long 85°51'46", on line secs. 32 and 33, T. 20 N., R. 6 E., at bridge on State Road 13, 0.2 mile south of Perkinsville, Ind.	555	1964	10-26-65	c264
...Do.....	...do.....	Lat 40°07'27", long 85°56'32", in E½ sec. 3, T. 19 N., R. 5 E., at bridge on State Road 37 at Strawtown, Ind.	721	1965	10-14-65 11-18-65	151 151
...Do.....	...do.....	Lat 40°05'43", long 85°58'05", in sec. 16, T. 19 N., R. 5 E., at Public Service Co. of Indiana dam, at Clare, Ind.	839		10-19-65 10-26-65	c132 c362
Cicero Creek	White River	Lat 40°04'19", long 86°02'41", in NW¼ sec. 26, T. 19 N., R. 4 E., below Morse Dam, 2¼ miles northwest of Noblesville, Ind.	214		11-5-65 12-2-65 12-29-65 3-24-66 6-17-66 7-14-66 9-9-66	5.81 .38 48.5 86.5 285 35.6 29.3
White River	Wabash River	Lat 40°00'01", long 86°01'24", in S½ sec. 13, T. 18 N., R. 4 E., at bridge on State Road 234, 2 miles south of Noblesville, Ind.	1,147	1965	10-6-65 10-19-65 11-15-65	233 c168 292
...Do.....	...do.....	Lat 39°57'22", long 86°03'35", in NW¼ sec. 3, T. 17 N., R. 4 E., at bridge on 116th St., 2.8 miles west of Fishers, Ind.			10-19-65	c175
...Do.....	...do.....	Lat 39°52'35", long 86°08'17", in NW¼ sec. 36, T. 17 N., R. 3 E., at bridge on Westfield Blvd., at north side of Indianapolis, Ind.	1,239		11-16-65	c153
...Do.....	...do.....	Lat 39°51'45", long 86°09'54", in NE¼ sec. 2, T. 16 N., R. 3 E., at bridge on Kessler Blvd., at Indianapolis, Ind.			11-16-65	c163
...Do.....	...do.....	Lat 39°49'57", long 86°11'03", in E½ sec. 15, T. 16 N., R. 3 E., at bridge on U.S. 421 (Northwestern Ave.) at Indianapolis, Ind.	1,261	1965	10-6-65 11-15-65	150 247
Fall Creek	White River	Lat 39°47'50", long 87°10'09", in S½ sec. 26, T. 16 N., R. 3 E., at bridge on U.S. 421 (Northwestern Ave.) at Indianapolis, Ind.			3-3-66 4-13-66	183 95.2
Eagle Creek	...do.....	Lat 39°47'39", long 86°16'07", in SW½ sec. 25, T. 16 N., R. 2 E., at bridge on West 21st St., at Speedway, Ind.			9-1-66	1.26
White River	Wabash River	Lat 39°42'35", long 86°12'08", in SE¼ sec. 28, T. 15 N., R. 3 E., 300 ft below Indianapolis Power Co. dam, at Stout generating plant at Indianapolis, Ind.	1,898		11-15-65	c502
...Do.....	...do.....	Lat 39°39'47", long 86°14'11", on line secs. 7 and 18, T. 14 N., R. 3 E., at Southport Road bridge, 2½ miles east of West Newton, Ind.	1,946	1950, 1965	10-22-65 11-5-65	466 355
...Do.....	...do.....	Lat 39°33'35", long 86°16'29", in NW¼ sec. 23, T. 13 N., R. 2 E., at bridge on State Road 144, ¼ mile northwest of Waverly, Ind.	2,026	1965	10-22-65 11-5-65	419 375
...Do.....	...do.....	Lat 39°22'22", long 86°33'23", in NW¼ SW¼ sec. 20, T. 11 N., R. 1 W., 1,000 ft above county road bridge, 1¼ miles southeast of Paragon, Ind.		1965	12-7-65	c400
...Do.....	...do.....	Lat 39°19'57", long 86°40'36", in S½ sec. 6, T. 10 N., R. 2 W., at county road bridge, 1.3 miles southwest of Gosport, Ind.			12-7-65	c437
Big Blue River	White River	Lat 39°55'18", long 85°23'03", in W½ sec. 10, T. 17 N., R. 10 E., at State Road 3 bridge, 0.3 mile northwest of New Castle, Ind.		1965	9-19-66 9-27-66	c3.45 c8.31
Duck Creek	Big Blue River	Lat 39°56'31", long 85°26'27", in NW¼ sec. 7, T. 17 N., R. 10 E., at inlet to pond, 3 miles west of New Castle, Ind.			3-23-66	0.47
...Do.....	...do.....	Lat 39°56'27", long 85°26'35", at west edge of sec. 7, T. 17 N., R. 10 E., at bridge on Henry County road 300 West, 3 miles west of New Castle, Ind.			3-23-66	0
...Do.....	...do.....	Lat 39°56'21", long 85°26'44", in E½ sec. 12, T. 17 N., R. 9 E., between ponds, 3¼ miles west of New Castle, Ind.			3-23-66	1.86
Jakes Branch	Duck Creek	Lat 39°56'21", long 85°26'56", in NE¼ sec. 12, T. 17 N., R. 9 E., at inlet to pond, 3¼ miles west of New Castle, Ind.			3-23-66	1.58

Discharge measurements made at miscellaneous sites during water year 1966--Continued

Discharge measurements made at miscellaneous sites during water year 1966--Continued						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Wabash River basin--Continued						
Duck Creek	Big Blue River	Lat 39°56'15", long 85°26'53", in SE¼ sec. 12, T. 17 N., R. 9 E., below Jakes Branch, 3½ miles west of New Castle, Ind.			3-23-66	3.45
...Do.....	...do.....	Lat 39°55'56", long 85°27'03", on line secs. 12 and 13, T. 17 N., R. 9 E., at bridge on State Road 38, 3½ miles west of New Castle, Ind.			3-23-66	4.04
...Do.....	...do.....	Lat 39°55'02", long 85°27'33", on line secs. 13 and 24, T. 17 N., R. 9 E., at bridge on Henry Co. road 100 South, 4 miles west of New Castle, Ind.			3-23-66	5.01
...Do.....	...do.....	Lat 39°54'32", long 85°27'44", in west ½ sec. 24, T. 17 N., R. 9 E., 100 ft upstream from bridge on Henry Co. road 400 West, 4 miles west of New Castle, Ind.			3-23-66	6.89
Big Blue River	White River	Lat 39°50'46", long 85°29'03", in SW¼ sec. 12, T. 16 N., R. 9 E., at county road bridge, 1.6 miles downstream from Duck Creek, and 2.5 miles west of Spiceland, Ind.			9-12-66 9-28-66	c17.5 c29.9
...Do.....	...do.....	Lat 39°40'38", long 85°42'46", in E½ sec. 11, T. 14 N., R. 7 E., at bridge on U.S. 52, 0.9 mile west of Morristown, Ind.			8-29-66 9-7-66	c36.3 c46.8
...Do.....	...do.....	Lat 39°26'39", long 85°53'18", in SW¼ sec. 32, T. 12 N., R. 6 E., at county road bridge at Johnson-Shelby county line, 0.3 mile west of Marietta, Ind.			8-8-66 8-24-66	c71.4 c88.3
East Fork White River	...do.....	Lat 38°53'29", long 86°03'58", in NW¼ sec. 10, T. 5 N., R. 4 E., at county road bridge, 0.3 mile downstream from Oathout ditch, 0.5 mile northwest of Brownstown, Ind.			7-12-66	c514
...Do.....	...do.....	Lat 38°46'28", long 86°10'01", in NE¼ sec. 22, T. 4 N., R. 3 E., 35 ft upstream from Muscatatuck River, 3½ miles south of Medora, Ind.			7-12-66	c677

* Chemical quality of stream water published in Part 2 of this report.

a Estimate.

b Made by Federal Water Pollution Control Administration.

c Time of travel.

d Seepage run.

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	-	1950-66
Wabash River basin					
Banning Lake near North Webster.....	Kosciusko	0.58	12	837.50	1945-66
Baughner 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	1945-66
Big Chapman Lake near Warsaw a/.....	Kosciusko	4.59	474	827.75	1945-66
Big Lake near Wolf Lake.....	Noble	6.77	228	*898.18	1943-66
Blue Lake near Churubusco.....	Whitley	3.47	239	850.28	1946-66
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	1945-66
Crooked Lake near Wolf Lake.....	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	-	1954-66
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	-	1954-66
Goose Lake near Lorane.....	Whitley	1.42	84	910.96	1945-53
Hill Lake near Silver Lake.....	Kosciusko	0.56	67	871.50	1952-66
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	1945-66
James Lake at Oswego.....	Kosciusko	-	*282	836.40	1943-66
Kuhn Lake near North Webster.....	Kosciusko	3.74	*137	837.50	1945-66
Lake Manitou at Rochester.....	Fulton	38.1	631	778.41	1943-66
Langenbaum Lake near Monterey.....	Starke	0.98	48	717.96	1954-66
Little Barbee Lake near North Webster.....	Kosciusko	48.8	*74	837.50	1945-66
Little Chapman Lake near Warsaw.....	Kosciusko	7.78	128	827.75	1945-66
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
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	1954-66
Lukens Lake near Disko.....	Wabash	0.99	46	-	1948-49
McClures Lake near Silver Lake.....	Kosciusko	0.45	32	865.85	1945-52
Maxinkuckee Lake at Culver.....	Marshall	9.48	1,650	733.12	1943-66
Muskelonge Lake near Warsaw.....	Kosciusko	11.1	32	842.67	1943-53
New Lake near Etna.....	Whitley	0.49	50	903.91	1945-53
North Little Lake at Silver Lake.....	Kosciusko	2.81	12	861.73	1947-66
Nyona Lake near Greenoak.....	Fulton	6.47	104	793.91	1946-66
Ogle Lake near Nashville.....	Brown	1.03	20	-	1954-66
Old Lake near Etna.....	Whitley	3.13	32	898.07	1949-66
Oswego Lake at Oswego.....	Kosciusko	115.0	*83	836.40	1943-66
Palestine Lake at Palestine.....	Kosciusko	29.9	290	-	1954-66
Pike Lake at Warsaw.....	Kosciusko	40.4	203	805.64	1954-66
Ridinger Lake near Piercetown.....	Kosciusko	34.9	136	843.12	1943-66
Robinson Lake near Piercetown.....	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	1945-66

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	1945-66
Sherburn Lake near Piercetown a/.....	Kosciusko	5.42	15	-	1954-66
Shoe Lake near Oswego.....	Kosciusko	0.47	40	841.57	1946-53
Shriner Lake at Tri-Lakes.....	Whitley	1.12	111	907.04	1943-66
Silver Lake at Silver Lake.....	Kosciusko	4.47	102	861.73	1947-66
Smalley Lake near Washington Center.....	Noble	32.6	69	-	1943-66
South Mud Lake near Fulton.....	Fulton	4.74	94	793.42	1946-66
Starve Hollow Lake near Vallonia.....	Jackson	6.14	145	-	1946-61
					1963-66
Tippecanoe Lake at Oswego.....	Kosciusko	115.0	*768	836.40	1943-66
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	-	1957-66
Webster Lake at North Webster.....	Kosciusko	54.0	774	852.75	1943-66
Wilnot Pond at Wilnot b/.....	Noble	39.7	10	-	1945-51
Wilson Lake near Larwill.....	Whitley	0.49	29	865.39	1946-52
Wilson Lake at Warsaw.....	Kosciusko	32.1	529	811.06	1943-66
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	1964-66
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 Wolf Lake.....	Noble	6.12	136	894.60	1943-66
Big Long Lake near Stroh.....	Lagrange	4.13	388	956.21	1954-66
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	1945-66
Blackman Lake near Wolcottville.....	Lagrange	1.4	67	974.20	1953-59
Bower Lake near Pleasant Lake.....	Steuben	87.5	25	948.50	1946-66
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	1946-66
Dallas Lake near Wolcottville.....	Lagrange	39.4	283	897.36	1945-66
Dewart Lake near Leesburg.....	Kosciusko	7.88	551	867.70	1945-66
Diamond Lake near Wawaka.....	Noble	2.82	105	-	1946-66
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	-	1956-66
Fish Lake near Plato.....	Lagrange	10.8	100	936.50	1945-66
Fish Lake near Scott.....	Lagrange	6.14	139	814.42	1954-66
Flatbelly Lake near Syracuse.....	Kosciusko	4.4	326	-	1964-66
Fox Lake near Angola.....	Steuben	1.13	142	1,018.83	1946-53
Golden Lake near Pleasant Lake.....	Steuben	92.4	119	948.50	1946-66
Gordy Lake near Cromwell.....	Noble	8.82	31	876.68	1953-66
Heckenburg Lake near Wolcottville.....	Lagrange	54.8	42	897.36	1945-66
Harper Lake near Washington Center.....	Noble	2.67	11	878.25	1946-66
Heaton Lake near Elkhart.....	Elkhart	8.78	87	767.30	1946-53
High Lake near Wolf Lake.....	Noble	4.75	123	896.35	1961-66
Hindman Lake near Washington Center.....	Noble	8.00	13	878.25	1946-66
Hogback Lake near Angola.....	Steuben	102.0	146	948.50	1946-66
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	1946-66
Knapp Lake near Washington Center.....	Noble	5.64	88	878.25	1946-66
Lake Gage at Panama.....	Steuben	17.2	324	954.25	1946-66
Lake George at Hobart.....	Lake	125.0	282	602.23	1946-66
Lake George at Jamestown.....	Steuben	12.3	488	985.28	1946-66
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	1951-66
Lake Pleasant near Nevada Mills.....	Steuben	2.51	424	-	1954-66
Letta Lake near Rome City.....	Noble	4.37	42	918.71	1954-66
Lima Lake at Panama.....	Steuben	17.4	44	954.25	1946-66
Little Long Lake at Kendallville.....	Noble	4.34	71	-	1954-66
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	-	1946-66
Long Lake near Burr Oak.....	Noble	12.0	40	895.82	1954-66
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	1951-66
Martin Lake near Valentine.....	Lagrange	5.36	26	-	1945-66
Messick Lake near Wolcottville.....	Lagrange	55.8	68	897.36	1945-66
Moss Lake near Washington Center.....	Noble	5.90	9	878.25	1946-66
Mud Lake near Orland.....	Steuben	1.64	25	939.01	1956-66
Muncie Lake near Burr Oak.....	Noble	43.4	47	-	1954-66
North Twin Lake near Howe.....	Lagrange	1.99	135	843.56	1953-66
Olin Lake near Valentine.....	Lagrange	6.12	103	899.45	1945-66
Oliver Lake near Valentine.....	Lagrange	11.3	362	899.45	1945-66
Otter Lake near Flint.....	Steuben	6.82	118	934.15	1954-66
Papakeechie Lake near Syracuse.....	Kosciusko	5.3	300	-	1964-66
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 Wolf Lake.....	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	-	1954-66
Royer Lake near Plato.....	Lagrange	4.91	69	936.50	1952-66
Sacandice 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	-	1948-66
Shipshewana Lake near Shipshewana.....	Lagrange	4.00	202	852.04	1951-66
Silver Lake near Angola.....	Steuben	3.72	238	959.40	1945-53
Silver Lake near Wolf Lake.....	Noble	0.32	34	-	1953-63
Simonton Lake near Elkhart.....	Elkhart	4.37	282	772.19	1946-66
Skinner Lake near Albion.....	Noble	13.8	125	927.74	1945-66
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	-	1948-66
Stone Lake near Scott.....	Lagrange	1.32	152	818.76	1954-66
Story Lake near Hudson.....	DeKalb	2.48	77	942.20	1946
					1954-66
Sylvan Lake at Rome City.....	Noble	31.5	575	916.20	1943-66
Syracuse Lake at Syracuse.....	Kosciusko	37.4	414	858.87	1943-66
Tamarack Lake near Cosperville.....	Noble	15.1	50	-	1948-65
Upper Long Lake near Wolf Lake.....	Noble	2.03	86	-	1956-66
Village Lake near Cromwell.....	Noble	11.9	12	876.68	1953-66
Wabec Lake near Milford.....	Kosciusko	13.4	187	829.79	1946-53
Waldron Lake near Cosperville.....	Noble	131.0	216	-	1948-66
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	1945-66
Witmer Lake near Wolcottville.....	Lagrange	35.8	204	897.36	1945-66
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	-	1961-66
Clear Lake at Clear Lake.....	Steuben	6.86	800	1,037.38	1943-66
Hamilton Lake at Hamilton.....	Steuben	16.5	802	898.83	1943-66
Long Lake near Ray.....	Steuben	2.80	154	-	1961-63
Round Lake at Clear Lake.....	Steuben	7.25	30	1,037.38	1943-66

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	1943-66
Cedar Lake at Cedar Lake.....	Lake	8.05	781	-	1943-66
Clear Lake at LaPorte.....	LaPorte	0.35	106	798.20	1942-49
					1952-66
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	-	1954-66

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	1946-66
Hudson Lake at Hudson Lake.....	LaPorte	3.06	432	763.09	1946-66
J. C. Murphy Lake near Morocco.....	Newton	16.7	1,515	-	1952-61
Koontz Lake at Koontz Lake.....	Starke	6.46	346	714.56	1943-66
Lake of the Woods near Bremen.....	Marshall	11.6	416	803.85	1945-66
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	1946-66
Pretty Lake near Plymouth.....	Marshall	0.91	97	787.36	1954-66
Riddles Lake near Lakeville.....	St. Joseph	13.5	77	817.50	1946-66
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	1946-66
Upper Fish Lake near Stillwell.....	LaPorte	9.71	139	688.22	1946-53
Wauhob Lake near Valparaiso.....	Porter	0.29	21	-	1946-66
Wharton Lake near South Bend.....	St. Joseph	1.75	-	-	1960-66

* 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

1966

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

Part 2. Water Quality Records

[Symbols after station name designate type of data: c, chemical;
t, water temperature; s, sediment]

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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:

Specific conductance $\times (0.65 \pm 0.05) =$ 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 stream-flow. 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.

OHIO RIVER MAIN STEM

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.

DRAINAGE AREA.--83,200 square miles.

RECORDS AVAILABLE.--Chemical analyses: October 1959 to 1960.

Water temperatures: October 1959 to September 1966.
 Maximum 1055 66 Specific conductance: Maximum daily 764 micromhos Nov 21, minimum daily 210 micromhos Mar 5

EXTREMES, 1965-66. -- Specific conductance: Maximum daily, 764 micromhos Nov. 21; minimum daily, 620 micromhos Nov. 21. -- Water temperatures: Maximum 84°F July 12-13; minimum 74°F Feb. 21 to Feb. 26.

Water temperatures: Maximum, 84°F July 12, 13, 15-19; minimum, 34°F Jan. 31 to Feb. 6.

EXTREMES 1959-66 --Specific conductance: Maximum daily 810 micromhos Oct 21 1962: minimum daily 167 micromhos Mar 3 1962

EXTREMES, 1959-66.--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. Samples for iron and manganese were filtered clear when collected. Analyses were made for same. Water temperatures: maximum, 86° F. July 14; 1002; minimum, freezing point on many days during winter months.

Chemical analyses, in parts per million, water year October 1965 to September 1966

Date of collection	Mean discharge (cfs)	Silica (SiO ₂)	Alu- mi- num (Al)	Iron (Fe)	Manga- nese (Mn)	Cal- cium (Ca)	Mag- ne- sium (Mg)	Sodium (Na)	Po- tas- sium (K)	Lith- ium (Li)	Bi- car- bon- ate (HCO ₃)	Car- bon- ate (CO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluo- ride (F)	Ni- trate (NO ₃)	Phos- phor- us (residue at 180°C) PO ₄	Hardness as CaCO ₃		To- Specific tal acid- ance (micro- mhos at 25°C)	pH	Col- or	
																			Cal- cium, mag- nesium	Non- carbon- ate			
Oct. 5, 1965.				--	--						76	0	133	52	0.2	8.6	0.21	363	196	134	599	6.9	
Oct. 15.....				--	--						98	0	150	68	.4	8.3	.37	408	234	154	680	7.1	
Oct. 22.....				--	--						78	0	168	78	.4	9.6	.32	434	240	176	726	7.1	
Oct. 25.....				--	--						86	0	151	70	.3	10	.38	424	232	162	677	7.0	
Nov. 5.....				--	--						84	0	166	68	.4	10	.38	433	234	163	693	6.8	
Nov. 15.....				--	--						91	0	159	66	.5	11	.46	415	238	164	676	7.6	
Nov. 21.....				--	--						84	0	191	76	.6	10	.37	486	264	195	764	7.7	
Nov. 25.....				--	--						68	0	183	72	.4	11	.36	442	246	191	717	7.5	
Dec. 1.....				--	--						58	0	198	67	.6	4.4	.17	462	246	199	735	6.9	
Dec. 5.....				--	--						58	0	170	55	.5	5.8	.11	398	221	174	634	6.8	
Dec. 15.....				--	--						58	0	105	46	.4	4.7	.17	294	168	121	483	7.4	
Dec. 25.....				--	--						59	0	102	38	.4	5.0	.09	270	164	116	452	6.8	
Jan. 1, 1966.				0.19	0.54						62	0	97	44	.1	7.5	.34	278	158	107	457	7.6	
Jan. 5.....				1.2	1.0						78	0	85	36	.3	8.3	.36	246	152	88	423	7.6	
Jan. 15.....				.36	.47						64	0	86	28	.2	7.4	.20	234	142	90	384	6.9	
Jan. 25.....				.22	.49						74	0	90	26	.1	8.6	.42	251	156	96	402	7.4	
Feb. 5.....				.30	.10						78	0	88	26	.2	8.9	.33	248	158	94	414	7.4	
Feb. 9.....				.30	.35						86	0	92	27	.2	9.8	.42	262	170	100	434	7.2	
Feb. 15.....				.18	.42						52	0	65	28	.2	7.5	.19	192	118	76	337	7.2	
Feb. 25.....				.31	.26						46	0	64	22	.1	6.4	.17	172	114	76	322	7.3	
Mar. 5.....				.40	.49						50	0	74	22	.2	6.7	.25	210	124	83	329	7.2	
Mar. 15.....				.39	.63						46	0	85	20	.3	5.7	.20	216	125	88	335	7.1	
Mar. 25.....				.08	.34						50	0	78	24	.2	6.2	.31	231	126	85	344	7.3	

OHIO RIVER MAIN STEM--Continued
3-2772. OHIO RIVER AT MARKLAND DAM, NEAR WARSAW, KY.--Continued

Chemical analyses, in parts per million, water year October 1965 to September 1966--Continued																					
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)	Sulfate (SO ₄)	Chloride (Cl)	Fluoride (F)	Nitrate (NO ₃)	Phosphorus (P ₂ O ₅)	Dissolved solids (residue at 180°C)	Hardness as CaCO ₃		Total acidity (micro-mhos at H ⁺ 25°C)	pH or Col- or
																		Calcium, magnesium	Non-carbonate		
Mar. 31, 1966				0.15	0.10						54	82	32	0.4	5.7	0.46	248	136	92	385	7.4
Apr. 5.....				.13	.21						54	81	40	.1	5.7	.18	248	138	94	402	7.0
Apr. 15.....				.31	.25						54	79	26	.2	4.9	.15	230	128	84	351	7.2
Apr. 23.....				.23	.12						44	58	16	.1	3.3	.28	162	94	58	262	7.2
Apr. 25.....				.15	.06						52	62	18	.2	3.9	.20	182	106	64	287	7.3
May 5.....				.29	.39						44	46	11	.3	3.5	.16	120	82	46	210	7.2
May 15.....				.03	.10						72	67	20	.3	5.0	.30	190	134	75	322	7.5
May 25.....				.03	.11						70	90	26	.3	5.4	.29	232	158	101	388	7.1
May 27.....				.03	.10						80	90	27	.4	6.1	.23	236	162	96	408	7.2
June 5.....				.03	.00						84	90	26	.1	5.4	.17	242	162	93	409	7.3
June 15.....				.06	.00						86	97	28	.2	6.9	.27	274	168	98	433	7.5
June 25.....				.00	.00						85	102	34	.1	6.4	.32	274	176	107	468	7.5
June 30.....				.00	.07						86	105	38	.1	6.7	.21	290	180	110	483	7.9
July 5.....				.03	.11						86	106	40	.3	6.2	.35	306	186	116	490	7.3
July 15.....				.03	.00						84	107	44	.3	6.7	.54	294	184	115	501	7.5
July 25.....				.06	.10						80	122	51	.4	6.2	.28	336	196	131	551	7.5
July 28.....				.03	.10						86	124	51	.5	6.6	.35	340	204	134	554	7.6
Aug. 5.....				.00	.09						88	112	47	.4	8.8	.02	310	196	124	534	6.9
Aug. 15.....				--	--						90	111	54	.4	9.6	.29	336	198	124	554	7.0
Aug. 25.....				--	--						70	136	58	.4	7.0	.24	338	200	143	602	6.9
Aug. 31.....				--	--						78	124	81	.5	7.0	.24	388	212	148	661	6.9
Sept. 5.....				--	--						83	117	78	.3	7.9	.31	398	204	136	642	7.4
Sept. 15.....				--	--						82	130	74	.4	8.4	.42	417	216	149	663	7.4
Sept. 26.....				.60	.30						76	126	68	.5	8.6	.43	380	192	130	617	7.0
Sept. 30.....				--	--						62	186	74	.6	8.9	.26	461	226	175	743	7.1

Chemical analyses, in parts per million, water year October 1965 to September 1966--Continued

OHIO RIVER MAIN STEM--Continued

33-2772. OHIO RIVER AT MARKLAND DAM, NEAR WARSAW, KY.--Continued

Chemical analyses, in parts per million, water year October 1965 to September 1966--Continued

[illegible]

Pesticide analyses, in parts per trillion, November 1964 to September 1966

Date of collection	Kelthane	Aldrin	Lindane	DDD	DDE	DDT	Dieldrin	Endrin	Heptachlor epoxide	Methoxy-chlor
Nov. 17, 1964.....	0	10	15	0	0	0	0	0	0	0
Dec. 15.....	0	0	0	0	0	0	0	0	0	0
Jan. 12, 1965.....	0	0	100	0	0	0	0	0	0	0
Feb. 16.....	0	0	0	0	0	0	0	0	0	0
Mar. 18.....	0	0	15	0	0	0	0	0	0	0
Apr. 14.....	0	0	0	0	0	0	0	0	0	0
May 18.....	0	0	0	0	0	0	0	0	0	0
June 18.....	50	0	0	0	0	0	0	0	0	0
July 16.....	0	0	10	50	40	100	40	0	0	0
Aug. 17.....	0	0	0	0	0	0	10	0	0	0
Sept. 24.....	0	0	0	0	0	0	0	0	0	0
Oct.....	0	0	0	0	0	0	0	0	0	0
Nov. 18.....	0	0	0	0	0	0	0	0	0	0
Dec. 17.....	0	0	0	0	0	0	0	0	0	0
Feb. 18, 1966.....	0	0	--	0	0	0	0	0	0	0
Mar. 18.....	0	10	60	0	0	0	0	0	0	0
Apr. 14.....	0	0	0	0	0	0	0	0	0	0
May 27.....	0	0	0	0	0	0	0	0	0	0
June 24.....	0	0	16	0	0	0	0	0	0	0
July 22.....	0	0	>10	0	0	0	0	0	0	0
Aug. 18.....	0	0	>10	0	0	0	0	0	0	0
Sept. 22.....	0	0	>10	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 1965 to September 1966
(Once-daily measurement, usually between 1600 and 2000)

Day	October	November	December	January	February	March	April	May	June	July	August	September
1.....	623	699	735	457	417	326	395	319	400	482	554	658
2.....	623	685	694	447	411	329	382	303	399	485	552	--
3.....	585	652	657	407	413	335	384	262	390	487	544	--
4.....	567	655	643	364	414	323	401	228	390	487	540	--
5.....	599	693	634	423	414	329	402	210	409	490	534	642
6.....	560	690	620	389	417	361	399	214	408	491	536	640
7.....	573	684	585	396	422	369	399	230	414	491	542	--
8.....	625	670	565	384	417	326	390	242	418	494	548	638
9.....	644	653	549	404	434	312	384	262	413	499	557	638
10.....	674	662	544	384	422	315	379	296	417	496	574	639
11.....	710	675	519	387	370	320	376	286	422	499	569	641
12.....	--	--	508	378	367	317	370	291	--	499	571	641
13.....	669	--	499	376	385	335	374	296	429	491	581	651
14.....	647	677	494	376	391	338	373	322	423	505	562	658
15.....	680	676	483	384	337	335	351	322	433	501	554	663
16.....	692	--	464	385	291	338	338	322	434	469	555	644
17.....	700	686	454	389	301	344	312	322	419	488	565	640
18.....	713	685	447	390	294	341	283	357	--	492	563	620
19.....	--	714	440	393	291	332	276	365	429	525	570	641
20.....	713	739	440	392	274	326	270	374	438	542	580	641
21.....	720	764	440	390	266	326	266	376	445	541	--	646
22.....	726	763	441	396	274	329	266	398	454	541	620	639
23.....	696	714	448	391	303	326	262	394	460	545	598	649
24.....	709	712	448	398	319	341	268	384	--	--	568	--
25.....	677	717	452	402	322	344	287	388	468	551	602	--
26.....	660	708	458	400	331	348	309	392	475	--	607	617
27.....	658	708	462	404	331	--	302	408	477	553	606	623
28.....	664	708	465	401	340	358	323	407	480	554	637	648
29.....	665	722	469	398	--	361	326	--	479	549	657	652
30.....	668	742	467	413	--	369	335	401	483	543	--	743
31.....	698	--	463	421	--	385	--	397	--	543	661	--
Average	659	698	515	397	356	337	339	325	433	511	576	646

OHIO RIVER MAIN STEM--Continued

3-2772. OHIO RIVER AT MARKLAND DAM, NEAR WARSAW, KY.--Continued

Temperature (°F) of water, water year October 1965 to September 1966
(Once-daily measurement, usually between 1600 and 2000)

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	74	73	73	73	70	70	69	69	68	68	68	68	--	66	66	65	65	65	65	--	65	65	65	65	64	65	64	64	60	62	62	62	67
November	62	60	60	60	60	60	60	60	59	60	59	--	--	68	57	--	56	55	55	55	49	54	54	53	53	53	53	52	52	52	52	--	57
December	50	50	48	48	48	47	47	47	47	47	47	46	47	47	46	46	46	46	46	44	45	44	44	44	44	44	44	43	44	44	44	44	46
January	44	44	44	44	44	44	44	44	44	44	44	43	41	42	42	42	40	39	40	40	39	38	38	38	37	37	37	37	36	36	36	34	41
February	34	34	34	34	34	34	35	35	35	36	38	38	39	38	40	40	40	41	41	40	40	39	--	39	40	40	39	39	39	--	--	38	38
March	40	41	43	43	42	42	42	43	44	45	47	47	47	47	47	48	51	51	50	49	49	50	51	50	51	50	51	51	--	51	50	51	47
April	51	51	51	51	51	50	50	50	50	49	51	49	49	48	48	48	49	50	50	53	53	54	55	55	56	57	59	59	59	59	--	--	52
May	61	61	60	59	60	59	59	60	58	59	58	58	59	60	61	61	62	62	62	62	64	64	69	67	68	69	69	69	--	70	69	63	63
June	69	69	69	69	71	71	72	73	74	73	75	--	76	76	76	75	76	--	77	75	75	80	79	--	79	81	81	79	80	82	--	--	75
July	83	83	83	83	82	82	82	82	82	82	83	84	84	--	84	84	84	84	84	82	83	83	83	--	82	--	83	83	82	82	82	83	83
August	82	82	82	81	81	81	81	82	82	81	81	81	81	--	81	81	79	81	81	81	--	81	80	79	79	79	79	79	81	--	81	81	81
September	81	--	--	--	81	79	--	79	79	78	78	79	77	77	77	76	76	76	76	75	75	75	73	--	--	72	72	72	71	70	--	--	76

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 mouth of Little River, and at mile 409.

DRAINAGE AREA.--710 square miles.

RECORDS AVAILABLE.--Water temperatures: October 1963 to September 1966.

EXTREMES, 1965-66.--Water temperatures: Maximum, 84°F July 3; minimum, 33°F Feb. 6-8.

EXTREMES, 1963-66.--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 1965 to September 1966
(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	66	62	60	58	58	61	61	59	58	58	56	57	57	60	64	67	68	66	64	64	64	61	56	52	53	53	52	50	51	54	59	
	Minimum	61	58	60	56	54	55	58	59	58	56	56	54	54	55	57	60	61	63	61	62	62	61	55	52	52	51	50	47	48	50	56	
November	Maximum	52	51	54	54	52	54	56	57	55	50	50	50	49	50	54	51	47	45	46	46	46	46	46	46	46	49	49	45	39	39	---	49
	Minimum	50	50	50	52	49	52	54	55	50	47	49	49	46	46	48	47	45	44	43	45	45	45	45	46	46	45	39	38	38	---	47	
December	Maximum	38	39	41	41	42	42	41	39	38	42	45	47	47	46	43	42	40	39	38	37	36	37	39	43	41	38	36	36	41	45	41	
	Minimum	38	38	38	41	40	41	38	36	37	38	42	45	46	43	41	40	39	38	37	37	36	36	37	39	41	38	37	36	35	40	39	
January	Maximum	45	44	43	41	39	39	38	36	35	34	35	35	35	35	35	35	34	34	34	34	34	34	34	34	34	35	35	35	35	35	36	
	Minimum	43	43	41	39	38	38	36	34	34	34	34	35	35	35	35	35	34	34	34	34	34	34	34	34	34	34	35	35	35	35	36	
February	Maximum	34	34	34	34	34	34	34	34	34	34	35	37	39	39	39	39	39	37	37	36	36	36	36	36	36	36	38	37	---	---	36	
	Minimum	34	34	34	34	34	33	33	33	34	34	34	35	38	39	38	38	36	36	36	36	36	36	36	36	36	36	37	37	---	---	35	
March	Maximum	41	43	44	45	44	40	38	37	41	43	46	46	46	46	47	46	49	49	47	46	49	52	52	49	43	41	41	42	45	46	45	
	Minimum	37	39	43	44	40	38	36	35	37	41	42	46	45	44	46	44	45	47	43	42	46	49	49	43	40	41	40	39	42	42	42	
April	Maximum	45	44	44	44	44	43	43	43	45	45	44	44	46	50	50	51	54	59	59	62	59	60	58	58	63	63	59	54	56	54	---	51
	Minimum	44	43	44	42	43	41	42	41	43	43	44	43	43	44	48	48	48	52	58	58	57	54	54	56	56	58	51	51	52	53	---	48
May	Maximum	53	54	55	56	60	63	61	61	56	56	55	51	51	50	54	58	58	60	61	61	63	65	65	66	68	71	71	68	65	65	60	
	Minimum	52	51	52	52	55	59	57	56	52	50	50	50	50	50	50	54	56	57	59	59	59	60	63	61	64	66	68	62	60	59	57	
June	Maximum	65	66	68	72	74	74	75	74	74	73	73	75	75	75	74	70	70	71	73	75	76	79	78	79	81	81	82	82	80	83	---	75
	Minimum	59	60	63	66	70	69	69	72	70	68	66	68	73	72	69	68	66	67	67	70	71	73	75	75	76	76	78	75	77	---	70	
July	Maximum	82	82	84	83	82	81	80	79	79	77	76	77	76	76	76	74	77	78	80	79	75	76	76	79	81	82	81	80	79	77	77	79
	Minimum	78	78	79	80	78	78	77	74	76	75	72	72	76	76	73	72	72	77	75	73	70	71	73	74	76	77	78	74	72	71	75	
August	Maximum	77	75	76	76	78	77	78	78	77	72	72	72	72	70	75	76	78	77	74	73	73	73	72	70	72	74	74	76	76	77	75	
	Minimum	72	73	69	67	70	71	72	73	74	70	68	67	69	67	70	72	70	72	74	69	68	72	68	65	65	65	68	70	72	72	72	70
September	Maximum	78	77	77	77	75	70	69	69	70	70	70	68	69	70	70	66	64	66	66	63	61	64	64	62	61	58	57	58	57	57	---	67
	Minimum	72	72	75	75	68	66	63	62	62	64	64	64	65	66	64	60	59	60	62	61	60	60	60	58	58	54	56	54	56	54	---	62

WABASH RIVER BASIN--Continued

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.--Continued

Particle-size analyses of suspended sediment, water year October 1965 to September 1966
 (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 tem- per- ature (°F)	Sam- pling point	Discharge (cfs)	Sediment concentra- tion (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	
Feb. 11, 1966.....	1000			600	3120		29	35	44	60	96	98	99	100				SBWC
Apr. 21.....	1100			240	1140		44	59	69	82	95	99	100	--				SBWC
Apr. 21.....	1100			240	1140		0	14	36	63	96	97	100	--				SBN
Apr. 24.....	1200			240	1720		36	50	63	75	88	92	99	100				SBWC
Apr. 24.....	1200			240	1720		1.0	8.0	22	48	94	96	99	100				SBN
Apr. 25.....	0300			570	3630		29	39	50	72	90	98	99	100				SBWC

WABASH RIVER BASIN--Continued

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.--Continued

Suspended sediment, water year October 1965 to September 1966
 (Where loads were computed from a partly estimated or estimated concentration graph,
 time-weighted concentrations are reported)

Day	OCTOBER			NOVEMBER			DECEMBER		
	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day
1..	18	79	4	8.5	22	1	9.1	8	T
2..	18	58	3	8.0	17	T	8.8	5	T
3..	17	42	2	7.5	6	T	8.5	7	T
4..	14	40	2	7.2	10	T	8.5	12	T
5..	12	35	1	7.2	15	T	9.5	14	T
6..	12	28	1	7.2	22	T	9.1	14	T
7..	12	22	1	7.2	28	1	8.8	15	T
8..	13	22	1	7.8	21	T	8.8	20	T
9..	13	24	1	7.8	14	T	8.8	21	T
10..	15	24	1	7.2	18	T	9.5	16	T
11..	14	24	1	7.0	24	T	10	22	1
12..	13	24	1	7.8	32	1	15	113	5
13..	13	23	1	8.8	67	2	23	129	8
14..	12	23	1	8.5	56	1	24	33	2
15..	12	25	1	8.3	47	1	22	34	2
16..	11	23	1				18	52	3
17..	11	20	1	8.8	15	T	15	35	1
18..	11	21	1	8.5	15	T	13	20	1
19..	13	24	1	8.5	9	T	12	22	1
20..	15	25	1	8.8	6	T	12	18	1
21..	16	28	1	8.5	6	T	12	15	T
22..	18	30	1	8.5	5	T	11	21	1
23..	21	30	2	8.5	8	T	11	19	1
24..	17	31	1	8.3	2	T	11	8	T
25..	14	28	1	8.3	3	T	26	22	2
26..	12	31	1	9.1	10	T	58	16	3
27..	11	57	2	12	92	3	50	4	1
28..	10	55	1	11	76	2	38	6	1
29..	9.5	64	2	10	25	1	30	5	T
30..	8.8	72	2	10	9	T	27	18	1
31..	8.5	35	1	—	—	—	43	75 S	11
Total	414.8	—	42	253.3	—	19	57.4	—	50
Day	JANUARY			FEBRUARY			MARCH		
	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day
1..	311	428 S	402	12	11	T	62	8	1
2..	280	362	274	13	11	T	76	52	11
3..	204	200	110	13	10	T	96	111	29
4..	144	38	15	13	8	T	130	124	44
5..	116	16	5	13	11	T	123	55	18
6..	102	16	4	13	9	T	96	23	6
7..	82	24	5	15	21	1	70	12	2
8..	60	20	3	34	92 S	10	60	23	4
9..	48	14	2	62	37	6	57	28	4
10..	40	13	1	339	1600 S	1830	56	31	5
11..	34	12	1	540	2680 S	4260	58	30	5
12..	30	14	1	240	1080	700	59	20	3
13..	27	15	1	158	620	264	63	14	2
14..	25	18	1	123	280	93	62	23	4
15..	23	22	1	96	265	69	60	20	3
16..	22	20	1	76	93	19	56	20	3
17..	21	27	2	58	7	1	50	23	3
18..	19	29	1	48	17	2	50	32	4
19..	18	30	1	43	15	2	49	11	1
20..	17	24	1	38	10	1	42	10	1
21..	16	17	1	36	7	1	38	9	1
22..	15	11	T	34	4	T	38	8	1
23..	15	12	1	33	15	1	40	7	1
24..	14	12	T	32	22	2	39	7	1
25..	14	11	T	31	4	T	34	11	1
26..	13	15	1	30	3	T	31	11	1
27..	13	8	T	30	4	T	30	18	1
28..	12	8	T	36	5	T	27	11	1
29..	12	9	T	—	—	—	27	10	1
30..	12	10	T	—	—	—	27	11	1
31..	12	10	T	—	—	—	29	9	1
Total	1771	—	838	2209	—	7270	1735	—	164

S Computed by subdividing day.
 T Less than 0.50 ton.

WABASH RIVER BASIN--Continued

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.--Continued

Suspended sediment, water year October 1965 to September 1966--Continued
(Where loads were computed from a partly estimated or estimated-concentration graph,
time-weighted concentrations are reported)

Day	APRIL			MAY			JUNE		
	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day
1..	27	8	1	300	3630	2940	26	9	1
2..	26	3	T	213	750	431	23	7	T
3..	25	5	T	158	150	64	22	7	T
4..	23	7	T	123	35	12	21	12	1
5..	21	7	T	102	34	9	20	31	2
6..	21	6	T	96	32	8	20	25	1
7..	21	6	T	76	43	9	27	15	1
8..	20	5	T	76	53	11	27	7	1
9..	20	14	1	70	65	12	21	8	T
10..	19	15	1	62	30	5	18	10	T
11..	20	70	4	63	18	3	16	12	1
12..	26	546	38	96	65	17	14	9	T
13..	33	468	42	102	87	24	14	7	T
14..	29	65	5	109	98	29	23	36	2
15..	24	37	2	96	65	17	35	48	5
16..	22	32	2	89	22	5	76	120	A 35
17..	22	21	1	82	9	2	130	237	83
18..	21	22	1	82	36	8	82	69	15
19..	22	44	3	82	103	23	50	55	7
20..	33	53 S	8	70	27	5	35	36	3
21..	218	810 S	477	76	21	4	26	35	2
22..	151	408	166	89	17	4	20	34	2
23..	109	110	32	76	21	4	17	34	2
24..	300	1390 S	1780	70	18	3	15	33	1
25..	450	2150 S	2850	58	14	2	14	29	1
26..	240	307	199	49	12	2	12	34	1
27..	222	475	285	44	13	2	11	25	1
28..	280	3280	2480	42	12	1	11	32	1
29..	240	1680	1090	38	12	1	10	65	2
30..	243	1680 S	1100	33	11	1	9.5	52	1
31..	--	--	--	28	10	1	--	--	--
Total	2928	--	10600	2750	--	366	845.5	--	174
Day	JULY			AUGUST			SEPTEMBER		
	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day	Mean discharge (cfs)	Mean concentration (ppm)	Tons per day
1..	8.8	22	1	3.6	21	T	2.6	22	T
2..	8.3	15	T	3.4	18	T	2.6	21	T
3..	7.8	21	T	3.2	26	T	3.2	--	E 4
4..	6.0	25	T	3.2	26	T	4.2	--	E 12
5..	8.1	40	1	3.1	15	T	3.2	280	2
6..	24	750 A	50	3.0	13	T	2.8	40	T
7..	21	303	17	3.0	13	T	2.7	13	T
8..	14	241	9	2.8	9	T	2.7	14	T
9..	11	216	6	3.0	10	T	2.6	15	T
10..	8.0	179	4	3.1	11	T	2.6	15	T
11..	65	1200 S	300	3.7	14	T	2.6	13	T
12..	63	1080 S	184	3.4	13	T	2.6	28	T
13..	20	413 S	25	3.8	9	T	2.4	13	T
14..	11	150	4	4.7	17	T	2.6	14	T
15..	8.3	45	1	4.3	20	T	3.4	214	2
16..	7.0	39	1	4.0	20	T	3.4	144	1
17..	6.0	35	1	3.6	25	T	3.0	28	T
18..	5.6	25	T	3.1	22	T	3.0	11	T
19..	5.4	20	T	3.4	21	T	6.1	--	E 10
20..	5.1	19	T	3.1	15	T	9.1	1200	29
21..	4.5	18	T	3.1	15	T	6.5	1200	21
22..	4.3	17	T	3.0	15	T	5.4	174	3
23..	4.2	16	T	3.0	14	T	4.5	15	T
24..	4.3	15	T	2.8	13	T	3.8	9	T
25..	4.2	14	T	2.7	11	T	4.0	7	T
26..	4.0	15	T	2.7	9	T	4.2	11	T
27..	3.8	16	T	2.7	9	T	4.3	190	2
28..	4.0	11	T	2.7	8	T	4.3	227	3
29..	5.4	19	T	2.7	5	T	4.2	74	1
30..	4.9	20	T	2.6	15	T	4.5	114	1
31..	3.8	26	T	2.6	22	T	--	--	--
Total	36.8	--	608	99.1	--	4.1	113.1	--	93
Total discharge for year (cfs-days).....									
Total load for year (tons).....									
14050.0									
20200									

E Estimated.

T Less than 0.50 ton.

S Computed by subdividing day.

A Computed from partly estimated-concentration graph.

3-3419.1. WABASH RIVER AT HUTSONVILLE, ILL.

LOCATION.--At intake line to Ohio River Valley Water Sanitation Commission (ORSANCO) monitor station at Central Illinois Public Service Company at Hutsonville, Crawford County.

DRAINAGE AREA.--12,600 square miles, approximately.

RECORDS AVAILABLE.--Chemical analyses: November 1964 to December 1965 (discontinued).

Water temperatures: November 1964 to December 1965 (discontinued).

EXTREMES, November 1964 to December 1965.--Specific conductance: Maximum daily, 784 micromhos Jan. 24, 1965; minimum daily, 287 micromhos Feb. 10, 1965.

Water temperatures: Maximum, 88°F Aug. 19, 1965; minimum, 34°F Jan. 29, 30, Feb. 2, 1965.

REMARKS.--Daily samples were collected at this station. Analyses were made for samples collected on the 5th, 15th, and 25th of each month and for the day on which the maximum daily specific conductance occurred. No discharge records available for this station.

Chemical analyses, in parts per million, October to December 1965

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)	Phosphate (PO ₄)	Dissolved solids (residue at 180°C)	Hardness as CaCO ₃		Total acidity (micro-mhos at 25°C)	Specific conductance (micro-mhos at 25°C)	pH or
																			Calcium, magnesium	Non-carbonate			
Oct. 5, 1965...											248	0	82	18	0.3	9.6	0.64	388	298	94		601	8.1
Oct. 15.....											228	0	90	20	.3	.8	.43	366	276	88		581	7.2
Oct. 25.....											244	0	91	22	.3	7.6	.64	388	294	94		617	8.1
Oct. 30.....											282	0	85	30	.5	8.5	.53	422	320	88		682	8.1
Nov. 5.....											273	0	90	24	.3	3.7	.56	384	324	100		646	7.5
Nov. 15.....											256	0	102	24	.3	2.8	.57	396	318	103		630	8.1
Nov. 25.....											265	0	100	24	.4	.4	.34	386	320	103		638	7.4
Nov. 30.....											290	0	107	22	.3	.6	.37	412	338	100		672	7.5
Dec. 5.....											298	0	98	26	.4	2.4	1.2	438	342	98		692	7.9
Dec. 13.....											294	0	100	36	.3	6.4	.74	464	342	101		728	7.4
Dec. 15.....											292	0	108	28	.3	7.2	.62	464	352	113		712	7.5
Dec. 25.....											276	10	107	26	.4	9.6	.77	458	350	107		698	8.4

WABASH RIVER BASIN--Continued
 3-3419.1. WABASH RIVER AT HUTSONVILLE, ILL.--Continued
 Temperature (°F) of water, October to December 1965
 (Once-daily measurement at 0800)

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	68	66	67	65	63	63	64	63	63	63	63	60	62	63	64	65	67	68	69	70	70	68	65	62	59	57	57	56	55	54	55	63
November	54	54	56	58	58	60	62	60	58	56	56	56	57	54	54	56	54	50	49	51	52	52	47	48	51	48	50	50	47	45	--	53
December	43	42	43	44	43	44	43	43	46	48	50	51	50	50	50	48	46	45	43	42	41	41	45	46	46	44	42	39	37	38	42	44

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 below dam at Clare, and at mile 269.0. DRAINAGE AREA.--837 square miles. RECORDS AVAILABLE.--Water temperatures: November 1952 to September 1966. EXTREMES, 1965-66.--Water temperatures: Maximum, 93°F July 12, 13; minimum, freezing point Jan. 9-13, 16-28, 31, Feb. 1, 6, 21, 23. EXTREMES, 1952-66.--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 1965 to September 1966
(Continuous ethyl alcohol-actuated thermometer)

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	67	63	63	61	60	59	59	61	62	58	59	59	59	59	66	67	67	69	69	69	68	66	63	58	53	54	54	53	51	53	53	61
	63	60	60	57	55	55	57	57	57	56	56	54	54	57	57	65	62	67	67	67	65	63	58	53	51	50	50	50	48	47	51	57
November	54	54	53	54	55	55	54	56	56	54	52	52	52	51	49	51	51	47	45	45	45	44	44	43	44	46	47	43	40	40	—	49
	49	51	50	52	53	53	52	53	54	52	52	51	51	47	45	49	47	45	44	43	44	42	43	43	43	42	43	40	38	39	—	47
December	39	39	40	41	42	40	40	41	41	42	43	45	45	45	44	41	40	39	37	37	37	37	38	41	42	39	38	37	37	43	45	40
	38	38	39	39	39	39	39	39	39	41	41	41	45	44	41	39	39	37	36	35	37	36	37	38	39	37	35	35	35	37	43	39
January	46	45	44	41	38	39	39	38	33	35	34	34	36	36	36	33	33	33	33	33	33	33	32	32	33	35	35	36	36	35	33	36
	45	44	41	38	38	38	38	33	32	32	32	32	32	33	33	32	32	32	32	32	32	32	32	32	32	32	32	32	33	33	32	34
February	35	36	36	36	35	34	37	39	37	37	39	39	39	40	40	39	38	38	38	35	35	33	32	33	32	34	40	41	40	43	—	38
	32	34	33	33	33	32	33	34	34	34	36	37	37	39	38	36	35	35	33	33	32	33	32	34	35	36	36	37	—	—	—	35
March	43	45	47	50	49	44	40	41	44	46	49	48	48	52	52	50	53	51	50	49	52	55	55	53	48	46	43	46	47	50	50	48
	37	39	42	46	44	38	36	35	37	41	43	47	48	47	47	46	47	50	47	45	46	49	53	48	43	43	40	39	41	43	45	44
April	51	50	50	51	50	49	49	48	48	49	50	50	49	54	54	57	58	66	66	69	68	69	65	63	68	67	65	61	60	57	—	57
	48	47	48	46	46	45	46	45	45	45	47	47	45	45	49	50	51	55	61	62	62	59	60	62	61	63	61	59	57	—	52	
May	57	56	59	60	64	68	67	65	62	60	57	58	56	55	57	65	64	67	69	68	67	68	71	72	73	75	78	77	74	71	70	65
	55	53	55	56	58	63	63	62	57	54	55	54	55	55	54	57	63	63	63	64	65	65	67	70	67	68	70	72	68	65	64	61
June	70	71	72	75	75	75	76	76	80	80	78	77	78	80	78	74	74	74	76	79	78	80	83	84	85	85	85	86	88	89	—	79
	63	63	66	68	70	71	70	71	73	75	70	69	72	77	72	70	68	68	69	71	73	74	77	80	80	77	79	84	84	82	—	73
July	90	90	88	86	88	88	86	85	87	88	87	93	93	91	91	87	85	86	90	89	85	82	81	80	84	87	86	88	86	85	82	87
	86	86	83	82	81	83	82	81	83	81	81	87	90	89	87	79	78	78	85	85	76	76	76	76	77	83	85	85	84	79	75	82
August	81	80	79	81	80	81	81	83	83	82	80	79	78	77	80	82	83	84	84	82	84	82	80	78	77	79	80	80	79	82	82	81
	75	77	74	76	74	74	75	76	79	80	78	73	73	73	74	80	77	78	81	80	80	79	77	75	72	74	76	75	76	77	76	76
September	82	85	86	85	81	75	74	74	73	73	73	74	78	79	78	75	73	72	72	71	67	68	68	67	66	64	64	62	61	—	—	73
	79	79	81	79	74	71	69	69	68	69	69	69	73	75	74	70	69	69	68	67	65	65	65	63	63	60	62	59	59	57	—	69

WABASH RIVER BASIN--Continued

3-3510. WHITE RIVER NEAR NORA, IND.

LOCATION.--Lat 39°54'35", long 86°06'20", 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.

DRAINAGE AREA.--1,200 square miles.

RECORDS AVAILABLE.--Water temperatures: June 1954 to May 1960, October 1962 to September 1966.

EXTREMES, 1965-66.--Water temperatures: Maximum, 85°F July 2-5, 12, 13; minimum, freezing point Jan. 16 to Feb. 10.

EXTREMES, 1954-60, 1962-66.--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 1965 to September 1966
(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	65	65	63	63	62	60	61	61																								
	Maximum	65	65	63	62	60	59	61	60	59	59	58	58	58	60	62	63	64	64	64	63	63	63	63	62	58	55	54	54	53	53	60
November	53	53	54	54	54	54	55	56	56	56	54	53	53	53	52	53	53	51	47	45	45	46	46	44	43	44	45	45	41	39	--	50
	Maximum	53	53	54	54	54	55	56	56	56	54	53	53	53	52	53	53	51	47	45	45	46	46	44	43	44	45	45	41	39	--	50
December	37	37	38	38	38	38	38	38	38	39	41	42	42	42	42	42	41	39	38	38	37	36	37	39	40	40	38	36	36	38	42	39
	Maximum	37	37	38	38	38	38	38	38	38	39	41	42	42	42	42	41	39	38	38	37	36	36	37	39	40	40	38	36	36	38	42
January	36	37	37	38	38	38	38	38	38	38	39	41	42	42	42	42	41	39	38	38	37	36	37	39	38	38	36	36	36	36	38	38
	Minimum	36	37	37	38	38	38	38	38	38	38	39	41	42	42	42	41	39	38	38	37	36	36	37	39	38	38	36	36	36	36	38
February	43	43	42	42	39	40	39	38	37	36	35	34	34	34	33	33	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	35
	Maximum	43	43	42	42	39	40	39	38	37	36	35	34	34	34	33	33	32	32	32	32	32	32	32	32	32	32	32	32	32	32	35
March	32	32	32	32	33	33	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	34
	Minimum	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	34
April	42	43	45	47	47	46	44	41	42	44	46	47	47	47	49	49	50	50	50	49	49	52	53	53	51	47	47	46	46	47	47	47
	Maximum	42	43	45	47	47	46	44	41	42	44	46	47	47	49	49	50	50	50	49	49	52	53	53	51	47	47	46	46	47	47	47
May	47	47	47	49	48	48	48	48	49	49	49	49	50	51	52	52	54	56	57	60	60	60	60	60	60	60	61	61	60	59	59	54
	Minimum	46	47	47	47	48	48	47	47	47	48	49	49	49	51	51	52	54	56	57	60	60	60	60	60	60	61	61	60	59	58	53
June	58	56	57	58	60	62	62	62	62	59	56	56	55	55	55	55	57	59	60	61	61	62	64	64	65	68	69	70	71	69	68	61
	Maximum	58	56	57	58	60	62	62	62	59	56	56	55	55	55	55	57	59	60	61	61	62	64	64	65	68	69	70	71	69	68	61
July	67	67	67	69	69	69	70	70	72	72	72	72	73	74	73	73	73	73	75	75	76	78	79	81	82	82	83	84	83	83	83	75
	Minimum	66	65	66	67	68	69	69	70	71	71	71	72	73	73	73	72	72	73	75	75	76	77	79	80	81	82	83	83	83	83	73
August	84	85	85	85	85	84	83	83	82	83	83	85	85	84	84	84	82	82	83	84	83	80	80	80	81	82	82	82	82	81	83	83
	Maximum	84	85	85	85	84	83	83	82	83	83	85	85	84	84	84	82	81	81	82	80	80	80	80	81	82	82	82	82	81	82	83
September	80	79	78	76	76	77	76	77	77	77	76	74	73	72	73	74	73	74	74	75	75	75	73	73	72	72	73	72	73	74	74	75
	Minimum	78	78	76	75	75	76	75	76	76	74	73	72	71	71	73	72	73	74	74	75	75	73	72	72	71	72	73	74	74	74	76
October	76	76	77	77	77	75	73	70	69	69	70	70	70	69	69	69	67	66	65	65	65	64	64	64	63	62	62	62	60	59	--	67
	Maximum	76	76	77	77	77	75	73	70	69	69	70	70	69	69	69	67	66	65	65	65	64	64	64	63	62	62	62	60	59	--	67

WABASH RIVER BASIN--Continued

3-3655. EAST FORK WHITE RIVER AT SEYMOUR, IND.

LOCATION.--Lat 38°58'57", long 85°53'57", temperature recorder 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 1966.

EXTREMES, 1965-66.--Water temperatures: Maximum, 87°F July 13, 14, 1966; minimum, freezing point on many days during winter months.

EXTREMES, 1954-66.--Water temperatures: Maximum, 87°F July 13, 14, 1966; minimum, freezing point on many days during winter months.

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 gage.

Temperature (°F) of water, water year October 1965 to September 1966
(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	66	64	64	62	60	60	61	61	60	58	58	58	58	57	60	62	63	64	64	63	63	63	61	59	56	53	52	52	51	50	51	59
Minimum	63	61	61	59	57	56	59	59	58	57	56	56	55	56	57	58	60	62	61	62	62	61	59	56	52	51	51	51	49	48	49	57
November																																
Maximum	51	51	51	53	53	54	55	55	55	52	50	50	50	49	48	52	52	46	44	43	44	46	45	44	45	48	48	45	43	40	--	49
Minimum	49	49	49	51	51	53	53	54	52	49	48	48	49	46	46	48	46	44	42	42	43	44	44	43	43	45	45	43	40	38	--	47
December																																
Maximum	38	38	39	40	40	40	40	39	39	40	42	45	45	44	44	44	43	42	40	39	38	37	38	39	42	42	41	39	38	37	40	43
Minimum	37	37	38	39	39	40	39	38	38	39	40	42	44	44	43	42	40	39	38	37	37	37	38	39	41	39	38	37	36	36	40	39
January																																
Maximum	44	45	45	44	41	40	40	39	37	36	36	36	36	36	36	36	35	34	34	33	34	33	33	33	32	32	32	32	32	32	32	36
Minimum	43	44	44	41	40	40	39	37	36	35	35	35	35	36	36	35	34	34	33	33	33	33	33	32	32	32	32	32	32	32	32	35
February																																
Maximum	32	32	32	32	32	32	32	32	36	36	35	38	38	39	39	38	38	37	36	36	35	35	35	36	36	37	37	38	--	--	--	36
Minimum	32	32	32	32	32	32	32	32	34	34	34	35	38	38	38	38	37	36	36	35	34	34	34	35	36	36	36	37	--	--	--	35
March																																
Maximum	39	41	43	46	46	44	40	39	41	43	47	48	48	49	50	52	52	52	52	51	52	55	55	54	50	48	47	46	46	47	48	47
Minimum	38	39	41	43	44	40	39	37	38	41	43	47	48	48	49	50	50	50	50	50	50	52	54	50	47	47	46	44	45	46	46	46
April																																
Maximum	49	50	49	49	48	47	47	47	47	50	49	48	48	48	49	50	52	56	57	59	60	61	62	62	62	63	63	61	61	61	--	54
Minimum	48	49	49	48	48	47	47	46	47	47	49	48	46	46	48	49	50	52	56	57	59	59	61	62	61	62	61	61	61	60	--	53
May																																
Maximum	60	58	57	58	61	64	64	67	67	61	57	56	57	57	58	58	60	62	63	65	65	65	69	69	70	70	72	73	72	70	67	64
Minimum	58	56	56	57	58	61	62	63	61	57	55	55	56	57	56	58	58	60	62	63	64	63	64	68	67	68	69	71	69	67	65	61
June																																
Maximum	66	67	67	69	71	71	73	73	75	75	72	74	75	75	75	74	73	74	75	76	76	78	79	80	81	82	82	82	82	83	--	75
Minimum	64	65	66	67	68	70	70	72	73	72	70	71	73	74	74	72	70	71	72	74	75	75	77	77	78	79	81	81	81	81	--	73
July																																
Maximum	83	84	84	84	83	82	81	81	82	85	85	84	87	87	86	84	82	82	83	83	81	78	78	77	78	81	82	83	82	82	80	82
Minimum	82	82	83	83	81	81	80	79	80	82	83	83	84	86	84	81	81	82	82	81	77	76	77	76	76	78	81	82	82	80	79	81
August																																
Maximum	79	78	76	77	78	78	79	80	82	81	79	77	76	74	76	77	78	80	80	80	80	79	76	75	75	75	76	77	78	79	80	78
Minimum	78	76	74	74	75	76	77	78	79	79	77	75	74	74	74	76	76	78	79	80	79	79	76	74	74	74	75	76	77	77	77	76
September																																
Maximum	80	80	80	80	79	77	74	74	73	73	72	74	73	75	72	72	73	73	69	68	67	68	68	66	65	64	62	63	65	64	--	71
Minimum	78	79	79	79	76	74	72	72	70	71	71	70	71	70	70	67	65	66	68	67	66	67	66	65	64	62	62	62	63	61	--	69

3-3725. SALT CREEK NEAR HARRODSBURG, IND.

EXTREMES, August and September 1966.--Water temperatures: Maximum, 73°F Sept. 1; minimum, 62°F Aug. 22.

Temperature (°F) of water, August and September 1966
(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	--	--	--	69	68	68	68	67	68	67	67	68	67	67	67	66	68	68	68	67	67	65	66	64	65	65	65	65	66	67	67	67
Minimum	--	--	--	--	66	66	67	67	66	67	64	65	67	67	66	65	66	66	66	66	66	62	63	64	64	65	65	65	65	65	65	65
September																																
Maximum	73	69	68	69	68	69	69	70	70	70	70	70	70	71	72	71	70	70	70	70	70	70	70	69	68	69	69	68	68	68	68	69
Minimum	66	68	68	68	68	68	68	69	69	70	70	70	70	70	70	71	70	70	70	70	70	69	69	68	68	69	68	68	68	67	--	69

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, three-eighths of a 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 1966. EXTREMES, 1965-66.--Water temperatures: Maximum, 88°F July 14, 15; minimum, freezing point on several days during January and February.

EXTREMES, 1964-66.--Water temperatures: Maximum, 88°F July 14, 15, 1966; minimum, freezing point on many days during winter months.

Temperature (°F) of water, water year October 1965 to September 1966
(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	63	61	61	59	57	57	58	57	55	55	55	54	54	54	57	58	60	61	59	60	59	58	55	55	55	55	55	55	55	55	55	55	55	
Maximum	61	59	59	57	55	55	57	55	54	54	54	53	52	53	54	56	57	58	58	59	58	55	52	52	52	52	52	52	52	52	52	52	52	
Minimum																																		
November	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	55	53	--	--	--	--	--	--	48	47	48	50	50	48	45	42	--		
Maximum	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	52	49	--	--	--	--	--	--	47	47	48	48	45	45	42	41	--		
Minimum																																		
December	41	40	40	40	40	40	40	39	39	39	41	43	43	43	43	43	42	42	41	40	40	40	40	40	42	41	39	39	38	40	42	41		
Maximum	40	40	40	40	40	40	39	39	39	38	38	41	43	43	43	42	41	40	40	40	40	40	40	40	41	39	38	38	38	40	40	40		
Minimum																																		
January	42	43	43	43	43	43	42	39	38	38	37	36	36	36	36	36	36	35	34	33	33	33	33	33	33	32	32	32	32	32	32	32	36	
Maximum	42	42	43	43	43	42	39	38	38	37	36	36	36	36	36	36	35	34	33	33	33	33	33	33	32	32	32	32	32	32	32	32	36	
Minimum																																		
February	32	32	32	32	32	32	32	32	32	32	34	35	35	35	35	35	35	34	34	34	34	34	34	34	34	35	36	36	36	--	--	34		
Maximum	32	32	32	32	32	32	32	32	32	32	32	34	35	35	35	35	34	34	34	34	34	34	34	34	34	35	36	36	--	--	--	34		
Minimum																																		
March	37	37	39	42	42	42	40	40	40	40	43	44	45	46	47	48	50	50	51	51	53	55	55	55	55	51	50	49	49	50	50	52	47	
Maximum	36	36	37	39	42	40	39	39	39	39	40	43	44	45	46	47	48	50	50	50	51	53	55	55	55	49	49	48	49	49	50	45	45	
Minimum																																		
April	52	53	53	52	51	50	50	51	51	51	51	50	48	48	48	48	49	51	53	56	57	59	59	60	61	61	62	62	61	61	61	61	54	
Maximum	51	51	52	50	50	50	49	50	50	49	50	48	47	47	48	48	48	49	51	53	56	56	59	59	60	61	61	61	61	61	61	61	53	
Minimum																																		
May	61	61	60	60	59	59	60	62	62	62	62	61	61	61	60	59	60	61	62	63	63	64	66	66	68	69	71	72	72	71	70	63	63	
Maximum	61	60	60	59	59	59	59	60	62	62	61	61	61	60	59	59	59	60	61	62	63	63	64	66	66	67	69	71	70	70	68	63	63	
Minimum																																		
June	68	69	70	71	72	72	72	73	74	74	73	74	74	73	74	74	74	74	75	77	78	79	79	80	81	82	83	83	82	85	--	76	76	
Maximum	68	68	68	70	71	71	70	72	73	73	72	72	73	72	73	74	73	73	74	75	76	78	79	78	79	79	81	82	81	81	81	81	74	74
Minimum																																		
July	84	86	86	84	84	84	82	82	83	85	85	86	87	88	88	86	84	86	86	85	82	80	81	81	84	85	85	86	86	84	83	84	84	
Maximum	82	82	87	83	81	82	81	80	81	82	84	84	85	86	86	82	81	84	84	82	77	76	78	79	79	82	84	85	83	81	80	82	82	
Minimum																																		
August	82	82	79	80	79	80	81	82	83	82	79	78	78	78	78	79	78	81	84	83	84	82	82	80	77	77	78	79	80	80	82	80	80	
Maximum	79	78	76	76	76	76	77	78	79	79	78	76	76	76	77	76	76	79	80	82	81	79	76	75	74	74	75	76	77	77	77	77	77	77
Minimum																																		
September	82	82	82	80	78	78	77	76	76	76	75	76	76	76	75	72	72	72	72	70	69	70	69	68	67	66	66	64	64	66	66	--	73	
Maximum	77	78	79	77	76	75	74	73	72	73	74	73	73	73	73	72	69	68	70	69	69	68	68	67	66	64	63	63	63	62	--	71	71	
Minimum																																		

ST. LAWRENCE RIVER BASIN
STREAMS TRIBUTARY TO LAKE ERIE

4-1820. ST. MARYS RIVER NEAR FORT WAYNE, IND.

LOCATION (revised).--Lat 41°59'16", long 85°07'03", 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 1966.

Sediment records: May 1953 to September 1966.

EXTREMES, 1965-66.--Water temperatures: Maximum, 89°F July 1; minimum, freezing point Jan. 14.

Sediment concentrations: Maximum daily, 1,070 ppm July 9, 10; minimum daily, 2 ppm Apr. 8.

Sediment loads: Maximum daily, 1,800 tons Feb. 11; minimum daily, less than 0.50 ton Apr. 8.

EXTREMES, 1953-66.--Water temperatures (1964-66): Maximum, 89° 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. 16-31, Feb. 1-10, 21-28. Flow sometimes regulated by Grand Lake. Some diversion from or into Wabash River basin and into Miami and Erie Canal. For the period Oct. 1 to Mar. 24 the temperature measurements were taken between 0800 and 0900 hours.

Temperature (°F) of water, water year October 1965 to September 1966
(Once-daily measurement between 1700 and 2000)

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	68	69	68	70	69	69	68	68	68	67	66	65	68	67	66	65	65	64	66	65	71	69	67	65	60	--	67
November	57	--	57	58	56	55	54	54	54	56	55	49	48	48	47	47	46	47	46	46	46	46	45	45	44	44	43	43	42	41	--	49
December	41	--	--	--	34	34	--	35	35	35	36	36	36	36	36	37	38	38	37	37	37	36	36	36	36	35	38	36	37	37	36	
January.....	38	--	35	--	37	--	36	35	35	34	34	34	33	32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
February.....	--	--	--	--	--	--	--	--	--	--	--	34	--	--	34	33	34	34	34	34	35	34	34	34	34	34	34	34	34	34	34	--
March.....	--	35	35	35	35	36	35	36	36	36	36	36	45	45	45	50	50	50	50	45	45	45	50	45	45	42	41	41	42	42	44	46
April.....	40	40	43	43	43	42	43	44	47	--	--	47	50	55	53	--	56	63	62	65	--	63	60	--	--	--	49	53	57	--	--	--
May.....	--	56	50	--	62	63	--	--	52	56	49	50	--	51	--	62	59	--	64	64	64	--	69	68	70	72	71	72	--	--	65	--
June	67	69	71	75	--	74	75	--	76	76	75	--	78	--	--	--	74	--	78	80	--	--	--	85	--	--	--	--	--	88	--	--
July.....	89	--	--	83	88	--	--	--	74	--	--	84	80	--	--	82	--	82	84	81	--	82	83	--	86	86	80	83	78	81	--	--
August.....	78	76	--	--	79	83	--	83	80	71	73	--	70	--	80	79	80	81	79	76	--	--	72	71	73	76	--	--	83	82	82	--
September	81	82	--	--	75	75	70	70	71	72	--	75	73	73	68	66	68	--	67	63	65	66	64	--	62	61	60	--	--	--	--	--

STREAMS TRIBUTARY TO LAKE ERIE--Continued

4-1820. ST. MARYS RIVER NEAR FORT WAYNE, IND.--Continued

Suspended sediment, water year October 1965 to September 1966
 (Where no daily concentrations are reported, loads are estimated)
 (Where loads were computed from a partly estimated or estimated-concentration graph,
 time-weighted concentrations are reported)

Day	OCTOBER			NOVEMBER			DECEMBER		
	Mean dis-charge (cfs)	Suspended sediment		Mean dis-charge (cfs)	Suspended sediment		Mean dis-charge (cfs)	Suspended sediment	
		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day
1..	23	66	4	51	40	6	37	20	2
2..	24	67	4	42	39	4	30	20	2
3..	22	69	4	37	39	4	30	20	2
4..	22	72	4	32	40	3	30	20	2
5..	20	76	4	29	40	3	31	20	2
6..	18	72	3	28	40	3	31	20	2
7..	19	68	3	36	116	14	30	20	2
8..	19	63	3	44	313	37	28	20	2
9..	18	66	3	42	196	22	28	20	2
10..	17	67	3	37	70	7	27	20	1
11..	18	59	3	30	38	3	27	22	2
12..	17	46	2	27	23	2	76	64	16
13..	20	32	2	27	18	1	240	143	93
14..	27	27	2	26	18	1	220	137	81
15..	28	27	2	25	24	2	140	117	44
16..	25	30	2	26	25	2	112	97	29
17..	24	46	3	28	19	1	82	77	17
18..	22	29	2	28	13	1	69	65	12
19..	23	12	1	25	15	1	63	57	10
20..	27	13	1	23	17	1	58	47	7
21..	56	44	7	24	22	1	53	37	5
22..	609	257	423	24	29	2	52	34	5
23..	375	37	37	24	37	2	48	31	4
24..	240	26	17	24	27	2	58	46	7
25..	164	33	15	24	21	1	519	240	336
26..	148	56	22	24	24	2	350	40	38
27..	140	55	21	53	55	8	200	33	18
28..	125	53	18	63	76	13	125	32	11
29..	105	49	14	49	27	4	93	36	9
30..	82	45	10	40	20	2	77	41	9
31..	66	41	7	—	—	—	128	48	23
Total	2543	—	646	992	—	155	3092	—	795
Day	JANUARY			FEBRUARY			MARCH		
	Mean dis-charge (cfs)	Suspended sediment		Mean dis-charge (cfs)	Suspended sediment		Mean dis-charge (cfs)	Suspended sediment	
		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day		Mean concentration (ppm)	Tons per day
1..	1200	—	1100	31	—	2	182	48	24
2..	1520	145	595	31	—	2	210	65	37
3..	1240	138	462	31	—	2	210	125	71
4..	945	103	263	31	—	2	432	252	294
5..	700	67	127	31	—	2	575	228	354
6..	635	49	84	31	—	2	485	106	139
7..	605	40	65	35	—	2	400	76	82
8..	515	42	58	50	—	3	350	63	60
9..	400	49	53	100	—	14	290	52	41
10..	290	52	41	500	—	330	270	42	31
11..	230	49	30	2050	320	1800	290	32	25
12..	210	41	23	1700	167	767	300	46	37
13..	210	37	21	1050	133	377	400	114	123
14..	164	—	15	910	112	275	425	88	101
15..	125	—	11	875	127	300	375	74	75
16..	110	—	10	875	190	449	312	69	58
17..	95	—	8	840	80	181	280	65	49
18..	83	—	7	700	58	110	260	62	44
19..	74	—	6	545	61	90	250	56	38
20..	65	—	5	425	67	77	220	44	26
21..	58	—	4	350	84	79	182	31	15
22..	50	—	4	260	89	62	164	54	24
23..	45	—	3	210	85	48	268	—	750
24..	39	—	2	168	83	38	300	650	600
25..	36	—	2	140	78	29	270	21	15
26..	35	—	2	115	75	23	270	21	15
27..	34	—	2	120	72	23	250	22	15
28..	33	—	2	94	64	16	210	13	7
29..	33	—	2	—	—	—	182	12	6
30..	32	—	2	—	—	—	164	15	7
31..	32	—	2	—	—	—	148	15	6
Total	9843	—	3011	12298	—	5105	8924	—	3169

S Computed by subdividing day.

A Computed from partly estimated-concentration graph.

B Computed from estimated-concentration graph.

STREAMS TRIBUTARY TO LAKE ERIE--Continued

4-1820. ST. MARYS RIVER NEAR FORT WAYNE, IND.--Continued

Suspended sediment, water year October 1965 to September 1966--Continued
 (Where no daily concentrations are reported, loads are estimated)
 (Where loads were computed from a partly estimated or estimated-concentration graph,
 time-weighted concentrations are reported)

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..	132	18	6	700	93	176	112	46	14
2..	125	17	6	735	120	238	99	57	15
3..	112	12	4	665	104	187	88	72	17
4..	105	8	2	605	97	158	77	64	13
5..	93	5	1	545	93	137	68	63	12
6..	88	4	1	455	78	96	61	60	10
7..	88	4	1	350	72	68	58	55	9
8..	82	2	1	270	67	49	56	56	8
9..	82	3	1	280	57	43	56	53	8
10..	77	6	1	280	53	40	54	55	8
11..	72	10	2	311	53	45	50	57	8
12..	69	8	1	1050	156	442	48	64	8
13..	66	7	1	1440	141	548	45	59	7
14..	63	8	1	1080	98	286	49	81	11
15..	60	17	3	945	90	230	77	104	22
16..	57	19	3	1050	98	278	156	122	51
17..	57	20	3	875	107	253	164	105	46
18..	56	21	3	665	90	162	200	132	71
19..	56	22	3	545	76	112	173	120	56
20..	56	24	4	455	93	114	148	99	40
21..	55	26	4	375	90	91	125	85	29
22..	55	27	4	485	100	131	93	91	23
23..	55	28	4	635	130	223	72	101	20
24..	55	27	4	635	131	225	57	82	13
25..	55	29	4	605	121	198	48	63	8
26..	56	27	4	515	109	152	42	56	6
27..	58	27	4	425	94	108	38	50	5
28..	93	29	7	300	81	66	35	45	4
29..	240	48	31	230	71	44	35	44	4
30..	425	95	109	173	62	29	35	43	4
31..	--	--	--	132	53	19	--	--	--
Total	2743	--	222	17811	--	4948	2419	--	550
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..	35	42	4	17	79	4	14	97	4
2..	34	51	5	18	74	4	14	95	4
3..	30	63	5	19	78	4	14	92	3
4..	27	64	5	18	90	4	13	95	3
5..	28	59	4	18	76	4	12	99	3
6..	30	57	5	17	76	3	12	97	3
7..	30	65	5	18	93	5	13	93	3
8..	30	60	5	16	88	4	15	93	4
9..	118	1070 S	951	17	89	4	14	91	3
10..	165	1070 S	631	22	110	7	14	88	3
11..	95	191	49	30	113	9	14	97	4
12..	103	198	55	27	95	7	14	97	4
13..	109	271	80	20	96	5	14	103	4
14..	75	183	37	20	118	6	14	103	4
15..	52	168	24	21	97	5	33	114	10
16..	38	135	14	25	86	6	72	115	22
17..	29	108	8	26	88	6	32	87	8
18..	26	107	8	25	92	6	21	100	6
19..	34	117	11	22	89	5	17	97	4
20..	39	118	12	20	84	5	23	115	7
21..	35	123	12	22	113	7	51	93	13
22..	32	129	11	48	160	21	62	88	15
23..	24	107	7	34	147	13	46	94	12
24..	21	104	6	22	134	8	32	97	8
25..	19	97	5	18	124	6	26	90	6
26..	17	90	4	17	120	6	26	71	5
27..	18	97	5	16	123	5	30	73	6
28..	19	98	5	15	87	4	29	83	6
29..	23	98	6	16	65	3	25	82	6
30..	28	99	7	19	56	3	23	67	4
31..	21	80	5	15	95	4	--	--	--
Total	1384	--	1991	658	--	183	739	--	187
Total discharge for year (cfs-days)..... 63446									
Total load for year (tons)..... 20962									

S Computed by subdividing day.

T Less than 0.50 ton.

MISCELLANEOUS ANALYSES OF STREAMS IN WABASH RIVER BASIN IN INDIANA

Chemical analyses, in parts per million, water year October 1965 to September 1966

Date of collection	Discharge (cfs)	Silica (SiO ₂)	Iron (Fe)	Cal- cium (Ca)	Mag- ne- sium (Mg)	Sodium (Na)	Po- tas- sium (K)	Bicar- bonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluo- ride (F)	Ni- trate (NO ₃)	Dissolved solids (residue at 180°C)	Hardness as CaCO ₃		Specific conduct- ance (micro- mhos at 25°C)	pH	Dis- solved oxygen (ppm)
														Calcium	Non- carbon- ate			
3-3390.8. COAL CREEK NEAR AYLESWORTH, IND. (2 MILES NORTHEAST OF STONEBLUFF) (401159N 0871437)																		
Aug. 24, 1966.....	2.73							292	48	8.0		2.7	318	282	42	532	7.6	8.0
3-3391.05. COAL CREEK AT VEEDERSBURG, IND. (400615N 0871535)																		
Aug. 24, 1966.....	4.26							310	53	12		3.5	348	306	52	578	7.6	10
3-3391.1. EAST FORK COAL CREEK NEAR STERLING, IND. (400553N 0871443)																		
Aug. 24, 1966.....	3.53							302	41	12		1.8	314	278	30	533	7.6	9.0
3-3391.15. GRAHAM CREEK NEAR VEEDERSBURG, IND. (5 MILES SOUTHWEST) (400336N 0872108)																		
Aug. 24, 1966.....	0.26							302	47	8.0		2.2	312	272	24	501	7.9	10
3-3391.2. COAL CREEK AT COAL CREEK, IND. (0.5 MILE DOWNSTREAM FROM GAGE) (400142N 0872230)																		
Aug. 24, 1966.....	11.30							292	48	14		2.3	320	282	42	543	7.4	9.0
3-3391.25. COAL CREEK NEAR LODI, IND. (2.5 MILES NORTHEAST) (395839N 0872254)																		
Aug. 24, 1966.....	12.70							236	44	12		1.8	268	239	46	466	7.7	11
3-3391.3. COAL CREEK AT LODI, IND. (395646N 0872423)																		
Aug. 24, 1966.....	12.60							300	50	12		1.5	332	290	44	551	7.6	12
3-3391.37. LITTLE VERMILION RIVER NEAR GEORGETOWN, ILL. (395813N 0873650)																		
Sept. 1, 1966.....	0.001							246	61	20		2.7	330	268	66	543	7.2	9.0
3-3391.43. LITTLE VERMILION RIVER NEAR CAYUGA, IND. (4 MILES SOUTHWEST) (395304N 0873202)																		
Sept. 1, 1966.....	0.096							356	46	20		2.2	390	327	35	644	7.4	10

MISCELLANEOUS ANALYSES OF STREAMS IN WABASH RIVER BASIN IN INDIANA--Continued

Chemical analyses, in parts per million, water year October 1965 to September 1966--Continued

Date of collection	Discharge (cfs)	Silica (SiO ₂)	Iron (Fe)	Cal- cium (Ca)	Mag- ne- sium (Mg)	Sodium (Na)	Po- tas- sium (K)	Bicar- bonate (HCO ₃)	Sulfate (SO ₄)	Chloride (Cl)	Fluo- ride (F)	Ni- trate (NO ₃)	Dissolved solids (residue at 180°C)	Hardness as CaCO ₃		Specific conduct- ance (micro- mhos at 25°C)	pH	Dis- solved oxygen (ppm)
														Calcium	Non- carbon- ate			
3-3391.5. LITTLE VERMILION RIVER NEAR NEWPORT, IND. (200 FEET DOWNSTREAM FROM GAGE) (395304N 0872834)																		
Sept. 1, 1966.....	0.023							336	76	16		0.9	404	344	68	656	7.6	9.0
3-3391.5. LITTLE VERMILION RIVER NEAR NEWPORT, IND. (300 FEET DOWNSTREAM FROM GAGE) (395332N 0872542)																		
Sept. 1, 1966.....	0.141							306	54	12		1.2	330	310	58	571	7.6	11

MISCELLANEOUS ANALYSES OF STREAMS IN OHIO RIVER BASIN--Continued

Periodic determinations of suspended-sediment discharge, water year October 1965 to September 1966
(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)

F, pipet; S, sieve; V, visual accumulation tube; W, in distilled water.)													
Date of collection	Time (24 hour)	Water tem- per- ature (°F)	Sam- pling 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

GREAT MIAMI RIVER BASIN

3-2760. EAST FORK WHITEWATER RIVER NEAR BROOKVILLE, IND. (392600N 0850911)

Oct. 23, 1965.....	0915			315	51	43											
Nov. 11.....	1600			81	10	2.2											
Dec. 16.....	1630			141	64	24											
Feb. 14, 1966.....	1415			845	102	233											
Mar. 1.....	1210			405	68	74											
Mar. 14.....	1350			216	17	9.9											
Apr. 11.....	1400			114	6	2											
May 3.....	0910			508	134	184											
May 23.....	1355			295	19	15											
May 24.....	1230			275	18	13											
June 20.....	1225			91	12	2.9											
June 22.....	1020			81	27	59											
July 18.....	1235			311	342	287											
July 21.....	1140			48	46	6.0											
Aug. 15.....	1200			116	160	50											
Aug. 16.....	1030			97	100	26											
Sept. 15.....	1155			34	28	2.6											
Sept. 19.....	1315			36	72	7.0											

ANDERSON RIVER BASIN

3-3033. MIDDLE FORK ANDERSON RIVER AT BRISTOW, IND. (380819N 0864316)

Dec. 17, 1965.....	0930			4.80	10	0.1											
Jan. 18, 1966.....	1240			13.2	1	.3											
Feb. 15.....	1430			89.5	14	3.4											
Mar. 15.....	1215			74.8	12	2.4											
Apr. 12.....	1240			1010	271	739											
Apr. 21.....	0825			60.1	22	3.6											
May 18.....	1345			237	167	107											
July 19.....	1005			25	708	48											
July 19.....	1210			24	740	48											
July 21.....	1145			.1	14	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 1965 to September 1966--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 tem- per- ature (°F)	Sam- pling point	Discharge (cfs)	Sediment concen- tration (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	

ANDERSON RIVER BASIN--Continued

3-3033. MIDDLE FORK ANDERSON RIVER AT BRISTOW, IND. (380819N 0864316)--Continued

Aug. 16, 1966.....	0910			1.2	74	0.2											
Sept. 20.....	0845			36	578	56											
Sept. 27.....	1450			.233	28	T											

WABASH RIVER BASIN

3-3243. SALAMONIE RIVER NEAR WARREN, IND. (404245N 0852713)

Jan. 4, 1966.....	1230			489	32	42											
Feb. 8.....	1350			132	19	12											
Mar. 11.....	1330			119	5	12											
Mar. 18.....	1140			94	8	2											
Apr. 1.....	1530			958	40	100											
May 12.....	1700			270	11	8.0											
May 17.....	1450																
June 27.....	1730			38	11	1.1											
July 6.....	1745			19.2	27	1.4											
Aug. 3.....	2030			18	28	14											
Aug. 4.....	1130			17.5	152	74											
Sept. 8.....	1345			11.1	34	1.0											
Sept. 8.....	1855			11	35	1.0											

3-3355. WABASH RIVER AT LAFAYETTE, IND. (402519N 0865349)

Feb. 14, 1966.....	1015			11000	150	4500											
Mar. 11.....	1215			3680	18	180											
May 4.....	1230			6970	58	1100											
July 15.....	0930			2170	44	260											
Sept. 13.....	1305			575	24	37											

3-3515. FALL CREEK NEAR FORTVILLE, IND. (395715N 0855205)

Jan. 5, 1966.....	1030			188	20	10											
Feb. 14.....	1415			68	97	51											
Feb. 28.....	1455				59	11											

T Less than 0.50 ton.

MISCELLANEOUS ANALYSES OF STREAMS IN OHIO RIVER BASIN--Continued

Periodic determinations of suspended-sediment discharge, water year October 1965 to September 1966--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)

F, pipet; S, sieve; V, visual accumulation tube; W, in disturbed water.)												
Date of collection	Time (24 hour)	Water tem- per- ature (°F)	Sam- pling point	Discharge (cfs)	Sediment con- cen- tration (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	

WABASH RIVER BASIN--Continued

3-3515. FALL CREEK NEAR FORTVILLE, IND. (395715N 0855205)--Continued

Mar. 14, 1966.....	1000			106	38	11											
Apr. 14.....	1130			68	12	2.2											
May 2.....	1200			250	86	58											
June 2.....	1700			48	18	2.3											
June 20.....	1430			39.5	27	2.9											
June 20.....	1640			38	48	4.9											
July 14.....	0940			44.3	25	3.0											
Aug. 30.....	1245			12.8	22	.8											

3-3540. WHITE RIVER NEAR CENTERTON, IND. (393002N 0862424)

Feb. 2, 1966.....	1015			432	4	5											
Mar. 1.....	1055			1670	62	280											
Apr. 1.....	1030			848	18	41											
Apr. 29.....	1300			3180	135	1160											
May 27.....	1100			1080	26	76											
July 1.....	1120			500	53	72											
Aug. 1.....	1300			349	30	28											
Sept. 1.....	1000			309	12	10											

3-3680. BRUSH CREEK NEAR NEBRASKA, IND. (3904N 08529)

Oct. 22, 1965.....	1045			9.6	12	0.3											
Nov. 11.....	1130			1.4	18	.1											
Jan. 18, 1966.....	1110			2.0	44	.2											
Feb. 15.....	0730			20	14	.8											
Mar. 14.....	1600			10	10	.3											
Mar. 17.....	1000			5.5	7	.1											
Apr. 11.....	1615			2.6	18	.1											
Apr. 12.....	1515			370	916	915											
May 13.....	1020			11	8	.2											
May 23.....	1630			6.4	7	.1											
June 6.....	1115			.6	13	.2											
June 21.....	0840			.2	34	.2											
Aug. 15.....	1440			.1	134	T											

T Less than 0.05 ton.

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