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Geological Survey - Water Resources Division

WATER RESOURCES DATA
FOR
INDIANA

1968

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

1969

CALENDAR FOR WATER YEAR 1968

OCTOBER 1967

S	M	T	W	T	F	S
1	2	3	4	5	6	7
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NOVEMBER 1967

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JANUARY 1968

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FEBRUARY 1968

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APRIL 1968

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JUNE 1968

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JULY 1968

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AUGUST 1968

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SEPTEMBER 1968

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WATER RESOURCES DATA FOR INDIANA, 1968

Part 1. Surface Water Records

INTRODUCTION

The surface-water records for the 1968 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, 1968

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, F. Perley Provost, director, through Bureau of Water and Mineral Resources, W. J. Andrews, deputy director; State Highway Commission, Ruel W. Steele, chairman, Russel H. Harrell, executive director, and F. L. Ashbaucher, chief engineer; State Board of Health, A. C. Offutt, commissioner, and B. A. Poole, Assistant Commissioner for Environmental Health.

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

The following organizations aided in collecting records;

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

DEFINITION OF TERMS AND ABBREVIATIONS

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

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

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

DEFINITION OF TERMS AND ABBREVIATIONS

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

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

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

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

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

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

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

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

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

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

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DOWNSTREAM ORDER AND STATION NUMBERS

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

A similar order is followed listing stations on first rank, second rank, and other ranks of tributaries. To indicate the rank of any tributary on which a gaging station is situated and the stream to which it is immediately tributary, each indention in the listing of gaging stations in the table of contents of this report represents one rank. This downstream order and system of indention shows which gaging stations are on tributaries between any two stations on a main stem and the rank of the tributary on which each gaging station is situated.

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

The complete 8-digit number for each station, such as 03-3355.00, includes the part number "03" and a six-digit station number. In this report, the nonessential zeros are not shown. For example, the complete number 03-3355.00 would appear as 3-3355, just to the left of the station name. In this report, the records are listed in downstream order by parts. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage and measurements of discharge. In addition, observations of factors affecting the stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. Records of stage are obtained from a water-stage

EXPLANATION OF DATA

recorder that gives a continuous chart of the fluctuations (for digital recorders, a tape punched at 15-, 30-, or 60-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter by the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in Water-Supply Paper 888 and are also outlined in standard textbooks on the measurement of stream discharge.

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

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

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

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For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute the daily discharge. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins.

The data in this report generally comprise a description of the station and a table showing the daily discharge and monthly and yearly discharge of the stream. Records are published for the water year which begins on October 1 and ends on September 30. A calendar for the 1968 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

EXPLANATION OF DATA

the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge, it is given separately. Information pertaining to the accuracy of the records and to conditions which affect the natural flow at the gaging station is given under "Remarks."

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

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

In the yearly summary below the monthly summary corresponding figures are listed for the calendar year and the water year.

Peak discharges and their times of occurrence and corresponding gage heights for most stations are listed below the table of the yearly summary. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any stream for which the peaks are subjected to substantial control by man. Time of day is expressed in 24-hour local standard time, for example, 12:30 a.m. is 0030, 1:30 p.m. is 1330.

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

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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.

For most gaging stations on lakes and reservoirs the data presented comprise a description of the station and a monthly summary table of stage and contents.

ACCURACY OF FIELD DATA AND COMPUTED RESULTS

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

The station description under "Remarks" states the degree of accuracy of the records. "Excellent" indicates that about 95 percent of the daily discharges are within 5 percent; "good," within 10 percent; "fair," within 15 percent. "Poor," means that daily discharges have less than fair accuracy.

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

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

OTHER DATA AVAILABLE

Data collected at partial-record stations and at miscellaneous sites are given at the end of this report. The data are presented in two tables. The first is a table of discharge measurements at

OTHER DATA AVAILABLE

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); and through September 1960 has been published as Water-Supply Papers 1725 (3A), 1727 (4), and 1728 (5). These reports contain a summary of monthly and annual discharges for all previously published records as well as some records not contained in the annual series of water-supply papers. All records were re-examined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical.

Information of a more detailed nature than that published for most of the gaging stations is on file in the district office, such as discharge measurements and recorder charts or nonrecording-gage readings. Most gaging-station records in the State through 1966 have been analyzed with an electronic computer to give: (1) the number of days in each year that the daily discharge was between selected limits (duration tables); (2) the lowest mean discharge for selected numbers of consecutive days in each year; and (3) the highest mean discharge for selected numbers of consecutive days in each year.

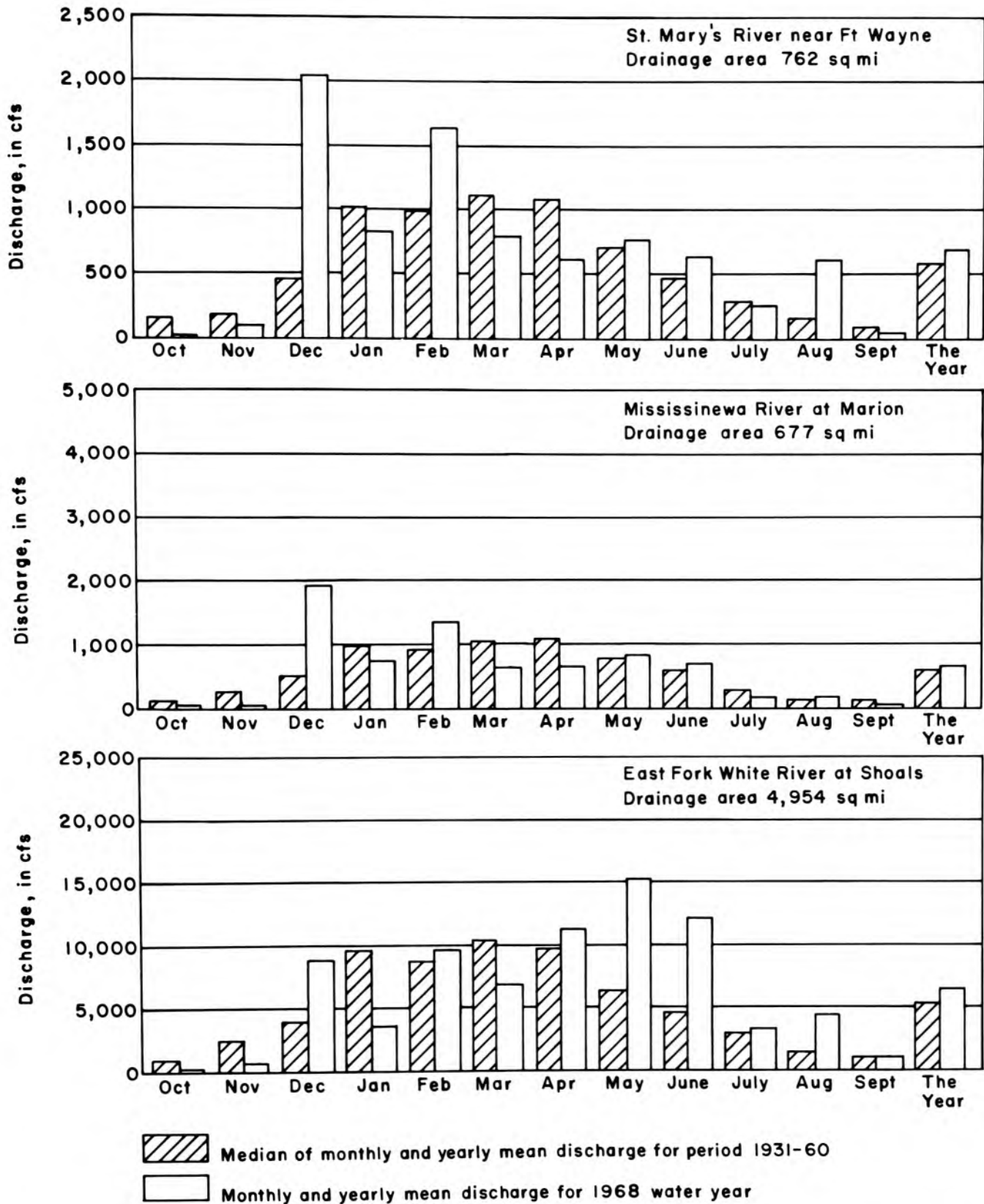
At or near some gaging stations, water-quality records also are collected. Data are obtained on the chemical quality of the stream water, on water temperature, on suspended-sediment concentration, and on the particle-size distribution of suspended sediment and bed material. These data are given in Part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

HYDROLOGIC CONDITIONS

The deficient streamflow conditions continued from last year until alleviated by normal precipitation in mid-October. Heavy precipitation throughout December caused minor flooding in the state. Lowlands were flooded in the Wabash River basin below Lafayette and in the Maumee River basin below Fort Wayne. General rainfall at the end of January raised many stations in the Wabash and White River basins to bankfull stages.

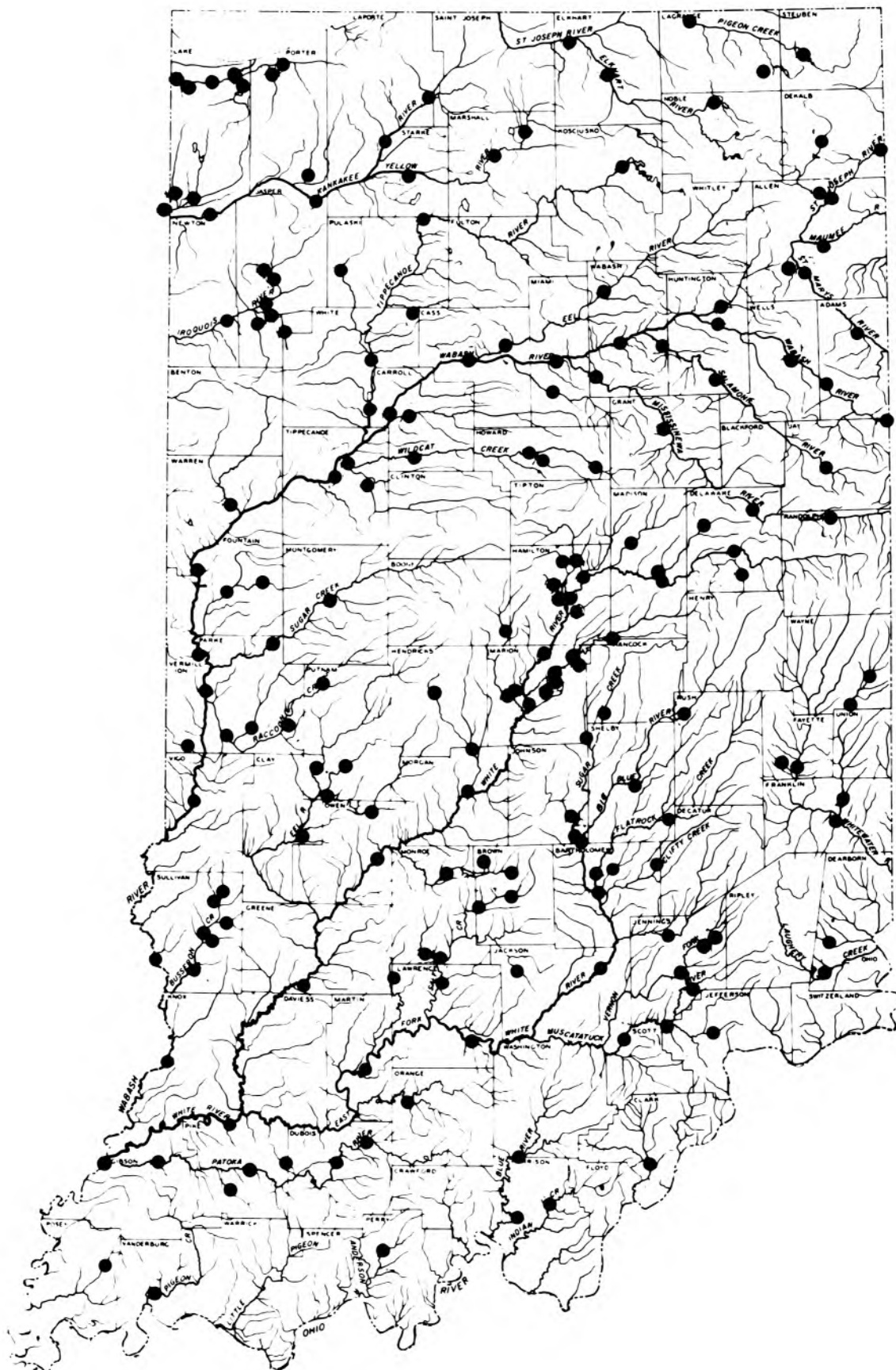
Extremely low temperatures and lack of precipitation during February and March lowered streams throughout the state to near base flow conditions. Streamflow returned to normal in April. Heavy rainfall in late May caused near record flooding in the Whitewater River and Upper East Fork White River basins.

A series of locally heavy storms crossed the state during the summer months. Precipitation caused by Hurricane Candy hit the northern part of the state in late June to rise the Kankakee, Calumet, and St. Joseph River basins to near flood stages. Isolated storms in July and August released heavy amounts of rain which affected many small watersheds. Normal conditions returned to the state in late August and September.



Comparison of discharge at three long-term representative gaging stations during 1968 water year with median discharge for period 1931-60

MAP SHOWING LOCATION OF GAGING STATIONS IN INDIANA



13

Location.--Lat 39°38'16", long 85°10'20", in NE¼ sec. 27, T. 14 N., R. 12 E., on downstream right bank wingwall of Indiana State Highway 44 bridge, 1 mile west of Connersville, and 2.6 miles upstream from mouth.

Records available.--September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 842.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during period, 41 cfs Sept. 17 (gage height, 3.33 ft); minimum daily, 1.3 cfs Sept. 29, 30; minimum gage height, 2.71 ft Sept. 6-9, 13-15, 30.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

GREAT MIAMI RIVER BASIN

3-2750. Whitewater River near Alpine, Ind.

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

Drainage area.--529 sq mi.

Records available.--October 1928 to September 1968. 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.--40 years, 532 cfs.

Extremes.--Maximum discharge during year, 27,600 cfs May 24 (gage height, 15.81 ft); minimum daily, 84 cfs Oct. 5.
1928-68: Maximum discharge, 37,100 cfs Jan. 14, 1937 (gage height, 16.61 ft); minimum, 14 cfs Sept. 22, 1931; minimum daily, 30 cfs Aug. 6, 1934.

Remarks.--Record good. Record of suspended sediment loads for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	141	100	385	2,080	245	1,110	262	1,040	415	1,130	223
2	92	192	368	350	3,430	242	939	256	1,220	378	938	227
3	90	156	2,940	330	2,580	231	774	259	1,130	363	585	215
4	86	153	1,740	300	1,400	231	3,180	248	847	344	660	209
5	84	138	1,040	284	1,060	238	2,570	238	708	333	684	211
6	92	125	1,010	270	888	242	1,390	234	630	316	530	207
7	90	122	988	250	790	231	1,030	228	575	306	465	200
8	90	105	820	238	698	228	851	228	530	306	600	195
9	96	105	665	231	628	242	712	357	495	309	1,640	199
10	92	98	803	230	528	242	626	304	474	288	2,650	222
11	92	100	1,930	230	460	234	565	798	443	278	1,890	226
12	100	100	1,710	228	433	245	512	783	415	270	966	211
13	98	98	1,250	224	398	234	467	536	404	278	702	200
14	96	98	952	224	376	224	467	429	385	274	595	193
15	90	98	904	224	365	234	500	556	430	264	530	189
16	90	100	770	210	360	336	449	3,390	1,240	645	555	188
17	125	100	680	207	347	448	425	1,490	630	475	555	201
18	105	98	825	207	327	462	419	979	516	355	565	219
19	102	100	940	204	331	429	389	789	456	854	480	214
20	100	98	780	201	336	415	409	718	416	672	410	202
21	96	98	1,310	397	298	515	385	673	391	475	366	192
22	90	98	4,590	510	284	686	358	607	376	379	346	223
23	96	98	1,770	715	280	666	345	6,700	371	555	334	229
24	96	98	1,070	600	273	635	331	16,100	477	495	312	190
25	98	98	886	438	262	997	319	8,220	952	1,700	298	180
26	102	98	803	397	256	2,110	316	4,060	1,160	875	278	175
27	98	98	650	346	256	1,570	307	6,820	762	645	270	170
28	96	98	600	470	252	991	284	3,230	610	635	257	168
29	92	96	535	1,160	248	769	276	1,960	540	560	242	162
30	96	96	488	6,080	-----	637	270	1,540	480	415	236	160
31	96	-----	452	4,530	-----	587	-----	1,220	-----	367	223	-----
TOTAL	2,956	3,301	34,369	20,670	20,224	15,796	20,975	64,212	19,103	14,824	20,292	6,000
MEAN	95.4	110	1,109	667	697	510	699	2,071	637	478	655	200
MAX	125	192	4,590	6,080	3,430	2,110	3,180	16,100	1,240	1,700	2,650	229
MIN	84	96	100	201	248	224	270	228	371	264	223	160
CFSM	.18	.21	2.10	1.26	1.32	.96	1.32	3.92	1.20	.90	1.24	.38
IN.	.21	.23	2.42	1.45	1.42	1.11	1.47	4.51	1.34	1.04	1.43	.42

CAL YR 1967	TOTAL 232,291	MEAN 636	MAX 8,040	MIN 84	CFSM 1.20	IN 16.33
WTR YR 1968	TOTAL 242,722	MEAN 663	MAX 16,100	MIN 84	CFSM 1.25	IN 17.06

PEAK DISCHARGE (BASE, 6,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-31	0015	10.58	7,740	05-27	1000	10.76	8,070
05-24	0345	15.81	27,600				

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 1968.

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.--19 years, 118 cfs.

Extremes.--Maximum discharge during year, 7,500 cfs May 24 (gage height, 10.06 ft); minimum, 9.4 cfs July 15; minimum gage height, 0.40 ft Oct. 7.

1949-68: 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.--Record 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	72	24	87	360	37	268	44	263	46	415	36
2	15	53	226	80	533	36	171	39	275	36	206	36
3	16	51	780	74	322	34	140	45	231	36	114	42
4	16	36	372	61	202	34	943	44	187	32	301	52
5	17	30	253	58	163	35	394	42	160	32	168	45
6	34	24	262	55	138	36	221	40	145	29	106	37
7	17	24	229	53	124	34	171	42	131	27	238	30
8	32	23	170	51	111	34	141	41	117	27	392	27
9	21	23	128	49	102	38	114	93	103	25	626	94
10	19	22	379	46	88	39	97	55	92	23	1,720	103
11	18	26	658	44	80	37	92	264	82	21	478	54
12	17	23	531	40	70	47	84	257	72	18	277	38
13	19	21	277	40	61	35	78	142	65	14	207	29
14	20	21	222	40	58	33	92	102	65	14	168	24
15	19	21	206	40	56	35	106	497	72	243	164	21
16	23	20	155	40	55	76	87	815	323	677	313	21
17	32	28	137	40	50	124	85	280	156	160	205	36
18	25	23	243	41	44	105	84	187	106	120	181	44
19	23	22	205	42	46	94	75	151	78	194	149	34
20	21	22	199	44	49	91	81	139	62	110	124	31
21	18	21	1,550	114	44	141	76	124	52	65	100	26
22	17	23	309	150	42	170	71	107	46	46	82	24
23	18	22	177	205	41	150	65	1,510	58	124	78	22
24	24	23	202	118	40	142	58	4,400	106	55	75	18
25	28	23	188	92	39	277	53	824	191	250	68	16
26	20	22	162	74	40	527	56	1,290	179	142	65	15
27	26	22	123	63	40	328	51	2,800	117	100	55	16
28	21	20	114	123	40	190	48	989	86	168	52	20
29	18	22	105	326	40	141	49	532	65	92	34	20
30	18	24	94	1,640	-----	112	46	390	52	62	34	20
31	29	-----	92	597	-----	145	-----	309	-----	58	32	-----
TOTAL	656	807	8,772	4,527	3,078	3,357	4,097	16,594	3,737	3,046	7,227	1,031
MEAN	21.2	26.9	283	146	106	108	137	535	125	98.3	233	34.4
MAX	34	72	1,550	1,640	533	527	943	4,400	323	677	1,720	103
MIN	15	20	24	40	39	33	46	39	46	14	32	15
CFSM	.17	.22	2.34	1.21	.88	.89	1.13	4.42	1.03	.81	1.93	.28
IN.	.20	.25	2.70	1.39	.95	1.03	1.26	5.10	1.15	.94	2.22	.32
CAL YR 1967	TOTAL 51,118		MEAN 140		MAX 3,120	MIN 14		CFSM 1.16	IN 15.71			
WTR YR 1968	TOTAL 56,929		MEAN 156		MAX 4,400	MIN 14		CFSM 1.29	IN 17.50			

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	0645	6.16	2,780	05-26	2245	7.49	3,890
01-30	1245	5.67	2,430	07-15	2330	5.08	2,020
05-24	0315	10.06	7,500	08-10	0515	6.86	3,340

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 1968.

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, 9,980 cfs May 24 (gage height, 14.05 ft); minimum, 26 cfs Oct. 1-4 (gage height, 2.39 ft).
1965-68: Maximum discharge, 9,980 cfs May 24, 1968 (gage height, 14.05 ft); minimum discharge, 19 cfs Aug. 7, 8, 1966 (gage height, 1.94 ft).

Remarks.--Record good. Record of suspended sediment loads for water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	257	74	140	614	75	480	84	489	126	616	75
2	28	241	760	140	872	74	365	82	482	116	406	79
3	29	167	1,680	140	540	70	300	80	424	110	249	73
4	29	170	676	130	347	71	1,200	82	359	100	709	81
5	30	105	463	110	283	75	700	76	318	96	438	80
6	59	82	477	115	244	77	325	74	283	92	283	75
7	36	74	432	110	222	71	287	74	261	86	483	67
8	48	64	225	90	105	72	260	74	237	90	954	61
9	58	60	252	103	177	80	232	175	216	93	1,360	65
10	36	57	714	103	146	81	216	118	198	86	1,790	238
11	34	72	1,150	100	137	76	206	613	185	82	771	113
12	33	68	883	94	129	87	198	580	170	85	484	88
13	33	56	473	94	117	77	188	315	154	79	350	76
14	45	55	374	100	112	73	190	274	145	74	295	67
15	33	52	347	94	110	78	174	1,010	154	239	248	61
16	36	49	267	85	109	145	154	2,590	712	1,510	412	57
17	89	92	232	82	100	182	148	719	346	364	331	69
18	69	73	441	82	86	161	146	542	252	243	270	97
19	56	58	391	82	90	149	136	436	200	461	227	91
20	44	56	281	87	98	151	142	400	178	255	202	76
21	39	54	951	225	86	243	131	363	158	169	170	67
22	35	55	2,570	281	82	287	124	308	146	186	157	61
23	36	61	624	336	81	266	122	3,980	145	501	145	72
24	37	50	368	196	80	259	113	7,250	210	186	144	61
25	107	69	330	145	77	460	106	1,550	346	477	130	56
26	54	54	308	128	77	855	104	2,410	334	337	117	52
27	67	52	300	115	79	557	100	4,740	244	221	100	49
28	54	52	251	201	79	350	92	1,500	191	304	101	48
29	42	50	193	461	78	265	90	825	150	209	88	46
30	40	61	181	2,350	-----	216	86	651	140	156	80	46
31	91	-----	155	1,010	-----	275	-----	546	-----	135	76	-----
TOTAL	1,455	2,466	16,923	7,529	5,447	5,967	7,115	32,521	7,845	7,267	12,213	2,247
MEAN	46.9	82.2	546	243	188	192	237	1,049	262	234	394	74.9
MAX	107	257	2,570	2,350	872	855	1,200	7,250	712	1,510	1,790	238
MIN	28	49	74	82	77	70	86	74	140	74	76	46
CFSM	.24	.42	2.76	1.23	.95	.97	1.20	5.30	1.32	1.18	1.90	.38
IN.	.27	.46	3.18	1.41	1.02	1.12	1.34	6.11	1.47	1.36	2.29	.42
CAL YR 1967	TOTAL	94,868	MEAN	260	MAX	4,850	MIN	26	CFSM	1.31	IN	17.82
WTR YR 1968	TOTAL	108,995	MEAN	298	MAX	7,250	MIN	28	CFSM	1.50	IN	20.47

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-03	0300	9.64	2,680	05-24	0545	14.05	9,980
12-22	0330	11.97	4,370	05-27	0030	11.59	6,710
01-30	1330	10.48	3,240	07-16	0315	9.58	4,300
05-16	0830	10.33	5,200	08-10	1000	8.55	3,200

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

Location.--Lat 39°26'02", long 85°00'12", in NE¹/₄ 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 1968.

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.--14 years, 374 cfs.

Extremes.--Maximum discharge during year, 31,600 cfs May 24 (gage height, 17.35 ft); minimum, 40 cfs Oct. 3-5; minimum gage height, 2.29 ft Oct. 3-5.

1954-68: Maximum discharge, 36,100 cfs Jan. 21, 1959; maximum gage height, 17.35 ft May 24, 1968; minimum discharge, 15 cfs Sept. 10, 1964.

Remarks.--Record good. Record of suspended sediment loads for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	130	78	362	1,390	170	808	174	780	186	708	108
2	42	261	773	365	1,720	165	627	169	904	172	637	118
3	42	144	3,310	363	1,320	160	508	165	759	164	460	108
4	42	155	1,350	336	818	160	2,220	165	618	153	883	108
5	42	125	872	303	635	164	1,640	157	526	143	728	110
6	56	105	796	280	537	171	846	152	460	139	470	107
7	68	92	753	250	478	163	639	148	428	133	460	100
8	56	85	667	220	425	158	532	150	390	129	970	93
9	56	78	478	230	382	169	441	353	357	151	2,370	122
10	65	76	948	230	303	179	385	305	320	129	1,790	320
11	56	88	2,010	220	272	172	344	1,690	290	123	1,130	210
12	52	102	1,740	210	254	173	315	1,530	277	110	637	161
13	52	92	1,090	210	241	174	289	731	252	128	475	138
14	54	98	871	220	218	168	259	515	243	113	400	124
15	58	85	801	220	224	169	390	702	255	148	350	114
16	52	92	623	190	220	250	312	3,270	1,490	1,170	440	107
17	58	85	513	190	214	353	285	1,420	647	539	405	108
18	81	105	965	190	190	319	293	953	430	289	345	141
19	70	92	882	190	187	289	263	709	348	442	292	168
20	65	85	642	200	194	272	316	624	274	331	237	136
21	58	85	959	520	107	431	303	565	265	223	225	118
22	54	85	5,400	732	180	575	257	477	251	180	200	108
23	52	85	1,680	734	178	583	254	7,570	247	550	180	120
24	54	95	971	497	175	566	235	18,600	252	261	171	110
25	72	88	788	380	170	939	214	5,030	353	4,330	158	98
26	78	98	754	320	170	1,560	204	4,390	432	786	144	90
27	67	82	582	303	175	1,160	207	6,740	342	677	138	85
28	70	78	536	406	175	716	190	3,130	273	558	130	78
29	64	70	476	687	175	543	183	1,500	232	460	122	78
30	60	76	445	4,210	-----	446	182	1,130	206	380	112	74
31	63	-----	425	2,560	-----	408	-----	882	-----	340	110	-----
TOTAL	1,815	2,977	33,108	16,328	11,812	11,925	13,981	64,096	12,945	13,646	15,877	3,730
MEAN	58.5	99.2	1,068	527	407	385	466	2,068	432	440	512	124
MAX	81	261	5,400	4,210	1,720	1,560	2,220	18,600	1,490	4,330	2,370	390
MIN	42	70	78	190	170	158	182	148	206	113	110	74
CFSM	.15	.26	2.81	1.39	1.07	1.01	1.23	5.44	1.14	1.16	1.35	.33
IN.	.18	.29	3.24	1.60	1.16	1.17	1.37	6.27	1.27	1.34	1.55	.37
CAL YR 1967	TOTAL 175,919			MEAN 482		MAX 6,960	MIN 38	CFSM 1.27	IN 17.22			
WTR YR 1968	TOTAL 202,240			MEAN 553		MAX 18,600	MIN 42	CFSM 1.45	IN 19.79			

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	0445	8.09	6,380	05-24	0430	17.35	31,600
01-30	1100	7.51	5,320	05-26	1745	10.04	10,600

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 1968. 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.--47 years (1915-17, 1923-68), 1,252 cfs.

Extremes.--Maximum discharge during year, 57,800 cfs May 24 (gage height, 23.55 ft); minimum, 130 cfs Oct. 3-6 (gage height, 0.76 ft).

1915-20, 1923-68: Maximum discharge, 81,800 cfs Jan. 21, 1959 (gage height, 27.78 ft); from rating curve extended above 45,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 49 cfs Jan. 5, 1935; minimum gage height, 0.12 ft Sept. 21, 1955.

Maximum stage known, 39.0 ft Mar. 25, 1913 (present datum), from floodmarks (discharge not determined).

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APP	MAY	JUN	JUL	AUG	SEP
1	140	433	348	860	4,180	514	2,760	612	3,150	713	4,230	388
2	134	846	3,080	828	4,780	503	2,210	588	3,940	639	2,490	401
3	131	492	8,240	834	4,660	470	1,790	566	2,970	597	1,540	385
4	132	503	3,960	766	2,940	462	6,200	555	2,400	554	2,000	376
5	130	427	2,450	656	2,320	480	5,190	531	1,970	518	2,230	378
6	192	362	2,110	672	1,980	510	2,980	509	1,650	489	1,400	371
7	217	322	2,020	639	1,770	468	2,340	496	1,490	469	1,380	356
8	186	304	1,720	530	1,570	465	1,950	489	1,330	457	2,050	344
9	199	285	1,360	618	1,400	502	1,620	935	1,200	481	3,900	355
10	205	273	2,090	595	1,170	540	1,410	1,050	1,100	450	3,660	624
11	183	293	4,010	572	1,030	508	1,270	5,640	1,000	434	3,650	487
12	176	371	4,140	548	947	515	1,170	4,110	916	420	2,210	427
13	170	332	2,870	553	891	500	1,070	2,250	871	446	1,610	385
14	170	308	2,430	567	830	466	1,060	1,640	884	429	1,350	357
15	169	293	2,320	564	801	500	1,520	1,630	843	456	1,140	338
16	157	278	1,900	518	777	820	1,180	6,610	4,120	1,640	1,100	323
17	183	283	1,530	496	753	1,140	1,040	3,910	2,100	1,280	1,200	326
18	223	315	2,670	498	652	1,070	1,070	2,810	1,470	757	1,070	384
19	216	295	2,380	496	635	987	971	2,210	1,170	1,130	920	411
20	203	281	1,830	514	670	986	1,250	1,930	987	1,320	794	376
21	187	278	2,190	1,040	613	1,820	1,250	1,730	855	826	703	347
22	179	278	11,200	1,530	578	2,130	1,010	1,500	811	631	633	325
23	172	280	4,340	1,690	564	2,050	947	20,700	851	2,160	582	443
24	178	277	2,670	1,230	555	1,930	876	46,700	1,260	956	547	374
25	218	285	2,150	949	539	3,110	793	18,200	1,520	10,200	505	338
26	245	289	1,990	824	519	4,290	750	11,100	2,020	3,750	471	320
27	226	275	1,510	743	536	3,370	745	16,800	1,550	2,120	454	311
28	223	263	1,380	888	529	2,410	684	8,550	1,230	1,740	437	300
29	213	245	1,200	1,620	511	1,890	653	5,520	982	1,440	421	292
30	199	279	1,100	10,400	-----	1,960	639	4,520	822	1,040	405	283
31	207	-----	1,030	7,810	-----	1,620	-----	3,500	-----	864	393	-----
TOTAL	5,763	10,745	84,218	41,048	39,700	38,986	48,508	177,891	47,402	30,406	45,745	11,125
MEAN	186	335	2,717	1,324	1,369	1,258	1,617	5,738	1,580	1,271	1,476	371
MAX	245	846	11,200	10,400	4,780	4,290	6,290	46,700	4,120	10,200	4,230	624
MIN	130	245	348	496	511	462	639	489	811	420	393	283
CFSM	.15	.27	2.22	1.08	1.12	1.03	1.32	4.69	1.29	1.04	1.21	.30
IN.	.18	.31	2.56	1.25	1.21	1.18	1.47	5.41	1.44	1.27	1.30	.34

CAL YR 1967 TOTAL 499,755 MEAN 1,369 MAX 18,200 MIN 129 CFSM 1.12 IN 15.18
WTR YR 1968 TOTAL 589,837 MEAN 1,612 MAX 46,700 MIN 130 CFSM 1.32 IN 17.02

PEAK DISCHARGE (BASE, 12,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	0515	11.37	16,100	05-24	1115	23.55	57,800
01-30	1430	10.59	14,200	05-27	0030	13.23	20,600
05-11	1900	9.81	12,500				

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

Location.--Lat 39°01'47", long 85°02'17", in NW $\frac{1}{4}$ sec. 7, T. 4 N., R. 2 W., on left downstream abutment of bridge on county road at Dillsboro station, $1\frac{1}{2}$ miles northeast of Dillsboro, and $1\frac{1}{2}$ miles downstream from Whitaker Creek.

Drainage area.--38.2 sq mi.

Records available.--July 1961 to September 1968. 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.--7 years, 53.3 cfs.

Extremes.--Maximum discharge during year, 10,200 cfs May 24 (gage height, 11.52 ft); no flow for many days.
1961-68: Maximum discharge, 10,200 cfs May 24, 1968 (gage height, 11.52 ft); no flow at times each year.
Flood of Jan. 21, 1959, reached a stage of 14.00 ft (discharge, 16,300 cfs, computed from contracted-opening).

Remarks.--Record good. Record of chemical analysis for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	3.2	41	8.1	73	4.8	274	10	64	1.4	1.5	0
2	0	7.5	286	7.4	198	5.2	73	9.1	56	2.0	1.1	0
3	0	3.7	151	8.2	62	4.5	49	8.2	46	1.3	1.1	0
4	0	2.9	35	7.2	34	4.7	622	7.4	39	.72	215	0
5	0	2.3	10	5.1	26	5.2	106	6.4	25	.53	137	.10
6	0	2.3	14	4.6	21	6.5	56	5.8	18	.35	20	1.0
7	0	2.3	12	4.3	18	5.4	42	5.1	15	.27	8.3	.30
8	0	2.3	10	4.0	15	5.4	33	4.9	12	.23	8.3	.10
9	.01	2.3	8.7	3.7	14	6.7	25	256	9.0	.18	7.8	.10
10	.02	2.3	34	3.5	11	8.5	21	70	8.0	.26	8.3	.20
11	0	2.2	99	3.4	9.0	9.0	18	1,310	6.5	.10	16	.40
12	0	4.3	167	3.3	7.7	11	15	184	5.1	.10	5.5	.50
13	0	3.3	42	3.2	7.4	9.7	14	66	3.0	.10	14	.50
14	0	2.0	99	3.1	6.2	9.4	17	43	2.9	.0	4.0	.40
15	0	1.5	84	3.1	5.3	17	38	31	2.4	.20	15	.30
16	0	1.3	33	3.0	5.1	6.8	22	40	9.2	1.1	14	.20
17	.02	1.4	35	3.0	4.7	5.6	18	35	7.0	.80	14	.30
18	.07	1.3	254	3.0	4.4	33	20	84	4.0	2.1	7.8	.50
19	.02	1.0	72	4.0	4.2	25	16	55	2.8	4.9	4.0	.50
20	0	.95	36	8.3	4.0	27	62	36	1.8	2.0	2.4	.50
21	0	1.4	100	64	4.0	458	45	26	1.1	1.5	1.5	.30
22	0	2.0	295	94	4.0	313	26	20	17	1.0	1.0	.20
23	0	3.2	49	66	4.0	167	161	1,080	10	1.0	.70	.20
24	0	3.3	29	42	4.0	218	94	3,320	5.7	3.2	.50	.10
25	.13	6.6	24	31	4.0	337	42	163	10	22	.40	.10
26	.06	5.6	22	17	4.1	194	30	1,670	8.5	40	.30	1.1
27	.03	4.0	17	11	4.3	84	23	591	4.8	11	.20	2.7
28	0	2.7	14	16	4.5	49	17	122	3.6	7.3	.10	1.7
29	.03	1.9	12	31	4.7	44	14	264	2.4	5.5	.10	1.7
30	.12	84	11	373	-----	56	12	274	1.8	2.4	0	1.0
31	.19	-----	9.4	121	-----	387	-----	83	-----	1.7	0	-----
TOTAL	0.70	165.05	2,123.1	959.5	567.6	2,629.0	2,005	9,988.8	412.4	116.14	509.90	15.00
MEAN	.023	5.50	68.5	31.0	19.6	84.8	66.8	322	13.7	3.75	16.4	.50
MAX	.19	94	205	373	198	458	622	3,320	64	40	215	2.7
MIN	0	.95	8.7	3.0	4.0	4.5	12	4.8	1.1	0	0	0
CFSM	.0005	.14	1.79	.81	.51	2.22	1.75	8.44	.36	.10	.43	.01
IN.	.0006	.16	2.07	.93	.55	2.56	1.95	9.72	.40	.11	.50	.01
CAL YR 1967	TOTAL	10,902.91	MEAN	29.9	MAX	730	MIN	0	CFSM	.78	IN	10.61
WTR YR 1968	TOTAL	19,492.19	MEAN	53.3	MAX	3,320	MIN	0	CFSM	1.39	IN	18.98

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
05-11	1115	8.23	4,250	05-26	1730	9.59	6,380
05-24	0515	11.52	10,200				

LAUGHERY CREEK BASIN

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 1968.

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.--28 years, 270 cfs.

Extremes.--Maximum discharge during year, 28,700 cfs May 24 (gage height, 17.06 ft); minimum discharge, 0.10 cfs Oct, 5, 6, 8 (gage height, 0.29 ft).
1940-68: Maximum discharge, 47,800 cfs Jan. 21, 1959 (gage height, 21.13 ft); from rating curve extended above 14,000 cfs on basis of slope-area measurement of peak flow; no flow at times in most years.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.23	5.4	158	91	742	30	2,730	75	370	27	64	4.7
2	.20	12	650	123	902	31	954	64	290	23	231	4.2
3	.19	13	1,950	100	995	27	480	59	230	19	167	3.6
4	.15	12	957	63	444	28	2,430	56	100	15	187	3.3
5	.13	31	333	51	310	28	2,200	49	140	12	446	4.7
6	.14	28	194	54	232	31	607	43	100	11	222	6.8
7	.13	21	148	45	191	28	405	37	90	9.1	123	5.2
8	.27	19	119	38	163	29	313	35	80	7.5	110	3.8
9	.51	15	105	36	142	33	235	1,430	64	7.2	76	3.8
10	.45	12	146	34	118	37	187	530	54	6.9	329	4.5
11	.49	14	376	32	97	42	158	2,390	46	6.3	236	4.1
12	.45	28	988	31	102	58	134	2,500	40	5.2	96	3.8
13	.48	26	710	30	86	68	117	746	36	4.7	63	3.8
14	1.0	23	499	29	71	58	126	420	32	4.7	60	6.9
15	1.5	16	656	28	61	74	215	360	29	6.6	97	5.5
16	2.2	18	448	27	55	159	287	304	48	12	129	6.6
17	2.7	20	266	27	50	300	193	766	40	14	114	6.9
18	2.5	18	678	29	46	294	163	452	36	11	90	7.8
19	2.6	17	970	35	42	189	141	372	32	19	65	6.9
20	2.7	17	432	46	39	168	256	274	20	30	49	7.2
21	2.5	16	598	77	36	1,480	323	195	24	31	36	7.8
22	2.4	13	2,030	230	33	1,840	271	153	27	19	27	6.3
23	2.4	21	1,060	961	31	1,270	269	951	30	13	21	5.2
24	2.6	23	385	886	30	966	375	12,600	27	398	17	5.0
25	3.5	26	256	677	29	1,670	225	5,880	30	350	14	4.7
26	3.5	29	207	528	28	1,830	161	3,780	36	830	11	3.8
27	3.8	27	162	377	31	879	140	4,660	38	488	9.4	3.4
28	3.8	22	134	168	29	488	112	1,580	34	256	7.9	2.8
29	3.9	20	122	170	28	357	97	1,180	36	158	6.6	2.2
30	3.8	240	98	1,240	-----	539	84	1,170	31	103	5.4	2.0
31	4.4	-----	86	2,380	-----	1,040	-----	509	-----	66	5.0	-----
TOTAL	55.62	802.4	15,921	8,643	5,163	14,071	14,398	43,620	2,289	2,963.2	3,114.3	147.3
MEAN	1.79	26.7	514	279	178	454	480	1,407	76.3	95.6	100	4.91
MAX	4.4	240	2,030	2,380	995	1,840	2,730	12,600	370	830	446	7.8
MIN	.13	5.4	86	27	28	27	84	35	24	4.7	5.0	2.0
CFSM	.007	.11	2.07	1.12	.72	1.83	1.93	5.67	.31	.39	.41	.02
IN.	.008	.12	2.39	1.30	.77	2.11	2.16	6.54	.34	.44	.47	.02
CAL YR 1967	TOTAL	82,801.75	MEAN	227	MAX	3,400	MIN	.04	CFSM	.91	IN	12.42
WTR YR 1968	TOTAL	111,177.82	MEAN	304	MAX	12,600	MIN	.13	CFSM	1.22	IN	16.67

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
05-11	1130	10.18	7,510	05-26	1800	12.13	12,400
05-24	0530	17.06	28,700				

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SILVER CREEK BASIN

21

3-2938. Deam Lake near Sellersburg, Ind.

Location.--Lat 38°27'50", long 85°51'30", in NW¼ sec. 4, T. 1 S., R. 6 E., in intake tower of reservoir on Big Run, 1 mile above mouth, and 7.2 miles northwest of Sellersburg.

Drainage area.--3.74 sq mi.

Records available.--January 1965 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 500.00 ft above mean sea level, datum of 1929 (levels by Indiana Department of Natural Resources).

Extremes.--Maximum contents during year, 3,120 acre-ft June 4 (elevation, 36.35 ft); minimum contents, 2,778 acre-ft Oct. 13 (elevation, 34.64 ft).

1965-68: Maximum contents, 3,468 acre-ft April 30, 1966 (elevation, 37.99 ft); minimum contents since reaching minimum pool elevation of 535.00 ft, 2,742 acre-ft Oct. 31, 1966 (elevation, 34.46 ft).

Remarks.--Reservoir is formed by earth fill dam. Releases normally controlled by a sluice gate into 42-inch diameter pipe. Minimum design capacity is 2,850 acre-ft (elevation, 535 ft). Capacity at uncontrolled spillway elevation (555.1 ft) is 8,440 acre-ft. Reservoir is used for flood control and recreation. Reservoir put in operation on Jan. 14, 1965.

Cooperation.--Capacity tables furnished by Indiana Department of Natural Resources.

Month-end elevation and contents, water year October 1967 to September 1968

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	34.72	2,794	-
Oct. 31.....	34.71	2,792	-2
Nov. 30.....	35.00	2,850	+58
Dec. 31.....	35.62	2,974	+124
Calendar year 1967.....	-	-	+28
Jan. 31.....	35.84	3,018	+44
Feb. 29.....	35.35	2,920	-98
Mar. 31.....	36.33	3,116	+196
Apr. 30.....	35.95	3,040	-76
May 31.....	36.34	3,118	+78
June 30.....	35.35	2,920	-198
July 31.....	35.25	2,900	-20
Aug. 31.....	est. 35.15	2,880	-20
Sept. 30.....	34.92	2,834	-46
Water year 1967-68	-	-	+40

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 1968.

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.--14 years, 208 cfs.

Extremes.--Maximum discharge during year, 4,050 cfs Mar. 21 (gage height, 18.51 ft); minimum, 0.40 cfs Sept. 29, 30 (gage height, 3.65 ft).

1954-68: Maximum discharge, 19,600 cfs Jan. 22, 1959 (gage height, 30.89 ft from floodmarks), from rating curve extended above 6,300 cfs on basis of contracted-opening measurements of peak flow, at site 5.2 miles upstream, (drainage area, 164 sq mi), adjusted to gage site; no flow at times in most years.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	18	360	64	502	25	1,470	74	480	8.0	300	1.2
2	3.3	43	735	58	1,030	24	546	64	340	6.0	105	.90
3	2.6	31	1,080	64	678	23	559	54	230	4.0	36	.90
4	2.4	33	260	60	380	23	2,400	44	170	6.0	36	1.2
5	1.7	23	144	44	280	22	1,920	44	128	5.3	23	4.2
6	1.7	20	112	37	220	21	546	36	98	4.4	18	29
7	1.6	17	92	34	180	21	380	36	80	2.4	14	23
8	1.6	11	80	28	160	20	300	29	74	.90	18	9.6
9	1.6	8.9	74	24	128	29	230	44	64	.90	9.6	7.1
10	1.8	19	74	27	105	54	190	144	54	1.6	7.4	5.3
11	1.5	42	210	36	92	64	160	637	44	3.0	44	4.2
12	1.0	58	656	36	80	340	144	750	36	3.0	23	4.4
13	.60	49	280	30	64	420	120	300	29	18	18	2.4
14	5.1	34	280	28	56	260	144	190	29	18	74	1.8
15	5.9	24	612	28	52	200	1,090	136	29	8.3	36	1.9
16	4.0	16	320	27	47	190	360	105	29	4.4	23	3.5
17	4.9	12	240	28	44	190	260	85	23	2.6	14	9.6
18	13	10	678	28	39	152	360	85	18	2.4	9.6	18
19	7.0	8.2	400	29	34	128	260	152	18	3.0	7.7	9.6
20	4.9	8.9	260	40	44	248	708	105	14	5.0	7.1	5.8
21	4.6	15	568	80	34	3,150	740	80	14	3.1	5.8	3.6
22	4.6	35	1,460	360	29	3,400	320	64	14	4.2	5.0	2.0
23	5.9	27	524	502	26	1,340	260	523	29	3.5	5.0	.60
24	10	25	440	340	23	952	380	1,480	23	3.0	4.8	.50
25	30	24	360	220	29	1,390	300	906	29	6.8	5.6	.80
26	24	23	200	160	28	1,160	180	2,310	18	260	4.6	.80
27	17	20	144	128	27	590	136	3,550	14	198	2.5	3.8
28	7.0	17	112	128	26	400	112	1,010	14	54	1.6	.60
29	5.6	20	98	180	25	300	98	874	9.6	29	1.2	.40
30	6.4	280	85	770	-----	250	85	1,120	8.6	14	.90	.40
31	7.3	-----	74	1,100	-----	355	-----	656	-----	29	1.0	-----
TOTAL	191.70	972.0	11,012	4,718	4,462	15,741	14,758	15,687	2,160.2	711.80	861.40	157.10
MEAN	6.18	32.4	355	152	154	508	492	506	72.0	23.0	27.8	5.24
MAX	30	280	1,460	1,100	1,030	3,400	2,400	3,550	480	260	300	29
MIN	.60	8.2	74	24	23	20	85	29	8.6	.90	.90	.40
CFSM	.03	.17	1.89	.81	.82	2.70	2.62	2.69	.38	.12	.15	.03
IN.	.04	.19	2.18	.93	.88	3.11	2.92	3.10	.43	.14	.17	.03
CAL YR 1967	TOTAL 60,940.50			MEAN 167	MAX 2,970	MIN .60	CFSM .89	IN 12.06				
WTR YR 1968	TOTAL 71,432.20			MEAN 195	MAX 3,550	MIN .40	CFSM 1.04	IN 14.13				

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
03-21	2300	18.51	4,050	05-27	0600	18.45	4,000
04-04	2200	17.35	3,500				

INDIAN CREEK BASIN

23

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 1968. 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.--25 years, 165 cfs.

Extremes.--Maximum discharge during year, 6,800 cfs Mar. 21 (gage height, 15.17 ft); minimum, 0.29 cfs Sept. 30; minimum gage height, 4.10 ft Sept. 3, 4.
1943-68: Maximum discharge, 26,700 cfs Mar. 5, 1964 (gage height, 22.64 ft); no flow at times during 1943-44, 1951-54, 1959, 1965, minimum gage height, 4.07 ft Aug. 26, 1965.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	12	244	65	473	21	424	57	219	8.2	28	.66
2	5.6	30	481	67	1,050	22	286	51	228	7.2	26	.66
3	5.3	50	723	64	624	21	239	44	199	6.4	19	.51
4	4.9	37	247	58	376	19	2,640	43	148	5.5	26	1.7
5	4.4	36	171	41	261	18	878	39	115	4.7	27	4.2
6	4.1	29	135	49	206	19	454	31	94	3.7	15	6.7
7	2.9	23	118	41	177	20	313	28	80	3.3	9.7	6.7
8	3.0	18	97	33	151	18	240	25	67	3.0	14	3.8
9	2.6	15	82	34	128	18	183	39	59	2.7	17	3.8
10	1.4	13	83	37	105	22	150	64	51	2.5	21	3.9
11	1.2	24	176	37	84	29	130	427	46	2.5	65	3.0
12	1.3	116	447	34	81	158	113	414	39	3.2	41	3.8
13	1.7	77	248	32	70	206	99	192	34	2.4	21	4.1
14	4.4	53	243	31	60	154	101	136	29	5.9	21	3.0
15	7.6	41	474	30	62	136	286	104	26	6.9	62	3.2
16	16	32	307	30	56	126	168	86	26	9.8	31	4.2
17	34	27	224	32	54	127	140	70	27	8.8	23	3.9
18	42	24	570	33	40	114	160	79	27	7.4	15	4.7
19	31	21	392	34	36	105	136	91	23	7.9	11	3.7
20	15	17	263	38	43	104	158	73	20	5.9	8.1	2.1
21	9.9	16	426	60	34	4,000	173	62	18	6.0	6.7	3.0
22	7.5	16	1,410	258	30	1,640	136	54	16	5.3	5.1	2.2
23	6.0	16	499	379	28	961	130	148	46	2.9	3.8	1.9
24	6.6	15	308	281	26	662	140	375	41	2.1	3.1	1.4
25	12	15	230	184	26	915	109	300	22	2.0	3.8	1.4
26	33	14	187	152	24	976	94	2,020	17	18	2.5	1.4
27	23	13	142	133	25	556	93	1,830	15	65	1.7	1.0
28	15	12	127	123	25	366	79	638	14	40	1.4	.66
29	11	11	107	143	24	269	70	432	11	29	1.2	.51
30	8.7	233	91	825	-----	211	63	373	9.5	14	1.2	.39
31	8.2	-----	86	813	-----	188	-----	252	-----	9.8	.83	-----
TOTAL	334.9	1,056	9,338	4,171	4,379	12,202	8,385	8,577	1,766.5	301.9	532.13	82.19
MEAN	10.8	35.2	301	135	151	394	280	277	58.9	9.74	17.2	2.74
MAX	42	233	1,410	825	1,050	4,000	2,640	2,020	229	65	65	6.7
MIN	1.2	11	82	30	24	18	63	25	9.5	2.0	.83	.39
CFSM	.08	.27	2.34	1.04	1.17	3.05	2.17	2.14	.46	.08	.13	.02
IN.	.10	.30	2.69	1.20	1.26	3.52	2.42	2.47	.51	.09	.15	.02

CAL YR 1967 TOTAL 41,573.8 MEAN 114 MAX 1,410 MIN 1.2 CFSM .88 IN 11.00
WTR YR 1968 TOTAL 51,125.62 MEAN 140 MAX 4,000 MIN .39 CFSM 1.08 IN 14.74

PEAK DISCHARGE (BASE, 4,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
03-21	1500	15.17	6,800	04-04	1600	13.60	5,100

BLUE RIVER BASIN

3-3028. Blue River at Fredericksburg, Ind.

Location.--Lat 38°26'02", long 86°11'31", in NW¼ sec. 16, T. 1 S., R. 3 E., attached to downstream end of left pier to bridge on U.S. Highway 150 at Fredericksburg and 0.5 mile downstream from South Fork Blue River.

Drainage area.--283 sq mi, of which 76.9 sq mi does not contribute directly to surface runoff.

Records available.--June to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 590.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum daily discharge during period, 520 cfs June 1; minimum, 9.0 cfs Sept. 30 (gage height, 1.94 ft).

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									520	27	454	15
2									500	24	162	16
3									400	22	100	15
4									300	21	107	15
5									350	19	79	108
6									210	18	57	142
7									180	17	44	48
8									160	17	39	29
9									140	17	70	22
10									125	18	223	18
11									115	47	243	16
12									105	32	138	15
13									95	21	95	14
14									84	17	238	13
15									77	19	155	13
16									82	27	107	12
17									83	23	79	13
18									68	22	60	20
19									59	40	50	31
20									53	77	41	25
21									48	37	34	20
22									45	28	29	16
23									48	20	26	14
24									48	17	24	13
25									43	16	22	12
26									52	280	19	11
27									45	180	16	11
28									37	124	15	10
29									33	67	15	9.7
30					-----				30	41	14	9.3
31		-----			-----		-----		-----	205	14	-----
TOTAL									4,135	1,540	2,769	726.0
MEAN									138	49.7	89.3	24.2
MAX									520	280	454	142
MIN									30	16	14	9.3
CFSM									.49	.18	.32	.09
IN.									.54	.20	.36	.10

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

Location (revised).--Lat 38°14'15", long 86°13'42", in NW 1/4 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 1968. Monthly figures only for some periods, published in WSP 1305.

Gage.--Digital water-stage recorder. Datum of gage is 434.26 ft 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.--38 years, 600 cfs.

Extremes.--Maximum discharge, 9,010 cfs May 26 (gage height, 11.57 ft); minimum, 24 cfs Oct. 12, 13; minimum gage height, 1.72 ft Oct. 3.
1930-68: Maximum discharge, 28,500 cfs Jan. 22, 1959 (gage height, 23.07 ft); minimum, 9.0 cfs Oct. 17, 1964; minimum gage height, 1.40 ft Sept. 20, 1940, Sept. 30, 1941.

Remarks.--Record good. Record of suspended sediment loads for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	53	1,310	420	2,250	184	4,500	405	1,570	106	468	49
2	29	87	1,520	366	2,190	181	2,990	376	1,630	98	469	50
3	28	96	3,900	358	2,320	171	1,900	351	1,240	91	347	51
4	28	120	1,670	334	1,550	170	4,350	331	970	82	296	61
5	27	134	1,000	306	1,170	163	5,570	306	777	79	220	138
6	28	121	754	276	951	160	2,530	280	665	77	189	252
7	27	105	628	266	822	158	1,770	255	573	79	147	258
8	30	92	547	208	727	147	1,380	240	506	76	155	135
9	38	79	469	255	639	153	1,090	258	442	83	137	90
10	34	70	419	244	575	159	894	276	399	152	222	72
11	27	137	475	230	500	171	775	1,270	360	140	713	63
12	25	289	1,090	224	446	363	689	2,780	332	117	525	55
13	25	307	1,250	220	413	816	624	1,320	299	119	340	50
14	50	257	968	224	372	785	590	882	267	94	257	48
15	50	200	1,880	227	348	659	1,190	712	241	84	368	45
16	39	163	1,700	211	339	619	1,110	600	231	77	342	44
17	75	136	1,190	190	321	611	827	579	228	128	258	45
18	112	119	1,800	181	302	596	964	525	217	97	191	56
19	99	175	2,350	183	275	548	983	561	210	102	153	104
20	107	96	1,520	192	269	520	945	566	193	89	128	102
21	77	92	1,440	252	269	3,430	1,740	495	175	116	110	84
22	54	86	3,450	573	244	5,580	1,220	435	156	121	97	65
23	42	84	2,640	991	217	4,070	966	525	147	89	87	53
24	35	117	1,560	1,140	223	2,750	864	3,230	145	74	78	46
25	59	118	1,160	850	213	3,100	762	4,300	163	67	71	44
26	62	118	940	649	203	3,700	654	5,910	160	73	66	45
27	76	113	760	548	198	2,710	580	8,110	147	302	60	40
28	76	137	640	506	195	1,850	523	3,890	152	355	56	37
29	69	97	575	532	104	1,400	467	2,350	121	266	52	34
30	55	496	500	1,680	-----	1,140	432	2,800	111	183	50	33
31	50	-----	456	3,880	-----	1,280	-----	1,910	-----	130	48	-----
TOTAL	1,567	4,194	40,561	16,716	18,735	38,353	43,888	46,827	12,827	3,745	6,700	2,249
MEAN	50.5	140	1,308	539	646	1,237	1,463	1,511	428	121	216	75.0
MAX	112	496	3,900	3,880	2,320	5,580	5,570	8,110	1,630	355	713	258
MIN	25	53	419	181	154	147	432	240	111	67	48	33
CFSM	.11	.30	2.84	1.17	1.40	2.68	3.17	3.28	.93	.26	.47	.16
IN.	.13	.34	3.27	1.35	1.51	3.09	3.54	3.78	1.03	.30	.54	.18
CAL YR 1967	TOTAL 195,291		MEAN 535		MAX 6,640		MIN 25		CFSM 1.16		IN 15.75	
WTR YR 1968	TOTAL 236,362		MEAN 646		MAX 8,110		MIN 25		CFSM 1.40		IN 19.07	

PEAK DISCHARGE (BASE, 7,500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
04-05	0345	10.68	7,780	05-26	2400	11.57	9,010

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.--41.9 sq mi.

Records available.--August 1961 to September 1968.

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

Average discharge.--7 years, 45.8 cfs.

Extremes.--Maximum discharge during year, 1,570 cfs Dec. 2 (gage height, 15.22 ft); no flow many days.

1961-68: Maximum discharge, 6,360 cfs Mar. 9, 1964; maximum gage height, 19.33 ft Mar. 4, 1964; no flow on many days each year.

Flood of Jan. 21, 1959, reached a stage of 20.0 ft (from floodmark), discharge, 15,000 cfs (from rating curve extended above 7,000 cfs on basis of logarithmic plotting). This is the maximum flood since 1905, from information by local resident.

Remarks.--Record good except those above 150 cfs, which is fair. Occasional regulation of Soil Conservation Service control structure No. 6 may affect peaks and recessions. Record of suspended sediment loads for water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	6.4	48	22	246	30	242	16	503	.58	.36	0
2	0	16	749	20	577	29	127	14	451	.39	.22	0
3	0	12	649	20	249	26	119	13	195	.30	4.8	0
4	0	15	158	18	135	24	880	11	96	.16	10	0
5	0	11	75	15	89	21	356	9.2	57	.08	7.3	.02
6	0	8.7	64	15	71	10	154	7.9	37	.14	5.2	4.2
7	0	7.2	62	13	67	5.9	93	6.8	27	.09	3.7	3.4
8	0	5.9	46	11	63	5.4	66	6.0	21	.14	2.4	2.4
9	0	5.1	38	11	61	6.7	50	7.3	16	.27	1.5	1.7
10	0	4.5	44	11	56	9.1	42	8.4	12	.28	1.7	1.0
11	0	88	64	11	52	11	36	207	10	.23	3.1	.76
12	0	44	90	10	50	97	32	144	8.6	.11	2.5	.65
13	0	20	67	11	49	54	28	66	6.7	.09	1.7	.43
14	0	15	190	12	47	40	41	46	5.3	.04	1.7	.31
15	0	11	263	11	47	32	59	33	4.3	.01	2.7	.22
16	.02	9.2	124	9.0	47	33	44	26	3.8	0	2.1	.13
17	17	8.6	133	9.0	46	28	76	20	3.8	0	1.4	7.0
18	11	8.1	470	9.0	44	23	91	18	3.4	.01	.95	11
19	5.0	7.0	206	14	42	21	65	22	3.0	.03	.67	10
20	4.2	6.3	121	22	43	40	72	18	2.8	.02	.49	6.6
21	4.2	6.2	273	49	41	637	63	16	2.4	0	.33	4.6
22	4.2	6.2	568	90	39	402	49	14	2.1	0	.20	3.1
23	4.2	6.2	200	115	37	174	47	25	3.9	0	.09	2.2
24	4.4	6.0	104	76	36	215	41	67	2.8	0	.04	1.4
25	7.4	6.2	73	59	35	344	34	126	2.3	1.9	.41	1.4
26	6.8	5.8	61	65	34	308	30	768	2.0	1.3	.12	1.7
27	5.0	5.1	46	62	34	163	27	604	1.6	.91	.02	1.2
28	4.2	4.4	39	72	33	99	23	223	1.3	2.7	0	.69
29	4.2	4.2	32	115	32	69	20	331	1.1	1.3	0	.48
30	4.2	284	28	917	-----	54	18	865	.90	.47	0	.42
31	4.2	-----	27	433	-----	130	-----	319	-----	.22	0	-----
TOTAL	90.22	643.3	5,112	2,327.0	2,402	3,141.1	3,025	4,057.6	1,487.10	11.77	55.70	67.01
MEAN	2.91	21.4	165	75.1	82.8	101	101	131	49.6	.38	1.80	2.23
MAX	17	284	749	917	577	637	880	865	503	2.7	10	11
MIN	0	4.2	27	9.0	32	5.4	18	6.0	.90	0	0	0
CFSM	.07	.51	3.94	1.79	1.98	2.42	2.41	3.12	1.18	.009	.04	.05
IN.	.08	.57	4.54	2.07	2.13	2.79	2.68	3.60	1.32	.01	.05	.06

CAL YR 1967 TOTAL 19,954.40 MEAN 54.7 MAX 1,400 MIN 0 CFSM 1.30 IN 17.71
WTR YR 1968 TOTAL 22,419.80 MEAN 61.3 MAX 917 MIN 0 CFSM 1.46 IN 19.90

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-02	1945	15.22	1,570				

PIGEON CREEK BASIN

27

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 1968.

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.--7 years, 262 cfs.

Extremes.--Maximum discharge during year, 3,680 cfs Feb. 2; maximum gage height, 16.24 ft Mar. 28; minimum, 5.4 cfs July 7, 8, 24; minimum gage height, 1.51 ft.

1960-68: Maximum discharge, 12,100 cfs May 10, 1961 (gage height, 27.94 ft); minimum daily (unaffected by backwater), 1 cfs Aug. 30 to Sept. 1, Oct. 11, 12, 21, 22, 26, 1964; zero or reverse flow occurs at times due to extreme stages on the Ohio River.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	41	1,340	94	2,470	38	1,390	41	1,820	14	748	12
2	11	97	2,090	117	3,580	38	1,150	37	1,860	13	789	12
3	9.5	146	2,740	100	3,420	38	1,160	35	1,980	11	539	14
4	10	186	2,390	92	3,370	37	2,350	32	1,930	9.2	203	212
5	04	179	2,580	76	2,970	38	2,460	28	1,730	8.5	97	712
6	205	121	2,430	70	2,110	38	2,410	24	1,790	7.5	47	368
7	87	00	1,800	62	1,200	38	2,310	24	1,380	6.7	24	117
8	62	53	981	55	694	38	1,810	24	1,130	7.6	17	53
9	44	36	520	52	661	38	1,120	24	760	8.0	17	32
10	24	27	1,050	48	512	46	814	33	457	194	13	25
11	21	790	1,340	48	315	62	647	228	124	422	9.1	21
12	15	961	1,740	49	229	264	616	334	38	159	9.1	19
13	21	726	1,540	52	124	637	336	276	33	60	14	20
14	53	424	1,960	56	95	620	268	194	28	25	00	20
15	30	239	1,890	62	93	455	165	147	28	30	462	18
16	08	144	1,610	64	82	437	189	101	20	45	273	16
17	1,520	100	1,780	62	85	479	214	66	36	73	103	14
18	1,010	72	1,820	60	64	416	380	53	26	63	48	38
19	733	53	1,460	65	52	338	292	73	25	69	30	30
20	364	40	1,420	78	62	1,100	282	80	24	42	26	35
21	163	34	1,440	163	41	2,290	492	66	26	26	19	26
22	96	30	1,550	402	49	2,220	362	50	26	12	13	17
23	52	29	1,310	731	47	2,400	224	62	23	6.8	9.1	13
24	30	29	1,250	763	38	2,360	155	257	19	7.3	17	14
25	141	30	1,120	572	36	2,250	110	368	189	12	14	19
26	165	30	544	348	35	1,640	83	843	173	29	9.1	23
27	111	30	390	275	40	1,340	66	933	102	212	9.5	19
28	74	24	271	466	40	828	56	1,150	49	292	9.1	13
29	165	20	195	1,080	41	520	50	1,280	26	190	9.5	9.1
30	83	1,620	157	2,360	-----	760	46	1,320	16	52	10	9.1
31	38	-----	139	2,180	-----	905	-----	1,630	-----	20	11	-----
TOTAL	5,520.5	6,391	42,847	10,702	22,559	22,708	22,007	9,813	15,877	2,126.0	3,676.5	1,950.2
MEAN	178	213	1,382	345	778	733	734	317	529	68.6	119	65.0
MAX	1,520	1,620	2,740	2,360	3,580	2,400	2,460	1,630	1,980	422	789	712
MIN	9.5	20	139	48	35	37	46	24	16	6.7	9.1	9.1
CFSM	.55	.65	4.24	1.06	2.39	2.25	2.25	.97	1.62	.21	.36	.20
IN.	.63	.73	4.89	1.22	2.57	2.59	2.51	1.12	1.81	.24	.42	.22
CAL YR 1967	TOTAL 125,791.50	MEAN 345	MAX 2,870	MIN 0	CFSM 1.06	IN 14.35						
WTR YR 1968	TOTAL 166,179.8	MEAN 454	MAX 3,580	MIN 6.7	CFSM 1.39	IN 18.90						

WABASH RIVER BASIN

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

Location.--Lat 40°33'50", long 84°48'10", in SE $\frac{1}{4}$ sec. 3, T. 24 N., R. 15 E., on left bank, 10 ft downstream from county bridge on Indiana-Ohio State line road, 2 miles east of New Corydon, 2 3/4 miles downstream from Beaver Creek, and at mile 465.6.

Drainage area.--262 sq mi.

Records available.--April 1951 to September 1968.

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

Average discharge.--17 years, 180 cfs.

Extremes.--Maximum discharge during year, 5,620 cfs May 28 (gage height, 18.85 ft); minimum 4.8 cfs Oct. 3 (gage height, 6.80 ft).
1951-68: Maximum discharge, 8,720 cfs Jan. 22, 1959 (gage height, 20.47 ft, from floodmarks); minimum, 0.7 cfs Sept. 13, 1954; minimum gage height, 5.40 ft Aug. 18, 1951.

Remarks.--Record good except for winter period and for period of no gage-height record, which is poor. 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	15	26	190	1,660	186	83	14	316	87	18	13
2	7.7	30	119	180	3,100	186	79	14	379	64	23	14
3	4.8	60	3,120	170	2,170	185	73	13	258	53	20	16
4	5.6	80	2,700	170	979	180	915	13	169	44	35	13
5	6.2	70	1,390	170	601	93	927	12	125	39	51	11
6	7.1	60	1,210	160	438	50	322	10	100	34	30	12
7	10	47	822	160	372	42	188	8.9	84	32	27	11
8	8.3	35	520	160	321	37	132	8.3	71	30	89	10
9	7.4	25	354	160	292	36	93	8.6	60	29	613	10
10	10	19	1,100	150	252	38	70	12	54	25	284	13
11	9.5	14	3,090	150	230	38	59	13	48	25	133	18
12	8.3	11	2,000	150	210	34	51	45	90	24	83	16
13	7.1	10	1,090	150	200	32	44	47	94	24	53	13
14	8.0	11	606	150	190	30	39	33	55	32	41	12
15	8.0	11	417	150	180	30	65	25	39	55	33	10
16	8.0	9.0	327	150	170	93	72	33	57	54	61	9.5
17	8.3	14	289	150	170	584	54	80	89	36	148	8.7
18	22	24	315	150	166	473	47	50	54	27	205	11
19	20	40	402	150	160	315	44	34	33	24	86	18
20	12	45	348	150	160	226	40	30	23	23	45	17
21	11	34	888	258	160	190	50	30	18	21	32	14
22	9.2	27	2,360	444	160	237	46	28	14	19	26	12
23	8.6	21	1,140	579	160	227	38	64	13	17	27	10
24	6.8	18	499	402	170	204	34	655	70	50	10	8.5
25	8.3	15	348	282	170	553	31	579	903	52	38	10
26	15	14	293	244	180	1,740	27	341	1,210	37	34	11
27	13	12	260	224	186	778	23	3,190	1,000	28	27	9.7
28	11	10	240	359	186	319	19	4,560	354	30	17	7.9
29	11	11	220	1,430	186	187	15	2,410	199	26	16	7.6
30	8.3	13	210	3,290	-----	127	14	1,180	130	20	14	6.6
31	7.4	-----	200	2,930	-----	96	-----	515	-----	17	13	-----
TOTAL	296.8	805.0	26,903	13,612	13,579	7,546	3,694	14,055.8	6,109	1,078	2,331	353.5
MEAN	9.57	26.8	868	439	468	243	123	453	204	34.8	75.2	11.8
MAX	22	80	3,120	3,290	3,100	1,740	927	4,560	1,210	87	613	18
MIN	4.8	9.0	26	150	160	30	14	8.3	13	17	13	6.6
CFSM	.04	.10	3.31	1.68	1.79	.93	.47	1.73	.79	.13	.29	.04
IN.	.04	.11	3.82	1.93	1.93	1.07	.52	2.00	.87	.15	.33	.05
CAL YR 1967	TOTAL 100,259.0	MEAN 275	MAX 3,220	MIN 4.8	CFSM 1.05	IN 14.23						
WTR YR 1968	TOTAL 90,363.1	MEAN 247	MAX 4,560	MIN 4.8	CFSM .94	IN 12.83						

PEAK DISCHARGE (BASE, 2,500 CFS)

Note.--No gage-height record Nov. 1-27.

DATE	TIME	G. HT.	DISCHARGE	DATE	TIME	G. HT.	DISCHARGE
12-03	1715	17.43	3,670	01-30	2030	17.72	4,010
12-11	0530	17.19	3,410	02-02	1515	17.28	3,510
12-22	0700	16.48	2,680	05-28	0300	18.85	5,620

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

Location.--Lat 40°39'22", long 85°01'58", in SE½SE½ 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 1968.

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, 4,560 cfs Feb. 3 (gage height, 12.15 ft); minimum, 5.8 cfs Oct. 7 (gage height, 3.25 ft). 1964-68: Maximum discharge, 6,620 cfs Dec. 11, 1966 (gage height, 13.01 ft); minimum discharge, 4.0 cfs Oct. 7, 1964 (gage height, 3.17 ft). Flood of April 1964 reached a stage of 13.13 ft, from floodmark (discharge, about 6,900 cfs, revised).

Remarks.--Record good except for winter period, which is fair. Occasional 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	18	22	280	3,300	203	168	42	1,620	140	16	19
2	9.5	39	93	270	3,680	203	149	40	899	110	27	21
3	8.5	122	1,180	250	4,340	201	160	39	497	89	27	20
4	7.7	150	1,730	240	3,290	196	1,050	38	293	75	62	21
5	7.3	130	2,760	230	2,320	178	1,510	36	164	67	94	21
6	6.8	106	2,450	230	1,520	99	1,540	33	132	59	87	18
7	6.4	69	2,150	220	916	60	877	30	115	51	60	16
8	7.4	45	1,780	220	609	50	350	28	102	44	75	16
9	11	32	1,320	210	454	49	223	30	92	41	1,090	16
10	12	24	1,200	210	368	50	166	31	82	38	1,260	25
11	11	21	1,640	210	315	49	134	39	75	36	815	29
12	11	20	2,360	200	290	47	115	59	69	33	218	35
13	12	18	2,550	200	270	45	99	79	87	35	127	30
14	11	19	2,130	200	250	41	90	75	92	79	92	23
15	11	19	1,530	200	240	38	113	59	72	95	70	19
16	11	17	951	200	220	140	141	53	59	93	58	16
17	15	22	569	200	210	739	122	58	63	83	116	16
18	18	43	525	200	210	916	101	95	87	59	517	16
19	18	84	618	200	206	777	92	75	69	78	260	18
20	22	88	585	200	200	509	93	60	50	66	122	23
21	19	64	841	464	200	374	125	54	38	42	81	27
22	15	47	1,690	840	200	440	115	54	33	32	58	21
23	13	39	2,360	960	200	447	96	70	45	30	44	18
24	13	36	2,320	880	200	412	87	471	102	44	36	16
25	13	36	1,560	800	200	859	75	899	943	77	30	16
26	15	34	868	643	190	1,290	66	1,000	1,310	78	50	15
27	15	31	471	320	190	1,590	59	1,470	1,540	59	52	16
28	17	27	415	593	200	1,350	52	1,820	1,490	45	32	16
29	17	24	370	1,190	210	647	48	2,790	899	27	25	14
30	15	23	330	1,930	-----	295	44	2,830	258	16	22	12
31	14	-----	290	2,830	-----	210	-----	2,270	-----	47	20	-----
TOTAL	392.2	1,447	39,648	15,820	24,998	12,504	8,059	14,727	11,377	1,868	5,643	589
MEAN	12.7	48.2	1,279	510	862	403	269	475	379	60.3	182	19.6
MAX	22	150	2,760	2,830	4,340	1,590	1,540	2,830	1,620	140	1,260	35
MIN	6.4	17	22	200	190	38	44	28	33	16	16	12
CFSM	.03	.11	2.82	1.12	1.90	.89	.59	1.05	.84	.13	.40	.04
IN.	.03	.12	3.25	1.30	2.05	1.02	.66	1.21	.93	.15	.46	.05

CAL YR 1967 TOTAL 151,737.5 MEAN 416 MAX 3,690 MIN 6.4 CFSM .92 IN 12.43
WTR YR 1968 TOTAL 137,072.2 MEAN 375 MAX 4,340 MIN 6.4 CFSM .82 IN 11.23

PEAK DISCHARGE (BASE, 1,900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-05	2015	10.26	2,890	02-03	1045	12.15	4,560
12-13	0115	10.35	2,620	05-29	2345	11.08	3,070
12-23	2015	10.04	2,460				

WABASH RIVER BASIN

3-3230. Wabash River at Bluffton, Ind.

Location.--Lat 40°44'30", long 85°10'19", in sec. 4, T. 26 N., R. 12 E., on downstream side of left abutment of Main Street Bridge in Bluffton, 2 miles downstream from Sixmile Creek and at mile 434.5.

Drainage area.--506 sq mi.

Records available.--October 1930 to September 1968. 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.--38 years, 388 cfs.

Extremes.--Maximum discharge during year, 5,020 cfs Feb. 2 (gage height, 12.53 ft); minimum, 7.8 cfs Oct. 1 (gage height, 0.84 ft). 1930-68: Maximum discharge, 11,800 cfs Feb. 15, 1950 (gage height, 16.07 ft); minimum, 3.9 cfs July 18, 1936; minimum gage height, 0.83 ft Sept. 13, 14, 1964.

Maximum stage known, about 21.0 ft Mar. 25, 26, 1913, on basis of gage readings published in newspapers (discharge, 25,000 cfs, from rating curve extended above 11,700 cfs on basis of a rainfall-runoff relation).

Remarks.--Record good except for winter period, which is fair. Occasional regulation by Grand Lake Reservoir, diversion from or into St. Marys River basin, and into Miami and Erie Canal. Record of suspended sediment loads for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	26	27	310	3,580	240	270	56	1,970	266	74	26
2	8.2	38	146	280	4,860	240	228	54	1,080	184	40	27
3	11	74	1,300	270	4,550	242	213	52	567	135	33	26
4	9.4	158	1,700	260	3,810	239	1,200	50	400	104	308	25
5	11	142	2,250	250	3,140	231	1,650	48	283	85	235	26
6	8.8	127	2,700	240	2,050	226	1,830	45	220	73	152	25
7	8.6	99	2,600	230	1,210	195	1,450	42	180	63	102	22
8	9.0	67	2,170	220	914	93	635	41	156	54	367	20
9	8.4	49	1,680	220	531	54	336	44	137	48	1,230	19
10	8.6	38	1,480	220	412	45	233	44	120	45	1,360	21
11	11	35	2,000	210	294	44	178	56	102	43	986	28
12	12	34	2,280	210	280	45	150	76	90	41	365	32
13	12	28	2,700	210	270	48	129	90	88	47	204	36
14	12	24	2,640	200	260	51	129	99	127	48	133	35
15	14	25	2,010	200	250	50	129	87	102	108	95	27
16	13	24	1,290	200	240	263	156	101	77	122	73	22
17	22	36	702	200	240	1,000	156	87	65	112	238	21
18	20	48	582	200	230	1,210	131	104	91	87	423	22
19	21	68	691	200	228	1,090	114	110	90	82	372	22
20	19	95	652	200	222	754	123	88	67	93	204	21
21	24	82	1,270	459	220	519	142	73	51	64	127	25
22	21	65	2,340	958	220	531	146	70	54	50	83	28
23	18	50	2,300	1,170	220	564	127	102	41	46	63	23
24	18	43	2,520	1,070	220	555	110	465	131	59	51	22
25	16	39	2,060	814	220	1,060	99	942	516	279	42	20
26	16	39	1,250	646	230	1,690	85	1,200	1,300	148	37	19
27	18	37	597	465	230	1,800	74	1,950	1,450	87	58	18
28	18	31	412	1,050	240	1,840	68	1,890	1,570	64	50	18
29	18	29	362	1,870	240	1,310	61	2,490	1,300	48	37	19
30	19	29	350	2,560	-----	558	58	3,360	522	27	30	17
31	19	-----	320	2,820	-----	330	-----	2,810	-----	29	27	-----
TOTAL	452.0	1,679	45,381	18,412	29,611	17,117	10,410	16,726	12,947	2,741	7,599	712
MEAN	14.6	56.0	1,464	594	1,021	552	347	540	432	88.4	245	23.7
MAX	24	158	2,700	2,820	4,860	1,840	1,830	3,360	1,970	279	1,360	36
MIN	8.0	24	27	200	220	44	58	41	41	27	27	17
CFSM	.03	.11	2.89	1.17	2.02	1.09	.69	1.07	.85	.17	.48	.05
IN.	.03	.12	3.34	1.35	2.18	1.26	.77	1.23	.95	.20	.56	.05

CAL YR 1967 TOTAL 181,486.9 MEAN 497 MAX 3,990 MIN 6.8 CFSM .98 IN 13.34
WTR YR 1968 TOTAL 163,787.0 MEAN 448 MAX 4,860 MIN 8.0 CFSM .88 IN 12.04

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-02	1300	12.53	5,020	05-30	1400	10.20	3,420

WABASH RIVER BASIN

31

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 Plant, 2 miles south of Huntington, 3¼ miles upstream from Little River, and at mile 409.

Drainage area.--710 sq mi.

Records available.--January 1951 to September 1968.

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.--17 years, 563 cfs.

Extremes.--Maximum discharge during year, 6,800 cfs Feb. 4 (gage height, 16.07 ft); minimum, 11 cfs Oct. 4, 5 (gage height, 9.07 ft).
1951-68: Maximum discharge, 14,900 cfs Feb. 10, 1959; maximum gage height, 23.20 ft Feb. 10, 1959 (backwater from ice);
minimum discharge, 2.3 cfs Oct. 28, 1964 (gage height, 8.87 ft).
Flood in March 1913 reached a stage of 22.7 ft (from high-water mark by Corps of Engineers).

Remarks.--Record good except for winter period, which is poor. Record of water temperatures for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	44	70	430	5,160	260	398	110	3,430	550	55	55
2	20	70	104	400	5,930	260	390	107	2,010	334	80	51
3	16	78	1,380	380	6,600	270	348	98	1,040	242	83	48
4	12	98	2,270	360	6,770	290	1,620	95	730	190	86	51
5	11	175	2,580	350	6,580	348	2,560	89	526	150	685	58
6	12	170	3,490	340	5,920	308	2,380	89	383	138	518	53
7	15	142	3,760	330	3,700	230	2,120	80	302	122	272	51
8	16	126	3,100	320	1,380	165	1,330	75	254	107	272	53
9	18	107	2,600	310	1,030	146	703	72	212	98	2,750	53
10	15	86	2,200	300	860	185	502	75	185	95	2,130	53
11	12	75	1,900	300	658	130	390	83	165	95	1,610	51
12	13	75	2,600	300	520	122	327	101	142	86	870	48
13	15	75	3,500	300	450	118	290	126	126	80	446	51
14	20	75	3,200	300	380	110	272	122	114	80	296	53
15	21	70	2,500	300	350	114	272	126	142	80	206	53
16	25	65	1,800	300	330	180	272	958	134	110	703	46
17	46	65	1,200	300	310	780	272	486	107	142	1,160	46
18	58	68	800	300	300	1,370	272	302	104	134	930	46
19	65	101	900	300	280	1,370	248	260	104	114	810	46
20	46	101	900	300	270	1,200	230	230	118	98	486	48
21	40	101	1,600	414	270	930	260	175	107	104	302	44
22	38	104	4,900	750	270	850	266	146	95	92	190	44
23	40	104	4,000	1,340	260	860	266	155	83	78	155	40
24	38	95	2,800	1,570	260	830	224	438	95	78	138	38
25	42	86	1,800	1,190	260	1,190	200	1,150	398	142	92	38
26	38	78	1,300	941	260	2,280	180	1,290	1,560	296	80	33
27	40	78	850	750	260	2,380	165	2,430	1,840	175	78	33
28	38	65	650	2,170	260	2,260	146	2,780	1,840	118	75	33
29	40	68	570	4,320	260	1,860	130	2,710	1,760	92	80	33
30	36	70	500	4,790	-----	1,100	118	3,730	1,130	78	68	33
31	36	-----	460	5,130	-----	622	-----	4,050	-----	65	55	-----
TOTAL	903	2,715	60,284	29,885	50,138	23,118	17,151	22,738	19,236	4,363	15,761	1,383
MEAN	29.1	90.5	1,945	964	1,729	746	572	733	641	141	508	46.1
MAX	65	175	4,900	5,130	6,770	2,380	2,560	4,050	3,430	550	2,750	58
MIN	11	44	70	300	260	110	118	72	83	65	55	33
CFSM	.04	.13	2.74	1.36	2.44	1.05	.81	1.03	.90	.20	.72	.06
IN.	.05	.14	3.16	1.57	2.63	1.21	.90	1.19	1.01	.23	.83	.07

CAL YR 1967 TOTAL 257,317 MEAN 705 MAX 4,900 MIN 11 CFSM .99 IN 13.48
WTR YR 1968 TOTAL 247,675 MEAN 677 MAX 6,770 MIN 11 CFSM .95 IN 12.97

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-22	2200	14.93	5,420	02-04	1430	16.07	6,800
01-29	0500	15.85	6,520				

WABASH RIVER BASIN

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 1968. 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.--25 years, 223 cfs.

Extremes.--Maximum discharge during year, 3,420 cfs Dec. 22 (gage height, 15.92 ft); minimum, 9.6 cfs Oct. 4 (gage height, 1.62 ft). 1943-68: Maximum discharge, 5,990 cfs Jan. 4, 1950; maximum gage height, 18.43 ft Feb. 11, 1959; minimum discharge, 1.0 cfs Oct. 8, 1946, site and datum then in use; minimum gage height since October 1948, 1.30 ft Oct. 1, 1949.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	34	37	160	2,350	50	135	66	252	132	37	21
2	12	133	116	140	3,170	50	109	63	349	107	35	23
3	11	102	1,150	120	3,080	53	109	60	228	83	31	24
4	10	128	899	100	2,380	54	1,850	63	168	69	59	21
5	11	98	690	85	1,610	60	2,010	61	134	61	69	22
6	13	67	1,150	75	997	64	1,340	56	111	56	66	23
7	13	53	893	65	684	61	601	51	95	50	46	22
8	14	44	513	55	493	59	358	48	86	46	40	20
9	26	39	325	50	384	71	224	51	78	83	67	21
10	24	36	676	49	282	78	172	58	71	63	161	20
11	18	36	1,650	49	210	70	144	59	65	49	107	21
12	16	51	1,710	49	160	64	124	93	64	43	62	21
13	16	55	1,260	49	130	59	109	87	59	40	44	21
14	17	48	633	49	110	61	110	67	53	39	36	20
15	18	44	376	49	95	61	192	62	50	38	32	18
16	17	38	265	49	80	493	140	2,310	51	52	67	16
17	50	67	207	50	65	723	117	2,770	50	69	455	17
18	94	192	236	54	60	433	119	2,140	45	54	574	23
19	55	125	292	70	55	331	105	1,380	45	45	271	31
20	36	84	284	87	52	316	107	855	44	41	116	31
21	28	69	1,350	121	50	325	135	566	40	34	69	25
22	24	63	3,370	284	50	363	114	419	39	30	50	23
23	22	65	3,220	355	50	300	97	357	37	29	40	22
24	21	63	2,490	247	50	283	93	561	214	34	36	22
25	30	59	1,690	182	50	798	87	444	662	46	31	24
26	32	53	989	135	50	1,080	80	342	1,060	58	27	26
27	31	46	569	132	50	694	78	1,130	1,040	75	25	26
28	36	37	424	1,510	50	358	75	1,030	570	63	24	24
29	35	46	310	2,370	50	248	69	617	306	66	22	23
30	30	38	250	2,880	-----	185	67	408	187	42	21	23
31	28	-----	190	2,650	-----	157	-----	325	-----	33	20	-----
TOTAL	801	2,013	28,314	12,320	16,897	8,002	9,070	16,599	6,253	1,729	2,740	674
MEAN	25.8	67.1	913	397	583	258	302	535	208	55.8	88.4	22.5
MAX	94	192	3,370	2,880	3,170	1,080	2,010	2,770	1,060	132	574	31
MIN	10	34	37	49	50	50	67	49	37	29	20	16
CFSM	.10	.25	3.43	1.49	2.19	.97	1.14	2.01	.78	.21	.33	.08
IN.	.11	.28	3.96	1.72	2.36	1.12	1.27	2.32	.87	.24	.38	.09

CAL YR 1967 TOTAL 95,390.2 MEAN 261 MAX 3,370 MIN 5.8 CFSM .98 IN 13.34
WTR YR 1968 TOTAL 105,412 MEAN 288 MAX 3,370 MIN 10 CFSM 1.08 IN 14.74

PEAK DISCHARGE (BASE, 2,800 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-22	0230	15.92	3,420	02-02	2100	15.65	3,310
01-30	1400	14.62	2,920	05-16	1130	15.04	3,070

3-3242. Salamonie River at Portland, Ind.

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

Drainage area.--86.0 sq mi.

Records available.--September 1959 to September 1968.

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

Average discharge.--9 years, 64.5 cfs.

Extremes.--Maximum discharge during year, 2,080 cfs Feb. 2 (gage height, 13.13 ft); minimum, 0.3 cfs Oct. 8; minimum gage height, 1.34 ft July 29.
1959-68: Maximum discharge, 3,460 cfs Mar. 5, 1963 (gage height, 16.96 ft); minimum, 0.2 cfs Sept. 27, 1965; minimum gage height, 1.30 ft Oct. 31, 1960.

Remarks.--Record good except for winter period, which is fair. Natural flow partially affected by sewage effluent.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	10	4.4	15	425	8.0	36	8.9	39	20	7.2	3.5
2	1.3	44	129	12	1,840	8.0	34	8.6	122	14	4.6	4.0
3	1.9	37	1,720	10	553	8.2	32	7.8	60	11	4.0	3.1
4	1.7	36	761	9.2	134	8.5	819	7.2	33	8.9	10	3.3
5	2.4	33	372	9.0	84	8.9	290	6.5	22	8.0	8.3	3.5
6	2.6	13	489	8.5	64	9.5	93	6.5	17	7.2	5.8	3.5
7	1.3	7.4	316	8.5	54	9.2	62	6.2	13	6.2	9.7	3.3
8	2.0	5.1	150	8.2	45	8.6	46	6.5	11	5.8	63	2.6
9	5.9	4.1	91	8.0	39	9.5	34	8.9	9.2	5.5	508	2.6
10	1.9	3.4	638	8.0	33	9.5	28	7.2	8.3	8.0	59	14
11	1.7	3.8	1,210	8.0	30	9.8	24	13	8.0	5.8	28	7.2
12	1.2	3.2	464	8.0	23	9.8	20	17	34	4.8	15	6.2
13	1.2	3.0	208	8.0	18	11	18	15	21	4.4	11	4.6
14	2.2	3.0	113	8.0	16	9.8	18	11	10	5.5	8.9	2.9
15	1.7	3.2	84	8.0	15	9.2	33	9.2	7.8	4.6	8.0	2.2
16	2.0	3.0	58	8.0	13	8.9	30	66	8.0	7.0	19	1.8
17	9.3	7.4	43	8.0	12	371	22	62	6.2	4.2	191	2.2
18	12	30	79	8.5	11	189	21	24	6.2	4.0	84	3.1
19	5.1	24	136	10	10	114	19	19	5.1	4.0	28	4.6
20	2.4	12	72	23	9.0	80	21	18	4.6	3.5	17	3.5
21	1.9	9.6	695	107	8.2	101	26	16	4.4	2.6	8.9	2.9
22	1.2	7.4	1,310	179	8.0	129	21	12	4.6	3.1	7.0	1.5
23	.90	8.3	207	254	8.0	102	17	131	3.5	5.3	6.2	2.4
24	2.6	8.3	79	120	8.0	115	16	723	329	15	4.4	3.5
25	8.6	9.0	59	68	8.0	471	14	226	1,090	11	3.3	4.2
26	2.8	6.8	51	35	8.0	672	12	301	780	5.8	2.9	3.3
27	3.8	5.6	36	26	8.0	224	11	1,370	503	4.4	3.5	3.3
28	3.0	7.4	28	195	8.0	97	9.2	301	109	3.5	3.3	3.3
29	1.7	4.4	25	788	8.0	62	9.2	120	52	3.3	3.1	2.4
30	1.0	4.4	20	1,700	-----	44	9.2	80	30	3.5	2.6	2.0
31	3.0	-----	18	848	-----	36	-----	52	-----	3.7	2.0	-----
TOTAL	91.80	356.8	9,665.4	4,513.9	3,500.2	3,033.5	1,844.6	3,660.5	3,350.9	203.6	1,136.7	110.5
MEAN	2.96	11.9	312	146	121	97.9	61.5	118	112	6.57	36.7	3.68
MAX	12	44	1,720	1,700	1,840	672	819	1,370	1,090	20	508	14
MIN	.90	3.0	4.4	8.0	8.0	8.0	9.2	6.2	3.5	2.6	2.0	1.5
CFSM	.03	.14	3.63	1.69	1.40	1.14	.71	1.37	1.30	.08	.43	.04
IN.	.04	.15	4.18	1.95	1.51	1.31	.80	1.58	1.45	.09	.49	.05
CAL YR 1967	TOTAL 30,267.00	MEAN 82.9	MAX 1,720	MIN .90	CFSM .96	IN 13.09						
WTR YR 1968	TOTAL 31,468.40	MEAN 86.0	MAX 1,840	MIN .90	CFSM 1.00	IN 13.61						

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-03	1300	12.62	1,920	02-02	0930	13.13	2,080
12-11	0145	11.75	1,680	05-27	0330	12.30	1,810
12-22	0230	12.67	1,940	06-25	2015	10.72	1,430
01-30	1500	12.82	1,980				

WABASH RIVER BASIN

3-3243. Salamonie River near Warren, Ind.

Location.--Lat 40°42'45", long 85°27'13", in SE¼ sec. 12, T. 26 N., R. 9 E., on right downstream side of county road bridge 1,700 ft downstream from unnamed tributaries entering from the right and left, 4,000 ft upstream from abandoned concrete and stone dam, and 2.4 miles northwest of Warren.

Drainage area.--422 sq mi.

Records available.--March 1957 to September 1968.

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.--11 years, 356 cfs.

Extremes.--Maximum discharge during year, 6,530 cfs Feb. 2 (gage height, 12.94 ft); minimum, 5.8 cfs Oct. 17; minimum gage height, 5.81 ft Oct. 2, 3.

1957-68: Maximum discharge, 13,200 cfs Feb. 10, 1959 (gage height, 17.05 ft); minimum, 5.0 cfs Sept. 18, 19, 1959; minimum gage height, 5.01 ft Sept. 5, 1966.

Remarks.--Record good above 70 cfs and fair below, except for winter period, which is poor. Record of suspended sediment loads for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	27	24	103	4,580	38	231	50	377	161	60	20
2	11	52	146	90	5,100	38	185	40	349	119	37	24
3	12	44	2,030	80	5,800	38	185	37	311	91	47	20
4	14	60	2,350	74	6,000	40	1,940	35	231	72	359	24
5	16	69	2,500	66	3,700	44	2,700	31	161	60	95	29
6	15	50	2,030	62	1,800	47	1,720	31	128	54	57	27
7	14	47	1,350	56	800	47	629	29	107	50	60	24
8	14	37	830	52	370	44	405	22	91	44	87	24
9	29	25	445	49	317	50	287	35	83	44	630	24
10	35	20	770	47	220	52	220	47	80	50	1,100	27
11	27	22	2,760	45	165	52	180	60	69	69	384	29
12	27	22	3,300	43	142	52	151	87	63	63	200	29
13	18	27	2,660	43	120	47	123	103	60	54	128	35
14	18	27	930	42	105	44	115	95	63	99	87	29
15	10	24	469	41	90	47	156	87	76	161	87	29
16	6.0	20	317	41	75	210	195	132	60	91	107	25
17	27	35	242	40	66	1,210	161	128	54	63	151	25
18	60	72	258	40	57	1,310	132	161	47	47	349	31
19	54	60	248	40	52	870	115	132	47	44	305	31
20	42	50	421	42	46	647	119	99	42	37	151	31
21	44	60	2,050	99	42	593	170	91	37	35	91	27
22	40	52	5,450	429	40	712	165	87	37	35	63	31
23	25	42	3,870	930	38	674	132	128	40	37	47	29
24	19	37	2,620	741	38	611	111	780	749	91	42	25
25	18	35	770	356	38	1,470	99	1,580	1,320	115	33	29
26	14	31	469	236	38	2,500	83	920	2,160	128	29	27
27	19	31	305	215	38	2,280	69	1,860	1,930	95	24	24
28	19	29	236	2,400	38	1,000	63	2,350	1,110	69	22	24
29	19	27	180	3,020	38	548	72	1,680	437	50	19	22
30	20	25	156	4,620	-----	370	60	900	248	42	18	22
31	19	-----	128	4,180	-----	281	-----	557	-----	52	18	-----
TOTAL	717.0	1,159	40,314	18,322	29,953	15,966	10,973	12,374	10,567	2,222	4,887	797
MEAN	23.1	38.6	1,300	591	1,033	515	366	399	352	71.7	158	26.6
MAX	60	72	5,450	4,620	6,000	2,500	2,700	2,350	2,160	161	1,100	35
MIN	6.0	20	24	40	38	38	60	22	37	35	18	20
CFSM	.05	.09	3.08	1.40	2.45	1.22	.87	.95	.83	.17	.37	.06
IN.	.06	.10	3.55	1.61	2.64	1.41	.97	1.09	.93	.20	.43	.07
CAL YR 1967	TOTAL 162,937.2			MEAN 446	MAX 5,450	MIN 6.0	CFSM 1.06	IN 14.36				
WTR YR 1968	TOTAL 148,251.0			MEAN 405	MAX 6,000	MIN 6.0	CFSM .96	IN 13.07				

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-12	1700	10.17	3,460	01-28	1500	10.43	3,840
12-22	1200	12.25	5,750	02-02	----	12.94	6,530

3-3244.5 Salamonie Reservoir at Dora, Ind.

Location.--Lat 40°48'27", long 85°40'46", in NE¼ sec. 12, T. 27 N., R. 7 E., in discharge tower of reservoir on Salamonie River, 1.1 miles northwest of Dora, 3.4 miles upstream from mouth.

Drainage area.--553 sq mi.

Records available.--April 1967 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 700.00 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Extremes.--Maximum contents during year, 89,030 acre-ft Feb. 6 (elevation, 763.60 ft); minimum contents, 12,110 acre-ft Oct. 16 (elevation, 728.95 ft).
1967-68: Maximum contents, that of Feb. 6, 1968; minimum contents, that of Oct. 16, 1967.

Remarks.--Reservoir is formed by earth fill dam. Releases normally controlled by three gates, 4.75 ft wide and 16.0 ft high, in semi-elliptical conduit through dam. Minimum design capacity is 13,100 acre-ft (elevation, 730 ft). Seasonal pool capacity is 60,700 acre-ft (elevation, 755 ft). Capacity at uncontrolled spillway elevation (793 ft) is 263,600 acre-ft. Reservoir is used for flood control and recreation. Reservoir put in operation on April 17, 1967.

Cooperation.--Records furnished by Corps of Engineers.

Month-end elevation and contents, water year October 1967 to September 1968

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	-	25,940	-
Oct. 31.....	-	13,430	-12,510
Nov. 30.....	-	14,370	+940
Dec. 31.....	-	14,500	+130
Calendar year 1967.....	-	-	-
Jan. 31.....	-	45,050	+30,550
Feb. 29.....	-	13,360	-31,690
Mar. 31.....	-	13,240	-120
Apr. 30.....	-	36,470	+23,230
May 31.....	-	63,780	+27,310
June 30.....	-	61,100	-2,680
July 31.....	-	61,380	+280
Aug. 31.....	-	60,440	-940
Sept. 30.....	-	44,860	-15,580
Water year 1967-68	-	-	+18,920

WABASH RIVER BASIN

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 1968. 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, graphic 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.--44 years (1924-68), 495 cfs.

Extremes.--Maximum discharge during year, 6,630 cfs Feb. 12 (gage height, 10.77 ft); minimum, 0.66 cfs Sept. 3, 4 (gage height, 1.98 ft).

1923-68: Maximum discharge, 16,500 cfs May 18, 1943 (gage height, 14.75 ft, from graph based on gage readings, site and datum then in use); minimum, 0.34 cfs July 18, 1967 (gage height, 2.04 ft).

Remarks.--Record good. Flow regulated by Salamonie Reservoir (see sta. No. 3-3244.5) about ½ mile upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	551	77	82	521	183	163	150	22	769	356	57	15
2	548	100	99	246	603	163	23	22	760	201	57	14
3	545	116	730	150	927	163	20	22	764	155	57	8.9
4	542	141	745	160	791	160	25	22	764	92	434	11
5	541	140	1,560	171	800	160	332	22	426	53	1,080	17
6	537	140	1,570	192	802	138	580	22	178	32	1,360	15
7	534	140	1,580	172	800	120	430	18	133	32	902	15
8	533	138	1,570	136	1,470	108	207	14	84	33	255	15
9	529	138	1,640	113	3,600	100	19	15	37	33	580	15
10	525	138	2,260	92	5,540	102	19	15	38	34	1,240	15
11	521	138	708	72	5,410	118	19	15	40	34	868	15
12	516	138	665	71	5,980	124	10	15	40	36	240	15
13	1,150	138	676	72	6,330	118	20	14	40	36	173	15
14	1,170	136	1,220	78	6,030	118	20	14	40	36	108	15
15	345	27	2,490	00	4,920	118	20	16	40	56	98	15
16	6.9	27	2,700	109	2,330	124	20	25	39	06	255	338
17	8.9	29	3,270	108	819	252	21	15	38	102	442	550
18	6.8	56	3,700	108	474	665	19	15	37	102	418	667
19	6.3	130	3,540	108	294	863	10	15	42	102	390	784
20	12	130	3,410	109	267	863	20	15	56	102	531	935
21	26	130	1,870	108	173	857	20	15	56	102	374	997
22	26	130	153	210	183	852	21	14	54	102	621	992
23	26	130	136	631	195	846	21	17	57	86	370	769
24	30	130	144	818	183	841	22	16	398	56	108	495
25	40	129	976	716	175	841	22	15	1,730	57	82	495
26	40	117	2,630	360	173	1,210	22	23	1,790	57	42	405
27	52	80	5,260	285	168	1,490	22	18	1,140	57	22	405
28	61	82	5,790	394	163	1,510	22	13	1,760	56	27	400
29	60	82	5,010	159	163	1,480	22	466	2,110	57	24	510
30	60	82	326	150	-----	1,450	22	769	026	57	12	571
31	61	-----	527	165	-----	715	-----	760	-----	56	14	-----
TOTAL	9,609.9	3,279	57,046	6,900	49,746	16,832	2,218	2,488	14,395	2,556	11,241	9,807.9
MEAN	310	109	1,840	223	1,715	543	73.9	80.3	480	82.5	363	327
MAX	1,170	141	5,790	818	6,330	1,510	580	760	2,110	355	1,360	907
MIN	6.3	27	82	71	163	100	19	13	37	32	12	8.9

CAL YR 1967 TOTAL 235,230.3 MEAN 562 MAX 5,790 MIN 4.4
WTR YR 1968 TOTAL 186,118.8 MEAN 509 MAX 6,330 MIN 6.3

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 1968. 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.--45 years, 1,443 cfs.

Extremes.--Maximum discharge during year, 17,300 cfs Dec. 22 (gage height, 18.26 ft); minimum daily 80 cfs Oct. 23.

1923-68: Maximum discharge, 49,600 cfs May 18, 1943; maximum gage height, 24.44 ft Feb. 11, 1959 (ice jam); minimum discharge observed, 17 cfs Aug. 4, 5, 9, 1934, July 21, 22, 1936; minimum gage height, 1.66 ft Aug. 4, 5, 9, 1934.

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

Remarks.--Record good except for winter period, which is fair. Flow partially regulated by Salamonie Reservoir (see sta. No. 3-3244.5).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	579	92	196	1,000	9,110	440	987	256	5,380	1,330	177	138
2	574	94	340	900	13,400	440	642	245	4,520	937	165	133
3	565	96	3,590	810	12,700	442	565	237	2,960	614	190	121
4	561	200	4,700	760	11,200	478	4,390	233	2,170	424	1,860	114
5	561	420	5,110	720	10,000	498	6,080	232	1,580	351	1,680	116
6	553	400	6,550	660	8,640	455	5,290	218	940	270	2,230	119
7	545	370	6,630	620	6,880	398	4,090	200	774	242	1,750	112
8	553	350	5,790	580	4,120	333	2,760	184	615	215	723	105
9	579	313	4,890	540	4,730	309	1,370	196	473	206	2,100	105
10	561	286	5,500	510	6,550	312	924	210	422	239	3,830	109
11	553	265	6,920	500	6,100	355	724	231	387	212	3,080	109
12	541	256	7,400	500	6,140	340	596	266	363	190	1,670	103
13	870	253	6,480	500	6,880	326	515	316	324	183	1,040	100
14	1,290	262	6,150	500	6,880	315	483	304	298	173	602	98
15	606	171	6,330	500	6,800	317	610	298	200	190	456	97
16	100	150	5,460	500	4,470	861	585	6,610	326	233	805	160
17	110	159	4,990	500	1,570	1,960	523	5,960	296	316	4,070	349
18	160	235	4,880	520	1,200	2,730	517	3,710	250	342	3,260	755
19	230	410	4,950	541	845	3,040	474	2,520	248	320	1,890	888
20	160	400	4,730	583	805	2,900	443	1,740	263	287	1,700	1,030
21	135	354	8,800	665	497	2,650	488	1,260	266	264	1,050	1,110
22	100	358	15,400	1,130	460	2,540	502	965	246	263	1,050	1,100
23	80	344	10,500	2,120	450	2,410	468	922	227	247	885	1,000
24	82	325	7,910	2,580	450	2,330	428	1,550	259	215	365	595
25	84	307	7,450	2,320	450	3,190	404	2,040	259	230	303	600
26	84	286	7,240	1,600	450	4,910	367	2,610	3,720	352	236	591
27	85	232	7,500	1,330	450	5,310	340	4,430	4,710	419	179	584
28	86	212	7,130	4,460	450	4,640	311	4,650	4,330	332	164	577
29	88	188	4,830	8,240	450	4,220	285	4,250	4,300	268	161	578
30	90	201	1,260	10,700	-----	3,430	266	5,950	2,950	236	158	633
31	92	-----	1,100	9,330	-----	2,100	-----	5,720	-----	196	138	-----
TOTAL	11,257	7,989	180,706	56,719	133,127	54,979	34,427	59,523	44,164	10,296	37,967	12,233
MEAN	363	266	5,829	1,830	4,591	1,774	1,214	1,888	1,472	332	1,225	408
MAX	1,290	420	15,400	10,700	13,400	5,310	6,080	6,610	5,380	1,330	4,070	1,110
MIN	80	92	196	500	450	309	266	184	227	173	138	97
CFSM	.21	.15	3.36	1.06	2.65	1.02	.70	1.09	.85	.19	.71	.24
IN.	.24	.17	3.88	1.22	2.86	1.18	.78	1.26	.95	.22	.81	.26

CAL YR 1967 TOTAL 628,745 MEAN 1,723 MAX 15,400 MIN 52 CFSM .99 IN 13.49
WTR YR 1968 TOTAL 644,387 MEAN 1,761 MAX 15,400 MIN 80 CFSM 1.02 IN 13.83

PEAK DISCHARGE (BASE, 11,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-22	0145	18.26	17,300	02-02	1645	16.53	14,100
01-30	0945	14.55	11,000				

WABASH RIVER BASIN

3-3255. Mississinewa River near Ridgeville, Ind.

Location.--Lat 40°16'49", long 84°59'44", on line between secs. 7 and 8, T. 21 N., R. 14 E., on right bank, 10 ft downstream from highway bridge, 0.8 mile downstream from Mud Creek, and 2 miles east of Ridgeville.

Drainage area.--130 sq mi.

Records available.--August 1946 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 965.28 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 5, 1950, wire-weight gage, and Oct. 5, 1950 to Apr. 24, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--22 years, 125 cfs.

Extremes.--Maximum discharge during year, 2,480 cfs Jan. 30 (gage height, 11.18 ft); minimum, 1.5 cfs Oct. 4, 24; minimum gage height, 2.05 ft Oct. 4.
1946-68: Maximum discharge, 13,900 cfs June 10, 1958 (gage height, 16.25 ft), from rating curve extended above 5,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 0.1 cfs Oct. 24, 1946; minimum gage height, 1.65 ft Sept. 11, 1953.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.9	14	9.5	37	587	22	151	26	147	46	77	5.8
2	2.6	50	141	35	1,670	22	125	25	222	37	58	5.2
3	2.0	25	2,060	32	570	18	108	25	140	30	26	5.5
4	3.0	31	1,260	28	249	18	1,320	25	95	25	25	5.2
5	7.5	21	725	25	183	20	632	23	70	22	28	4.7
6	14	9.1	690	24	147	21	249	20	50	20	19	10
7	3.9	6.1	457	22	124	18	172	20	48	17	21	12
8	3.4	4.9	251	21	100	18	125	19	42	16	67	6.4
9	4.9	4.4	174	20	86	21	87	23	36	16	59	4.7
10	4.2	3.9	920	19	66	20	72	22	31	15	63	4.4
11	3.2	4.2	1,220	19	50	18	62	33	44	14	54	4.7
12	3.0	4.2	625	18	45	18	54	50	86	13	30	10
13	2.8	3.9	309	18	38	19	48	30	38	12	21	7.0
14	3.0	3.7	212	18	35	18	50	24	23	11	17	5.0
15	3.4	4.4	178	18	30	19	67	22	50	11	14	3.2
16	2.2	3.9	133	18	28	133	53	41	90	30	19	3.5
17	5.8	7.5	104	22	25	350	49	35	54	16	68	3.8
18	11	26	162	22	29	233	48	24	33	12	60	3.9
19	7.5	17	183	24	21	165	42	22	26	14	59	4.2
20	5.5	10	129	26	20	127	45	20	21	13	34	4.6
21	3.7	8.7	292	91	20	151	45	18	19	10	19	4.5
22	3.0	9.1	937	172	19	161	38	16	18	15	15	4.0
23	2.0	9.5	253	345	18	144	39	255	17	12	13	3.8
24	1.7	8.7	143	143	18	154	38	1,040	233	10	11	4.1
25	10	10	113	92	18	595	33	452	897	45	12	4.3
26	5.2	10	90	60	22	907	31	570	590	38	8.7	3.7
27	4.7	8.7	72	51	24	402	29	1,400	225	20	7.9	3.4
28	4.7	7.5	63	265	26	193	26	1,140	131	44	7.5	3.7
29	3.2	7.5	55	1,050	23	131	26	405	89	22	6.8	3.6
30	2.0	8.7	47	2,010	-----	96	28	215	63	14	6.1	3.5
31	2.2	-----	43	1,090	-----	85	-----	147	-----	12	6.4	-----
TOTAL	139.2	342.6	12,050.5	5,835	4,291	4,317	3,892	6,277	3,628	632	932.4	152.4
MEAN	4.49	11.4	389	188	148	139	130	202	121	20.4	30.1	5.08
MAX	14	50	2,060	2,010	1,670	907	1,320	1,400	897	46	77	12
MIN	1.7	3.7	9.5	18	18	18	26	16	17	10	6.1	3.2
CFSM	.03	.09	2.99	1.45	1.14	1.07	1.00	1.56	.93	.16	.23	.04
IN.	.04	.10	3.45	1.67	1.23	1.23	1.11	1.87	1.04	.18	.27	.04
CAL YR 1967	TOTAL 43,224.3	MEAN 118	MAX 2,060	MIN 1.7	CFSM .91	IN 12.37						
WTR YR 1968	TOTAL 42,489.1	MEAN 116	MAX 2,060	MIN 1.7	CFSM .89	IN 12.16						

PEAK DISCHARGE (BASE, 2,400 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-03	1115	11.13	2,440	01-30	1515	11.18	2,480

3-3260. Mississinewa River near Eaton, Ind.

Location.--Lat 40°19'08", long 85°19'10", in NE¼ sec. 31, T. 22 N., R. 11 E., on right bank at downstream side of bridge, 1½ miles upstream from Estey Creek and 2½ miles southeast of Eaton.

Drainage area.--304 sq mi.

Records available.--March 1952 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 880.60 ft above mean sea level, datum of 1929. Prior to Sept. 24, 1954, wire-weight gage, and Sept. 25, 1954 to Nov. 23, 1965, graphic water-stage recorder, at same site and datum.

Average discharge.--16 years, 271 cfs.

Extremes.--Maximum discharge during year, 5,050 cfs Feb. 2 (gage height, 11.53 ft); minimum, 5.5 cfs Oct. 2, 5; minimum gage height, 2.55 ft Oct. 1, 2.

1952-68: Maximum discharge, 19,400 cfs June 10, 1958 (gage height, 18.53 ft) from rating curve extended above 6,000 cfs on basis of contracted-opening measurement of peak flow; minimum, 2.0 cfs Sept. 23, 27, 1954 (gage height, 2.23 ft).

Remarks.--Record fair except for winter period and periods of no gage-height record, which are fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	14	21	94	3,080	36	195	45	340	250	21	17
2	6.7	27	102	82	4,590	36	258	46	488	180	55	18
3	7.0	78	2,230	74	4,020	34	209	44	438	120	88	16
4	6.1	59	3,840	70	1,540	32	1,570	43	266	90	45	16
5	6.7	43	3,110	64	654	31	2,550	40	191	76	40	17
6	8.5	45	1,840	60	452	31	1,220	37	140	66	37	16
7	8.2	30	1,560	60	344	30	568	36	126	54	29	14
8	20	22	975	58	274	30	450	34	110	50	26	14
9	9.0	17	548	56	211	30	350	39	100	40	242	14
10	11	16	845	54	180	30	270	39	92	37	358	13
11	9.4	16	2,490	54	150	30	200	50	85	34	334	14
12	8.0	15	2,800	52	130	31	170	73	80	32	189	27
13	6.8	14	1,500	52	110	31	150	96	95	30	82	23
14	6.0	14	705	52	100	31	120	69	82	29	50	18
15	6.4	14	528	50	91	33	150	66	74	27	34	16
16	7.0	13	382	50	82	150	130	81	70	26	35	13
17	8.0	16	274	50	76	900	113	204	78	60	50	13
18	9.0	18	266	52	70	750	104	118	65	40	180	14
19	12	27	516	58	66	440	96	88	86	23	140	15
20	17	39	375	70	62	316	93	78	80	19	88	14
21	13	30	930	130	58	289	98	72	70	19	74	17
22	11	25	2,760	389	56	428	90	67	60	20	38	17
23	9.0	23	2,030	690	54	372	78	235	54	23	30	15
24	7.0	21	609	735	50	334	74	1,780	50	27	25	15
25	5.6	21	358	382	48	805	70	2,180	2,300	34	23	16
26	15	21	280	250	46	1,780	62	1,440	1,700	43	21	14
27	13	21	211	167	46	1,700	58	2,510	1,100	66	24	12
28	11	21	184	283	47	725	53	2,740	700	40	23	12
29	9.0	20	150	1,270	43	382	49	2,020	500	44	20	12
30	8.0	20	130	3,180	-----	252	46	970	350	41	10	12
31	6.8	-----	111	4,580	-----	193	-----	504	-----	24	18	-----
TOTAL	287.0	760	32,660	13,268	16,730	10,292	9,644	15,844	9,979	1,666	2,465	464
MEAN	9.26	25.3	1,054	428	577	332	321	511	333	53.7	79.5	15.5
MAX	20	78	3,840	4,580	4,590	1,780	2,550	2,740	2,300	250	358	27
MIN	5.6	13	21	50	43	30	46	34	50	19	18	12
CFSM	.03	.08	3.47	1.41	1.90	1.09	1.06	1.68	1.09	.18	.26	.05
IN.	.04	.09	4.00	1.62	2.05	1.26	1.18	1.94	1.22	.20	.30	.06
CAL YR 1967	TOTAL 117,890.3	MEAN 323	MAX 4,450	MIN 4.9	CFSM 1.06	IN 14.42						
WTR YR 1968	TOTAL 114,059.0	MEAN 312	MAX 4,590	MIN 5.6	CFSM 1.03	IN 13.95						

PEAK DISCHARGE (BASE, 3,000 CFS)

Note.--No gage-height record Oct. 8 to Nov. 1 and June 8 to July 18.

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-04	1715	10.56	4,160	01-31	0800	11.25	4,800
12-12	0415	9.32	3,160	02-02	1345	11.53	5,050

WABASH RIVER BASIN

3-3265. Mississinewa River at Marion, Ind.

Location.--Lat 40°34'34", long 85°39'34", in sec. 31, T. 25 N., R. 8 E., on left bank, 12 ft downstream from Highland Avenue Bridge in Marion, 1 mile upstream from Hummels Creek, and 4 miles downstream from Lugar Creek.

Drainage area.--677 sq mi.

Records available.--September 1923 to September 1968. 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.--45 years, 625 cfs.

Extremes.--Maximum discharge during year, 10,200 cfs Feb. 2 (gage height, 10.64 ft); minimum 3.6 cfs Aug. 28 (gage height, 0.49 ft), caused by taintor gates above gage being temporarily closed.

1923-68: Maximum discharge, 25,000 cfs Mar. 21, 1927 (gage height, 17.4 ft from graph based on gage readings), from rating curve extended above 18,000 cfs; minimum, 1.1 cfs Apr. 17, 1959; minimum daily, 3.8 cfs Oct. 23, 1940, Oct. 9, 1943; minimum gage height, -0.27 ft Sept. 25, 1935.

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

Remarks.--Record good except for winter period, which is fair. Flow periodically regulated by dam above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	99	61	270	6,110	130	307	175	893	453	127	61
2	32	102	397	250	9,580	134	429	179	844	340	102	63
3	34	105	2,600	235	8,400	127	498	179	858	270	90	59
4	33	108	3,760	225	4,360	120	2,600	179	666	226	111	59
5	33	144	4,130	210	1,910	127	3,490	175	491	195	245	63
6	33	111	2,990	205	1,390	134	2,750	167	393	175	124	57
7	32	96	2,210	195	956	130	1,410	163	334	163	105	57
8	47	96	1,680	190	865	130	783	155	290	159	85	166
9	59	80	1,130	180	706	130	660	187	260	152	99	59
10	45	72	1,370	175	530	130	504	179	236	163	478	55
11	45	70	3,500	170	381	130	417	204	218	155	600	53
12	47	70	4,100	165	315	130	369	240	218	141	399	55
13	51	75	3,090	160	275	134	318	240	255	127	306	53
14	51	68	1,670	160	245	120	312	245	296	134	208	49
15	45	63	1,080	155	220	127	429	213	226	200	183	55
16	53	57	858	150	205	316	411	231	191	167	103	57
17	134	82	673	150	190	1,120	357	285	175	138	84	51
18	88	85	654	150	179	1,450	318	340	175	117	355	72
19	57	78	823	148	165	1,130	290	265	200	102	275	57
20	63	72	865	152	155	900	323	222	179	102	265	38
21	55	70	3,090	204	150	816	435	200	163	90	222	4.8
22	51	85	7,370	447	144	865	369	183	155	85	260	5.6
23	49	82	4,460	893	140	900	312	280	167	111	155	104
24	59	75	2,310	958	140	830	270	1,710	856	111	6.0	70
25	59	68	1,270	809	141	1,490	250	2,830	2,610	130	237	68
26	55	65	928	556	141	2,640	222	2,630	3,590	138	80	55
27	61	61	680	426	144	2,590	208	3,220	2,930	130	71	51
28	57	59	550	1,480	141	1,830	191	3,300	1,700	124	23	47
29	55	57	453	2,980	138	1,010	179	2,830	942	138	4.8	45
30	55	59	405	5,700	-----	692	175	2,240	628	108	13	44
31	61	-----	351	6,400	-----	550	-----	1,310	-----	120	44	-----
TOTAL	1,631	2,414	59,508	24,548	38,416	21,062	19,586	24,956	21,139	4,964	5,459.8	1,733.4
MEAN	52.6	80.5	1,920	792	1,325	679	653	805	705	160	176	57.8
MAX	134	144	7,370	6,400	9,580	2,640	3,490	3,300	3,590	453	600	166
MIN	32	57	61	148	138	120	175	155	155	85	4.8	4.8
CFSM	.08	.12	2.84	1.17	1.96	1.00	.96	1.19	1.04	.24	.26	.09
IN.	.09	.13	3.27	1.35	2.11	1.16	1.08	1.37	1.16	.27	.30	.10
CAL YR 1967	TOTAL 213,650.3	MEAN 585	MAX 7,370	MIN 5.6	CFSM .86	IN 11.74						
WTR YR 1968	TOTAL 225,417.2	MEAN 616	MAX 9,580	MIN 4.8	CFSM .91	IN 12.38						

PEAK DISCHARGE (BASE, 5,600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	2145	9.45	8,220	02-02	1430	10.64	10,200

3-3269.5 Mississinewa Reservoir at Peoria, Ind.

Location.--Lat 40°43'00", long 85°57'22", in NW¼ sec. 10, T. 26 N., R. 5 E., in discharge tower of reservoir on Mississinewa River, at Peoria, 6 3/4 miles southeast of Peru, and 7.1 miles above the mouth.

Drainage area.--809 sq mi.

Records available.--April to September 1968.

Gage.--Water-stage recorder. Datum of gage is 700.00 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Extremes.--Maximum contents during period, 83,130 acre-ft June 27 (elevation, 739.38 ft); minimum contents, 63,770 acre-ft Sept. 30 (elevation, 733.12 ft).

Remarks.--Reservoir is formed by earth fill dam. Releases normally controlled by three gates, 4.75 ft wide and 16.0 ft high, in semi-elliptical conduit through dam. Minimum design capacity is 23,300 acre-ft (elevation, 712 ft). Seasonal pool capacity is 75,200 acre-ft (elevation, 737 ft). Capacity at uncontrolled spillway elevation (779 ft) is 368,400 acre-ft. Reservoir is used for flood control and recreation. Reservoir put in operation on April 23, 1968.

Cooperation.--Records furnished by Corps of Engineers.

Month-end elevation and contents, water year October 1967 to September 1968

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	-	-	-
Oct. 31.....	-	-	-
Nov. 30.....	-	-	-
Dec. 31.....	-	-	-
Calendar year 1967.....	-	-	-
Jan. 31.....	-	-	-
Feb. 29.....	-	-	-
Mar. 31.....	-	-	-
Apr. 30.....	-	-	-
May 31.....	-	59,790	-
June 30.....	-	77,020	+17,230
July 31.....	-	75,570	-1,450
Aug. 31.....	-	75,340	-230
Sept. 30.....	-	63,940	-11,400
Water year 1967-68	-	-	-

WABASH RIVER BASIN

3-3270. Mississinewa River at Peoria, Ind.

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

Drainage area.--810 sq mi.

Records available.--October 1952 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 660.00 ft above mean sea level, datum of 1929. Prior to Oct. 7, 1954, wire-weight gage and crest-stage gage on highway bridge, 2,500 ft upstream and Oct. 7, 1954 to Sept. 30, 1962, graphic water-stage recorder on right bank at site 2,500 ft upstream all at same datum. Oct. 1, 1962 to Apr. 19, 1966, graphic water-stage recorder at present site and datum.

Average discharge.--16 years, 671 cfs.

Extremes.--Maximum discharge during year, 8,820 cfs Feb. 2 (gage height, 10.62 ft); minimum, 5.0 cfs Nov. 8 (gage height, 0.20 ft). 1952-68: Maximum discharge, 28,000 cfs June 11, 1958 (gage height, 19.26 ft, site then in use); minimum, 5.0 cfs Nov. 8, 1967 (gage height, 0.20 ft); minimum daily, 10 cfs May 25, 1968.

Remarks.--Record good except for winter period, which is fair. Flow regulated by Mississinewa Reservoir (see sta. No. 3-3269.5) since April 1968.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	73	96	308	6,640	208	563	26	18	860	171	45
2	60	119	191	190	5,720	195	372	26	18	397	147	56
3	60	178	1,370	261	111	178	361	28	16	364	135	53
4	60	156	3,150	303	118	178	1,400	20	10	280	135	83
5	65	157	4,650	257	121	178	3,360	20	19	321	129	68
6	69	160	4,800	255	121	178	3,630	30	19	316	150	70
7	66	154	3,810	327	1,880	179	3,270	31	19	219	137	103
8	63	118	2,580	278	4,970	180	1,810	30	19	106	137	103
9	71	146	1,610	222	6,210	180	857	33	20	170	138	103
10	85	115	1,190	228	6,770	182	627	32	19	170	211	105
11	83	109	3,010	229	6,250	182	549	33	19	170	401	103
12	74	104	4,320	200	5,570	181	416	32	19	170	445	101
13	76	112	4,660	204	4,680	180	402	31	19	256	368	102
14	81	107	3,640	203	3,130	170	363	30	19	74	341	101
15	84	105	1,740	203	793	179	387	31	20	74	337	101
16	85	104	1,060	203	502	244	420	52	10	135	415	305
17	114	105	841	198	310	680	437	31	19	167	592	416
18	178	115	785	196	242	1,170	383	31	19	168	460	475
19	163	142	863	194	242	1,420	276	31	19	171	317	528
20	126	129	940	194	279	1,220	244	32	15	170	203	500
21	108	79	1,870	203	288	995	261	31	17	113	176	400
22	74	174	4,510	273	255	950	280	23	17	75	153	498
23	85	106	5,260	586	235	970	209	12	23	77	122	566
24	82	111	6,690	944	235	945	20	11	194	77	124	627
25	93	100	5,340	880	232	1,190	21	10	1,370	75	93	674
26	105	94	2,510	730	228	1,820	22	14	2,670	133	50	705
27	78	95	902	546	223	2,520	23	14	3,030	174	63	575
28	99	95	652	1,340	219	2,790	24	14	3,020	171	50	482
29	97	95	537	2,890	215	2,100	24	15	2,730	318	66	482
30	88	96	519	4,400	-----	1,090	25	15	1,760	457	60	482
31	92	-----	414	5,530	-----	687	-----	14	-----	123	44	-----
TOTAL	2,767	3,485	74,510	23,014	56,789	23,528	21,045	801	15,174	6,588	6,397	9,120
MEAN	89.3	116	2,404	742	1,958	750	702	25.8	506	213	206	304
MAX	178	178	6,690	5,530	6,770	2,790	3,630	52	3,030	860	592	705
MIN	60	73	96	190	111	178	20	10	15	74	44	45

CAL YR 1967 TOTAL 281,992 MEAN 773 MAX 6,690 MIN 53
WTR YR 1968 TOTAL 243,218 MEAN 665 MAX 6,770 MIN 10

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-24	1345	10.35	8,360	02-09	1730	9.57	7,120
02-02	1200	10.62	8,820				

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 1968. 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.--25 years, 2,294 cfs.

Extremes.--Maximum discharge during year, 21,300 cfs Feb. 2 (gage height, 14.68 ft); minimum, 208 cfs Sept. 4 (gage height, 2.12 ft).

1943-68: Maximum discharge, 68,000 cfs May 18, 1943 (gage height, 24.46 ft, from floodmark); minimum, 62 cfs Sept. 19, 1945; minimum gage height, 1.70 ft Oct. 5, 26, 1946.

Flood of Mar. 26, 1913, reached a stage of 28.1 ft (discharge, about 115,000 cfs, from rating curve extended above 63,000 cfs).

Remarks.--Record good except for winter period, or periods of no gage-height record, which is poor. Flow regulated by Salamonie Reservoir (see sta. No. 3-3244.5), and Mississinewa Reservoir (see sta. No. 3-3269.5).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	636	320	370	1,800	18,000	837	1,900	338	4,960	2,740	370	240
2	624	348	480	1,400	20,000	837	1,500	334	4,440	1,760	410	236
3	612	272	3,450	1,100	12,700	823	1,210	325	3,000	1,370	307	240
4	600	600	7,260	1,050	10,700	802	4,970	330	2,230	942	2,170	232
5	612	600	8,880	960	9,520	823	8,900	325	1,830	844	1,750	260
6	612	630	10,400	920	8,300	830	8,540	325	1,110	739	2,630	236
7	606	624	9,900	900	7,920	774	7,020	302	921	550	2,090	244
8	600	530	8,160	860	8,380	732	4,720	280	725	525	1,070	272
9	624	540	6,470	840	9,580	678	2,680	298	576	440	1,280	298
10	636	490	6,380	820	12,300	640	1,940	284	500	435	3,840	307
11	630	465	9,360	780	11,400	640	1,580	298	450	445	3,540	316
12	618	455	11,100	760	10,700	600	1,290	320	425	435	2,410	302
13	630	425	10,500	740	10,800	620	1,130	343	390	425	1,610	298
14	1,430	435	9,180	740	9,340	620	1,090	370	352	356	1,100	298
15	963	410	7,960	740	6,440	670	1,110	375	338	284	879	298
16	490	348	6,440	720	4,190	1,100	1,230	6,890	356	325	928	356
17	330	356	5,810	700	2,180	2,000	1,150	6,310	352	420	3,990	970
18	361	375	5,680	700	1,810	3,900	1,110	3,890	320	490	4,100	1,290
19	425	560	5,760	740	1,340	3,400	963	2,710	294	515	3,000	1,500
20	395	612	5,800	781	1,310	4,100	858	1,950	289	510	2,300	1,610
21	338	520	11,500	879	1,080	3,800	872	1,460	298	455	1,500	1,720
22	289	500	20,500	1,250	994	3,600	942	1,150	284	370	1,200	1,750
23	260	515	19,000	2,240	963	3,400	914	1,070	312	405	1,200	1,770
24	252	500	16,000	3,500	956	3,300	570	1,630	1,340	385	950	1,480
25	260	490	13,500	3,290	949	4,300	515	1,970	4,070	348	650	1,400
26	268	455	10,500	2,490	928	7,000	480	2,270	7,180	375	450	1,470
27	289	425	9,000	2,080	928	7,600	455	4,030	7,290	600	350	1,410
28	284	395	7,000	5,020	907	7,000	420	4,330	6,660	582	230	1,250
29	298	370	5,000	10,300	879	5,600	400	3,840	6,570	495	252	1,240
30	289	356	3,500	17,000	-----	4,000	370	5,150	5,030	830	272	1,270
31	302	-----	2,500	16,000	-----	2,700	-----	5,220	-----	420	240	-----
TOTAL	15,563	13,921	257,340	82,100	185,494	77,726	60,829	58,717	62,892	19,815	47,068	24,563
MEAN	502	464	8,301	2,648	6,396	2,507	2,028	1,894	2,096	639	1,518	819
MAX	1,430	630	20,500	17,000	20,000	7,600	8,900	6,890	7,290	2,740	4,100	1,770
MIN	252	272	370	700	879	600	370	280	284	284	230	232
CFSM	.19	.17	3.13	1.00	2.41	.94	.76	.71	.79	.24	.57	.31
IN.	.22	.19	3.60	1.15	2.60	1.09	.85	.82	.88	.28	.66	.34
CAL YR 1967	TOTAL 958,952			MEAN 2,627	MAX 20,500	MIN 132		CFSM .99	IN 13.43			
WTR YR 1968	TOTAL 906,028			MEAN 2,475	MAX 20,500	MIN 230		CFSM .93	IN 12.69			

PEAK DISCHARGE (BASE, 18,000 CFS)

NOTE.--No gage height record Dec. 22 to Jan. 16, Jan. 30 to Feb. 2, Mar. 10 to Apr. 1, Aug. 19-28.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	----	----	a 21,000	02-02	1200	14.68	21,300

a--About

WABASH RIVER BASIN

3-3275.2 Pipe Creek near Bunker Hill, Ind.

Location.--Lat 40°40'06", long 86°05'44", in SE¼ sec. 29, T. 26 N., R. 4 E., on right bank 150 ft downstream from bridge on county road 125 West, 0.5 mile northeast of Bunker Hill.

Drainage area.--158 sq mi.

Records available.--May to September 1968. Occasional low-flow measurements water years 1960-67.

Gage.--Digital water-stage recorder. Datum of gage is 736.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during period, 1,470 cfs June 24 (gage height, 9.52 ft); minimum, 4.3 cfs Aug. 29 (gage height, 2.06 ft).

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								40	135	55	16	7.7
2								40	198	48	14	10
3								50	203	42	13	9.8
4								45	139	38	13	8.3
5								40	107	35	13	7.9
6								35	90	34	12	8.0
7								33	79	31	11	7.1
8								35	71	29	10	6.4
9								36	64	28	14	6.0
10								37	59	28	17	6.1
11								37	55	28	16	7.4
12								40	52	25	16	7.8
13								36	48	23	14	7.0
14								34	45	22	13	6.4
15								34	45	22	13	6.6
16								362	52	24	14	6.0
17								96	47	21	25	5.4
18								70	41	19	19	8.7
19								58	37	18	15	15
20								51	34	17	12	10
21								45	32	15	12	8.9
22								41	31	14	11	7.2
23								58	36	22	9.8	7.0
24								191	763	21	9.0	6.8
25								277	335	17	8.4	7.6
26								181	241	16	8.2	9.1
27								577	153	15	8.1	7.2
28								573	105	15	8.3	6.7
29								329	79	14	8.1	6.1
30								213	64	12	7.5	5.9
31		-----			-----		-----	153	-----	14	7.3	-----
TOTAL								3,847	3,440	762	387.7	230.1
MEAN								124	115	24.6	12.5	7.67
MAX								577	763	55	25	15
MIN								33	31	12	7.3	5.4
CFSM								.79	.73	.16	.08	.05
IN.								.91	.81	.18	.09	.05

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
05-16	0245	7.91	988	06-24	0715	9.52	1,470
05-27	0915	5.86	644				

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

Location.--Lat 40°59'55", long 85°45'50", in NE¼ sec. 5, T. 29 N., R. 7 E., on right bank, 200 ft downstream from Main Street Bridge at North Manchester, and 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 1968. Prior to April 1930, monthly discharge only, published in WSP 1305. Gage-height records since October 1924 are available in the district office.

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

Average discharge.--39 years, 347 cfs.

Extremes.--Maximum discharge during year, 7,940 cfs Dec. 22 (gage height, 13.55 ft); minimum, 76 cfs Sept. 30; minimum gage height, 1.43 ft Aug. 31, Sept. 1.

1929-68: Maximum discharge, 7,940 cfs Dec. 22, 1967 (gage height, 13.55 ft); maximum gage height, 14.00 ft Feb. 27, 1936; minimum not determined, occurred Oct. 7, 1957, due to unusual regulation; minimum daily, 16 cfs Oct. 19, 1956.

Remarks.--Record good except for winter period, which is fair. Diurnal fluctuation caused by grist mill above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	112	171	152	522	2,800	125	303	197	493	568	147	119
2	112	216	175	440	4,600	125	291	186	508	463	141	129
3	112	196	745	385	3,980	125	304	187	412	386	138	124
4	116	228	673	350	3,120	126	2,400	187	349	333	204	114
5	117	209	582	320	2,570	131	2,540	178	307	294	189	146
6	116	185	1,220	300	2,100	135	2,040	167	275	267	163	133
7	119	173	1,250	290	1,560	134	1,470	162	249	232	147	117
8	117	165	913	280	1,150	134	893	160	228	211	143	107
9	129	161	629	270	913	150	638	180	209	204	148	105
10	130	159	913	250	701	157	515	194	194	187	157	103
11	128	160	1,820	240	550	150	446	192	184	176	152	103
12	125	161	1,950	224	460	146	393	207	172	166	145	101
13	125	160	1,710	210	380	138	351	197	168	159	143	99
14	128	160	1,180	200	320	139	337	187	164	164	140	98
15	126	157	801	200	277	141	427	186	160	155	143	95
16	136	155	597	194	245	995	374	3,320	169	149	294	93
17	160	170	477	185	217	1,170	335	3,460	159	142	628	92
18	168	224	449	180	210	756	330	2,520	155	143	478	103
19	160	209	480	175	200	554	305	1,970	165	162	291	111
20	151	188	431	171	185	480	303	1,260	156	155	207	108
21	146	179	2,390	168	175	449	314	833	148	146	169	103
22	142	174	7,040	194	165	453	284	624	155	138	152	96
23	141	172	4,440	209	155	389	262	547	155	147	142	94
24	141	168	3,480	188	145	349	245	538	949	264	134	92
25	147	166	3,000	180	140	670	226	458	1,970	253	126	95
26	145	163	2,540	171	135	907	232	493	2,830	181	125	91
27	154	159	2,130	168	130	775	249	1,180	2,370	158	123	87
28	157	155	1,530	1,440	125	529	232	901	1,830	159	122	84
29	154	154	1,020	2,620	125	399	218	680	1,190	154	118	83
30	154	154	789	3,300	-----	308	207	817	750	146	115	81
31	156	-----	649	2,800	-----	317	-----	538	-----	144	111	-----
TOTAL	4,224	5,251	46,155	16,824	27,833	11,556	17,464	22,906	17,223	6,606	5,635	3,106
MEAN	136	175	1,489	543	960	373	582	739	574	213	182	104
MAX	168	228	7,040	3,300	4,600	1,170	2,540	3,460	2,830	568	628	146
MIN	112	154	152	168	125	125	207	160	148	138	111	81
CFSM	.33	.42	3.58	1.30	2.31	.90	1.40	1.78	1.38	.51	.44	.25
IN.	.38	.47	4.13	1.50	2.49	1.03	1.56	2.05	1.54	.59	.50	.28
CAL YR 1967	TOTAL 155,767		MEAN 427		MAX 7,040		MIN 72		CFSM 1.03		IN 13.93	
WTR YR 1968	TOTAL 184,783		MEAN 505		MAX 7,040		MIN 81		CFSM 1.21		IN 16.52	

PEAK DISCHARGE (BASE, 2,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	0445	13.55	7,940	04-04	1800	9.06	3,030
01-30	0900	9.65	3,380	05-16	1715	11.33	4,790
02-02	1545	11.51	4,970				

WABASH RIVER BASIN

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 1968. 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. 16, 1956, wire-weight gage, and Aug. 16, 1956 to Sept. 30, 1964, graphic water-stage recorder, at same site and datum.

Average discharge.--25 years, 704 cfs.

Extremes.--Maximum discharge during year, 12,800 cfs Dec. 23 (gage height, 11.73 ft); minimum, 124 cfs Oct. 4 (gage height, 3.06 ft).

1943-68: Maximum discharge, 14,200 cfs Dec. 9, 1966 (gage height, 12.20 ft); minimum, 65 cfs Mar. 16, 1960, result of freezeup (gage height, 2.60 ft).

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

Remarks.--Record good except for winter period, which is fair. Record of suspended sediment loads for water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	132	248	221	950	5,040	340	669	429	1,460	1,270	268	231
2	132	338	325	800	8,000	340	599	409	1,780	1,080	260	235
3	128	566	1,270	700	8,870	340	608	404	1,340	910	249	245
4	126	518	1,820	620	6,740	339	3,200	392	1,050	781	2,860	239
5	130	542	1,420	560	4,410	346	4,960	381	890	689	1,970	359
6	132	454	2,290	520	3,440	360	3,520	362	785	618	966	374
7	130	360	2,690	500	2,780	362	2,610	344	712	561	671	303
8	130	312	2,020	480	2,140	359	1,820	334	657	504	578	252
9	134	288	1,480	460	1,720	392	1,310	362	613	462	416	231
10	130	280	1,550	440	1,410	426	1,060	384	573	452	371	225
11	137	280	3,010	430	1,250	422	911	400	540	419	341	229
12	137	276	3,790	420	1,150	403	804	407	506	392	307	225
13	137	280	3,290	410	1,030	382	721	402	469	367	277	216
14	139	290	2,390	410	725	363	691	381	442	352	260	208
15	139	276	1,660	410	860	376	785	405	440	357	259	203
16	153	280	1,270	410	770	1,050	806	6,700	457	331	324	198
17	217	292	1,050	410	680	2,130	721	10,100	456	314	2,100	198
18	292	370	963	410	620	1,610	690	7,110	421	304	2,210	234
19	329	506	1,000	410	580	1,250	657	3,990	403	312	1,230	289
20	270	420	978	440	540	1,100	654	2,920	410	317	805	291
21	228	380	2,900	459	500	1,030	692	2,050	399	301	570	266
22	195	329	9,180	649	470	1,020	646	1,570	371	288	438	249
23	175	304	12,000	746	440	966	589	1,440	366	296	366	230
24	170	292	7,740	774	420	879	543	1,660	954	426	321	221
25	178	284	4,840	616	400	1,160	507	1,450	2,640	616	287	215
26	183	273	3,790	548	380	1,540	495	1,230	4,130	536	264	210
27	210	259	3,120	512	360	1,580	513	2,180	4,050	400	247	206
28	214	242	2,560	2,350	350	1,240	505	2,060	3,160	365	236	197
29	231	224	1,910	4,950	340	1,000	473	1,590	2,380	320	229	195
30	214	221	1,350	6,400	-----	844	449	1,710	1,640	206	221	188
31	220	-----	1,150	5,900	-----	745	-----	1,780	-----	280	217	-----
TOTAL	5,472	9,974	85,027	34,094	56,615	24,694	33,208	55,336	34,494	14,916	20,118	7,162
MEAN	177	332	2,743	1,100	1,952	797	1,107	1,785	1,150	481	649	239
MAX	329	566	12,000	6,400	8,870	2,130	4,960	10,100	4,130	1,270	2,860	374
MIN	126	221	221	410	340	339	449	334	366	280	217	188
CFSM	.22	.42	3.47	1.39	2.47	1.01	1.40	2.26	1.45	.61	.82	.30
IN.	.26	.47	4.00	1.60	2.66	1.16	1.56	2.60	1.62	.70	.95	.34

CAL YR 1967 TOTAL 292,679 MEAN 802 MAX 12,000 MIN 122 CFSM 1.01 IN 13.76
WTR YR 1968 TOTAL 381,110 MEAN 1,041 MAX 12,000 MIN 126 CFSM 1.32 IN 17.92

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-23	0600	11.73	12,800	05-17	1300	10.90	10,800
02-03	0800	10.19	9,160	08-04	1345	8.23	5,250
04-05	0345	8.23	5,250				

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 1968. 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.--45 years (1923-68), 3,205 cfs.

Extremes.--Maximum discharge during year, 35,600 cfs Dec. 23 (gage height, 13.20 ft); minimum, 434 cfs Oct. 24 (gage height, 2.93 ft).

1903-6, 1923-68: Maximum discharge, 89,800 cfs May 18, 1943 (gage height, 21.32 ft); minimum, 97 cfs Sept. 25, 1941; minimum daily, 135 cfs Sept. 26, 1941; minimum gage height, 2.27 ft July 23, 1936.

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

Remarks.--Record good. Flow partially regulated by Salamonie Reservoir (see sta. No. 3-3244.5) and Mississinewa Reservoir (see sta. No. 3-3269.5).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	793	634	640	3,000	24,100	1,290	2,900	937	7,430	4,660	752	569
2	789	739	912	2,300	32,900	1,260	2,170	913	7,440	3,040	740	544
3	784	955	4,570	2,000	26,600	1,230	1,860	915	5,410	2,410	693	541
4	779	1,130	10,300	1,700	21,900	1,150	7,580	887	3,850	1,870	3,790	526
5	778	1,110	11,300	1,600	17,300	1,190	16,100	868	3,160	1,550	4,230	717
6	784	1,090	14,200	1,600	14,200	1,210	14,200	837	2,250	1,480	3,560	690
7	766	1,030	14,600	1,500	12,300	1,160	11,600	797	1,810	1,270	3,100	617
8	767	918	11,900	1,500	12,500	1,100	8,230	767	1,560	1,120	2,060	578
9	777	828	9,140	1,500	12,500	1,100	4,780	832	1,370	1,030	1,370	553
10	787	810	8,550	1,500	15,100	1,100	3,350	818	1,200	988	3,920	545
11	782	771	13,600	1,500	14,200	1,090	2,670	847	1,110	1,010	4,220	557
12	779	749	17,200	1,500	13,200	1,110	2,300	864	1,040	968	3,270	551
13	768	722	16,200	1,500	13,200	1,070	1,960	859	972	852	2,240	529
14	1,170	726	13,500	1,500	11,800	1,020	1,910	862	907	935	1,600	518
15	1,300	720	11,300	1,500	8,970	1,050	1,960	978	909	763	1,290	510
16	860	651	8,850	1,500	6,050	1,890	2,120	17,000	935	759	1,240	500
17	700	678	7,640	1,500	3,590	4,480	1,970	18,800	920	843	5,220	779
18	725	752	7,190	1,500	2,740	5,650	1,880	13,000	851	954	6,970	1,280
19	754	941	7,220	1,500	2,250	6,210	1,740	7,950	794	998	4,180	1,550
20	720	1,100	7,340	1,600	2,100	5,970	1,610	5,720	773	961	3,210	1,690
21	624	1,000	16,300	2,670	1,910	5,360	1,640	4,080	770	913	2,240	1,750
22	539	877	34,300	3,070	1,610	5,120	1,650	3,130	760	805	1,690	1,790
23	485	893	33,100	4,300	1,630	4,930	1,600	2,840	751	874	1,620	1,760
24	468	872	25,100	6,460	1,630	4,650	1,380	3,610	3,580	1,100	1,260	1,670
25	479	850	20,300	6,140	1,550	5,700	1,170	3,990	7,150	1,080	985	1,410
26	476	810	15,700	5,230	1,470	8,370	1,130	3,850	12,600	968	770	1,450
27	535	766	12,600	3,880	1,370	10,400	1,100	6,680	12,900	1,000	671	1,450
28	531	703	11,500	8,350	1,350	9,490	1,060	7,660	11,200	1,080	607	1,270
29	541	662	9,300	18,200	1,330	8,430	1,010	6,510	10,300	945	566	1,230
30	532	642	4,500	25,200	-----	6,350	970	7,470	8,010	1,050	554	1,240
31	565	-----	3,640	24,700	-----	4,680	-----	8,190	-----	1,040	561	-----
TOTAL	22,137	25,129	382,492	141,500	281,350	114,810	105,600	133,461	112,712	39,406	69,090	29,364
MEAN	714	838	12,340	4,565	9,702	3,704	3,520	4,305	3,757	1,271	2,229	970
MAX	1,300	1,130	34,300	25,200	32,900	10,400	16,100	18,800	12,900	4,660	6,970	1,790
MIN	468	634	640	1,500	1,330	1,020	970	767	751	759	556	500
CFSM	.19	.22	3.29	1.22	2.59	.90	.94	1.15	1.00	.34	.59	.26
IN.	.22	.25	3.79	1.40	2.79	1.14	1.05	1.32	1.17	.39	.69	.29

CAL YR 1967 TOTAL 1,366,459 MEAN 3,744 MAX 34,300 MIN 302 CFSM 1.00 IN 13.55
WTR YR 1968 TOTAL 1,457,051 MEAN 3,981 MAX 34,300 MIN 468 CFSM 1.06 IN 14.45

PEAK DISCHARGE (BASE, 22,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-23	0115	13.20	35,600	02-02	1530	13.08	34,900

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 1968. Prior to January 1940 monthly discharge only, published in WSP 1305.

Gage.--Digital water-stage recorder. Datum of gage is 519.90 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark). Prior to July 20, 1942, wire-weight gage, and July 20, 1942 to May 18, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--29 years, 3,315 cfs.

Extremes.--Maximum discharge during year, 42,000 cfs Dec. 23 (gage height, 21.88 ft); minimum, 530 cfs Oct. 24 (gage height, 1.64 ft).

1939-68: Maximum discharge, 85,300 cfs May 19, 1943 (gage height, 25.60 ft); maximum gage height, 27.48 ft Feb. 11, 1959 (ice jam); minimum daily discharge, 158 cfs Sept. 19, 20, 1941.

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

Remarks.--Record good except for winter period, which is fair. Flow partially regulated by Salamonie Reservoir (see sta. No. 3-3244.5) and Mississinewa Reservoir (see sta. No. 3-3269.5).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	828	693	682	3,300	24,400	1,460	3,530	1,030	7,770	5,580	1,000	607
2	810	816	889	2,600	33,500	1,470	2,590	996	7,940	3,520	800	589
3	804	910	2,730	2,200	34,300	1,410	2,120	1,050	6,450	2,640	800	587
4	792	1,210	8,970	2,000	25,700	1,350	5,300	994	4,560	2,170	914	601
5	786	1,250	10,300	1,800	19,800	1,350	14,800	955	3,640	1,820	5,100	610
6	798	1,230	12,600	1,700	16,200	1,430	14,700	929	2,920	1,690	3,040	807
7	792	1,180	14,100	1,600	13,700	1,380	12,200	888	2,250	1,560	3,040	716
8	792	1,080	12,300	1,600	13,100	1,320	9,380	830	2,000	1,350	2,600	642
9	798	955	9,690	1,600	12,400	1,320	5,880	858	1,770	1,260	1,660	609
10	804	996	8,520	1,600	13,700	1,310	3,860	880	1,630	1,160	2,550	594
11	810	992	11,900	1,600	13,500	1,290	3,030	910	1,510	1,110	4,010	595
12	816	840	16,700	1,600	12,600	1,300	2,620	934	1,360	1,080	3,470	597
13	810	798	16,800	1,600	12,400	1,270	2,260	942	1,260	1,010	2,440	588
14	834	768	14,300	1,600	11,600	1,230	2,130	953	1,170	923	1,860	571
15	1,470	774	11,900	1,600	9,440	1,210	2,170	1,260	1,190	951	1,460	578
16	1,230	744	9,470	1,600	6,880	1,680	2,260	22,800	1,250	817	1,380	583
17	987	732	7,990	1,600	4,350	3,760	2,230	21,900	1,210	827	3,520	623
18	840	762	7,270	1,600	2,740	5,380	2,110	16,000	1,130	922	7,630	1,180
19	804	854	7,150	1,700	2,540	6,010	1,990	10,200	1,040	1,060	4,960	1,590
20	822	1,090	7,320	1,800	2,330	6,040	1,890	7,230	963	1,000	3,220	1,770
21	750	1,150	10,900	2,300	2,080	5,570	1,830	5,280	928	965	2,670	1,830
22	660	1,020	34,500	4,500	1,750	5,200	1,830	3,990	938	901	1,960	1,910
23	580	945	40,200	6,160	1,770	5,060	1,780	3,620	887	816	1,650	1,890
24	545	945	29,900	7,870	1,770	4,760	1,660	4,310	2,110	1,240	1,600	1,890
25	560	910	22,100	8,350	1,670	5,230	1,380	4,920	5,700	1,400	1,130	1,660
26	545	975	17,300	7,770	1,610	7,490	1,330	4,560	11,700	1,160	891	1,580
27	570	816	13,500	6,760	1,600	9,770	1,270	6,020	12,900	1,030	800	1,610
28	610	768	11,700	8,940	1,570	9,430	1,220	8,130	11,200	1,140	703	1,540
29	595	720	9,960	16,800	1,520	8,530	1,150	7,180	10,000	1,090	632	1,390
30	595	734	6,400	24,800	-----	6,880	1,090	7,360	8,440	954	592	1,380
31	627	-----	3,860	26,500	-----	5,140	-----	8,590	-----	1,330	583	-----
TOTAL	24,064	27,321	391,901	157,050	300,520	116,030	111,590	156,499	117,816	44,476	68,683	31,717
MEAN	776	911	12,640	5,066	10,360	3,743	3,720	5,048	3,927	1,435	2,216	1,057
MAX	1,470	1,250	40,200	26,500	34,300	9,770	14,800	22,800	12,900	5,580	7,630	1,910
MIN	545	693	682	1,600	1,520	1,210	1,090	830	887	816	583	571
CFSM	.19	.23	3.14	1.26	2.57	.93	.92	1.25	.97	.36	.55	.26
IN.	.22	.25	3.61	1.45	2.77	1.07	1.03	1.44	1.09	.41	.63	.29

CAL YR 1967 TOTAL 1,401,024 MEAN 3,838 MAX 40,200 MIN 345 CFSM .95 IN 12.92
WTR YR 1968 TOTAL 1,547,667 MEAN 4,229 MAX 40,200 MIN 545 Cr-SM 1.05 IN 14.28

PEAK DISCHARGE (BASE, 24,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-23	0315	21.88	42,000	05-16	1730	18.06	26,400
02-02	2245	21.35	39,000				

3-3297. Dear Creek near Delphi, Ind.

Location.--Lat 40°35'25", long 86°37'15", on line between SE $\frac{1}{4}$ sec. 22 and NE $\frac{1}{4}$ sec. 27, T. 25 N., R. 2 W., on downstream side of left wingwall of highway bridge, 3 miles northeast of Delphi and $\frac{1}{2}$ miles upstream from mouth.

Drainage area.--278 sq mi.

Records available.--October 1943 to September 1968. Prior to March 1944 monthly discharge only published in WSP 1305.

Gage.--Digital water-stage recorder. Datum of gage is 553.81 ft above mean sea level (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.--25 years, 229 cfs.

Extremes.--Maximum discharge during year, 7,670 cfs May 16 (gage height, 13.34 ft); minimum, 15 cfs Oct. 7; minimum gage height, 2.19 ft Oct. 5, 6, 7.

1943-68: Maximum discharge, 14,400 cfs June 10, 1958 (gage height, 18.26 ft); minimum, 5.6 cfs Sept. 27, 1954.

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

Remarks.--Record good except that for Nov. 12 to May 9, which is poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	47	51	215	3,800	100	214	101	383	139	41	42
2	19	58	85	190	5,000	100	188	92	478	120	36	39
3	18	65	360	160	5,400	94	198	139	437	104	34	36
4	17	64	930	145	2,040	96	990	103	328	92	39	33
5	17	56	746	130	1,310	100	780	94	265	87	38	139
6	16	51	800	115	1,050	100	548	88	225	79	35	113
7	16	46	850	120	800	96	436	82	199	74	32	60
8	17	42	718	120	660	87	338	79	180	70	38	43
9	19	38	644	110	540	97	270	95	164	67	38	36
10	18	36	640	100	450	104	230	88	154	70	188	35
11	18	38	995	100	370	94	203	90	143	65	139	35
12	18	38	1,280	110	320	95	188	94	137	62	80	34
13	20	36	1,010	120	288	84	174	88	123	58	61	32
14	22	35	723	130	244	84	169	82	112	53	50	30
15	23	35	504	110	224	88	198	145	139	50	51	28
16	24	36	400	100	210	255	176	5,340	250	67	50	26
17	46	39	344	94	200	315	169	1,650	230	188	358	30
18	54	44	315	92	180	297	169	838	180	103	297	32
19	55	54	328	140	170	279	146	600	150	74	162	37
20	42	45	309	220	160	270	164	490	127	56	104	39
21	32	40	900	366	150	355	146	400	112	45	76	36
22	28	37	3,700	750	140	384	139	312	103	39	59	32
23	25	43	2,800	660	135	338	128	471	96	41	50	32
24	25	44	1,800	577	120	300	128	920	261	62	44	33
25	31	40	1,020	432	120	492	114	785	663	104	39	33
26	30	36	760	354	110	508	116	586	673	71	36	31
27	35	34	580	318	110	424	112	570	431	58	35	30
28	34	38	476	700	105	392	104	508	300	47	33	28
29	32	45	384	2,000	105	318	103	467	216	41	33	27
30	31	46	294	3,300	-----	264	101	549	169	36	32	26
31	37	-----	250	3,100	-----	246	-----	393	-----	43	31	-----
TOTAL	839	1,306	24,996	15,173	24,511	6,856	7,139	16,339	7,423	2,265	2,339	1,207
MEAN	27.1	43.5	806	489	845	221	238	527	247	73.1	75.5	40.2
MAX	55	65	3,700	3,300	5,400	508	990	5,340	673	188	358	139
MIN	16	34	51	92	105	84	101	79	96	36	31	26
CFSM	.10	.16	2.90	1.76	3.04	.80	.86	1.90	.89	.26	.27	.14
IN.	.11	.17	3.34	2.03	3.28	.92	.96	2.19	.99	.30	.31	.16
CAL YR 1967	TOTAL	93,758		MEAN 257	MAX 3,700	MIN 14		CFSM .92	IN 12.54			
WTR YR 1968	TOTAL	110,393		MEAN 302	MAX 5,400	MIN 16		CFSM 1.09	IN 14.77			

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	----	----	a4,500	05-16	0345	13.34	7,670
02-03	----	----	a6,500				

a--About

WABASH RIVER BASIN

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 1968.

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.--19 years, 97.8 cfs.

Extremes.--Maximum discharge during year, 412 cfs Feb. 8 (gage height, 8.09 ft); minimum, 0.31 cfs Oct. 1, 2 (gage height, 4.29 ft). 1949-68: Maximum discharge, 700 cfs Oct. 17, 1954 (gage height, 8.64); minimum, 0.08 cfs Aug. 4, 5, 1967 (gage height, 4.25 ft).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	53	36	304	172	102	146	80	150	380	55	24
2	.43	56	37	280	233	97	143	78	146	370	55	37
3	.46	58	40	266	282	91	141	77	143	370	54	33
4	.64	58	48	249	326	84	148	62	138	370	54	14
5	7.2	58	61	236	360	81	152	40	132	360	53	20
6	43	58	72	215	388	79	153	29	126	350	52	31
7	40	56	92	200	403	76	155	29	118	340	52	23
8	38	55	105	190	410	74	152	30	106	330	50	14
9	37	54	111	178	408	75	156	28	84	315	50	14
10	36	52	128	170	400	74	157	20	74	300	28	25
11	35	52	148	160	390	73	156	21	65	280	10	28
12	32	49	161	150	370	74	153	21	42	260	11	9.0
13	32	46	171	143	350	72	150	21	43	240	12	9.0
14	30	43	179	136	325	70	148	21	43	220	15	11
15	32	37	184	133	305	69	149	22	40	205	19	21
16	35	37	185	133	285	77	146	28	11	176	43	20
17	48	38	188	130	260	80	142	42	.83	168	102	40
18	74	39	192	118	245	83	139	45	3.5	157	142	47
19	81	39	196	106	225	89	135	80	1.0	147	136	47
20	92	39	194	100	210	99	132	135	1.0	134	133	46
21	86	39	198	95	195	110	128	145	3.0	84	102	42
22	79	39	224	91	175	118	124	153	6.0	52	77	35
23	74	39	241	87	165	123	116	157	13	54	52	36
24	66	40	254	85	150	129	109	156	25	62	50	35
25	55	40	273	83	135	132	106	153	55	67	48	35
26	53	40	302	78	125	138	104	153	110	66	44	18
27	54	38	320	77	115	142	102	158	270	63	38	13
28	54	37	334	84	114	143	96	161	380	62	37	13
29	52	37	334	99	110	147	92	161	380	59	28	13
30	52	37	332	121	-----	147	87	155	380	55	19	13
31	52	-----	322	137	-----	147	-----	150	-----	55	19	-----
TOTAL	1,371.13	1,363	5,662	4,634	7,631	3,005	4,017	2,611	3,080.33	6,151	1,640	766.0
MEAN	44.2	45.4	183	149	263	90.8	134	84.2	103	198	52.9	25.5
MAX	92	58	334	304	410	147	157	161	380	380	142	47
MIN	.40	37	36	77	110	69	87	20	.83	52	10	9.0
CFSM	.38	.40	1.59	1.30	2.29	.87	1.16	.73	.90	1.73	.46	.22
IN.	.44	.44	1.83	1.50	2.47	1.00	1.30	.84	1.00	1.99	.53	.25
CAL YR 1967	TOTAL 30,506.42	MEAN 83.6	MAX 334	MIN .08	CFSM .73	IN 9.87						
WTR YR 1968	TOTAL 42,030.46	MEAN 115	MAX 410	MIN .40	CFSM 1.00	IN 13.59						

WABASH RIVER BASIN

51

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 1968. 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 30, 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.--25 years, 779 cfs.

Extremes.--Maximum discharge during year, 6,600 cfs Feb. 4 (gage height, 13.95 ft); minimum, 141 cfs Oct. 4 (gage height, 4.56 ft). 1943-68: Maximum discharge, 7,800 cfs Apr. 5, 1950 (gage height, 14.40 ft site then in use); minimum, 86 cfs Sept. 14, 1966; minimum gage height, 4.15 ft Aug. 14, 1944, Oct. 16, 17, 1946.

Remarks.--Record good except for winter period, which is fair. Record of suspended sediment loads for water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	451	375	1,700	3,550	760	1,220	874	1,210	2,860	413	294
2	148	557	403	1,600	4,160	760	1,150	810	1,250	2,600	384	317
3	146	685	675	1,500	5,820	780	1,130	765	1,240	2,360	359	308
4	145	743	909	1,400	6,490	800	1,760	749	1,160	2,080	611	291
5	143	768	906	1,350	5,780	803	2,560	727	1,080	1,810	909	300
6	144	727	1,040	1,250	4,670	826	2,810	682	986	1,600	727	300
7	148	666	1,300	1,200	3,840	832	2,560	640	896	1,460	592	282
8	150	595	1,330	1,150	3,340	832	2,240	599	816	1,360	493	265
9	154	557	1,270	1,050	3,000	906	1,930	595	752	1,270	429	251
10	167	528	1,300	1,000	2,710	951	1,660	576	701	1,200	394	251
11	182	509	1,530	960	2,500	931	1,460	576	647	1,140	362	251
12	187	522	1,930	920	2,150	903	1,350	599	590	1,080	327	246
13	182	544	2,230	890	1,900	861	1,300	567	551	1,010	300	236
14	182	535	2,250	860	1,700	835	1,300	570	515	954	268	236
15	194	499	2,030	820	1,550	829	1,300	570	480	912	259	236
16	217	471	1,800	800	1,350	1,140	1,250	979	448	867	551	226
17	308	477	1,620	760	1,200	1,440	1,230	1,370	426	803	1,020	226
18	426	535	1,490	760	1,100	1,440	1,210	1,330	403	746	1,330	249
19	477	567	1,440	760	1,050	1,390	1,180	1,270	407	711	1,190	349
20	503	560	1,400	760	960	1,360	1,180	1,240	384	656	957	410
21	499	522	1,580	760	900	1,340	1,250	1,200	352	608	803	445
22	467	509	2,520	760	850	1,330	1,200	1,140	384	563	701	419
23	426	503	3,710	760	820	1,310	1,140	1,100	422	525	621	384
24	394	496	4,130	760	780	1,270	1,070	1,120	736	794	557	368
25	400	487	3,690	780	760	1,320	995	1,080	1,690	1,000	483	343
26	407	467	3,230	820	760	1,420	970	1,040	2,720	896	419	320
27	439	442	2,950	909	760	1,500	1,020	1,130	3,330	736	375	303
28	471	410	2,620	1,260	760	1,470	1,020	1,170	3,420	631	339	285
29	487	387	2,250	2,040	760	1,380	973	1,140	3,290	554	314	265
30	477	378	1,980	2,740	-----	1,320	928	1,110	3,090	499	297	246
31	451	-----	1,810	3,280	-----	1,260	-----	1,210	-----	451	279	-----
TOTAL	9,269	16,097	57,698	36,359	65,970	34,299	42,346	28,528	34,395	34,736	17,063	8,902
MEAN	299	537	1,861	1,173	2,275	1,106	1,412	920	1,147	1,121	550	297
MAX	503	768	4,130	3,280	6,490	1,500	2,810	1,370	3,420	2,860	1,330	445
MIN	143	378	375	760	760	760	928	567	352	451	259	226
CFSM	.36	.64	2.22	1.40	2.71	1.32	1.68	1.10	1.37	1.34	.66	.35
IN.	.41	.71	2.56	1.61	2.92	1.52	1.88	1.26	1.52	1.54	.76	.39

CAL YR 1967 TOTAL 327,686 MEAN 898 MAX 4,130 MIN 137 CFSM 1.07 IN 14.53
WTR YR 1968 TOTAL 385,662 MEAN 1,054 MAX 6,490 MIN 143 CFSM 1.26 IN 17.10

PEAK DISCHARGE (BASE, 2,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-13	2345	10.58	2,310	04-06	0515	11.39	2,860
12-24	0700	12.78	4,240	06-28	0115	12.11	3,450
02-04	0845	13.95	6,600				

WABASH RIVER BASIN

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

Location.--Lat 40°52'53", long 86°35'26", in NW¼ sec. 13, T. 28 N., R. 2 W., on right bank at downstream side of county road bridge, 2.9 miles upstream from mouth, 3.2 miles downstream from Fredericks ditch, and 4.8 miles northwest of Royal Center.

Drainage area.--35.0 sq mi.

Records available.--July 1959 to September 1968.

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

Average discharge.--9 years, 24.8 cfs.

Extremes.--Maximum discharge during year, 451 cfs Dec. 22 (gage height, 7.50 ft); minimum, 0.56 cfs Mar. 4 (gage height, 0.79 ft).
1959-68: Maximum discharge, about 500 cfs Mar. 5, 1963 (gage height, unknown); minimum daily, 0.5 cfs Dec. 17-22, 1963;
minimum gage height, 0.63 ft Mar. 16, 1960.
Maximum stage known, 11.2 ft in Spring of 1957, from information by local residents.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	6.7	6.1	33	304	14	17	14	53	75	16	10
2	2.3	14	31	30	430	13	16	14	62	61	15	8.7
3	2.3	11	93	27	389	12	27	14	50	50	15	7.4
4	2.1	14	55	24	303	11	243	13	43	43	37	7.1
5	2.5	9.8	53	22	219	9.8	159	12	40	38	27	7.7
6	3.0	7.1	125	21	165	12	124	12	37	33	20	6.7
7	2.3	5.7	107	20	135	12	80	12	37	30	21	5.4
8	2.8	4.8	64	19	110	12	54	12	37	29	31	4.8
9	3.3	4.8	66	18	88	14	38	14	37	27	25	4.8
10	2.5	4.8	161	18	79	14	31	13	37	26	22	5.1
11	2.3	6.7	226	17	70	12	27	16	37	23	18	5.1
12	2.1	9.1	268	16	70	12	25	15	37	22	16	4.5
13	2.3	7.7	219	16	69	18	23	15	37	21	16	4.0
14	2.8	7.1	149	15	68	10	26	16	38	19	15	4.0
15	2.3	6.7	100	15	54	12	27	18	40	18	16	4.0
16	5.7	5.7	73	15	24	50	24	168	44	18	20	3.8
17	10	13	57	15	21	38	23	156	42	17	133	5.1
18	8.4	16	57	15	19	32	23	98	42	17	79	9.1
19	5.4	12	56	19	18	29	22	69	45	16	44	8.7
20	3.8	10	50	18	17	28	25	53	45	15	31	8.0
21	2.8	9.8	280	17	18	29	24	46	47	14	25	6.4
22	2.3	10	436	18	17	30	21	41	47	14	21	7.1
23	2.1	10	362	18	17	27	19	52	51	14	18	7.4
24	2.3	9.8	263	19	17	28	17	68	130	37	16	6.7
25	4.0	9.1	187	19	16	43	16	56	273	41	14	6.1
26	3.0	8.0	131	22	16	46	17	53	316	26	13	5.4
27	4.0	7.1	117	52	16	39	17	85	252	21	12	5.4
28	3.8	6.4	86	224	15	31	16	68	176	18	11	5.1
29	3.3	6.3	56	294	15	26	16	62	121	16	9.8	4.5
30	2.8	6.2	46	332	-----	23	15	53	88	15	9.1	4.5
31	3.3	-----	42	272	-----	22	-----	46	-----	16	8.4	-----
TOTAL	104.4	259.4	4,022.1	1,680	2,799	708.8	1,252	1,384	2,341	830	774.3	182.6
MEAN	3.37	8.65	130	54.2	96.5	22.9	41.7	44.6	78.0	26.8	25.0	6.09
MAX	10	16	436	332	430	50	243	168	316	75	133	10
MIN	2.1	4.8	6.1	15	15	9.8	15	12	37	14	8.4	3.8
CFSM	.10	.25	3.71	1.55	2.76	.65	1.19	1.28	2.23	.76	.71	.17
IN.	.11	.28	4.27	1.79	2.97	.75	1.33	1.47	2.49	.88	.82	.19
CAL YR 1967	TOTAL 12,027.5	MEAN 33.0	MAX 436	MIN 1.5	CFSM .94	IN 12.78						
WTR YR 1968	TOTAL 16,337.6	MEAN 44.6	MAX 436	MIN 2.1	CFSM 1.28	IN 17.36						

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-12	0945	5.37	276	04-04	1215	5.18	260
12-22	0230	7.50	451	06-25	2345	6.07	332
02-02	0945	7.38	440				

WABASH RIVER BASIN

53

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

Location.--Lat 40°59'03", long 86°51'43", in NE¼ sec. 10, T. 29 N., R. 4 W., on right bank at downstream side of county road bridge, 1.1 miles east of Francesville, 1.6 miles downstream from unnamed tributary from right bank, and 10.2 miles upstream from mouth.

Drainage area.--145 sq mi.

Records available.--August 1959 to September 1968.

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.--9 years, 135 cfs.

Extremes.--Maximum discharge during year, 2,030 cfs Feb. 2 (gage height, 15.90 ft); minimum, 18 cfs Oct. 4 (gage height, 1.34 ft).
1959-68: Maximum discharge, 2,750 cfs Dec. 25, 1965 (gage height, 15.14 ft, from floodmarks); minimum discharge 4.0 cfs Oct. 3, 1964 (gage height, 1.17 ft).
Maximum stage known, about 18.60 ft in Spring of 1957, from information by local residents.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	57	57	160	1,260	88	151	125	221	329	56	60
2	20	89	75	150	1,990	87	149	121	251	302	54	61
3	20	93	210	140	1,540	86	202	118	193	224	49	60
4	19	116	212	130	1,270	88	1,720	111	157	186	204	56
5	20	100	212	120	858	95	1,500	106	139	160	225	54
6	20	83	206	115	590	92	1,200	103	127	140	130	49
7	20	75	222	110	500	86	660	100	121	127	98	47
8	21	68	181	105	465	89	439	94	112	139	85	46
9	22	64	178	100	390	86	338	97	106	208	78	46
10	22	61	313	92	289	90	283	94	100	156	74	47
11	22	65	436	90	260	92	247	102	95	135	67	48
12	21	70	686	85	230	96	216	103	90	121	60	48
13	22	67	497	84	210	100	191	94	88	108	59	46
14	24	66	367	82	190	105	201	98	84	101	56	42
15	28	63	286	82	170	139	217	115	84	110	53	41
16	41	60	227	82	160	531	192	938	83	100	89	41
17	53	73	200	82	150	398	188	554	78	88	558	41
18	57	89	212	82	140	331	200	387	73	87	517	47
19	47	76	215	82	130	300	181	323	71	85	250	51
20	44	69	199	80	120	290	204	268	66	78	165	56
21	40	68	1,240	80	110	284	190	223	63	73	126	55
22	37	70	1,640	80	105	280	166	194	65	70	106	50
23	35	73	1,200	80	100	236	152	254	66	69	96	52
24	35	70	629	82	100	229	147	283	96	77	86	52
25	39	66	469	90	95	262	139	226	1,060	82	78	54
26	37	62	386	180	92	308	153	219	1,640	68	72	50
27	48	57	295	266	90	291	178	313	1,280	67	70	48
28	60	56	243	588	90	226	158	269	902	65	68	45
29	53	56	207	1,060	90	191	145	277	534	60	66	44
30	47	56	186	1,140	-----	169	134	242	375	57	63	43
31	46	-----	178	812	-----	166	-----	192	-----	58	61	-----
TOTAL	1,041	2,138	11,864	6,511	11,784	5,911	10,259	6,843	8,420	3,730	3,819	1,480
MEAN	33.6	71.3	383	210	406	191	342	221	281	120	123	49.3
MAX	60	116	1,640	1,140	1,990	531	1,720	938	1,640	329	558	61
MIN	19	56	57	80	90	86	134	94	63	57	49	41
CFSM	.23	.49	2.64	1.45	2.80	1.32	2.36	1.52	1.94	.83	.85	.34
IN.	.27	.55	3.04	1.67	3.02	1.52	2.63	1.76	2.16	.96	.98	.38

CAL YR 1967 TOTAL 61,810 MEAN 169 MAX 1,640 MIN 16 CFSM 1.17 IN 15.85
WTR YR 1968 TOTAL 73,800 MEAN 202 MAX 1,990 MIN 19 CFSM 1.39 IN 18.93

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	0615	15.33	1,940	04-05	0045	15.26	1,920
01-30	0500	12.01	1,400	05-16	1515	11.08	1,250
02-02	1700	15.90	2,030	06-26	1345	14.17	1,750

WABASH RIVER BASIN

3-3325. Tippecanoe River near Monticello, Ind.

Location.--Lat 40°46'48", long 86°45'36", in sec. 21, T. 27 N., R. 3 W., at Norway plant of Northern Indiana Public Service Co., 2 miles north of Monticello.

Drainage area.--1,710 sq mi.

Records available.--October 1931 to September 1968.

Average discharge.--37 years, 1,451 cfs.

Extremes.--Maximum daily discharge during year, 16,700 cfs Feb. 2; minimum daily, 239 cfs Oct. 10.
1931-68: Maximum daily discharge, 16,800 cfs June 13, 1958; minimum daily, 103 cfs July 27, 1934.

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

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	283	902	702	2,160	10,900	1,400	1,880	1,430	2,310	4,610	1,000	801
2	283	416	966	1,860	16,700	1,180	1,900	1,780	2,680	4,670	916	570
3	283	768	1,430	2,140	14,100	1,180	2,140	1,390	2,310	3,640	825	686
4	326	1,200	1,530	1,650	11,900	1,290	9,000	1,280	2,160	3,160	970	507
5	348	1,110	1,010	1,520	10,700	1,140	8,280	1,140	1,810	3,020	1,590	687
6	326	1,020	2,270	1,800	9,790	1,180	6,640	1,110	1,760	2,520	1,680	521
7	261	916	2,860	1,810	8,070	1,140	5,360	1,070	1,430	2,300	1,090	521
8	261	916	2,380	1,220	7,260	1,100	4,620	1,130	1,430	2,100	1,070	521
9	306	817	2,570	1,600	5,930	1,480	3,940	1,170	1,430	2,100	1,170	521
10	239	702	3,190	1,580	4,050	1,480	3,250	916	1,160	1,960	1,220	521
11	352	916	4,750	1,640	2,700	1,290	2,930	1,170	1,130	1,590	916	521
12	283	884	6,610	1,600	2,100	1,400	2,530	916	1,020	1,600	701	521
13	413	800	6,060	1,640	3,110	1,360	2,280	1,110	1,020	1,430	719	521
14	326	817	5,010	1,600	3,060	1,400	2,380	1,020	950	1,430	850	521
15	347	784	4,340	1,460	3,050	1,250	2,310	1,120	914	1,430	567	521
16	521	768	3,710	1,570	2,960	1,480	2,170	5,300	959	1,460	916	521
17	521	784	3,060	1,320	2,270	2,550	2,170	4,940	1,040	1,170	4,180	521
18	636	916	3,060	1,430	1,920	2,820	2,040	3,540	718	1,410	4,920	521
19	653	784	2,890	1,370	1,740	3,080	2,230	2,840	916	1,110	3,030	702
20	554	867	2,620	1,430	2,060	2,880	2,040	2,770	653	1,110	2,190	521
21	735	916	8,820	1,650	1,620	2,810	2,280	2,330	883	916	1,750	834
22	620	850	12,900	1,720	1,700	2,590	2,040	2,230	669	1,080	1,370	702
23	586	801	9,040	2,000	1,360	2,680	2,040	2,280	731	1,000	1,180	653
24	746	834	7,730	1,980	1,550	2,420	1,710	2,700	1,180	1,640	916	834
25	559	768	7,980	1,530	1,700	2,470	1,620	2,360	5,090	1,700	1,110	603
26	521	751	6,470	1,530	1,720	2,550	1,680	2,310	8,170	1,600	652	521
27	702	669	5,110	1,820	1,590	2,980	1,800	2,770	7,180	1,370	850	704
28	685	984	4,780	4,690	1,550	2,860	1,620	2,500	6,610	1,150	685	616
29	603	669	3,780	7,740	1,210	2,830	1,700	2,510	6,210	916	653	616
30	735	653	3,700	9,730	-----	2,530	1,580	2,490	5,180	916	751	568
31	768	-----	3,110	8,180	-----	2,230	-----	2,060	-----	1,070	521	-----
TOTAL	14,782	24,982	134,438	74,970	138,370	61,030	88,160	63,682	69,703	57,178	40,958	17,898
MEAN	477	833	4,337	2,418	4,771	1,969	2,939	2,054	2,323	1,844	1,321	597
MAX	768	1,200	12,900	9,730	16,700	3,080	9,000	5,300	8,170	4,670	4,920	834
MIN	239	416	702	1,220	1,210	1,100	1,580	916	653	916	521	507

CAL YR 1967 TOTAL 664,298 MEAN 1,820 MAX 12,900 MIN 196
WTR YR 1968 TOTAL 786,151 MEAN 2,148 MAX 16,700 MIN 239

3-3330. Tippecanoe River near Delphi, Ind.

Location.--Lat 40°37'02", long 86°45'39", in sec. 16, T. 25 N., R. 3 W., on right bank 2 miles northeast of Springboro, 2 miles downstream from Big Creek, and 5 miles northwest of Delphi.

Drainage area.--1,857 sq mi.

Records available.--March to December 1903, March to December 1904, March 1905 to July 1906, November and December 1908, July 1939 to September 1968. 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 $\frac{1}{2}$ miles downstream at different datum. June 23, 1939 to Nov. 28, 1962, graphic water-stage recorder at present site and datum.

Average discharge.--29 years (1939-68), 1,573 cfs.

Extremes.--Maximum discharge during year, 20,600 cfs Feb. 2 (gage height, 14.36 ft); minimum 222 cfs Oct. 10, 11, 14, 15 (gage height, 2.52 ft).

1903-6, 1908, 1939-68: 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, $\frac{1}{2}$ miles upstream.

Remarks.--Record good except for winter period, which is fair. Flow regulated by powerplant above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	406	639	900	2,700	11,100	1,540	2,160	1,650	2,640	4,730	1,580	938
2	233	996	1,150	1,900	17,900	1,510	1,790	1,470	2,550	4,660	1,110	751
3	230	803	1,450	2,400	14,400	1,220	2,390	1,460	2,440	3,470	1,170	732
4	374	1,220	1,650	1,900	11,900	1,430	8,820	1,250	2,410	3,310	1,070	500
5	400	994	1,650	1,550	10,800	1,430	9,020	1,380	2,210	2,970	1,970	870
6	231	1,130	2,300	1,950	9,690	1,440	7,050	1,190	1,960	2,590	1,950	488
7	230	969	2,900	1,800	8,370	1,430	5,940	1,230	1,280	2,290	1,200	647
8	328	970	2,700	1,500	7,370	1,260	4,640	1,090	1,580	2,310	1,300	684
9	300	724	2,500	1,750	6,070	1,570	4,270	1,330	1,660	2,140	1,400	521
10	241	890	3,000	1,600	5,140	1,610	3,260	1,140	1,300	1,910	1,810	757
11	419	814	5,200	1,700	4,950	1,430	2,860	1,210	1,150	1,800	1,200	578
12	229	987	7,200	1,780	4,940	1,830	2,550	1,110	1,160	1,720	804	493
13	528	602	6,000	1,940	4,330	1,260	2,480	1,360	1,160	1,460	826	493
14	318	768	5,200	1,780	3,300	1,550	2,430	1,100	1,100	1,530	979	743
15	356	868	4,450	1,690	3,000	1,550	2,330	1,340	1,070	1,490	761	521
16	741	787	3,760	2,090	3,010	2,540	2,150	7,360	1,090	1,590	1,120	494
17	604	964	3,300	1,650	2,400	2,980	2,380	5,500	1,340	1,350	5,450	786
18	498	967	3,290	1,620	2,070	2,980	2,220	3,900	840	1,400	5,800	503
19	752	818	2,840	1,590	1,940	2,810	2,300	3,130	1,010	1,240	3,630	770
20	487	712	2,960	1,650	2,190	2,850	2,170	3,000	890	1,140	2,440	726
21	769	988	8,460	1,800	1,850	2,920	2,360	2,470	999	1,080	2,140	933
22	484	986	14,700	1,900	1,690	2,600	2,240	2,520	703	1,080	1,440	726
23	640	645	9,800	2,430	1,740	2,580	1,990	2,540	1,080	1,150	1,400	1,030
24	769	960	8,050	2,070	1,800	2,440	1,800	3,050	1,250	2,170	1,190	672
25	632	780	7,780	1,820	1,850	2,600	1,960	2,500	5,130	2,270	1,330	752
26	379	900	6,200	1,810	1,790	2,900	1,640	2,700	8,330	1,740	653	696
27	885	720	5,600	2,090	1,830	3,000	1,830	3,000	6,880	1,750	1,080	754
28	532	730	5,300	4,870	1,610	2,770	1,780	2,740	6,710	1,300	662	568
29	677	720	4,100	8,090	1,510	2,740	1,810	2,690	5,900	1,110	725	705
30	733	640	3,700	10,200	-----	2,140	1,610	2,650	4,510	1,100	854	645
31	813	-----	3,500	8,390	-----	2,240	-----	2,220	-----	1,550	639	-----
TOTAL	15,218	25,691	141,590	82,010	150,540	65,150	92,230	71,280	72,341	61,400	49,683	20,476
MEAN	491	856	4,567	2,645	5,191	2,102	3,074	2,299	2,411	1,981	1,603	683
MAX	885	1,220	14,700	10,200	17,900	3,000	9,020	7,360	8,330	4,730	5,800	1,030
MIN	229	602	900	1,500	1,510	1,220	1,610	1,090	703	1,080	639	488
CFSM	.26	.46	2.46	1.42	2.80	1.13	1.66	1.24	1.30	1.07	.86	.37
IN.	.30	.51	2.84	1.64	3.01	1.30	1.85	1.43	1.45	1.23	.99	.41
CAL YR 1967	TOTAL 694,772			MEAN 1,903	MAX 14,700	MIN 193	CFSM 1.03	IN 13.91				
WTR YR 1968	TOTAL 847,609			MEAN 2,316	MAX 17,900	MIN 229	CFSM 1.25	IN 16.98				

WABASH RIVER BASIN

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 Howard 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 1968.

Gage.--Digital water-stage recorder. Datum of 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.--7 years, 103 cfs.

Extremes.--Maximum discharge during year, 3,150 cfs Feb. 2 (gage height, 11.07 ft); minimum, 1.4 cfs Oct. 2, 3; minimum gage height, 1.49 ft Sept. 15, 16.

1961-68: Maximum discharge, 4,160 cfs Apr. 20, 1964; maximum gage height, 11.98 ft Jan. 26, 1962; minimum, 0.9 cfs Oct. 12, 1966.

Maximum stage known, about 18 ft March 1913, from information by local residents.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	7.0	3.9	100	1,240	30	113	36	206	57	9.2	7.3
2	1.5	8.0	22	86	2,920	31	101	34	408	46	8.4	8.8
3	1.5	7.7	265	76	1,870	25	107	35	370	39	8.8	7.3
4	1.7	7.7	322	66	1,020	23	628	33	247	32	11	6.7
5	1.7	6.7	196	58	642	26	819	28	180	29	11	6.7
6	1.7	6.1	180	53	464	30	440	23	143	25	9.6	6.4
7	2.0	5.5	185	48	385	26	322	20	116	22	8.4	5.8
8	2.4	4.9	153	45	327	23	246	20	98	20	9.6	5.5
9	2.6	4.6	109	42	274	28	174	29	84	18	32	5.5
10	2.6	4.4	161	40	201	30	138	31	73	29	110	6.1
11	2.6	4.6	598	38	176	26	116	33	66	42	42	6.1
12	2.4	4.6	667	36	156	24	98	41	63	28	20	5.8
13	2.6	4.1	488	35	119	21	87	37	54	20	14	5.5
14	3.1	4.1	334	34	96	21	85	36	46	18	11	5.2
15	3.6	3.9	250	32	92	26	93	40	48	16	10	5.2
16	4.9	3.6	201	31	79	80	84	143	45	16	10	4.9
17	7.7	4.6	170	30	69	265	79	156	39	14	21	5.2
18	7.3	4.9	168	30	70	242	74	107	34	13	26	7.0
19	5.8	4.6	188	30	56	212	64	87	30	12	18	7.3
20	4.6	4.4	170	30	55	218	70	73	26	11	12	6.7
21	3.9	4.4	795	68	48	249	94	63	23	11	10	6.1
22	3.4	4.4	2,730	176	44	270	80	56	22	10	8.8	6.4
23	3.4	4.4	1,550	233	39	236	75	135	22	10	8.4	8.0
24	3.9	4.1	756	198	35	214	68	497	54	10	7.3	6.7
25	5.8	4.1	493	152	34	378	58	502	287	11	7.0	7.3
26	6.1	3.9	382	117	32	418	50	402	354	11	6.7	6.7
27	6.4	3.6	274	94	34	321	46	692	238	11	6.4	5.8
28	6.4	3.4	207	450	34	236	40	535	147	11	6.4	5.2
29	5.5	3.4	162	979	31	182	37	370	100	9.2	6.1	4.9
30	4.9	3.6	132	1,620	-----	144	37	287	73	8.4	5.8	4.9
31	5.5	-----	113	1,400	-----	131	-----	222	-----	8.8	5.8	-----
TOTAL	119.1	145.3	12,424.9	6,427	10,642	4,186	4,523	4,803	3,696	618.4	480.7	187.0
MEAN	3.84	4.84	401	207	367	135	151	155	123	19.9	15.5	6.23
MAX	7.7	8.0	2,730	1,620	2,920	418	819	692	408	57	110	8.8
MIN	1.5	3.4	3.9	30	31	21	37	20	22	8.4	5.8	4.9
CFSM	.03	.03	2.71	1.40	2.48	.91	1.02	1.05	.83	.13	.10	.04
IN.	.03	.04	3.12	1.62	2.67	1.05	1.14	1.21	.93	.16	.12	.05

CAL YR 1967 TOTAL 48,023.9 MEAN 132 MAX 2,730 MIN 1.5 CFSM .89 IN 12.07
WTR YR 1968 TOTAL 48,252.4 MEAN 132 MAX 2,920 MIN 1.5 CFSM .89 IN 12.13

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	0700	10.81	2,990	02-02	1030	11.07	3,150

WABASH RIVER BASIN

57

3-3336. Kokomo Creek near Kokomo, Ind.

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

Drainage area.--24.3 sq mi.

Records available.--July 1959 to September 1968.

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.--9 years, 16.6 cfs.

Extremes.--Maximum discharge during year, 472 cfs Feb. 2 (gage height, 7.71 ft); minimum, 0.11 cfs Oct. 3, minimum gage height, 1.43 ft Aug. 28, 29.
1959-68: Maximum discharge, 1,040 cfs Apr. 20, 1964 (gage height, 9.88 ft); minimum, that of Oct. 3, 1967; minimum gage height, 1.30 ft Aug. 12, 27, 1959.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	2.2	.30	11	262	4.2	12	5.9	22	3.8	1.9	1.5
2	.13	1.8	8.1	11	453	4.4	12	5.5	30	3.4	1.7	1.9
3	.12	1.5	58	10	297	3.7	13	5.8	25	3.1	1.8	1.6
4	.15	1.5	33	8.8	126	3.7	317	5.4	20	3.0	2.3	1.4
5	.17	1.3	23	7.4	79	4.4	154	4.8	17	2.9	1.8	1.6
6	.19	.93	26	7.4	57	4.8	68	4.4	15	2.7	1.7	1.5
7	.35	.75	25	6.8	42	4.4	37	4.1	13	2.6	1.7	1.5
8	.93	.59	21	6.2	34	4.2	26	4.2	12	2.5	2.2	1.3
9	1.4	.59	18	6.6	28	4.5	20	5.8	10	2.5	5.4	1.3
10	1.4	.59	36	6.4	21	4.5	17	5.2	9.4	2.8	1.9	1.4
11	1.4	.67	105	6.0	20	3.9	14	5.7	8.7	2.6	1.1	1.6
12	1.3	.67	102	5.6	16	3.7	13	6.0	8.1	2.5	7.2	1.6
13	1.4	.67	46	6.0	13	3.4	11	5.4	7.1	2.4	5.1	1.5
14	1.6	.67	30	6.2	11	3.9	12	5.1	6.6	2.3	4.3	1.6
15	1.6	.51	24	6.0	11	4.4	13	6.0	6.8	2.2	3.6	1.5
16	1.7	.43	21	5.0	9.9	14	11	8.0	6.8	2.5	4.3	1.4
17	3.0	1.1	19	4.7	8.1	20	11	8.6	6.1	2.1	9.7	1.4
18	.93	.93	21	4.7	7.4	19	9.9	7.5	5.5	2.0	8.4	1.6
19	.25	.75	22	5.2	7.0	19	9.0	7.1	5.1	2.0	5.7	1.4
20	.17	.67	21	5.2	7.2	21	11	6.6	4.7	1.9	2.2	1.4
21	.17	.75	222	13	6.2	23	12	5.9	4.5	1.8	1.8	1.3
22	.15	.75	357	22	5.4	24	11	5.5	4.4	1.8	1.5	1.3
23	.43	.67	170	27	5.2	22	10	14	4.2	1.8	1.5	1.5
24	.93	.59	61	20	5.0	22	9.2	68	4.2	1.9	1.5	1.6
25	1.9	.59	41	16	4.8	44	8.1	38	5.8	2.1	1.4	1.3
26	1.8	.43	30	13	4.5	40	7.3	38	6.4	2.1	1.3	1.1
27	1.9	.35	22	16	4.8	27	6.7	67	6.5	2.1	1.2	.93
28	1.7	.25	19	110	4.8	22	6.2	40	5.3	2.0	1.2	.93
29	1.7	.25	17	224	4.4	18	6.0	30	4.6	1.8	1.2	.93
30	1.5	.35	14	299	-----	14	6.1	28	4.1	1.7	1.2	.73
31	1.7	-----	13	207	-----	14	-----	22	-----	1.9	1.2	-----
TOTAL	32.22	23.80	1,625.40	1,103.2	1,554.7	425.1	873.5	473.5	288.0	72.8	115.7	41.62
MEAN	1.04	.79	52.4	35.6	53.6	13.7	29.1	15.3	9.63	2.35	3.73	1.39
MAX	3.0	2.2	357	299	453	44	317	68	30	3.8	19	1.9
MIN	.12	.25	.30	4.7	4.4	3.4	6.0	4.1	4.1	1.7	1.2	.73
CFSM	.04	.03	2.16	1.46	2.21	.56	1.20	.63	.40	.10	.15	.06
IN.	.05	.04	2.49	1.69	2.38	.65	1.34	.72	.44	.11	.16	.06

CAL YR 1967 TOTAL 8,504.24 MEAN 23.3 MAX 357 MIN .12 CFSM .96 IN 13.02
WTR YR 1968 TOTAL 6,630.44 MEAN 18.1 MAX 453 MIN .12 CFSM .75 IN 10.15

PEAK DISCHARGE (BASE, 260 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	2145	7.00	401	02-02	0930	7.71	472
01-30	0845	5.97	320	04-04	0445	7.41	441

WABASH RIVER BASIN

3-3337. Wildcat Creek at Kokomo, Ind.

Location.--Lat 40°28'24", long 86°09'26", in NW¼ sec. 2, T. 23 N., R. 3 E., on right bank in Kokomo, 0.3 mile downstream from Kokomo Creek, 0.4 mile upstream from Dixon Road Bridge and on property of Continental Steel Corporation.

Drainage area.--245 sq mi.

Records available.--October 1955 to September 1968.

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

Average discharge.--13 years, 203 cfs.

Extremes.--Maximum discharge during year, 5,080 cfs Feb. 2 (gage height, 9.44 ft); minimum, 12 cfs Oct. 23 (gage height, 0.99 ft).
1955-68: Maximum discharge, 8,100 cfs Feb. 10, 1959; maximum gage height, 11.77 ft Apr. 21, 1964; minimum, 5.0 cfs Sept. 30, 1956; minimum gage height, 0.90 ft Nov. 1, 1966.

Remarks.--Record good. Some regulation at low stages for municipal water supply by regulation of Kokomo Reservoirs No. 1 and No. 2 (combined capacity 4,170 acre-ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	66	21	134	1,950	52	185	61	350	102	44	42
2	24	30	259	127	4,250	48	158	67	500	80	36	42
3	24	41	222	120	3,800	45	175	65	400	64	34	36
4	22	25	148	103	1,870	45	1,250	56	350	51	45	34
5	22	21	231	90	1,100	46	1,340	49	250	51	39	41
6	21	22	426	84	795	48	815	49	200	47	36	32
7	18	23	321	76	624	48	525	49	150	41	40	31
8	33	22	290	68	505	50	375	42	120	55	85	29
9	23	22	247	67	428	50	298	74	110	54	121	31
10	20	21	324	65	337	40	218	54	100	70	142	40
11	10	25	744	64	259	49	188	90	96	54	140	32
12	10	16	940	60	220	69	154	53	87	55	85	30
13	31	18	765	60	180	41	136	60	76	49	60	31
14	18	22	407	62	150	35	142	59	67	41	50	28
15	32	21	361	68	134	56	150	74	101	146	44	24
16	60	21	286	59	127	104	136	96	85	121	46	28
17	119	49	256	52	108	223	125	185	62	66	142	31
18	34	20	238	52	85	271	112	150	55	56	68	83
19	26	17	253	60	90	85	108	125	49	51	63	38
20	22	20	241	66	90	154	127	104	46	43	52	32
21	21	24	1,210	124	76	331	119	87	43	38	45	30
22	17	24	3,280	195	69	365	130	80	36	42	42	51
23	10	17	2,810	304	65	344	106	150	35	47	42	32
24	44	18	1,340	295	60	319	93	300	50	41	37	61
25	26	17	775	213	57	445	93	600	188	50	32	34
26	23	15	561	170	57	610	95	500	387	40	36	26
27	31	19	414	154	56	513	68	700	330	39	35	24
28	18	20	313	537	57	368	62	600	210	33	35	20
29	18	19	250	1,400	56	292	60	450	150	36	34	17
30	21	23	203	2,270	-----	229	58	300	114	36	33	19
31	34	-----	173	2,230	-----	198	-----	250	-----	60	32	-----
TOTAL	878	718	18,399	9,429	17,659	5,582	7,601	5,579	4,806	1,759	1,775	1,029
MEAN	28.3	23.9	594	304	609	180	253	180	160	56.7	57.3	34.3
MAX	119	66	3,280	2,270	4,250	610	1,340	700	500	146	142	83
MIN	17	15	21	52	56	35	58	42	35	33	32	17
CFSM	.12	.10	2.42	1.24	2.49	.73	1.03	.73	.65	.23	.23	.14
IN.	.13	.11	2.79	1.43	2.68	.85	1.15	.85	.73	.27	.27	.16
CAL YR 1967	TOTAL 84,233	MEAN 231	MAX 3,280	MIN 13	CFSM .04	IN 12.79						
WTR YR 1968	TOTAL 75,214	MEAN 206	MAX 4,250	MIN 15	CFSM .84	IN 11.42						

PEAK DISCHARGE (BASE, 2,100 CFS)

DATE	TIME	G. HT.	DISCHARGE	DATE	TIME	G. HT.	DISCHARGE
12-22	1945	8.41	3,910	02-02	2030	9.44	5,080
01-30	2230	6.79	2,460				

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 1968. 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 present site and datum.

Average discharge.--25 years, 351 cfs.

Extremes.--Maximum discharge during year, 6,040 cfs Feb. 3 (gage height, 10.02 ft); minimum, 23 cfs Oct. 2 (gage height, 1.03 ft).
1943-68: Maximum discharge, 10,200 cfs Jan. 5, 1950 (gage height, 13.3 ft), from rating curve extended above 6,700 cfs;
minimum observed, 10 cfs Sept. 25, 1944.
Flood of May 18, 1943, reached a stage of 14.0 ft, from floodmarks.

Remarks.--Record good except for winter period, which is poor. Some regulation at low stages for municipal water supply by regulation of Kokomo Reservoirs No. 1 and No. 2 (combined capacity 4,170 acre-ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	46	41	274	3,330	105	319	138	477	164	76	62
2	32	70	75	245	3,900	100	292	138	628	149	94	65
3	30	104	516	215	5,420	95	283	144	632	133	68	80
4	30	79	459	180	5,490	90	640	156	608	110	69	58
5	31	83	322	160	2,980	90	1,690	133	456	90	68	121
6	31	58	386	150	1,510	90	1,510	120	365	82	70	70
7	33	48	520	135	1,100	85	951	119	310	77	65	62
8	34	46	421	120	879	80	676	120	277	71	62	56
9	35	48	375	122	730	80	504	144	245	68	78	49
10	41	44	365	115	588	80	410	168	220	106	200	49
11	40	50	604	110	452	80	334	149	208	135	253	51
12	37	47	1,010	102	390	75	258	182	203	101	218	55
13	41	46	1,090	100	350	70	265	149	184	89	154	56
14	41	44	846	98	300	70	256	140	166	83	106	55
15	46	41	612	98	275	70	265	156	174	73	92	54
16	42	44	480	90	240	100	250	393	235	170	83	45
17	75	46	407	80	220	280	245	295	215	203	195	45
18	164	52	386	80	210	379	233	310	174	129	203	51
19	108	71	375	94	190	386	215	274	158	104	149	92
20	64	50	375	149	180	271	218	256	140	95	115	78
21	50	46	1,240	194	170	347	235	225	122	86	94	63
22	44	46	3,760	340	160	484	223	196	115	80	60	58
23	40	53	4,160	435	150	504	225	301	104	84	71	54
24	38	54	3,650	456	140	463	203	730	104	304	69	74
25	41	50	2,210	417	130	548	186	924	162	163	66	57
26	68	49	1,110	368	120	726	184	874	280	132	57	86
27	59	43	784	310	120	766	182	793	382	102	52	58
28	54	39	600	667	110	604	162	964	331	86	53	55
29	52	38	463	1,720	105	473	153	865	253	71	54	53
30	43	41	382	2,780	-----	393	147	694	198	62	54	44
31	41	-----	325	3,410	-----	337	-----	536	-----	66	53	-----
TOTAL	1,521	1,576	28,349	13,817	29,939	8,411	11,763	10,786	8,126	3,468	3,173	1,860
MEAN	49.1	52.5	914	446	1,032	271	392	348	271	112	102	62.0
MAX	164	104	4,160	3,410	5,490	766	1,690	964	632	304	253	121
MIN	30	38	41	80	105	70	147	119	104	62	52	44
CFSM	.13	.13	2.34	1.14	2.65	.70	1.01	.89	.69	.29	.26	.16
IN.	.15	.15	2.70	1.32	2.85	.80	1.12	1.03	.77	.33	.30	.18

CAL YR 1967 TOTAL 131,770 MEAN 361 MAX 4,160 MIN 25 CFSM .93 IN 12.57
WTR YR 1968 TOTAL 122,789 MEAN 335 MAX 5,490 MIN 30 CFSM .86 IN 11.71

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	2300	9.21	4,790	02-03	2400	10.02	6,040

WABASH RIVER BASIN

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

Location.--Lat 40°25'04", long 86°46'05", in SW¼ sec. 21, T. 23 N., R. 3 W., on right bank 40 ft upstream from bridge on State Highway 26, one-half mile upstream from Middle Fork, 4½ miles upstream from mouth, and 5 miles east of Lafayette.

Drainage area.--246 sq mi.

Records available.--October 1943 to September 1968. 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.--25 years, 226 cfs.

Extremes.--Maximum discharge during year, 8,550 cfs Dec. 22 (gage height, 13.47 ft); minimum, 21 cfs Oct. 2-4 (gage height, 1.41 ft).

1943-68: Maximum discharge, 12,600 cfs June 10, 1958 (gage height, 15.28 ft), from rating curve extended above 6,000 cfs on basis of contracted-opening measurement at 16.8 ft; minimum, 15 cfs Sept. 18, 19, 22, 1944.

Flood in May 1943 reached a stage of 16.8 ft, from floodmarks (discharge, 17,900 cfs, by contracted-opening method).

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	38	35	173	1,820	68	173	95	308	104	51	57
2	22	44	75	198	3,860	71	155	92	397	97	45	64
3	21	51	628	187	2,560	64	159	88	397	85	46	46
4	22	49	505	168	1,540	62	680	86	324	78	90	43
5	22	50	341	155	1,060	67	1,090	81	249	73	132	108
6	24	43	365	146	812	70	781	76	205	70	81	113
7	27	38	351	130	676	67	540	73	182	67	62	76
8	27	37	279	125	560	64	421	70	161	61	311	62
9	27	36	223	123	467	70	317	103	146	59	151	55
10	28	35	282	110	337	73	252	108	134	73	200	54
11	27	36	516	100	276	68	214	101	125	144	175	54
12	26	35	952	92	263	68	187	110	125	106	115	51
13	27	35	632	96	217	64	171	97	113	81	88	49
14	30	33	383	104	187	62	164	90	103	67	71	47
15	33	33	272	106	161	65	175	113	182	58	65	45
16	32	32	211	80	144	130	159	344	612	52	67	44
17	54	36	180	66	125	220	157	266	341	49	548	46
18	94	41	182	66	123	228	153	192	225	46	449	58
19	52	41	195	85	136	211	140	164	177	44	254	61
20	41	37	185	103	115	231	146	149	149	43	159	54
21	35	36	2,090	173	97	260	185	132	132	40	113	49
22	33	36	6,420	393	115	298	180	119	125	40	90	49
23	32	36	2,450	460	121	285	155	298	119	50	76	47
24	33	36	1,240	379	90	249	144	1,040	110	45	67	46
25	38	38	907	288	79	411	132	947	175	157	58	47
26	46	34	692	237	75	484	121	664	285	168	52	45
27	40	33	523	237	78	369	113	656	214	92	49	43
28	38	32	418	844	76	276	106	519	166	70	47	41
29	38	32	330	2,090	73	225	99	414	138	54	45	40
30	35	34	282	2,820	-----	187	97	421	117	46	44	40
31	35	-----	243	2,080	-----	175	-----	334	-----	50	41	-----
TOTAL	1,062	1,127	22,387	12,414	16,243	5,242	7,566	8,042	6,236	2,269	3,842	1,634
MEAN	34.3	37.6	722	400	560	169	252	259	208	73.2	124	54.5
MAX	94	51	6,420	2,820	3,860	484	1,090	1,040	612	168	548	113
MIN	21	32	35	66	73	62	97	70	103	40	41	40
CFSM	.14	.15	2.94	1.63	2.28	.69	1.03	1.05	.84	.30	.50	.22
IN.	.16	.17	3.38	1.88	2.46	.79	1.14	1.22	.94	.34	.58	.25

CAL YR 1967 TOTAL 80,877 MEAN 222 MAX 6,420 MIN 20 CFSM .90 IN 12.23
WTR YR 1968 TOTAL 88,064 MEAN 241 MAX 6,420 MIN 21 CFSM .98 IN 13.31

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	0200	13.47	8,550	02-02	1030	10.43	4,460
01-30	1245	8.60	3,060				

3-3350. Wildcat Creek near Lafayette, Ind.

Location.--Lat 40°26'26", long 86°49'46", on north half of line between 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 1968.

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.--14 years, 690 cfs.

Extremes.--Maximum discharge during year, 13,900 cfs Dec. 22 (gage height, 16.22 ft); minimum discharge, 72 cfs Oct. 4, 5, (gage height, 2.36 ft).
1954-68: Maximum discharge, 25,000 cfs June 10, 1958 (gage height, 21.52 ft), from rating curve extended above 18,000 cfs by logarithmic plotting; minimum, 46 cfs Sept. 27-29, 1954, Sept. 6, 7, 1964; minimum gage height, 2.22 ft Sept. 3, 4, 1966.

Remarks.--Record good except for winter period, which is fair. Some regulation during low flow for municipal water supply for Kokomo. Record of suspended sediment loads for water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89	119	114	520	6,320	200	635	276	986	338	170	152
2	85	131	171	440	10,000	190	577	270	1,320	302	175	172
3	77	168	1,050	390	8,650	187	577	270	1,240	281	170	158
4	74	140	1,150	350	7,710	180	1,390	285	1,150	257	194	155
5	77	155	740	310	5,630	175	2,930	267	890	236	236	230
6	79	150	790	285	3,150	170	2,700	249	715	215	200	245
7	81	128	974	260	2,320	168	1,840	237	615	206	175	178
8	89	121	790	245	1,830	162	1,300	237	542	197	329	155
9	91	117	645	250	1,490	160	980	279	486	191	260	142
10	89	119	700	235	1,100	160	785	324	438	209	335	133
11	95	121	1,210	210	910	155	645	302	410	302	410	133
12	93	121	2,410	202	800	147	565	320	400	263	341	135
13	95	117	2,100	200	710	140	510	313	379	218	278	135
14	101	114	1,590	195	620	140	478	270	341	203	233	133
15	106	112	1,200	185	540	175	500	430	380	191	206	128
16	114	112	968	170	470	418	474	1,110	1,250	180	212	124
17	138	123	835	160	430	630	460	795	770	302	778	124
18	205	128	785	160	400	730	445	622	526	233	745	138
19	211	143	790	250	370	795	410	554	432	197	449	150
20	145	138	785	360	340	665	415	506	368	180	323	180
21	121	126	3,050	564	320	725	455	450	332	172	266	150
22	110	121	12,300	790	310	969	450	390	317	162	227	140
23	103	126	9,070	1,040	290	986	430	735	296	162	200	138
24	101	128	6,040	1,200	270	908	398	2,330	290	281	180	140
25	110	131	4,280	880	245	1,160	359	1,940	449	338	170	142
26	112	126	2,100	720	230	1,410	351	1,900	590	329	158	148
27	140	121	1,500	625	220	1,390	338	1,730	648	257	145	145
28	128	112	1,170	1,950	210	1,150	320	1,680	585	212	138	126
29	123	110	900	5,210	205	920	300	1,530	470	185	138	124
30	121	112	730	7,700	-----	765	285	1,390	393	162	135	119
31	112	-----	610	6,740	-----	680	-----	1,120	-----	170	135	-----
TOTAL	3,415	3,790	61,547	32,796	56,090	16,810	22,302	23,111	18,008	7,131	8,111	4,472
MEAN	110	126	1,985	1,058	1,934	542	743	746	600	230	262	149
MAX	211	168	12,300	7,700	10,000	1,410	2,930	2,330	1,320	338	778	245
MIN	74	110	114	160	205	140	285	237	290	162	135	119
CFSM	.14	.16	2.51	1.34	2.45	.69	.94	.94	.76	.29	.33	.19
IN.	.16	.18	2.89	1.54	2.64	.79	1.05	1.09	.85	.34	.38	.21
CAL YR 1967	TOTAL 260,437			MEAN 714	MAX 12,300	MIN 66	CFSM .90	IN 12.24				
WTR YR 1968	TOTAL 257,583			MEAN 704	MAX 12,300	MIN 74	CFSM .89	IN 12.11				

PEAK DISCHARGE (BASE, 6,300 CFS)

NOTE.--No gage-height record Dec. 26 to Jan. 20, Feb. 10 to Mar. 4.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	0800	16.22	13,900	02-02	1500	14.48	11,000
01-30	1530	12.30	8,120				

WABASH RIVER BASIN

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 1968. 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.--45 years (1923-68), 6,203 cfs.

Extremes.--Maximum discharge during year, 68,500 cfs Feb. 3 (gage height, 22.25 ft); minimum, 1,140 cfs Oct. 24, 26 (gage height, 1.45 ft).

1901-3, 1923-68: Maximum discharge, 131,000 cfs May 19, 1943 (gage height, 28.47 ft); minimum, 265 cfs Jan. 12, 1954; minimum gage height, 0.24 ft Aug. 15, 18, 1901.

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

Remarks.--Record good. Natural flow of stream affected by storage reservoirs and power development. Records of water temperature and suspended sediment loads for water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1250	1760	1760	9100	44800	4280	7820	3470	13300	13000	3480	1480
2	1400	1960	2070	7400	55300	3940	5110	3290	13000	10200	2600	1990
3	1220	2070	4760	6800	67100	3940	5740	3270	11700	9200	2360	1730
4	1190	2590	9820	6200	59300	3660	11100	3220	9400	7000	2310	1550
5	1320	2730	12100	5750	49800	3780	25600	2880	7600	5100	5740	1440
6	1360	2740	14000	5350	39400	3840	29700	2920	6200	5500	5440	2000
7	1190	2610	16900	5000	32300	3840	24800	2790	4800	5000	5330	1730
8	1220	2470	16300	4800	27400	3650	19300	2590	4650	4550	4550	1660
9	1310	2130	13300	4600	24200	3680	13600	2690	4300	4200	3840	1550
10	1290	2140	11900	4500	22900	4060	9960	2940	3800	3850	4400	1410
11	1240	1970	15500	4400	20500	3820	7990	2740	3550	3600	5040	1550
12	1440	2180	23500	4300	19500	3770	7240	2870	3380	3350	5390	1400
13	1270	1940	27100	4200	17300	3880	6350	2870	3220	3200	4340	1320
14	1600	1780	24200	4100	16300	3570	5800	2870	3100	3100	3400	1300
15	1730	1940	18900	4000	15300	3710	6120	2920	3270	3050	3050	1430
16	2160	1700	15200	3900	12200	4440	5830	24600	4220	3050	2690	1300
17	2210	1980	12500	3850	9620	7230	5980	40200	3940	3120	6380	1240
18	1960	2040	11400	3800	6730	9480	5660	31600	3200	2550	14500	1600
19	1800	2120	10900	3900	6100	10300	5360	21000	2770	2920	11200	2050
20	1810	1910	11000	3980	5650	10300	5440	13500	2790	2520	7400	2650
21	1840	2440	15300	4070	5350	10200	5480	10600	2470	2490	5930	2700
22	1440	2430	43800	5270	5100	9820	5100	9340	2360	2380	4540	2940
23	1560	2040	65300	6310	4850	9700	5160	8160	2550	2250	3610	2900
24	1240	2160	57200	7160	4750	9190	4820	10800	3190	2970	3410	2950
25	1810	1980	45500	7720	4680	9350	4360	12000	7990	4490	2990	2790
26	1200	2120	35000	7290	4720	11700	4130	10900	17700	3960	2360	2560
27	1420	1870	25900	5780	4400	14400	3920	11100	22000	3410	2000	2440
28	1540	1740	19400	11200	4540	14800	4040	13900	20000	2910	1960	2520
29	1610	1790	16200	24400	4280	13200	3720	13300	17400	2770	1790	2260
30	1450	1600	12400	39000	-----	11500	3700	13100	15900	2310	1530	2190
31	1540	-----	9210	46300	-----	9520	-----	13300	-----	2930	1780	-----
TOTAL	46620	62930	618320	264430	591370	222550	258930	300730	223750	130720	136330	58620
MEAN	1504	2098	19950	8530	20390	7179	8631	9701	7458	4217	4398	1954
MAX	2210	2740	65300	46300	67100	14800	29700	40200	22000	13000	14500	2950
MIN	1190	1600	1760	3800	4280	3570	3700	2590	2360	2250	1530	1240
CFSM	.208	.289	.275	.118	.281	.991	.119	.134	.103	.582	.607	.270
IN.	.24	.32	.317	.136	.303	.114	.133	.154	.115	.67	.70	.30
CAL YR 1967 TOTAL	2,612,690	MEAN	7,158	MAX	65,300	MIN	690	CFSM	.99	IN	13.39	
WTR YR 1968 TOTAL	2,915,300	MEAN	7,965	MAX	67,100	MIN	1,190	CFSM	1.10	IN	14.95	

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 1968.

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

Average discharge.--13 years, 241 cfs.

Extremes.--Maximum discharge during year, 8,230 cfs May 16 (gage height, 13.73 ft); minimum observed, 13 cfs Oct. 13; minimum gage height, 3.16 ft Oct. 4-6.
1955-68: 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, 6.5 cfs Oct. 6-8, 1966.

Remarks.--Record fair to mid-March and good thereafter.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	34	35	164	2,400	95	159	131	555	537	595	68
2	24	24	49	145	5,400	91	136	122	588	366	405	66
3	23	30	165	130	3,320	88	256	117	660	239	266	62
4	22	37	171	120	1,920	84	2,010	112	458	201	838	60
5	22	37	145	110	1,310	82	1,580	104	384	181	304	58
6	22	35	333	103	985	81	912	96	341	163	223	55
7	21	28	347	97	782	80	595	95	304	149	211	50
8	21	24	256	93	664	80	412	95	283	144	216	47
9	21	22	201	90	573	83	311	114	261	140	163	46
10	19	24	214	87	415	85	268	101	244	144	492	46
11	17	31	393	84	341	83	234	104	230	127	664	46
12	15	32	922	81	280	81	216	106	216	119	387	44
13	13	34	893	80	235	76	196	94	201	112	237	42
14	15	35	637	78	200	73	207	92	198	120	188	40
15	15	28	396	77	170	104	214	1,020	268	114	159	38
16	21	34	296	76	140	177	188	7,050	304	98	147	37
17	34	35	253	76	120	218	209	2,840	263	90	527	43
18	30	34	239	75	105	198	218	1,750	237	94	843	48
19	24	33	221	110	120	196	198	1,290	225	89	898	47
20	18	34	209	212	150	194	234	990	201	78	487	45
21	15	34	1,490	288	240	192	246	756	192	72	251	40
22	14	34	2,230	402	170	205	216	610	186	89	192	35
23	13	34	1,670	497	200	203	203	1,530	177	75	163	35
24	14	34	843	300	150	186	184	1,540	173	117	140	35
25	22	35	479	230	130	175	167	1,040	704	418	122	34
26	28	35	361	200	110	179	167	893	893	372	107	32
27	34	35	270	438	105	167	157	782	752	372	95	30
28	35	32	234	902	101	161	144	640	458	192	89	28
29	34	32	251	2,200	98	153	138	551	333	147	83	28
30	33	32	209	2,650	-----	144	136	592	266	120	75	28
31	39	-----	194	1,900	-----	181	-----	519	-----	580	71	-----
TOTAL	701	962	14,606	12,095	20,934	4,195	10,511	25,876	10,555	5,859	9,638	1,313
MEAN	22.6	32.1	471	390	722	135	350	835	352	189	311	43.8
MAX	39	37	2,230	2,650	5,400	218	2,010	7,050	893	580	898	68
MIN	13	22	35	75	98	73	136	92	173	72	71	28
CFSM	.07	.10	1.43	1.19	2.19	.41	1.06	2.54	1.07	.57	.94	.13
IN.	.08	.11	1.65	1.37	2.37	.47	1.19	2.93	1.19	.66	1.09	.15

CAL YR 1967	TOTAL	84,858.7	MEAN	232	MAX	2,840	MIN	8.5	CFSM	.71	IN	9.59
WTR YR 1968	TOTAL	117,245	MEAN	320	MAX	7,050	MIN	13	CFSM	.97	IN	13.25

PEAK DISCHARGE (BASE, 2,800 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-21	2000	9.39	3,210	02-02	1400	12.18	5,990
01-30	0800	8.87	2,800	05-16	1000	13.73	8,230

WABASH RIVER BASIN

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 1968. 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.--29 years, 6,936 cfs.

Extremes.--Maximum discharge during year, 64,300 cfs Feb. 4 (gage height, 26.22 ft); minimum daily, 1,440 cfs Oct. 9, 10. 1939-68: Maximum discharge, 147,000 cfs May 20, 1943 (gage height, 32.44 ft); minimum observed, 487 cfs Sept. 29, 1941 (gage height, 1.81 ft). Maximum stage known, 35.1 ft in March 1913, from floodmark determined by U.S. Weather Bureau (discharge, 200,000 cfs estimated).

Remarks.--Record good above 15,000 cfs and poor below. Natural flow of stream affected by reservoirs.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,570	1,760	2,010	11,000	44,500	4,850	10,500	4,300	15,800	16,600	5,240	2,230
2	1,550	1,770	2,050	9,500	53,000	4,650	9,080	4,200	15,900	13,900	4,500	2,010
3	1,530	1,970	3,000	8,400	60,700	4,550	7,760	4,000	15,800	11,700	4,000	1,890
4	1,510	2,270	6,020	7,600	63,400	4,400	12,600	3,900	14,800	8,890	11,700	1,800
5	1,500	2,790	11,300	6,800	56,000	4,300	19,400	3,700	13,300	7,440	13,200	1,900
6	1,480	2,940	14,100	6,200	49,000	4,250	24,700	3,600	10,600	6,620	11,600	1,950
7	1,470	2,640	16,900	5,700	41,700	4,250	27,800	3,500	9,390	5,930	7,890	1,900
8	1,460	2,540	18,200	5,400	36,100	4,250	27,200	3,400	8,100	5,570	7,140	1,800
9	1,440	2,450	18,000	5,200	32,000	4,250	23,400	3,550	6,710	5,260	6,050	1,750
10	1,440	2,430	15,500	5,100	29,200	4,300	17,100	3,700	5,960	5,080	5,720	1,730
11	1,460	2,420	15,700	4,900	26,400	4,300	13,000	3,800	5,450	4,650	7,340	1,700
12	1,490	2,370	21,200	4,800	23,900	4,300	9,930	3,850	4,910	4,160	7,620	1,680
13	1,520	2,350	24,700	4,700	22,100	4,300	8,470	3,700	4,520	3,830	6,620	1,660
14	1,600	2,230	27,200	4,650	19,700	4,300	7,500	3,700	4,130	3,760	5,800	1,640
15	1,700	2,090	27,400	4,550	18,800	4,300	6,960	3,800	3,950	3,660	5,100	1,620
16	1,900	2,070	24,200	4,450	17,300	5,450	6,960	9,000	5,630	3,550	4,150	1,590
17	2,240	2,050	19,500	4,350	14,600	7,120	6,900	27,400	6,580	3,500	7,500	1,570
18	2,320	2,110	15,700	4,300	11,400	9,250	6,850	34,200	5,630	3,400	13,100	1,550
19	2,050	2,140	13,800	4,400	8,720	10,800	6,700	34,200	5,100	3,350	16,100	2,100
20	1,990	2,250	13,100	4,550	7,440	11,900	6,500	28,100	4,420	3,250	12,100	2,400
21	1,940	2,360	16,200	4,700	6,560	12,100	7,000	20,300	4,700	3,200	9,340	2,650
22	1,930	2,510	25,900	5,800	6,100	12,100	6,500	13,600	3,340	3,150	7,410	2,850
23	1,900	2,470	35,700	7,100	5,800	11,900	6,200	12,200	3,210	3,110	5,520	2,900
24	1,710	2,460	52,100	8,100	5,650	11,100	5,800	16,700	3,120	3,100	4,940	2,950
25	1,680	2,430	55,700	8,900	5,500	11,000	5,500	18,800	3,640	3,780	4,100	2,950
26	1,670	2,370	49,200	9,500	5,300	11,700	5,200	16,500	14,600	5,450	3,640	2,900
27	1,710	2,270	41,100	8,700	5,150	14,100	5,000	14,500	20,500	5,160	3,100	2,750
28	1,770	2,090	34,400	13,000	5,050	16,000	4,800	16,000	22,300	4,400	2,800	2,700
29	1,890	2,050	27,800	20,500	5,000	15,800	4,600	16,800	21,400	3,940	2,740	2,600
30	1,910	2,030	22,700	27,900	-----	14,100	4,500	16,200	19,000	3,380	2,620	2,500
31	1,880	-----	14,200	36,300	-----	12,000	-----	15,900	-----	3,280	2,250	-----
TOTAL	53,210	68,680	684,580	267,050	686,070	251,970	314,410	367,100	282,490	166,050	210,930	64,220
MEAN	1,716	2,289	22,080	8,615	23,660	8,128	10,480	11,840	9,416	5,356	6,804	2,141
MAX	2,320	2,940	55,700	36,300	63,400	16,000	27,800	34,200	22,300	16,600	16,100	2,950
MIN	1,440	1,760	2,010	4,300	5,000	4,250	4,500	3,400	3,120	3,100	2,250	1,550
CFSM	.21	.28	2.69	1.05	2.88	.99	1.28	1.44	1.15	.65	.83	.26
IN.	.24	.31	3.10	1.21	3.11	1.14	1.42	1.66	1.28	.75	.96	.29
CAL YR 1967	TOTAL 2,894,630		MEAN 7,930		MAX 55,700		MIN 870		CFSM .97		IN 13.12	
WTR YR 1968	TOTAL 3,416,760		MEAN 9,335		MAX 63,400		MIN 1,440		CFSM 1.14		IN 15.48	

3-3390. Vermilion River near Danville, Ill.

Location.--Lat 40°05'53", long 87°35'37", in SE 1/4 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 1968. 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.--47 years, 889 cfs.

Extremes.--Maximum discharge during year, 20,800 cfs May 17 (gage height, 22.41 ft); minimum, 61 cfs Oct. 7.

1914-21, 1928-68: Maximum discharge, 48,700 cfs Mar. 13, 1939 (gage height, 28.59 ft); minimum daily, 2 cfs Oct. 9-12, 1920, Aug. 10, 1930.

Remarks.--Records good except those for winter periods, which are poor. Flow regulated at times by storage at Lake Vermilion on North Fork Vermilion River, 4.5 miles above station (usable capacity, 7,440 acre-ft in 1940), and by Danville sewage-disposal plant.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	138	101	700	9,770	377	632	391	2,150	1,390	2,030	129
2	64	161	228	720	13,300	422	559	364	2,540	1,240	1,360	123
3	67	187	656	740	15,400	372	589	348	2,130	1,060	760	110
4	66	187	893	680	13,700	364	2,580	335	1,790	908	10,100	115
5	66	157	757	580	8,710	365	5,370	317	1,560	722	12,400	109
6	69	167	1,270	540	4,900	379	5,890	292	1,390	552	6,590	104
7	64	154	2,220	500	3,840	367	4,170	272	1,250	509	2,480	103
8	75	146	1,910	450	3,290	336	2,340	272	1,130	494	1,910	95
9	78	146	1,430	470	2,500	355	1,730	352	1,020	712	1,520	93
10	66	137	1,490	500	1,800	370	1,320	315	906	1,180	1,280	95
11	67	139	2,700	500	1,500	359	1,250	336	785	955	2,160	95
12	71	141	4,070	490	1,200	342	1,090	312	666	466	2,400	101
13	76	133	3,950	470	1,000	318	891	306	604	414	1,280	85
14	86	139	3,330	458	765	305	778	271	546	383	555	79
15	81	136	2,130	456	802	331	795	300	1,060	342	520	77
16	93	126	1,480	434	751	552	754	8,100	5,160	321	804	76
17	130	125	1,390	414	626	1,440	749	19,100	4,230	339	734	88
18	122	126	1,380	387	515	1,340	805	12,000	2,420	358	524	108
19	142	119	1,340	391	510	1,200	890	6,720	1,720	295	482	101
20	119	121	1,160	395	500	1,210	847	3,620	1,370	270	443	106
21	102	119	4,540	438	480	1,320	828	2,550	1,130	240	376	115
22	90	112	10,800	537	470	1,300	752	2,190	980	222	338	115
23	88	107	9,570	704	460	1,280	675	4,210	853	201	307	96
24	91	109	6,490	771	450	1,080	652	9,460	772	818	280	104
25	98	107	4,000	737	450	911	601	8,770	2,960	941	257	123
26	89	104	2,800	641	442	839	567	8,470	4,930	1,290	233	156
27	97	98	1,800	685	461	785	545	6,260	4,080	998	214	143
28	118	93	1,300	3,240	440	719	504	4,190	2,290	1,070	186	111
29	108	91	1,100	8,030	411	680	440	3,740	1,780	746	159	77
30	116	99	1,000	10,600	-----	630	405	2,880	1,480	327	144	73
31	138	-----	900	10,800	-----	705	-----	2,190	-----	847	125	-----
TOTAL	2,802	3,924	78,185	47,458	89,443	21,353	39,998	109,233	55,682	20,610	52,951	3,105
MEAN	90.4	131	2,522	1,531	3,084	689	1,333	3,524	1,856	665	1,708	104
MAX	142	187	10,800	10,800	15,400	1,440	5,890	19,100	5,160	1,390	12,400	156
MIN	64	91	101	387	411	305	405	271	546	201	125	73
CFSM	.07	.10	1.97	1.20	2.41	.54	1.04	2.76	1.45	.52	1.34	.08
IN.	.08	.11	2.27	1.38	2.60	.62	1.16	3.18	1.62	.60	1.54	.09
CAL YR 1967	TOTAL 294,856	MEAN 808	MAX 10,800	MIN 53	CFSM .63	IN 8.57						
WTR YR 1968	TOTAL 524,744	MEAN 1,434	MAX 19,100	MIN 64	CFSM 1.12	IN 15.26						

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-22	1345	15.80	11,100	05-24	1645	15.86	11,000
02-03	1600	19.30	15,600	06-26	0200	10.98	6,190
04-05	2100	11.29	6,480	08-04	2030	18.25	14,000
05-17	0800	22.41	20,800				

Location.--Lat 40°06'06", long 87°07'54", in NW1/4 sec. 8, T. 19 N., R. 6 W., on downstream side of center pier of concrete bridge on county road, 1.5 miles east of Hillsboro, and 3.7 miles northwest of Waynetown.

Extremes.--Maximum discharge during period, 118 cfs Sept. 5 (gage height, 3.02 ft); minimum, 8.7 cfs Sept. 16, 17, 29, 30; minimum gage height, 1.81 ft Sept. 16, 17.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

[illegible]

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. 8 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 1968.

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, about 10,100 cfs Aug. 4 (gage height, 17.5 ft, estimated by gage observer); minimum, 12 cfs Oct. 1-4 (gage height, 1.10 ft).
1964-68: Maximum discharge, that of Aug. 4, 1968, minimum, 6.0 cfs Sept. 12, 13, 1966 (gage height, 0.85 ft).

Remarks.--Record poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	22	31	158	1,870	93	202	90	458	114	548	48
2	12	24	444	147	3,810	90	180	87	422	105	260	50
3	12	27	1,550	138	1,540	90	224	85	360	98	200	48
4	14	40	830	130	702	85	690	85	268	87	6,390	48
5	14	37	440	120	488	87	468	80	224	83	3,070	48
6	14	35	575	113	400	96	318	80	207	77	680	48
7	15	29	408	107	326	93	250	80	188	73	402	44
8	16	25	302	102	296	90	202	80	168	70	266	44
9	17	25	276	96	264	90	177	105	162	78	206	44
10	16	27	794	90	244	90	162	107	147	90	160	44
11	16	31	1,600	86	230	90	150	105	132	78	128	40
12	14	28	1,460	85	216	99	142	98	119	75	123	40
13	15	28	575	87	200	102	135	96	111	70	108	40
14	16	25	302	91	180	114	138	107	104	66	98	40
15	16	25	258	86	160	165	158	326	297	62	90	40
16	29	26	200	80	150	202	142	240	1,350	62	90	40
17	85	68	196	80	140	210	142	192	503	57	317	40
18	63	89	290	88	124	188	132	159	290	57	450	46
19	35	83	270	118	120	188	132	147	207	53	200	46
20	27	76	264	204	114	230	142	146	153	53	138	43
21	22	58	3,670	276	114	260	135	128	135	49	92	40
22	22	33	4,460	378	107	240	135	110	128	49	76	40
23	20	25	1,070	420	107	216	120	904	128	49	73	38
24	20	25	730	310	102	202	107	2,020	138	68	66	37
25	31	25	450	252	102	202	102	1,060	430	77	66	36
26	42	25	364	210	102	183	98	801	550	87	61	34
27	33	25	300	240	102	168	96	672	408	90	56	34
28	28	25	260	905	107	162	96	482	226	162	52	34
29	28	25	224	3,000	104	150	96	452	150	174	52	34
30	25	31	184	2,650	-----	150	94	759	128	93	48	34
31	24	-----	170	1,260	-----	162	-----	603	-----	1,330	48	-----
TOTAL	755	1,067	22,947	12,107	12,521	4,587	5,365	10,486	8,291	3,736	14,614	1,242
MEAN	24.4	35.6	740	391	432	148	179	338	276	121	471	41.4
MAX	85	89	4,460	3,000	3,810	260	690	2,020	1,350	1,330	6,390	50
MIN	12	22	31	80	102	85	94	80	104	49	48	34
CFSM	.11	.17	3.46	1.82	2.02	.69	.84	1.58	1.29	.56	2.20	.19
IN.	.13	.19	3.99	2.10	2.18	.80	.93	1.82	1.44	.65	2.54	.22

CAL YR 1967 TOTAL 65,814.8 MEAN 180 MAX 4,460 MIN 9.0 CFSM .84 IN 11.44
WTR YR 1968 TOTAL 97,718 MEAN 267 MAX 6,390 MIN 12 CFSM 1.25 IN 16.98

PEAK DISCHARGE (BASE, 2,600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-03	0630	9.24	2,640	02-02	1200	11.74	4,390
12-21	2300	15.16	7,480	08-04	-----	17.50	a 10,100
01-29	2100	11.26	4,010				

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WABASH RIVER BASIN

3-3391.5 Little Vermilion River near Newport, Ind.

Location.--Lat 39°53'32", long 87°25'42", in NW 1/4 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 1968.

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 observed during year, 5,160 cfs Aug. 5 (gage height, 10.88 ft); minimum observed, 1.2 cfs Oct. 8; minimum observed gage height, 0.55 ft Sept. 30.
1965-68: Maximum discharge, 6,520 cfs Dec. 8, 1966 (gage height, 11.54 ft); no flow Oct. 3-6, 1964.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	10	13	190	1,590	100	610	103	460	195	678	13
2	2.5	13	548	170	3,020	91	342	98	442	170	332	15
3	2.0	17	1,440	163	2,420	90	304	91	412	146	236	17
4	1.7	20	950	150	1,450	87	1,220	84	340	129	1,190	16
5	1.7	19	667	140	1,040	82	846	76	288	120	4,240	16
6	1.7	20	572	130	786	76	512	71	258	110	1,360	13
7	1.5	14	810	120	648	76	414	68	233	101	628	11
8	1.3	13	572	110	532	74	348	66	209	93	418	11
9	2.2	13	378	115	448	93	275	111	195	121	478	10
10	2.2	14	459	125	376	94	243	111	177	229	474	9.0
11	2.4	15	768	110	342	82	220	108	159	103	342	8.8
12	3.4	14	1,680	110	314	87	205	117	148	83	256	8.8
13	3.1	14	1,360	110	275	77	190	108	127	70	206	8.8
14	3.6	16	825	96	239	70	198	110	116	65	170	8.8
15	3.1	15	628	88	215	90	197	122	169	61	142	7.8
16	5.3	14	512	82	200	177	163	272	420	60	128	7.5
17	4.3	14	472	82	180	282	168	213	562	53	108	11
18	2.9	14	565	82	163	240	195	183	390	52	90	14
19	1.8	13	530	90	154	225	158	153	280	59	100	15
20	1.6	13	448	134	145	237	184	138	213	54	82	10
21	1.4	12	1,700	160	135	239	218	118	187	38	58	7.8
22	1.3	12	3,940	237	123	250	187	106	170	33	53	7.8
23	1.2	12	2,120	306	116	237	170	895	153	28	41	7.8
24	1.5	12	1,020	356	110	212	158	2,470	134	30	36	7.5
25	1.4	11	728	286	110	195	139	2,300	262	91	33	7.1
26	1.1	12	560	234	105	187	129	1,600	660	141	26	6.7
27	8.9	12	416	256	94	166	124	1,410	572	80	20	5.8
28	8.6	12	330	856	96	152	114	930	350	90	19	6.2
29	8.0	10	285	1,870	98	146	106	745	280	87	20	5.8
30	7.5	11	250	2,960	-----	141	106	648	230	54	19	4.8
31	7.5	-----	215	2,040	-----	369	-----	528	-----	497	16	-----
TOTAL	266	411	25,761	11,958	15,524	4,724	9,443	14,153	9,596	3,243	11,999	298.8
MEAN	8.58	13.7	831	386	535	152	281	457	287	105	387	9.96
MAX	43	20	3,940	2,960	3,020	369	1,220	2,470	660	497	4,240	17
MIN	1.3	10	13	82	94	70	106	66	116	28	16	4.8
CFSM	0.036	0.057	3.46	1.61	2.23	0.633	1.17	1.90	1.20	0.438	1.61	0.042
IN.	.04	.06	3.99	1.86	2.40	.73	1.30	2.19	1.34	.50	1.86	.05

CAL YR 1967 TOTAL 80,421.46 MEAN 220 MAX 3,940 MIN .40 CFSM 0.917 IN 12.44
WTR YR 1968 TOTAL 105,376.8 MEAN 288 MAX 4,240 MIN 1.3 CFSM 1.20 IN 16.32

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	2300	10.42	4,240	05-24	2400	9.80	3,200
01-30	1200	9.90	3,200	08-05	1000	10.88	5,160
02-02	1700	9.95	3,300				

3-3395. Sugar Creek at Crawfordsville, Ind.

Location.--Lat 40°02'56", long 86°53'58", in NW 1/4 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 Sugar Creek.

Drainage area.--509 sq mi.

Records available.--June 1938 to September 1968.

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.--30 years, 458 cfs.

Extremes.--Maximum discharge during year, 14,300 cfs Dec. 21 (gage height, 10.88 ft); minimum, 12 cfs Oct. 3-5 (gage height, 1.04 ft). 1938-68: Maximum discharge, 26,300 cfs June 28, 1957 (gage height, 14.48 ft), no flow part of Oct. 19, 1964 (unusual regulation).

Maximum stage known, 17.3 ft in March 1913, from information by local resident (discharge, about 36,000 cfs).

Remarks.--Record fair. Occasional regulation and diversion for cooling of power plant.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	32	37	240	4,220	120	498	168	904	177	164	110
2	13	34	392	220	7,280	110	452	160	1,020	156	119	89
3	13	51	2,880	200	5,790	100	452	148	1,270	138	105	74
4	12	58	1,880	180	2,740	100	3,590	136	1,160	126	905	66
5	13	65	1,140	170	1,920	110	3,430	126	753	119	820	80
6	15	58	943	180	1,500	110	1,810	118	552	109	411	92
7	16	53	846	150	1,230	100	1,250	111	436	103	252	76
8	21	44	660	140	995	90	906	104	362	97	309	67
9	23	41	498	125	834	90	620	155	312	90	495	58
10	23	37	676	135	526	100	470	206	276	87	927	56
11	25	39	1,540	145	368	100	398	189	256	113	911	56
12	21	39	2,950	155	340	90	340	227	235	136	468	56
13	23	39	1,660	110	305	80	320	206	211	113	304	52
14	25	39	1,050	130	280	80	315	177	195	96	236	49
15	25	37	788	130	260	140	356	208	210	103	194	47
16	32	37	612	110	250	325	325	389	268	108	168	45
17	88	39	505	90	225	810	305	286	268	85	1,080	44
18	101	39	660	80	200	711	296	230	212	73	1,270	62
19	68	41	777	80	200	596	268	206	184	68	584	67
20	46	39	628	168	185	636	452	192	164	62	341	62
21	37	37	5,870	492	170	755	636	171	144	59	241	55
22	30	37	11,900	1,200	155	822	416	154	160	62	189	51
23	25	39	6,280	1,560	140	700	340	1,350	176	110	154	47
24	25	37	2,400	777	135	628	292	5,100	148	109	130	46
25	30	37	1,680	526	130	1,140	256	3,740	288	227	110	80
26	32	37	1,280	428	125	1,100	228	2,420	598	684	98	63
27	39	35	900	428	120	777	216	3,270	415	310	91	53
28	35	32	650	1,950	115	572	192	2,110	298	220	85	48
29	32	30	470	3,590	115	464	180	1,560	239	160	81	44
30	30	35	360	5,420	-----	386	172	1,360	202	121	75	43
31	30	-----	280	4,650	-----	392	-----	1,030	-----	172	72	-----
TOTAL	962	1,217	53,192	23,959	30,853	12,334	19,781	26,007	11,916	4,393	11,389	1,838
MEAN	31.0	40.6	1,716	773	1,064	398	659	839	397	142	367	61.3
MAX	101	65	11,900	5,420	7,280	1,140	3,590	5,100	1,270	684	1,270	110
MIN	12	30	37	80	115	80	172	104	144	59	72	43
CFSM	.06	.08	3.37	1.52	2.09	.78	1.30	1.65	.78	.28	.72	.12
IN.	.07	.09	3.89	1.75	2.25	.90	1.45	1.90	.87	.32	.83	.13

CAL YR 1967 TOTAL 161,559 MEAN 443 MAX 11,900 MIN 11 CFSM .87 IN 11.80
WTR YR 1968 TOTAL 197,841 MEAN 541 MAX 11,900 MIN 12 CFSM 1.06 IN 14.46

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	2200	10.88	14,300	04-04	1930	4.85	4,590
01-30	1200	5.73	5,730	05-24	0945	5.64	5,620
02-02	1800	7.12	7,540	05-27	0215	4.47	4,010

WABASH RIVER BASIN

3-3400. Sugar Creek near Byron, Ind.

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

Drainage area.--668 sq mi.

Records available.--October 1940 to September 1968.

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.--28 years, 624 cfs.

Extremes.--Maximum discharge during year, 22,300 cfs Dec. 21 (gage height, 18.00 ft); minimum, 29 cfs Oct. 4, 5 (gage height, 1.83 ft).
1940-68: Maximum discharge, 32,200 cfs June 28, 1957 (gage height, 22.98 ft); minimum observed, 12 cfs Sept. 21, 1941; minimum gage height, 1.69 ft Sept. 12, 13, 1966.

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	67	76	395	5,900	170	720	262	1,350	270	298	178
2	32	73	1,060	320	10,100	170	684	252	1,600	240	202	148
3	30	86	4,200	290	8,400	160	672	241	1,900	210	160	115
4	30	129	2,500	270	4,300	140	4,030	227	1,800	190	2,670	115
5	41	120	1,700	280	3,000	160	4,430	214	1,100	180	1,430	172
6	49	115	1,300	240	2,400	170	2,290	199	840	170	798	153
7	42	99	1,100	220	2,000	160	1,580	190	680	160	465	125
8	42	89	850	210	1,400	140	1,190	184	540	150	425	106
9	47	81	720	190	1,300	150	888	318	470	140	594	96
10	44	77	960	210	930	160	702	320	420	135	1,220	94
11	40	78	2,700	250	720	150	600	280	390	170	1,270	94
12	43	78	4,300	190	550	140	520	340	360	205	750	90
13	44	75	2,200	190	470	130	485	310	334	170	480	86
14	51	75	1,400	200	430	120	490	270	306	150	350	82
15	49	72	1,100	200	380	260	535	350	346	170	290	78
16	58	69	857	160	350	800	485	560	410	184	255	74
17	190	72	750	140	320	1,100	460	430	450	145	1,500	76
18	202	76	946	130	300	920	450	340	354	123	1,760	102
19	143	72	1,040	130	270	840	400	310	290	115	918	110
20	97	76	889	280	260	882	606	280	260	104	555	104
21	76	76	9,760	1,040	240	1,000	924	250	230	98	370	94
22	66	76	15,400	1,850	220	1,050	666	230	250	94	283	92
23	59	79	9,070	2,250	210	966	530	1,360	270	110	231	88
24	62	77	3,180	1,360	200	858	460	7,200	230	172	196	82
25	80	77	2,110	870	190	1,270	395	5,000	360	184	166	108
26	69	76	1,620	714	190	1,380	346	3,600	910	774	148	110
27	71	71	1,180	666	180	1,040	326	4,900	600	565	133	92
28	72	68	960	2,160	180	810	294	3,200	460	358	123	84
29	65	68	768	4,880	170	678	276	2,300	360	248	115	78
30	62	73	702	7,170	-----	570	269	2,000	310	187	110	72
31	63	-----	565	6,600	-----	565	-----	1,500	-----	245	113	-----
TOTAL	2,054	2,420	75,963	34,055	45,560	17,109	26,703	37,417	18,180	6,416	18,378	3,098
MEAN	66.3	80.7	2,450	1,099	1,571	552	890	1,207	606	207	592	103
MAX	202	129	15,400	7,170	10,100	1,380	4,430	7,200	1,900	774	2,670	178
MIN	30	67	76	130	170	120	269	184	230	94	110	72
CFSM	.10	.12	3.67	1.64	2.35	.83	1.33	1.81	.91	.31	.89	.15
IN.	.11	.13	4.23	1.90	2.54	.95	1.49	2.08	1.01	.36	1.02	.17

CAL YR 1967	TOTAL 217,750	MEAN 597	MAX 15,400	MIN 26	CFSM .89	IN 12.12
WTR YR 1968	TOTAL 287,353	MEAN 785	MAX 15,400	MIN 30	CFSM 1.18	IN 16.00

PEAK DISCHARGE (BASE, 6,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	2215	18.00	22,300	02-02	----	----	all, 000
01-30	1130	10.50	7,750	05-24	----	----	a 8,000

a--about

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 Racoon 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 1968. July 1924 to September 1927 (gage heights only) in reports of Indiana Department of Conservation.

Gage.--Digital water-stage recorder. Datum of gage is 457.75 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Oct. 1, 1927 to Sept. 11, 1934, chain gage, Sept. 12, 1934 to July 12, 1950, wire-weight gage, and July 13, 1950 to Dec. 12, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--41 years, 9,246 cfs.

Extremes.--Maximum discharge during year, 93,400 cfs Feb. 4 (gage height, 28.30 ft) minimum observed, 1,500 cfs Oct. 12 (gage height, 2.55 ft).

1927-68: Maximum discharge, 184,000 cfs May 20, 1943 (gage height, 32.83 ft); minimum observed, 560 cfs Sept. 24, 1941; minimum gage height, 1.43 ft Aug. 3, 10, 1934.

Maximum stage known, 34.0 ft Mar. 27, 1913, from floodmarks (discharge, 230,000 cfs, estimated).

Remarks.--Record fair. Daily flow is affected at times by the operation of several reservoirs.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,650	1,990	2,130	19,200	54,300	5,720	14,100	5,810	21,000	19,700	11,000	3,120
2	1,640	2,040	2,250	13,800	74,600	5,650	12,000	5,590	21,000	17,000	8,880	3,120
3	1,660	2,170	13,000	12,200	84,200	5,380	9,980	5,380	20,600	14,000	6,400	3,140
4	1,660	2,430	12,500	10,900	91,700	5,250	14,800	5,190	19,700	11,500	15,800	3,070
5	1,640	2,580	13,700	9,310	90,300	5,060	23,600	5,080	17,400	9,550	28,100	2,930
6	1,650	2,930	17,000	8,280	80,900	5,110	27,100	4,810	14,900	8,440	25,700	2,910
7	1,680	2,890	20,300	6,540	68,800	5,110	28,700	4,720	12,800	7,600	17,300	3,030
8	1,690	2,880	22,400	6,090	56,800	5,050	29,700	4,550	10,900	6,940	11,700	3,020
9	1,680	2,720	21,400	6,310	46,800	4,990	28,600	4,820	9,330	6,680	10,200	2,850
10	1,640	2,610	20,100	6,170	40,100	4,940	23,900	4,870	8,770	6,750	8,860	2,740
11	1,630	2,420	21,600	6,430	35,400	5,090	17,500	5,110	8,160	6,740	9,240	2,650
12	1,580	2,440	26,600	6,380	31,800	5,000	13,500	5,190	7,360	5,930	11,100	2,640
13	1,680	2,320	29,500	6,260	28,600	4,810	11,700	4,960	6,770	5,480	10,200	2,650
14	1,780	2,380	29,500	6,100	25,800	4,900	10,300	4,850	6,340	5,170	7,720	2,530
15	1,720	2,140	29,900	6,170	24,100	4,690	9,640	4,930	6,360	4,990	6,280	2,470
16	1,900	2,180	29,200	6,400	22,200	5,170	9,400	10,500	10,300	4,850	5,700	2,490
17	2,520	2,220	25,800	6,120	19,000	7,060	9,060	24,500	13,800	4,630	5,670	2,560
18	2,770	2,170	22,100	5,620	14,900	10,300	9,130	32,000	11,600	4,610	11,100	2,500
19	2,450	2,300	19,000	5,780	11,000	12,600	8,900	36,500	8,990	4,520	16,500	2,650
20	2,250	2,380	17,100	5,960	9,490	14,100	8,790	36,600	7,330	4,360	15,200	2,920
21	2,180	2,410	24,300	6,120	8,700	14,700	9,290	32,200	6,400	4,210	11,200	3,280
22	2,020	2,440	51,300	7,740	7,690	14,800	8,920	23,800	5,990	3,980	8,500	3,470
23	2,050	2,630	57,000	10,900	7,250	14,400	8,380	23,100	6,170	4,040	7,010	3,560
24	1,820	2,620	55,700	12,100	6,840	13,900	7,960	35,700	5,410	3,950	5,800	3,580
25	1,900	2,490	60,500	11,200	6,720	13,300	7,520	38,200	7,250	4,960	5,170	3,620
26	1,840	2,520	62,600	10,600	6,480	13,700	6,990	35,600	15,700	6,820	4,760	3,520
27	1,960	2,380	57,800	11,000	6,380	15,200	6,670	32,500	21,400	7,480	4,280	3,410
28	1,670	2,390	48,800	15,800	6,130	17,100	6,310	29,100	23,200	6,720	3,720	3,200
29	1,900	2,250	41,000	27,600	6,020	17,600	6,210	26,000	23,100	5,960	3,610	3,230
30	1,830	2,210	35,100	38,200	-----	16,600	5,930	24,600	21,800	4,930	3,310	3,060
31	1,950	-----	27,800	45,700	-----	15,300	-----	22,300	-----	6,310	3,200	-----
TOTAL	57,990	72,590	916,980	356,980	973,000	292,580	394,580	539,060	379,830	218,800	303,210	89,920
MEAN	1,871	2,420	29,580	11,520	33,550	9,438	13,150	17,390	12,660	7,058	9,781	2,997
MAX	2,770	2,930	62,600	45,700	91,700	17,600	29,700	38,200	23,200	19,700	28,100	3,620
MIN	1,580	1,990	2,130	5,620	6,020	4,690	5,930	4,550	5,410	3,950	3,200	2,470
CFSM	.17	.22	2.66	1.04	3.02	.85	1.18	1.57	1.14	.64	.88	.27
IN.	.19	.24	3.07	1.20	3.26	.98	1.32	1.81	1.27	.73	1.02	.30
CAL YR 1967	TOTAL 3,689,360	MEAN 10,110	MAX 62,600	MIN 1,170	CFSM .91	IN 12.36						
WTR YR 1968	TOTAL 4,595,520	MEAN 12,560	MAX 91,700	MIN 1,580	CFSM 1.13	IN 15.40						

WABASH RIVER BASIN

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

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

Drainage area.--132 sq mi.

Records available.--August 1957 to September 1968. Prior to October 1963, published as Raccoon Creek near Fincastle.

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

Average discharge.--11 years, 122 cfs.

Extremes.--Maximum discharge during year, 9,880 cfs Dec. 22 (gage height, 14.75 ft); minimum discharge, 3.2 cfs Oct. 3-5; minimum gage-height, 1.78 ft Oct. 1-4.

1957-68: Maximum discharge, 15,100 cfs Jan. 26, 1962; maximum gage height, 15.68 ft Jan. 26, 1962 (ice jam); minimum discharge, 1.6 cfs Oct. 5, 1964.

Maximum flood known, 39,900 cfs June 28, 1957 (gage height, 19.10 ft), from slope-area measurement.

Remarks.--Record good. Records of water temperature and suspended sediment loads for the water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	12	17	80	997	41	267	47	309	76	18	15
2	3.4	14	338	74	2,590	43	191	45	330	64	14	14
3	3.3	20	1,970	68	930	38	187	43	263	53	13	13
4	3.4	61	794	63	523	39	2,370	42	243	47	109	12
5	3.7	70	513	58	392	40	816	39	184	42	102	12
6	5.1	50	410	55	306	42	455	37	148	38	50	12
7	8.0	37	355	51	262	40	325	36	128	34	28	11
8	8.3	29	268	50	223	39	233	35	114	31	24	11
9	7.8	24	210	52	190	43	159	66	104	28	20	10
10	6.6	21	298	54	127	46	125	69	95	26	368	10
11	5.9	20	640	48	110	43	107	78	88	25	309	10
12	5.5	20	1,710	45	90	42	96	94	79	24	143	9.9
13	5.8	19	637	47	80	40	87	72	71	23	84	9.8
14	6.5	17	493	48	70	39	91	64	64	20	57	9.6
15	7.0	16	440	45	66	43	99	256	62	21	43	9.4
16	10	15	295	40	61	105	81	682	76	20	36	9.0
17	42	15	240	35	57	223	82	290	70	18	91	9.6
18	74	16	475	33	54	182	82	195	56	18	261	12
19	42	15	413	33	52	151	74	153	49	17	143	14
20	22	15	283	57	50	204	117	144	43	15	80	14
21	14	15	3,000	329	48	231	136	125	38	14	53	12
22	11	16	5,690	516	46	233	96	107	128	12	40	11
23	9.2	18	808	540	45	193	84	1,580	128	12	31	11
24	8.8	19	443	284	44	182	75	3,050	169	11	25	9.7
25	11	20	338	200	44	343	66	1,050	551	11	22	9.9
26	12	19	252	145	43	267	60	694	394	11	18	9.7
27	15	17	182	131	44	183	57	757	220	15	16	8.9
28	15	15	150	402	44	137	52	535	159	15	15	8.4
29	13	14	121	820	43	113	50	444	119	13	14	7.9
30	11	15	110	2,180	-----	97	49	415	95	11	13	7.7
31	11	-----	100	1,000	-----	140	-----	324	-----	15	13	-----
TOTAL	404.7	674	21,998	7,583	7,631	3,602	6,769	11,568	4,577	780	2,253	323.5
MEAN	13.1	22.5	710	245	263	116	226	373	153	25.2	72.7	10.8
MAX	74	70	5,690	2,180	2,590	343	2,370	3,050	551	76	368	15
MIN	3.3	12	17	33	43	38	49	35	38	11	13	7.7
CFSM	.10	.17	5.38	1.85	1.99	.88	1.71	2.83	1.16	.19	.55	.08
IN.	.11	.19	6.20	2.14	2.15	1.01	1.91	3.26	1.29	.22	.63	.09
CAL YR 1967	TOTAL 50,210.3			MEAN 138		MAX 5,690	MIN 3.2	CFSM 1.04	IN 14.15			
WTR YR 1968	TOTAL 68,163.2			MEAN 186		MAX 5,690	MIN 3.3	CFSM 1.41	IN 19.20			

PEAK DISCHARGE (BASE, 1,900 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-03	1030	9.37	2,360	02-02	1245	10.51	2,940
12-12	0815	9.39	2,380	04-04	1400	10.81	3,120
12-22	0230	14.75	9,880	05-24	1130	11.42	3,620
01-30	1445	9.71	2,540				

3-3408.7 Mansfield Reservoir at Ferndale, Ind.

Location.--Lat 39°43'02", long 87°04'20", in NE¼ sec. 28, T. 15 N., R. 6 W., in discharge tower of reservoir on Big Raccoon Creek, at Ferndale, 4.4 miles upstream from Rocky Fork Creek, and 6.1 miles northeast of Mansfield.

Drainage area.--208 sq mi.

Records available.--December 1960 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 600.00 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Extremes.--Maximum contents during year, 74,420 acre-ft June 4 (elevation, 671.77 ft); minimum contents, 16,180 acre-ft many times (elevation, 640.0 ft).
1961-68: Maximum contents, 87,510 acre-ft May 4, 1964 (elevation, 676.52 ft); minimum contents, 16,080 acre-ft many times (elevation, 639.9 ft).

Remarks.--Reservoir is formed by earth fill dam. Releases normally controlled by three gates, 4 ft wide and 8 ft high, in semi-elliptical concrete conduit through dam. Minimum design capacity is 16,180 acre-ft (elevation, 640 ft). Seasonal pool capacity is 49,300 acre-ft (elevation, 661 ft). Capacity at uncontrolled spillway elevation (690 ft) is 133,000 acre-ft. Reservoir is used for flood control and recreation. Reservoir put in operation on Dec. 6, 1960.

Cooperation.--Records furnished by Corps of Engineers.

Month-end elevation and contents, water year October 1967 to September 1968

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	-	38,600	-
Oct. 31.....	-	27,380	-11,220
Nov. 30.....	-	16,330	-11,050
Dec. 31.....	-	45,530	+29,200
Calendar year 1967.....	-	-	+16,130
Jan. 31.....	-	28,250	-17,280
Feb. 29.....	-	16,370	-11,880
Mar. 31.....	-	16,540	+170
Apr. 30.....	-	35,080	+18,540
May 31.....	-	35,080	0
June 30.....	-	51,120	+16,040
July 31.....	-	49,370	-1,750
Aug. 31.....	-	48,090	-1,280
Sept. 30.....	-	38,170	-9,920
Water year 1967-68	-	-	-430

WABASH RIVER BASIN

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 1968. Prior to October 1963, published as Raccoon Creek at Ferndale.

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

Average discharge.--12 years, 207 cfs.

Extremes.--Maximum discharge during year, 2,920 cfs Dec. 29 (gage height, 9.27 ft); minimum daily, 20 cfs May 8; minimum gage height, 1.39 ft May 7-9, 14, 15, 21, 22.

1956-68: Maximum discharge, 40,500 cfs June 28, 1957 (gage height, 19.87 ft) from rating extended above 5,000 cfs on basis of records for station at Mansfield; minimum daily, 2.7 cfs Oct. 11, 1956.

Remarks.--Record good. Flow regulated since October 1960 by Mansfield Reservoir (see sta. No. 3-3408.7).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	186	225	30	1,360	100	76	83	22	109	228	38	25
2	186	233	131	1,340	100	76	31	22	107	368	28	26
3	184	233	137	1,550	100	76	37	22	103	278	28	40
4	186	275	395	1,710	101	76	165	22	616	99	29	200
5	191	289	1,070	1,740	98	68	93	21	1,140	98	69	200
6	194	287	1,060	1,760	98	65	90	21	1,070	74	88	200
7	193	241	1,040	1,710	97	65	89	21	967	51	90	200
8	193	198	1,020	1,650	97	65	87	20	964	51	90	200
9	194	211	1,010	1,600	712	66	87	26	961	51	90	200
10	196	214	608	1,110	1,610	75	87	21	956	51	91	200
11	200	235	649	408	1,700	77	87	32	951	51	180	200
12	200	243	667	90	1,770	77	87	24	944	50	223	220
13	198	241	89	86	1,760	77	87	22	938	38	270	220
14	196	239	96	84	1,710	77	47	21	932	31	223	220
15	196	237	93	83	1,660	79	24	22	925	33	170	220
16	209	237	91	98	1,610	87	22	22	918	30	100	220
17	225	237	96	110	1,550	174	24	22	910	30	103	220
18	297	200	100	110	944	209	23	22	904	30	100	220
19	335	182	93	110	345	212	22	21	715	29	103	80
20	333	181	527	93	125	360	33	21	202	29	260	50
21	333	214	639	103	105	438	26	21	81	28	100	200
22	241	233	127	328	82	385	24	21	74	28	100	275
23	203	231	107	587	80	315	24	368	158	27	70	290
24	205	229	103	581	79	243	23	274	217	27	45	300
25	205	229	103	428	77	355	23	122	143	29	30	299
26	203	241	100	345	77	430	23	119	98	29	25	298
27	203	247	98	209	77	345	22	111	447	30	25	232
28	202	245	723	209	76	237	22	108	621	28	25	203
29	200	239	2,230	216	76	165	23	107	274	28	25	203
30	200	108	2,340	100	-----	157	22	105	100	28	25	202
31	198	-----	1,610	100	-----	164	-----	103	-----	36	25	-----
TOTAL	6,685	6,854	17,182	20,008	17,016	5,371	1,539	1,906	17,545	2,018	2,856	5,863
MEAN	216	228	554	645	587	173	51.3	61.5	585	65.1	92.1	195
MAX	335	289	2,340	1,760	1,770	438	165	368	1,140	368	270	300
MIN	184	108	30	83	76	65	22	20	74	27	25	25

CAL YR 1967 TOTAL 70,527 MEAN 193 MAX 2,340 MIN 19
 WTR YR 1968 TOTAL 104,843 MEAN 286 MAX 2,340 MIN 20

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 Welsner Creek, and 3.8 miles upstream from mouth.

Drainage area.--133 sq mi.

Records available.--December 1956 to September 1968 (fragmentary prior to October 1957).

Gage.--Digital water-stage recorder. Datum of gage is 515.56 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Feb. 16, 1967, graphic water-stage recorder at same site and datum.

Average discharge.--11 years (1957-68), 118 cfs.

Extremes.--Maximum discharge during year, 22,100 cfs Dec. 21 (gage height, 16.26 ft); minimum, 6.8 cfs Oct. 4, 5, (gage height, 0.98 ft).
1956-68: 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, 0.98 ft Oct. 4, 5, 1967.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	15	20	96	1,080	60	139	64	302	59	83	25
2	7.2	16	699	92	2,310	57	116	61	327	54	37	28
3	7.2	18	1,530	86	600	54	139	58	237	50	28	25
4	7.2	34	457	80	420	52	1,430	55	193	46	47	24
5	7.2	38	319	74	300	56	453	52	164	44	62	24
6	7.5	30	250	68	260	58	309	49	144	43	37	22
7	7.2	27	211	65	235	54	241	47	129	41	28	21
8	8.1	24	165	62	220	52	198	47	115	39	28	20
9	8.1	21	134	59	190	57	160	139	105	38	108	20
10	8.1	19	283	57	160	62	141	101	95	42	52	19
11	7.8	20	419	54	140	60	127	258	87	37	40	16
12	7.8	22	635	52	125	58	117	188	79	33	34	18
13	8.1	21	303	52	112	54	108	118	69	31	30	18
14	8.5	21	259	53	108	53	124	109	64	29	27	17
15	8.5	19	233	50	103	61	134	134	62	28	26	16
16	10	19	173	47	98	183	110	452	60	32	27	15
17	30	19	162	43	92	201	119	200	54	29	32	16
18	41	19	348	42	86	146	118	146	47	26	49	18
19	28	18	233	42	30	133	104	124	67	14	49	17
20	19	17	175	47	77	275	234	112	86	16	39	15
21	16	17	7,290	134	74	246	182	99	103	18	30	14
22	14	17	5,550	203	71	219	133	87	175	20	26	13
23	12	18	583	259	66	182	116	2,600	335	26	23	12
24	13	18	398	179	64	164	99	3,810	234	19	21	13
25	15	19	310	150	63	205	89	1,130	686	23	20	13
26	15	19	241	106	62	172	83	751	242	22	19	12
27	16	17	187	129	62	145	77	505	128	24	19	11
28	16	16	166	376	62	126	72	376	97	25	23	11
29	15	16	140	1,340	61	115	70	399	79	20	23	10
30	14	17	129	2,050	-----	109	67	468	66	18	23	10
31	14	-----	120	679	-----	121	-----	294	-----	36	23	-----
TOTAL	404.0	611	22,122	6,826	7,331	3,590	5,609	13,033	4,631	982	1,113	513
MEAN	13.0	20.4	714	220	253	116	187	420	154	31.7	35.9	17.1
MAX	41	38	7,290	2,050	2,310	275	1,430	3,810	686	59	108	28
MIN	7.2	15	20	42	30	52	67	47	47	14	19	10
CFSM	.10	.15	5.37	1.66	1.90	.87	1.41	3.16	1.16	.24	.27	.13
IN.	.11	.17	6.19	1.91	2.05	1.00	1.57	3.64	1.29	.27	.31	.14
CAL YR 1967	TOTAL	52,962.7	MEAN	145	MAX	7,290	MIN	7.2	CFSM	1.09	IN	14.81
WTR YR 1968	TOTAL	66,765.0	MEAN	182	MAX	7,290	MIN	7.2	CFSM	1.37	IN	18.67

PEAK DISCHARGE (BASE, 1,900 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-03	0445	11.14	2,510	02-02	0800	12.16	2,990
12-21	2030	16.26	22,100	04-04	0645	10.95	2,430
01-30	0730	11.56	2,670	05-24	0530	13.88	6,170

WABASH RIVER BASIN

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 1968. Prior to October 1963, published as Raccoon Creek at Coxville.

Gage.--Digital water-stage recorder. Datum of gage is 494.00 ft above mean sea level, datum of 1929 (Indiana Flood Control and Water Resources Commission bench mark). Prior to Feb. 16, 1967, graphic water-stage recorder at present site and datum.

Average discharge.--12 years, 438 cfs.

Extremes.--Maximum discharge during year, 40,400 cfs Dec. 22 (gage height, 17.76 ft); minimum discharge, 71 cfs Sept. 3 (gage height, 2.28 ft).

1956-68: Maximum discharge, 108,000 cfs June 28, 1957 (gage height, 21.23 ft) from rating curve extended above 35,000 cfs on basis of an estimate made by a slope-area study; minimum daily, 6.5 cfs Oct. 10, 1956.

Remarks.--Record good. Flow regulated by Mansfield Reservoir (see sta. No. 3-3408.7).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	188	252	130	1,750	1,610	215	395	151	751	277	398	75
2	188	283	703	1,600	4,940	219	274	144	820	496	139	77
3	188	290	2,580	1,700	1,290	208	278	140	625	506	109	83
4	189	318	800	1,780	869	205	2,440	135	626	271	126	183
5	191	375	1,220	1,780	684	203	913	129	1,370	219	149	199
6	199	356	1,210	1,860	590	199	626	125	1,400	202	141	202
7	198	355	1,170	1,810	548	190	518	122	1,250	168	140	202
8	202	268	1,120	1,760	505	188	446	120	1,220	155	159	204
9	201	261	1,080	1,720	589	201	384	219	1,200	147	285	205
10	199	267	1,110	1,400	1,550	206	352	195	1,180	150	204	206
11	204	277	985	933	1,810	202	327	438	1,160	139	167	206
12	205	302	1,660	393	1,840	204	309	363	1,130	133	262	219
13	208	300	715	337	1,880	194	293	238	1,110	127	272	221
14	209	295	550	310	1,850	193	304	214	1,100	116	248	221
15	209	294	518	286	1,810	205	292	220	1,090	112	151	220
16	222	290	419	266	1,770	400	239	573	1,080	115	146	221
17	303	290	391	275	1,710	462	246	324	1,070	107	139	214
18	337	277	648	273	1,450	455	250	260	1,060	103	163	230
19	392	234	492	271	812	442	221	227	1,030	90	192	124
20	381	228	552	268	427	738	447	213	588	91	278	103
21	376	234	10,500	312	362	843	382	197	298	89	171	259
22	346	276	17,600	521	298	788	277	180	345	94	135	299
23	249	278	4,800	877	271	641	241	5,380	605	183	104	309
24	247	280	900	904	256	582	214	12,000	427	100	89	319
25	259	278	700	681	247	633	197	2,730	1,270	107	82	323
26	250	281	560	634	237	705	187	1,890	645	102	78	320
27	248	295	450	523	233	638	178	1,260	528	108	76	298
28	245	291	1,000	830	230	520	169	987	832	104	77	278
29	241	289	3,400	2,290	224	421	164	924	702	92	76	221
30	239	260	4,200	4,830	-----	369	158	1,110	315	88	74	218
31	241	-----	2,000	1,410	-----	387	-----	766	-----	194	73	-----
TOTAL	7,554	8,584	64,163	34,584	30,892	12,056	11,721	31,974	26,827	4,985	4,903	6,429
MEAN	244	286	2,070	1,116	1,065	389	391	1,031	894	161	158	214
MAX	392	375	17,600	4,830	4,940	843	2,440	12,000	1,400	506	398	323
MIN	188	228	130	266	224	188	158	120	298	98	73	75
CFSM	.55	.65	4.70	2.54	2.42	.88	.89	2.34	2.03	.37	.36	.49
IN.	.64	.72	5.42	2.92	2.61	1.02	.99	2.70	2.27	.42	.41	.54
CAL YR 1967	TOTAL 174,370		MEAN 478		MAX 17,600	MIN 46		CFSM 1.70	IN 14.75			
WTR YR 1968	TOTAL 244,672		MEAN 669		MAX 17,600	MIN 73		CFSM 1.52	IN 20.66			

WABASH RIVER BASIN

77

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 1966 to September 1968.

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

Extremes.--Maximum discharge during year, 12,200 cfs Dec. 21 (gage height, 16.50 ft, from graph); minimum, 1.9 cfs Oct. 3-5 (gage height, 1.35 ft).
1966-68: Maximum discharge, 13,600 cfs Dec. 8, 1966 (gage height, 17.08 ft, from floodmark); minimum observed, 1.0 cfs Sept. 7, 1966 (gage height, 1.46 ft).

Remarks.--Record fair except for winter period and periods of backwater from the Wabash River, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	7.7	11	240	1,510	93	455	97	924	105	2,380	16
2	2.2	9.3	589	218	4,270	105	320	92	942	96	1,170	16
3	2.2	12	2,450	198	2,780	69	292	85	666	89	633	16
4	1.9	14	1,120	180	1,820	81	795	83	538	81	377	16
5	1.9	17	810	170	1,890	95	635	74	415	77	380	16
6	2.2	15	624	158	1,550	99	458	70	346	73	289	14
7	2.2	14	592	150	1,120	89	383	69	302	66	230	13
8	2.9	13	495	140	802	83	328	65	268	62	230	12
9	3.6	12	425	130	629	97	262	100	238	59	230	11
10	3.6	10	498	120	492	102	222	89	210	236	250	10
11	3.2	11	804	116	473	94	203	209	182	138	190	9.3
12	2.9	11	1,280	115	450	89	194	236	169	101	157	8.9
13	3.6	11	808	113	350	79	176	163	154	83	136	8.5
14	4.0	11	590	110	280	87	187	184	142	70	116	8.1
15	4.4	10	502	107	230	105	190	194	139	67	107	7.7
16	5.6	10	398	103	200	86	160	174	133	63	107	6.9
17	26	10	359	96	160	342	169	140	120	52	95	9.8
18	36	10	530	83	130	282	169	131	111	45	85	10
19	19	9.6	669	82	130	244	148	124	105	42	75	12
20	12	9.3	490	87	120	330	214	146	100	40	69	13
21	9.3	9.3	4,830	151	95	346	238	117	93	33	60	11
22	7.3	8.9	8,850	258	95	320	194	89	136	28	53	9.7
23	6.4	9.3	2,350	445	160	282	178	3,220	153	26	46	8.9
24	6.9	9.3	936	478	306	236	162	9,600	91	22	41	8.1
25	6.9	9.6	854	378	109	210	138	6,740	610	46	34	8.1
26	6.0	9.6	858	306	95	190	127	3,980	332	318	28	6.9
27	6.9	9.3	792	426	108	172	118	1,580	246	230	24	6.0
28	6.9	8.9	626	1,430	103	152	107	984	184	240	22	5.2
29	6.9	8.9	468	1,820	81	148	101	898	145	172	20	4.8
30	6.0	10	362	4,080	-----	144	100	878	121	118	18	4.4
31	6.4	-----	275	2,820	-----	156	-----	647	-----	789	17	-----
TOTAL	217.8	320.0	35,245	15,308	20,538	5,007	7,423	31,258	8,315	3,667	7,669	307.3
MEAN	7.03	10.7	1,137	494	708	162	247	1,008	277	118	247	10.2
MAX	36	17	8,850	4,080	4,270	346	795	9,600	942	789	2,380	16
MIN	1.9	7.7	11	82	81	69	100	65	91	22	17	4.4
CFSM	.02	.03	3.43	1.49	2.14	.49	.75	3.05	.84	.36	.75	.03
IN.	.02	.04	3.96	1.72	2.31	.56	.83	3.51	.93	.41	.86	.03
CAL YR 1967	TOTAL	91,553.9	MEAN	251	MAX	8,850	MIN	1.6	CFSM	.76	IN	10.29
WTR YR 1968	TOTAL	135,275.1	MEAN	370	MAX	9,600	MIN	1.9	CFSM	1.12	IN	15.20

WABASH RIVER BASIN

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

Location.--Lat 39°28'00", long 87°25'08", in NW 1/4 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 1968. Gage-height records collected at site 3,300 ft upstream June 1891 to June 1897 and since December 1904 are contained in reports of U.S. Weather Bureau.

Gage.--Water-stage recorder. Datum of gage is 442.90 ft above mean sea level, datum of 1929. Aug. 3, 1902, to Dec. 31, 1903, chain gage at power house 3,400 ft upstream at datum 3.0 ft higher. Feb. 25, 1905 to July 20, 1906, chain gage at Vendellia 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.--41 years (1927-68), 10,200 cfs.

Extremes.--Maximum discharge during year, 86,500 cfs Feb. 5 (gage height, 24.98 ft); minimum, 1,910 cfs Oct. 6 (gage height, 3.84 ft). 1927-68: Maximum discharge, 189,000 cfs May 20, 1943 (gage height, 30.50 ft); minimum, 690 cfs Aug. 10, 1934 (gage height, 2.40 ft). Maximum stage known, 31.1 ft Mar. 27, 1913, present site and datum (discharge, 245,000 cfs, estimated).

Remarks.--Record good. Water for municipal supply for Terre Haute diverted above gage, most of which is returned below. Natural flow affected by upstream reservoir.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,030	2,370	2,580	30,200	53,000	7,570	15,500	6,580	25,900	21,700	11,900	3,440
2	1,960	2,420	3,320	20,000	64,200	7,350	13,900	6,330	25,100	19,000	12,000	3,530
3	1,930	2,600	11,800	16,300	75,300	7,170	11,900	6,090	23,800	16,300	9,220	3,380
4	1,990	2,760	14,300	14,200	81,400	6,900	15,900	5,830	22,300	13,600	9,380	3,480
5	1,950	2,970	13,400	12,300	85,400	6,700	22,800	5,660	20,500	11,300	24,500	3,300
6	1,910	3,120	16,100	11,100	83,500	6,670	27,200	5,460	18,200	9,910	28,600	3,270
7	1,960	3,340	18,800	8,590	74,300	6,670	29,300	5,190	15,800	8,930	23,100	3,200
8	2,020	3,280	21,200	7,040	64,500	6,580	31,200	5,060	13,800	8,160	15,300	3,400
9	1,990	3,180	22,000	7,330	58,800	6,540	32,000	5,370	12,100	7,580	12,200	3,210
10	1,920	3,080	21,800	7,940	51,700	6,450	29,900	5,580	10,900	7,690	10,900	3,080
11	1,930	2,920	21,400	8,110	46,000	6,500	22,400	6,020	10,200	7,620	10,300	2,980
12	1,950	2,880	25,600	8,000	41,300	6,610	17,000	6,680	9,420	7,220	11,400	2,850
13	1,930	2,780	30,700	7,640	37,000	6,360	13,800	5,980	8,700	6,360	11,800	2,960
14	2,020	2,820	31,800	7,420	32,900	6,300	12,300	5,740	8,160	6,010	9,980	2,790
15	1,990	2,720	32,700	7,170	29,600	6,200	11,400	5,640	7,870	5,700	7,980	2,680
16	2,180	2,560	33,300	7,390	27,100	6,650	10,800	7,670	9,620	5,580	6,880	2,620
17	2,520	2,660	33,600	7,240	23,600	8,090	10,400	18,400	14,000	5,350	6,410	2,840
18	3,200	2,610	29,100	6,880	19,700	10,300	10,300	27,400	13,900	5,060	9,100	2,790
19	3,210	2,640	22,700	6,830	15,800	12,800	10,200	34,000	11,400	5,220	14,900	2,740
20	2,910	2,660	19,600	7,030	13,100	14,700	10,300	39,400	9,380	4,860	16,600	2,970
21	2,700	2,700	22,400	7,240	11,500	15,800	10,800	40,200	7,870	4,820	15,800	3,270
22	2,640	2,680	49,400	8,300	10,300	16,100	10,300	34,900	7,130	4,540	10,500	3,800
23	2,490	2,920	58,000	11,100	9,470	15,700	9,830	31,300	7,390	5,460	8,570	3,860
24	2,280	3,000	56,000	13,100	8,990	15,200	9,260	44,400	6,680	4,760	7,170	4,040
25	2,280	2,800	62,000	12,800	8,740	14,500	8,750	55,100	7,580	4,860	6,230	4,060
26	2,240	2,780	64,000	12,000	8,500	14,400	8,210	51,700	13,000	6,520	5,590	3,980
27	2,360	2,660	64,200	12,200	8,300	15,200	7,730	46,200	19,800	8,270	5,080	3,960
28	2,200	2,700	60,700	15,200	8,120	16,800	7,330	41,100	23,100	7,910	4,460	3,610
29	2,140	2,670	54,100	24,600	7,890	17,900	7,040	35,600	24,500	7,100	4,060	3,530
30	2,260	2,610	48,200	37,600	-----	17,500	6,850	32,100	23,900	6,040	3,770	3,480
31	2,260	-----	41,500	47,200	-----	16,500	-----	28,600	-----	5,780	3,590	-----
TOTAL	69,350	83,890	1,006,3M	410,050	1,060,0M	328,710	444,600	655,280	432,000	249,210	337,270	99,100
MEAN	2,237	2,796	32,460	13,230	36,550	10,600	14,820	21,140	14,400	8,039	10,880	3,303
MAX	3,210	3,340	64,200	47,200	85,400	17,900	32,000	55,100	25,900	21,700	28,600	4,060
MIN	1,910	2,370	2,580	6,830	7,890	6,200	6,850	5,060	6,680	4,540	3,590	2,620
CFSM	.18	.23	2.66	1.08	3.00	.87	1.21	1.73	1.18	.66	.89	.27
IN.	.21	.26	3.07	1.25	3.23	1.00	1.36	2.00	1.32	.76	1.03	.30
CAL YR 1967	TOTAL 4,051,600		MEAN 11,100		MAX 64,200		MIN 1,500		CFSM .91		IN 12.35	
WTR YR 1968	TOTAL 5,175,770		MEAN 14,140		MAX 85,400		MIN 1,910		CFSM 1.16		IN 15.78	

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 1968. 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.--30 years, 10,980 cfs.

Extremes.--Maximum discharge during year, 93,300 cfs Feb. 7 (gage height, 22.82 ft); minimum daily, 1,950 cfs Oct. 7; minimum gage height, 1.78 ft Oct. 7.

1938-68: Maximum discharge, 201,000 cfs May 21, 1943 (gage height, 29.36 ft); minimum observed, 858 cfs Sept. 27 to Oct. 1, 1941 (gage height, 0.02 ft).

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

Remarks.--Record good. Natural flow of stream affected by storage reservoirs and power development. Record of water temperature for water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2090	2370	2690	56600	42200	7810	19000	6970	37900	22500	7870	3940
2	2070	2440	3030	50400	50700	7540	16700	6730	33300	21100	12400	3770
3	2000	2490	9960	41000	58700	7360	14900	6490	30400	18800	11100	3740
4	1980	2600	15900	25900	67200	7100	20600	6220	29000	16200	8640	3690
5	1990	2740	14000	19500	77900	6940	24500	5950	25900	13500	9040	3750
6	2010	2920	14000	15000	87300	6760	25300	5780	23100	11300	21800	3620
7	1950	3130	16300	11700	92600	6730	26600	5560	20000	9820	24600	3560
8	1990	3230	19600	9130	91200	6680	27500	5340	17200	8830	21400	3520
9	2040	3190	20100	7820	84200	6620	28400	5500	14600	8120	15700	3620
10	1980	3130	20800	7780	75200	6610	29500	5950	12500	7760	12900	3510
11	1980	3040	21300	8200	67400	6550	29900	6610	11200	7750	11600	3400
12	1990	2900	23000	8280	60300	6670	27100	7980	10400	7640	10400	3310
13	2010	2850	25100	8140	55100	6620	20600	7260	9420	7200	11400	3220
14	2020	2790	26800	7860	49400	6420	16100	6440	8680	6560	11300	3230
15	2060	2790	28300	7600	43100	6430	13600	6120	8220	6190	9440	3130
16	2100	2700	29800	7440	37900	7580	12200	6060	8040	5950	8000	3050
17	2380	2590	29800	7480	33400	8710	11400	9000	9720	5720	7040	3000
18	2690	2650	31200	7320	29300	9060	11100	18600	13600	5470	6640	3150
19	3030	2590	30600	7040	23800	11000	10800	23000	13400	5280	9280	3130
20	3060	2650	27200	7040	19000	15200	12200	25800	11300	5270	14700	3060
21	2860	2690	25600	7280	14200	17300	13000	28600	9200	5040	15300	3190
22	2730	2690	36000	7880	12200	17700	11800	31100	7990	4940	13000	3430
23	2650	2690	44200	9380	10600	17000	10900	35200	7650	4920	10000	3830
24	2550	2850	50600	11700	9600	16300	10000	43400	7510	5860	8360	3990
25	2440	2940	57600	13100	9010	15800	9300	49900	7660	5150	7090	4130
26	2350	2790	61500	12800	8740	15100	8820	56100	9220	5350	6250	4140
27	2310	2740	62900	12300	8560	14900	8290	59000	14100	7020	5740	4120
28	2370	2690	63400	13700	8290	15700	7860	57400	19200	9160	5250	4080
29	2280	2650	63500	19900	8080	17100	7460	53500	21400	7920	4690	3870
30	2200	2730	63300	31400	-----	18200	7210	48500	22700	7060	4360	3750
31	2320	-----	60800	37000	-----	18000	-----	43100	-----	6300	4130	-----
TOTAL	70480	83250	996880	495670	123328	337490	491640	683160	473510	269680	329420	106930
MEAN	2274	2775	32157	16022	42523	10887	16388	22037	15784	8699	10626	3564
MAX	3060	3230	63500	56600	92600	19200	29900	59000	37900	22500	24600	4140
MIN	1950	2370	2690	7040	8080	6420	7210	5340	7510	4920	4130	3000
CFSM	.17	.21	2.45	1.22	3.25	.83	1.25	1.68	1.20	.66	.81	.27
IN.	.20	.24	2.82	1.41	3.50	.96	1.40	1.94	1.34	.77	.94	.30
CAL YR 1967 TOTAL	4,252,790	MEAN	11,650	MAX	63,500	MIN	1,660	CFSM	.89	IN	12.09	
WTR YR 1968 TOTAL	5,572,290	MEAN	15,220	MAX	92,600	MIN	1,950	CFSM	1.16	IN	15.82	

WABASH RIVER BASIN

3-3421. Busseron Creek near Hymara, Ind.

Location.--Lat 39°12'54", long 87°18'41", in $\frac{1}{4}$ sec. 21, T. 9 N., R. 8 W., on right bank at downstream side of bridge on Sullivan County Road 900 North, 1.9 miles northwest of Hymara.

Drainage area.--16.7 sq mi.

Records available.--June 1966 to September 1968.

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

Extremes.--Maximum discharge during the year, 1,380 cfs May 24 (gage height, 17.23 ft); no flow Oct. 1, 4.
1966-68: Maximum discharge, 1,450 cfs (revised) Dec. 8, 1966 (gage height, 17.42 ft); no flow at times most years.

Remarks.--Record good above 30 cfs and fair below. Flow affected at times by Soil Conservation Service flood water retarding structures.

Revisions.--The maximum discharge for the water year 1967 has been revised, superseding figures published in 1967 State Annual Report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	.02	.42	.86	4.3	147	.30	32	1.6	44	1.0	16	.53	
2	.02	.47	27	3.6	225	.27	23	1.2	31	.84	6.0	.53	
3	.04	.53	16	3.1	72	.24	74	.77	15	.67	3.5	.47	
4	.02	.53	7.8	2.9	55	.23	373	.60	8.8	.58	2.4	.77	
5	.04	.37	4.8	2.7	43	.26	78	.47	5.6	.52	1.7	.60	
6	.06	.28	3.3	1.8	34	.29	62	.53	3.9	.47	1.3	.47	
7	.06	.28	2.4	1.4	27	.43	51	.42	3.0	.46	1.2	.47	
8	.20	.24	1.6	1.5	21	1.3	39	.60	2.4	.40	1.1	.47	
9	.28	.16	1.1	1.4	16	1.9	30	18	2.0	.33	.94	.53	
10	.13	.16	3.8	1.2	11	2.1	23	9.4	1.8	.39	1.1	.68	
11	.13	.24	11	1.0	7.0	1.9	18	68	1.5	.44	.96	.53	
12	.10	.24	20	1.0	5.4	3.3	14	30	1.1	.37	.86	.47	
13	.16	.20	9.4	1.2	4.0	5.5	11	19	.84	.40	.77	.47	
14	.37	.16	21	1.2	3.3	3.8	10	13	.77	.47	.68	.47	
15	.28	.16	15	.86	2.5	7.5	9.4	9.4	.77	.45	.86	.53	
16	.58	.10	8.5	.70	2.0	51	7.8	8.8	.96	.45	.77	.68	
17	9.8	.13	22	.60	2.0	27	8.8	8.2	.66	.41	.68	1.3	
18	1.3	.16	34	.60	1.5	17	8.8	7.8	.58	.40	.68	.68	
19	.60	.08	18	.70	1.2	17	9.4	7.5	.52	.42	.77	.32	
20	.37	.08	10	2.5	.94	68	42	6.1	.43	.39	.68	.24	
21	.24	.08	261	18	.84	61	23	4.8	.43	.37	.60	.24	
22	.13	.10	119	32	.72	39	16	9.4	.67	.38	.60	.32	
23	.10	.13	75	47	.58	34	11	297	.46	1.2	.53	.32	
24	.16	.10	57	39	.54	35	8.2	642	1.7	.68	.53	.32	
25	.28	.16	46	25	.52	30	5.8	144	40	2.2	.47	.32	
26	.13	.13	32	20	.42	22	4.8	115	15	3.0	.47	.24	
27	.16	.10	22	22	.43	15	3.8	77	6.5	44	.47	.24	
28	.13	.04	16	34	.36	11	2.9	64	3.9	20	.47	.24	
29	.10	.04	13	194	.33	13	2.7	65	2.4	11	.47	.20	
30	.08	1.1	7.2	377	-----	21	2.4	47	1.7	5.5	.47	.20	
31	.24	-----	5.0	86	-----	27	-----	34	-----	13	.47	-----	
TOTAL	16.41	6.97	890.76	928.26	685.58	517.32	1,004.8	1,710.59	198.39	111.19	48.50	13.85	
MEAN	.53	.23	28.7	29.9	23.6	16.7	33.5	55.2	6.61	3.59	1.56	.46	
MAX	9.8	1.1	261	377	225	68	373	642	44	44	16	1.3	
MIN	.02	.04	.86	.60	.33	.23	2.4	.42	.43	.33	.47	.20	
CFSM	.03	.01	1.72	1.79	1.42	1.00	2.01	3.30	.40	.21	.09	.03	
IN.	.04	.02	1.98	2.07	1.53	1.15	2.24	3.81	.44	.25	.11	.03	
CAL YR 1967	TOTAL	6,145.77		MEAN	16.8	MAX	261	MIN	0	CFSM	1.01	IN	13.69
WTR YR 1968	TOTAL	6,132.62		MEAN	16.8	MAX	642	MIN	.02	CFSM	1.00	IN	13.66

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

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

Drainage area.--14.4 sq mi.

Records available.--October 1966 to September 1968.

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

Extremes.--Maximum discharge during year, 1,140 cfs May 24 (gage height, 12.14 ft); no flow many days.
1966-68: Maximum discharge, that of May 24, 1968; no flow at times each year.

Remarks.--Record poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.28	.68	3.0	129	1.1	24	1.5	25	.38	27	.10
2	.06	.23	16	2.5	188	1.1	8.6	1.4	23	.23	2.5	.28
3	.03	.38	12	2.0	29	1.0	64	1.3	6.0	.10	.82	.28
4	.14	.28	2.1	1.8	19	1.0	390	1.1	3.9	.03	.55	.49
5	.28	.18	2.3	1.5	13	1.0	36	1.1	2.8	0	.61	.43
6	.38	.18	2.4	1.3	10	1.2	22	.98	2.3	0	.33	.38
7	.33	.18	2.5	1.2	9.9	1.4	15	1.1	2.0	.03	.23	.33
8	.49	.14	2.7	1.2	9.4	1.7	10	.82	1.8	0	1.9	.38
9	.33	.18	2.7	1.2	9.4	1.8	6.4	28	1.5	0	.75	.38
10	.28	.28	4.9	1.2	5.6	1.9	4.9	3.9	1.5	0	.10	.18
11	.33	.38	9.8	1.3	2.5	2.0	4.2	71	1.5	.14	.03	.18
12	.33	.38	19	1.3	2.3	2.1	3.7	19	1.2	0	0	.10
13	.55	.38	5.6	1.4	2.1	2.2	3.2	6.7	1.3	.33	0	.06
14	.43	.38	15	1.4	2.0	2.3	3.9	4.2	.98	.14	0	.10
15	.43	.38	9.4	1.5	1.8	7.4	3.9	2.8	1.1	0	.03	.14
16	.86	.33	5.1	1.6	2.1	83	2.8	3.4	1.2	.06	.03	.06
17	1.1	.38	19	1.6	1.8	26	4.2	2.7	1.1	.03	.03	1.7
18	.28	.38	33	1.6	1.7	11	4.4	3.0	.90	.03	0	1.4
19	.10	.38	8.7	1.8	1.6	18	3.2	2.7	.82	.06	0	.38
20	.10	.38	7.9	2.3	1.5	96	60	2.0	.49	0	.06	.33
21	.10	.43	165	3.7	1.4	66	17	1.6	.43	0	0	.23
22	.06	.49	73	13	1.4	24	8.3	2.4	1.9	0	0	.28
23	.10	.43	17	25	1.3	22	5.1	344	1.4	0	0	.23
24	.38	.55	11	13	1.3	30	3.2	288	2.8	0	0	.28
25	.14	.49	11	4.2	1.2	21	2.5	88	52	12	.03	.28
26	.10	.43	8.3	2.8	1.2	9.9	2.3	96	3.7	1.9	0	.38
27	.10	.38	6.4	12	1.2	6.7	2.1	29	1.5	56	0	.49
28	.10	.38	4.6	52	1.2	5.1	1.8	16	.98	4.9	0	.43
29	.06	.38	3.9	192	1.2	4.9	1.7	30	.68	1.4	0	.49
30	.10	.90	3.7	360	-----	15	1.6	17	.38	.23	0	.49
31	.18	-----	3.4	54	-----	22	-----	8.6	-----	6.0	.03	-----
TOTAL	8.28	10.92	488.08	764.4	453.1	489.8	720.0	1,079.30	146.16	83.99	35.03	11.26
MEAN	.27	.36	15.7	24.7	15.6	15.8	24.0	34.8	4.87	2.71	1.13	.38
MAX	1.1	.90	165	360	188	96	390	344	52	56	27	1.7
MIN	.03	.14	.68	1.2	1.2	1.0	1.6	.82	.38	0	0	.06
CFSM	.02	.03	1.09	1.71	1.09	1.10	1.67	2.42	.34	.19	.08	.03
IN.	.02	.03	1.26	1.97	1.17	1.26	1.86	2.79	.38	.22	.09	.03
CAL YR 1967	TOTAL 4,296.52	MEAN 11.8	MAX 289	MIN .03	CFSM .82	IN 11.10						
WTR YR 1968	TOTAL 4,290.32	MEAN 11.7	MAX 390	MIN 0	CFSM .81	IN 11.08						

WABASH RIVER BASIN

3-3422.5 Mud Creek near Dugger, Ind.

Location.--Lat 39°06'28", long 87°16'42", in SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T. 8 N., R. 8 W., on right bank of downstream side of bridge on Sullivan County Road 700 East, 0.6 mile north of road 100 North, 1.7 miles upstream from mouth, and 2.5 miles northwest of Dugger.

Drainage area.--11.9 sq mi.

Records available.--June 1966 to September 1968.

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, 866 cfs May 24 (gage height, 13.42 ft); minimum, 0.88 cfs Oct. 10-12; minimum gage height, 5.99 ft Aug. 25-30, Sept. 3, 11-16.
1966-68: Maximum discharge, 866 cfs May 24, 1968; minimum, 0.67 cfs Nov. 4, 1966; minimum gage height, 5.99 ft Aug. 25-30, Sept. 3, 11-16, 1968.

Remarks.--Record fair below 20 cfs and good above. Flow affected at times by surface-mined area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	8.2	9.2	9.0	97	5.6	47	7.7	15	8.7	15	2.0
2	1.6	6.2	41	8.5	136	5.1	23	6.7	14	8.7	5.5	1.9
3	1.4	7.7	19	7.8	32	4.9	35	6.2	13	8.2	6.5	1.6
4	1.2	6.7	9.7	7.2	22	4.7	194	6.2	11	8.2	5.1	5.3
5	1.6	4.2	7.7	8.0	18	4.9	34	5.7	10	7.7	4.2	2.3
6	2.1	3.6	8.7	8.0	16	5.2	23	5.2	9.7	7.7	3.7	1.8
7	2.1	3.1	7.7	7.6	15	4.7	19	5.2	9.2	7.7	4.7	1.6
8	7.2	2.6	5.7	6.8	14	4.6	16	5.2	8.7	7.7	4.2	1.6
9	1.6	3.1	5.2	7.5	13	5.0	14	19	8.2	7.2	3.5	1.6
10	1.2	3.1	10	8.8	12	8.0	13	7.7	7.7	7.2	5.5	1.7
11	.88	9.7	88	8.6	11	6.5	12	50	7.7	7.2	4.2	1.5
12	1.2	6.2	59	7.4	10	10	11	15	7.2	7.2	3.4	1.4
13	4.2	4.7	16	8.8	9.0	13	11	11	6.7	7.2	3.1	1.4
14	2.1	4.2	22	8.8	8.0	8.7	13	8.7	6.2	7.2	3.4	1.3
15	1.6	3.1	14	7.0	7.2	21	12	7.7	6.2	7.2	3.4	1.4
16	11	3.1	11	6.0	6.6	128	10	16	6.7	7.2	3.1	2.1
17	57	3.6	29	5.3	6.4	28	13	12	6.7	6.7	2.9	22
18	8.2	3.1	29	5.1	7.4	19	11	11	6.7	6.7	2.4	19
19	4.2	2.6	13	5.0	7.0	21	10	9.7	6.2	6.7	3.1	3.9
20	3.6	3.1	11	6.0	6.0	64	63	7.7	5.7	6.2	2.6	2.7
21	2.6	4.7	39	7.7	6.8	49	23	7.2	5.2	6.2	2.5	2.4
22	2.6	4.2	24	11	7.0	27	15	8.7	5.7	5.7	2.3	2.6
23	2.6	4.2	13	13	6.6	25	13	134	5.2	5.7	2.2	2.2
24	8.2	4.2	9.7	15	6.1	27	11	300	13	5.7	2.3	2.4
25	6.2	4.2	11	18	5.7	24	9.7	51	55	10	1.6	4.6
26	3.1	3.1	9.2	11	5.4	18	9.7	64	15	5.7	1.5	2.0
27	2.6	2.6	8.2	8.7	5.2	15	8.2	36	12	13	1.4	1.9
28	2.6	3.1	7.8	16	5.1	13	7.7	23	11	6.2	1.4	1.8
29	2.6	3.1	6.7	43	5.1	13	7.7	23	9.7	4.7	1.5	1.7
30	2.1	16	6.0	144	-----	12	7.7	23	8.7	4.2	1.5	1.6
31	4.7	-----	7.5	30	-----	62	-----	18	-----	27	1.6	-----
TOTAL	155.68	141.3	558.0	464.6	506.6	656.9	696.7	911.5	313.0	242.6	109.3	101.3
MEAN	5.02	4.71	18.0	15.0	17.5	21.2	23.2	29.4	10.4	7.83	3.52	3.38
MAX	57	16	88	144	136	128	194	300	55	27	15	22
MIN	.88	2.6	5.2	5.0	5.1	4.6	7.7	5.2	5.2	4.2	1.4	1.3
CFSM	.42	.40	1.51	1.26	1.47	1.78	1.95	2.47	.88	.66	.30	.28
IN.	.49	.44	1.74	1.45	1.58	2.05	2.18	2.85	.98	.76	.34	.32
CAL YR 1967	TOTAL 4,385.58		MEAN 12.0		MAX 163	MIN .88		CFSM 1.01	IN 13.71			
WTR YR 1968	TOTAL 4,857.18		MEAN 13.3		MAX 300	MIN .88		CFSM 1.12	IN 15.18			

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 bank at upstream side of bridge on State Road 54, 1.6 miles east of intersections of State Roads 41 and 54, 1.5 miles southeast of Sullivan.

Drainage area.--138 sq mi.

Records available.--June 1966 to September 1968.

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

Extremes.--Maximum discharge during year, 4,150 cfs May 25 (gage height, 15.00 ft); minimum, 1.3 cfs Sept. 16 (gage height, 1.80 ft).
1966-68: Maximum discharge, 4,150 cfs May 25, 1968 (gage height, 15.00 ft); minimum discharge, 0.8 cfs Sept. 8, 9, 1966; minimum gage height, 1.80 ft Sept. 16, 1968.

Remarks.--Record good except those affected by backwater from return flow and winter period, which are fair. Flow affected at times by surface-mined areas and Soil Conservation Service flood water retarding structures.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.4	15	35	56	1,350	19	676	31	213	21	157	2.0
2	3.4	15	96	49	1,500	17	246	28	233	19	49	2.0
3	2.9	15	182	41	1,240	15	256	30	138	17	31	1.8
4	2.9	18	79	35	454	14	1,730	31	96	16	22	3.7
5	2.9	12	52	32	460	15	2,540	25	75	15	15	4.8
6	3.4	9.6	44	33	234	14	1,190	22	60	12	12	3.1
7	3.1	8.7	42	29	188	13	561	20	51	10	12	2.7
8	8.2	7.8	35	26	157	16	266	18	44	10	21	2.7
9	7.4	7.8	29	27	136	26	186	82	38	9.1	10	2.0
10	4.2	7.4	36	28	103	36	151	73	33	8.6	42	1.8
11	3.7	14	92	25	94	37	121	286	30	8.6	29	2.0
12	3.4	14	364	23	86	40	103	244	25	8.2	11	1.8
13	3.9	9.1	143	24	80	46	88	108	22	9.6	7.4	1.8
14	8.2	8.7	134	24	76	38	85	74	22	7.8	7.0	1.8
15	4.8	7.8	182	24	72	69	90	56	20	13	6.2	1.6
16	7.0	7.4	97	19	60	866	70	130	31	10	5.5	1.6
17	83	8.2	124	17	36	591	72	91	26	7.8	4.8	14
18	37	7.8	360	15	45	231	84	96	19	6.6	4.2	16
19	18	7.0	179	25	42	170	69	75	17	6.6	3.4	7.8
20	11	7.0	107	41	41	760	477	58	15	5.5	3.1	5.5
21	8.7	10	286	84	38	771	385	46	14	5.2	2.9	3.7
22	7.0	8.7	1,120	129	33	418	160	38	18	3.9	2.9	5.9
23	6.6	10	737	233	28	293	110	808	39	4.5	7.7	3.4
24	7.8	9.6	265	190	26	290	76	2,330	32	25	2.7	2.7
25	22	13	184	124	23	341	59	3,430	295	47	2.2	2.4
26	9.1	8.7	145	76	20	197	51	1,920	161	71	1.8	2.4
27	8.2	7.4	99	78	18	143	45	1,090	58	68	1.8	2.0
28	7.4	11	87	251	18	112	39	558	41	138	1.6	1.8
29	7.0	12	79	702	17	96	36	451	31	34	1.6	1.6
30	6.6	33	73	1,550	-----	100	34	428	25	20	1.6	1.4
31	9.1	-----	59	2,550	-----	250	-----	239	-----	46	1.6	-----
TOTAL	321.3	330.7	5,546	6,560	6,675	6,044	10,056	12,916	1,922	684.0	476.0	107.8
MEAN	10.4	11.0	179	212	230	195	335	417	64.1	22.1	15.4	3.59
MAX	83	33	1,120	2,550	1,500	866	2,540	3,430	295	138	157	16
MIN	2.9	7.0	29	15	17	13	34	18	14	3.9	1.6	1.4
CFSM	.08	.08	1.30	1.54	1.67	1.41	2.43	3.02	.46	.16	.11	.03
IN.	.09	.09	1.50	1.78	1.80	1.63	2.71	3.48	.51	.18	.13	.03
CAL YR 1967	TOTAL 46,015.8		MEAN 126		MAX 1,680	MIN 2.9	CFSM .91	IN 12.41				
WTR YR 1968	TOTAL 51,638.8		MEAN 141		MAX 3,430	MIN 1.4	CFSM 1.02	IN 13.93				

WABASH RIVER BASIN

3-3423.5 Buttermilk Creek near Paxton, Ind.

Location.--Lat 39°03'43", long 87°20'37", in SE 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 1966 to September 1968.

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

Extremes.--Maximum discharge during year, 442 cfs Apr. 4 (gage height, 13.02 ft); minimum, 0.02 cfs Sept. 30 (gage height, 6.25 ft). 1966-68: Maximum discharge, 442 cfs Apr. 4, 1968 (gage height, 13.02 ft); minimum, no flow at times most years.

Remarks.--Record poor. Natural flow of stream affected by temporary storage retention reservoirs and surface-mined areas.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.59	5.8	18	10	161	4.8	87	3.8	15	5.4	18	.71
2	.44	6.9	102	9.5	217	4.2	25	3.3	14	4.1	3.8	.83
3	.38	8.2	38	9.0	55	4.0	58	2.8	12	2.9	3.8	1.3
4	.59	8.8	9.9	8.5	33	4.5	246	3.8	8.8	3.3	2.4	2.3
5	.85	5.5	6.2	8.0	24	4.8	57	6.8	6.2	4.0	2.3	1.6
6	1.5	6.1	7.4	7.5	18	5.6	32	12	5.7	3.1	1.3	1.4
7	1.7	4.8	7.1	7.2	16	5.9	26	7.1	5.7	2.3	1.1	2.0
8	5.0	3.4	4.3	7.0	14	4.7	20	8.1	6.2	2.0	1.4	.83
9	7.5	3.6	3.2	7.0	13	5.0	17	26	7.9	2.0	1.4	.32
10	6.0	5.9	16	7.5	12	9.1	14	17	5.2	2.0	13	.25
11	5.4	11	68	8.5	11	6.8	12	67	4.1	2.0	5.2	.19
12	5.2	8.9	94	13	10	12	11	24	3.6	2.0	3.1	1.4
13	6.4	6.8	18	17	9.5	15	9.8	12	3.6	1.9	3.6	.40
14	6.7	6.4	48	16	9.0	15	16	8.3	3.6	3.6	3.3	.10
15	5.1	5.6	24	8.2	8.5	55	13	6.2	4.1	4.0	2.3	.07
16	9.2	4.1	10	6.7	7.5	223	14	19	3.8	2.6	2.6	.10
17	26	5.7	90	6.4	7.0	47	17	15	2.6	2.3	2.8	3.1
18	4.8	5.1	82	6.3	6.4	23	15	13	2.4	3.8	1.8	4.3
19	2.5	5.0	15	6.3	6.4	37	13	14	2.8	4.3	1.3	1.3
20	2.4	5.6	9.1	5.8	6.6	152	122	11	3.3	2.0	2.0	.83
21	3.1	8.3	83	12	6.4	91	30	7.0	2.8	1.3	1.9	1.6
22	3.0	6.9	55	18	6.2	42	19	7.4	3.4	2.4	1.2	.83
23	3.2	6.9	21	24	5.8	38	15	198	3.6	4.3	1.1	.50
24	4.8	6.4	14	19	5.4	44	12	318	4.0	3.1	.95	.50
25	6.3	6.2	12	19	5.4	29	11	104	54	4.8	1.4	1.6
26	3.7	5.6	11	9.2	5.4	16	9.3	99	15	5.0	1.4	.60
27	3.1	5.0	10	14	5.4	15	8.8	52	10	9.3	1.2	.32
28	3.5	4.6	9.5	40	5.2	14	8.1	32	8.3	4.7	.71	.32
29	3.5	4.9	9.5	142	5.0	10	5.0	43	5.5	1.4	.95	.50
30	3.5	48	9.5	271	-----	8.4	4.5	30	4.8	1.2	1.2	.14
31	4.2	-----	10	62	-----	133	-----	20	-----	28	.60	-----
TOTAL	140.15	226.0	914.7	805.6	695.1	1,078.8	947.5	1,190.6	232.0	125.1	89.11	30.24
MEAN	4.52	7.53	29.5	26.0	24.0	34.8	31.6	38.4	7.73	4.04	2.87	1.01
MAX	26	48	102	271	217	223	246	318	54	28	18	4.3
MIN	.38	3.4	3.2	5.8	5.0	4.0	4.5	2.8	2.4	1.2	.60	.07
CFSM	.27	.46	1.79	1.57	1.45	2.11	1.91	2.33	.47	.24	.17	.06
IN.	.32	.51	2.06	1.82	1.57	2.43	2.14	2.68	.52	.28	.20	.07
CAL YR 1967	TOTAL 6,154.27			MEAN 16.9		MAX 237	MIN .17	CFSM 1.02	IN 13.87			
WTR YR 1968	TOTAL 6,474.90			MEAN 17.7		MAX 318	MIN .07	CFSM 1.07	IN 14.59			

3-3425. Busseron Creek near Carlisle, Ind.

Location.--Lat 38°58'30", long 87°25'35", in NW $\frac{1}{4}$ survey 17, Vincennes Tract, 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 1968.

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.--25 years, 207 cfs.

Extremes.--Maximum discharge during year, 3,540 cfs May 26 (gage height, 16.17 ft); minimum, 3.3 cfs Oct. 4, 5 (gage height, 2.42 ft).

1943-68: Maximum discharge, 8,800 cfs Jan. 5, 1950 (gage height, 20.05 ft); maximum gage height, 20.30 ft May 9, 1961; no flow many days in 1954.

Remarks.--Record fair. Natural flow of stream affected by temporary storage retention reservoirs and surface-mined areas.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.4	24	171	103	2,330	27	1,240	54	312	34	411	4.9
2	3.9	49	301	115	3,200	29	701	48	323	29	121	5.2
3	3.7	38	523	88	2,590	27	420	44	241	24	77	5.3
4	3.9	47	211	70	2,200	24	2,140	49	168	22	64	6.7
5	3.7	40	127	53	1,620	25	2,230	43	132	21	42	12
6	4.4	30	110	54	713	26	2,410	42	109	18	30	8.7
7	5.0	25	120	50	532	24	1,920	41	91	15	23	7.6
8	5.7	21	99	40	508	22	806	33	79	14	37	6.9
9	15	17	80	42	445	35	339	71	70	13	26	5.8
10	8.5	16	103	48	339	56	255	120	61	12	40	4.8
11	5.9	22	227	42	253	58	203	282	52	12	83	4.6
12	5.2	43	791	38	195	61	166	414	46	11	29	4.8
13	5.7	32	409	39	143	65	139	168	40	12	18	5.2
14	12	26	335	40	119	70	130	110	39	18	17	5.2
15	14	23	420	40	112	181	150	87	37	22	15	4.8
16	15	20	230	33	99	1,380	115	175	43	19	13	4.6
17	157	18	310	28	89	1,330	113	133	48	13	12	21
18	93	21	938	25	70	665	135	144	36	9.8	11	32
19	41	17	507	40	68	332	112	117	30	10	8.9	23
20	24	16	255	60	76	1,090	705	93	27	9.3	7.3	12
21	16	33	420	83	57	1,320	779	74	24	7.8	7.2	9.2
22	13	36	1,120	177	58	1,020	301	62	32	8.3	6.6	9.3
23	12	31	1,220	381	49	597	196	732	62	8.5	6.2	13
24	11	30	795	336	43	539	137	1,990	37	16	6.2	7.8
25	33	32	375	213	38	591	106	2,510	396	46	5.7	7.2
26	27	29	325	144	34	371	90	3,450	355	78	5.5	7.2
27	18	22	239	158	31	251	84	3,160	108	55	5.2	6.4
28	16	16	227	373	29	194	73	2,370	73	167	5.0	5.9
29	16	17	190	855	28	157	65	1,540	53	58	4.6	6.4
30	15	162	205	1,740	-----	140	58	850	42	33	4.8	6.1
31	15	-----	163	2,080	-----	383	-----	436	-----	329	5.7	-----
TOTAL	623.0	953	11,546	7,588	16,068	11,090	16,318	19,442	3,166	1,144.7	1,147.4	263.6
MEAN	20.1	31.8	372	245	554	358	544	627	106	36.9	37.0	8.79
MAX	157	162	1,220	2,080	3,200	1,380	2,410	3,450	396	329	411	32
MIN	3.7	16	80	25	28	22	58	33	24	7.8	4.6	4.6
CFSM	.09	.14	1.63	1.07	2.43	1.57	2.39	2.75	.46	.16	.16	.04
IN.	.10	.16	1.88	1.24	2.62	1.81	2.66	3.17	.52	.19	.19	.04
CAL YR 1967	TOTAL 75,369.3	MEAN 206	MAX 1,770	MIN 3.5	CFSM .91	IN 12.29						
WTR YR 1968	TOTAL 89,349.7	MEAN 244	MAX 3,450	MIN 3.7	CFSM 1.07	IN 14.57						

PEAK DISCHARGE (BASE, 2,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-02	0845	16.00	3,400	05-26	1645	16.17	3,540
04-04	1315	14.64	2,520				

WABASH RIVER BASIN

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 1968. 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.--39 years, 11,240 cfs.

Extremes.--Maximum discharge during year, 77,200 cfs Feb. 8; maximum observed gage height, 24.37 ft Feb. 8; minimum discharge, 2,140 cfs Oct. 4; minimum observed gage height, 2.58 ft Oct. 4.

1929-68: Maximum discharge, 189,000 cfs May 22, 23, 1943 (gage height, 29.33 ft, present datum); minimum observed, 770 cfs Aug. 4, 5, 1934 (gage height, 1.40 ft, present datum).

Flood of Mar. 29, 1913, reached a stage of 26.3 ft, present datum, from floodmarks, determined by Corps of Engineers (discharge, 255,000 cfs, estimated).

Remarks.--Record good. Natural flow of stream affected by storage reservoirs and power development.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2270	2680	3680	45000	36900	9900	20800	8650	39100	23600	9450	4590
2	2340	2630	3680	43000	49500	9650	19400	8260	36100	22700	12700	4380
3	2240	2800	6740	34000	49300	9250	17200	7970	32600	20700	13500	4170
4	2170	2930	15500	30000	55300	9900	22600	7610	30300	18200	13500	4170
5	2170	3020	16000	25000	63100	8650	26900	7220	27900	15600	10400	4170
6	2270	3240	15100	20000	70000	8400	26800	7020	25100	13400	19700	4130
7	2240	3360	16800	17000	74900	9210	27500	6790	22900	12500	23600	4010
8	2170	3640	13800	14000	75700	9160	23000	6460	19700	11200	23700	3920
9	2290	3680	20600	11500	75600	8060	23000	6330	16800	10200	19400	3920
10	2310	3660	21800	10200	70100	7970	23500	5920	14600	9350	15500	4010
11	2270	3600	22400	10200	63800	7970	23800	7700	14400	9150	14500	3820
12	2200	3520	24100	10400	55600	9090	23900	9880	13200	9050	13700	3640
13	2240	3340	25600	10600	51100	8300	24500	9950	12300	8850	13400	3600
14	2310	3280	25900	10000	46200	9060	19600	8650	11300	8060	14000	3480
15	2270	3200	23100	9700	43800	7970	16300	7610	10400	7730	12600	3500
16	2340	3220	23400	9300	39200	11000	14000	7990	10000	7060	10600	3360
17	2720	3160	29100	9200	35800	14600	12500	8300	10300	6790	9020	3320
18	3220	2970	30700	9120	32700	13800	12500	15900	13700	6530	8060	3320
19	3240	3020	31100	8850	23600	13000	13500	21800	14700	6190	8450	3520
20	3520	2980	29900	8550	23100	16000	15000	24500	14000	5030	13000	3400
21	3400	3060	27300	8800	17000	19300	16300	25300	12000	5910	16100	3320
22	3120	3080	30200	9500	15000	19800	14000	23000	10300	5680	15100	3560
23	2980	3120	33800	11000	14000	13900	12100	30600	9650	5550	13000	3920
24	2890	3140	33800	13700	12800	13200	11500	35200	9500	5840	10600	4300
25	2930	3340	42600	14500	11900	17600	11000	41400	10000	6560	9320	4430
26	2740	3360	47500	14400	11300	16700	10500	45800	11400	5280	7780	4510
27	2610	3200	50300	12500	11000	16100	10200	50700	13300	6460	6970	4530
28	2590	3160	52400	14500	10600	16400	9900	51900	18600	9680	6650	4470
29	2660	3080	53100	13500	10300	17500	9400	50000	21600	10200	5840	4380
30	2520	3480	52900	23700	-----	18600	8950	45800	23100	9000	5240	4050
31	2520	-----	43000	33200	-----	19600	-----	42800	-----	7970	4930	-----
TOTAL	79760	95950	891900	524920	1154200	394640	546150	645010	529850	312020	380310	117900
MEAN	2573	3198	23770	16930	39800	12730	13200	20810	17660	10060	12270	3930
MAX	3520	3680	53100	45000	76700	19800	29800	51900	39100	23600	23700	4590
MIN	2170	2630	3680	9550	10300	7970	8950	6330	9500	5550	4930	3320
CFSM	.188	.233	2.10	1.24	.291	.929	1.33	1.52	1.29	.734	.896	.287
IN.	.22	.26	2.42	1.43	3.14	1.07	1.48	1.75	1.44	.85	1.03	.32
CAL YR 1967	TOTAL 4,451,620	MEAN 12,200	MAX 53,100	MIN 1,840	CFSM .891	IN 12.08						
WTR YR 1968	TOTAL 5,672,610	MEAN 15,500	MAX 76,700	MIN 2,170	CFSM 1.13	IN 15.41						

WABASH RIVER BASIN

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

Location.--Lat 38°56'10", long 88°01'10", in NW 1/4 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 1968. Prior to October 1963, published as Embarras River at Ste. Marie.

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

Average discharge.--57 years, 1,181 cfs.

Extremes.--Maximum discharge during year, 37,300 cfs Dec. 23 (gage height, 26.00 ft); minimum, 38 cfs Oct. 4, 5, 7, 8. 1909-12, 1914-68: Maximum discharge, 44,800 cfs Jan. 4, 1950 (gage height, 25.95 ft, present datum), from rating curve extended above 29,000 cfs; maximum gage height, 26.54 ft, present datum, June 30, 1957; minimum discharge, 1 cfs Oct. 5-9, 1914.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	72	657	1,610	12,400	495	940	466	7,710	1,140	2,000	146
2	41	108	1,580	1,400	11,000	471	936	443	6,320	952	3,100	128
3	39	150	5,710	1,100	11,000	457	887	425	4,290	782	1,700	121
4	38	170	7,180	1,000	11,500	441	4,540	401	2,970	666	1,320	117
5	39	189	8,360	900	9,790	421	6,250	377	2,490	588	1,170	112
6	40	179	9,060	800	8,510	420	3,980	356	2,230	532	1,000	105
7	39	168	5,650	700	8,200	417	2,330	334	1,930	485	830	100
8	42	153	3,540	650	7,500	409	1,900	317	1,630	452	708	96
9	45	138	2,670	650	6,250	404	1,640	406	1,370	433	1,370	93
10	45	126	3,290	600	3,640	414	1,380	2,110	1,190	392	1,920	89
11	43	120	5,860	600	2,510	421	1,180	1,080	1,030	389	3,730	86
12	41	118	7,100	600	2,020	428	1,020	2,450	901	386	2,850	85
13	43	116	7,930	600	1,630	418	910	1,440	796	344	1,400	82
14	42	122	8,100	550	1,400	406	845	917	718	319	1,030	79
15	40	115	7,340	550	1,270	430	804	782	657	310	795	76
16	50	105	5,420	550	1,180	1,120	776	702	626	286	651	77
17	211	99	3,930	566	1,090	1,710	757	617	588	278	597	76
18	371	95	4,750	558	968	1,680	828	562	550	253	486	80
19	265	107	5,130	534	851	1,430	853	564	602	226	416	78
20	165	137	3,560	520	761	2,310	1,540	649	863	210	359	77
21	121	110	5,640	617	721	2,690	1,900	654	948	108	317	79
22	98	108	25,600	1,270	691	1,960	1,280	587	854	185	284	77
23	86	141	33,500	2,140	619	1,350	978	1,870	3,110	201	255	75
24	80	121	20,800	2,410	617	1,100	837	6,000	2,070	310	231	71
25	79	112	11,600	2,120	589	993	734	9,360	1,720	324	215	70
26	77	130	8,400	1,800	560	910	661	14,600	3,980	1,070	198	67
27	75	119	7,000	1,600	537	820	608	13,600	2,470	488	180	64
28	77	105	5,000	2,570	523	741	567	14,500	1,620	958	166	63
29	76	95	3,500	4,920	520	683	527	12,000	1,450	1,250	155	62
30	70	162	2,520	7,530	-----	643	494	10,300	1,320	568	148	61
31	71	-----	1,970	9,940	-----	635	-----	8,900	-----	674	160	-----
TOTAL	2,590	3,790	232,347	51,955	109,587	27,227	42,882	107,769	59,003	15,649	29,741	2,592
MEAN	83.5	126	7,495	1,676	3,779	878	1,429	3,476	1,967	505	959	86.4
MAX	371	189	33,500	9,940	12,400	2,690	6,250	14,600	7,710	1,250	3,730	146
MIN	38	72	657	520	520	404	494	317	550	185	148	61
CFSM	.06	.08	4.95	1.11	2.50	.58	.94	2.30	1.30	.33	.63	.06
IN.	.06	.09	5.71	1.28	2.69	.67	1.05	2.65	1.45	.38	.73	.06
CAL YR 1967	TOTAL	546,383	MEAN	1,497	MAX	33,500	MIN	38	CFSM	.99	IN	13.43
WTR YR 1968	TOTAL	695,132	MEAN	1,872	MAX	33,500	MIN	38	CFSM	1.24	IN	16.84

PEAK DISCHARGE (BASE, 6,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-06	0345	19.30	9,600	02-01	1545	20.08	13,000
12-14	1000	18.57	8,170	05-26	0730	20.56	15,400
12-23	0230	26.00	37,300				

WABASH RIVER BASIN

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 1968. 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 present datum.

Average discharge.--28 years, 238 cfs.

Extremes.--Maximum discharge during year, 21,900 cfs Dec. 22 (gage height, 23.30 ft); minimum daily, 1.4 cfs Oct. 7.
1940-68: Maximum discharge, 27,100 cfs Jan. 4, 1950 (gage height, 24.38 ft, present datum), from rating curve extended above 16,000 cfs; no flow for many days in 1953-54, 1964-65.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.4	11	172	100	3,650	40	212	64	248	52	824	16
2	2.3	24	600	90	2,670	39	290	59	368	43	1,170	15
3	2.6	33	1,990	90	2,960	39	216	55	280	36	512	14
4	2.2	42	3,070	90	1,840	36	1,860	50	172	31	192	14
5	1.9	35	3,610	80	542	36	3,230	45	122	28	110	15
6	2.2	33	1,530	70	323	37	1,940	42	90	25	88	13
7	1.4	28	720	70	250	39	463	39	85	22	60	13
8	2.5	23	543	60	216	30	300	37	75	21	60	12
9	2.7	19	350	60	184	38	223	72	67	22	697	12
10	2.3	17	435	60	130	43	173	397	50	51	822	11
11	2.3	16	1,370	50	100	50	143	383	53	256	1,300	10
12	2.9	16	1,930	50	90	54	122	1,130	47	74	896	9.7
13	5.0	15	2,210	50	80	54	110	424	42	44	227	9.7
14	4.3	15	1,960	50	75	46	104	193	37	33	141	10
15	3.6	15	1,420	50	70	60	105	142	34	46	110	9.5
16	7.0	13	642	50	65	555	111	112	48	89	145	9.7
17	128	12	431	50	60	1,080	114	93	39	63	114	9.5
18	120	12	1,210	50	55	661	165	80	32	36	76	11
19	81	11	1,380	60	50	385	160	75	28	24	60	11
20	37	10	576	75	50	1,080	734	71	26	18	50	11
21	20	11	2,680	104	48	1,490	1,140	63	24	15	45	12
22	12	14	18,000	298	46	1,060	362	58	65	13	41	10
23	8.7	14	4,500	643	47	431	199	808	1,460	14	37	9.5
24	6.9	14	1,100	773	46	257	144	4,480	422	254	37	8.2
25	8.1	16	641	627	45	193	112	7,120	770	215	20	7.7
26	7.3	21	418	324	43	164	96	5,000	1,290	697	25	6.9
27	5.9	19	294	274	43	140	86	3,190	308	337	22	6.0
28	5.4	17	217	680	43	118	79	1,810	127	508	20	6.2
29	5.7	14	160	1,680	42	105	73	606	87	843	18	5.7
30	5.7	72	140	5,060	-----	98	68	471	66	191	18	5.0
31	5.7	-----	120	6,320	-----	99	-----	347	-----	281	17	-----
TOTAL	505.0	612	54,419	18,078	13,863	8,566	13,143	27,516	6,589	4,478	7,976	313.3
MEAN	16.3	20.4	1,755	583	478	276	438	888	220	144	257	10.4
MAX	128	72	18,000	6,320	3,650	1,490	3,230	7,120	1,460	849	1,300	16
MIN	1.4	10	120	50	42	36	68	37	24	13	17	5.0
CFSM	.05	.06	5.50	1.83	1.50	.87	1.37	2.78	.69	.45	.81	.03
IN.	.06	.77	6.34	2.11	1.62	1.00	1.53	3.21	.77	.52	.93	.04
CAL YR 1967	TOTAL 121,199.0	MEAN 332	MAX 18,000	MIN 1.4	CFSM 1.04	IN 14.13						
WTR YR 1968	TOTAL 156,058.3	MEAN 426	MAX 18,000	MIN 1.4	CFSM 1.34	IN 18.10						

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-05	0530	17.46	4,060	01-30	2045	19.32	7,910
12-22	0845	23.30	21,900	05-25	0230	19.24	7,670

3-3470. White River at Muncie, Ind.

Location.--Lat 40°12'15", long 85°23'14", SE¼NW¼ Hackley Reserve, on right bank 200 ft downstream from Walnut Street Bridge in Muncie and 6 miles upstream from Bell Creek.

Drainage area.--241 sq mi (revised).

Records available.--November 1930 to September 1968. Prior to October 1948, published as West Fork White River at Muncie. Daily gage heights from October 1924 to December 1929 are available in the district office.

Gage.--Digital water-stage recorder. Datum of gage is 917.10 ft above mean sea level (city of Muncie bench mark). Prior to Jan. 4, 1934, chain gage at highway bridge 200 ft upstream at datum 8.00 ft higher. Jan. 4, 1934 to Sept. 13, 1940, water-stage recorder and Sept. 14, 1940 to Feb. 14, 1941, staff gage, at present site at datum 7.00 ft higher. Feb. 15, 1941 to Jan. 27, 1942, wire-weight gage at bridge 200 ft upstream at datum 3.00 ft higher. Jan. 28, 1942 to Apr. 27, 1964, graphic water-stage recorder at present site and datum 3.00 ft higher.

Average discharge.--37 years (1931-68), 204 cfs.

Extremes.--Maximum discharge during year, 4,710 cfs May 25 (gage height, 8.90 ft); minimum, 7.3 cfs Oct. 4, 5, 24; minimum gage height, 2.72 ft Oct. 24, Sept. 4.
1930-68: Maximum discharge, 14,300 cfs Apr. 21, 1964; maximum gage height, 21.07 ft Jan. 15, 1937, present datum; minimum discharge, 0.6 cfs Sept. 16, 1937; minimum daily, 1.1 cfs Sept. 16, 17, 23-25, 1954 and Oct. 10, 1956.
Maximum stage known, about 22.6 ft in March 1913, present datum (discharge, about 20,000 cfs).

Remarks.--Record good except that below 2.5 cfs and for winter period, which is fair. Records of diversion available since October 1937.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	18	16	100	1,480	68	557	70	346	116	276	41
2	17	33	100	94	2,970	66	486	73	686	96	382	38
3	9.2	46	1,680	87	2,420	64	350	72	518	84	209	33
4	7.9	39	1,670	80	941	64	1,260	72	342	73	156	21
5	20	35	830	74	547	62	1,570	68	255	68	186	26
6	16	28	687	66	437	60	772	59	206	59	146	25
7	19	17	545	60	362	60	459	57	172	57	112	21
8	25	16	386	58	301	60	338	57	149	49	200	21
9	21	13	266	53	255	60	248	75	135	43	376	18
10	15	12	467	50	216	60	200	68	116	38	1,020	15
11	14	17	1,390	48	200	60	177	90	118	33	1,110	38
12	18	18	1,130	47	180	60	164	124	118	31	506	41
13	16	14	722	47	160	60	149	103	122	52	294	28
14	18	12	423	46	140	62	149	90	114	66	209	22
15	16	11	352	46	130	76	164	133	101	49	164	20
16	13	10	270	47	120	100	154	374	114	335	172	15
17	15	13	207	50	115	286	140	232	140	146	200	13
18	13	17	203	53	110	290	133	164	130	96	265	18
19	11	23	292	59	100	252	124	142	100	262	206	17
20	10	21	237	66	96	216	133	124	81	159	156	21
21	9.5	17	392	88	90	222	128	108	72	105	114	18
22	11	16	1,450	151	86	272	114	98	66	96	93	17
23	9.9	21	942	262	82	276	112	446	66	255	81	15
24	10	20	473	265	78	262	101	2,480	262	126	72	17
25	13	18	288	206	76	428	91	3,280	486	312	68	14
26	10	20	218	161	72	954	88	1,420	703	323	54	12
27	15	16	146	128	73	742	85	2,010	552	194	45	13
28	16	13	152	180	73	463	81	1,370	304	272	42	15
29	13	10	123	772	69	316	75	772	203	186	37	16
30	12	8.3	120	2,280	-----	241	72	523	154	118	32	13
31	11	-----	113	2,750	-----	212	-----	403	-----	96	35	-----
TOTAL	445.5	572.3	16,290	8,474	11,979	6,474	8,674	15,157	6,931	3,995	7,008	642
MEAN	14.4	19.1	525	273	413	209	289	489	231	129	226	21.4
MAX	25	46	1,680	2,750	2,970	954	1,570	3,280	703	335	1,110	41
MIN	7.9	8.3	16	46	69	60	72	57	66	31	32	12
CFSM	.06	.08	2.18	1.13	1.71	.87	1.20	2.03	.96	.53	.94	.09
IN.	.07	.09	2.51	1.31	1.85	1.00	1.34	2.34	1.07	.62	1.08	.10

CAL YR 1967 TOTAL 77,622.7 MEAN 213 MAX 2,380 MIN 4.4 CFSM .88 IN 11.98
WTR YR 1968 TOTAL 86,641.8 MEAN 237 MAX 3,280 MIN 7.9 CFSM .98 IN 13.37

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-31	0615	7.79	3,230	05-25	0300	8.90	4,710
02-03	0230	7.97	3,460				

Diversion for municipal supply for city of Muncie

Water diverted above gage for municipal supply for city of Muncie shown below table. Water is returned to river at sewer outlet a short distance below gage.

Diversion, monthly and yearly means in cfs-days

Oct.	Nov.	Dec.	1967 Cal. year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	1968 Water year
21.1	19.8	19.2	19.0	20.5	20.4	19.4	18.7	19.2	20.8	21.5	22.4	22.1	20.4

WABASH RIVER BASIN

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.--35.5 sq mi (revised).

Records available.--October 1954 to September 1968.

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 5, 1955 to Apr. 27, 1964, water-stage recorder at same site and datum.

Average discharge.--14 years, 33.0 cfs.

Extremes.--Maximum discharge during year, 1,050 cfs May 24 (gage height, 11.34 ft); minimum, 8.5 cfs Oct. 3 (gage height, 2.22 ft).
1954-68: Maximum discharge, 1,780 cfs Apr. 21, 1964 (gage height, 13.96 ft); minimum daily 5.6 cfs Dec. 20, 1964.
Maximum stage known about 15 ft, from information by local residents. Date unknown.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.7	16	13	21	107	23	56	21	76	25	55	18
2	9.2	21	47	20	371	23	41	20	95	25	29	18
3	8.8	16	234	19	154	22	41	21	61	25	25	18
4	9.0	15	79	18	91	21	241	20	50	24	32	17
5	11	14	54	18	69	22	100	20	43	23	28	18
6	12	13	46	18	59	22	65	19	40	23	24	17
7	9.7	13	39	17	52	21	52	19	40	22	26	16
8	10	12	33	17	46	21	43	19	36	22	35	16
9	11	11	29	17	41	22	37	23	34	22	81	16
10	10	11	86	16	37	22	35	20	32	20	177	16
11	9.7	12	89	17	34	20	33	32	32	20	70	17
12	9.7	13	72	18	32	22	31	29	31	20	42	16
13	9.7	12	48	16	30	25	29	25	29	20	35	16
14	10	11	42	16	27	20	34	24	28	41	30	16
15	10	11	39	16	26	21	37	31	28	49	28	15
16	11	11	34	16	25	34	32	86	36	215	28	14
17	15	12	30	16	24	38	30	42	30	44	34	15
18	15	13	35	15	24	33	30	34	28	34	29	16
19	12	13	35	15	23	30	29	32	27	42	25	16
20	12	12	31	15	23	29	30	31	26	29	22	15
21	11	11	50	21	23	33	28	29	25	26	21	15
22	11	11	122	25	23	35	27	27	25	29	20	15
23	10	11	48	38	23	34	27	177	24	31	20	16
24	11	11	37	29	23	36	25	858	62	25	19	16
25	17	11	35	24	22	71	24	248	54	27	19	16
26	13	11	31	20	23	103	24	241	43	25	18	14
27	13	11	27	20	23	62	23	276	35	24	18	14
28	12	11	26	41	24	47	22	127	30	24	18	14
29	12	11	24	133	24	40	21	91	28	21	18	14
30	11	11	24	246	-----	35	21	74	26	21	18	14
31	13	-----	22	159	-----	35	-----	61	-----	22	18	-----
TOTAL	348.5	372	1,561	1,097	1,503	1,022	1,268	2,777	1,154	1,020	1,062	474
MEAN	11.2	12.4	50.4	35.4	51.8	33.0	42.3	89.6	38.5	32.9	34.3	15.8
MAX	17	21	234	246	371	103	241	858	95	215	177	18
MIN	8.8	11	13	15	22	20	21	19	24	20	18	14
CFSM	.32	.35	1.42	1.00	1.46	.93	1.19	2.52	1.08	.93	.97	.45
IN.	.37	.39	1.64	1.15	1.57	1.07	1.33	2.91	1.21	1.07	1.11	.50
CAL YR 1967	TOTAL 10,287.9		MEAN 28.2		MAX 234		MIN 8.6	CFSM .79	IN 10.78			
WTR YR 1968	TOTAL 13,658.5		MEAN 37.3		MAX 858		MIN 8.8	CFSM 1.05	IN 14.31			

PEAK DISCHARGE (BASE, 400 CFS)

NOTE.--No gage-height record Nov. 4-29.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-02	1230	8.37	589	05-24	1530	11.34	1,050
04-04	1045	6.86	420	07-16	0345	7.90	534

3-3480. White River at Anderson, Ind.

Location.--Lat 40°06'22", long 85°40'20", in SW $\frac{1}{4}$ sec. 7, T. 19 N., R. 8 E., on left bank at municipal water-supply plant in Anderson, 1 mile upstream from Killbuck Creek.

Drainage area.--406 sq mi (revised).

Records available.--July 1925 to September 1926, October 1931 to September 1968. 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.--38 years, 367 cfs.

Extremes.--Maximum discharge during year, 5,820 cfs Feb. 2 (gage height, 12.50 ft); minimum, 51 cfs Oct. 1-3, 5, 16, 23 (gage height, 7.36 ft).

1925-26, 1931-68: Maximum discharge, 18,700 cfs Apr. 21, 1964 (gage height, 19.41 ft); maximum gage height, 19.96 ft June 14, 1958; minimum discharge observed, 8.8 cfs Sept. 24, 1940 (gage height, 6.92 ft).

Maximum stage known, 23.6 ft Mar. 25, 1913, present site and datum, based on determination of U.S. Weather Bureau at site then in use (discharge, 28,000 cfs, estimated).

Remarks.--Record fair except for winter period, which is 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 1967 TO SEPTFMRE 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	51	87	67	270	2,290	180	561	225	681	269	252	123
2	51	175	213	250	4,520	195	849	225	990	225	609	131
3	51	149	1,660	220	4,300	175	768	225	1,010	195	405	116
4	56	190	2,040	210	1,170	162	1,900	236	750	185	316	108
5	51	185	1,300	190	885	162	2,670	225	561	149	258	104
6	131	101	914	190	770	180	1,580	175	475	131	269	104
7	67	108	759	180	670	166	1,060	166	410	120	215	97
8	61	93	665	170	590	157	804	166	360	120	280	83
9	61	87	510	170	520	171	561	215	320	120	831	71
10	67	80	531	160	470	180	475	195	292	120	1,710	83
11	61	87	1,620	160	420	162	405	258	280	110	1,730	83
12	61	112	1,630	160	380	149	379	258	316	110	1,030	101
13	56	71	1,200	160	340	149	353	280	269	120	633	108
14	56	74	689	160	310	144	328	225	258	130	433	87
15	56	77	705	160	280	153	980	175	247	150	328	87
16	51	74	633	160	270	153	379	980	304	185	379	87
17	108	90	489	160	250	205	328	540	247	447	360	80
18	131	83	461	160	240	503	316	380	304	225	426	87
19	93	108	517	160	230	482	304	292	258	166	426	97
20	61	93	517	170	220	447	316	280	200	379	316	90
21	61	87	678	190	210	405	328	269	175	190	258	90
22	58	93	2,030	258	210	503	280	236	175	328	205	90
23	51	93	1,630	405	210	482	280	928	166	496	190	97
24	58	98	990	593	200	531	304	3,120	321	405	162	90
25	87	93	665	392	200	625	304	4,750	914	316	153	140
26	90	90	625	328	200	1,360	247	2,600	1,040	641	153	90
27	74	93	545	316	190	1,370	236	3,230	980	405	144	87
28	90	80	440	372	190	932	236	2,550	553	304	144	93
29	87	64	370	1,020	190	681	236	1,580	304	405	131	80
30	61	61	330	2,860	-----	531	236	1,100	346	258	131	61
31	56	-----	300	3,410	-----	433	-----	813	-----	175	123	-----
TOTAL	2,154	2,968	25,723	13,764	20,925	12,128	18,003	26,897	13,506	7,579	13,000	2,845
MEAN	69.5	98.9	830	444	722	391	600	868	450	244	419	94.8
MAX	131	190	2,040	3,410	4,520	1,370	2,670	4,750	1,040	641	1,730	140
MIN	51	61	67	160	190	144	236	166	166	110	123	61
CFSM	.17	.24	2.04	1.09	1.78	.96	1.48	2.14	1.11	.60	1.03	.23
IN.	.20	.27	2.36	1.26	1.92	1.11	1.65	2.46	1.24	.69	1.19	.26
CAL YR 1967	TOTAL 136,266	MEAN 373	MAX 3,020	MIN 40	CFSM .92	IN 12.48						
WTR YR 1968	TOTAL 159,492	MEAN 436	MAX 4,750	MIN 51	CFSM 1.07	IN 14.61						

PEAK DISCHARGE (BASE, 2,700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-31	0400	11.13	3,750	04-05	0330	10.50	2,920
02-02	2400	12.50	5,820	05-25	1900	12.00	5,020

WABASH RIVER BASIN

3-3480.2 Killbuck Creek near Gaston, Ind.

Location.--Lat 40°15'45", long 85°30'53", in SW¼SE¼SW¼ sec. 16, T. 21 N., R. 9 E., on right bank 30 ft upstream from bridge on county road 500 North, and 15 ft east of county road 675 West, 3.6 miles southwest of Gaston.

Drainage area.--25.5 sq mi.

Records available.--June to September 1968.

Gage.--Digital water-stage recorder. Datum of gage 837.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during period, 337 cfs Aug. 10 (gage height, 10.03 ft); minimum, 3.7 cfs Sept. 30; minimum gage height, 3.66 ft Sept. 16.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									34	28	6.2	6.7
2									35	23	5.9	6.7
3									31	21	5.5	6.4
4									26	19	5.9	6.2
5									23	17	6.1	6.4
6									20	15	5.4	6.3
7									19	14	7.1	6.0
8									17	13	17	5.7
9									15	12	57	5.7
10									14	11	325	5.9
11									15	10	169	6.1
12									14	9.2	58	6.0
13									13	9.1	40	5.6
14									12	29	32	5.1
15									11	24	25	4.9
16									11	16	22	4.7
17									10	12	27	4.6
18									9.4	9.2	29	4.8
19									8.9	8.1	21	4.8
20									8.4	7.4	17	4.5
21									8.1	6.5	14	4.2
22									8.0	8.6	13	4.3
23									8.0	8.8	11	4.4
24									78	6.7	10	4.4
25									250	15	9.4	4.6
26									198	16	8.6	4.4
27									116	10	8.0	4.0
28									60	9.1	7.5	4.0
29									44	7.5	7.1	3.8
30									34	6.4	6.8	3.7
31		-----			-----		-----		-----	6.1	6.5	-----
TOTAL									1,150.8	407.7	983.0	154.9
MEAN									38.4	13.2	31.7	5.16
MAX									250	29	325	6.7
MIN									8.0	6.1	5.4	3.7
CFSM									1.50	.52	1.24	.20
IN.									1.68	.59	1.43	.23

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G. HT.	DISCHARGE	DATE	TIME	G. HT.	DISCHARGE
06-25	1400	9.44	277	08-10	0445	10.03	337

3-3481. Killbuck Creek near Anderson, Ind.

Location.--Lat 40°08'18", long 85°39'44", in SW $\frac{1}{4}$ 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.--97.8 sq mi (revised).

Records available.--July 1964 to September 1968.

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

Extremes.--Maximum discharge during year, 3,080 cfs Feb. 2 (gage height, 8.67 ft); minimum 5.0 cfs Oct. 4 (gage height, 2.18 ft).
1964-68: Maximum discharge, 3,480 cfs Dec. 10, 1966 (gage height, 8.98 ft); minimum 5.0 cfs Oct. 4, 1968 (gage height, 2.18 ft).

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	20	19	55	1,100	43	82	38	147	92	35	40
2	6.1	25	60	49	2,060	42	86	37	122	82	28	34
3	5.8	31	250	46	1,600	40	164	34	97	70	24	32
4	5.2	28	600	42	527	38	412	31	86	60	25	28
5	6.4	27	820	40	316	37	459	31	76	54	23	25
6	9.4	25	640	38	238	36	295	31	64	48	22	24
7	11	23	280	37	200	35	186	32	59	46	22	23
8	12	21	190	35	166	35	140	34	58	42	41	22
9	14	20	117	34	140	35	130	34	56	39	210	21
10	20	18	190	33	127	34	105	36	55	38	699	19
11	18	18	387	33	117	34	90	41	52	32	780	20
12	17	20	362	33	106	36	86	49	52	35	332	22
13	17	22	305	33	92	34	80	51	50	32	221	21
14	15	22	218	33	86	33	88	52	43	96	168	22
15	15	21	138	33	78	32	103	50	42	104	117	22
16	14	19	121	33	72	44	100	57	40	120	122	20
17	18	19	107	33	66	87	92	64	37	80	112	20
18	24	20	105	34	60	105	87	55	35	64	120	19
19	25	19	127	35	56	93	80	52	32	56	138	19
20	28	18	111	39	52	83	77	47	31	37	162	19
21	26	19	158	71	50	83	72	45	31	36	124	19
22	23	19	792	120	48	125	67	53	31	39	59	19
23	17	19	688	144	47	164	64	121	68	32	51	20
24	16	18	471	130	46	182	63	351	75	36	49	19
25	15	19	278	93	45	214	60	222	240	55	46	19
26	16	19	152	69	44	297	55	311	289	91	41	19
27	17	18	118	80	43	230	51	182	251	81	37	18
28	15	18	100	138	43	148	50	159	204	57	32	17
29	15	18	82	361	42	112	43	158	151	40	29	17
30	15	17	68	1,030	-----	102	41	159	106	40	28	17
31	18	-----	62	2,030	-----	92	-----	159	-----	38	26	-----
TOTAL	480.6	620	8,116	5,014	7,667	2,705	3,508	2,776	2,680	1,772	3,923	656
MEAN	15.5	20.7	262	162	264	87.3	117	89.5	89.3	57.2	127	21.9
MAX	28	31	820	2,030	2,060	297	459	351	289	120	780	40
MIN	5.2	17	19	33	42	32	41	31	31	32	22	17
CFSM	.16	.21	2.68	1.65	2.70	.89	1.20	.92	.91	.58	1.29	.22
IN.	.18	.24	3.09	1.91	2.92	1.03	1.33	1.06	1.02	.67	1.49	.25
CAL YR 1967	TOTAL 28,892.2	MEAN 79.2	MAX 1,150	MIN 5.2	CFSM .81	IN 10.99						
WTR YR 1968	TOTAL 39,917.6	MEAN 109	MAX 2,060	MIN 5.2	CFSM 1.12	IN 15.18						

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	1200	7.18	1,430	04-04	2300	6.02	630
01-31	0400	8.17	2,520	08-10	2300	7.13	1,370
02-02	2200	8.67	3,080				

WABASH RIVER BASIN

3-3483.5 Pipe Creek at Frankton, Ind.

Location.--Lat 40°13'38", long 85°45'58", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 31, T. 21 N., R. 7 E., on right bank 20 ft downstream from bridge on county road 500 West at Northeast edge of Frankton.

Drainage area.--113 sq mi.

Records available.--May to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 810.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during period, 660 cfs May 27 (gage height, 7.32 ft); minimum 11 cfs Sept. 26 (gage height, 3.27 ft).

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								39	137	63	21	15
2								38	195	51	19	14
3								39	165	43	17	13
4								36	118	36	20	13
5								34	92	33	21	17
6								32	77	30	18	15
7								31	66	27	17	14
8								29	59	25	43	13
9								38	52	24	150	12
10								36	48	23	303	13
11								42	46	22	290	15
12								51	43	21	140	14
13								43	38	22	82	13
14								38	34	27	58	13
15								39	33	33	44	12
16								84	34	379	40	15
17								83	30	126	48	13
18								60	27	63	58	21
19								51	25	47	40	22
20								47	24	36	31	16
21								41	22	28	25	15
22								36	22	24	22	13
23								120	22	29	21	13
24								413	138	25	19	12
25								389	267	24	17	12
26								294	371	25	16	12
27								599	299	22	15	13
28								441	183	22	15	12
29								274	120	19	14	12
30					-----			211	83	17	14	12
31		-----			-----		-----	161	-----	18	13	-----
TOTAL								3,869	2,870	1,384	1,651	419
MEAN								125	95.7	44.6	53.3	14.0
MAX								599	371	379	303	22
MIN								29	22	17	13	12
CFSM								1.10	.85	.40	.47	.12
IN.								1.27	.94	.46	.54	.14

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
05-24	2100	6.65	500	07-16	1245	6.69	510
05-27	1330	7.32	660				

3-3485. White River near Noblesville, Ind.

Location.--Lat 40°07'46", long 85°57'46", in sec. 4, T. 19 N., R. 5 E., near center of span on downstream side of highway bridge, 1 mile west of Strawtown, 7 miles northeast of Noblesville, 9.5 miles upstream from Cicero Creek, and at mile 277.4.

Drainage area.--828 sq mi (revised).

Records available.--May 1915 to September 1926, October 1928 to September 1968. 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.--51 years, 786 cfs.

Extremes.--Maximum discharge during year, 10,300 cfs Feb. 3 (gage height, 13.59 ft); minimum, 82 cfs Oct. 3-5 (gage height, 3.87 ft)
1915-26, 1928-68: Maximum discharge, 27,200 cfs Mar. 21, 1927 (gage height, 16.3 ft, from graph based on gage readings); maximum gage height, 16.35 ft June 14, 1958, Apr. 22, 1964; minimum, 36 cfs Sept. 25, 1941.

Remarks.--Record good except for winter period, which is fair. Record of water temperatures for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	157	136	520	5,840	318	856	364	1,470	587	262	205
2	86	231	324	470	7,760	318	1,180	356	1,660	502	462	208
3	84	228	2,690	430	9,980	306	1,020	368	1,850	422	532	195
4	90	238	4,060	400	6,480	284	3,030	360	1,370	380	405	192
5	96	205	2,650	380	3,190	299	4,880	333	1,080	348	352	222
6	231	172	1,930	360	2,280	306	3,160	321	904	321	348	195
7	157	163	1,700	350	1,890	299	1,950	318	790	295	284	182
8	119	151	1,360	340	1,600	288	1,460	310	704	284	405	172
9	139	136	1,060	330	1,360	292	1,140	384	632	280	1,170	157
10	145	130	1,190	320	1,120	299	928	414	577	273	1,970	160
11	122	133	2,950	320	928	299	802	422	567	259	3,090	166
12	113	151	3,420	310	800	303	716	517	542	242	2,240	175
13	106	139	2,620	310	700	295	652	497	502	238	1,230	188
14	116	128	1,830	310	640	288	617	454	463	277	886	175
15	106	128	1,400	310	570	292	808	431	459	337	682	163
16	103	122	1,160	310	520	436	738	657	459	477	662	151
17	215	139	964	310	460	1,080	652	1,000	449	1,020	632	151
18	292	157	976	310	430	1,240	607	721	445	459	667	179
19	202	142	1,100	330	410	1,090	557	602	427	344	667	195
20	154	128	1,050	410	390	988	577	542	380	449	557	172
21	130	133	1,760	512	380	970	642	487	348	344	459	166
22	110	133	5,490	652	370	1,040	612	445	337	262	388	166
23	96	133	5,210	958	360	1,070	537	855	325	318	340	228
24	98	128	2,580	1,010	350	1,020	507	4,050	667	440	310	188
25	142	125	1,740	790	340	1,490	463	5,780	1,560	397	277	188
26	166	119	1,350	652	340	2,200	431	5,610	2,090	642	256	182
27	139	110	1,030	572	340	2,330	414	5,040	1,920	562	245	157
28	130	113	838	1,090	337	1,680	388	4,950	1,380	418	231	151
29	122	113	726	2,100	329	1,220	368	3,140	952	431	222	145
30	110	125	637	4,920	-----	970	372	2,210	721	348	212	136
31	116	-----	587	6,910	-----	832	-----	1,720	-----	270	198	-----
TOTAL	4,125	4,410	56,518	27,296	50,494	24,142	31,064	43,658	26,030	12,226	20,641	5,310
MEAN	133	147	1,823	881	1,741	779	1,035	1,408	868	394	666	177
MAX	292	238	5,490	6,910	9,980	2,330	4,880	5,780	2,090	1,020	3,090	228
MIN	84	110	136	310	329	284	368	310	325	238	198	136
CFSM	.16	.18	2.20	1.06	2.10	.94	1.25	1.70	1.05	.48	.80	.21
IN.	.19	.20	2.54	1.23	2.27	1.08	1.40	1.96	1.17	.55	.93	.24

CAL YR 1967 TOTAL 260,258 MEAN 713 MAX 5,770 MIN 73 CFSM .86 IN 11.69
WTR YR 1968 TOTAL 305,914 MEAN 836 MAX 9,980 MIN 84 CFSM 1.01 IN 13.74

PEAK DISCHARGE (BASE, 5,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-23	0200	11.68	6,410	02-03	1100	13.59	10,300
01-31	1700	12.13	7,190	05-26	0400	11.63	6,330

WABASH RIVER BASIN

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.--858 sq mi (revised).

Records available.--October 1946 to September 1968. 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.--22 years, 801 cfs.

Extremes.--Maximum discharge during year, 9,840 cfs Feb. 3 (gage height, 15.20 ft); minimum, 98 cfs Oct. 4; minimum gage height, 4.22 ft Sept. 30.
1946-68: Maximum discharge, 26,800 cfs Apr. 22, 1964 (gage height, 21.31 ft); minimum, 0.9 cfs Sept. 24, 1964 (gage height, 3.45 ft); minimum daily discharge 44 cfs Sept. 28, 1954.
Maximum stage known, 23.8 ft Mar. 25, 1913, present site and datum, from U.S. Weather Bureau records.

Remarks.--Record good except for winter period, which is fair. Flow slightly regulated by powerplant above station. Record of water temperatures for water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	168	148	460	5,800	335	979	334	1,500	600	304	206
2	108	230	308	410	7,140	333	1,260	322	1,600	498	386	212
3	104	255	2,180	380	9,450	321	1,170	330	1,890	423	605	197
4	106	248	3,590	360	7,200	306	2,870	330	1,420	378	468	191
5	124	236	2,720	340	3,450	314	4,630	304	1,110	342	398	221
6	200	197	1,870	330	2,420	319	3,460	287	923	322	374	194
7	203	186	1,650	320	1,960	312	2,120	280	809	294	330	183
8	146	178	1,370	320	1,660	303	1,550	273	719	276	408	176
9	161	158	1,090	310	1,420	308	1,200	354	641	276	978	166
10	166	148	1,110	310	1,200	314	972	394	572	266	1,670	163
11	148	156	2,680	310	939	312	851	386	556	252	2,730	173
12	136	171	3,360	310	837	316	755	488	524	242	2,270	178
13	132	158	2,710	300	740	316	689	468	498	236	1,220	194
14	141	146	1,850	300	690	308	629	433	458	255	881	183
15	132	143	1,420	300	630	313	797	398	448	326	677	166
16	134	136	1,190	290	580	417	779	589	438	390	623	156
17	209	146	991	304	540	1,050	683	911	443	978	629	158
18	304	173	959	308	505	1,250	623	707	423	550	623	173
19	230	171	1,090	315	470	1,120	567	567	423	398	659	209
20	178	141	1,070	334	440	1,010	572	514	370	463	561	188
21	153	146	1,540	413	410	977	635	463	334	413	463	171
22	128	156	5,730	671	387	1,040	578	418	318	314	382	168
23	112	153	6,010	965	380	1,090	529	743	308	354	334	218
24	112	148	3,200	1,060	370	1,040	498	3,990	545	458	301	197
25	146	146	1,820	833	360	1,440	453	5,630	1,390	418	269	183
26	181	143	1,360	695	354	2,110	418	5,820	1,980	671	248	191
27	163	130	991	600	350	2,440	394	5,030	1,890	647	236	163
28	148	130	761	1,020	352	1,830	370	5,120	1,410	483	224	153
29	141	134	659	2,020	346	1,380	342	3,440	965	468	215	143
30	128	141	556	4,400	-----	1,110	342	2,390	743	408	206	136
31	128	-----	503	6,290	-----	970	-----	1,790	-----	326	200	-----
TOTAL	4,710	4,972	56,486	25,578	51,380	25,004	31,715	43,503	25,648	12,725	19,822	5,410
MEAN	152	166	1,822	825	1,772	807	1,057	1,403	855	410	639	180
MAX	304	255	6,010	6,290	9,450	2,440	4,630	5,820	1,980	978	2,730	221
MIN	104	130	148	290	346	303	342	273	308	236	200	136
CFSM	.18	.19	2.12	.96	2.06	.94	1.23	1.64	1.00	.48	.75	.21
IN.	.20	.22	2.45	1.11	2.23	1.08	1.37	1.89	1.11	.55	.86	.23
CAL YR 1967	TOTAL 263,300		MEAN 721		MAX 6,010		MIN 94		CFSM .84		IN 11.41	
WTR YR 1968	TOTAL 306,953		MEAN 839		MAX 9,450		MIN 104		CFSM .98		IN 13.30	

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-23	0245	13.11	6,740	05-26	0615	12.12	6,070
02-03	1730	15.20	9,840				

3-3495. Cicero Creek near Arcadia, Ind.

Location.--Lat 40°10'34", long 85°59'43", in NW¼ sec. 20, T. 20 N., R. 5 E., on left bank, on downstream side of county bridge, ½ miles east of Arcadia and 10 miles upstream from Morse Dam.

Drainage area.--131 sq mi.

Records available.--October 1954 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 815.12 ft above mean sea level, datum of 1929. Prior to Dec. 7, 1955, wire-weight gage, and Dec. 7, 1955, to Jan. 17, 1966, graphic water-stage recorder, all at same site and datum.

Average discharge.--14 years, 113 cfs.

Extremes.--Maximum discharge during year, 2,280 cfs Dec. 23 (gage height, 9.90 ft); minimum, 0.90 cfs Oct. 21, Nov. 28; minimum gage height, 1.73 ft Nov. 28 and Sept. 9, 10.

1954-68: Maximum discharge, 6,720 cfs June 29, 1957 (gage height, 11.86 ft); minimum, 0.4 cfs Oct. 10, 1956. Maximum stage known, 15.6 ft (probably the flood of January 1937), from information by local residents.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.0	3.5	1.6	81	938	20	110	34	199	54	7.6	3.2
2	1.6	9.0	54	65	1,960	20	103	31	301	43	5.6	4.7
3	1.4	4.7	473	54	1,710	20	107	33	229	35	4.7	2.2
4	1.6	6.2	297	45	803	20	760	30	170	30	7.2	2.4
5	2.0	4.1	194	40	530	20	678	26	141	26	6.9	3.5
6	8.3	2.9	188	35	399	20	373	24	121	24	5.9	3.2
7	1.8	2.2	175	30	325	21	263	22	105	21	5.3	2.4
8	1.6	2.0	143	28	265	22	196	21	93	18	6.2	2.0
9	1.6	1.8	113	27	223	27	140	34	83	17	62	1.8
10	2.2	1.4	207	27	168	28	115	33	73	17	63	1.6
11	1.4	1.8	530	26	158	25	98	36	67	24	114	2.2
12	1.4	2.2	550	26	143	24	85	45	64	23	73	2.2
13	1.6	1.8	345	26	115	20	74	40	53	18	42	1.8
14	2.9	1.4	228	26	105	23	75	38	51	14	27	1.6
15	3.8	1.4	175	26	83	28	83	90	46	11	18	1.8
16	3.8	1.4	146	26	73	162	71	145	44	11	20	1.8
17	15	1.6	125	27	61	323	67	119	38	9.7	24	1.8
18	13	4.4	134	28	54	239	62	89	34	8.6	23	3.8
19	4.1	2.0	143	30	47	189	53	73	31	10	20	8.6
20	2.2	1.4	132	35	40	196	71	63	28	8.3	14	3.5
21	1.6	1.4	836	126	35	215	89	54	25	6.5	9.7	2.9
22	1.4	1.6	2,230	305	30	226	72	46	25	6.2	7.6	2.7
23	1.6	1.6	2,110	220	27	197	68	239	24	7.2	6.2	2.4
24	1.6	1.6	806	160	25	189	61	725	140	6.2	5.3	2.2
25	5.0	1.6	495	120	23	373	52	548	218	6.5	4.1	3.8
26	3.8	1.6	363	90	22	351	45	439	244	9.3	3.5	3.2
27	1.8	1.2	244	80	21	245	41	598	173	7.6	3.2	2.2
28	2.0	1.2	182	491	21	180	36	403	126	6.5	2.9	1.8
29	1.8	1.2	144	776	21	145	34	301	92	4.7	2.4	1.8
30	1.4	1.6	122	1,280	-----	119	35	241	70	4.1	2.4	1.6
31	1.6	-----	103	1,150	-----	113	-----	188	-----	4.1	2.7	-----
TOTAL	96.9	71.8	11,988.6	5,506	8,425	3,800	4,117	4,808	3,108	491.5	599.4	80.7
MEAN	3.13	2.39	387	178	291	123	137	155	104	15.9	19.3	2.69
MAX	15	9.0	2,230	1,280	1,960	373	760	725	301	54	114	8.6
MIN	1.4	1.2	1.6	26	21	20	34	21	24	4.1	2.4	1.6
CFSM	.02	.02	2.95	1.36	2.22	.94	1.05	1.18	.79	.12	.15	.02
IN.	.03	.02	3.40	1.56	2.39	1.08	1.17	1.36	.88	.14	.17	.02
CAL YR 1967	TOTAL 42,049.38	MEAN 115	MAX 2,230	MIN .74	CFSM .88	IN 11.94						
WTR YR 1968	TOTAL 43,092.9	MEAN 118	MAX 2,230	MIN 1.2	CFSM .90	IN 12.23						

PEAK DISCHARGE (BASE, 1,100 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-23	0315	9.90	2,280	02-02	1145	9.61	2,050
01-30	2030	8.59	1,440				

WABASH RIVER BASIN

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

Location.--Lat 40°10'32", long 86°02'45", on line between sec. 14 and 23, T. 20 N., R. 4 E., on left bank on downstream side of county road bridge, 0.5 mile downstream from Taylor Creek, 1.3 miles west of Arcadia, 3.9 miles from mouth, and 9.3 miles northwest of Noblesville.

Drainage area.--40.4 sq mi (revised).

Records available.--October 1955 to September 1968.

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

Average discharge.--13 years, 37.4 cfs.

Extremes.--Maximum discharge during year, 2,500 cfs Dec. 21 (gage height, 7.82 ft); no flow Oct. 1-15.

1955-68: Maximum discharge, 3,980 cfs June 28, 1957 (gage height, 8.69 ft); no flow Oct. 9, 10, 1956, Sept. 14 to Nov. 6, 1963, Sept. 8-20, 28-30, Oct. 1-21, 1964, Aug. 12 to Sept. 20, Oct. 11-16, Nov. 1, 1966, Aug. 12 to Oct. 15, 1967.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	2.2	3.2	17	410	7.6	35	8.6	83	7.0	1.5	.88
2	0	3.2	.69	14	960	7.2	35	7.6	108	5.6	1.5	.79
3	0	2.8	304	12	327	7.0	37	8.3	81	4.8	1.6	.79
4	0	2.6	172	10	194	6.8	361	7.9	66	4.0	3.0	.79
5	0	2.4	104	9.0	140	6.6	212	7.0	48	3.7	5.7	.88
6	0	2.0	77	8.6	111	8.1	122	6.1	37	3.2	3.7	.71
7	0	1.6	65	8.0	96	6.5	90	5.9	29	2.8	2.5	.75
8	0	1.4	56	7.9	79	6.5	67	6.1	23	2.6	2.0	.71
9	0	1.6	55	7.6	68	8.3	47	13	19	2.2	10	.67
10	0	2.0	132	7.5	55	8.1	38	10	16	6.3	200	.67
11	0	2.4	212	7.5	40	7.0	31	11	14	7.0	103	.59
12	0	2.6	164	7.4	31	6.3	26	12	12	4.3	55	.59
13	0	2.6	104	7.2	25	6.2	22	9.4	9.9	3.5	33	.51
14	0	2.4	83	7.1	20	6.3	22	8.8	9.1	2.8	20	.51
15	0	2.2	75	7.0	17	7.6	22	10	8.8	2.2	12	.51
16	.03	2.2	72	7.2	15	90	19	13	10	1.9	9.6	.51
17	2.7	2.2	66	7.0	13	143	19	10	8.8	1.7	9.9	.55
18	.22	2.4	59	6.5	12	90	17	9.1	7.2	1.5	13	.51
19	.07	2.5	65	7.6	11	79	15	8.8	6.3	1.3	8.8	.47
20	.07	2.4	59	8.8	11	87	25	8.1	5.2	1.2	5.7	.55
21	.07	2.2	804	68	10	89	31	7.2	4.8	1.5	3.9	.55
22	.07	2.1	784	115	9.9	83	24	6.5	5.0	1.8	2.8	.63
23	.07	2.0	381	80	9.4	72	21	131	22	1.8	2.2	.59
24	.27	1.9	260	45	9.0	78	18	454	31	2.0	1.9	.63
25	1.7	1.9	156	31	8.6	143	14	252	50	2.2	1.6	.71
26	2.1	1.8	87	25	8.4	125	12	206	53	6.4	1.4	.63
27	2.0	1.8	59	49	8.2	88	11	234	31	4.0	1.3	.59
28	2.0	1.8	47	186	7.8	65	9.1	143	19	2.7	1.2	.59
29	1.9	1.9	33	242	7.8	50	8.8	120	13	2.7	1.1	.59
30	1.8	2.6	28	534	-----	38	9.1	95	9.1	1.9	1.0	.59
31	1.8	-----	22	320	-----	36	-----	73	-----	1.5	.96	-----
TOTAL	16.87	65.7	4,657.2	1,869.9	2,714.1	1,462.1	1,420.0	1,902.4	839.2	98.1	520.86	19.04
MEAN	.54	2.19	150	60.3	93.6	47.2	47.3	61.4	28.0	3.16	16.8	.63
MAX	2.7	3.2	804	534	960	143	361	454	108	7.0	200	.88
MIN	0	1.4	3.2	6.5	7.8	6.2	8.8	5.9	4.8	1.2	.96	.47
CFSM	.01	.05	3.72	1.49	2.32	1.17	1.17	1.52	.69	.08	.42	.02
IN.	.02	.06	4.29	1.72	2.50	1.35	1.31	1.75	.77	.09	.48	.02
CAL YR 1967	TOTAL 13,763.77	MEAN 37.7	MAX 804	MIN 0	CFSM .93	IN 12.67						
WTR YR 1968	TOTAL 15,585.47	MEAN 42.6	MAX 960	MIN 0	CFSM 1.05	IN 14.35						

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	----	7.82	2,500	02-02	0930	6.23	1,110
01-30	1700	5.01	607	05-24	1630	4.68	523

3-3501. Minkle 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.--18.5 sq mi (revised).

Records available.--October 1955 to September 1968.

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.--13 years, 18.6 cfs.

Extremes.--Maximum discharge during year, 1,480 cfs Dec. 21 (gage height, 5.88 ft); minimum, 0.12 cfs Oct. 4; minimum gage height, 0.93 ft Sept. 25, 26, 28, 29, 30.
1955-68: Maximum discharge, 4,920 cfs June 28, 1957 (gage height, 8.45 ft); minimum, 0.04 cfs Sept. 7, 8, 1967 (gage height, 0.90 ft).

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	1.3	.72	5.4	225	4.1	19	6.3	37	3.1	2.1	.82
2	.14	2.1	50	5.0	391	4.1	16	5.9	39	2.9	1.6	.86
3	.14	1.6	178	4.7	130	4.2	19	5.6	43	2.6	1.5	.69
4	.14	1.8	63	4.5	81	4.3	297	5.3	29	2.5	3.2	.70
5	.20	1.5	39	4.3	58	4.4	106	5.0	20	2.5	2.8	1.2
6	.34	1.2	32	4.2	45	4.5	63	4.7	15	2.4	1.6	.91
7	.34	1.2	26	4.0	39	4.9	42	4.7	12	2.2	1.5	.78
8	.38	.94	17	3.9	32	5.2	28	4.8	10	2.1	2.9	.66
9	.42	.86	13	4.8	27	6.4	18	7.3	8.9	2.2	20	.66
10	.42	.86	69	4.2	20	6.1	16	5.4	7.7	2.5	100	.78
11	.38	1.3	87	3.9	17	5.5	14	8.2	6.9	2.4	55	.78
12	.34	1.5	77	3.8	14	5.8	12	6.7	6.7	2.2	30	.73
13	.38	1.3	36	3.7	11	5.8	11	5.5	5.6	2.1	17	.63
14	.50	1.2	26	3.6	10	5.5	12	5.8	5.2	2.9	9.0	.59
15	.42	1.1	20	3.5	9.0	6.1	12	6.1	6.2	1.9	4.5	.52
16	.50	.94	15	3.3	8.6	58	11	7.7	8.3	1.6	5.5	.49
17	2.1	1.2	13	3.5	8.3	73	10	5.9	5.6	1.5	7.0	.58
18	1.6	1.2	17	3.5	7.8	45	10	5.8	5.0	1.5	2.0	.90
19	.66	1.1	17	3.6	7.5	33	9.7	5.4	4.4	1.5	1.5	.93
20	.46	.86	14	3.9	7.0	39	19	5.3	3.8	1.3	1.2	.80
21	.42	.86	559	20	6.5	39	17	4.6	3.6	1.2	1.1	.72
22	.38	.86	267	38	6.2	32	13	4.4	4.3	1.4	.92	.76
23	.38	.86	77	39	5.8	28	12	80	3.8	1.5	.87	.95
24	.50	.79	38	17	5.4	38	10	296	3.7	1.3	.84	1.1
25	1.0	.79	28	9.0	5.0	81	8.9	106	9.6	2.2	.77	1.1
26	1.0	.79	18	5.4	4.8	61	8.3	98	8.0	2.9	.76	1.0
27	.94	.79	11	10	4.5	35	7.7	93	5.6	1.8	.80	.80
28	.79	.72	9.0	50	4.3	23	7.0	59	4.8	1.5	.72	.74
29	.72	.60	7.5	83	4.2	18	6.9	50	4.0	1.3	.71	.67
30	.66	.72	6.7	235	-----	14	6.7	39	3.5	1.1	.64	.64
31	.86	-----	5.5	104	-----	16	-----	29	-----	1.5	.64	-----
TOTAL	17.65	32.84	1,836.42	691.7	1,194.9	709.9	842.2	976.4	330.2	61.6	278.67	23.49
MEAN	.57	1.09	59.2	22.3	41.2	22.9	28.1	31.5	11.0	1.99	8.99	.78
MAX	2.1	2.1	559	235	391	81	297	296	43	3.1	100	1.2
MIN	.14	.60	.72	3.3	4.2	4.1	6.7	4.4	3.5	1.1	.64	.49
CFSM	.03	.06	3.20	1.21	2.23	1.24	1.52	1.70	.59	.11	.49	.04
IN.	.04	.07	3.69	1.39	2.40	1.43	1.69	1.96	.66	.12	.56	.05
CAL YR 1967	TOTAL 6.626.72	MEAN 18.2	MAX 559	MIN .07	CFSM .98	IN 13.32						
WTR YR 1968	TOTAL 6.995.97	MEAN 19.1	MAX 559	MIN .14	CFSM 1.03	IN 14.06						

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-21	1815	5.88	1,480	04-04	0615	3.92	664
02-01	2330	3.83	612	05-24	0315	3.73	580

WABASH RIVER BASIN

3-3503. Morse Reservoir near Noblesville, Ind.

Location.--Lat 40°04'21", long 86°02'47", in SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 23, T. 19 N., R. 4 E., in intake structure of reservoir on Cicero Creek, 2½ miles northwest of courthouse in Noblesville, and 4.7 miles above mouth.

Drainage area.--214 sq mi.

Records available.--December 1955 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 760.00 ft above mean sea level.

Extremes.--Maximum contents during year, 23,660 acre-ft, Dec. 22 (elevation, 811.80 ft); minimum contents, 18,080 acre-ft Oct. 5 (elevation, 807.60 ft).

1955-68: Maximum contents, 25,310 acre-ft, June 28, 1957 (elevation, 812.95 ft); minimum contents, 14,120 acre-ft Jan. 5, 1964 (elevation, 804.26 ft).

Remarks.--Reservoir is formed by earth fill dam. Releases normally controlled by two 36-inch valves or one 16-inch valve. Minimum design capacity is essentially empty at invert of outlet conduit at elevation of 763.50 ft. Capacity at uncontrolled spillway elevation (810 ft) is 21,180 acre-ft. Reservoir is used for low-flow augmentation and recreation. Reservoir put in operation on Dec. 9, 1955 and was filled for the first time on Feb. 3, 1957.

Cooperation.--Record furnished by Indianapolis Water Company.

Month-end elevation and contents, water year October 1967 to September 1968

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	807.34	17,750	-
Oct. 31.....	807.71	18,220	+470
Nov. 30.....	808.14	18,780	+560
Dec. 31.....	810.20	21,450	+2,670
Calendar year 1967	-	-	+90
Jan. 31.....	810.96	22,500	+1,050
Feb. 29.....	810.06	21,260	-1,240
Mar. 31.....	810.20	21,450	+190
Apr. 30.....	810.08	21,280	-170
May 31.....	810.28	21,560	+280
June 30.....	810.12	21,340	-220
July 31.....	809.95	21,120	-220
Aug. 31.....	809.81	20,930	-190
Sept. 30.....	809.86	21,000	+70
Water year 1967-68	-	-	+3,250

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.--216 sq mi (revised).

Records available.--July 1950 to September 1968.

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.--18 years, 182 cfs (unadjusted).

Extremes.--Maximum discharge during year, 4,940 cfs Dec. 22 (gage height, 13.27 ft); minimum, 0.83 cfs Oct. 1; minimum gage height, 3.57 ft Oct. 1, 2 and Aug. 29-31.
1950-68: Maximum discharge, 9,800 cfs June 28, 1957 (gage height, 15.26 ft); minimum, 0.5 cfs Sept. 25, 1954.

Remarks.--Record good above 5.0 cfs and fair below, except for winter period, which is fair. Flow regulated by Morse Reservoir (see sta. No. 3-3503)

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.83	2.6	1.1	132	1,540	40	194	57	347	80	18	1.9
2	6.0	2.2	4.4	110	3,960	37	173	50	487	63	9.6	2.2
3	16	2.1	70	90	3,170	35	184	55	487	43	6.8	2.2
4	16	1.9	586	80	1,620	33	1,260	61	352	27	30	2.1
5	18	1.6	472	70	1,000	33	1,410	46	260	25	26	2.6
6	18	1.5	375	65	757	34	845	17	204	27	19	2.6
7	7.0	1.1	330	60	643	36	574	19	168	20	20	2.2
8	2.4	.88	272	57	514	40	418	21	141	16	35	2.2
9	3.9	.85	204	61	442	45	297	63	122	16	67	2.1
10	3.0	.88	325	59	307	56	222	61	104	31	160	3.0
11	2.5	1.2	886	56	230	56	166	91	91	19	173	7.3
12	2.0	1.2	986	51	198	123	144	79	98	20	125	2.4
13	3.0	1.0	754	45	164	23	132	66	63	22	92	1.6
14	5.0	.93	496	42	137	12	135	63	47	21	66	1.6
15	9.0	.88	327	40	127	26	134	71	76	15	45	1.8
16	15	.88	242	39	112	115	115	135	83	10	45	1.9
17	25	1.1	202	38	92	550	112	150	60	8.2	47	2.1
18	15	1.0	202	41	82	400	117	117	42	7.3	36	2.6
19	5.0	1.1	218	38	78	320	97	97	42	12	29	2.4
20	3.0	1.0	204	47	70	340	118	80	32	8.2	24	2.2
21	2.2	1.0	1,120	97	66	370	148	64	19	3.5	18	2.1
22	2.0	.93	4,780	310	60	451	134	48	32	5.3	14	2.2
23	2.1	.93	3,280	535	55	382	110	267	31	4.4	9.1	2.6
24	2.6	.93	1,730	421	52	335	107	1,510	70	8.2	7.7	3.0
25	3.2	.88	934	260	48	589	89	1,280	216	24	14	5.0
26	3.0	.93	682	180	45	721	83	954	307	24	9.6	2.8
27	2.6	.93	478	120	42	553	61	1,110	230	23	3.5	3.0
28	2.4	.93	355	526	40	382	60	874	164	23	2.1	3.5
29	2.2	.93	257	1,090	40	295	60	667	117	6.0	1.9	2.6
30	2.1	1.1	212	2,050	-----	216	63	526	91	3.5	1.9	2.2
31	2.1	-----	194	2,040	-----	218	-----	382	-----	4.1	1.9	-----
TOTAL	202.13	35.39	21,178.5	8,850	15,691	6,866	7,762	9,081	4,583	619.7	1,157.1	78.0
MEAN	6.52	1.18	683	285	541	221	259	293	153	20.0	37.3	2.60
MAX	25	2.6	4,780	2,050	3,960	721	1,410	1,510	487	80	173	7.3
MIN	.83	.85	1.1	38	40	12	60	17	19	3.5	1.9	1.6

CAL YR 1967 TOTAL 70,831.73 MEAN 194 MAX 4,780 MIN .83
WTR YR 1968 TOTAL 76,103.82 MEAN 208 MAX 4,780 MIN .83

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	1000	13.27	4,940	02-02	1530	12.84	4,420
01-30	1845	11.25	2,380				

WABASH RIVER BASIN

3-3507. Stony Creek near Noblesville, Ind.

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

Drainage area.--50.8 sq mi.

Records available.--July 1967 to September 1968.

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

Extremes.--Maximum discharge during year, 1,010 cfs Feb. 2 (gage height, 6.64 ft); minimum, 5.4 cfs Oct. 1, 2 (gage height, 1.65 ft).
1967-68: Maximum discharge, 1,010 cfs Feb. 2, 1968 (gage height, 6.64 ft); minimum, 3.8 cfs Sept. 1, 1967 (gage height, 1.62 ft).

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	9.4	8.4	34	240	20	58	23	136	16	22	9.4
2	5.4	16	32	32	838	20	51	22	133	18	20	9.4
3	5.5	14	166	29	373	20	51	22	122	21	18	9.0
4	5.5	14	112	27	186	20	422	21	97	22	47	8.0
5	5.6	13	80	25	135	21	256	20	86	22	16	9.0
6	8.6	11	66	24	111	22	158	19	75	22	14	8.6
7	8.0	10	61	23	98	21	120	18	66	22	13	7.8
8	8.0	9.4	52	21	84	21	93	18	62	22	11	7.8
9	9.0	8.4	43	20	74	22	70	21	57	22	107	7.5
10	9.4	8.4	64	20	65	23	62	22	52	22	128	7.5
11	8.0	8.6	163	19	56	23	53	27	47	21	122	7.5
12	7.8	10	126	18	50	24	50	31	40	20	76	7.0
13	8.0	10	92	18	47	23	58	24	32	21	47	7.2
14	8.0	9.4	80	18	42	23	66	23	30	46	26	6.8
15	8.6	9.0	81	17	40	23	76	22	29	12	19	6.5
16	9.8	8.6	66	17	38	48	59	22	27	10	29	6.2
17	20	9.0	56	17	32	97	48	21	22	9.0	30	6.5
18	23	11	59	16	31	82	45	20	22	9.0	21	6.8
19	13	10	64	16	30	72	39	20	20	10	16	7.2
20	9.0	9.4	56	18	28	68	45	20	18	18	13	7.0
21	7.8	9.4	145	37	26	76	47	19	17	17	12	6.5
22	7.2	9.0	448	57	25	74	37	18	17	19	11	6.0
23	6.8	8.6	170	82	24	72	35	150	16	18	10	12
24	7.5	8.6	106	55	23	68	32	772	16	18	9.4	10
25	8.4	8.6	88	42	22	110	30	429	22	25	9.0	8.6
26	9.4	8.4	73	32	21	128	27	315	30	26	8.6	7.8
27	8.4	8.4	59	42	21	97	26	475	30	22	8.4	7.2
28	8.4	7.8	45	88	20	76	26	291	22	20	8.4	6.8
29	8.4	7.8	43	135	20	63	26	206	19	19	8.4	6.2
30	8.0	8.4	40	379	-----	53	24	177	17	17	8.0	6.5
31	7.8	-----	38	298	-----	52	-----	149	-----	18	8.0	-----
TOTAL	273.7	293.6	2,782.4	1,676	2,800	1,562	2,190	3,437	1,379	604.0	896.2	230.3
MEAN	8.83	9.79	89.8	54.1	96.6	50.4	73.0	111	46.0	19.5	28.9	7.68
MAX	23	16	448	379	838	128	422	772	136	46	128	12
MIN	5.4	7.8	8.4	16	20	20	24	18	16	9.0	8.0	6.0
CFSM	.17	.19	1.77	1.06	1.90	.99	1.44	2.18	.90	.38	.57	.15
IN.	.20	.21	2.04	1.23	2.05	1.14	1.60	2.52	1.01	.44	.66	.17

CAL YR 1967	TOTAL	MEAN	MAX	MIN	CFSM	IN
WTR YR 1968	TOTAL 18,124.2	MEAN 49.5	MAX 838	MIN 5.4	CFSM .97	IN 13.27

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	0800	5.20	555	04-04	1630	4.80	556
01-30	1930	5.01	508	05-24	1300	6.14	956
02-02	0900	6.64	1,010	05-27	0230	4.73	538

WABASH RIVER BASIN

103

3-3510. White River near Mora, 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 Mora, 14 miles upstream from Fall Creek and at mile 253.4.

Drainage.--1,219 sq mi (revised).

Records available.--October 1929 to September 1968. Prior to April 1930 monthly discharge only, published in WSP 1305. Prior to October 1948, published as West Fork White River near Mora.

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 $\frac{1}{2}$ miles downstream.

Average discharge.--39 years, 1,056 cfs.

Extremes.--Maximum discharge during year, 12,800 cfs Feb. 4 (gage height, 13.17 ft); minimum, 117 cfs Oct. 3 (gage height, 1.82 ft). 1929-68: Maximum discharge, 32,400 cfs May 19, 1943 (gage height, 18.19 ft); minimum, 40 cfs Sept. 2, 1934; minimum daily, 49 cfs Sept. 17, 1941.

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

Remarks.--Record good except for winter period or period of no gage-height record, which is poor. Flow slightly regulated by Morse Reservoir (see sta. No. 3-3503). Record of water temperatures for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	143	184	175	828	8,460	461	1,280	492	2,300	775	425	258	
2	126	237	273	724	9,640	438	1,400	470	2,330	645	393	272	
3	119	286	1,870	640	12,300	438	1,440	448	2,800	550	665	261	
4	126	286	4,150	580	11,900	409	3,940	456	2,250	474	655	247	
5	143	283	4,040	520	6,190	393	6,220	443	1,720	421	595	258	
6	189	249	2,750	480	3,940	409	5,390	389	1,410	393	492	275	
7	262	221	2,320	450	3,210	405	3,370	365	1,220	361	443	244	
8	206	212	2,000	410	2,660	397	2,380	357	1,080	334	430	240	
9	184	197	1,600	390	2,260	393	1,830	401	949	324	919	224	
10	189	184	1,480	400	1,880	401	1,460	515	859	317	1,690	214	
11	186	189	3,320	400	1,500	409	1,230	540	781	314	2,960	218	
12	170	203	4,740	400	1,300	454	1,080	620	742	296	2,950	224	
13	165	203	4,130	410	1,150	492	988	605	692	289	1,760	227	
14	165	189	3,030	410	1,000	405	925	565	615	314	1,130	230	
15	167	178	2,280	410	920	405	1,060	515	600	365	919	221	
16	159	175	1,840	400	880	545	1,070	640	625	381	847	205	
17	218	184	1,520	390	835	1,480	962	994	595	859	811	199	
18	318	192	1,400	360	714	2,030	895	1,000	550	736	753	208	
19	307	206	1,510	370	625	1,820	817	787	540	502	775	240	
20	237	192	1,540	403	600	1,600	817	698	488	452	709	240	
21	200	175	2,000	526	580	1,570	925	615	421	540	590	221	
22	178	178	7,460	948	560	1,620	883	550	389	409	497	240	
23	154	184	9,380	1,490	540	1,690	805	947	389	452	425	268	
24	143	181	6,440	1,580	520	1,590	748	5,000	434	466	385	272	
25	167	184	3,490	1,260	510	2,030	698	7,000	1,220	555	345	240	
26	186	178	2,600	981	484	2,850	620	7,320	2,180	682	320	237	
27	215	170	1,950	828	474	3,290	595	6,870	2,310	793	303	227	
28	192	156	1,510	1,170	474	2,590	550	6,660	1,810	625	289	208	
29	186	156	1,240	2,750	474	1,890	510	5,020	1,280	525	275	193	
30	167	167	1,070	6,100	-----	1,480	497	3,570	974	530	264	187	
31	167	-----	954	8,320	-----	1,260	-----	2,760	-----	448	261	-----	
TOTAL	5,734	5,979	84,062	35,328	76,580	35,644	45,385	57,612	34,553	15,127	24,275	6,998	
MEAN	185	199	2,712	1,140	2,641	1,150	1,513	1,858	1,152	488	783	233	
MAX	318	286	9,380	8,320	12,300	3,290	6,220	7,320	2,800	859	2,960	275	
MIN	119	156	175	360	474	393	497	357	389	289	261	187	
CFSM	.15	.16	2.22	.93	2.17	.94	1.24	1.52	.94	.40	.64	.19	
IN.	.17	.18	2.56	1.08	2.34	1.09	1.38	1.76	1.05	.46	.74	.21	
CAL YR 1967	TOTAL 378,784			MEAN 1,038		MAX 9,380		MIN 119		CFSM .85		IN 11.56	
WTR YR 1968	TOTAL 427,277			MEAN 1,167		MAX 12,300		MIN 119		CFSM .96		IN 13.04	

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-23	0900	11.50	9,600	05-26	2100	10.16	7,670
02-04	0200	13.17	12,800				

WABASH RIVER BASIN

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.--169 sq mi (revised).

Records available.--July 1941 to September 1968.

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 27, 1942 to June 16, 1964, graphic water-stage recorder at same site and datum.

Average discharge.--27 years, 161 cfs.

Extremes.--Maximum discharge during year, 3,300 cfs Feb. 2 (gage height, 7.98 ft); minimum, 17 cfs Oct. 4, 5 (gage height, 1.27 ft). 1941-68: Maximum discharge, 8,750 cfs Apr. 21, 1964 (gage height, 9.88 ft); minimum observed, 5.0 cfs Sept. 23, 24, 1941 (gage height, 1.04 ft). Maximum stage known, about 12 ft March 1913, (information by local resident).

Remarks.--Record good except for winter period, which is fair. Record of suspended sediment loads for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	48	40	103	903	90	311	92	422	71	118	51
2	18	84	95	128	2,350	92	272	89	573	66	101	54
3	18	78	821	110	2,550	86	234	87	466	62	74	47
4	18	78	740	105	905	86	1,210	87	347	61	142	47
5	23	70	392	95	589	87	1,280	84	280	61	144	57
6	43	57	302	88	498	90	603	81	236	58	98	48
7	35	51	251	88	424	86	430	78	207	55	74	43
8	29	48	210	84	358	86	342	83	182	54	129	40
9	34	46	176	82	308	90	265	96	168	51	226	39
10	34	42	326	81	250	93	222	95	154	50	334	40
11	29	43	782	80	190	90	193	113	142	48	416	43
12	27	48	638	80	170	90	174	144	131	48	250	43
13	26	45	459	80	150	83	160	115	122	51	160	39
14	27	42	321	80	140	87	164	99	115	52	118	38
15	26	40	294	80	130	87	198	98	111	47	99	36
16	27	39	243	82	120	109	170	118	118	43	350	34
17	63	45	199	78	110	191	154	129	111	43	260	34
18	90	51	212	77	105	178	150	111	102	40	187	43
19	67	48	229	78	100	164	138	102	96	43	134	48
20	49	46	196	79	100	154	150	101	90	39	106	43
21	42	41	297	96	100	170	152	96	84	37	87	39
22	39	40	845	144	95	205	133	90	86	66	75	36
23	36	40	514	223	95	198	127	337	84	115	68	54
24	32	39	311	203	90	193	120	1,820	80	61	62	47
25	37	40	258	170	90	324	113	2,300	95	78	58	50
26	46	40	227	141	93	483	104	1,100	113	81	54	43
27	42	40	180	128	96	381	102	1,290	98	59	50	38
28	42	41	168	254	96	272	99	891	92	55	50	36
29	38	39	148	533	95	219	95	622	86	45	47	34
30	36	40	137	1,580	-----	182	93	531	77	42	45	33
31	38	-----	128	1,580	-----	176	-----	427	-----	51	44	-----
TOTAL	1,130	1,449	10,139	6,810	11,300	4,922	7,958	11,506	5,068	1,733	4,160	1,277
MEAN	36.5	48.3	327	220	390	159	265	371	169	55.9	134	42.6
MAX	90	84	845	1,580	2,550	483	1,280	2,300	573	115	416	57
MIN	18	39	40	77	90	83	93	78	77	37	44	33
CFSM	.22	.29	1.94	1.30	2.31	.94	1.57	2.20	1.00	.33	.79	.25
IN.	.25	.32	2.23	1.50	2.49	1.08	1.75	2.53	1.12	.38	.92	.28

CAL YR 1967 TOTAL 50,499 MEAN 138 MAX 845 MIN 13 CFSM .82 IN 11.11
WTR YR 1968 TOTAL 67,452 MEAN 184 MAX 2,550 MIN 18 CFSM 1.09 IN 14.84

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-31	0800	6.92	1,870	04-05	0300	6.47	1,730
02-02	2330	7.98	3,300	05-25	0800	7.52	2,620

3-3517. Geist Reservoir near Oaklandon, Ind.

Location.--Lat 39°54'26", long 85°59'07", in SW¼NE¼ sec. 20, T. 17 N., R. 5 E., in intake structure of reservoir on Fall Creek, 2.6 miles northwest of Oaklandon, 17 miles above mouth.

Drainage area.--215 sq mi.

Records available.--January 1943 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 755.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum contents during year, 23,890 acre-ft May 25 (elevation, 786.36 ft); minimum contents, 13,620 acre-ft Oct. 5 (elevation, 780.21 ft).

1943-68: Maximum contents, 27,360 acre-ft May 18, 1943 (elevation, 788.02 ft); minimum contents, 11,230 acre-ft Jan. 5, 1964 (elevation, 778.42 ft).

Remarks.--Reservoir is formed by earth fill dam. Releases normally controlled by a 36-inch valve. Minimum design capacity is essentially empty at invert on outlet conduit at elevation of 756.75 ft. Capacity at uncontrolled spillway elevation (785 ft) is 21,180 acre-ft. Reservoir is used for low-flow augmentation and recreation. Reservoir filled for first time on March 17, 1943.

Cooperation.--Record furnished by Indianapolis Water Company.

Month-end elevation and contents, water year October 1967 to September 1968

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	780.49	14,010	-
Oct. 31.....	780.83	14,510	+500
Nov. 30.....	781.69	15,770	+1,260
Dec. 31.....	785.32	21,790	+6,020
Calendar year 1967.....	-	-	+80
Jan. 31.....	786.29	23,740	+1,950
Feb. 29.....	785.28	21,710	-2,030
Mar. 31.....	785.39	21,910	+200
Apr. 30.....	785.27	21,690	-220
May 31.....	785.67	22,460	+770
June 30.....	785.25	21,650	-810
July 31.....	784.91	21,010	-640
Aug. 31.....	785.14	21,440	+430
Sept. 30.....	784.94	21,060	-380
Water year 1967-68.....	-	-	+7,050

Diversion for municipal supply for city of Indianapolis

Water supply for the city of Indianapolis is from both White River and Fall Creek. Water from White River is diverted below White River near Nora (3-3510) into Indianapolis Water Canal at Westfield Boulevard. Water from Fall Creek is diverted below Fall Creek at Millersville (3-3525) at pumping station at Keystone Avenue. The return flow of the diversion is made below White River at Indianapolis (3-3530). Major return flow is made at mouth of Eagle Creek and minor return flow is made at Southport Road.

Diversion, monthly and yearly means in cfs-days

1967													1968
Oct.	Nov.	Dec.	Cal. year	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.	Water year
124	119	113	127	118	122	118	123	128	147	166	154	139	131

WABASH RIVER BASIN

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.--2.74 sq mi (revised).

Records available.--March 1952 to September 1956, October 1957 to September 1968.

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

Average discharge.--15 years, 5.14 cfs.

Extremes.--Maximum discharge during year, 285 cfs Aug. 15 (gage height, 4.60 ft); minimum, 1.5 cfs July 21.
1952-56, 1957-68: Maximum discharge, 2,650 cfs May 28, 1956 (gage height, 9.32 ft); minimum, 0.1 cfs Aug. 1, 2, 1952, Oct. 29, 30, 1953.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	7.2	3.0	4.5	32	3.6	8.2	4.7	7.1	2.2	5.1	3.7
2	3.6	4.9	48	4.4	38	3.6	6.5	4.7	5.8	2.0	2.4	3.5
3	3.6	5.7	21	4.4	10	3.4	7.4	4.6	6.7	2.1	2.8	2.7
4	3.6	4.9	9.2	4.3	8.0	3.6	41	4.6	5.0	2.1	4.3	3.9
5	5.9	4.0	7.4	4.3	7.1	3.6	8.9	4.4	4.7	2.0	2.4	4.0
6	5.5	3.7	7.1	4.3	6.2	3.6	7.1	4.4	4.5	2.0	2.2	3.1
7	3.2	3.6	6.7	4.2	4.7	3.4	6.4	4.4	4.5	2.1	2.8	2.8
8	8.1	3.4	6.0	4.2	4.6	3.6	5.8	4.4	4.3	2.1	5.7	2.8
9	3.9	3.2	6.9	4.2	4.6	3.9	5.2	6.9	4.2	2.2	4.1	2.7
10	3.7	3.2	20	4.3	4.6	3.4	5.0	4.4	4.1	2.1	7.2	2.7
11	3.7	4.6	11	4.2	4.5	3.4	5.0	8.3	4.1	2.0	2.8	2.8
12	3.7	3.7	9.2	4.2	4.5	3.6	4.9	6.0	4.0	2.0	2.5	2.7
13	4.5	3.7	7.4	4.4	4.5	3.6	4.7	4.7	4.0	2.0	2.2	2.7
14	3.6	3.6	8.2	4.4	4.5	3.6	5.2	4.9	3.9	2.0	2.2	2.8
15	3.6	3.6	6.9	4.4	4.4	3.9	5.3	5.0	3.8	2.1	23	2.5
16	7.9	3.4	6.4	4.4	4.3	7.6	5.0	4.7	5.5	2.1	9.7	3.1
17	24	5.1	6.7	4.3	4.3	6.0	5.2	4.7	3.8	2.2	6.2	3.2
18	5.8	3.7	7.6	4.6	4.3	5.5	5.0	4.8	3.8	2.1	4.6	3.9
19	4.3	3.6	6.4	5.2	4.2	5.3	4.7	5.7	3.8	2.2	4.0	2.8
20	3.7	3.4	6.2	5.8	4.2	5.7	7.1	5.3	3.7	1.9	3.6	2.8
21	3.4	3.4	26	9.5	4.2	7.6	5.3	4.9	3.6	1.9	3.6	2.7
22	3.1	3.9	10	7.6	4.3	6.4	5.2	4.6	3.6	5.4	3.4	3.3
23	3.4	3.4	6.9	6.9	4.0	6.5	4.9	55	3.5	2.8	3.2	2.7
24	4.8	4.0	6.2	5.3	3.9	8.2	4.7	47	3.5	2.1	3.1	3.2
25	3.6	3.9	6.7	4.9	3.7	8.2	4.7	20	5.5	2.5	2.8	2.7
26	3.4	3.6	5.5	5.0	3.9	6.9	4.7	40	2.5	2.1	2.8	2.7
27	3.7	3.6	5.2	5.0	3.7	5.7	4.7	29	2.2	2.6	3.0	2.5
28	3.2	3.4	5.0	5.3	3.7	5.0	4.6	8.0	2.2	2.1	2.8	2.5
29	3.2	3.4	4.9	15	3.9	4.9	4.7	7.4	2.1	2.1	2.8	2.7
30	3.2	3.4	4.7	38	-----	4.6	4.7	6.7	2.0	2.0	3.1	2.5
31	5.3	-----	4.7	12	-----	6.5	-----	5.8	-----	3.7	2.8	-----
TOTAL	149.3	118.2	297.1	203.5	198.8	154.4	201.8	330.0	122.0	70.8	133.2	88.7
MEAN	4.82	3.94	9.58	6.56	6.86	4.98	6.73	10.6	4.07	2.28	4.30	2.96
MAX	24	7.2	48	38	38	8.2	41	55	7.1	5.4	23	4.0
MIN	3.1	3.2	3.0	4.2	3.7	3.4	4.6	4.4	2.0	1.9	2.2	2.5
CFSM	1.76	1.44	3.50	2.40	2.50	1.82	2.46	3.89	1.48	.83	1.57	1.08
IN.	2.03	1.60	4.03	2.76	2.70	2.10	2.74	4.48	1.66	.96	1.81	1.20

CAL YR 1967 TOTAL 1,981.8 MEAN 5.43 MAX 48 MIN 1.8 CF5M 1.98 IN 26.90
WTR YR 1968 TOTAL 2,067.8 MEAN 5.65 MAX 55 MIN 1.9 CF5M 2.06 IN 28.07

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

WABASH RIVER BASIN

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3-3522. Mud Creek at Indianapolis, Ind.

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

Drainage area.--42.4 sq mi (revised).

Records available.--May 1958 to September 1968.

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.--10 years, 33.0 cfs.

Extremes.--Maximum discharge during year, 882 cfs Feb. 2 (gage height, 7.06 ft); minimum, 1.7 cfs Oct. 2 (gage height, 1.67 ft). 1958-68: Maximum discharge, 2,010 cfs Apr. 21, 1964 (gage height, 8.37 ft); minimum, 0.2 cfs Aug. 24, 1962, several days in September and Oct. 3, 1963; Sept. 9, 10, 13, 14, 17, 18, 1966; minimum gage height, 1.48 ft Sept. 13, 14, 1966.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.9	5.4	3.7	29	298	13	43	17	114	9.7	23	4.6
2	1.7	8.8	28	27	768	12	39	16	143	9.1	12	4.7
3	1.9	7.0	202	25	489	14	40	15	133	8.5	8.5	4.3
4	2.0	6.8	146	22	218	14	377	14	84	8.2	18	4.3
5	2.0	5.6	87	20	149	14	242	13	58	7.9	18	4.9
6	2.2	4.7	59	19	120	15	131	12	47	7.6	11	4.6
7	2.8	4.7	50	20	101	13	75	11	40	7.3	8.2	4.1
8	2.9	4.9	44	19	79	13	68	11	36	7.0	11	5.4
9	3.1	4.6	37	19	64	15	50	15	32	6.8	38	5.6
10	3.3	4.4	81	19	50	15	42	13	28	6.6	35	5.6
11	3.7	4.3	206	19	40	14	36	22	26	6.6	31	4.6
12	4.0	4.0	184	18	32	14	33	24	24	6.4	25	4.9
13	3.5	3.7	125	18	28	16	30	19	22	6.4	18	4.7
14	3.5	3.5	81	18	26	12	31	18	20	6.2	14	4.6
15	3.8	3.5	78	17	24	13	46	17	19	6.0	14	4.3
16	4.9	5.6	59	16	22	26	35	16	19	5.8	46	4.1
17	12	4.3	48	14	21	53	31	15	18	5.4	26	4.3
18	13	4.1	56	14	20	47	30	14	16	5.2	24	4.9
19	6.2	4.1	63	14	19	41	27	14	15	5.2	18	4.9
20	4.7	3.7	50	14	18	40	32	14	14	4.9	13	4.6
21	4.4	4.1	166	32	18	48	34	13	13	4.7	10	4.3
22	3.7	4.7	620	54	17	56	29	12	12	23	8.5	26
23	3.3	4.6	418	98	16	52	27	102	12	36	7.3	14
24	2.7	4.0	174	55	16	59	25	495	11	9.7	6.6	6.6
25	3.4	3.8	123	43	15	134	23	483	14	14	6.0	5.6
26	3.5	4.0	95	32	14	125	21	284	15	18	5.6	5.0
27	3.8	3.7	66	30	14	80	20	404	14	8.2	5.2	4.6
28	3.7	3.1	52	94	13	56	18	269	13	7.0	5.0	3.5
29	3.3	3.4	44	186	13	46	18	164	12	6.2	4.9	2.9
30	3.0	4.0	38	458	-----	39	17	139	10	5.8	4.7	2.7
31	2.8	-----	35	404	-----	39	-----	108	-----	9.4	4.6	-----
TOTAL	120.7	137.1	3,518.7	1,867	2,722	1,148	1,690	2,783	1,034	278.8	480.1	169.2
MEAN	3.89	4.57	114	60.2	93.9	37.0	56.3	89.8	34.5	8.99	15.5	5.64
MAX	13	8.8	620	458	768	134	377	495	143	36	46	26
MIN	1.7	3.1	3.7	14	13	12	17	11	10	4.7	4.6	2.7
CFSM	.09	.11	2.68	1.42	2.21	.87	1.33	2.12	.81	.21	.37	.13
IN.	.11	.12	3.09	1.64	2.39	1.01	1.48	2.44	.91	.24	.42	.15
CAL YR 1967	TOTAL 13,431.62	MEAN 36.8	MAX 620	MIN .82	CFSM .87	IN 11.78						
WTR YR 1968	TOTAL 15,948.6	MEAN 43.6	MAX 768	MIN 1.7	CFSM 1.03	IN 13.99						

PEAK DISCHARGE (BASE, 450 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	1500	6.76	715	04-04	1500	6.11	462
01-30	2030	6.38	534	05-24	2315	6.76	700
02-02	1115	7.06	882				

WABASH RIVER BASIN

3-3525. Fall Creek at Millersville, Ind.

Location.--Lat 39°51'07", long 86°05'15", in NE¼ sec. 9, T. 16 N., R. 4 E., on right bank at downstream side of Emerson Way Bridge, 8.6 miles from mouth (revised).

Drainage area.--298 sq mi (revised).

Records available.--October 1929 to September 1968. Monthly discharges only for some periods, published in WSP 1305. Twice-daily chain gage readings at former 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 Oct. 21, 1961, graphic water-stage recorder at site 500 ft downstream at present datum, and Oct. 21, 1961 to July 28, 1963, graphic water-stage recorder at present site and datum.

Average discharge.--39 years, 268 cfs (unadjusted).

Extremes.--Maximum discharge during year, 4,390 cfs Feb. 3 (gage height, 9.53 ft); minimum, 36 cfs Oct. 19 (gage height, 1.64 ft). 1929-68: Maximum discharge, 12,900 cfs May 28, 1956 (gage height, 13.53 ft); minimum, 7.0 cfs Sept. 28, 1941 (gage height, 0.84 ft).

Maximum stage known, 16.3 ft Mar. 26, 1913, from floodmarks (discharge, 22,000 cfs by slope-area measurement).

Remarks.--Record good except for winter period, which is fair. Flow regulated by Geist Reservoir (see sta. No. 3-3517).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	77	51	224	2,210	134	624	146	824	89	143	69
2	64	92	215	198	3,740	132	572	132	969	80	128	74
3	49	87	674	192	4,230	125	504	127	1,010	74	121	65
4	48	82	333	190	2,620	121	2,030	120	803	61	160	63
5	62	65	223	170	1,300	123	2,260	116	608	57	211	91
6	67	56	170	152	939	127	1,410	102	490	62	175	85
7	54	52	249	150	768	123	916	99	424	67	140	71
8	69	49	320	140	641	121	682	87	362	59	162	65
9	72	48	318	130	536	129	548	140	322	55	273	63
10	55	45	499	125	446	138	425	152	292	69	325	69
11	49	52	1,140	125	363	152	363	228	265	66	397	65
12	47	48	1,210	121	320	232	315	246	240	75	375	62
13	50	46	977	115	289	101	289	217	221	69	266	60
14	52	48	708	115	261	92	282	186	183	66	192	59
15	46	47	574	110	241	111	332	169	181	73	167	63
16	57	41	470	110	237	179	301	154	238	74	608	63
17	191	52	392	111	219	279	275	175	189	80	556	67
18	128	49	396	109	200	313	266	177	160	80	422	77
19	48	46	421	114	188	301	246	167	139	82	303	69
20	63	45	373	118	175	303	275	167	132	80	226	69
21	57	45	604	179	170	340	284	156	104	80	181	67
22	53	46	1,910	257	160	390	257	138	100	92	142	86
23	53	48	1,460	384	154	401	219	669	111	217	120	141
24	54	50	835	384	152	408	194	2,180	101	112	101	103
25	62	53	612	301	148	628	190	3,140	129	101	78	101
26	57	51	492	259	140	763	202	2,710	157	118	75	83
27	59	50	384	228	136	737	175	2,570	127	107	66	74
28	53	48	330	352	138	572	160	2,050	114	106	67	75
29	51	48	279	804	136	464	152	1,380	102	95	80	67
30	48	52	257	2,400	-----	378	146	1,130	97	89	69	62
31	63	-----	239	2,740	-----	378	-----	919	-----	98	62	-----
TOTAL	1,945	1,618	17,115	11,107	21,257	8,795	14,894	20,149	9,194	2,633	6,391	2,228
MEAN	62.7	53.9	552	358	733	284	496	650	306	84.9	206	74.3
MAX	191	92	1,910	2,740	4,230	763	2,260	3,140	1,010	217	608	141
MIN	46	41	51	109	136	92	146	87	97	55	62	59

CAL YR 1967 TOTAL 92,571 MEAN 254 MAX 1,910 MIN 41
WTR YR 1968 TOTAL 117,326 MEAN 321 MAX 4,230 MIN 41

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	1300	6.98	2,060	04-04	1800	7.62	2,550
01-30	2045	8.16	2,940	05-25	1715	8.29	3,250
02-03	0815	9.53	4,390				

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.--1,635 sq mi (revised).

Records available.--March 1904 to July 1906 and April 1930 to September 1968. Gage-height record published in reports of U.S. Weather Bureau for site 1.1 miles upstream Feb. 8, 1911 to Mar. 25, 1913, and at site 2.3 miles upstream since Oct. 16, 1913. Prior to October 1948, published as West Fork White River at Indianapolis.

Gage.--Digital water-stage recorder. Datum of gage is 662.26 ft above mean sea level, datum of 1929. March 1904 to July 1906, chain gage at railroad bridge three-quarters of a mile upstream at datum approximately 2.9 ft higher. April 1930 to July 20, 1931, float gage at Indianapolis sanitation plant 2½ miles downstream at datum 660 ft lower. July 21, 1931 to Mar. 2, 1932, staff gage at present site at datum 660 ft lower. Mar. 3, 1932 to May 14, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--39 years (1904-5, 1930-68), 1,344 cfs (unadjusted).

Extremes.--Maximum discharge during year, 17,400 cfs Feb. 3 (gage height, 13.79 ft); minimum, 75 cfs Oct. 4; minimum gage height, 2.41 ft Nov. 17, 29, 30.

1904-6, 1930-68: Maximum discharge, 37,200 cfs May 18, 1943; maximum gage height, 21.57 ft Jan. 16, 1937; minimum, 6.8 cfs Sept. 21, 1941.

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

Remarks.--Record fair. Natural flow affected by regulation of Morse Reservoir (see sta. No. 3-3503) and Geist Reservoir (see sta. No. 3-3517), and by diversion of municipal water supply by the Indianapolis Water Co. (see pg. 105).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	283	147	945	11,800	602	2,180	578	3,240	811	581	281
2	115	238	858	809	15,600	566	1,990	560	3,220	680	352	293
3	90	288	2,330	760	17,000	542	2,240	542	3,710	590	467	256
4	76	313	3,890	690	15,900	524	5,000	554	3,220	525	705	251
5	298	253	4,240	610	8,900	494	9,100	518	2,400	461	653	303
6	303	233	2,980	590	4,960	494	6,700	488	1,890	401	559	260
7	189	178	2,460	560	3,880	500	4,770	446	1,580	383	656	226
8	328	167	2,220	520	3,260	482	3,390	452	1,380	368	1,020	209
9	224	157	1,910	530	2,790	476	2,600	753	1,200	298	1,120	202
10	141	147	2,140	540	2,360	470	2,040	648	1,050	277	2,090	171
11	141	215	3,650	540	1,890	482	1,690	1,210	945	303	2,560	173
12	134	193	5,590	540	1,500	536	1,460	945	865	343	3,060	173
13	144	167	5,030	540	1,400	602	1,310	893	830	302	2,110	168
14	138	147	3,790	550	1,290	488	1,330	844	739	198	1,370	170
15	131	131	2,860	540	1,180	470	1,350	953	704	334	1,390	171
16	233	128	2,290	520	1,100	774	1,360	945	938	352	2,010	170
17	1,040	150	1,940	464	1,010	1,580	1,260	1,070	739	466	1,340	206
18	452	147	1,760	470	879	2,300	1,150	1,280	669	754	1,110	260
19	313	147	1,820	512	809	2,160	1,070	1,140	578	507	975	202
20	238	164	1,850	530	830	1,980	1,340	968	536	376	854	208
21	189	134	2,510	753	809	2,070	1,280	837	530	418	714	195
22	178	125	9,280	1,190	732	2,110	1,250	739	500	367	597	177
23	164	138	11,100	1,850	697	2,210	1,140	2,960	512	430	486	275
24	193	160	8,120	2,010	690	2,100	1,010	7,060	548	378	410	323
25	215	157	4,340	1,650	676	2,670	945	10,000	1,090	440	326	278
26	150	147	3,070	1,290	641	3,430	823	9,500	1,930	539	292	228
27	175	134	2,330	1,110	614	3,840	739	9,500	2,160	738	266	214
28	167	115	1,800	1,310	627	3,440	669	9,040	1,850	534	255	177
29	167	112	1,500	3,220	614	2,510	620	6,920	1,350	421	255	172
30	160	144	1,280	8,900	-----	1,960	590	4,890	1,030	372	262	161
31	220	-----	1,130	11,500	-----	2,180	-----	3,690	-----	422	246	-----
TOTAL	6,826	5,212	100,215	46,543	104,438	45,042	62,396	80,923	41,933	13,788	29,091	6,553
MEAN	220	174	3,233	1,501	3,601	1,453	2,080	2,610	1,398	445	938	218
MAX	1,040	313	11,100	11,500	17,000	3,840	9,100	10,000	3,710	811	3,060	323
MIN	76	112	147	464	614	470	590	446	500	198	246	161
CFSM	.13	.11	1.98	.92	2.20	.89	1.27	1.60	.85	.27	.57	.13
IN.	.16	.12	2.28	1.06	2.38	1.02	1.42	1.84	.95	.31	.66	.15
CAL YR 1967	TOTAL 455,767			MEAN 1,249		MAX 11,100	MIN 72	CFSM .76	IN 10.37			
WTR YR 1968	TOTAL 542,960			MEAN 1,483		MAX 17,000	MIN 76	CFSM .91	IN 12.35			

PEAK DISCHARGE (BASE, 8,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	2330	11.38	11,500	02-03	2030	13.79	17,400
01-31	2300	11.48	11,800	05-27	1445	10.63	9,960

WABASH RIVER BASIN

3-3531.2 Pleasant Run at Arlington Avenue at Indianapolis, Ind.

Location.--Lat 39°46'33", long 86°03'50", in NW 1/4 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.--7.58 sq mi (revised).

Records available.--December 1959 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 780.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Dec. 1, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--8 years (1960-68), 6.25 cfs.

Extremes.--Maximum discharge during year, 1,360 cfs Apr. 4 (gage height, 9.36 ft); minimum, 0.11 cfs Oct. 1 (gage height, 2.95 ft).
1959-68: Maximum discharge, 1,610 cfs Mar. 4, 1963 (gage height, 10.32 ft); no flow at times some years.
Flood in May 1956 reached a stage of 16.0 ft, from information by local resident.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	19	2.6	1.7	88	.72	18	1.5	11	1.1	11	1.9
2	.39	7.0	142	1.6	128	.72	7.3	1.4	5.6	1.3	1.3	1.8
3	.34	11	72	1.5	11	.72	20	1.5	8.1	1.1	1.8	.48
4	.26	6.6	8.8	1.5	5.9	.72	272	1.4	3.5	1.1	7.6	5.6
5	30	2.7	6.6	1.5	4.0	.75	12	1.4	2.9	1.2	1.7	4.1
6	16	2.7	6.2	1.4	3.2	.78	7.0	1.4	2.5	1.1	1.1	.83
7	1.2	2.7	4.8	1.4	3.0	.80	4.9	1.6	2.3	1.1	38	.52
8	26	1.9	3.4	1.5	2.5	.90	3.5	1.9	2.0	1.1	74	.43
9	4.0	1.6	7.7	1.6	2.2	1.5	2.7	23	1.9	1.2	11	.58
10	2.5	.56	49	1.7	1.8	1.2	2.4	2.3	1.9	1.2	14	.66
11	.50	5.9	18	2.0	1.5	1.0	2.2	38	1.9	1.2	2.4	.62
12	.56	2.7	14	2.4	1.3	1.2	2.0	4.6	1.7	3.7	1.2	.48
13	2.4	2.5	7.0	2.7	1.2	1.8	1.9	2.6	1.6	.68	.93	.50
14	1.5	2.7	10	3.1	1.1	2.1	7.5	2.3	1.3	1.0	.85	.48
15	.72	1.9	6.6	3.5	1.0	3.0	3.2	8.6	1.4	.68	57	.51
16	12	1.2	3.7	4.0	1.0	13	2.1	4.1	6.6	.74	46	.48
17	94	4.2	4.9	4.5	.94	4.2	3.4	2.7	1.6	.77	12	1.8
18	13	2.1	10	6.6	.90	2.8	2.8	2.2	1.2	.76	2.6	5.8
19	3.5	1.5	5.2	15	.88	2.8	2.3	5.6	1.4	1.2	1.5	1.3
20	2.2	1.6	3.5	24	.86	6.3	14	3.4	1.3	.65	1.0	.73
21	1.3	1.8	39	17	.84	13	2.8	2.3	1.2	.53	.85	.54
22	.44	2.5	16	12	.83	7.0	1.8	1.9	1.3	1.5	.87	.48
23	1.0	2.4	4.9	8.8	.80	8.4	1.9	225	2.4	1.7	.89	.48
24	7.7	4.5	3.2	4.9	.80	18	1.8	166	5.8	.78	.78	4.4
25	5.2	3.2	7.3	2.7	.80	13	1.8	13	15	1.1	.66	1.3
26	2.5	1.9	3.7	1.9	.76	6.3	1.8	102	4.1	.68	.67	.69
27	2.8	1.2	2.5	2.2	.74	3.5	1.7	32	1.7	10	.68	.72
28	2.1	1.0	2.2	6.3	.72	2.8	1.5	12	1.4	1.3	.62	.54
29	1.0	.90	2.0	39	.72	2.4	1.6	17	1.1	.79	.60	.50
30	.44	2.8	1.9	163	-----	2.1	1.6	9.8	1.2	.76	.58	.52
31	9.6	-----	1.8	12	-----	153	-----	5.0	-----	2.5	.53	-----
TOTAL	245.30	104.26	470.5	353.0	267.29	276.51	409.5	697.5	96.9	44.52	294.71	39.77
MEAN	7.91	3.48	15.2	11.4	9.22	8.92	13.7	22.5	3.23	1.44	9.51	1.33
MAX	94	19	142	163	128	153	272	225	15	10	74	5.8
MIN	.15	.56	1.8	1.4	.72	.72	1.5	1.4	1.1	.53	.53	.43
CFSM	1.04	.46	2.00	1.50	1.22	1.18	1.80	2.97	.43	.19	1.25	.17
IN.	1.20	.51	2.31	1.73	1.31	1.36	2.01	3.42	.48	.22	1.45	.20
CAL YR 1967	TOTAL 1,834.27		MEAN 5.03		MAX 142		MIN .07		CFSM .66		IN 9.00	
WTR YR 1968	TOTAL 3,299.76		MEAN 9.02		MAX 272		MIN .15		CFSM 1.19		IN 16.19	

PEAK DISCHARGE (BASE, 450 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-02	1530	6.12	530	04-04	0315	9.36	1,360
01-30	0100	6.40	600	05-23	0545	7.09	780
03-31	1630	9.03	1,260	08-08	2045	7.03	755

WABASH RIVER BASIN

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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.--10.1 sq mi (revised).

Records available.--November 1959 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 752.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Dec. 3, 1966 graphic water-stage recorder at same site and datum.

Average discharge.--8 years (1960-68), 8.51 cfs.

Extremes.--Maximum discharge during year, 1,660 cfs Apr. 4 (gage height, 8.36 ft); no flow Oct. 1, 2.
1959-68: Maximum discharge, 2,010 cfs Mar. 4, 1963 (gage height, 9.22 ft); no flow at times during most years.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	21	3.0	1.9	149	1.7	31	1.7	18	3.6	17	3.8
2	0	6.7	213	1.9	210	1.7	12	1.5	10	3.8	3.4	3.8
3	.12	10	98	1.9	19	1.7	40	1.5	15	3.4	4.1	1.5
4	.06	6.4	12	3.2	11	1.7	364	1.7	7.7	3.4	10	6.1
5	57	3.6	8.2	3.0	8.2	1.7	36	1.3	6.7	3.2	3.8	6.1
6	22	2.5	8.2	1.6	6.6	1.7	22	1.3	6.1	3.2	3.2	2.1
7	2.1	3.0	7.1	3.2	5.6	1.8	16	1.5	5.8	3.0	75	1.5
8	49	2.1	5.8	1.7	5.2	2.1	13	1.8	5.5	3.2	173	1.2
9	5.8	1.8	10	1.8	4.9	3.8	10	44	5.1	3.4	19	1.3
10	3.8	.58	72	2.0	4.5	3.2	7.7	3.6	4.8	3.4	17	2.1
11	1.3	5.5	23	2.2	4.1	2.7	5.8	47	4.8	3.4	5.8	2.5
12	.70	3.4	19	2.4	3.8	3.2	5.1	6.7	4.5	22	3.6	2.0
13	4.3	2.5	8.6	2.8	3.5	4.5	4.5	4.1	4.3	4.1	3.2	1.2
14	2.7	2.7	13	3.1	3.2	7.4	10	3.6	4.3	3.8	3.0	1.3
15	1.0	2.0	8.6	3.6	3.0	6.1	6.4	6.4	4.3	3.8	104	1.0
16	15	1.2	5.5	4.5	2.7	18	3.8	7.4	15	3.0	78	1.3
17	161	4.3	6.1	7.4	2.5	7.7	4.5	4.3	4.8	3.0	11	3.6
18	15	2.0	15	12	2.4	5.5	4.5	4.1	4.3	2.7	5.5	7.1
19	4.3	1.2	7.4	20	2.2	4.5	3.6	6.1	3.8	3.6	3.8	2.5
20	2.7	1.2	5.5	35	2.1	8.6	7.4	6.7	3.8	2.5	3.4	1.8
21	1.5	1.5	58	32	2.0	19	4.1	4.5	3.8	2.1	3.2	1.3
22	.28	1.8	20	24	1.9	11	2.5	3.2	3.8	2.3	2.7	1.2
23	.36	2.3	6.7	20	1.9	19	2.7	328	4.8	4.5	3.0	1.0
24	9.1	3.8	5.1	7.7	1.8	26	2.3	239	11	2.7	2.5	4.3
25	6.1	3.4	9.1	6.1	1.8	15	2.1	21	24	3.6	2.1	3.2
26	3.0	1.7	5.8	3.2	1.7	9.0	1.8	161	8.6	2.5	2.0	1.5
27	3.6	1.3	5.1	3.4	1.7	5.6	1.8	44	4.8	17	2.0	1.7
28	2.5	1.2	3.0	8.2	1.7	4.5	1.7	17	4.1	3.6	2.0	1.5
29	1.3	1.2	2.5	46	1.7	3.9	1.7	22	3.6	2.5	1.8	1.3
30	.18	4.1	3.6	254	-----	3.4	1.7	15	3.6	2.3	1.8	1.0
31	10	-----	2.1	21	-----	210	-----	9.1	-----	5.5	1.7	-----
TOTAL	385.80	105.98	670.0	540.8	469.7	415.7	629.7	1,020.1	210.7	134.1	571.6	71.8
MEAN	12.4	3.53	21.6	17.4	16.2	13.4	21.0	32.9	7.02	4.33	18.4	2.39
MAX	161	21	213	254	210	210	364	328	24	22	173	7.1
MIN	0	.58	2.1	1.6	1.7	1.7	1.7	1.3	3.6	2.1	1.7	1.0
CFSM	1.23	.35	2.14	1.73	1.60	1.33	2.08	3.26	.70	.43	1.83	.24
IN.	1.42	.39	2.47	1.99	1.73	1.53	2.32	3.76	.78	.49	2.10	.26
CAL YR 1967	TOTAL 2,766.76		MEAN 7.58		MAX 213		MIN 0		CFSM .75		IN 10.19	
WTR YR 1968	TOTAL 5,225.98		MEAN 14.3		MAX 364		MIN 0		CFSM 1.41		IN 19.24	

PEAK DISCHARGE (BASE, 380 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
10-17	1100	4.72	422	04-04	0315	8.36	1,660
12-02	1445	5.61	664	05-23	0545	6.70	1,030
01-30	0130	5.60	685	07-12	1530	4.72	435
03-31	----	7.60	1,360	08-08	2015	7.33	1,250

WABASH RIVER BASIN

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.--103 sq mi (revised).

Records available.--October 1957 to September 1968.

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.--11 years, 91.3 cfs.

Extremes.--Maximum discharge during year, 6,080 cfs Dec. 21 (gage height, 11.60 ft); no flow Oct. 1-25.

1957-68: Maximum discharge, 12,400 cfs Apr. 20, 1964 (gage height, 14.64 ft); no flow at times during 1959, 1963-68. Flood of June 28, 1957, reached a stage of 19.20 ft, from floodmark.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	1.8	2.8	40	882	13	109	15	252	25	18	1.4
2	0	2.1	77	35	2,300	13	84	13	314	19	16	1.6
3	0	2.2	718	30	638	11	82	12	367	16	13	1.6
4	0	3.8	325	27	384	11	1,730	11	276	13	38	1.3
5	0	4.0	224	25	276	11	546	11	186	11	131	1.6
6	0	4.0	167	24	210	15	308	8.6	134	11	60	1.6
7	0	3.4	154	23	180	14	201	7.0	102	8.6	36	1.3
8	0	2.6	116	22	139	13	134	6.5	84	7.0	36	1.1
9	0	2.1	90	21	113	14	87	14	70	6.5	140	.84
10	0	2.0	190	20	89	19	70	11	60	6.5	231	.84
11	0	2.4	447	19	70	17	57	20	52	6.5	234	.92
12	0	3.0	520	19	50	18	51	27	46	6.1	121	.84
13	0	3.0	280	18	40	16	47	22	34	5.7	65	.76
14	0	3.0	215	18	33	13	46	18	28	5.3	47	.69
15	0	2.6	193	18	30	16	50	18	27	4.3	35	.57
16	0	2.4	128	18	27	183	46	25	123	3.5	42	.43
17	0	3.0	103	18	24	318	44	25	65	3.0	47	.47
18	0	3.2	133	24	21	201	41	23	35	2.4	78	.76
19	0	3.0	156	27	19	147	38	22	28	2.3	51	1.1
20	0	3.0	121	34	17	160	50	22	27	2.0	33	1.3
21	0	3.0	1,810	146	16	177	62	20	26	2.0	22	1.2
22	0	2.8	2,500	250	15	162	48	17	25	1.9	13	1.0
23	0	2.8	520	220	14	136	44	283	27	1.9	9.2	.76
24	0	2.8	298	190	13	156	38	1,630	25	1.9	6.1	.52
25	0	2.8	224	150	13	374	30	658	34	73	4.3	.52
26	.08	2.6	162	136	12	286	27	538	136	198	3.0	.47
27	.68	2.4	123	105	12	168	23	538	72	72	2.6	.43
28	1.4	2.1	88	344	12	113	19	350	41	42	2.1	.40
29	1.4	2.1	70	571	11	86	18	254	27	25	1.8	.34
30	1.2	2.6	55	1,550	-----	67	16	243	27	15	1.6	.34
31	1.4	-----	45	722	-----	70	-----	192	-----	14	1.3	-----
TOTAL	6.16	82.6	10,254.8	4,864	5,660	3,018	4,146	5,054.1	2,750	611.4	1,539.0	27.00
MEAN	.20	2.75	331	157	195	97.4	138	163	91.7	19.7	49.6	.90
MAX	1.4	4.0	2,500	1,550	2,300	374	1,730	1,630	367	198	234	1.6
MIN	0	1.8	2.8	18	11	11	16	6.5	25	1.9	1.3	.34
CFSM	.002	.03	3.21	1.52	1.89	.95	1.34	1.58	.89	.19	.48	.009
IN.	.002	.03	3.70	1.76	2.04	1.09	1.50	1.82	.99	.22	.56	.01

CAL YR 1967 TOTAL 33,591.06 MEAN 92.0 MAX 2,500 MIN 0 CFSM .89 IN 12.13
WTR YR 1968 TOTAL 38,013.06 MEAN 104 MAX 2,500 MIN 0 CFSM 1.01 IN 13.73

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	2330	11.60	6,080	04-04	0900	9.21	2,960
01-30	1130	8.13	2,160	05-24	0930	8.53	2,410
02-02	0730	9.35	3,090				

3-3535. Eagle Creek at Indianapolis, Ind.

Location.--Lat 39°46'33", long 86°15'01", in NE¼ sec. 1, T. 15 N., R. 2 E., on right bank at downstream side of bridge on Lynhurst Drive, approximately 600 ft south of intersection of West 10th Street and Lynhurst Drive, 0.5 mile downstream from West 10th Street Bridge, 1.0 mile upstream from Vermont Street Bridge, 2.9 miles upstream from mouth of Little Eagle Creek, and 6.9 miles from mouth.

Drainage area.--174 sq mi (revised).

Records available.--November 1938 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 699.00 ft above mean sea level, datum of 1929. Temporary site during reconstruction of bridge on Lynhurst Drive, a wire-weight gage on downstream side of 10th Street Bridge, approximately half a mile upstream; Aug. 8, 1957 to June 30, 1958. Mar. 10, 1966 to Aug. 16, 1967, during channelization of Eagle Creek, a wire-weight gage on downstream side of Lynhurst Drive Bridge. Prior to Oct. 1, 1967, at datum 7.21 ft higher.

Average discharge.--29 years (1939-68), 148 cfs.

Extremes.--Maximum discharge during year 5,380 cfs Dec. 22 (gage height, 8.16 ft); minimum, 0.16 cfs Oct. 3 (gage height, 1.70 ft).

1938-68: Maximum discharge, 28,800 cfs June 28, 1957 (gage height, 23.59 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 23.2 ft, from information by local residents.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.40	8.4	5.6	100	952	34	154	51	367	6.6	10	22
2	.30	5.1	58	95	3,680	35	140	49	445	6.0	3.6	12
3	.26	6.2	367	90	1,450	35	138	47	485	5.7	3.2	8.2
4	.35	5.4	490	85	722	36	2,590	41	412	6.0	8.6	6.3
5	1.8	4.4	252	80	505	37	1,130	42	316	4.4	3.6	6.0
6	1.9	4.2	196	75	368	38	540	38	229	3.6	2.6	4.6
7	.40	3.8	176	70	314	38	363	34	174	3.8	8.1	4.4
8	1.6	4.0	146	66	256	36	260	33	164	3.6	30	4.4
9	1.1	4.2	118	62	216	37	192	48	143	3.2	26	4.1
10	.30	4.4	143	60	182	39	154	46	127	3.0	52	3.8
11	.30	8.9	470	58	157	40	135	72	103	3.4	22	3.6
12	.46	5.9	565	56	140	41	122	63	113	2.8	16	3.2
13	.70	4.8	400	54	120	42	109	57	75	3.2	26	3.2
14	.78	4.8	276	54	100	38	113	49	60	3.6	42	3.4
15	.46	5.1	280	54	90	37	120	57	45	4.1	116	3.4
16	1.5	5.9	206	54	83	145	106	52	75	3.2	115	3.4
17	21	8.4	157	55	76	480	102	51	75	2.8	100	4.6
18	3.8	5.6	160	58	70	314	100	48	60	2.8	91	6.0
19	2.0	5.6	213	79	64	224	88	48	48	2.8	87	4.6
20	1.6	5.4	188	100	58	216	111	47	46	3.2	76	3.6
21	1.5	5.6	626	140	54	264	135	43	39	2.5	70	3.6
22	1.7	5.1	416	430	48	256	109	41	38	2.6	66	3.8
23	1.3	5.6	1,260	395	44	216	92	454	39	3.6	62	3.4
24	4.4	6.6	626	256	41	202	82	2,400	27	2.0	59	70
25	3.0	6.2	465	151	38	430	76	1,100	52	2.5	56	66
26	2.4	5.9	354	138	36	395	70	770	58	2.6	52	68
27	2.4	5.1	224	106	35	260	64	784	25	7.1	48	66
28	2.5	5.4	160	300	35	176	60	520	17	4.1	43	65
29	2.6	5.1	132	650	34	138	57	431	12	3.0	37	59
30	2.2	6.6	120	2,250	-----	111	53	375	8.8	2.4	25	55
31	4.9	-----	105	1,260	-----	120	-----	308	-----	4.1	17	-----
TOTAL	69.91	167.7	9,354.6	7,481	9,968	4,510	7,565	8,199	3,877.8	114.3	1,373.7	574.6
MEAN	2.26	5.59	302	241	344	145	252	264	129	3.69	44.3	19.2
MAX	21	8.9	1,260	2,250	3,680	480	2,590	2,400	485	7.1	116	70
MIN	.26	3.8	5.6	54	34	34	53	33	8.8	2.0	2.6	3.2
CFSM	.01	.03	1.73	1.39	1.98	.84	1.45	1.52	.74	.02	.25	.11
IN.	.01	.04	2.00	1.60	2.13	.96	1.62	1.75	.83	.02	.29	.12

CAL YR 1967 TOTAL 53,326.61 MEAN 146 MAX 2,350 MIN .20 CFSM .84 IN 11.40
WTR YR 1968 TOTAL 53,255.61 MEAN 146 MAX 3,680 MIN .26 CFSM .84 IN 11.38

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-22	1300	8.16	5,380	04-04	1630	7.30	3,980
01-30	1800	6.48	2,770	05-24	1600	6.79	3,220
02-02	1530	7.53	4,320				

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

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

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

Records available.--October 1959 to September 1968.

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.--9 years, 15.7 cfs.

Extremes.--Maximum discharge during year, 1,060 cfs Apr. 4 (gage height, 5.27 ft); minimum, 0.62 cfs Oct. 4; minimum gage height, 0.19 ft Nov. 9.

1959-68: Maximum discharge, 1,940 cfs Apr. 25, 1961 (gage height, 7.44 ft); no flow at times most years.

Remarks.--Record fair.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	11	2.2	9.0	151	2.8	20	4.6	57	2.2	15	2.6
2	.98	6.0	92	8.0	399	2.7	14	4.3	49	2.2	2.4	3.7
3	.73	5.6	90	7.0	75	2.6	26	4.3	63	1.8	2.6	2.0
4	.73	4.3	29	6.5	50	2.6	516	3.4	35	1.8	11	2.2
5	3.7	3.4	18	6.0	38	2.5	85	3.4	21	1.8	3.4	2.8
6	5.4	2.2	16	5.6	31	2.5	53	3.4	15	1.6	1.8	2.0
7	1.4	2.2	13	5.3	28	2.6	40	3.7	12	1.4	6.2	1.6
8	4.7	2.0	9.5	5.0	22	3.1	30	3.1	9.5	1.3	19	1.4
9	2.0	2.1	8.6	4.7	19	4.0	20	15	7.2	1.3	14	1.3
10	1.3	2.0	51	4.5	16	4.0	17	4.6	6.4	1.3	48	1.4
11	1.1	7.4	55	4.4	15	4.0	13	36	5.6	1.3	9.9	1.3
12	1.1	4.0	57	4.3	12	4.0	12	12	4.9	1.1	3.4	1.1
13	2.1	2.2	29	4.2	11	9.5	10	7.2	4.6	1.1	2.4	1.1
14	1.6	2.4	29	4.2	9.5	7.6	20	6.0	4.3	.98	2.0	1.1
15	1.4	1.8	25	4.2	8.5	5.7	16	14	6.4	2.0	46	.84
16	5.0	1.6	19	4.2	7.5	69	11	8.0	29	1.3	74	.98
17	42	3.4	21	4.2	7.0	54	12	5.6	6.0	.98	29	2.2
18	6.9	2.0	28	5.0	6.5	35	11	5.2	4.3	.84	8.5	3.7
19	2.6	1.8	21	10	6.0	27	8.5	9.6	3.7	1.3	5.6	2.4
20	2.0	1.8	16	48	5.5	31	30	7.6	2.6	1.1	4.3	1.4
21	1.8	1.6	279	71	5.0	48	16	6.0	2.6	.84	3.7	1.1
22	2.0	2.0	201	52	4.6	41	11	4.6	2.4	.98	3.4	1.1
23	1.8	2.0	48	40	4.2	38	9.5	182	2.6	.98	2.8	.98
24	7.2	2.4	29	30	3.9	47	7.6	372	3.4	.98	2.6	2.9
25	5.1	2.4	27	26	3.6	64	6.4	96	30	1.4	2.2	2.0
26	2.4	1.8	22	17	3.3	40	5.6	141	13	1.1	2.2	1.1
27	2.4	1.8	22	13	3.1	27	5.2	104	8.5	5.2	2.0	1.1
28	2.0	1.8	18	44	3.0	19	4.9	58	4.9	1.6	2.0	.98
29	1.8	1.8	15	87	2.9	15	4.9	49	3.7	1.1	2.0	.98
30	1.6	2.6	12	472	-----	12	4.9	39	2.8	.84	2.0	.98
31	4.9	-----	10	115	-----	22	-----	28	-----	3.4	2.0	-----
TOTAL	120.84	89.4	1,312.3	1,121.3	951.1	649.2	1,040.5	1,240.6	420.4	47.12	335.4	50.34
MEAN	3.90	2.98	42.3	36.2	32.8	20.9	34.7	40.0	14.0	1.52	10.8	1.68
MAX	42	11	279	472	399	69	516	372	63	5.2	74	3.7
MIN	.73	1.6	2.2	4.2	2.9	2.5	4.9	3.1	2.4	.84	1.8	.84
CAL YR 1967	TOTAL 5,690.54			MEAN 15.6		MAX 287		MIN .40				
WTR YR 1968	TOTAL 7,378.50			MEAN 20.2		MAX 516		MIN .73				

PEAK DISCHARGE (BASE, 450 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	1700	4.55	845	04-04	0600	5.27	1,060
01-30	0700	4.38	794	05-24	0630	3.77	618
02-02	0400	4.10	710	08-15	2300	3.25	488

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.--28.8 sq mi (revised).

Records available.--May 1958 to September 1968.

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.--10 years, 23.4 cfs.

Extremes.--Maximum discharge during year, 1,130 cfs Dec. 21 (gage height, 7.36 ft, from crest-stage gage mark); no flow Oct. 1, 2, 4, 5.

1958-68: 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.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.18	5.0	12	203	5.0	55	6.0	62	7.0	6.3	.60
2	0	.30	50	11	572	5.0	35	5.6	48	6.8	5.7	.60
3	.01	.47	150	10	229	5.0	29	5.1	40	6.0	4.6	.60
4	0	.65	66	10	132	5.0	628	4.7	35	5.8	8.1	.60
5	0	.53	72	9.0	67	5.0	181	4.5	29	5.3	5.7	.60
6	.01	.41	69	9.0	54	5.2	132	4.2	24	5.1	7.6	.60
7	.01	.35	69	8.0	45	5.6	63	3.6	19	4.7	5.7	.60
8	.02	.30	65	8.0	25	6.0	32	3.6	12	4.5	6.3	.50
9	.04	.22	64	9.0	30	6.6	23	9.6	13	4.4	4.9	.40
10	.07	.22	69	10	22	6.8	18	9.0	11	4.2	106	.40
11	.05	.41	71	9.0	18	6.6	15	15	9.6	3.8	12	.40
12	.10	.53	67	8.0	15	7.3	14	11	8.4	3.4	11	.40
13	.13	.59	62	7.8	13	9.6	12	8.4	7.6	3.2	9.0	.30
14	.05	.40	56	7.4	12	16	13	7.6	6.8	24	7.0	.20
15	.04	.40	51	7.4	11	29	14	61	6.0	5.7	5.0	.20
16	.02	.30	44	7.4	10	58	13	119	14	4.4	5.2	.20
17	.30	.30	40	7.4	9.5	71	13	110	9.0	3.6	9.0	.40
18	.41	.30	37	7.4	9.0	64	12	87	8.1	2.5	35	1.0
19	.13	.30	35	9.0	8.0	59	12	50	7.6	1.7	20	1.1
20	.04	.40	30	35	7.5	55	14	21	6.8	1.2	7.0	.80
21	.01	.40	350	112	7.2	55	13	18	6.3	1.0	2.2	.50
22	.18	.30	380	165	7.0	65	12	18	6.6	1.0	1.8	.40
23	.13	.30	200	113	6.5	91	9.6	221	6.0	.86	1.6	.30
24	.26	.30	80	28	6.0	110	8.1	1,090	5.6	.86	1.3	.30
25	.47	.40	45	20	5.8	113	7.8	426	25	1.2	1.1	.30
26	.53	.30	30	29	5.6	71	7.5	190	29	2.6	1.0	.20
27	.26	.20	25	39	5.4	43	7.2	165	19	2.2	.80	.20
28	.16	.20	20	79	5.4	27	7.0	210	14	1.6	.70	.20
29	.09	.20	15	202	5.2	25	6.6	195	9.0	1.2	.60	.20
30	.07	.80	14	597	-----	23	6.0	153	7.3	1.0	.60	.20
31	.10	-----	13	202	-----	27	-----	106	-----	2.8	.50	-----
TOTAL	3.69	10.96	2,344	1,787.8	1,546.1	1,080.7	1,412.8	3,327.9	504.7	123.62	293.30	1,330
MEAN	.12	.37	75.6	57.7	53.3	34.9	47.1	107	16.8	3.99	9.46	.44
MAX	.53	.80	380	597	572	113	628	1,080	62	24	106	1.1
MIN	0	.18	5.0	7.4	5.2	5.0	6.0	3.6	5.6	.86	.50	.20
CFSM	.0042	.013	2.62	2.00	1.85	1.21	1.64	3.72	.583	.139	.328	.015
IN.	.005	.01	3.02	2.31	2.00	1.40	1.83	4.29	.65	.16	.38	.02
CAL YR 1967	TOTAL 7,989.65	MEAN 21.9	MAX 380	MIN 0	CFSM .76	IN 10.29						
WTR YR 1968	TOTAL 12,448.87	MEAN 34.0	MAX 1,080	MIN 0	CFSM 1.18	IN 16.08						

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 1968.

Gage.--Digital water-stage recorder. Datum of gage is 644.64 ft above mean sea level, datum of 1929. Aug. 30, 1957 to Dec. 9, 1963, and Oct. 1, 1964 to June 20, 1967, graphic water-stage recorder at present site and datum. Dec. 10, 1963 to Sept. 30, 1964, wire-weight gage at bridge 1,950 ft upstream at datum 1.39 ft higher.

Average discharge.--11 years, 187 cfs.

Extremes.--Maximum discharge during year, 11,000 cfs May 24 (gage height, 21.16 ft); minimum discharge, 3.2 cfs Oct. 13; minimum gage height, 7.44 ft Sept. 30.
1957-68: Maximum discharge, 18,000 cfs Mar. 4, 1963 (gage height, 22.95 ft); minimum discharge, 1.8 cfs Sept. 3, 1966; minimum gage height, 7.44 ft Sept. 30, 1968.
Flood of June 28, 1957, reached a stage of 22.5 ft, from levels to high-water mark by Indiana Flood Control and Water Resources Commission.

Remarks.--Record poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.6	30	12	42	1,240	21	543	64	602	70	72	14
2	4.8	32	621	40	4,510	21	283	60	690	62	45	15
3	4.5	24	1,490	35	1,280	21	258	59	534	54	34	15
4	4.1	32	504	33	759	21	4,360	56	465	50	34	15
5	85	16	305	31	554	21	1,400	48	345	48	40	17
6	18	12	246	30	300	21	772	48	288	45	40	15
7	7.5	9.0	234	28	200	22	529	45	250	43	33	14
8	6.8	7.5	167	25	150	23	372	47	220	40	33	13
9	6.7	7.1	141	27	120	25	272	85	196	38	47	12
10	4.5	6.7	404	29	100	28	224	69	178	35	118	12
11	3.7	6.4	626	32	80	26	182	171	149	34	146	12
12	3.7	6.4	718	22	70	30	158	106	130	32	75	11
13	3.7	6.4	401	21	60	35	158	95	118	32	48	10
14	4.8	6.0	330	21	50	47	169	85	105	320	37	10
15	3.7	5.6	328	21	45	60	158	702	112	90	33	9.6
16	7.1	5.2	234	21	42	554	141	1,280	350	38	93	9.6
17	91	5.2	191	21	40	598	134	350	162	33	63	20
18	28	4.8	308	21	37	414	132	234	126	30	62	27
19	14	4.5	274	22	35	302	118	178	116	20	45	25
20	8.0	4.5	211	30	32	319	198	143	98	13	34	18
21	6.0	4.1	831	173	30	489	211	122	87	11	28	15
22	4.8	4.1	2,970	504	28	401	151	274	90	11	24	14
23	4.5	4.1	764	572	27	336	118	4,370	88	9.5	22	12
24	4.8	4.5	420	246	25	369	106	5,540	90	9.5	20	10
25	14	5.6	220	182	24	678	96	1,900	212	15	18	12
26	11	7.5	150	132	23	443	90	1,700	304	28	16	11
27	8.5	8.0	80	106	23	300	82	1,290	184	25	16	10
28	6.8	7.5	70	489	22	234	76	804	126	22	14	10
29	5.2	7.1	55	1,260	21	198	70	650	98	20	14	10
30	9.0	12	50	4,750	-----	191	67	547	82	18	14	8.8
31	24	-----	45	1,680	-----	314	-----	414	-----	26	14	-----
TOTAL	413.8	295.8	13,400	10,646	9,927	6,562	11,628	21,536	6,595	1,322	1,332	407
MEAN	13.3	98.6	432	343	342	212	388	695	220	42.6	43.0	13.6
MAX	91	32	2,970	4,750	4,510	678	4,360	5,540	690	320	146	27
MIN	3.7	4.1	12	21	21	21	67	45	82	9.5	14	8.8
CFSM	.063	.465	2.04	1.62	1.61	1.00	1.83	3.28	1.04	.201	.203	.064
IN.	.07	.52	2.35	1.87	1.74	1.15	2.04	3.78	1.16	.23	.23	.07

CAL YR	1967	TOTAL	59,803.5	MEAN	164	MAX	2,970	MIN	3.7	CFSM	0.77	IN	10.96
WTR YR	1968	TOTAL	84,064.6	MEAN	230	MAX	5,540	MIN	3.7	CFSM	1.08	IN	15.21

PEAK DISCHARGE (BASE, 3,000 CFS)

DATE	TIME	G. HT.	DISCHARGE	DATE	TIME	G. HT.	DISCHARGE
12-22	0130	18.13	5,360	04-04	1015	19.96	8,110
01-30	0630	19.05	6,420	05-24	0545	21.16	11,000
02-02	1045	17.49	4,840				

3-3540. White River near Centerton, Ind.

Location.--Lat 39°30'02", long 86°24'24", in SW¼SE¼ sec. 3, T. 12 N., R. 1 E., on right bank, three-eighths of a mile downstream from highway bridge, 1 mile south of Centerton, 1 1/8 miles downstream from White Lick Creek, and at mile 202.6.

Drainage area.--2,444 sq mi (revised).

Records available.--October 1930 to March 1932, October 1946 to September 1967. Prior to March 1932, published as West Fork White River at Martinsville, and November 1946 to September 1948, published as West Fork White River near Centerton. Monthly discharge only for October and November 1946, published in WSP 1305. Daily chain-gage readings of gage height from July 1925 to September 1930 are available in the district office.

Gage.--Digital water-stage recorder. Datum of gage is 595.44 ft above mean sea level, datum of 1929 (Corps of Engineers bench mark), levels by Indianapolis Power and Light Co. Prior to March 1932, chain gage at site 8½ miles downstream at datum 17.72 ft lower. November 1946 to July 1953, wire-weight gage three-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.--23 years (1930-31, 1946-68) 2,271 cfs.

Extremes.--Maximum discharge during year, 31,700 cfs May 24 (gage height, 15.39 ft); minimum discharge, 280 cfs Oct. 5; minimum gage height, 0.56 ft Sept. 16.

1930-32, 1946-68: Maximum discharge, 50,500 cfs Apr. 22, 1964 (gage height, 17.57 ft); minimum discharge, 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) and 21.9 ft at present site (from information by Corps of Engineers); discharge, 90,000 cfs, estimated.

Remarks.--Record good. Flow slightly regulated by Morse Reservoir (see sta. No. 3-3503) and Geist Reservoir (see sta. No. 3-3517). Records of water temperatures and suspended sediment loads for water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	315	503	490	1,930	15,100	908	4,560	1,090	5,740	1,570	1,880	607
2	305	660	1,050	1,480	26,400	908	3,240	1,020	6,010	1,370	1,170	614
3	313	535	5,610	1,460	24,900	852	3,100	988	5,560	1,220	900	607
4	301	642	4,910	1,380	22,200	820	12,000	956	5,720	1,100	1,110	600
5	322	552	5,570	1,220	18,700	820	14,100	932	4,400	981	1,220	670
6	687	486	4,780	1,130	11,400	813	11,900	892	3,430	909	1,070	649
7	586	475	3,680	1,000	7,040	813	9,060	844	2,810	836	945	586
8	424	429	3,260	980	5,650	795	5,930	813	2,380	804	1,130	537
9	597	400	2,640	924	4,730	813	4,490	1,130	2,080	772	1,940	516
10	441	397	3,700	964	3,950	828	3,550	1,080	1,810	740	2,130	530
11	362	401	5,330	988	3,240	820	2,900	2,000	1,600	726	3,040	509
12	348	530	7,300	956	2,580	868	2,480	2,050	1,410	726	3,720	502
13	341	432	7,620	964	2,270	932	2,210	1,460	1,330	764	3,480	488
14	384	422	6,370	956	2,120	876	2,100	1,270	1,230	670	2,320	488
15	332	393	5,140	956	1,960	820	2,400	1,160	1,200	635	1,750	467
16	325	372	4,020	956	1,810	1,450	2,210	4,760	2,920	764	3,310	453
17	1,050	378	3,300	892	1,670	2,490	2,040	2,070	1,590	733	2,350	537
18	1,440	430	3,320	852	1,480	3,190	1,950	2,090	1,250	1,030	1,970	628
19	767	378	3,120	892	1,330	3,240	1,800	1,910	1,080	1,130	1,660	670
20	553	367	2,590	940	1,300	3,110	2,110	1,710	1,000	892	1,490	556
21	467	399	3,360	1,320	1,240	3,460	2,230	1,570	892	764	1,330	530
22	405	386	10,800	2,140	1,170	3,560	1,940	1,410	813	796	1,180	488
23	371	394	12,500	3,260	1,100	3,500	1,810	10,300	785	1,240	1,040	460
24	375	368	13,000	3,200	1,080	3,530	1,570	28,500	868	864	909	593
25	486	432	5,450	2,720	1,040	4,550	1,460	19,400	1,180	936	628	705
26	426	403	5,540	2,220	996	4,910	1,380	16,100	2,420	1,010	740	607
27	375	367	4,130	1,910	572	5,100	1,290	16,900	2,950	1,170	726	565
28	384	363	3,250	2,200	948	4,940	1,210	14,200	3,050	1,330	677	537
29	355	344	2,630	4,250	940	3,980	1,130	12,200	2,450	599	656	481
30	340	374	2,300	13,000	-----	3,200	1,110	9,670	1,870	892	649	460
31	464	-----	2,090	15,300	-----	2,600	-----	6,650	-----	918	621	-----
TOTAL	14,521	12,982	153,750	73,510	169,316	69,500	109,260	167,125	71,828	29,311	47,941	16,642
MEAN	466	433	4,960	2,371	5,838	2,242	3,642	5,391	2,394	946	1,546	555
MAX	1,440	660	13,000	15,300	26,400	5,100	14,100	28,500	6,010	1,570	3,720	705
MIN	301	344	490	852	940	799	1,110	813	785	635	621	453
CFSM	.19	.18	2.03	.97	2.39	.92	1.49	2.21	.98	.39	.63	.23
IN.	.22	.20	2.34	1.12	2.58	1.06	1.66	2.54	1.09	.45	.73	.25

CAL YR 1967 TOTAL 772,269 MEAN 2,116 MAX 13,000 MIN 301 CFSM .87 IN 11.75
WTR YR 1968 TOTAL 935,686 MEAN 2,557 MAX 28,500 MIN 301 CFSM 1.05 IN 14.24

PEAK DISCHARGE (BASE, 9,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-24	0045	11.31	13,500	04-04	2330	12.97	17,400
02-02	1845	14.86	28,400	05-24	1545	15.39	31,700

WABASH RIVER BASIN

3-3545. Beanblossom Creek at Beanblossom, Ind.

Location.--Lat 39°15'45", long 86°14'55", in NW¼ sec. 31, T. 10 N., R. 3 E., on right bank, 15 ft downstream from bridge on State Highway 135, 0.3 mile south of Beanblossom, and 2.5 miles upstream from North Fork Beanblossom Creek.

Drainage area.--14.6 sq mi.

Records available.--October 1951 to September 1968. Prior to October 1965, published as Bean Blossom Creek at Bean Blossom.

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

Average discharge.--17 years, 15.5 cfs.

Extremes.--Maximum discharge during year, 3,390 cfs May 24 (gage height, 11.10 ft); no flow for many days.
1951-68: Maximum discharge, 8,140 cfs June 23, 1960 (gage height, 11.78 ft), from curve extended above 2,000 cfs on basis of contracted-opening measurement; no flow for many days in most years.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	2.1	4.1	5.0	236	1.6	69	3.6	18	.80	97	.30
2	0	2.5	99	4.5	480	1.6	36	3.1	13	.74	20	.28
3	0	1.5	65	4.0	63	1.6	29	2.8	10	.62	12	.20
4	0	1.7	16	3.5	36	1.7	318	2.5	8.5	.52	8.2	.28
5	0	.94	9.1	3.1	25	2.0	58	2.1	6.1	.40	6.1	.62
6	0	.59	6.6	2.8	20	2.2	36	1.8	4.7	.35	4.2	.30
7	0	.44	5.6	2.6	16	1.9	30	1.6	3.8	.32	3.2	.25
8	0	.32	4.3	2.3	13	2.2	27	1.6	3.0	.30	2.6	.20
9	0	.29	3.9	2.1	10	3.3	23	8.0	2.5	.28	2.1	.18
10	0	.28	18	2.0	8.0	3.7	21	3.8	1.8	.25	2.1	.18
11	0	.57	24	1.9	5.5	3.1	17	215	1.4	.25	1.7	.18
12	0	.73	39	1.8	4.2	3.9	14	66	1.1	.22	1.3	.18
13	0	.59	18	1.8	3.9	3.5	12	32	.80	.20	1.1	.20
14	0	.58	33	1.7	3.5	3.3	15	24	.80	.18	1.4	.18
15	0	.48	25	1.7	3.2	4.9	15	15	12	.18	1.5	.15
16	0	.38	14	1.7	3.0	23	13	18	83	.17	1.1	.12
17	5.0	.58	13	1.7	2.8	20	15	16	11	.13	1.0	.46
18	1.5	.57	25	1.7	2.6	15	17	19	6.1	.83	.79	1.1
19	.43	.41	15	1.7	2.5	13	12	16	4.0	3.3	.62	.57
20	.18	.40	11	1.8	2.4	22	57	13	2.7	.49	.46	.35
21	.07	.44	100	18	2.2	64	34	10	1.8	.25	.40	.25
22	.06	.48	73	31	2.1	43	21	8.4	1.5	.48	.35	.18
23	.05	.54	26	37	2.0	34	16	506	1.4	2.2	.32	.15
24	.23	.58	16	23	2.0	53	11	1,130	1.5	.53	.30	.68
25	.84	.78	18	13	1.9	95	8.9	94	6.1	375	.28	1.4
26	.34	.66	18	9.0	1.8	67	7.6	208	5.2	45	.22	.28
27	.28	.52	13	8.4	1.7	39	6.3	88	3.5	36	.22	.15
28	.19	.41	10	12	1.7	25	5.3	41	2.6	20	.20	.10
29	.15	.39	8.0	33	1.6	20	5.0	36	1.7	9.7	.20	.10
30	.12	4.7	6.6	358	-----	22	4.0	32	1.3	6.1	.22	.10
31	.65	-----	5.5	63	-----	58	-----	22	-----	16	.22	-----
TOTAL	10.09	25.45	742.7	654.8	957.6	653.5	953.1	2,640.3	220.90	521.79	171.40	9.67
MEAN	.33	.85	24.0	21.1	33.0	21.1	31.8	85.2	7.36	16.8	5.53	.32
MAX	5.0	4.7	100	358	480	95	318	1,130	83	375	97	1.4
MIN	0	.28	3.9	1.7	1.6	1.6	4.0	1.6	.80	.13	.20	.10
CFSM	.02	.06	1.64	1.45	2.26	1.44	2.18	5.83	.50	1.15	.38	.02
IN.	.03	.06	1.89	1.67	2.44	1.66	2.43	6.73	.56	1.33	.44	.02

CAL YR 1967 TOTAL 5,896.64 MEAN 16.2 MAX 261 MIN 0 CFSM 1.11 IN 15.02
WTR YR 1968 TOTAL 7,561.30 MEAN 20.7 MAX 1,130 MIN 0 CFSM 1.42 IN 19.26

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-02	0345	8.16	1,580	05-24	0330	11.10	3,390
04-04	0445	6.62	1,120	07-25	1415	9.09	2,000
05-11	1245	5.38	746				

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.--6.94 sq mi (revised).

Records available.--May 1952 to September 1968.

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

Average discharge.--16 years, 6.54 cfs.

Extremes.--Maximum discharge during year, 1,460 cfs May 24 (gage height, 6.96 ft); no flow for many days.

1952-68: Maximum discharge, 1,830 cfs June 12, 1957 (gage height, 7.62 ft), from rating curve extended above 290 cfs on basis of slope-area measurement of peak flow at gage height, 6.43 ft; no flow for many days.

Remarks.--Record good.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	1.3	2.1	2.8	130	.50	37	1.9	7.4	.20	40	.10
2	0	1.4	23	2.5	146	.50	21	1.6	5.9	.20	11	.10
3	0	1.3	22	2.2	45	.50	17	1.5	4.3	.10	5.9	0
4	0	1.4	7.3	1.8	20	.50	139	1.2	3.1	.10	4.3	.30
5	0	.80	4.4	1.6	14	.60	33	1.0	2.2	.10	2.8	.50
6	.10	.60	3.5	1.0	10	.60	19	.80	1.8	.10	2.1	.20
7	.10	.40	2.8	.70	7.3	.60	13	.70	1.3	.10	1.5	.10
8	.20	.30	2.2	.70	5.6	.60	9.4	.60	1.1	.10	1.1	.10
9	.10	.30	2.4	.70	4.5	.80	7.1	2.4	.90	0	1.0	.10
10	.10	.30	17	.70	3.5	.80	5.6	1.5	.70	0	1.0	.10
11	.10	.40	16	.70	2.8	.80	4.7	72	.60	0	.90	.10
12	.10	.50	19	.60	2.3	.90	4.3	32	.40	0	.60	0
13	.10	.40	10	.60	1.9	.90	3.7	13	.30	0	.60	0
14	.20	.40	15	.60	1.5	.90	5.2	7.4	.20	0	.80	0
15	.10	.40	13	.50	1.3	1.1	6.0	5.4	2.9	0	.70	0
16	.20	.30	7.9	.50	1.1	7.3	5.2	23	9.1	.10	.50	0
17	3.0	.40	7.9	.50	.90	7.3	5.6	21	2.8	0	.40	.80
18	.80	.30	15	.50	.90	5.2	6.2	22	1.8	0	.40	1.1
19	.40	.30	9.8	.50	.80	4.7	5.4	14	1.4	.20	.20	.60
20	.30	.30	7.0	.70	.70	9.8	30	9.0	1.0	.10	.20	.30
21	.20	.30	28	9.2	.70	28	20	6.2	.70	0	.20	.20
22	.10	.30	30	18	.60	24	13	4.7	.50	38	.10	.10
23	.10	.30	13	19	.60	16	9.8	251	.50	39	.10	.10
24	.30	.40	8.2	12	.60	22	6.5	366	.40	4.5	.10	.20
25	.60	.40	8.5	8.8	.60	45	4.9	57	1.0	157	.10	.30
26	.40	.40	7.9	6.3	.60	37	4.3	99	1.0	31	0	.20
27	.30	.30	6.6	5.7	.60	21	3.7	54	.60	21	.10	.10
28	.30	.30	5.2	7.9	.50	14	3.1	26	.60	13	0	.10
29	.20	.30	4.2	23	.50	12	2.6	18	.40	5.6	0	.10
30	.20	.20	3.5	122	-----	13	2.3	13	.20	3.1	0	.10
31	.50	-----	2.8	37	-----	29	-----	8.4	-----	6.4	0	-----
TOTAL	9.10	15.00	325.2	289.30	405.40	305.90	447.6	1,135.30	55.10	320.00	76.70	6.00
MEAN	.29	.50	10.5	9.33	14.0	9.87	14.9	36.6	1.84	10.3	2.47	.20
MAX	3.0	1.4	30	122	146	45	139	366	9.1	157	40	1.1
MIN	0	.20	2.1	.50	.50	.50	2.3	.60	.20	0	0	0
CFSM	.04	.07	1.51	1.34	2.01	1.42	2.15	5.28	.26	1.49	.36	.03
IN.	.05	.08	1.74	1.55	2.17	1.64	2.40	6.08	.30	1.71	.41	.03

CAL YR 1967 TOTAL 2,379.50 MEAN 6.52 MAX 100 MIN 0 CFSM .94 IN 12.75
WTR YR 1968 TOTAL 3,390.60 MEAN 9.26 MAX 366 MIN 0 CFSM 1.33 IN 18.17

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-30	0600	3.63	220	05-24	0100	6.96	1,460
02-01	2400	4.50	412	07-22	2230	5.28	640
04-04	0230	4.30	362	07-25	1200	5.40	670

WABASH RIVER BASIN

3-3554. Lake Lemon near Bloomington, Ind.

Location.--Lat 39°16'20", long 86°25'37", in NW¼SE¼ sec. 28, T. 10 N., R. 1 E., on left side of dam on Beanblossom Creek, 5 miles downstream from Bear Creek, and 5½ miles west of Trevlac.

Drainage area.--70.9 sq mi (revised).

Records available.--April 1953 to March 1958, October 1960 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 620.10 ft above mean sea level, datum of 1929.

Extremes.--Maximum contents during year, 20,470 acre-ft May 24 (elevation, 13.32 ft); minimum contents, 8,250 acre-ft Nov. 29 (elevation, 5.41 ft).
1953-58, 1960-68: Maximum contents, that of May 24, 1968; minimum contents, 5,390 acre-ft Mar. 3, 1964 (elevation, 2.50 ft).

Remarks.--Reservoir is formed by earth fill dam. Releases normally controlled by 42-inch diameter gate in 42-inch conduit. Capacity at uncontrolled spillway elevation (9.87 ft) is 14,420 acre-ft. Reservoir is used for flood control, low-flow augmentation, and recreation. Reservoir put in operation on April 15, 1953.

Cooperation.--Capacity tables furnished by Indiana Department of Natural Resources.

Month-end elevation and contents, water year October 1967 to September 1968

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	6.67	9,810	-
Oct. 31.....	6.01	8,310	-500
Nov. 30.....	5.46	8,290	-20
Dec. 31.....	9.76	14,230	+5,940
Calendar year 1967.....	-	-	-870
Jan. 31.....	10.60	15,660	+1,430
Feb. 29.....	9.81	14,320	-1,340
Mar. 31.....	10.43	15,370	+1,050
Apr. 30.....	10.07	14,760	-610
May 31.....	10.32	15,180	+420
June 30.....	9.85	14,380	-800
July 31.....	10.29	15,130	+750
Aug. 31.....	9.23	13,370	-1,760
Sept. 30.....	8.38	12,080	-1,290
Water year 1967-68	-	-	+2,270

WABASH RIVER BASIN

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3-3560. Beanblossom Creek at Dolan, Ind.

Location.--Lat 39°14'30", long 86°29'57", in SW¼ sec. 2, T. 9 N., R. 1 W., on downstream side of pier of highway bridge at Dolan, 5 3/4 miles northeast of Bloomington, and 17.5 miles upstream from mouth.

Drainage area.--100 sq mi.

Records available.--April 1946 to September 1968. 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.--22 years, 113 cfs.

Extremes.--Maximum discharge during year, 4,090 cfs May 25 (gage height, 15.73 ft); minimum, 11 cfs July 17 (gage height, 1.56 ft).
1946-68: Maximum discharge, 9,420 cfs June 2, 1947; maximum gage height, 17.9 ft Jan. 5, 1949; no flow at times during 1946-49, 1953.

Remarks.--Record good. Flow regulated by Lake Lemon (see sta. No. 3-3554).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	26	36	30	701	21	588	35	162	23	458	24
2	20	30	118	27	2,310	21	393	33	171	23	293	24
3	19	31	234	26	2,080	21	258	31	114	22	148	24
4	19	34	76	25	673	21	1,450	29	84	22	94	25
5	20	27	49	24	290	22	1,170	27	61	22	70	25
6	21	24	40	24	182	23	476	26	47	22	51	24
7	20	22	37	24	139	23	262	28	39	22	42	24
8	21	20	33	23	115	23	160	26	36	22	38	24
9	21	20	36	23	96	25	119	33	33	22	35	24
10	20	20	90	23	78	26	95	31	31	22	46	24
11	20	22	110	23	65	25	80	344	28	22	44	24
12	20	22	101	23	63	27	71	697	26	22	34	24
13	20	21	67	22	48	26	63	350	24	22	30	24
14	20	21	78	22	40	25	67	181	24	21	30	24
15	20	20	80	22	35	29	75	116	25	22	29	24
16	22	20	54	21	32	109	84	168	45	20	28	24
17	49	20	50	21	31	94	84	166	60	20	27	30
18	27	20	81	21	29	67	78	188	47	23	27	28
19	22	19	61	22	28	57	77	154	38	23	27	25
20	21	19	48	23	27	78	242	115	33	22	26	25
21	20	20	86	31	26	175	308	95	30	22	26	24
22	21	20	190	54	25	278	215	78	27	34	26	24
23	20	19	78	79	24	283	149	1,140	25	155	25	25
24	21	20	55	60	23	258	91	3,170	25	32	25	28
25	24	20	54	52	22	483	72	2,910	31	908	25	27
26	21	20	56	45	22	590	66	1,620	29	1,820	25	26
27	21	19	47	43	21	396	57	1,400	26	676	25	25
28	20	19	39	59	21	232	50	673	25	294	24	25
29	20	19	36	112	21	162	42	375	24	141	24	25
30	20	33	33	1,230	-----	165	37	286	24	80	24	25
31	21	-----	32	1,250	-----	216	-----	196	-----	158	24	-----
TOTAL	671	667	2,185	3,484	7,267	4,001	6,979	14,721	1,394	4,759	1,850	748
MEAN	21.6	22.2	70.5	112	251	129	233	475	46.5	154	59.7	24.9
MAX	49	34	234	1,250	2,310	590	1,450	3,170	171	1,820	458	30
MIN	19	19	32	21	21	21	37	26	24	20	24	24

CAL YR 1967 TOTAL 36,640 MEAN 100 MAX 1,320 MIN 15
WTR YR 1968 TOTAL 48,726 MEAN 133 MAX 3,170 MIN 19

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-02	2000	15.16	3,070	05-25	0200	15.73	4,090
04-04	1630	13.09	1,790	07-26	1245	13.65	1,980

WABASH RIVER BASIN

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.--2,988 sq mi (revised).

Records available.--July 1925 to September 1968. Monthly discharge only for some periods, published in WSP 1305. Prior to October 1948, published as West Fork White River at Spencer. Gage-height records collected since July 1925 are contained in reports of U.S. Weather Bureau.

Gage.--Digital water-stage recorder. Datum of gage is 526.04 ft above mean sea level, datum of 1929. Prior to Dec. 26, 1940, wire-weight gage, and Dec. 26, 1940 to Mar. 3, 1967, graphic water-stage recorder at same site and datum.

Average discharge.--43 years, 2,971 cfs, (unadjusted).

Extremes.--Maximum discharge during year, 42,000 cfs May 25 (gage height, 23.09 ft); minimum, 338 cfs Oct. 3 (gage height, 1.70 ft). 1925-68: Maximum discharge, 59,400 cfs May 15, 1933, Jan. 16, 1937 (gage height, 23.2 ft); minimum, 133 cfs Sept. 25, 30, 1941; minimum gage height, 0.88 ft Sept. 25, 30, Oct. 1, 1941. Maximum stage known, 28.5 ft Mar. 26, 1913, from floodmarks (discharge, 100,000 cfs, estimated).

Remarks.--Record good. Natural flow of stream affected by three reservoirs.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	362	589	771	2,700	20,400	1,570	5,460	1,600	8,230	1,910	3,150	790
2	350	763	1,260	2,380	23,700	1,540	5,750	1,510	7,380	1,650	3,100	785
3	342	929	5,260	2,180	29,600	1,490	4,680	1,430	6,010	1,470	1,910	778
4	350	888	6,610	2,090	32,200	1,440	10,200	1,350	6,660	1,330	1,520	765
5	354	951	5,860	1,900	27,400	1,420	15,900	1,300	5,990	1,230	1,580	763
6	454	825	5,960	1,730	22,900	1,400	18,900	1,250	4,770	1,140	1,470	805
7	751	739	4,840	1,660	15,500	1,380	15,600	1,200	4,010	1,070	1,390	761
8	673	690	4,060	1,520	8,910	1,360	11,100	1,140	3,490	1,020	1,490	716
9	582	624	3,660	1,410	6,900	1,370	7,200	1,210	3,120	995	1,480	681
10	727	583	3,640	1,370	5,810	1,400	5,560	1,620	2,810	967	2,170	661
11	565	587	5,750	1,380	4,910	1,390	4,600	2,190	2,550	939	2,830	659
12	491	632	7,080	1,360	4,260	1,420	3,970	4,400	2,310	934	3,100	642
13	476	710	8,490	1,350	3,680	1,470	3,520	3,320	2,100	934	3,560	635
14	470	647	8,210	1,350	3,370	1,490	3,240	2,560	1,060	943	3,050	617
15	497	623	7,230	1,380	3,170	1,420	3,330	2,150	1,820	869	2,310	603
16	460	577	5,780	1,350	2,970	2,540	3,290	4,130	3,110	893	2,160	584
17	770	564	4,670	1,280	2,790	3,490	3,140	4,600	3,140	939	3,180	839
18	1,910	571	4,430	1,220	2,570	3,810	3,020	3,260	2,250	937	2,400	838
19	1,460	591	4,360	1,200	2,380	4,110	2,840	3,170	1,900	1,260	2,040	806
20	927	543	3,980	1,240	2,250	4,180	3,150	2,740	1,700	1,160	1,800	749
21	749	538	3,930	1,400	2,150	4,670	3,930	2,430	1,550	1,010	1,630	666
22	633	567	7,170	2,320	2,030	5,290	3,410	2,160	1,420	974	1,470	635
23	554	557	11,300	3,370	1,920	5,040	3,060	6,910	1,340	2,260	1,320	604
24	524	564	13,000	4,000	1,840	4,920	2,740	24,900	1,300	1,730	1,200	604
25	605	554	14,300	3,600	1,780	6,040	2,430	40,100	1,560	2,080	1,080	699
26	683	615	11,200	3,150	1,720	6,820	2,240	32,700	2,100	3,290	984	760
27	597	574	6,380	2,720	1,680	6,790	2,110	24,400	2,860	3,140	930	682
28	531	532	4,860	2,640	1,630	6,500	1,940	22,300	3,030	3,380	897	648
29	518	521	4,000	3,740	1,600	5,740	1,790	18,900	2,800	2,160	861	617
30	487	586	3,430	10,500	-----	4,940	1,690	14,900	2,330	1,510	833	582
31	489	-----	3,070	15,900	-----	4,290	-----	11,400	-----	1,570	816	-----
TOTAL	19,341	19,234	184,541	85,390	242,020	100,730	159,790	247,180	96,500	45,694	57,711	20,974
MEAN	624	641	5,953	2,755	8,346	3,249	5,326	7,974	3,217	1,474	1,862	699
MAX	1,910	951	14,300	15,900	32,200	6,820	18,900	40,100	8,230	3,380	3,560	839
MIN	342	521	771	1,200	1,600	1,360	1,690	1,140	1,300	869	816	582
CFSM	.21	.21	1.99	.92	2.79	1.09	1.78	2.67	1.08	.49	.62	.23
IN.	.24	.24	2.30	1.06	3.01	1.25	1.09	3.08	1.20	.57	.72	.26

CAL YR 1967 TOTAL 985,013 MEAN 2,699 MAX 14,300 MIN 278 CFSM .90 IN 12.26
WTR YR 1968 TOTAL 1,279,105 MEAN 3,495 MAX 40,100 MIN 342 CFSM 1.17 IN 15.92

PEAK DISCHARGE (BASE, 11,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-25	1300	15.83	14,500	04-06	0700	17.77	19,500
02-04	0230	21.11	33,400	05-25	1615	23.09	42,000

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

Location.--Lat 39°32'11", long 86°58'35", in NW¼SE¼ sec. 28, T. 13 N., R. 5 W., on left bank at highway bridge, 1½ miles southwest of Reelsville, and 3 miles upstream from Mill Creek.

Drainage area.--326 sq mi (revised).

Records available.--July 1949 to September 1968. Published as Eel River near Reelsville, October 1952 to September 1956.

Gage.--Digital water-stage recorder. Datum of gage is 588.24 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Dec. 10, 1949, wire-weight gage, and Dec. 10, 1949 to Feb. 17, 1967, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 323 cfs.

Extremes.--Maximum discharge during year, 15,800 cfs May 24 (gage height, 17.07 ft); minimum, 6.8 cfs Oct. 4, 5 (gage height, 2.14 ft).

1949-68: Maximum discharge, 27,400 cfs (revised) June 28, 1957 (gage height, 18.63 ft), from rating curve extended above 18,000 cfs on basis of slope-conveyance method; minimum, 1.2 cfs Sept. 8, 1954 (gage height, 1.56 ft).

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.9	46	66	240	1,880	90	482	109	1,060	166	126	29
2	7.9	61	421	220	5,160	90	417	98	1,210	140	105	29
3	7.9	73	2,030	200	2,290	90	414	88	814	126	64	28
4	7.3	107	1,050	180	1,270	90	4,470	79	697	115	54	29
5	7.9	106	652	170	970	95	1,910	70	567	105	70	32
6	15	91	508	160	817	110	1,050	63	472	97	70	30
7	19	77	439	150	719	98	799	59	401	90	56	28
8	16	66	352	145	634	95	638	55	347	85	88	26
9	21	58	271	150	565	113	507	125	300	79	245	25
10	20	54	382	148	457	125	421	133	260	75	123	24
11	18	53	1,140	130	350	115	368	320	238	72	216	23
12	16	57	2,350	130	280	110	328	273	200	69	130	23
13	16	56	986	135	240	95	293	167	166	65	87	22
14	16	54	733	140	210	93	306	129	151	62	69	22
15	16	52	684	135	190	120	357	135	134	61	64	21
16	17	48	535	120	180	619	282	1,070	139	62	66	21
17	127	49	475	100	160	751	279	480	147	57	61	26
18	172	54	768	100	150	574	291	348	119	53	62	43
19	98	52	628	120	140	478	249	268	99	50	68	60
20	66	48	493	151	130	622	412	226	82	48	56	41
21	48	47	3,540	406	120	695	398	195	70	46	48	34
22	40	49	6,960	796	110	631	302	164	66	43	43	29
23	34	52	2,310	912	108	556	254	5,200	224	46	39	26
24	33	54	1,200	649	105	553	218	12,200	132	55	37	24
25	72	61	936	496	100	831	190	3,230	1,350	44	34	24
26	69	60	772	397	98	695	170	1,970	809	43	32	23
27	58	54	613	367	96	539	154	1,550	430	48	31	21
28	51	49	500	754	94	434	138	1,220	298	47	29	21
29	45	46	400	1,600	90	373	126	1,190	232	43	28	20
30	41	52	350	5,890	-----	345	118	1,150	196	40	27	19
31	41	-----	280	2,470	-----	326	-----	869	-----	42	27	-----
TOTAL	1,222.9	1,786	32,624	17,761	17,713	10,551	16,341	33,233	11,410	2,174	2,255	823
MEAN	39.4	59.5	1,059	573	611	340	545	1,072	380	70.1	72.7	27.4
MAX	172	107	6,960	5,890	5,160	831	4,470	12,200	1,350	160	245	60
MIN	7.3	46	66	100	90	90	118	55	66	40	27	19
CFSM	.12	.18	3.25	1.76	1.87	1.04	1.67	3.29	1.17	.22	.22	.08
IN.	.14	.20	3.74	2.03	2.02	1.20	1.86	3.79	1.30	.25	.26	.09

CAL YR 1967 TOTAL 110,908.3 MEAN 304 MAX 6,960 MIN 7.3 CFSM .93 IN 12.65
WTR YR 1968 TOTAL 148,093.9 MEAN 405 MAX 12,200 MIN 7.3 CFSM 1.24 IN 16.89

PEAK DISCHARGE (BASE, 2,800 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-12	0215	11.47	4,100	04-04	0915	13.77	6,180
01-30	0915	14.54	7,060	05-24	0900	17.07	15,800
02-02	0915	13.81	6,220				

3-3580. Mill Creek near Cataract, Ind.

Location.--Lat 39°26'00", long 86°45'48", in SE¼ sec. 32, T. 12 N., R. 3 W., on left bank at downstream side of bridge on State Highway 43, 3 miles east of Cataract.

Drainage area.--245 sq mi (revised).

Records available.--July 1949 to September 1968.

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.--19 years, 244 cfs.

Extremes.--Maximum discharge during year, 10,200 cfs May 24 (gage height, 21.54 ft); minimum daily discharge, 2.4 cfs Oct. 4.
1949-68: Maximum discharge, 11,400 cfs June 24, 1960 (gage height, 22.58 ft); minimum, 0.1 cfs Sept. 3, 6, 7, 28, 29, 1954.

Remarks.--Record poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.5	30	87	74	2,790	38	721	55	696	59	280	6.6
2	3.0	64	497	100	3,020	38	331	51	1,140	52	101	6.7
3	2.5	64	2,030	88	3,010	38	276	48	516	46	45	6.8
4	2.4	75	1,020	71	1,100	38	3,210	46	323	41	31	6.9
5	5.0	83	529	56	597	40	4,050	41	227	38	25	7.1
6	69	52	386	50	450	43	1,930	38	173	35	22	7.3
7	36	43	357	47	380	39	655	36	139	31	18	7.3
8	20	37	250	45	309	37	411	35	117	30	22	7.3
9	15	31	174	45	257	46	274	94	101	28	23	7.5
10	13	32	434	47	171	54	216	88	88	27	43	7.0
11	10	38	1,060	45	140	50	175	384	79	26	94	7.0
12	9.1	53	1,590	45	120	47	148	426	72	24	35	7.0
13	8.4	50	670	45	103	34	126	183	64	23	21	7.0
14	9.6	45	468	45	90	43	127	119	60	22	16	7.0
15	11	42	519	45	80	53	198	92	58	23	14	7.0
16	12	33	305	40	75	1,330	128	853	823	31	42	6.8
17	152	31	226	40	65	1,140	119	242	254	21	42	6.8
18	249	39	537	40	60	525	137	163	124	19	32	7.0
19	59	39	421	45	55	356	110	128	88	29	19	7.5
20	29	36	253	58	50	521	283	105	71	18	13	7.5
21	22	34	617	260	50	796	299	94	62	14	10	7.0
22	19	39	2,290	706	45	628	158	79	60	16	9.0	7.0
23	18	39	1,680	851	45	502	124	1,960	63	86	8.5	6.9
24	19	40	628	436	40	629	99	8,390	72	43	8.0	6.7
25	34	55	466	267	40	1,120	82	9,210	594	22	7.4	6.6
26	52	61	360	166	40	575	74	5,000	471	19	7.0	7.1
27	37	51	237	156	40	346	70	2,800	175	62	6.8	7.1
28	33	39	189	728	39	246	63	1,310	113	55	6.7	6.6
29	28	33	155	1,580	38	202	60	812	84	25	6.6	5.9
30	26	40	146	3,600	-----	250	59	881	68	16	6.6	5.4
31	26	-----	116	4,140	-----	210	-----	533	-----	20	6.6	-----
TOTAL	1,032.5	1,348	18,697	13,961	13,296	10,014	14,713	34,296	6,975	1,001	1,021.2	207.4
MEAN	33.3	44.9	603	450	458	323	490	1,106	233	32.3	32.9	6.91
MAX	249	83	2,290	4,140	3,020	1,330	4,050	9,210	1,140	86	280	7.5
MIN	2.4	30	87	40	38	34	59	35	58	14	6.6	5.4
CFSM	.14	.18	2.46	1.84	1.87	1.32	2.00	4.52	.95	.13	.13	.03
IN.	.16	.20	2.84	2.12	2.02	1.52	2.23	5.21	1.06	.15	.16	.03
CAL YR 1967	TOTAL	70,859.5	MEAN	194	MAX	2,290	MIN	2.4	CFSM	.79	IN	10.76
WTR YR 1968	TOTAL	116,562.1	MEAN	318	MAX	9,210	MIN	2.4	CFSM	1.30	IN	17.69

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-31	0800	16.2	4,340	05-24	2400	21.54	10,200
04-05	0900	15.92	4,280				

3-3589. Cagles Mill Reservoir near Manhattan, Ind.

Location.--Lat 39°29'14", long 86°55'02", in NW¼ sec. 13, T. 12 N., R. 5 W., in discharge tower of reservoir on Mill Creek, 1.5 miles upstream from Deer Creek, and 5 3/4 miles south of Manhattan.

Drainage area.--293 sq mi.

Records available.--July 1953 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 581.83 ft above mean sea level (levels by Corps of Engineers).

Extremes.--Maximum contents during year, 96,160 acre-ft June 4 (elevation, 669.01 ft); minimum contents, 26,780 acre-ft May 14 (elevation, 635.76 ft).
1953-68: Maximum contents, 129,300 acre-ft May 15, 1961 (elevation, 679.75 ft); minimum contents, 26,700 acre-ft, many times (elevation, 635.7 ft). Pool lowered to elevation 629.70 ft Jan. 5, 1955 (capacity, 19,090 acre-ft) during period of construction of recreational facilities.

Remarks.--Reservoir is formed by earth and rock fill dam. Releases normally controlled by three gates, 5 ft wide and 10 ft high, in 12 ft by 12 ft concrete lined tunnel 496 ft long through right abutment. Minimum design capacity is 27,110 acre-ft (elevation, 636 ft). Capacity at uncontrolled spillway elevation (704 ft) is 228,000 acre-ft. Reservoir is used for flood control and recreation. Reservoir put in operation on July 6, 1953.

Cooperation.--Records furnished by Corps of Engineers.

Month-end elevation and contents, water year October 1967 to September 1968

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	-	27,000	-
Oct. 31.....	-	27,440	+440
Nov. 30.....	-	27,410	-30
Dec. 31.....	-	37,650	+10,240
Calendar year 1967.....	-	-	-250
Jan. 31.....	-	49,690	+12,040
Feb. 29.....	-	27,230	-22,460
Mar. 31.....	-	27,480	+250
Apr. 30.....	-	27,300	-180
May 31.....	-	90,980	+63,680
June 30.....	-	27,370	-63,610
July 31.....	-	27,550	+180
Aug. 31.....	-	26,980	-570
Sept. 30.....	-	27,350	+370
Water year 1967-68	-	-	+350

WABASH RIVER BASIN

3-3590. Mill Creek near Manhattan, Ind.

Location.--Lat 39°29'22", long 86°55'50", in sec. 11, T. 12 N., R. 5 W., on left bank, 200 ft downstream from Cagles Mill, three-quarters of a mile downstream from Cagles Mill Reservoir, three-quarters of a mile upstream from Deer Creek, and 5 3/4 miles south of Manhattan.

Drainage area.--294 sq mi (revised).

Records available.--May to September 1931 (fragmentary), October 1938 to September 1968. 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.--30 years (1938-68), 282 cfs.

Extremes.--Maximum discharge during year, 2,710 cfs Feb. 15 (gage height, 8.11 ft); maximum gage height, 14.60 ft May 24 (back water from Deer Creek); minimum daily discharge, 1.5 cfs Oct. 1-6.

1931, 1938-68: Maximum discharge, 8,960 cfs Jan. 5, 1950 (gage height, 18.38 ft); no flow Aug. 7, 1953.

Remarks.--Record good. Flow regulated by Cagles Mill Reservoir (see sta. No. 3-3589).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	38	53	1,020	90	57	625	19	134	107	104	5.7
2	2.5	55	84	1,150	90	57	588	50	125	100	345	6.0
3	2.5	67	378	1,380	95	57	363	59	119	46	325	5.7
4	2.5	89	122	1,350	98	57	110	61	1,190	28	62	6.0
5	2.5	103	984	876	97	57	110	62	1,890	28	28	6.0
6	2.5	109	1,620	89	97	57	111	63	1,850	28	28	5.7
7	6.9	86	1,570	82	97	57	113	64	2,110	28	28	5.7
8	14	49	1,010	82	97	57	114	64	2,370	28	28	5.7
9	13	37	461	82	895	57	113	67	2,330	28	28	6.0
10	13	14	461	81	1,950	69	114	89	1,980	28	28	6.0
11	13	28	1,060	81	1,910	95	765	326	1,660	29	47	6.0
12	13	53	687	81	1,870	106	1,620	355	1,640	29	56	6.0
13	13	53	96	82	2,090	106	1,660	917	1,610	25	56	6.0
14	13	53	119	82	2,370	106	1,630	272	1,710	17	36	6.0
15	14	53	938	80	2,580	109	1,740	17	1,820	18	20	6.0
16	16	53	1,570	80	2,620	115	1,780	205	1,790	25	16	6.4
17	64	53	1,300	80	2,530	312	1,730	346	1,770	29	46	7.4
18	253	53	427	80	2,440	375	1,680	344	1,880	28	74	7.1
19	303	53	242	80	2,350	376	1,020	343	1,960	28	56	6.0
20	120	53	951	80	2,110	826	341	217	1,910	28	19	6.4
21	6.7	53	890	79	707	1,170	341	100	1,970	28	16	6.4
22	3.3	53	100	98	12	1,360	340	103	2,040	28	13	6.4
23	3.0	33	101	311	18	1,490	250	103	1,990	28	5.3	6.4
24	3.2	25	101	462	85	1,320	102	103	1,910	86	5.3	6.4
25	3.3	45	102	458	107	1,400	102	120	558	107	5.3	6.4
26	4.6	53	102	455	107	1,170	102	140	113	107	5.3	6.4
27	15	53	102	391	89	247	103	124	618	41	5.3	6.4
28	15	53	103	308	57	286	104	113	924	25	5.3	6.7
29	15	53	617	435	57	354	104	114	386	29	5.7	6.4
30	15	54	1,050	100	-----	354	53	113	107	29	5.7	6.0
31	19	-----	1,040	100	-----	355	-----	115	-----	53	5.3	-----
TOTAL	987.0	1,627	18,441	10,195	27,715	12,614	17,928	5,188	42,464	1,266	1,507.5	185.7
MEAN	31.8	54.2	595	329	956	407	598	167	1,415	40.8	48.6	6.19
MAX	303	109	1,620	1,380	2,620	1,490	1,780	917	2,370	107	345	7.4
MIN	2.5	14	53	70	12	57	53	17	107	17	5.3	5.7

CAL YR 1967 TOTAL 88,009.8 MEAN 241 MAX 2,150 MIN 2.2
 WTR YR 1968 TOTAL 140,118.2 MEAN 383 MAX 2,620 MIN 2.5

3-3595. Deer Creek near Putnamville, Ind.

Location.--Lat 39°34'04", long 86°52'00", in NW¼ sec. 16, T. 13 N., R. 4 W., on right bank on downstream side of new bridge on State Highway 243, 0.4 mile southwest of Putnamville, 0.4 mile downstream from small tributary from left, and 0.8 mile downstream from Limestone Creek.

Drainage area.--59.0 sq mi.

Records available.--October 1954 to September 1965, October 1967 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 628.00 ft above mean sea level, datum of 1929. Oct. 1, 1954 to July 3, 1957, wire-weight gage, July 4, 1957 to May 10, 1965, graphic water-stage recorder (January 1959 to July 1963 wire-weight gage used below 1.7 ft gage height), May 11, 1965 to Sept. 30, 1965, digital water-stage recorder on left upstream side of old bridge at datum 2.73 ft higher.

Average discharge.--12 years, 62.6 cfs.

Extremes.--Maximum discharge during year, 8,900 cfs May 24 (gage height, 15.18 ft); minimum discharge, 0.25 cfs Oct. 4. 1954-65, 1967-68: Maximum discharge, 10,700 cfs Mar. 4, 1963 (gage height, 12.95 ft datum then in use); no flow Oct. 1-10, 1954.

Remarks.--Record poor below 800 cfs, fair above.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.45	19	40	28	619	11	58	14	300	10	33	2.0
2	.50	40	602	25	911	11	44	11	225	8.3	10	2.6
3	.50	41	526	22	214	11	77	11	97	6.7	5.3	1.4
4	1.0	55	135	20	144	11	1,200	8.9	73	6.0	3.8	2.0
5	2.7	43	106	19	111	12	1,390	6.7	59	5.3	3.4	2.2
6	34	32	90	18	93	13	167	5.3	49	4.7	2.7	2.0
7	16	24	84	17	87	12	127	4.6	42	4.2	20	1.8
8	11	16	64	17	79	13	98	3.9	37	4.2	12	1.5
9	20	11	58	17	56	14	76	38	33	3.8	10	1.5
10	14	6.7	133	16	45	15	67	20	28	3.4	27	1.4
11	7.4	9.7	328	16	36	14	59	70	25	3.4	12	1.4
12	6.0	27	388	16	30	13	54	50	21	3.4	5.3	1.4
13	2.7	21	136	16	26	12	50	28	18	4.7	3.4	1.3
14	4.6	17	149	16	23	15	59	21	17	3.4	3.0	1.3
15	7.4	14	117	15	21	38	58	36	16	3.0	14	1.2
16	12	6.0	87	13	20	417	44	92	25	2.7	33	1.4
17	133	9.7	100	12	19	147	50	43	17	2.7	14	9.1
18	61	19	190	12	17	90	50	36	13	2.4	8.3	14
19	37	12	109	35	16	71	42	31	11	2.4	6.0	8.3
20	25	4.6	85	93	15	111	84	24	9.1	2.2	4.2	3.4
21	19	4.6	1,300	342	14	174	66	21	8.3	2.0	3.4	2.2
22	14	6.0	394	309	13	117	50	15	9.1	2.0	2.7	1.8
23	11	8.1	162	267	13	101	43	1,850	9.1	17	2.4	1.7
24	14	8.1	114	158	12	189	34	1,760	14	3.0	2.2	17
25	48	29	90	138	12	183	27	246	126	2.7	2.0	3.5
26	29	29	70	96	12	101	24	327	53	2.7	1.8	2.7
27	17	19	60	71	11	71	22	200	34	6.7	1.7	1.7
28	7.4	9.7	50	147	11	59	21	117	26	5.3	1.5	1.5
29	2.1	6.0	42	472	11	53	18	190	19	3.0	1.4	1.4
30	1.5	25	35	1,520	-----	47	17	133	13	2.2	1.4	1.4
31	2.1	-----	31	278	-----	50	-----	88	-----	10	1.4	-----
TOTAL	561.35	572.2	5,875	4,241	2,691	2,196	4,176	5,501.4	1,426.6	143.5	252.3	96.1
MEAN	18.1	19.1	190	137	92.8	70.8	139	177	47.6	4.63	8.14	3.20
MAX	133	55	1,300	1,520	911	417	1,390	1,850	300	17	33	17
MIN	.45	4.6	31	12	11	11	17	3.9	8.3	2.0	1.4	1.2
CFSM	.31	.32	3.21	2.32	1.57	1.20	2.36	3.01	.81	.08	.14	.05
IN.	.35	.36	3.70	2.67	1.70	1.38	2.63	3.47	.90	.09	.16	.06

CAL YR 1967 TOTAL 27,732.45 MEAN 75.8 MAX 1,850 MIN .45 CFSM 1.28 IN 17.48

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	1745	12.95	3,970	04-04	0300	13.52	4,470
01-30	0200	11.97	3,380	05-24	0215	15.18	8,900

WABASH RIVER BASIN

3-3600. Eel River at Bowling Green, Ind.

Location.--Lat 39°23'02", long 87°01'12", in NW¼ sec. 24, T. 11 N., R. 6 W., on left bank, 500 ft downstream from bridge on State Highway 46, at Bowling Green, and 0.5 mile downstream from Jordan Creek.

Drainage area.--830 sq mi (revised).

Records available.--January 1931 to September 1968. Prior to October 1934, published as "near Centerpoint."

Gage.--Digital water-stage recorder. Datum of gage is 548.02 ft above mean sea level, datum of 1929 (levels by Corps of Engineers). Jan. 30, 1931 to Nov. 27, 1934, chain gage at site 5½ miles downstream at datum 6.15 ft lower. Nov. 28, 1934 to Nov. 30, 1949, water-stage recorder at site 500 ft upstream from present site at datum 1 ft higher. Dec. 1, 1949 to Nov. 10, 1965, graphic water-stage recorder at present site and datum.

Average discharge.--37 years, 825 cfs.

Extremes.--Maximum discharge during year, 22,100 cfs May 24 (gage height, 21.52 ft); minimum, 26 cfs Oct. 3-5 (gage height, 1.06 ft). 1931-68: Maximum discharge, 34,000 cfs Jan. 4, 1950 (gage height, 23.53 ft); minimum, 11 cfs Oct. 7, 8, 1954 (gage height, 0.32 ft).

Maximum stage known, about 30.0 ft in 1875, present datum, from information by Corps of Engineers

Remarks.--Record good. Flow regulated by Cagles Mill Reservoir (see sta. No. 3-3589).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	101	171	1,460	3,480	308	1,520	283	1,540	412	246	59
2	27	143	605	1,450	7,040	301	1,500	271	2,900	367	382	61
3	27	164	4,000	1,780	5,840	289	1,110	276	1,550	306	530	58
4	26	211	8,000	1,740	2,540	275	6,810	263	1,580	251	194	59
5	28	237	6,000	1,550	1,790	276	5,740	250	2,760	233	131	62
6	35	229	700	530	1,440	280	2,080	238	2,620	219	134	61
7	37	239	1,700	440	1,270	275	1,450	229	2,570	206	123	57
8	46	155	1,600	395	1,140	267	1,160	221	2,900	189	127	55
9	58	141	700	380	1,360	280	931	363	2,830	175	337	53
10	57	111	1,400	363	2,690	302	797	354	2,670	168	227	51
11	51	103	2,500	353	2,600	316	874	910	2,200	160	242	50
12	48	133	5,000	340	2,510	322	2,170	999	2,120	154	235	49
13	48	141	2,070	335	2,550	312	2,300	833	2,070	150	178	47
14	51	138	1,310	338	2,820	297	2,270	1,220	2,050	141	150	46
15	54	133	1,590	335	2,980	324	2,420	299	2,240	142	122	45
16	55	130	2,550	318	3,070	1,790	2,440	990	2,230	138	168	45
17	159	130	2,440	295	3,000	1,710	2,390	1,110	2,190	139	139	59
18	435	133	2,080	305	2,890	1,360	2,370	838	2,180	134	152	76
19	420	133	1,490	300	2,800	1,140	2,110	742	2,300	130	154	86
20	315	130	1,310	313	2,710	1,820	1,160	668	2,240	126	121	81
21	122	127	3,470	428	1,690	2,720	1,190	413	2,220	122	105	66
22	88	125	8,670	1,070	455	2,580	942	369	2,340	122	98	59
23	74	125	5,320	1,390	391	2,650	827	4,550	2,400	132	90	55
24	69	106	2,260	1,370	393	2,590	550	17,100	2,340	143	85	52
25	94	120	1,510	1,040	413	2,930	494	6,930	2,880	189	81	52
26	130	144	1,260	919	396	2,790	459	4,380	1,960	178	76	51
27	111	139	979	930	382	1,460	433	2,900	1,070	183	70	47
28	103	131	846	1,390	343	921	408	2,200	1,510	135	64	45
29	94	125	945	2,890	328	1,040	387	1,790	1,130	123	62	44
30	85	141	1,600	8,160	-----	1,070	356	2,170	483	117	60	43
31	85	-----	1,570	6,000	-----	1,190	-----	1,500	-----	124	59	-----
TOTAL	3,060	4,288	75,646	38,907	61,311	34,185	49,648	55,659	64,073	5,508	4,942	1,674
MEAN	98.7	143	2,440	1,255	2,114	1,103	1,655	1,795	2,136	178	159	52.8
MAX	435	237	8,670	8,160	7,040	2,930	6,810	17,100	2,900	412	530	86
MIN	26	101	171	295	328	267	356	221	483	117	59	43
CFSM	.12	.17	2.94	1.51	2.55	1.33	1.99	2.16	2.57	.21	.19	.07
IN.	.14	.19	3.39	1.74	2.75	1.53	2.22	2.49	2.87	.25	.22	.08
CAL YR 1967	TOTAL 280,366	MEAN 768	MAX 8,670	MIN 26	CFSM .93	IN 12.56						
WTR YR 1968	TOTAL 398,901	MEAN 1,090	MAX 17,100	MIN 26	CFSM 1.31	IN 17.97						

WABASH RIVER BASIN

129

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, and at mile 118.0.

Drainage area.--4,688 sq mi (revised).

Records available.--September 1928 to September 1968. 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.--40 years, 4,490 cfs (unadjusted).

Extremes.--Maximum discharge during year, 67,200 cfs May 27 (gage height, 23.43 ft); minimum, 493 cfs Oct. 5 (gage height, 0.92 ft).
1928-68: Maximum discharge, 76,900 cfs May 21, 1943 (gage height, 24.19 ft); minimum, 193 cfs Oct. 1, 1941; minimum gage height, 0.29 ft Sept. 30, Oct. 7, 8, 1954.
Maximum stage since at least 1875, 27.5 ft Mar. 27, 1913, from floodmarks by State Highway Department of Indiana (discharge, 130,000 cfs, estimated).

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	526	818	1,510	5,080	22,200	2,360	10,800	2,730	20,300	3,470	3,250	1,110
2	519	910	2,010	4,630	29,900	2,320	9,900	2,570	14,900	2,980	3,900	1,070
3	506	1,120	5,670	4,310	36,700	2,250	8,680	2,420	12,800	2,680	3,630	1,050
4	500	1,330	9,110	4,300	36,600	2,190	13,500	2,320	11,000	2,460	2,900	1,050
5	500	1,360	8,890	4,140	38,000	2,130	20,000	2,200	9,760	2,250	2,370	1,050
6	513	1,390	7,400	3,870	35,900	2,110	22,500	2,100	9,600	2,090	2,160	1,030
7	526	1,290	7,910	3,060	30,700	2,080	25,100	2,000	8,460	1,960	2,000	1,060
8	790	1,170	7,080	2,640	25,500	2,060	24,100	1,930	7,450	1,850	2,080	1,010
9	818	1,110	6,110	2,410	16,700	2,060	18,400	2,020	6,970	1,770	2,180	959
10	741	1,010	5,120	2,380	10,200	2,130	10,900	2,370	6,510	1,710	2,350	909
11	825	985	6,060	2,340	9,090	2,190	7,660	3,940	6,020	1,650	3,400	877
12	762	1,020	10,200	2,290	8,100	2,270	6,410	6,890	5,300	1,590	3,370	862
13	685	1,040	12,200	2,270	7,160	2,290	6,470	6,260	4,880	1,550	3,490	842
14	671	1,090	12,800	2,240	6,480	2,270	6,300	4,730	4,620	1,580	3,870	829
15	650	1,040	12,100	2,230	6,330	2,410	6,120	4,290	4,460	1,550	3,300	805
16	671	993	10,100	2,220	6,210	6,550	6,180	3,840	4,580	1,450	2,710	794
17	925	963	8,960	2,140	6,090	8,700	6,110	5,850	5,720	1,420	2,820	916
18	1,410	940	9,710	2,060	5,790	7,020	6,070	6,150	5,430	1,440	3,190	1,310
19	2,060	925	9,090	2,010	5,440	6,240	5,840	4,950	4,720	1,440	2,700	1,280
20	1,930	940	7,190	2,000	5,170	7,680	7,700	4,520	4,500	1,660	2,420	1,160
21	1,500	918	6,640	2,140	4,930	10,400	8,380	3,990	4,280	1,590	2,210	1,080
22	1,200	914	11,400	2,760	4,270	10,800	6,610	3,500	4,100	1,450	2,010	972
23	1,000	930	13,500	4,360	3,150	10,200	5,450	6,870	4,050	1,720	1,850	917
24	895	925	15,900	5,520	2,840	9,630	4,770	19,800	4,050	3,000	1,710	897
25	881	927	18,300	5,700	2,710	10,800	4,130	32,300	4,380	2,390	1,580	851
26	918	917	19,100	4,920	2,640	11,200	3,720	52,800	5,320	3,070	1,460	908
27	985	961	16,200	4,400	2,570	11,000	3,460	64,700	4,980	3,690	1,350	965
28	940	943	9,600	4,730	2,510	9,710	3,260	50,600	4,410	3,970	1,270	902
29	853	893	6,690	6,470	2,440	8,340	3,060	38,100	4,720	3,650	1,220	855
30	818	1,150	5,600	12,500	-----	7,720	2,880	30,700	4,360	2,640	1,170	824
31	804	-----	5,530	18,300	-----	7,960	-----	25,600	-----	2,240	1,140	-----
TOTAL	27,322	30,922	287,680	130,420	376,320	177,070	274,460	403,040	202,630	67,960	75,060	29,144
MEAN	881	1,031	9,280	4,207	12,980	5,712	9,149	13,000	6,754	2,192	2,421	971
MAX	2,060	1,390	19,100	18,300	38,000	11,200	25,100	64,700	20,300	3,970	3,900	1,310
MIN	500	818	1,510	2,000	2,440	2,060	2,880	1,930	4,050	1,420	1,140	794
CFSM	.19	.22	1.98	.90	2.77	1.22	1.95	2.77	1.44	.47	.52	.21
IN.	.22	.25	2.28	1.03	2.99	1.40	2.18	3.20	1.61	.54	.60	.23
CAL YR 1967	TOTAL 1,549,366	MEAN 4,245	MAX 19,100	MIN 500	CFSM .91	IN 12.29						
WTR YR 1968	TOTAL 2,082,028	MEAN 5,689	MAX 64,700	MIN 500	CFSM 1.21	IN 16.52						

WABASH RIVER BASIN

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.--184 sq mi (revised).

Records available.--October 1950 to September 1968. 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.--18 years, 189 cfs.

Extremes.--Maximum discharge during year, 4,340 cfs May 24 (gage height, 9.66 ft); minimum, 37 cfs Oct. 1-4 (gage height, 1.33 ft). 1950-68: Maximum discharge, 12,900 cfs Mar. 4, 1963 (gage height, 14.62 ft, from floodmarks), from rating curve extended above 6,200 cfs; minimum, 16 cfs Sept. 18-20, 1955; minimum gage height, 1.19 ft Aug. 9, 1966.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	103	70	117	729	101	877	112	423	102	295	85
2	38	139	176	128	2,190	171	458	108	661	100	182	87
3	40	110	1,020	115	1,380	95	343	108	480	98	127	81
4	39	118	579	110	650	95	1,320	107	342	95	287	80
5	40	97	359	100	482	98	940	103	271	92	214	84
6	65	86	306	106	380	101	513	101	234	91	145	81
7	51	82	260	98	322	96	370	99	212	89	126	76
8	48	77	206	90	272	96	286	99	192	87	300	73
9	58	75	171	110	243	103	228	140	175	86	1,920	72
10	50	72	321	103	205	102	203	115	168	85	1,100	74
11	46	73	568	95	183	98	194	213	158	83	690	77
12	45	75	522	91	170	103	168	213	150	83	382	74
13	46	71	357	93	15	97	157	153	141	112	264	71
14	51	72	279	93	14	96	170	138	137	90	210	69
15	46	70	258	91	14	101	206	136	135	87	176	67
16	45	69	206	86	137	141	168	337	208	136	170	65
17	55	79	176	88	130	210	160	223	158	120	157	70
18	70	78	268	84	121	193	160	174	142	147	145	80
19	66	73	267	86	119	177	148	156	133	402	132	78
20	60	70	206	87	123	178	160	157	125	148	123	73
21	54	72	270	107	114	225	150	153	120	111	115	70
22	51	70	920	139	116	252	138	138	117	99	110	68
23	48	72	402	229	111	238	135	1,060	115	120	106	68
24	55	69	255	198	107	237	130	3,280	127	99	101	68
25	60	74	214	156	104	435	125	1,980	166	372	96	70
26	90	70	190	128	103	661	122	1,210	164	189	92	66
27	72	68	159	124	105	426	119	2,120	137	137	91	64
28	62	67	154	285	105	280	114	912	127	124	89	62
29	56	66	141	691	103	221	116	665	116	174	87	60
30	53	72	136	1,990	-----	184	114	552	108	96	86	58
31	71	-----	130	1,530	-----	215	-----	434	-----	96	84	-----
TOTAL	1,671	2,399	9,546	7,548	9,247	5,756	8,482	15,496	5,942	3,839	8,202	2,171
MEAN	53.9	79.6	308	243	319	186	283	507	198	124	265	72.4
MAX	90	139	1,020	1,990	2,190	661	1,320	3,280	661	472	1,920	87
MIN	38	66	70	84	103	95	114	99	108	83	84	58
CFSM	.29	.43	1.67	1.32	1.73	1.01	1.54	2.72	1.00	.67	1.44	.39
IN.	.34	.48	1.93	1.53	1.87	1.16	1.71	3.13	1.20	.78	1.66	.44

CAL YR 1967 TOTAL 69,929

MEAN 192

MAX 1,480

MIN 38

CFSM 1.04

IN 14.13

WTR YR 1968 TOTAL 80,282

MEAN 219

MAX 3,280

MIN 38

CFSM 1.19

IN 16.23

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-30	2030	7.84	2,560	05-27	0545	8.10	2,740
02-02	1700	8.01	2,660	08-09	0815	7.91	2,580
05-24	1515	9.66	4,340				

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.--421 sq mi (revised).

Records available.--September 1943 to September 1968. 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.--25 years, 453 cfs.

Extremes.--Maximum discharge during year, 11,500 cfs May 24 (gage height, 16.10 ft); minimum, 54 cfs Oct. 3-5 (gage height, 2.60 ft).

1943-68: Maximum discharge, 15,800 cfs Mar. 5, 1963 (gage height, 17.70 ft); minimum, 23 cfs Oct. 2, 1953.

Flood of March 1913 reached a stage of about 20.2 ft, from floodmarks.

Remarks.--Record good. Record of suspended sediment loads for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	58	119	109	238	3,540	197	1,240	207	1,190	235	2,380	146
2	57	166	186	240	4,100	199	1,150	202	1,410	214	1,220	146
3	55	179	1,180	253	5,330	192	757	197	1,350	200	612	139
4	55	158	1,560	224	2,700	185	1,830	194	1,070	187	435	135
5	55	157	815	197	1,560	187	2,980	187	786	178	581	138
6	69	137	597	210	1,180	193	1,520	180	616	171	385	141
7	81	124	515	197	959	188	1,000	176	526	164	323	133
8	80	117	437	180	794	182	739	175	461	157	358	127
9	71	111	365	191	682	190	571	211	408	153	1,650	122
10	82	107	456	185	559	200	476	257	367	148	3,520	121
11	74	106	1,590	185	435	193	423	346	340	143	2,530	125
12	70	106	1,470	177	424	196	381	721	315	139	1,040	126
13	69	107	1,170	179	408	196	349	507	200	144	672	122
14	70	103	780	188	344	183	350	386	273	151	521	120
15	74	103	749	185	325	186	428	361	200	137	428	117
16	71	100	616	162	312	226	378	719	534	131	374	113
17	87	106	501	159	303	390	344	783	449	182	345	120
18	106	112	558	176	291	413	338	590	342	178	312	126
19	102	110	707	167	267	367	312	471	296	481	274	135
20	89	107	576	168	261	351	324	415	267	413	253	127
21	84	104	559	179	247	420	344	385	246	254	232	117
22	79	105	2,000	241	251	553	299	353	234	208	216	112
23	75	104	1,540	409	248	546	280	3,000	239	606	202	109
24	84	106	808	466	230	530	266	10,200	1,490	397	101	110
25	93	104	603	375	214	872	249	8,100	910	766	179	105
26	134	107	540	326	207	1,420	238	5,220	700	844	169	103
27	104	103	433	282	203	1,140	229	4,960	492	485	162	97
28	98	100	385	437	203	758	218	4,510	381	391	157	93
29	93	99	340	1,210	202	579	212	2,520	314	295	151	89
30	89	109	317	3,740	-----	478	210	1,930	267	235	146	86
31	94	-----	294	5,040	-----	430	-----	1,480	-----	229	141	-----
TOTAL	2,502	3,476	22,756	16,566	26,869	12,340	18,435	49,943	16,753	8,706	20,150	3,600
MEAN	80.7	116	734	534	927	398	615	1,611	558	281	650	120
MAX	134	179	2,000	5,040	5,330	1,420	2,980	10,200	1,490	844	3,520	146
MIN	55	99	109	159	202	182	210	175	234	131	141	86
CFSM	.19	.28	1.74	1.27	2.20	.95	1.46	3.83	1.33	.67	1.54	.29
IN.	.22	.31	2.01	1.46	2.37	1.09	1.63	4.41	1.48	.77	1.78	.32

CAL YR 1967	TOTAL	155,891	MEAN	427	MAX	3,500	MIN	51	CFSM	1.01	IN	13.77
WTR YR 1968	TOTAL	202,105	MEAN	552	MAX	10,200	MIN	55	CFSM	1.31	IN	17.85

PEAK DISCHARGE (BASE, 3,400 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
01-31	1645	12.14	5,180	05-24	1200	16.10	11,500
02-03	0745	12.48	5,480	08-10	2400	10.92	4,240

WABASH RIVER BASIN

3-3616.5 Sugar Creek at New Palestine, Ind.

Location.--Lat 39°42'51", long 85°53'08", in SE¼SW¼ sec. 29, T. 15 N., R. 6 E., on left bank, 10 ft downstream from bridge on County Road 450 West, ½ mile south of New Palestine, 3 miles upstream from Little Sugar Creek and 37.3 miles above mouth.

Drainage area.--93.9 sq mi.

Records available.--October 1967 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 786.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 1,740 cfs Feb. 2 (gage height, 9.34 ft); minimum daily 4.2 cfs Oct. 5.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	14	11	36	1,090	23	343	37	205	26	33	24
2	5.0	18	30	35	1,530	23	329	35	236	23	39	24
3	4.7	18	312	33	1,500	23	230	33	331	21	43	23
4	4.5	15	368	30	910	22	796	32	256	19	40	21
5	4.2	18	256	28	396	22	790	30	178	18	46	21
6	6.0	16	153	28	288	22	582	28	135	17	70	20
7	7.0	15	120	26	236	22	301	27	109	16	51	19
8	6.2	14	95	24	170	22	222	26	92	15	59	17
9	7.8	13	75	29	130	22	171	35	80	14	107	16
10	8.0	12	272	28	105	24	135	34	70	14	411	16
11	7.4	12	514	25	86	24	112	68	62	13	409	16
12	7.0	13	513	23	80	24	96	83	55	13	275	16
13	7.2	13	381	23	70	23	85	76	49	12	167	15
14	7.2	12	239	23	60	22	87	58	45	11	110	14
15	6.7	12	171	22	53	22	130	55	41	11	83	13
16	6.6	11	128	21	50	38	114	66	44	12	261	13
17	11	12	98	20	45	73	92	59	44	12	356	13
18	15	12	99	19	37	99	83	63	42	10	205	14
19	21	12	106	19	38	91	74	52	38	10	137	15
20	18	12	96	19	38	86	79	49	34	9.2	96	15
21	11	12	121	21	35	100	83	46	31	8.8	73	14
22	9.0	11	309	31	32	116	73	41	28	8.8	59	14
23	8.6	11	327	74	30	120	65	328	27	115	50	21
24	8.6	11	164	81	29	124	59	851	27	77	44	18
25	9.5	11	108	72	28	199	53	687	30	47	40	17
26	9.6	11	85	56	27	245	48	762	40	32	36	14
27	9.2	10	67	49	26	231	45	624	40	46	31	14
28	9.7	10	56	118	25	174	42	497	37	34	26	13
29	9.6	9.8	53	342	24	134	39	385	33	23	24	12
30	9.3	11	46	967	-----	107	38	310	29	19	22	11
31	11	-----	37	1,010	-----	116	-----	241	-----	17	21	-----
TOTAL	270.1	385.8	5,410	3,332	7,168	2,393	5,396	5,718	2,468	723.8	3,424	493
MEAN	8.71	12.9	175	107	247	77.2	180	184	82.3	23.3	110	16.4
MAX	21	19	514	1,010	1,530	245	796	851	331	115	411	24
MIN	4.2	9.8	11	19	24	22	38	26	27	8.8	21	11
CFSM	.09	.14	1.86	1.14	2.63	.82	1.92	1.96	.88	.25	1.18	.18
IN.	.11	.15	2.14	1.32	2.84	.95	2.14	2.26	.98	.29	1.36	.20

CAL YR 1967 TOTAL
WTR YR 1968 TOTAL 37,181.7 MEAN 102 MAX 1,530 MIN 4.2 CFSM 1.08 IN 14.73

PEAK DISCHARGE (BASE, 950 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-30	1345	7.92	1,100	04-04	1230	7.69	1,010
02-02	0530	9.34	1,740	05-24	1045	7.55	958

WABASH RIVER BASIN

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3-3618.5 Buck Creek at Acton, Ind.

Location.--Lat 39°39'25", long 85°57'27", in SE¼ sec. 15, T. 14 N., R. 5 E., on left bank 30 ft downstream from McGregor Road Bridge, ½ mile east of Acton and 4.2 miles above mouth.

Drainage area.--78.8 sq mi.

Records available.--October 1967 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 757.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 2,880 cfs May 24 (gage height, 11.45 ft); minimum daily, 0.60 cfs Oct. 1, 4.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	.60	12	6.9	34	738	13	598	22	178	14	46	5.5	
2	.72	33	104	29	2,090	13	271	20	219	12	23	5.5	
3	.66	23	816	28	866	11	206	18	192	12	11	4.6	
4	.60	25	342	25	392	11	1,540	18	154	11	11	4.9	
5	.86	21	198	21	241	12	857	16	108	10	12	6.2	
6	4.6	12	142	19	177	17	333	14	83	9.0	9.0	6.2	
7	13	8.0	120	20	143	14	206	13	67	8.0	9.8	4.2	
8	11	5.8	94	16	113	11	142	13	57	7.6	29	3.9	
9	9.2	4.6	76	18	95	13	99	33	49	7.2	114	3.6	
10	12	3.9	386	20	71	14	79	26	43	6.9	290	3.3	
11	9.1	4.2	580	18	60	13	62	133	38	5.8	136	3.3	
12	7.7	8.0	424	17	50	14	54	158	34	6.2	77	3.3	
13	7.9	8.3	244	18	40	12	47	84	30	9.0	47	3.0	
14	8.3	7.2	190	19	35	11	65	60	28	6.5	33	3.0	
15	8.7	5.8	179	18	34	13	125	63	27	5.5	28	3.6	
16	11	4.9	127	15	32	37	74	238	51	5.2	175	3.6	
17	49	4.9	99	13	29	97	60	116	36	4.9	165	4.2	
18	54	5.8	137	13	26	78	54	87	28	4.9	112	5.5	
19	19	5.8	130	13	23	66	45	68	24	4.6	68	6.5	
20	8.7	5.2	100	14	24	68	70	66	21	3.9	42	5.5	
21	4.6	4.6	172	37	22	117	71	56	19	3.9	27	4.6	
22	3.3	4.6	514	85	20	137	51	46	19	3.6	19	4.9	
23	2.5	4.9	205	187	17	121	46	1,370	19	11	15	5.2	
24	2.0	5.2	120	118	15	143	41	2,490	28	17	12	12	
25	3.9	5.8	98	90	14	308	35	823	34	15	9.8	14	
26	6.9	7.6	87	60	14	247	31	664	45	9.8	8.3	8.3	
27	4.9	6.5	62	49	15	157	28	917	29	11	7.2	5.2	
28	3.6	4.9	54	188	14	117	25	396	22	15	6.5	4.6	
29	3.3	4.2	45	466	13	95	24	328	18	8.3	5.5	3.9	
30	2.5	5.5	40	1,690	-----	83	24	299	16	4.9	4.9	3.9	
31	3.6	-----	38	940	-----	119	-----	203	-----	5.2	4.6	-----	
TOTAL	277.74	262.2	5,929.9	4,298	5,423	2,182	5,363	8,858	1,716	258.9	1,557.6	156.0	
MEAN	8.96	8.74	191	139	187	70.4	179	286	57.2	8.35	50.2	5.20	
MAX	54	33	816	1,650	2,090	308	1,540	2,490	219	17	290	14	
MIN	.60	3.9	6.9	13	13	11	24	13	16	3.6	4.6	3.0	
CFSM	.11	.11	2.43	1.76	2.37	.89	2.27	3.63	.73	.11	.64	.07	
IN.	.13	.12	2.80	2.03	2.56	1.03	2.53	4.18	.81	.12	.74	.07	
CAL YR 1967	TOTAL			MEAN									
WTR YR 1968	TOTAL	36,282.34		MEAN	99.1	MAX	2,490	MIN	.60	CFSM	1.26	IN	17.12

PEAK DISCHARGE (BASE, 900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-03	1045	7.37	1,000	04-04	1530	10.30	2,190
01-30	1445	9.96	1,990	05-24	0545	11.45	2,880
02-02	0915	10.58	2,360	05-27	0215	8.03	1,220

WABASH RIVER BASIN

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.--107 sq mi (revised).

Records available.--October 1942 to September 1968. 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.--26 years, 107 cfs.

Extremes.--Maximum discharge during year, 9,290 cfs May 24 (gage height, 12.85 ft); minimum, 2.3 cfs Oct. 2, 3; (gage height, 0.81 ft).

1942-68: Maximum discharge, 10,700 cfs Jan. 27, 1952 (gage height, 13.4 ft); minimum, 0.4 cfs Sept. 14, 1954.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	11	28	48	685	29	122	27	267	20	624	6.2
2	2.7	18	168	54	3,180	28	113	25	221	20	293	6.2
3	3.0	18	856	45	1,390	27	99	23	181	20	147	6.2
4	3.2	17	448	47	506	25	636	22	150	19	100	6.8
5	3.3	15	265	40	366	26	485	21	123	19	73	10
6	8.8	12	179	40	286	27	255	19	107	19	49	8.2
7	6.8	9.9	136	33	239	27	174	18	91	19	39	7.4
8	5.9	8.3	97	30	189	25	116	18	78	15	41	5.6
9	12	7.3	78	27	156	27	71	25	69	19	36	4.4
10	6.9	6.9	255	26	110	28	53	28	62	18	54	5.0
11	5.8	6.7	579	24	89	28	46	96	54	17	34	5.0
12	4.6	9.6	527	23	78	28	40	155	46	16	27	5.0
13	4.0	9.0	361	22	70	28	34	84	40	15	21	5.0
14	5.3	9.3	278	22	63	26	39	56	37	13	23	5.0
15	5.3	8.5	284	22	61	26	49	95	36	14	19	4.4
16	4.1	7.9	182	22	59	71	36	540	680	10	16	4.4
17	22	8.7	122	22	53	134	34	321	321	9.6	17	8.9
18	24	9.7	140	22	45	95	34	240	181	9.6	15	15
19	12	8.9	150	23	45	77	33	161	129	26	10	15
20	6.5	9.4	130	25	46	75	64	102	96	21	10	10
21	4.1	11	130	77	43	163	62	69	77	13	11	8.2
22	3.2	11	550	177	40	205	47	52	62	11	9.6	7.4
23	3.1	12	550	289	36	184	43	1,530	54	29	8.9	5.6
24	4.0	13	220	144	34	214	39	6,260	138	17	8.9	5.6
25	6.9	15	140	92	32	432	36	1,740	138	39	7.4	8.9
26	6.2	14	110	69	32	345	33	1,130	152	113	6.8	6.8
27	6.2	13	90	61	31	218	31	1,090	82	52	6.8	6.8
28	6.2	12	72	100	30	152	28	582	46	57	6.2	6.8
29	5.2	11	65	255	30	113	27	448	31	34	5.6	6.2
30	4.6	17	58	1,390	-----	97	28	446	23	26	5.6	5.0
31	6.5	-----	54	1,270	-----	92	-----	345	-----	27	5.0	-----
TOTAL	205.5	340.1	7,302	4,541	8,024	3,072	2,907	15,808	3,772	761.2	1,729.6	211.0
MEAN	6.63	11.3	236	146	277	99.1	96.9	510	126	24.6	55.8	7.03
MAX	24	18	856	1,390	3,180	432	636	6,260	680	143	624	15
MIN	2.7	6.7	28	22	30	25	27	18	23	9.6	5.0	4.4
CFSM	.06	.11	2.20	1.37	2.59	.93	.91	4.77	1.18	.23	.52	.07
IN.	.07	.12	2.54	1.58	2.79	1.07	1.01	5.49	1.31	.26	.66	.07

CAL YR 1967 TOTAL 32,824.9 MEAN 89.9 MAX 1,010 MIN 2.2 CFSM .84 IN 11.41
WTR YR 1968 TOTAL 48,673.6 MEAN 133 MAX 6,260 MIN 2.7 CFSM 1.24 IN 16.92

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-02	1345	10.33	4,180	05-27	0330	6.91	1,310
05-24	1115	12.85	9,290				

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, 1½ miles upstream from confluence with Blue River, and 1½ miles northwest of Edinburg.

Drainage area.--474 sq mi (revised).

Records available.--October 1942 to September 1968. 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.--26 years, 475 cfs.

Extremes.--Maximum discharge during year, 19,900 cfs May 24 (gage height, 16.98 ft); minimum, 20 cfs Oct. 5, 6; minimum gage height, 3.58 ft Oct. 3-6.
1942-68: Maximum discharge, 27,600 cfs May 29, 1956 (gage height, 18.38 ft); minimum, 8.0 cfs Sept. 18, 1954 (gage height, 3.04 ft).

Remarks.--Record good. Record of suspended sediment loads for water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	51	80	257	4,780	149	700	178	1,380	213	1,320	100
2	24	61	266	250	6,300	146	1,200	169	1,350	187	982	55
3	22	78	1,480	249	9,590	140	900	161	1,310	174	541	57
4	21	84	1,780	220	5,250	132	1,500	152	1,290	158	384	47
5	20	76	1,200	200	2,640	134	3,200	144	1,000	147	307	107
6	29	74	876	200	1,510	138	2,720	135	808	134	259	102
7	33	66	686	160	1,180	138	1,520	129	681	128	240	56
8	29	60	572	140	962	131	1,030	125	590	121	283	92
9	36	54	467	160	802	135	757	143	520	115	290	88
10	38	51	608	170	655	143	594	182	460	110	857	86
11	35	52	2,010	160	540	142	500	300	410	105	1,330	85
12	33	56	2,200	140	520	146	430	867	370	102	929	81
13	34	52	1,730	140	445	144	381	610	330	98	832	79
14	34	54	1,280	140	355	135	369	441	305	95	483	77
15	32	54	1,180	140	328	133	484	449	295	95	365	76
16	31	51	918	125	308	183	491	1,530	1,400	90	386	71
17	52	52	714	120	278	362	417	1,230	978	86	781	80
18	70	54	748	125	227	424	382	900	635	85	708	100
19	98	52	865	125	233	390	338	697	490	105	501	55
20	86	55	707	120	239	369	371	554	400	108	373	84
21	51	56	725	218	204	487	452	468	330	89	291	80
22	43	56	1,970	388	200	717	383	395	295	82	236	76
23	40	56	1,720	619	185	690	331	2,660	270	109	202	72
24	40	58	1,070	629	175	695	297	13,900	395	131	173	68
25	46	61	765	540	172	1,280	262	13,100	415	238	150	76
26	45	61	665	491	163	1,390	238	5,940	535	361	135	76
27	41	60	533	301	162	1,070	221	5,010	450	242	125	72
28	42	58	441	442	159	811	204	4,020	355	224	117	67
29	42	56	373	1,110	156	640	190	2,580	290	205	108	62
30	40	67	334	3,200	-----	573	183	2,190	248	142	100	60
31	45	-----	302	5,140	-----	500	-----	1,730	-----	125	97	-----
TOTAL	1,253	1,776	29,265	16,419	38,718	12,667	21,045	61,089	18,585	4,406	13,665	2,501
MEAN	40.4	59.2	944	530	1,335	409	702	1,971	620	142	441	83.4
MAX	98	84	2,200	5,140	9,590	1,390	3,200	13,900	1,400	361	1,330	107
MIN	20	51	80	120	156	131	183	125	248	82	97	60
CFSM	.09	.12	1.99	1.12	2.82	.86	1.48	4.16	1.31	.30	.93	.18
IN.	.10	.14	2.30	1.29	3.04	.99	1.65	4.79	1.46	.35	1.07	.20
CAL YR 1967	TOTAL 146,997	MEAN 403	MAX 3,240	MIN 19	CFSM .85	IN 11.53						
WTR YR 1968	TOTAL 221,389	MEAN 605	MAX 13,900	MIN 20	CFSM 1.28	IN 17.37						

PEAK DISCHARGE (BASE, 4,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-03	0830	14.27	10,600	05-24	1745	16.98	19,900

3-3630. Driftwood River near Edinburg, Ind.

Location.--Lat 39°20'21", long 85°59'11", in sec. 4, T. 10 N., R. 5 E., on left bank just downstream from highway bridge, 0.8 mile downstream from confluence of Blue River and Sugar Creek and 1½ miles southwest of Edinburg.

Drainage area.--1,060 sq mi (revised).

Records available.--October 1940 to September 1968. 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.--28 years, 1,109 cfs.

Extremes.--Maximum discharge during year, 34,600 cfs May 24 (gage height, 16.61 ft); minimum, 110 cfs Oct. 4-6; minimum gage height, 1.57 ft Oct. 4, 5.

1940-68: Maximum discharge, 40,500 cfs Mar. 6, 1963 (gage height, 16.97 ft); minimum observed, 36 cfs Sept. 23, 1941.

Maximum stage known, 20.3 ft in March 1913, from information by local residents.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	206	270	790	9,900	502	1,750	512	3,470	701	3,010	338
2	116	253	502	751	10,400	495	2,930	495	3,200	637	3,400	330
3	115	344	2,200	758	14,900	477	2,250	477	3,260	588	1,740	323
4	111	362	3,490	674	11,400	456	3,320	458	3,110	544	1,280	316
5	112	338	2,710	589	6,180	453	5,700	441	2,440	507	1,160	325
6	134	324	1,970	608	3,660	460	5,670	418	1,940	478	1,060	317
7	144	293	1,620	511	2,930	459	3,350	401	1,770	459	896	306
8	151	265	1,390	451	2,390	440	2,340	389	1,410	437	942	291
9	160	245	1,180	490	1,990	446	1,750	430	1,270	418	1,130	279
10	157	231	1,270	488	1,680	465	1,420	514	1,150	402	3,080	272
11	157	227	3,350	476	1,560	463	1,220	690	1,060	384	4,770	271
12	150	228	4,190	461	1,390	471	1,080	1,480	975	369	3,930	268
13	149	221	3,620	459	1,140	465	974	1,380	902	353	2,080	266
14	150	220	2,780	461	1,000	441	930	1,050	845	360	1,470	260
15	145	215	2,450	456	931	432	1,090	941	828	346	1,210	253
16	150	209	2,060	398	883	507	1,130	2,350	2,080	332	1,110	243
17	206	211	1,710	390	830	775	982	2,420	1,720	327	1,370	253
18	234	216	1,650	407	737	957	924	1,880	1,270	369	1,250	292
19	314	217	1,900	393	711	919	863	1,520	1,050	513	1,040	288
20	259	221	1,740	383	729	878	889	1,250	911	788	643	280
21	211	219	1,660	477	662	1,010	977	1,090	819	575	726	265
22	190	216	3,370	692	617	1,360	887	973	761	461	638	252
23	177	214	4,090	1,040	611	1,410	796	4,160	725	632	574	244
24	175	217	2,780	1,220	601	1,400	738	20,200	1,180	917	520	246
25	179	223	1,970	1,040	572	2,100	682	26,700	1,590	1,050	474	255
26	189	217	1,710	904	548	2,670	638	15,200	1,480	1,560	437	249
27	204	217	1,460	784	540	2,550	604	11,800	1,260	1,170	409	245
28	188	211	1,240	925	532	1,970	569	10,400	1,030	978	386	234
29	179	206	1,090	1,970	522	1,570	539	7,880	885	832	366	225
30	173	244	989	5,340	-----	1,330	524	5,600	781	638	345	219
31	184	-----	927	8,920	-----	1,150	-----	4,370	-----	578	331	-----
TOTAL	5,280	7,230	63,338	33,706	80,546	29,481	47,516	127,869	45,172	18,703	41,947	8,205
MEAN	170	241	2,043	1,087	2,777	951	1,584	4,125	1,506	603	1,353	274
MAX	314	362	4,190	8,920	14,900	2,670	5,700	26,700	3,470	1,560	4,770	338
MIN	111	206	270	383	522	432	524	389	725	327	331	219
CFSM	.16	.23	1.93	1.03	2.62	.90	1.49	3.89	1.42	.57	1.28	.26
IN.	.19	.25	2.22	1.18	2.83	1.03	1.67	4.49	1.58	.66	1.47	.29

CAL YR 1967 TOTAL 397,525 MEAN 1,089 MAX 7,220 MIN 100 CFSM 1.03 IN 13.95
WTR YR 1968 TOTAL 508,993 MEAN 1,391 MAX 26,700 MIN 111 CFSM 1.31 IN 17.86

PEAK DISCHARGE (BASE, 7,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-03	1130	14.73	16,000	05-24	2245	16.61	34,600

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.--303 sq mi (revised).

Records available.--October 1930 to September 1968. 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.--38 years, 310 cfs.

Extremes.--Maximum discharge during year, 17,600 cfs May 24 (gage height, 12.37 ft); minimum, 4.6 cfs Oct. 5, 6 (gage height, 0.32 ft).
1930-68: Maximum discharge, 18,500 cfs Jan. 5, 1949; maximum recorded gage height, 12.37 ft May 24, 1968; minimum discharge, 0.5 cfs Aug. 7, 9, 1931.
Flood in March 1913 reached a stage of approximately 20.5 ft, from information by local residents.

Remarks.--Record good. Slight diversion occasionally by quarry above gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	43	39	225	2,130	98	455	130	756	200	3,150	56
2	6.4	73	310	210	2,040	95	575	124	754	178	1,170	55
3	6.1	73	1,460	190	1,740	92	481	120	713	162	613	54
4	5.1	66	1,040	177	1,470	90	1,290	117	614	146	414	50
5	4.7	60	757	165	865	89	1,440	111	469	136	438	48
6	9.9	51	559	155	675	95	1,140	105	380	126	360	47
7	17	44	509	148	572	88	679	100	322	117	300	45
8	18	40	449	140	490	83	514	97	280	115	340	42
9	19	36	364	133	421	91	390	130	250	115	571	39
10	18	34	370	126	361	101	318	144	225	107	711	38
11	17	34	530	120	310	98	275	506	206	96	690	39
12	15	35	833	115	280	101	240	794	190	85	501	39
13	15	34	732	110	250	96	214	551	174	79	340	38
14	15	33	625	107	220	86	220	380	160	88	465	36
15	14	32	603	103	200	92	255	313	160	109	220	34
16	15	31	518	100	185	172	224	419	1,760	96	192	32
17	22	33	426	100	170	327	209	663	850	71	178	33
18	24	34	511	100	160	329	206	552	470	89	164	52
19	25	34	572	100	150	287	192	439	315	387	147	54
20	22	31	511	105	140	265	234	369	241	515	125	43
21	20	30	1,070	130	135	368	246	328	203	250	115	36
22	18	31	2,690	246	130	483	210	297	183	204	104	33
23	18	31	1,310	468	125	476	194	3,130	197	879	96	45
24	19	31	827	420	120	462	182	12,100	3,320	348	90	47
25	25	31	569	330	115	668	167	6,270	1,240	1,520	63	37
26	28	31	529	250	112	1,000	158	3,060	997	1,480	76	31
27	28	31	415	200	108	902	153	2,580	622	800	70	25
28	26	29	348	318	102	648	142	2,080	426	571	66	27
29	26	28	301	590	100	494	134	1,670	309	350	63	25
30	23	38	276	2,600	-----	412	132	1,200	241	248	60	24
31	30	-----	241	2,240	-----	363	-----	922	-----	276	56	-----
TOTAL	555.6	1,162	20,294	10,521	13,876	9,051	11,269	39,801	17,027	9,943	11,774	1,212
MEAN	17.9	38.7	655	339	478	292	376	1,284	568	321	380	40.4
MAX	30	73	2,690	2,600	2,130	1,000	1,440	12,100	3,320	1,520	3,150	56
MIN	4.7	28	39	100	100	83	132	97	160	71	56	24
CFSM	.06	.13	2.16	1.12	1.58	.96	1.24	4.24	1.87	1.06	1.25	.13
IN.	.07	.14	2.49	1.29	1.70	1.11	1.38	4.89	2.09	1.22	1.45	.15

CAL YR 1967 TOTAL 108,623.7 MEAN 298 MAX 2,690 MIN 4.0 CFSM .98 IN 13.33
WTR YR 1968 TOTAL 146,485.6 MEAN 400 MAX 12,100 MIN 4.7 CFSM 1.32 IN 17.98

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	0015	5.37	3,920	06-24	0600	6.58	5,730
01-30	1245	4.88	3,300	07-25	2300	4.53	2,790
05-24	1545	12.37	17,600	08-01	0530	6.53	5,650

WABASH RIVER BASIN

3-3639. Flatrock River at Columbus, Ind.

Location.--Lat 39°14'06", long 85°55'36", in SW¼ sec. 12, T. 9 N., R. 5 E., on left bank at downstream side of U.S. Highway 31 (bypass) bridge, ¼ mile northwest of Columbus city limits, and 2.6 miles upstream from mouth.

Drainage area.--534 sq mi.

Records available.--October 1967 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 610.14 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 20,000 cfs May 25 (gage height, 15.87 ft from inside high-water mark); minimum daily, 22 cfs Oct. 5.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	60	96	420	3,900	296	616	258	1,730	543	3,020	148
2	24	65	133	375	3,920	299	784	250	1,560	472	6,830	140
3	23	78	1,160	350	3,980	286	757	235	1,440	425	2,150	137
4	23	92	1,940	325	2,920	285	1,490	225	1,350	388	1,400	136
5	22	100	1,150	310	2,070	284	2,730	215	1,110	359	1,060	135
6	23	95	799	300	1,550	283	2,130	210	946	334	953	130
7	23	88	616	300	1,300	283	1,450	205	833	313	769	125
8	34	86	586	260	1,090	277	1,060	210	736	294	783	122
9	40	84	529	250	900	274	790	270	655	285	743	118
10	48	82	482	240	740	281	621	330	588	275	1,160	114
11	43	80	1,020	235	577	285	548	620	538	307	1,090	112
12	39	80	1,340	230	500	288	498	1,650	494	266	941	110
13	41	80	1,420	225	450	288	463	1,100	454	259	732	108
14	38	78	1,100	220	430	278	442	800	419	229	589	108
15	35	76	1,110	220	410	274	482	680	400	221	507	104
16	35	74	920	200	390	292	468	900	1,410	248	442	100
17	46	73	692	200	370	430	435	1,230	2,140	230	398	103
18	42	72	690	200	360	512	423	1,020	1,160	208	363	110
19	45	74	955	200	350	489	407	880	810	355	332	116
20	48	77	830	210	340	466	408	760	635	633	299	122
21	46	80	741	220	330	499	480	680	531	574	275	113
22	45	79	3,140	282	331	722	438	620	471	386	253	106
23	42	78	3,280	520	336	767	398	2,200	437	663	233	101
24	43	79	1,880	579	334	731	375	9,000	2,200	1,000	218	104
25	43	79	1,220	508	325	1,040	354	16,000	3,460	1,180	203	108
26	43	79	1,020	419	314	1,570	333	8,950	2,340	2,870	186	104
27	46	78	815	375	319	1,550	318	7,610	1,580	1,880	177	97
28	48	76	630	371	312	1,200	300	5,210	1,090	1,330	168	94
29	48	76	536	628	305	861	284	3,600	827	921	161	91
30	45	87	488	2,380	-----	711	270	2,670	656	657	155	87
31	52	-----	456	4,890	-----	595	-----	2,120	-----	528	149	-----
TOTAL	1,197	2,385	31,774	16,442	29,453	16,696	20,552	70,708	33,000	18,655	26,741	3,403
MEAN	38.6	79.5	1,025	530	1,016	539	685	2,281	1,100	602	863	113
MAX	52	100	3,280	4,890	3,980	1,570	2,730	16,000	3,460	2,870	6,830	148
MIN	22	60	96	200	305	274	270	205	400	208	149	87
CFSM	.07	.15	1.92	.99	1.90	1.01	1.28	4.27	2.06	1.13	1.62	.21
IN.	.08	.17	2.21	1.15	2.05	1.16	1.43	4.92	2.30	1.30	1.86	.24

CAL YR 1967 TOTAL MEAN MAX MIN CFSM IN
WTR YR 1968 TOTAL 271,006 MEAN 740 MAX 16,000 MIN 22 CFSM 1.39 IN 18.87

PEAK DISCHARGE (BASE, 3,500 CFS)

NOTE.--No gage-height record May 2-25.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	2315	10.32	5,050	05-25	----	15.87	20,000
01-31	0945	11.07	6,280	06-25	0145	10.32	5,050
02-03	0115	10.39	5,150				

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 New Creek.

Drainage area.--1,707 sq mi (revised).

Records available.--October 1947 to September 1968. Prior to January 1948 monthly discharge only, published in WSP 1305.

Gage.--Digital water-stage recorder above concrete control. Datum of gage is 603.12 ft above mean sea level, datum of 1929. Prior to Oct. 22, 1952, wire-weight gage, 600 ft upstream at same datum. Oct. 22, 1952 to Mar. 24, 1967, graphic water-stage recorder at present site and datum

Average discharge.--21 years, 1,803 cfs.

Extremes.--Maximum discharge during year, 48,500 cfs May 25 (gage height, 14.99 ft); minimum, 155 cfs Oct. 5 (gage height, 1.11 ft). 1947-68: Maximum discharge, 52,300 cfs Mar. 6, 1963 (gage height, 16.23 ft); minimum, 87 cfs Sept. 29, Oct. 7, 1954.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	266	364	1,160	14,300	733	2,400	858	5,070	952	4,700	567
2	169	289	676	1,050	15,700	737	3,850	833	4,500	858	9,960	544
3	169	337	2,950	980	17,900	710	3,410	808	4,390	791	4,180	530
4	163	394	5,240	930	17,900	694	5,250	779	4,190	807	2,090	526
5	161	378	4,300	860	11,000	686	7,880	749	3,460	829	2,090	520
6	171	369	3,090	900	5,700	693	8,610	721	2,780	792	1,940	498
7	187	351	2,420	760	4,370	686	5,590	689	2,310	772	1,570	481
8	193	333	2,060	660	3,590	674	3,870	665	1,980	765	1,540	463
9	198	318	1,740	720	3,010	673	2,930	743	1,740	718	1,570	447
10	207	306	1,640	720	2,530	696	2,300	789	1,520	709	3,210	435
11	200	309	3,770	700	2,100	706	1,940	2,100	1,370	709	4,880	428
12	193	299	5,540	680	1,770	722	1,700	2,970	1,240	659	4,900	421
13	196	305	5,250	680	1,500	711	1,520	2,760	1,130	637	3,000	418
14	196	301	4,190	680	1,400	684	1,480	1,960	1,040	607	2,150	411
15	186	296	3,730	680	1,300	675	1,630	1,520	1,030	595	1,720	401
16	187	290	3,190	600	1,180	774	1,690	2,710	3,010	597	1,490	392
17	245	292	2,580	600	1,100	1,090	1,490	3,630	3,930	571	1,590	398
18	266	296	2,460	620	1,030	1,410	1,400	3,080	2,050	654	1,640	406
19	286	297	2,890	600	960	1,390	1,310	2,600	1,450	791	1,360	409
20	295	304	2,700	580	960	1,350	1,600	2,150	1,160	1,220	1,170	406
21	263	309	2,960	736	900	1,720	1,690	1,830	992	1,130	1,050	389
22	241	305	6,600	1,010	870	2,230	1,500	1,610	873	859	955	371
23	229	303	7,690	1,630	840	2,360	1,320	5,200	791	1,270	886	355
24	233	305	4,950	1,850	820	2,340	1,200	21,100	2,080	1,790	838	356
25	232	310	3,370	1,600	800	3,340	1,100	44,700	4,850	3,700	780	361
26	230	310	2,840	1,450	784	4,510	1,050	29,800	3,030	5,450	730	354
27	256	307	2,360	1,200	782	4,430	998	20,400	2,290	3,530	680	346
28	251	302	1,920	1,180	770	3,530	953	16,000	1,670	2,530	648	339
29	241	297	1,640	2,370	757	2,740	908	12,600	1,330	1,840	620	330
30	233	338	1,450	7,150	-----	2,350	877	8,860	1,100	1,360	597	324
31	247	-----	1,330	12,500	-----	2,040	-----	6,330	-----	1,140	572	-----
TOTAL	6,698	9,416	97,890	47,836	116,623	48,084	73,446	201,544	68,356	39,632	65,706	12,630
MEAN	216	314	3,158	1,543	4,021	1,551	2,448	6,501	2,279	1,278	2,120	421
MAX	295	394	7,690	12,500	17,900	4,510	8,610	44,700	5,070	5,450	9,960	567
MIN	161	266	364	580	757	673	877	665	791	571	572	324
CFSM	.13	.18	1.85	.90	2.36	.91	1.43	3.81	1.33	.75	1.24	.25
IN.	.15	.21	2.13	1.04	2.54	1.05	1.60	4.39	1.49	.86	1.43	.28

CAL YR 1967 TOTAL 597,928 MEAN 1,638 MAX 10,400 MIN 140 CFSM .96 IN 13.03
WTR YR 1968 TOTAL 787,861 MEAN 2,153 MAX 44,700 MIN 161 CFSM 1.26 IN 17.16

PEAK DISCHARGE (BASE, 10,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-04	0100	9.08	19,400	08-02	0915	6.08	11,700
05-25	1145	14.99	48,500				

WABASH RIVER BASIN

3-3642. New Creek near Clifford, Ind.

Location.--Lat 39°15'00", long 85°51'22", in NW 1/4 sec. 34, T. 10 N., R. 6 E., on left bank, 20 ft downstream from County Road 450 North bridge, 1.2 miles southeast of Clifford, 5.8 miles northeast of Columbus, and 7.4 miles upstream from mouth.

Drainage area.--47.5 sq mi.

Records available.--August 1967 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 643.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 2,560 cfs May 24 (gage height, 13.9 ft from floodmark); no flow for parts of many days in October as the result of irrigation.
1967-68: Maximum discharge, 2,560 cfs May 24, 1968 (gage height, 13.9 ft from floodmark); no flow for parts of many days as the result of irrigation.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	2.2	15	31	177	14	88	15	95	29	460	6.4
2	1.2	4.0	141	28	552	15	65	13	93	27	133	6.0
3	1.1	3.6	169	25	175	12	54	12	74	24	91	5.4
4	1.1	3.4	83	22	108	13	590	12	60	21	72	5.4
5	1.1	3.3	52	20	81	13	186	12	48	19	65	5.7
6	.99	2.8	39	18	66	13	116	11	41	16	43	5.4
7	.74	2.5	33	16	58	12	86	10	37	14	197	5.0
8	1.2	2.4	28	15	48	11	65	10	32	14	109	4.3
9	0	2.1	24	14	41	12	49	16	28	17	54	4.3
10	.14	1.9	58	14	33	13	42	15	25	14	42	4.0
11	.46	2.1	110	13	31	12	39	157	22	14	34	4.0
12	.50	2.7	122	13	27	13	34	172	20	16	27	4.0
13	.86	2.6	75	13	23	14	31	99	16	47	25	3.6
14	.80	2.5	66	13	22	12	33	65	15	21	24	3.6
15	.80	2.4	76	13	22	13	46	49	14	16	23	3.4
16	1.2	2.2	55	14	21	49	35	47	205	14	20	3.4
17	2.1	2.2	45	15	20	54	32	42	61	11	19	3.0
18	.48	2.2	81	16	18	39	31	40	36	74	16	4.3
19	.59	2.2	68	17	17	31	27	36	26	215	14	5.0
20	.56	2.3	51	19	16	31	46	30	20	56	12	4.3
21	.46	2.5	428	27	16	98	45	26	16	33	12	3.6
22	.54	2.6	788	71	15	96	34	23	16	26	10	3.4
23	.77	3.0	180	81	14	94	31	659	47	114	9.4	3.0
24	.77	3.1	106	45	13	136	27	2,140	346	40	8.4	3.0
25	0	3.4	83	37	13	263	23	459	180	880	8.0	3.0
26	.51	3.4	80	26	12	152	22	700	123	347	7.2	3.0
27	0	3.5	64	25	12	119	21	923	73	191	6.8	3.0
28	.22	3.4	51	46	12	94	19	254	54	126	6.4	3.0
29	.65	3.1	46	76	13	55	17	176	42	78	6.0	3.0
30	.80	8.6	42	682	-----	62	15	147	33	55	6.0	3.0
31	.95	-----	38	239	-----	60	-----	111	-----	48	5.7	-----
TOTAL	22.48	88.2	3,297	1,704	1,676	1,625	1,949	6,481	1,898	2,617	1,565.9	121.5
MEAN	.73	2.94	106	55.0	57.8	52.4	65.0	209	63.3	84.4	50.5	4.05
MAX	2.1	8.6	788	682	552	263	590	2,140	346	880	460	6.4
MIN	0	1.9	15	13	12	11	15	10	14	11	5.7	3.0
CFSM	.02	.06	2.24	1.16	1.22	1.10	1.37	4.40	1.33	1.78	1.06	.09
IN.	.02	.07	2.58	1.33	1.31	1.27	1.53	5.07	1.49	2.05	1.23	.10

CAL YR 1967 TOTAL 23,045.08 MEAN 63.0 MAX 2,140 MIN 0 CFSM 1.33 IN 18.04

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	2400	11.2	1,530	05-24	0700	11.2	2,560
01-30	1030	8.95	1,030	05-26	2200	13.1	2,200
02-02	0700	8.85	1,010	06-24	0130	7.66	785
04-04	1000	8.50	945	07-25	1545	11.25	1,540

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.--91.4 sq mi (revised).

Records available.--February 1948 to September 1968.

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.--20 years, 98.1 cfs.

Extremes.--Maximum discharge during year, 6,840 cfs May 24 (gage height, 11.79 ft); no flow for many days.
1948-68: Maximum discharge, 11,300 cfs Jan. 21, 1959 (gage height, 14.29 ft); no flow at times most years.
Flood in 1913 reached a stage of 25.1 ft, from floodmarks.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	31	49	327	21	159	25	179	40	2,620	4.2
2	0	1.6	202	46	620	22	135	23	247	34	430	4.0
3	0	14	860	42	319	18	118	22	201	31	196	3.5
4	0	22	297	39	205	18	755	21	164	27	138	4.0
5	0	20	178	36	161	21	378	19	118	23	101	4.1
6	0	18	134	33	134	22	223	18	93	20	73	3.5
7	0	16	109	31	119	20	170	16	78	18	125	3.0
8	0	13	89	29	100	18	134	15	67	18	82	2.3
9	0	9.8	72	28	86	20	104	21	59	24	63	2.0
10	0	7.4	93	27	61	24	87	42	52	39	47	2.0
11	0	8.2	147	26	63	23	75	350	46	19	40	2.4
12	0	8.2	224	25	54	25	66	609	42	32	33	2.0
13	0	7.4	179	24	44	23	60	253	37	67	29	1.8
14	0	7.4	151	24	38	21	70	168	34	28	37	1.7
15	0	7.4	186	23	35	23	91	121	33	31	36	1.7
16	0	9.8	136	24	32	103	72	657	221	20	30	1.4
17	0	11	108	25	29	169	63	303	137	15	29	1.3
18	0	9.8	179	27	27	123	61	234	75	19	25	2.4
19	0	9.0	183	29	25	102	53	173	55	146	22	3.0
20	0	9.8	135	33	24	98	71	133	44	61	18	2.8
21	0	13	525	75	23	198	87	108	37	31	16	2.2
22	0	13	1,660	219	22	221	62	88	35	32	14	1.9
23	0	12	334	295	21	201	54	1,830	667	182	12	1.7
24	0	11	189	150	20	218	47	4,450	1,270	82	11	1.7
25	0	12	151	73	19	328	41	779	377	1,330	9.0	1.6
26	0	12	156	61	19	428	37	664	231	924	7.5	3.7
27	0	11	116	47	19	257	36	826	132	264	6.3	2.4
28	0	11	96	78	19	174	31	396	92	226	5.4	1.8
29	0	11	76	166	20	146	29	276	67	122	4.9	1.2
30	0	21	69	1,150	-----	146	28	302	51	79	4.5	1.0
31	0	-----	57	517	-----	126	-----	210	-----	71	4.1	-----
TOTAL	0	336.8	7,122	3,451	2,685	3,357	3,397	13,152	4,941	4,055	4,268.7	72.3
MEAN	0	11.2	230	111	92.6	108	113	424	165	131	138	2.41
MAX	0	22	1,660	1,150	620	428	755	4,450	1,270	1,330	2,620	4.2
MIN	0	0	31	23	19	18	28	15	33	15	4.1	1.0
CFSM	0	.12	2.51	1.22	1.01	1.18	1.24	4.64	1.80	1.43	1.51	.03
IN.	0	.14	2.90	1.40	1.09	1.37	1.38	5.35	2.01	1.65	1.74	.03

CAL YR 1967 TOTAL 30,948.48 MEAN 84.8 MAX 1,660 MIN 0 CFSM .93 IN 12.59
WTR YR 1968 TOTAL 46,837.80 MEAN 128 MAX 4,450 MIN 0 CFSM 1.40 IN 19.06

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-22	1230	6.74	2,250	06-23	2145	9.99	4,670
01-30	1215	5.53	1,560	07-25	1300	6.47	2,090
05-24	0215	11.79	6,840	08-01	1500	9.23	3,990

WABASH RIVER BASIN

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 Wyalosing Creek, and 16 miles upstream from mouth.

Drainage area.--155 sq mi (revised).

Records available.--February 1948 to September 1968.

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.--20 years, 167 cfs.

Extremes.--Maximum discharge during year, 16,600 cfs May 24 (gage height, 20.08 ft); minimum, 0.09 cfs Oct. 1-3 (gage height, 0.74 ft).
1948-68: Maximum discharge, 19,900 cfs Jan. 21, 1959 (gage height, 21.70 ft inside, 22.20 ft outside), from rating curve extended above 6,500 cfs on basis of contracted-opening measurement of peak flow; no flow many times.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.11	8.0	88	75	404	25	1,030	44	263	21	494	6.3
2	.11	10	524	54	764	25	376	40	705	15	585	6.0
3	.11	66	1,630	48	436	22	257	37	353	11	236	5.5
4	.14	51	423	42	249	21	2,360	34	316	9.4	179	5.3
5	.20	36	222	37	200	22	773	32	200	7.9	444	5.7
6	.28	35	160	34	165	28	370	28	147	6.2	125	5.5
7	.25	25	126	31	143	26	260	25	117	5.4	88	6.7
8	.37	17	108	29	126	23	197	23	99	6.4	279	6.1
9	.51	13	89	28	107	22	152	188	86	9.9	148	5.1
10	.60	11	92	29	89	29	121	88	75	6.4	147	4.7
11	1.1	12	181	30	72	35	107	883	65	5.4	92	5.9
12	1.6	14	581	31	63	37	94	951	56	9.0	71	6.3
13	1.8	17	330	32	54	39	85	366	49	13	52	7.4
14	2.6	28	284	33	51	35	108	223	42	14	44	6.5
15	2.6	22	358	32	46	35	291	157	36	33	43	5.1
16	2.8	17	210	27	43	71	159	704	42	123	68	4.3
17	4.1	15	159	26	39	200	118	330	72	56	69	4.0
18	4.1	14	671	25	36	131	109	235	60	26	46	4.2
19	3.9	12	417	26	34	104	96	196	44	27	36	4.2
20	3.9	12	233	30	32	108	147	151	39	108	30	4.0
21	8.0	14	348	49	31	708	204	123	29	65	26	3.5
22	6.2	13	1,660	306	29	643	117	104	25	32	24	4.3
23	5.6	13	486	297	28	476	97	2,120	26	306	19	4.8
24	5.3	14	243	186	26	592	87	11,100	32	227	17	4.1
25	5.8	15	176	109	25	923	73	1,300	159	1,020	14	3.6
26	5.3	14	150	83	24	866	64	1,220	152	910	12	3.4
27	4.5	14	132	72	24	434	61	1,940	90	443	10	3.1
28	12	13	114	74	24	269	58	713	64	348	8.9	3.6
29	8.0	12	96	134	24	203	50	492	43	185	7.5	5.4
30	8.0	58	86	1,560	-----	509	46	645	30	115	6.6	3.9
31	7.0	-----	78	858	-----	878	-----	341	-----	90	6.0	-----
TOTAL	106.88	615.0	10,455	4,427	3,388	7,541	8,067	24,833	3,516	4,254.0	3,427.0	148.5
MEAN	3.45	20.5	337	143	117	243	269	801	117	137	111	4.55
MAX	12	66	1,660	1,560	764	923	2,360	11,100	705	1,020	585	7.4
MIN	.11	8.0	78	25	24	21	46	23	25	5.4	6.0	3.1
CFSM	.02	.13	2.18	.92	.75	1.57	1.73	5.17	.76	.89	.71	.63
IN.	.03	.15	2.51	1.06	.81	1.61	1.94	5.96	.84	1.02	.82	.64

CAL YR 1967 TOTAL 55,761.50 MEAN 153 MAX 2,980 MIN 0 CFSM .99 IN 13.38
WTR YR 1968 TOTAL 70,778.38 MEAN 193 MAX 11,100 MIN .11 CFSM 1.25 IN 16.98

PEAK DISCHARGE (BASE, 2,900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-30	1245	9.26	3,110	05-24	0845	20.08	16,600
04-04	1215	10.94	4,260	07-25	2045	9.40	3,010

3-3655. East Fork White River at Seymour, Ind.

Location.--Lat 38°58'57", long 85°53'57", in NW 1/4 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.--2,341 sq mi (revised).

Records available.--October 1927 to September 1968. 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.--41 years, 2,363 cfs.

Extremes.--Maximum discharge during year, 60,200 cfs May 24 (gage height, 18.93 ft); minimum, 196 cfs Oct. 4 (gage height, 0.37 ft). 1923-68: Maximum discharge, 78,500 cfs Jan. 5, 1949 (gage height, 19.67 ft).

1927-68: Minimum, 84 cfs Sept. 15, 1941.

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

Remarks.--Record good. Some regulation of low flow by Seymour Water Co. at dam above station. Records of water temperatures and suspended sediment loads for the water year 1968 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	211	326	659	1,920	15,500	1,160	5,400	1,210	8,790	1,790	2,300	731
2	212	338	940	1,700	17,800	1,140	4,690	1,160	8,000	1,580	7,820	728
3	213	360	5,080	1,690	21,100	1,120	4,780	1,120	7,320	1,430	10,600	709
4	211	450	6,220	1,640	21,500	1,080	6,650	1,080	6,490	1,320	5,320	695
5	215	483	5,980	1,400	19,800	1,060	12,100	1,030	5,730	1,230	3,650	690
6	220	473	4,680	1,370	12,200	1,050	10,700	985	4,630	1,150	2,850	674
7	221	466	3,560	1,320	7,160	1,040	9,820	949	3,840	1,090	2,410	658
8	236	440	2,980	1,130	5,610	1,040	6,760	924	3,300	1,050	2,490	637
9	254	417	2,580	1,180	4,660	1,020	4,920	1,080	2,880	1,020	2,400	621
10	255	396	2,280	1,200	3,930	1,020	3,840	1,250	2,540	987	2,680	597
11	254	397	3,150	1,160	3,270	1,040	3,190	1,950	2,290	1,000	3,990	585
12	257	395	5,230	1,130	2,800	1,080	2,780	6,020	2,090	982	5,110	569
13	254	375	6,490	1,120	2,550	1,100	2,470	5,360	1,890	944	4,520	553
14	260	380	5,990	1,100	2,340	1,060	2,290	3,800	1,710	996	2,960	545
15	250	371	5,420	1,090	2,150	1,060	2,710	2,880	1,590	898	2,410	529
16	249	367	4,750	1,070	2,020	1,240	2,790	2,870	1,780	943	2,070	521
17	291	367	3,900	995	1,910	1,770	2,480	5,110	4,170	957	1,870	513
18	317	363	3,960	984	1,760	2,130	2,270	4,610	3,720	866	1,910	509
19	315	358	4,410	984	1,610	2,150	2,130	3,950	2,630	1,100	1,800	525
20	344	358	4,030	965	1,420	2,100	2,150	3,240	2,110	1,400	1,580	529
21	342	370	3,600	978	1,280	3,020	2,650	2,720	1,790	1,530	1,410	533
22	313	374	7,130	1,530	1,300	4,120	2,400	2,380	1,580	1,290	1,280	529
23	296	372	11,200	2,380	1,380	4,150	2,070	3,480	1,490	1,220	1,180	525
24	298	370	9,380	2,600	1,350	3,920	1,850	28,300	2,420	2,140	1,090	505
25	311	377	6,110	2,320	1,320	5,450	1,680	55,200	6,080	2,240	1,040	497
26	292	378	4,510	2,010	1,260	6,470	1,550	44,500	5,800	7,810	975	489
27	296	380	3,870	1,800	1,240	6,370	1,470	32,600	4,430	8,200	914	481
28	309	378	3,210	1,640	1,220	5,380	1,390	25,400	3,260	5,150	857	481
29	300	371	2,740	2,140	1,200	4,180	1,320	18,700	2,530	3,430	815	473
30	295	486	2,410	5,000	-----	3,700	1,250	15,500	2,090	2,430	778	461
31	306	-----	2,190	12,100	-----	3,510	-----	11,400	-----	1,920	752	-----
TOTAL	8,397	11,736	138,639	59,646	162,640	75,730	112,550	290,758	108,970	60,093	81,831	17,092
MEAN	271	391	4,472	1,924	5,608	2,443	3,752	9,379	3,632	1,938	2,640	570
MAX	344	486	11,200	12,100	21,500	6,470	12,100	55,200	8,790	8,200	10,600	731
MIN	211	326	659	965	1,200	1,020	1,250	924	1,490	866	752	461
CFSM	.12	.17	1.91	.82	2.40	1.04	1.60	4.01	1.55	.83	1.13	.24
IN.	.13	.19	2.20	.95	2.58	1.20	1.79	4.62	1.73	.95	1.30	.27
CAL YR 1967	TOTAL	839,684	MEAN	2,301	MAX	15,400	MIN	211	CFSM	.98	IN	13.34
WTR YR 1968	TOTAL	1,128,082	MEAN	3,082	MAX	55,200	MIN	211	CFSM	1.32	IN	17.92

PEAK DISCHARGE (BASE, 12,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-04	2030	16.05	22,300	05-24	2315	18.93	60,200
04-05	0615	13.72	13,000				

WABASH RIVER BASIN

3-3660. Graham Creek near Vernon, Ind.

Location.--Lat 38°55'47", long 85°33'45", in SE¼ sec. 30, T. 6 N., R. 9 E., on right bank 10 ft upstream from State Highway 7, 4.7 miles southeast of Vernon, and 8.0 miles downstream from Little Graham Creek.

Drainage area.--77.2 sq mi (revised).

Records available.--June 1955 to September 1968.

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.--13 years, 89.0 cfs.

Extremes.--Maximum discharge during year, 16,300 cfs May 24 (gage height, 19.98 ft); minimum, no flow Oct. 6-8, 11, 12. 1955-68: Maximum discharge, 18,600 cfs June 23, 1960 (gage height, 21.37 ft) from rating curve extended above 6,000 cfs on basis of contracted-opening measurements of peak flow; no flow at times during most years.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.65	119	19	148	5.0	1,690	23	65	3.1	6.8	.90
2	.03	.97	253	15	495	5.0	220	20	75	2.0	5.9	.90
3	.02	1.0	514	12	210	4.9	123	17	51	2.1	4.8	.90
4	.02	1.1	105	10	85	4.5	1,510	15	36	1.8	4.0	1.0
5	.02	1.1	57	8.0	60	4.5	370	12	28	1.7	9.0	1.3
6	0	1.5	45	7.0	49	4.8	134	11	22	1.6	5.6	1.2
7	0	1.4	38	5.6	42	5.1	92	9.6	18	1.4	2.5	1.1
8	0	1.3	33	5.0	37	5.3	73	8.6	16	4.8	1.4	1.1
9	.02	1.1	28	4.5	34	5.3	57	1,980	12	1.7	1.4	1.3
10	.01	1.0	30	5.0	28	6.1	46	563	11	1.8	181	1.4
11	0	1.5	95	6.0	23	8.1	40	2,320	10	2.0	711	1.3
12	0	1.9	271	6.8	19	16	34	850	7.4	1.6	76	1.3
13	.01	1.8	126	7.5	15	23	30	167	5.9	1.4	37	1.3
14	.06	2.1	119	8.6	13	23	34	90	4.8	1.4	27	1.2
15	.04	2.8	261	8.8	11	28	187	104	4.6	2.0	167	1.1
16	.02	2.5	95	7.2	11	46	85	389	4.8	2.1	43	1.1
17	.12	2.5	63	6.0	10	96	58	162	4.8	2.0	70	1.2
18	.11	2.3	396	5.6	9.0	55	66	129	5.0	1.8	37	1.5
19	.10	2.0	217	5.7	7.4	43	56	128	4.6	7.5	20	1.7
20	.10	1.9	85	6.2	6.6	40	192	67	3.9	4.4	6.8	1.6
21	.09	2.2	103	9.0	6.0	892	181	47	3.6	1.9	5.3	1.6
22	.11	2.3	974	39	5.6	763	77	36	3.4	6.4	3.9	1.4
23	.13	2.6	158	108	5.2	409	316	1,240	4.3	5.6	3.1	1.5
24	.21	2.5	74	75	5.2	335	551	8,420	12	3.6	2.4	1.4
25	.33	3.0	56	51	5.1	845	118	563	8.8	126	1.6	1.3
26	.31	3.7	52	38	4.9	656	71	1,150	8.8	5.9	1.6	1.2
27	.33	5.0	43	30	4.8	209	55	1,660	6.8	32	1.2	1.2
28	.29	4.6	38	36	5.0	117	44	297	4.8	38	1.1	1.1
29	.28	4.4	32	93	5.0	84	34	138	4.1	15	1.0	1.0
30	.31	4.9	27	1,060	-----	143	29	423	3.6	8.8	.90	.82
31	.35	-----	24	480	-----	748	-----	114	-----	6.8	.82	-----
TOTAL	3.45	111.72	4,531	2,198.5	1,359.8	5,629.6	6,573	21,153.2	450.0	478.1	1,630.02	36.92
MEAN	.11	3.72	146	70.9	46.9	182	219	682	15.0	15.4	52.6	1.23
MAX	.35	4.9	974	1,080	495	892	1,690	8,420	75	126	711	1.7
MIN	0	.65	24	4.5	4.8	4.5	29	8.6	3.4	1.4	.82	.82
CFSM	.001	.05	1.89	.92	.61	2.35	2.84	8.84	.19	.20	.68	.62
IN.	.002	.05	2.18	1.06	.66	2.71	3.17	10.2	.22	.23	.79	.62

CAL YR 1967 TOTAL 27,235.59 MEAN 74.6 MAX 2,110 MIN 0 CFSM .97 IN 13.12
WTR YR 1968 TOTAL 44,155.31 MEAN 121 MAX 8,420 MIN 0 CFSM 1.56 IN 21.27

PEAK DISCHARGE (BASE, 2,300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
04-01	0045	10.08	4,000	05-24	1145	19.98	16,300
05-09	1500	10.79	4,420	05-26	2345	8.04	2,720
05-11	1615	10.92	4,510				

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Location.--Lat 38°46'55", long 85°29'08", in SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 14, T. 4 N., R. 9 E., attached to left downstream wingwall of bridge on County Road 533 West, $\frac{1}{4}$ mile west of Smyrna, 3.7 miles upstream from Big Creek, and 4 miles northwest of Madison.

Remarks.--Record good.

[illegible]

WABASH RIVER BASIN

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.--293 sq mi (revised).

Records available.--November 1947 to September 1968.

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.--20 years (1948-68), 339 cfs.

Extremes.--Maximum discharge during year, 26,300 cfs May 24 (gage height, 27.05 ft); minimum, 0.10 cfs Oct. 5; minimum gage height, 0.40 ft Oct. 4, 5.

1947-68: 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.--Record good. Record of suspended sediment loads for water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.21	6.1	251	91	720	24	4,620	120	452	16	130	7.8
2	.21	12	353	76	1,160	25	1,120	100	401	15	83	7.5
3	.23	16	1,030	62	1,030	23	571	86	342	15	44	7.5
4	.19	17	491	55	493	23	3,770	78	257	12	33	8.0
5	.16	15	263	50	352	23	2,240	63	199	9.2	43	163
6	.37	12	178	47	281	24	694	52	162	7.6	67	187
7	.44	9.8	139	44	237	24	463	44	136	6.4	72	39
8	.69	8.6	109	41	205	23	365	39	117	5.6	111	19
9	.81	7.5	91	39	175	25	294	1,240	100	5.9	58	14
10	.76	6.7	88	37	142	30	241	2,660	85	20	154	12
11	.69	7.7	204	35	108	46	207	3,460	66	47	643	11
12	.64	11	697	33	99	153	178	4,840	59	15	390	10
13	.61	14	544	31	83	267	155	838	47	8.2	168	9.1
14	.59	16	464	32	69	194	166	453	39	0.5	270	6.1
15	.43	13	858	32	67	181	568	350	33	8.5	377	7.2
16	.52	10	520	32	60	218	428	633	40	17	305	6.3
17	1.8	9.6	334	32	58	386	288	677	48	10	100	6.3
18	2.1	9.2	904	33	46	321	353	468	35	263	139	7.3
19	1.1	8.2	915	34	42	230	310	593	27	2,000	104	8.8
20	.68	8.3	466	36	46	206	629	385	22	288	05	11
21	.55	9.4	455	49	36	2,530	824	261	19	155	40	10
22	.48	9.8	2,290	148	33	2,670	401	199	17	89	28	8.0
23	.55	11	927	406	30	1,670	341	2,110	54	52	25	7.1
24	.64	12	446	440	29	1,210	1,020	16,300	510	31	22	6.6
25	1.6	14	330	305	29	2,170	485	6,490	200	23	18	6.4
26	1.9	15	287	223	26	1,910	299	3,980	162	536	15	6.0
27	2.7	15	246	171	27	889	274	5,950	79	256	13	5.4
28	3.9	13	197	161	25	524	221	1,550	50	152	11	5.0
29	3.2	12	160	334	25	394	171	957	35	112	7.4	4.7
30	3.0	62	132	1,940	-----	382	142	1,190	24	64	9.1	4.4
31	3.6	-----	120	2,050	-----	1,020	-----	703	-----	59	8.3	-----
TOTAL	35.35	390.9	14,489	7,099	5,733	17,815	21,838	56,869	3,820	4,308.9	3,846.8	613.5
MEAN	1.14	13.0	467	229	198	575	728	1,834	127	139	124	20.5
MAX	3.9	62	2,290	2,050	1,160	2,670	4,620	16,300	510	2,000	843	187
MIN	.16	6.1	88	31	25	23	142	39	17	5.6	8.3	4.4
CFSM	.004	.04	1.60	.78	.67	1.96	2.48	6.26	.43	.47	.42	.07
IN.	.004	.05	1.84	.90	.73	2.26	2.77	7.22	.48	.55	.49	.08
CAL YR 1967	TOTAL	90,494.26	MEAN	248	MAX	6,720	MIN	.14	CFSM	.85	IN	11.49
WTR YR 1968	TOTAL	136,858.45	MEAN	374	MAX	16,300	MIN	.16	CFSM	1.28	IN	17.37

PEAK DISCHARGE (BASE, 7,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
05-12	0015	19.91	9,360	05-27	0400	19.18	8,190
05-24	1845	27.05	26,300				

3-3670. Muscatatuck River near Austin, Ind.

Location.--Lat 38°46'13", long 85°49'21", in SW $\frac{1}{4}$ 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.--359 sq mi (revised).

Records available.--August 1932 to September 1968 (high-water records only since October 1943).

Average discharge.--10 years (1932-35, 1936-43), 387 cfs.

Gage.--Water-stage recorder. Datum of gage is 513.96 ft above mean sea level, datum of 1929. Prior to June 22, 1934, chain gage at same site and datum. Nov. 8 to Dec. 30, 1939, staff gage approximately half mile upstream at different datum. Aug. 1, 1940, to Sept. 30, 1943, auxiliary gage (for low flows) at Slate-Ford bridge $2\frac{1}{4}$ miles upstream at different datum.

Extremes.--Maximum discharge during year, 22,200 May 25 (gage height, 25.68 ft).
1932-68: Maximum discharge, 53,900 cfs Jan. 22, 1959 (gage height, 29.20 ft).

Remarks.--Record poor. Daily discharge not computed when gage height is below 13.0 ft.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER TO SEPTEMBER												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1					1,490		2,740					
2					1,020		4,130					
3			792		1,180		1,450					
4			700		650		1,580					
5							4,000					
6							2,400					
7							790					
8												
9												
10								2,040				
11								2,010				
12			690					4,570				
13			660					4,500				
14			650					1,220				
15			730									
16			670									
17												
18			733									
19			833									
20			650									
21						1,070	796					
22			1,290			2,870						
23			1,490			1,360		690				
24			680			2,330	714	4,060				
25						2,260		17,200				
26						2,610		5,920				
27						1,840		5,720				
28						903		6,000				
29								2,610				
30				921	-----			1,720				
31	-----			2,350	-----	680	-----	1,050	-----			-----

PEAK DISCHARGE (BASE, 5,000 CFS)

DATE	TIME	G. HT.	DISCHARGE	DATE	TIME	G. HT.	DISCHARGE
04-02	0630	20.34	5,020	05-25	0530	25.68	22,200
05-12	2115	21.36	6,820				

WABASH RIVER BASIN

3-3680. Brush Creek near Nebraska, Ind.

Location.--Lat 39°04'13", long 85°29'10", in NE¼ sec. 11, T. 7 N., R. 9 E., on right bank at downstream side of county road bridge, 1.5 miles northwest of Nebraska, 2.9 miles northeast of Butlerville, and 3.6 miles upstream from Brush Creek Dam.

Drainage area.--11.4 sq mi (revised).

Records available.--May 1955 to September 1968.

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.--13 years, 12.6 cfs.

Extremes.--Maximum discharge during year, 3,440 cfs May 24 (gage height, 11.40 ft); no flow for many days.
1955-68: Maximum discharge, 3,440 cfs May 24, 1968 (gage height, 11.40 ft), from rating curve extended above 440 cfs on basis of contracted-opening measurement of peak flow at gage height, 9.70 ft; no flow at times in most years.

Remarks.--Record good. Record of suspended sediment loads for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	10	1.3	22	.90	66	3.3	26	.20	2.8	0
2	0	0	79	1.1	43	.90	24	1.9	20	.20	.80	0
3	0	.10	31	.80	14	.90	19	1.6	8.8	.20	.40	0
4	0	.10	15	.60	8.4	1.0	310	1.4	5.4	.20	68	0
5	0	.10	10	.50	6.5	1.1	31	1.1	3.5	.20	38	.20
6	0	.20	8.0	.50	5.2	1.4	21	.90	2.9	.10	2.4	.20
7	0	.20	7.0	.40	4.9	1.1	17	.70	2.4	.10	1.4	.10
8	0	.10	5.0	.40	4.2	1.2	14	.70	2.1	.10	2.6	0
9	0	.10	4.0	.60	3.5	1.9	11	88	1.6	.10	1.1	0
10	0	.10	10	.80	2.8	2.2	10	13	1.2	.10	19	.30
11	0	.10	38	.70	1.9	2.1	9.4	285	1.0	.10	3.3	.30
12	0	.20	40	.60	1.7	3.3	8.1	49	.90	0	1.2	.10
13	0	.20	17	.60	1.5	2.9	7.8	14	.80	0	.80	.10
14	0	.20	31	.60	1.4	2.9	16	8.1	.70	0	.70	0
15	0	.30	20	.70	1.3	4.4	17	4.9	.70	0	.60	0
16	0	.30	12	.80	1.1	12	11	53	6.4	0	1.9	0
17	0	.20	16	.90	1.0	9.1	10	8.1	1.4	0	.90	0
18	0	.20	63	.90	.90	5.9	11	8.8	.80	0	.50	0
19	0	.20	16	.80	.90	4.9	9.4	5.7	.70	0	.30	0
20	0	.10	10	.80	.90	8.4	25	3.5	.60	0	.20	0
21	0	.20	114	16	.90	104	16	2.6	.40	0	.20	0
22	0	.20	58	25	.90	68	11	2.1	.40	0	.10	0
23	0	.20	14	16	.90	36	12	285	.60	0	.10	0
24	0	.20	8.4	7.8	.90	95	12	1,010	2.8	0	.10	0
25	0	.40	7.5	4.4	.90	76	8.8	62	8.1	24	.10	0
26	0	.50	5.7	3.5	.90	34	7.5	241	4.4	3.9	.10	0
27	0	.60	3.9	3.5	.90	17	6.8	170	2.9	1.5	.10	0
28	0	.60	3.3	7.5	.90	12	5.9	44	.90	1.4	0	0
29	0	.60	2.6	19	.90	11	4.9	71	.60	.40	0	0
30	0	16	2.1	137	-----	14	4.4	42	.40	.20	0	0
31	0	-----	1.9	30	-----	349	-----	19	-----	.20	0	-----
TOTAL	0	22.50	663.4	284.10	135.20	884.50	737.0	2,501.40	109.40	33.20	147.70	1.30
MEAN	0	.75	21.4	9.16	4.66	28.5	24.6	80.7	3.65	1.07	4.76	.043
MAX	0	16	114	137	43	349	310	1,010	26	24	68	.30
MIN	0	0	1.9	.40	.90	.90	4.4	.70	.40	0	0	0
CFSM	0	.07	1.88	.80	.41	2.50	2.15	7.08	.32	.09	.42	.004
IN.	0	.07	2.16	.93	.44	2.89	2.40	8.16	.36	.11	.48	.004
CAL YR 1967	TOTAL 3,527.00		MEAN 9.66		MAX 296		MIN 0		CFSM .85		IN 11.51	
WTR YR 1968	TOTAL 5,519.70		MEAN 15.1		MAX 1,010		MIN 0		CFSM 1.32		IN 18.01	

PEAK DISCHARGE (BASE, 950 CFS)

DATE	TIME	G. HT.	DISCHARGE	DATE	TIME	G. HT.	DISCHARGE
03-31	1700	8.53	1,720	05-11	1000	7.22	1,120
04-04	0530	8.00	1,460	05-24	0500	11.40	3,440

3-3684. Brush Creek Reservoir near Butlerville, Ind.

Location.--Lat 39°03'23", long 85°31'29", in NW¼ sec. 16, T. 7 N., R. 9 E., at dam at Muscatatuck State School, 1.5 miles northwest of Butlerville.

Drainage area.--14.3 sq mi.

Records available.--November 1953 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 680.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum contents during year, 3,633 acre-ft May 24 (elevation, 41.93 ft); minimum contents, 1,410 acre-ft Nov. 22, 24, 29 (elevation, 31.05 ft).

1954-68: Maximum contents, 3,830 acre-ft Jan. 21, 1959 (elevation, 42.66 ft); minimum contents since reaching minimum pool elevation of 714.66 ft, 1,193 acre-ft Nov. 24, 1964 (elevation, 29.58 ft).

Remarks.--Reservoir is formed by earth fill dam. Releases normally controlled by a 24-inch diameter gate in gate well of 24-inch concrete pipe. Capacity at uncontrolled spillway elevation (35.0 ft) is 2,080 acre-ft. Reservoir is used for recreation and low-flow augmentation for Muscatatuck State School and city of North Vernon. Reservoir was put in operation on Nov. 13, 1953.

Cooperation.--Capacity tables furnished by Indiana Department of Natural Resources.

Month-end elevation and contents, water year October 1967 to September 1968

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	31.52	1,485	
Oct. 31.....	31.10	1,418	-67
Nov. 30.....	31.38	1,463	+45
Dec. 31.....	est. 35.2	2,116	+653
Calendar year 1967.....			+13
Jan. 31.....	35.22	2,120	+4
Feb. 29.....	34.48	1,986	-134
Mar. 31.....	37.28	2,509	+523
Apr. 30.....	35.12	2,102	-407
May 31.....	35.40	2,152	+50
June 30.....	34.95	2,071	-81
July 31.....	34.92	2,066	-5
Aug. 31.....	34.36	1,965	-101
Sept. 30.....	34.05	1,909	-56
Water year 1967-68	-	-	+424

WABASH RIVER BASIN

3-3690. Vernon Fork near Butlerville, Ind.

Location.--Lat 39°02'55", long 85°32'40", in SE¼ sec. 17, T. 7 N., R. 9 E., on left bank 0.3 mile downstream from Muscatatuck State School dam, 1¼ miles downstream from Brush Creek, and 2 miles northwest of Butlerville.

Drainage area.--85.9 sq mi (revised).

Records available.--February 1942 to September 1968. 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.--26 years, 92.6 cfs.

Extremes.--Maximum discharge during year, 19,500 cfs May 24 (gage height, 23.20 ft); no flow Oct. 5-7.

1942-68: Maximum discharge, 26,200 cfs Jan. 21, 1959 (gage height, 25.41 ft), from rating curve extended above 10,000 cfs on basis of slope-area measurement of peak flow; no flow at times in most years.

Remarks.--Record fair. Water supply for the Muscatatuck State School is diverted and the sewage effluent returned above station. Flow regulated by Brush Creek Reservoir (see sta. No. 3-3684.00).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.2	80	21	201	7.1	890	20	141	5.3	74	1.4
2	1.2	2.5	541	20	347	7.6	226	17	245	3.9	53	1.5
3	1.0	3.7	552	19	165	6.4	170	16	126	3.2	22	1.1
4	.36	4.9	123	18	113	6.5	1,600	13	109	2.8	35	1.4
5	0	6.1	82	12	88	7.1	288	11	78	2.6	211	2.6
6	0	5.0	62	11	77	26	158	9.5	48	2.5	88	1.8
7	0	4.2	52	11	67	11	120	7.9	36	2.2	48	1.6
8	.28	3.4	47	7.8	60	8.2	108	7.2	29	2.3	173	1.4
9	1.0	3.1	37	7.4	52	11	77	136	24	2.2	40	1.3
10	1.5	2.8	43	7.9	45	14	155	116	20	2.0	101	1.4
11	1.4	4.4	190	8.1	40	14	51	985	15	2.0	94	1.5
12	1.2	3.6	407	7.7	35	19	46	407	12	1.8	52	1.2
13	.46	3.0	139	9.3	30	19	42	138	9.5	1.7	24	.82
14	.26	3.4	170	11	25	17	48	86	8.0	1.6	8.2	.69
15	.05	4.0	215	10	20	20	149	65	7.7	1.7	16	.57
16	.03	3.4	160	8.8	15	51	72	488	14	2.2	13	.49
17	.31	3.6	102	7.7	15	78	61	138	12	3.7	24	.51
18	.24	3.4	444	7.4	12	58	59	111	11	3.0	9.5	.71
19	.21	2.8	196	8.1	9.9	47	52	89	8.0	3.6	6.7	.75
20	.21	2.9	121	9.0	11	58	94	69	6.3	2.6	5.0	.66
21	.16	3.3	294	15	8.8	547	103	52	5.1	2.8	4.2	.63
22	.14	3.6	992	116	8.1	425	63	42	4.3	3.2	3.2	.58
23	.16	3.8	164	126	7.2	266	54	2,130	5.5	55	2.9	.58
24	.28	4.5	108	73	6.8	378	50	8,330	22	30	2.4	.59
25	1.4	5.0	84	51	7.4	637	40	519	68	390	2.2	.62
26	1.8	4.9	76	34	7.0	390	35	922	59	331	1.5	.54
27	1.8	4.6	55	30	7.2	190	32	1,180	32	145	1.4	.51
28	1.5	4.2	49	42	7.3	120	27	339	13	94	1.4	.49
29	1.1	3.5	37	90	7.3	96	24	236	9.2	33	1.2	.44
30	1.2	52	32	1,120	-----	255	22	315	6.9	16	1.2	.46
31	1.3	-----	30	334	-----	967	-----	172	-----	27	1.0	-----
TOTAL	21.85	160.8	5,684	2,253.2	1,495.0	4,756.9	4,916	17,166.6	1,184.5	1,179.9	1,120.0	28.84
MEAN	.70	5.36	183	72.7	51.6	153	164	554	39.5	38.1	36.1	.96
MAX	1.8	52	992	1,120	347	967	1,600	8,330	245	390	211	2.6
MIN	0	1.2	30	7.4	6.8	6.4	22	7.2	4.3	1.6	1.0	.44
CFSM	.008	.06	2.13	.85	.60	1.79	1.91	6.45	.46	.44	.42	.01
IN.	.009	.07	2.46	.98	.65	2.06	2.13	7.43	.51	.51	.48	.01
CAL YR 1967	TOTAL 28,846.50	MEAN 79.0	MAX 2,070	MIN 0	CFSM .92	IN 12.49						
WTR YR 1968	TOTAL 39,967.59	MEAN 109	MAX 8,330	MIN 0	CFSM 1.27	IN 17.30						

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
04-04	----	12.0	5,000	05-24	0945	23.20	19,500

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., at downstream end of left bank bridge pier, 1 mile southwest of Vernon, and 3.1 miles downstream from South Fork Vernon Fork.

Drainage area.--198 sq mi (revised).

Records available.--October 1939 to September 1968. 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, May 7, 1964 to Sept. 22, 1966, digital water-stage recorder, Sept. 23, 1966 to June 22, 1967, graphic water-stage recorder, and June 23, 1967 to Nov. 13, 1967, staff gage at site on right bank at same datum. Nov. 14, 1967 to April 4, 1968, graphic water-stage recorder at present site and datum.

Average discharge.--29 years, 217 cfs.

Extremes.--Maximum discharge during year, 40,600 cfs May 24 (gage height, 29.46 ft); minimum, 1.4 cfs Sept. 30 (gage height, 0.17 ft).

1939-68: Maximum discharge, 56,800 cfs Jan. 21, 1959 from rating curve extended above 24,000 cfs on basis of slope-area measurement of peak flow (gage height, 32.83 ft from high-water mark). No flow at times in 1940, 1943-44.

Remarks.--Record good. Diversion above station for municipal water supply of North Vernon and Vernon. Part of this diversion returned above gage as sewage effluent by North Vernon Sewage Treatment Plant.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	4.5	255	66	472	22	3,080	54	253	17	80	3.6
2	3.0	9.0	591	54	868	22	595	47	342	14	94	3.8
3	2.3	14	1,760	52	455	22	330	42	229	11	59	3.3
4	2.4	18	375	50	255	20	3,430	38	175	8.4	39	3.9
5	2.3	22	201	44	191	20	880	33	125	6.5	416	7.7
6	3.1	18	142	38	151	22	381	28	96	5.5	161	9.0
7	2.3	15	115	34	124	43	263	26	74	5.0	109	8.2
8	2.8	12	102	29	114	28	207	25	61	6.2	201	5.8
9	5.6	11	86	24	97	27	183	1,720	50	13	115	4.4
10	4.0	10	94	25	80	30	129	530	42	7.4	850	3.9
11	2.6	18	405	26	75	35	114	3,180	36	5.8	488	4.1
12	2.2	17	1,010	26	63	48	101	1,460	31	5.4	115	3.7
13	2.4	15	390	27	57	58	90	462	26	4.2	114	3.4
14	3.0	14	358	33	50	52	96	255	22	3.4	51	3.1
15	4.3	12	595	33	45	60	350	212	20	3.6	42	2.6
16	3.4	9.9	318	25	36	115	201	720	26	4.3	67	1.8
17	4.0	9.3	233	21	31	233	146	405	32	4.1	88	1.9
18	9.6	10	1,090	21	28	142	146	238	26	4.2	61	3.6
19	4.9	9.3	525	21	28	109	126	220	24	11	36	5.5
20	3.7	8.8	268	22	28	110	268	162	20	7.6	26	4.1
21	2.8	8.8	460	41	27	1,450	308	126	16	5.6	22	3.2
22	2.8	8.5	2,280	396	25	1,270	178	103	15	4.9	17	2.7
23	2.6	9.3	455	305	23	770	162	3,260	18	4.6	15	2.2
24	2.4	10	255	191	22	668	193	22,700	18	34	12	1.8
25	8.0	15	201	133	23	1,650	127	1,370	46	133	9.9	2.1
26	7.0	23	171	90	23	1,210	102	1,790	80	767	8.0	2.4
27	7.0	20	133	69	22	490	91	2,950	65	163	7.1	2.2
28	4.0	15	112	85	22	292	78	786	46	201	5.6	2.1
29	4.0	13	94	191	22	222	68	447	30	80	4.7	2.1
30	5.0	142	83	2,160	-----	525	60	903	22	41	4.0	1.5
31	4.5	-----	75	965	-----	2,100	-----	358	-----	32	3.7	-----
TOTAL	122.2	521.4	13,232	5,297	3,457	11,865	12,483	44,650	2,066	1,613.7	3,321.0	109.7
MEAN	3.94	17.4	427	171	119	383	416	1,440	68.9	52.1	107	3.66
MAX	9.6	142	2,280	2,160	968	2,100	3,430	22,700	342	767	850	9.0
MIN	2.2	4.5	75	21	22	20	60	25	15	3.4	3.7	1.5
CFSM	.02	.09	2.16	.86	.60	1.93	2.10	7.27	.35	.26	.54	.02
IN.	.02	.10	2.49	.99	.65	2.23	2.34	8.39	.39	.30	.62	.02
CAL YR 1967	TOTAL 68,481.40	MEAN 188	MAX 4,880	MIN .40	CFSM .95	IN 12.86						
WTR YR 1968	TOTAL 98,738.0	MEAN 270	MAX 22,700	MIN 1.5	CFSM 1.36	IN 18.55						

PEAK DISCHARGE (BASE, 6,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
04-01	0030	13.66	8,060	05-11	1730	12.32	6,720
04-04	1400	13.10	7,500	05-24	1230	29.46	40,600

WABASH RIVER BASIN

3-3715. East Fork White River near Bedford, Ind.

Location.--Lat 38°46'10", long 86°24'30", in NE¼ sec. 21, T. 4 N., R. 1 E., on downstream side of center pier of bridge on county road, 0.4 mile upstream from Mill Creek, 2.9 miles downstream from Sugar Creek, 3.9 miles northeast of Mitchell, and 7.8 miles southeast of Bedford.

Drainage area.--3,861 sq mi (revised).

Records available.--May 1939 to September 1968 (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.--15 years (1939-43, 1957-68), 3,534 cfs.

Extremes.--Maximum discharge during year, 71,300 cfs May 27; maximum gage height, 33.89 ft May 27; minimum 275 cfs Oct. 3-5 (gage height, 2.46 ft).

1939-68: Maximum discharge, 75,700 cfs Mar. 12, 1964; maximum gage height, 35.97 ft May 11, 1961.

1957-68: Minimum daily, 220 cfs Dec. 18, 19, 1963; minimum gage height, 2.40 ft Oct. 14, 18, 1964.

Flood in March 1913 reached a stage of 47.5 ft, from floodmark determined by Corps of Engineers (discharge, 155,000 cfs) at former site.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	288	410	1,210	3,520	8,960	1,660	10,500	2,430	29,000	3,050	3,770	1,090
2	283	428	2,400	3,130	11,900	1,630	10,800	2,250	23,900	2,640	3,450	1,050
3	277	453	4,760	2,850	14,800	1,590	10,900	2,100	19,700	2,340	4,280	1,020
4	277	481	5,520	2,630	18,300	1,550	13,000	1,970	16,400	2,120	6,150	992
5	284	506	6,820	2,500	21,500	1,500	14,500	1,850	13,000	1,970	7,340	970
6	290	548	7,580	2,350	23,100	1,470	16,300	1,730	10,600	1,840	6,190	970
7	289	581	7,340	2,050	22,800	1,450	18,900	1,660	7,760	1,740	4,510	1,150
8	293	596	5,850	1,900	18,500	1,420	19,400	1,570	5,690	1,640	3,730	1,150
9	294	580	4,540	1,800	11,900	1,410	17,800	1,520	4,690	1,560	3,590	1,010
10	309	562	3,810	1,650	7,950	1,420	14,400	1,680	4,110	1,540	3,720	932
11	323	584	3,610	1,650	6,190	1,440	10,500	3,930	3,630	1,470	4,210	876
12	333	587	4,190	1,700	5,180	1,640	7,570	6,690	3,280	1,440	5,290	844
13	341	579	5,960	1,650	4,450	2,240	5,510	7,970	2,980	1,450	6,280	816
14	356	593	7,420	1,600	3,950	2,650	4,670	9,190	2,740	1,370	6,110	795
15	355	589	8,480	1,600	3,650	2,580	4,530	9,940	2,550	1,340	5,160	780
16	357	569	8,630	1,550	3,380	2,540	5,340	9,820	2,420	1,320	4,090	765
17	419	558	8,200	1,500	3,170	2,730	5,850	9,010	2,350	1,260	3,500	770
18	416	547	7,420	1,400	2,950	3,160	5,510	8,550	3,040	1,280	3,070	770
19	426	535	7,210	1,350	2,770	3,600	5,100	8,320	4,010	1,320	2,790	765
20	428	528	7,580	1,400	2,570	3,720	5,180	7,260	3,670	1,890	2,620	760
21	424	554	7,680	1,480	2,330	5,280	6,160	6,090	3,040	2,960	2,360	760
22	429	553	8,070	1,760	2,150	7,500	6,630	4,970	2,630	2,680	2,120	750
23	427	556	8,350	2,280	2,070	8,730	6,230	5,060	2,370	2,090	1,920	735
24	411	573	9,250	3,250	1,970	9,380	5,500	8,430	2,220	1,770	1,760	715
25	413	588	10,800	3,700	1,920	10,400	5,310	11,900	2,420	1,930	1,630	695
26	412	601	11,500	3,570	1,860	11,200	4,940	49,200	4,600	2,410	1,520	675
27	409	601	9,810	3,260	1,800	11,900	4,050	69,000	5,710	3,640	1,420	675
28	395	600	7,030	2,950	1,750	12,500	3,360	60,200	5,560	6,060	1,340	670
29	391	592	5,460	3,000	1,710	12,600	2,960	51,300	4,650	6,650	1,270	655
30	394	842	4,520	4,390	-----	11,700	2,670	42,600	3,690	5,490	1,200	650
31	401	-----	3,980	7,330	-----	10,300	-----	34,800	-----	4,130	1,120	-----
TOTAL	11,144	16,864	204,980	76,750	215,530	152,890	254,070	442,990	202,410	74,390	107,510	25,255
MEAN	359	562	6,612	2,476	7,432	4,932	8,469	14,290	6,747	2,400	3,468	842
MAX	429	842	11,500	7,330	23,100	12,600	19,400	69,000	29,000	6,650	7,340	1,150
MIN	277	410	1,210	1,350	1,710	1,410	2,670	1,520	2,220	1,260	1,120	650
CFSM	.09	.15	1.71	.64	1.92	1.28	2.19	3.70	1.75	.62	.90	.22
IN.	.11	.16	1.97	.74	2.08	1.47	2.45	4.27	1.95	.72	1.04	.24
CAL YR 1967	TOTAL 1,347,154	MEAN 3,691	MAX 21,000	MIN 277	CFSM .96	IN 12.98						
WTR YR 1968	TOTAL 1,784,783	MEAN 4,876	MAX 69,000	MIN 277	CFSM 1.26	IN 17.19						

PEAK DISCHARGE (BASE, 13,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-06	1800	----	23,500	04-08	0800	20.17	19,600
02-07	----	22.08	----	05-27	0600	33.89	71,300

3-3716. South Fork Salt Creek at Kurtz, Ind.

Location.--Lat 38°57'46", long 86°12'12", in SW 1/4 sec. 9, T. 6 N., R. 3 E., on right bank at downstream side of county road bridge, at 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.--38.2 sq mi (revised).

Records available.--October 1960 to September 1968.

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.--8 years, 38.8 cfs.

Extremes.--Maximum discharge during year, 6,400 cfs May 24 (gage height, 13.84 ft); no flow for many days.
1960-68: Maximum discharge, 6,400 cfs May 24, 1968 (gage height, 13.84 ft); no flow at times in most years.
Flood of January 1959 reached a stage of approximately 15 ft, from floodmarks.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	.09	38	11	206	3.7	335	8.5	144	.58	.78	.03
2	0	.10	924	9.3	683	3.6	119	7.0	204	.47	.94	.02
3	0	.08	253	8.0	143	3.6	125	6.4	76	.38	2.2	.02
4	0	.77	56	7.2	73	3.6	1,140	5.6	43	.30	3.5	.02
5	0	.87	33	5.9	51	3.7	167	5.0	28	.23	1.4	.02
6	0	.63	25	5.3	40	4.0	87	4.4	20	.17	.64	.02
7	0	.46	22	4.8	34	4.5	59	4.1	16	.15	.31	.01
8	0	.33	17	4.6	27	5.0	44	3.9	12	.15	37	.01
9	0	.22	14	4.5	23	6.3	34	66	8.9	.13	6.9	0
10	0	.17	71	4.4	17	8.9	28	28	6.6	.11	32	0
11	0	.40	77	4.3	14	11	23	1,150	5.5	.11	23	0
12	0	2.8	96	4.3	11	16	20	223	4.5	.09	4.9	0
13	0	2.3	44	4.3	9.5	17	18	87	3.5	.08	3.5	0
14	0	1.5	143	4.4	8.7	18	50	60	3.3	.07	5.2	0
15	0	1.2	96	4.5	9.0	58	65	42	2.8	.05	4.3	0
16	0	.84	46	4.6	8.9	175	39	50	6.3	.05	3.1	0
17	0	.78	47	4.9	7.9	87	42	41	5.3	.03	1.7	0
18	0	.68	137	5.3	6.5	52	46	46	2.9	.04	1.0	.02
19	0	.56	58	5.9	5.8	41	37	44	2.0	.09	.71	.04
20	0	.48	41	7.3	6.4	154	231	36	1.6	.07	.38	.02
21	0	.51	219	56	5.6	524	97	30	1.1	.03	.30	.01
22	0	.62	222	94	4.9	198	54	26	.94	.02	.20	0
23	0	.78	67	95	4.6	140	39	602	1.9	.05	.13	0
24	0	.87	42	59	4.3	240	27	2,390	1.0	.05	.11	0
25	.02	1.5	47	48	4.2	305	21	280	2.5	.26	.08	0
26	.01	1.6	44	24	4.0	203	18	966	5.4	.94	.06	0
27	0	1.3	36	20	3.9	95	17	321	3.1	1.3	.04	0
28	0	.95	24	55	3.8	60	13	145	2.2	.85	.03	0
29	0	.81	19	106	3.8	48	12	154	1.3	.42	.02	0
30	0	161	16	600	-----	72	9.7	126	.85	.20	.02	0
31	0	-----	14	188	-----	722	-----	73	-----	.15	.02	-----
TOTAL	0.03	185.20	2,988	1,459.8	1,423.8	3,282.9	3,016.7	7,030.9	616.49	7.62	134.47	0.24
MEAN	.001	6.17	96.4	47.1	49.1	106	101	227	20.5	.25	4.34	.008
MAX	.02	161	924	600	683	722	1,140	2,390	204	1.3	37	.04
MIN	0	.08	14	4.3	3.8	3.6	9.7	3.9	.85	.02	.02	0
CFSM	0	.16	2.52	1.23	1.29	2.77	2.63	5.94	.54	.006	.11	.0002
IN.	0	.18	2.91	1.42	1.39	3.20	2.94	6.85	.60	.007	.13	.0002
CAL YR 1967	TOTAL	16,763.13	MEAN	45.9	MAX	1,270	MIN	0	CFSM	1.20	IN	16.32
WTR YR 1968	TOTAL	20,146.15	MEAN	55.0	MAX	2,390	MIN	0	CFSM	1.44	IN	19.61

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-02	1630	10.91	2,750	05-11	1430	11.02	2,810
02-02	0500	8.77	1,740	05-24	0545	13.84	6,400
04-04	0715	11.27	2,990				

WABASH RIVER BASIN

3-3716.5 North Fork Salt Creek at Nashville, Ind.

Location.--Lat 39°12'05", long 86°14'50", in SW¹/₄ 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.--76.1 sq mi (revised).

Records available.--July 1962 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 579.576 ft above mean sea level, datum of 1929. Prior to Jan. 21, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--6 years, 69.3 cfs.

Extremes.--Maximum discharge during year, 7,200 cfs May 24 (gage height, 16.00 ft); no flow Oct. 1-8, 11-14.
1962-68: Maximum discharge, 7,500 cfs Mar. 4, 1963; maximum gage height, 16.00 ft May 24, 1968; no flow at times during most years.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	5.0	26	30	345	5.2	338	23	116	3.2	278	3.7
2	0	7.9	430	24	1,620	5.3	189	20	102	2.7	108	3.4
3	0	8.2	342	18	348	4.7	156	17	82	2.2	61	3.2
4	0	7.6	92	14	194	4.6	1,120	14	60	2.0	43	3.8
5	0	6.2	57	11	138	4.8	329	12	40	1.9	32	3.7
6	0	4.7	43	9.0	108	5.4	189	10	29	1.7	26	2.8
7	0	3.6	35	8.0	90	4.8	138	8.9	23	1.5	20	2.4
8	0	2.6	28	7.0	73	4.0	107	8.0	18	1.4	19	2.2
9	.08	2.2	25	6.6	60	4.0	82	6.9	14	1.2	15	2.2
10	.03	2.0	38	6.4	43	7.7	67	50	11	1.3	15	1.9
11	0	3.0	76	6.8	35	8.2	55	1,510	9.0	1.2	13	1.7
12	0	3.6	104	6.6	28	10	47	463	7.6	1.1	10	1.6
13	0	3.4	71	6.2	23	9.7	41	184	6.4	1.1	9.2	1.8
14	0	3.2	70	5.7	20	9.1	50	113	5.7	1.1	8.4	1.9
15	.02	2.8	82	5.3	18	11	84	84	5.5	1.4	8.1	2.1
16	.16	2.4	59	5.0	17	106	69	77	93	1.1	8.4	2.1
17	4.6	2.6	49	5.0	15	137	69	60	27	1.0	7.8	2.6
18	5.7	2.6	92	5.0	11	96	75	70	13	1.3	6.9	3.6
19	2.5	2.2	74	5.5	9.9	80	66	69	8.3	4.2	6.3	3.3
20	1.3	2.2	56	9.0	10	107	327	56	6.5	4.4	5.6	2.9
21	.78	2.2	695	31	8.0	366	216	45	5.1	1.8	5.2	2.7
22	.63	2.2	628	126	7.2	243	139	37	4.2	3.3	4.8	2.5
23	.54	2.4	180	165	6.6	175	106	1,630	4.7	31	4.6	2.2
24	1.1	2.4	116	110	6.5	205	83	4,570	5.1	11	4.5	2.0
25	1.7	2.6	103	79	6.2	431	62	544	12	2,500	5.5	2.1
26	1.4	2.4	100	56	5.9	394	50	1,100	11	518	4.4	1.5
27	1.0	2.4	72	46	6.0	209	43	606	7.8	184	3.8	1.4
28	.75	2.0	62	56	5.8	145	35	275	6.1	138	3.5	1.4
29	.56	1.8	49	92	5.7	114	30	208	5.0	73	3.4	1.2
30	.43	1.6	41	1,100	-----	108	27	183	4.0	45	3.2	1.1
31	1.3	-----	35	360	-----	158	-----	133	-----	40	3.0	-----
TOTAL	24.58	114.4	3,930	2,415.1	3,263.8	3,172.5	4,389	12,248.9	742.0	3,582.1	746.6	71.0
MEAN	.79	3.81	127	77.9	113	102	146	395	24.7	116	24.1	2.37
MAX	5.7	16	695	1,100	1,620	431	1,120	4,570	116	2,500	278	3.8
MIN	0	1.8	25	5.0	5.7	4.0	27	8.0	4.0	1.0	3.0	1.1
CFSM	.01	.05	1.67	1.02	1.48	1.34	1.92	5.19	.33	1.52	.32	.03
IN.	.01	.06	1.92	1.18	1.60	1.55	2.14	5.99	.36	1.75	.36	.03

CAL YR 1967 TOTAL 27,473.36 MEAN 75.3 MAX 1,100 MIN 0 CFSM .99 IN 13.43
WTR YR 1968 TOTAL 34,699.98 MEAN 94.8 MAX 4,570 MIN 0 CFSM 1.25 IN 16.96

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	2145	11.39	2,970	05-11	1615	12.25	3,600
01-30	1015	8.98	1,690	05-24	0900	16.00	7,200
02-02	0700	11.86	3,300	05-26	1830	9.07	1,730
04-04	0800	10.57	2,440	07-25	1945	13.62	4,820

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 Brummet 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 1968.

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.--22 years, 130 cfs.

Extremes.--Maximum discharge during year, 11,500 cfs May 24 (gage height, 22.29 ft); minimum, 0.07 cfs Oct. 8; minimum gage height, 2.70 ft Sept. 15-17.

1946-68: Maximum discharge, 13,300 cfs June 23, 1960 (gage height, 23.10 ft); no flow at times in most years. Flood in March 1913 reached a stage of 25.7 ft, from information by local residents.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.14	2.9	82	49	610	14	656	37	222	10	242	3.9
2	.11	7.0	565	45	2,720	14	326	30	224	8.6	200	3.7
3	.11	12	1,030	37	1,220	13	232	28	179	8.3	102	3.6
4	.11	15	235	33	378	12	1,600	25	142	6.6	71	3.6
5	.09	15	129	25	232	12	893	22	103	5.8	52	4.1
6	.11	12	95	23	177	14	320	18	72	5.2	39	4.6
7	.09	9.3	81	22	144	11	211	16	51	4.6	30	3.8
8	.17	7.6	67	17	114	11	164	15	37	4.2	26	3.3
9	.44	6.5	59	16	98	11	127	94	28	3.9	23	3.0
10	.30	5.4	111	17	72	15	104	104	22	4.0	24	2.9
11	.17	5.7	187	16	58	17	84	1,390	18	3.7	22	2.7
12	.14	6.5	239	15	51	26	73	1,760	17	3.9	18	2.7
13	.17	7.3	174	14	43	23	65	376	14	3.3	15	2.5
14	.30	7.3	153	13	37	20	68	182	12	2.9	13	2.4
15	.30	6.8	187	12	35	24	115	130	11	2.6	12	2.2
16	.40	6.2	135	12	32	140	101	120	89	2.5	12	2.1
17	3.9	6.1	110	12	30	236	95	104	59	2.6	12	2.9
18	2.1	6.7	184	12	26	152	111	119	29	2.9	11	3.8
19	3.4	5.7	168	13	23	123	98	115	19	3.9	10	4.0
20	2.6	4.8	123	16	23	166	543	98	15	5.9	8.9	4.0
21	2.0	4.9	458	49	21	603	453	78	13	9.6	7.7	3.2
22	1.3	5.1	1,680	224	19	465	219	63	11	7.0	6.9	2.7
23	.90	5.1	451	359	17	286	162	1,610	9.8	104	6.3	2.3
24	.80	4.8	226	207	16	275	125	9,470	12	42	6.0	2.8
25	1.1	5.1	186	178	16	681	96	3,180	23	1,280	6.5	2.7
26	1.0	5.1	202	118	15	785	78	1,640	32	3,320	6.5	2.2
27	.80	5.9	144	99	15	362	67	1,500	22	542	5.8	2.1
28	.60	4.9	128	108	15	221	55	618	16	255	4.8	1.9
29	.50	4.4	86	164	15	173	48	418	14	125	4.1	1.6
30	.60	39	74	1,600	-----	162	42	384	12	76	3.9	1.4
31	1.2	-----	61	1,050	-----	235	-----	264	-----	60	3.7	-----
TOTAL	25.95	240.1	7,810	4,575	6,272	5,302	7,331	24,008	1,527.8	5,916.0	1,005.1	88.7
MEAN	.84	8.00	252	148	216	171	244	774	50.9	191	32.4	2.96
MAX	3.9	39	1,680	1,600	2,720	785	1,600	9,470	224	3,320	242	4.6
MIN	.09	2.9	59	12	15	11	42	15	9.8	2.5	3.7	1.4
CFSM	.007	.07	2.10	1.23	1.80	1.43	2.04	6.45	.42	1.59	.27	.02
IN.	.008	.07	2.42	1.42	1.94	1.64	2.27	7.44	.47	1.83	.31	.03
CAL YR 1967	TOTAL	46,776.99	MEAN	128	MAX	1,890	MIN	.09	CFSM	1.07	IN	14.50
WTR YR 1968	TOTAL	64,101.65	MEAN	175	MAX	9,470	MIN	.09	CFSM	1.46	IN	19.87

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	0815	16.54	2,090	05-12	0230	17.57	2,660
01-30	1815	16.48	2,060	05-24	1600	22.29	11,500
02-02	1715	18.09	3,130	07-26	0800	19.16	4,800
04-04	1715	16.50	2,070				

3-3724. Monroe Reservoir near Harrodsburg, Ind.

Location.--Lat 39°00'26", long 86°30'45", in SW $\frac{1}{4}$ sec. 27, T. 7 N., R. 1 W., in discharge tower of reservoir on Salt Creek, 1.1 miles upstream from Clear Creek, 2.2 miles southeast of Harrodsburg, and 25.9 miles upstream from mouth.

Drainage area.--432 sq mi.

Records available.--April 1966 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 500.00 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Extremes.--Maximum contents during year, 304,600 acre-ft June 4 (elevation, 547.70 ft); minimum contents, 169,900 acre-ft Oct. 15 (elevation, 536.83 ft).

1966-68: Maximum contents, that of June 4, 1968; minimum contents, 149,500 acre-ft Nov. 7, 1966 (elevation, 534.77 ft).

Remarks.--Reservoir is formed by earth and rock fill dam. Releases normally controlled by three gates, 3.75 ft wide and 12.0 ft high, in semi-elliptical concrete conduit through dam. Minimum design capacity is 22,300 acre-ft (elevation, 515 ft). Capacity at uncontrolled spillway elevation (556 ft) is 258,800 acre-ft. Reservoir is used for flood control and recreation. Reservoir put in operation on April 26, 1966.

Cooperation.--Records furnished by Corps of Engineers.

Month-end elevation and contents, water year October 1967 to September 1968

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	537.05	172,200	-
Oct. 31.....	536.88	170,400	-1,800
Nov. 30.....	536.95	171,200	+800
Dec. 31.....	539.93	203,700	+32,500
Calendar year 1967.....	-	-	+12,300
Jan. 31.....	539.41	197,800	-5,900
Feb. 28.....	537.97	181,900	-16,000
Mar. 31.....	538.88	191,900	+10,000
Apr. 30.....	538.00	182,200	-9,700
May. 31.....	547.24	298,000	+115,800
June. 30.....	540.37	208,800	-89,200
July 31.....	538.13	183,700	-25,100
Aug. 31.....	537.74	179,500	-4,200
Sept. 30.....	537.36	175,400	-4,100
Water year 1967-68	-	-	+3,200

3-3725. Salt Creek near Harrodsburg, Ind.

Location.--Lat 39°00'16", long 86°30'31", in NW¼ sec. 34, T. 7 N., R. 1 W., on right bank 1,300 ft downstream from Monroe Reservoir, 0.9 mile upstream from Clear Creek, 2.2 miles southeast of Harrodsburg, and 25.1 miles upstream from mouth.

Drainage area.--432 sq mi (revised).

Records available.--May 1955 to September 1968.

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.--13 years, 463 cfs.

Extremes.--Maximum discharge during year, 2,940 cfs Feb. 16 (gage height, 19.87 ft); maximum gage height, 26.07 May 24; minimum daily, 38 cfs Sept. 9.

1955-68: Maximum discharge, 22,000 cfs June 25, 1960 (gage height, 32.76 ft, from graph based on gage readings at site and datum then in use); maximum gage height at present site and datum, 35.35 ft May 9, 1961; no flow Sept. 29 to Dec. 2, 1964.

Remarks.--Record good. Flow regulated by Monroe Reservoir (see sta. No. 3-3724). Record of water temperatures for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	49	50	1,140	600	51	1,700	50	200	1,850	860	48
2	52	49	50	1,290	190	51	1,700	50	200	1,840	638	48
3	52	49	50	1,600	190	51	1,700	50	200	1,830	172	46
4	52	49	200	1,600	190	51	600	50	600	1,820	168	46
5	52	49	700	1,600	190	51	180	50	1,700	1,810	91	50
6	52	49	1,750	1,600	190	51	180	50	1,700	1,810	50	50
7	52	49	1,520	1,490	190	51	180	50	1,700	1,300	50	50
8	52	49	909	894	190	51	180	50	1,700	241	50	49
9	51	49	693	290	917	51	180	50	1,690	53	116	38
10	51	49	250	147	1,850	51	180	50	1,670	51	380	44
11	51	48	548	90	1,830	51	671	1,180	1,660	50	600	42
12	51	48	900	89	1,880	51	1,680	1,830	1,670	50	370	38
13	51	48	900	90	2,010	51	1,770	2,120	1,830	50	370	48
14	51	48	900	91	2,380	51	1,770	2,170	1,990	50	161	49
15	51	48	1,430	89	2,910	51	1,770	2,130	1,980	50	50	49
16	51	48	1,380	87	2,930	90	1,770	2,170	1,980	50	50	50
17	51	48	1,070	112	2,910	200	1,760	2,130	1,980	50	50	50
18	51	48	802	90	2,880	548	1,760	2,190	1,960	50	50	50
19	51	48	313	90	2,670	601	1,740	2,220	1,950	50	50	50
20	51	48	540	90	1,710	888	1,750	1,760	1,940	50	50	50
21	50	49	650	90	413	1,570	1,750	1,020	1,930	50	48	49
22	50	49	350	294	51	1,700	1,750	50	1,920	49	46	49
23	50	49	200	488	51	1,700	1,750	100	1,910	50	46	49
24	50	49	200	450	51	1,700	1,750	200	1,920	50	48	49
25	50	49	200	490	51	1,700	1,750	200	1,920	244	50	49
26	50	50	200	577	51	1,700	1,730	200	1,930	536	48	49
27	50	50	200	568	51	1,700	1,460	200	1,900	1,360	47	49
28	50	50	200	560	51	1,700	876	200	1,890	1,380	48	49
29	50	50	200	560	51	1,700	323	200	1,880	636	48	49
30	50	50	791	1,000	-----	1,700	50	200	1,860	679	48	49
31	50	-----	1,160	1,050	-----	1,700	-----	200	-----	865	47	-----
TOTAL	1,578	1,465	19,306	18,696	29,628	21,662	36,410	23,170	49,360	19,004	4,900	1,435
MEAN	50.9	48.8	623	603	1,022	699	1,214	747	1,645	613	158	47.8
MAX	52	50	1,750	1,600	2,930	1,700	1,770	2,220	1,990	1,850	860	50
MIN	50	48	50	87	51	51	50	50	200	49	46	38

CAL YR 1967 TOTAL 170,735 MEAN 468 MAX 2,210 MIN 45
WTR YR 1968 TOTAL 226,614 MEAN 619 MAX 2,930 MIN 38

WABASH RIVER BASIN

3-3727. Clear Creek near Harrodsburg, Ind.

Location.--Lat 39°02'03", long 86°34'01", in NW¼ sec. 19, T. 7 N., R. 1 W., on left bank at downstream side of county road bridge, 1.9 miles northwest of Harrodsburg, 3.9 miles upstream from Little Clear Creek, and 5.1 miles upstream from mouth.

Drainage area.--55.2 sq mi, of which 6.4 sq mi does not contribute directly to surface runoff.

Records available.--September 1960 to September 1968.

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.--8 years, 67.9 cfs.

Extremes.--Maximum discharge during year, 8,280 cfs May 24 (gage height, 14.80 ft); minimum, 7.7 cfs Oct. 7 (gage height, 3.29 ft). 1960-68: Maximum discharge, 8,280 cfs May 24, 1968 (gage height, 14.80 ft); minimum, 4.3 cfs Nov. 27, 1964; minimum gage height, 3.20 ft Oct. 3, 1960.

Flood of June 1960 reached a stage of 16.47 ft, from floodmarks (discharge, 10,200 cfs on basis of contracted-opening measurement).

Remarks.--Record good. Flow regulated by effluent from the sewage treatment plant of the city of Bloomington and possibly by pumpage from several rock quarries.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	60	114	48	864	25	244	43	247	18	86	25
2	12	75	601	50	1,780	24	158	40	253	18	45	24
3	13	74	561	45	466	23	142	39	161	17	36	24
4	12	83	240	41	270	23	876	35	123	15	30	29
5	13	61	160	37	195	22	316	32	99	15	27	38
6	14	51	126	37	160	21	192	30	84	15	24	23
7	13	44	106	31	139	22	150	29	73	14	34	23
8	28	38	86	30	115	23	123	29	64	15	55	22
9	23	35	89	31	103	29	98	111	56	15	44	22
10	14	33	156	32	88	34	85	47	52	24	244	23
11	13	46	196	31	78	32	76	580	48	24	105	24
12	13	44	244	28	71	38	69	222	44	17	49	24
13	15	37	172	26	63	33	62	129	40	17	37	24
14	21	38	194	25	58	34	78	100	38	16	32	23
15	13	35	184	24	57	41	71	85	36	17	28	21
16	29	32	143	23	54	159	59	141	74	15	24	18
17	271	34	142	22	50	119	65	109	37	15	21	101
18	96	31	194	23	45	95	62	104	34	19	18	69
19	51	28	141	24	44	85	56	97	32	38	17	36
20	41	27	119	30	45	137	371	80	28	17	18	26
21	34	31	352	113	40	266	171	70	26	14	17	23
22	29	27	393	123	36	214	121	63	24	14	18	21
23	28	27	200	127	34	184	100	870	30	124	19	20
24	39	25	143	93	31	211	82	3,430	47	53	21	28
25	68	31	136	72	30	291	71	678	79	118	21	29
26	38	26	114	59	29	227	66	841	43	76	20	20
27	33	25	91	52	28	169	57	520	31	78	22	19
28	30	24	82	56	27	138	50	322	26	50	22	18
29	27	24	70	92	26	123	48	254	22	34	21	16
30	25	152	62	703	-----	119	46	192	19	29	22	16
31	44	-----	58	338	-----	220	-----	153	-----	53	23	-----
TOTAL	1,111	1,298	5,669	2,466	5,026	3,181	4,165	9,475	1,970	1,004	1,200	829
MEAN	35.8	43.3	183	79.5	173	103	139	306	65.7	32.4	38.7	27.6
MAX	271	152	601	703	1,780	291	876	3,430	253	124	244	101
MIN	11	24	58	22	26	21	46	29	19	14	17	16
CFSM	.65	.78	3.31	1.44	3.14	1.86	2.52	5.54	1.19	.59	.70	.50
IN.	.75	.87	3.82	1.66	3.39	2.14	2.81	6.38	1.33	.68	.81	.56

CAL YR 1967 TOTAL 28,101 MEAN 77.0 MAX 601 MIN 11 CFSM 1.39 IN 18.93
WTR YR 1968 TOTAL 37,394 MEAN 102 MAX 3,430 MIN 11 CFSM 1.85 IN 25.19

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-02	1500	7.63	1,530	04-04	0430	8.50	2,200
12-21	1915	7.41	1,380	05-11	1115	7.69	1,570
02-02	0445	11.06	4,310	05-24	0500	14.80	8,280

3-3730. Salt Creek near Peerless, Ind.

Location.--Lat 38°56'35", long 86°30'38", in NW 1/4 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.--573 sq mi (revised).

Records available.--February 1939 to September 1950, February 1957 to September 1968.

Gage.--Wire-weight gage read twice daily and concrete control. Datum of gage is 476.02 ft above mean sea level, datum of 1929. Feb. 1-10, 1939, chain gage, and Feb. 11, 1939 to Sept. 30, 1950, water-stage recorder, at same site and datum.

Average discharge.--22 years, 643 cfs.

Extremes.--Maximum discharge during year, 6,030 cfs May 24 (gage height, 25.0 ft); minimum, 44 cfs July 21; minimum gage height, 2.23 ft Oct. 3, 4.

1939-50, 1957-68: Maximum discharge, 25,100 cfs May 10, 1961 (gage height, 35.33 ft, from graph based on gage readings); minimum, 0.7 cfs Aug. 18, 1940.

Flood of January 1937 reached a stage of 34.3 ft (information by Corps of Engineers).

Remarks.--Record good. Stage-discharge relation affected at times by backwater from East Fork White River or return flow from overbank storage. Flow regulated by Monroe Reservoir (see sta. No. 3-3724).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	97	504	946	2,980	73	2,980	126	350	2,090	1,230	64
2	72	97	552	1,280	4,160	73	3,010	116	400	2,090	1,010	64
3	68	97	744	1,440	2,400	76	3,110	111	400	2,090	762	64
4	68	97	968	1,660	1,580	80	3,680	106	360	2,090	488	60
5	68	116	744	1,850	940	80	3,440	97	620	2,090	274	76
6	72	136	780	1,900	450	80	3,010	97	1,800	2,090	111	76
7	72	168	1,010	1,850	400	92	2,950	88	1,750	2,040	80	64
8	72	157	1,140	1,120	840	92	1,350	92	1,750	1,430	126	60
9	72	157	1,230	726	968	92	600	1,480	1,700	72	97	48
10	72	157	1,220	488	1,170	97	400	2,350	1,650	64	1,750	52
11	72	157	640	412	1,490	97	350	2,480	1,750	72	1,780	56
12	72	146	800	328	1,920	102	350	2,530	2,220	68	800	60
13	72	136	1,250	179	2,140	106	400	2,530	2,380	68	584	56
14	72	97	1,300	179	2,620	106	1,510	2,560	2,140	56	426	60
15	72	88	1,320	226	2,980	126	2,330	2,530	2,090	68	168	64
16	88	84	1,320	274	3,040	217	2,140	2,590	2,090	56	146	64
17	398	80	1,300	328	3,140	708	2,070	2,650	2,090	48	116	106
18	384	72	1,280	384	2,850	762	2,040	2,620	2,090	52	106	190
19	136	76	840	412	1,080	860	2,020	2,620	2,090	64	88	126
20	88	80	636	426	240	1,810	2,850	2,170	2,090	60	84	72
21	64	84	488	412	102	2,530	2,680	1,300	2,090	44	80	80
22	68	88	800	412	88	2,530	2,300	463	2,090	102	76	76
23	72	94	1,060	398	82	2,560	2,140	1,190	2,090	250	72	72
24	72	97	990	370	79	2,590	2,040	4,770	2,090	126	72	68
25	72	97	726	426	76	2,590	1,900	4,000	2,120	243	76	84
26	84	80	568	456	74	2,560	1,560	2,500	2,120	762	68	97
27	92	76	536	456	73	2,500	1,370	1,100	2,120	1,100	64	80
28	76	106	440	520	73	2,500	600	700	2,120	1,440	64	68
29	72	342	398	1,140	73	2,500	472	540	2,120	1,210	68	68
30	72	472	370	2,340	-----	2,500	193	460	2,120	880	64	64
31	72	-----	654	2,880	-----	2,700	-----	400	-----	968	64	-----
TOTAL	2,978	3,831	26,608	26,218	38,108	33,789	55,845	47,366	52,890	23,883	10,994	2,239
MEAN	96.1	128	858	846	1,314	1,090	1,862	1,528	1,763	770	355	74.6
MAX	398	472	1,320	2,880	4,160	2,700	3,680	4,770	2,380	2,090	1,780	190
MIN	64	72	370	179	73	73	193	88	350	44	64	48
CFSM	.17	.22	1.50	1.48	2.29	1.90	3.25	2.67	3.08	1.34	.62	.13
IN.	.19	.25	1.73	1.70	2.47	2.19	3.62	3.07	3.43	1.55	.71	.15
CAL YR 1967	TOTAL 230,013		MEAN 630		MAX 2,850	MIN 59		CFSM 1.10	IN 14.93			
WTR YR 1968	TOTAL 324,749		MEAN 887		MAX 4,770	MIN 44		CFSM 1.55	IN 21.08			

WABASH RIVER BASIN

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.--60.7 sq mi (revised).

Records available.--September 1961 to September 1968.

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.--7 years, 50.2 cfs.

Extremes.--Maximum discharge during year, 6,310 cfs May 24 (gage height, 12.81 ft); minimum, 0.20 cfs Oct. 5; minimum gage height, 1.48 ft Oct. 1-5.
1961-68: Maximum discharge, 6,450 cfs Mar. 9, 1964 (gage height, 12.95 ft); minimum, no flow in some years.
Flood of Spring 1950 or 1951 reached a stage of 18.4 ft, from information by local resident.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.25	14	80	23	863	7.8	391	16	99	5.3	18	3.9
2	.26	23	624	21	1,790	8.1	165	14	197	4.9	12	3.6
3	.25	21	384	21	278	7.2	133	13	82	4.5	28	3.4
4	.24	31	145	19	149	7.0	1,050	11	50	4.0	16	3.8
5	.24	22	88	16	101	7.8	236	10	34	3.6	8.8	4.5
6	.32	16	70	16	77	8.6	136	9.8	26	3.3	5.9	4.5
7	.32	12	63	14	66	8.0	98	9.6	21	3.0	6.5	3.8
8	.70	10	46	12	53	8.0	74	9.1	17	2.6	115	3.2
9	.98	9.0	40	14	47	9.7	53	36	15	2.4	387	3.2
10	.59	8.2	130	13	38	15	42	24	13	2.7	1,150	3.0
11	.53	10	148	12	29	21	35	680	11	2.6	244	3.4
12	1.1	13	216	11	25	25	31	218	10	2.4	73	3.0
13	1.4	12	103	11	21	22	27	96	9.2	2.1	45	2.6
14	1.4	11	159	10	19	20	27	66	8.2	1.9	94	2.5
15	1.3	9.3	139	10	18	44	30	46	7.5	1.7	52	2.5
16	2.6	8.4	87	10	17	328	26	58	8.4	1.5	30	2.7
17	.92	8.6	95	10	16	140	28	48	7.1	1.4	21	8.1
18	29	8.5	200	10	14	91	33	55	6.0	1.3	17	12
19	11	7.4	102	11	13	71	28	53	5.3	2.9	13	8.6
20	7.4	7.0	73	16	14	213	507	41	5.1	2.7	11	5.1
21	5.7	7.9	499	89	11	465	152	32	5.2	1.9	8.9	3.6
22	4.7	8.2	338	160	11	219	86	27	5.8	1.4	7.6	3.1
23	4.0	8.3	129	160	9.9	164	62	706	7.0	30	6.9	2.7
24	4.4	8.1	85	91	9.4	231	45	3,190	9.0	5.2	6.2	2.7
25	14	8.2	85	55	9.1	286	35	421	18	22	6.1	3.4
26	12	8.0	88	39	8.6	185	30	637	16	13	5.6	3.7
27	8.5	7.0	58	35	8.8	112	26	332	9.8	50	4.7	3.2
28	6.9	6.2	47	61	8.7	82	22	166	7.6	22	4.4	2.7
29	5.9	6.0	37	126	8.6	71	20	126	6.8	7.3	4.0	2.3
30	5.0	143	31	683	-----	86	18	103	5.8	4.6	3.8	2.1
31	7.2	-----	29	234	-----	559	-----	68	-----	5.2	3.7	-----
TOTAL	230.18	472.3	4,418	2,013	3,733.1	3,522.2	3,646	7,321.5	722.8	219.4	2,409.1	116.9
MEAN	7.43	15.7	143	64.9	129	114	122	236	24.1	7.08	77.7	3.90
MAX	92	143	624	683	1,790	559	1,050	3,190	197	50	1,150	12
MIN	.24	6.0	29	10	8.6	7.0	18	9.1	5.1	1.3	3.7	2.1
CFSM	.12	.26	2.35	1.07	2.12	1.87	2.00	3.89	.40	.12	1.28	.06
IN.	.14	.29	2.71	1.23	2.29	2.16	2.23	4.49	.44	.13	1.48	.07
CAL YR 1967	TOTAL 17,891.97	MEAN 49.0	MAX 665	MIN .21	CFSM .81	IN 10.96						
WTR YR 1968	TOTAL 28,824.48	MEAN 78.8	MAX 3,190	MIN .24	CFSM 1.30	IN 17.66						

PEAK DISCHARGE (BASE, 1,400 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-02	1415	6.37	1,560	04-04	0415	7.82	2,390
12-21	1845	6.40	1,580	05-11	1115	6.38	1,570
02-02	0300	10.17	3,980	05-24	0400	12.81	6,310
03-31	1930	6.15	1,460	08-09	2215	10.73	4,420

3-3735. East Fork White River at Shoals, Ind.

Location.--Lat 38°40'02", long 86°47'32", in sec. 30, T. 3 N., R. 3 W., in first pier from left bank on U.S. Highway 50 bridge at Shoals, 400 ft upstream from Baltimore and Ohio Railroad bridge, 1 mile upstream from Beaver Creek, and at mile 107.6.

Drainage area.--4,927 sq mi (revised).

Records available.--June 1903 to July 1906, October 1908 to September 1916, June 1923 to September 1968. 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.--54 years (1903-5, 1909-16, 1923-68) 5,310 cfs.

Extremes.--Maximum discharge during year, 58,800 cfs May 30 (gage height, 29.44 ft); minimum, 371 cfs Oct. 8 (gage height, 2.16 ft). 1903-6, 1908-16, 1923-68: Maximum discharge, 160,000 cfs Mar. 28, 1913 (gage height, 42.2 ft), from rating curve extended above 100,000 cfs by logarithmic plotting; minimum, 44 cfs Oct. 6, 1935, as a result of filling Williams Reservoir.

Remarks.--Record good. Flow partially regulated by Monroe Reservoir (see sta. No. 3-3724).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	395	543	2,530	5,110	12,900	2,100	15,700	3,180	50,200	5,790	5,520	1,300
2	395	575	3,400	4,670	18,500	2,050	16,000	2,910	45,000	5,190	5,130	1,260
3	389	615	9,850	4,520	22,000	2,020	15,300	2,700	39,100	4,820	4,840	1,220
4	389	666	9,150	4,490	21,400	1,970	17,900	2,490	31,700	4,500	5,810	1,210
5	402	692	7,680	4,280	20,300	1,940	21,000	2,320	22,900	4,300	7,280	1,200
6	403	718	8,780	4,140	20,900	1,890	19,300	2,170	17,500	4,120	7,520	1,160
7	395	727	9,680	3,990	21,700	1,860	18,500	2,050	13,800	3,970	5,940	1,150
8	383	736	8,450	3,760	21,500	1,850	19,100	1,940	10,100	3,420	4,800	1,300
9	395	736	6,380	2,870	18,400	1,820	19,200	1,880	8,120	2,330	4,330	1,320
10	402	727	5,260	2,400	13,500	1,850	18,000	1,930	7,080	1,930	6,900	1,170
11	402	745	4,910	2,190	9,610	1,910	15,400	3,460	6,430	1,990	9,920	1,060
12	389	781	5,350	2,040	7,850	2,120	11,800	5,990	5,990	1,780	7,250	1,010
13	402	820	6,650	1,990	6,850	2,510	8,800	10,800	5,610	1,720	7,080	967
14	421	820	8,550	1,940	6,360	3,190	7,220	11,600	5,440	1,710	7,620	945
15	428	763	10,800	1,930	6,230	3,460	7,050	12,700	5,350	1,620	6,650	934
16	447	745	11,600	2,010	6,320	3,650	7,100	13,300	5,190	1,620	5,480	912
17	583	736	11,000	1,880	6,160	4,330	7,750	12,800	5,080	1,580	4,540	1,000
18	745	700	10,600	1,780	5,960	4,330	7,920	11,700	5,150	1,530	4,010	1,150
19	820	700	9,680	1,740	5,790	4,730	7,420	11,500	6,120	1,620	3,590	1,200
20	658	683	8,820	1,700	5,500	5,410	7,850	10,600	6,620	1,650	3,290	1,060
21	575	624	9,490	1,720	4,580	8,350	9,850	8,780	6,100	2,600	3,040	978
22	551	683	13,600	2,350	3,420	11,700	9,540	6,710	5,570	3,350	2,740	945
23	535	700	13,200	3,210	2,850	12,400	9,100	6,730	5,240	2,980	2,440	912
24	543	718	11,000	4,010	2,660	13,000	8,050	14,400	4,930	2,560	2,200	880
25	551	736	11,800	4,540	2,490	14,800	7,380	19,100	4,750	2,170	2,010	850
26	543	754	13,600	4,730	2,350	16,000	7,080	24,500	5,680	2,680	1,850	830
27	543	763	13,400	4,540	2,280	16,100	6,450	35,400	7,620	3,630	1,710	810
28	528	763	9,970	4,330	2,220	16,200	5,440	48,200	8,200	6,210	1,600	790
29	520	754	7,050	4,640	2,150	16,300	4,490	57,000	7,700	7,880	1,490	772
30	512	1,110	5,680	6,580	-----	15,900	3,740	58,200	6,580	7,120	1,400	763
31	520	-----	5,330	12,000	-----	14,900	-----	55,200	-----	5,920	1,350	-----
TOTAL	15,164	21,833	273,240	112,080	282,730	210,640	339,430	466,350	364,850	104,290	139,330	31,058
MEAN	489	728	8,814	3,615	9,749	6,795	11,310	15,040	12,160	3,364	4,495	1,035
MAX	820	1,110	13,600	12,000	22,000	16,300	21,000	58,200	50,200	7,880	9,920	1,320
MIN	383	543	2,530	1,700	2,150	1,820	3,740	1,880	4,750	1,530	1,350	763
CFSM	.10	.15	1.79	.73	1.98	1.38	2.30	3.05	2.47	.68	.91	.21
IN.	.11	.16	2.06	.84	2.14	1.59	2.57	3.52	2.76	.78	1.05	.23

CAL YR 1967 TOTAL 1,779,535 MEAN 4,875 MAX 19,900 MIN 383 CFSM .99 IN 13.42
WTR YR 1968 TOTAL 2,360,995 MEAN 6,451 MAX 58,200 MIN 383 CFSM 1.31 IN 17.81

PEAK DISCHARGE (BASE, 20,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-03	2000	15.25	22,400	05-30	0500	29.44	58,800
04-05	1200	14.56	21,300				

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 1968. 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, 2,880 cfs May 27 (gage height, 21.50 ft); minimum daily, 9.2 cfs Oct. 1, 2, 5; minimum gage height, 2.78 ft Oct. 2-5.

1964-68: Maximum discharge, 3,020 cfs Feb. 10, 1965 (gage height, 22.04 ft); minimum, 3.4 cfs July 20, 1965 (gage height, 2.47 ft) due to unusual regulation.

Maximum stage known, 28.1 ft, March 1964, from floodmarks.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	23	574	217	1,310	85	1,140	221	1,080	56	98	45
2	9.2	33	953	197	1,910	83	1,080	195	941	51	127	44
3	9.7	44	2,180	181	1,820	79	808	182	696	48	148	41
4	9.7	48	1,690	165	1,220	74	2,060	166	528	47	206	43
5	9.2	50	947	148	786	73	2,560	152	443	50	132	47
6	15	44	537	140	589	74	2,250	139	388	42	86	47
7	11	37	447	127	500	72	1,630	129	347	41	65	41
8	12	30	389	111	438	68	1,020	121	318	48	56	37
9	14	27	328	106	388	67	692	117	281	51	94	35
10	15	24	282	106	344	71	546	118	244	61	587	33
11	16	56	375	99	295	78	474	338	223	180	806	33
12	16	160	496	94	259	190	416	564	202	102	420	31
13	17	122	511	94	229	700	377	373	184	57	661	31
14	14	77	673	94	204	1,050	351	263	169	46	1,010	28
15	12	57	1,160	93	191	650	386	215	156	60	708	26
16	14	44	923	87	180	450	363	192	148	101	493	26
17	58	41	663	75	166	350	416	180	141	64	343	75
18	108	37	873	73	153	315	860	163	125	48	245	111
19	55	33	873	79	143	620	602	185	114	52	191	100
20	33	28	663	90	141	1,100	1,060	189	103	54	158	61
21	24	28	648	172	132	1,500	1,140	164	94	48	134	42
22	19	31	1,300	463	121	2,000	764	144	89	39	114	32
23	17	33	1,100	502	108	2,100	604	477	82	36	99	28
24	17	36	757	452	106	2,100	593	1,700	77	35	87	25
25	19	48	572	350	101	1,950	489	2,020	92	39	77	25
26	32	58	489	272	96	1,600	407	2,370	109	50	68	23
27	35	54	412	225	93	1,370	348	2,840	84	110	60	21
28	26	45	350	214	91	953	304	2,720	72	200	55	20
29	23	39	304	255	90	702	271	2,340	66	110	51	18
30	20	384	267	1,030	-----	569	243	1,980	60	65	48	17
31	19	-----	242	1,660	-----	544	-----	1,460	-----	53	45	-----
TOTAL	708.0	1,771	21,978	7,971	12,204	21,637	24,254	22,417	7,656	2,044	7,472	1,186
MEAN	22.8	59.0	709	257	421	698	808	723	255	65.9	241	39.5
MAX	108	384	2,180	1,660	1,910	2,100	2,560	2,840	1,080	200	1,010	111
MIN	9.2	23	242	73	90	67	243	117	60	35	45	17
CFSM	.08	.21	2.47	.90	1.47	2.43	2.82	2.52	.89	.23	.84	.14
IN.	.09	.23	2.85	1.04	1.58	2.80	3.14	2.90	.99	.26	.97	.15

CAL YR 1967 TOTAL 97,653.5 MEAN 268 MAX 2,850 MIN 8.6 CFSM .93 IN 12.65
WTR YR 1968 TOTAL 131,298.0 MEAN 359 MAX 2,840 MIN 9.2 CFSM 1.25 IN 17.03

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-03	1100	18.95	2,240	04-05	0300	20.41	2,600
02-02	2000	17.89	2,000	05-27	1300	21.50	2,880
03-23							
or 24	----	----	2,100				

3-3740. White River at Petersburg, Ind.

Location.--Lat 38°30'39", long 87°17'22", in SW¼ sec. 15, T. 1 N., R. 8 W., on left bank, 300 ft downstream from bridge on State Highway 61, three-eighths of a mile upstream from Prides Creek, 1 mile north of Petersburg, and at mile 47.7.

Drainage area.--11,125 sq mi (revised).

Records available.--October 1927 to September 1968. 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.--41 years, 11,230 cfs.

Extremes.--Maximum discharge during year, 96,600 cfs May 31 (gage height, 24.93 ft); minimum discharge, 1,080 cfs Oct. 5 (gage height, 1.09 ft).

1927-68: Maximum discharge, 183,000 cfs Jan. 22, 1937 (gage height, 28.3 ft, present datum, 31.58 ft site and datum then in use); minimum, 553 cfs Oct. 2, 1941 (gage height, 0.05 ft).

Maximum stage known, 29.5 ft (present site and datum) in March 1913, from floodmarks, by Corps of Engineers (discharge, 235,000 cfs, estimated).

Remarks.--Record good. Natural flow of stream affected by reservoirs. Record of water temperatures for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,130	1,530	3,520	12,900	26,000	5,530	26,500	8,720	92,000	11,300	9,090	3,390
2	1,130	1,560	5,580	12,000	35,100	5,380	27,500	7,820	83,000	9,810	9,200	3,270
3	1,130	1,610	12,200	11,200	43,400	5,240	28,300	7,250	70,500	8,680	10,100	3,170
4	1,110	1,760	15,900	10,500	50,000	5,070	31,100	6,800	61,600	7,920	12,300	3,120
5	1,100	1,950	17,600	9,840	57,200	4,930	34,700	6,240	54,600	7,430	10,600	3,100
6	1,140	2,100	17,400	9,880	59,600	4,820	37,400	5,870	46,300	7,000	10,700	3,050
7	1,140	2,150	17,100	9,230	60,200	4,740	40,300	5,560	37,400	6,610	10,500	2,950
8	1,130	2,120	17,300	7,900	59,600	4,660	42,400	5,290	28,000	6,320	9,090	2,920
9	1,160	2,050	16,200	6,870	57,300	4,620	44,600	5,100	21,800	5,820	7,840	2,990
10	1,270	1,970	14,100	6,230	51,800	4,640	45,500	4,980	17,800	5,050	8,840	2,990
11	1,280	1,970	12,900	5,720	41,500	4,720	42,600	5,750	15,700	4,750	12,800	2,840
12	1,250	2,070	14,300	5,510	29,800	5,410	34,500	8,870	14,200	4,400	13,100	2,670
13	1,300	2,050	15,700	5,380	21,700	6,230	24,800	16,100	12,900	4,230	13,400	2,570
14	1,270	2,090	18,700	5,240	17,500	6,410	19,500	18,000	11,800	4,080	12,600	2,510
15	1,230	2,100	22,500	5,140	15,300	7,100	17,000	17,700	11,100	4,010	13,500	2,440
16	1,250	1,990	23,600	5,020	14,500	9,030	16,100	17,900	10,700	4,020	12,400	2,420
17	1,830	1,890	23,600	4,980	14,200	11,700	15,900	17,900	10,400	3,820	10,300	2,600
18	2,150	1,910	23,700	4,920	13,700	13,900	17,600	18,200	10,800	3,770	8,820	2,940
19	2,070	1,850	22,700	4,760	13,200	13,700	17,400	18,600	11,100	3,770	8,350	3,130
20	2,470	1,750	21,200	4,630	12,800	14,800	18,800	17,800	11,300	3,670	7,450	3,220
21	2,600	1,740	19,800	4,700	12,100	20,000	20,700	16,500	11,300	3,710	6,770	2,960
22	2,300	1,730	22,600	5,410	11,000	23,400	21,700	14,500	10,600	4,160	6,260	2,740
23	2,030	1,710	24,600	7,070	9,500	25,000	20,500	13,200	9,920	4,700	5,780	2,570
24	1,850	1,750	25,100	8,890	7,820	25,900	18,300	17,400	9,490	4,570	5,330	2,460
25	1,740	1,790	24,800	10,400	6,960	27,000	16,200	26,200	9,440	5,040	4,930	2,370
26	1,640	1,770	26,000	11,200	6,380	27,400	14,600	36,000	9,560	4,970	4,600	2,290
27	1,620	1,800	27,800	11,000	6,120	28,100	13,500	47,600	10,900	5,290	4,290	2,240
28	1,610	1,770	28,600	10,700	5,920	28,500	12,400	68,000	12,500	6,840	4,050	2,240
29	1,610	1,800	26,300	12,500	5,750	28,100	11,100	88,200	12,600	9,270	3,840	2,210
30	1,540	2,610	20,400	17,000	-----	26,900	9,800	94,600	12,300	10,800	3,660	2,160
31	1,530	-----	15,100	22,000	-----	25,600	-----	96,000	-----	10,000	3,500	-----
TOTAL	47,610	56,940	596,900	268,720	765,950	428,530	741,300	738,650	741,610	185,810	263,990	82,530
MEAN	1,536	1,898	19,250	8,668	26,410	13,820	24,710	23,830	24,720	5,994	8,516	2,751
MAX	2,600	2,610	28,600	22,000	60,200	28,500	45,500	96,000	92,000	11,300	13,500	3,390
MIN	1,100	1,530	3,520	4,630	5,750	4,620	9,800	4,980	9,440	3,670	3,500	2,160
CFSM	.14	.17	1.73	.78	2.37	1.24	2.22	2.14	2.22	.54	.77	.25
IN.	.16	.19	2.00	.90	2.56	1.43	2.48	2.47	2.48	.62	.88	.28

CAL YR 1967 TOTAL 3,769,790 MEAN 10,330 MAX 39,800 MIN 1,100 CFSM .93 IN 12.60
WTR YR 1968 TOTAL 4,918,540 MEAN 13,440 MAX 96,000 MIN 1,100 CFSM 1.21 IN 16.44

PEAK DISCHARGE (BASE, 30,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-07	1500	22.66	60,300	05-31	0700	24.93	96,600
04-10	0900	20.55	45,800				

WABASH RIVER BASIN

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 1968. 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.--7 years, 173 cfs.

Extremes.--Maximum discharge during year, 2,060 cfs Apr. 4 (gage height, 13.32 ft); minimum, 0.25 cfs Oct. 4, minimum gage height, 1.95 ft Oct. 1-4.

1961-68: Maximum discharge, 14,700 cfs Mar. 10, 1964 (gage height, 20.02 ft); minimum, no flow Oct. 30, 1964.

Flood of March 1913 reached a stage of 19.1 ft (discharge about 12,300 cfs) according to information by local resident.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.61	48	506	70	1,290	27	541	110	578	11	13	4.3
2	.52	54	829	61	1,350	27	618	97	586	8.7	38	4.3
3	.37	57	1,560	55	1,230	26	425	87	363	7.5	40	4.3
4	.36	59	1,430	50	712	26	1,590	83	208	6.3	29	6.3
5	.52	60	980	45	361	26	1,820	73	146	6.3	24	8.7
6	.76	56	271	42	263	27	1,510	63	108	5.4	19	46
7	.76	53	203	39	216	27	901	55	82	5.0	16	63
8	.92	43	166	36	191	27	364	50	66	23	12	22
9	1.0	37	139	35	171	28	241	50	54	80	20	13
10	1.0	36	170	33	146	32	187	54	43	112	14	8.1
11	1.0	53	238	33	112	56	155	301	37	59	52	6.3
12	1.0	103	432	35	90	294	132	685	31	31	129	5.4
13	1.2	115	340	36	83	613	114	518	27	17	103	4.3
14	1.7	77	629	39	67	458	127	242	24	12	385	3.5
15	2.0	48	1,030	44	59	323	373	181	20	9.9	308	3.1
16	2.6	32	779	40	52	285	264	163	21	13	146	2.9
17	14	24	429	38	48	298	327	144	21	7.5	78	45
18	30	21	801	37	45	268	1,120	140	20	6.9	48	99
19	19	16	825	41	42	216	734	222	29	43	33	80
20	15	14	504	53	38	261	878	233	25	19	22	48
21	25	12	506	120	36	1,230	933	183	18	16	16	24
22	22	11	1,160	389	33	1,460	616	139	15	11	13	15
23	21	13	996	600	30	1,490	467	258	13	7.5	11	8.7
24	16	13	506	461	29	1,370	473	625	17	6.9	8.7	5.8
25	20	13	305	285	28	1,210	314	676	92	5.8	7.5	5.0
26	33	15	270	196	27	1,170	235	1,340	48	6.9	6.3	3.7
27	41	14	216	156	27	958	202	1,820	23	12	5.0	3.5
28	39	13	166	168	27	561	169	1,790	18	40	4.7	2.9
29	41	13	125	261	27	361	144	1,690	17	25	4.3	2.1
30	41	263	97	1,060	-----	273	126	1,560	14	16	4.3	1.5
31	44	-----	83	1,390	-----	251	-----	957	-----	13	4.0	-----
TOTAL	437.32	1,386	16,691	5,948	6,830	13,679	16,100	14,589	2,764	643.6	1,613.8	549.7
MEAN	14.1	46.2	538	192	236	441	537	471	92.1	20.8	52.1	18.3
MAX	44	263	1,560	1,390	1,350	1,490	1,820	1,820	586	112	385	99
MIN	.36	11	83	33	27	26	114	50	13	5.0	4.0	1.5
CFSM	.08	.27	3.15	1.12	1.38	2.58	3.14	2.75	.54	.12	.30	.11
IN.	.10	.30	3.63	1.29	1.49	2.97	3.50	3.17	.60	.14	.35	.12

CAL YR 1967 TOTAL 67,068.00 MEAN 184 MAX 2,790 MIN .36 CFSM 1.07 IN 14.59
WTR YR 1968 TOTAL 81,231.42 MEAN 222 MAX 1,820 MIN .36 CFSM 1.30 IN 17.67

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-03	0800	12.46	1,610	03-23	0945	11.98	1,500
12-22	0900	9.76	1,210	04-04	2115	13.32	2,060
01-31	0215	11.32	1,410	05-27	0930	12.97	1,860

3-3752. Beaver Creek Reservoir near Jasper, Ind.

Location.--Lat 38°24'10", long 86°50'30", in NW¼ sec. 27, T. 1 S., R. 4 W., in intake tower of reservoir on Beaver Creek, 2.5 miles above mouth, and 5.2 miles east of Jasper.

Drainage area.--

Records available.--October 1955 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 471.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum contents during year, 2,825 acre-ft Feb. 2 (elevation, 29.28 ft); minimum contents, 2,215 acre-ft Nov. 7-10 (elevation, 26.19 ft).
1956-68: Maximum contents, 3,337 acre-ft May 8, 1961 (elevation, 31.67 ft); minimum contents, 1,388 acre-ft Dec. 31, 1963 (elevation, 21.22 ft).

Remarks.--Reservoir is formed by earth and rock fill dam. Releases normally controlled by 18-inch sluice gate into 18-inch concrete conduit through dam. Capacity at uncontrolled spillway elevation (28.1 ft) is 2,588 acre-ft. Reservoir is used for low-flow augmentation and recreation. Reservoir was put in operation on October 11, 1955.

Cooperation.--Capacity tables furnished by Indiana Department of Natural Resources.

Month-end elevation and contents, water year October 1967 to September 1968

Date	Elevation (feet)	Contents (acre-feet)	Change in contents (acre-feet)
Sept. 30.....	26.62	2,298	
Oct. 31.....	26.50	2,274	-24
Nov. 30.....	26.78	2,329	+55
Dec. 31.....	28.37	2,641	+312
Calendar year 1967.....	-	-	+157
Jan. 31.....	28.82	2,732	+91
Feb. 29.....	28.29	2,626	-106
Mar. 31.....	28.57	2,681	+55
Apr. 30.....	28.37	2,641	-40
May. 31.....	28.78	2,724	+83
June 30.....	28.17	2,602	-122
July 31.....	28.22	2,612	+10
Aug. 31.....	28.12	2,592	-20
Sept. 30.....	28.26	2,620	+28
Water year 1967-68	-	-	+322

WABASH RIVER BASIN

3-3755. Patoka River at Jasper, Ind.

Location.--Lat 38°24'49", long 86°52'36", in SE¼ sec. 20, T. 1 S., R. 4 W., on left bank, 0.3 mile upstream from unnamed outlet of Jasper Lake, 1.0 mile downstream from Coon Seltz bridge, 1.2 miles downstream from Beaver Creek, and 3.3 miles northeast of Jasper

Drainage area.--257 sq mi.

Records available.--November 1947 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 446.19 ft above mean sea level, datum of 1929. Sept. 19, 1956 to Sept. 28, 1967, graphic water-stage recorder at same site and datum. Prior to Sept. 18, 1956, wire-weight gage at bridge 5.6 miles downstream at datum 0.34 ft lower (now used as a supplementary gage for high-water periods in excess of 1,500 cfs).

Average discharge.--20 years (1948-68), 343 cfs.

Extremes.--Maximum discharge during year, 2,720 cfs June 1; (gage height, 9.43 ft observed at supplementary gage); maximum gage height at base gage, 14.83 ft May 29, 30; minimum discharge, 0.07 cfs Oct. 1, 2 (gage height, 3.10 ft).
1947-68: Maximum discharge, 14,100 cfs Mar. 11, 1964; maximum gage height at base gage, 21.20 ft Mar. 11, 1964; no flow at times during 1948, 1952-56, 1963-65.
Maximum stage known, 15.9 ft (at former site) in March 1913, from floodmark furnished by local residents (discharge, 16,000 cfs).

Remarks.--Record fair 330 to 1,500 cfs, poor above and below. Flow partially regulated by Beaver Creek Reservoir (see sta. No. 3-3752).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	12	595	100	1,310	53	657	125	2,710	16	25	5.2
2	3.8	21	848	89	1,600	43	778	106	2,440	14	22	4.7
3	2.2	24	1,150	79	1,920	43	729	92	2,020	12	38	4.9
4	.29	19	1,270	70	2,120	41	1,200	81	862	9.9	106	5.8
5	.15	21	1,420	63	2,100	40	1,370	75	376	9.1	60	9.6
6	4.3	24	1,450	58	1,210	41	1,520	65	196	11	38	11
7	2.3	27	1,480	53	645	42	1,790	56	124	9.2	30	16
8	.82	21	723	49	363	43	2,020	49	86	7.9	24	52
9	1.5	18	314	47	279	45	1,850	45	63	15	23	33
10	.82	15	225	45	229	52	699	45	50	96	77	20
11	.29	21	348	46	178	66	334	87	40	214	170	14
12	4.6	68	555	46	145	178	232	477	33	103	92	9.4
13	3.0	115	638	49	144	621	187	683	29	60	155	7.0
14	1.0	124	705	51	123	722	168	488	26	38	461	5.6
15	.65	98	1,060	55	98	550	237	287	24	27	628	4.9
16	1.1	65	1,170	56	92	428	388	208	24	39	371	4.7
17	11	48	1,160	53	87	406	365	186	24	55	178	29
18	13	40	1,050	50	84	384	966	162	23	28	97	160
19	16	35	1,070	50	75	333	1,160	203	21	38	63	231
20	15	32	1,050	56	68	482	1,240	294	24	54	45	127
21	14	29	874	87	66	1,120	1,240	271	26	41	34	85
22	10	27	1,020	319	59	1,320	1,240	200	21	29	27	57
23	11	26	1,160	677	53	1,440	1,000	223	17	22	22	40
24	10	26	1,220	826	46	1,590	698	682	15	17	18	27
25	9.1	28	965	634	43	1,880	528	880	36	14	15	19
26	7.3	30	527	414	41	2,060	377	1,190	124	13	12	15
27	7.1	30	377	276	42	2,060	281	1,370	57	13	8.9	12
28	8.1	29	286	248	44	1,920	225	1,580	28	13	8.2	10
29	17	27	217	348	46	1,300	180	1,880	22	26	6.8	9.3
30	14	198	168	904	-----	784	147	2,370	19	37	5.8	8.3
31	12	-----	120	1,200	-----	458	-----	2,640	-----	26	5.3	-----
TOTAL	231.50	1,298	25,215	7,098	13,310	20,545	23,806	17,100	9,560	1,107.1	2,866.0	1,037.4
MEAN	6.50	43.3	813	229	459	663	794	552	319	35.7	92.5	34.6
MAX	17	198	1,480	1,700	2,120	2,060	2,020	2,640	2,710	214	628	231
MIN	.08	12	120	45	41	40	147	45	15	7.9	5.3	4.7
CFSM	.03	.17	3.16	.89	1.79	2.58	3.09	2.15	1.24	.14	.36	.13
IN.	.03	.19	3.65	1.03	1.93	2.97	3.44	2.47	1.38	.16	.41	.15
CAL YR 1967	TOTAL 102,386.84	MEAN 281	MAX 3,390	MIN .08	CFSM 1.09	IN 14.82						
WTR YR 1968	TOTAL 123,144.00	MEAN 336	MAX 2,710	MIN .08	CFSM 1.31	IN 17.82						

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 right bank at upstream side of bridge on State Highway 56, 2.15 miles west of intersection of State Highways 56 and 257, 2.5 miles southwest of Otwell, and 6.2 miles east of junction of State Highways 56 and 61.

Drainage area.--21.4 sq mi.

Records available.--October 1964 to September 1968.

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, 1,150 cfs Feb. 2 (gage height, 11.56 ft); no flow for many days.

1965-68: Maximum discharge, 1,320 cfs Feb. 9 or 10, 1965 (gage height, 11.89 ft, from recorded range in stage); no flow at times each year.

Maximum stage known, 12.58 ft in March 1964.

Remarks.--Record poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	.02	1.2	20	3.8	338	2.6	62	2.3	27	.87	16	0	
2	0	2.2	374	3.6	682	2.6	21	2.0	15	.80	3.4	0	
3	0	2.2	188	3.4	41	2.6	27	1.9	7.5	.70	14	0	
4	0	3.1	20	3.3	24	2.6	538	1.7	5.0	.45	5.2	0	
5	0	2.9	13	3.1	19	2.6	30	1.5	3.8	.33	1.9	.05	
6	0	2.0	12	3.0	14	2.6	19	1.4	3.3	.28	1.3	.33	
7	0	1.7	15	2.9	12	2.6	15	1.3	3.0	.20	.97	.11	
8	0	1.4	10	2.8	10	3.0	12	1.2	2.7	.16	.78	.05	
9	.39	1.2	7.8	2.7	8.0	3.3	9.5	1.3	2.5	.13	.78	0	
10	.69	1.0	59	2.7	7.0	4.1	8.2	1.5	2.2	.44	.99	0	
11	.37	4.0	54	2.6	6.0	13	6.8	34	2.0	14	.97	0	
12	.28	9.2	92	2.6	5.2	69	6.0	14	1.8	2.3	.70	0	
13	.25	3.8	23	2.6	4.6	36	5.2	6.4	1.7	1.4	6.4	0	
14	.23	2.6	183	2.6	4.4	28	8.4	5.9	1.6	.92	29	0	
15	.19	2.0	64	2.8	4.2	23	13	4.0	1.8	51	6.4	0	
16	.28	1.7	20	2.9	4.0	33	7.2	9.6	2.7	23	2.1	0	
17	23	1.5	72	2.8	3.9	21	35	4.3	2.8	4.2	1.4	4.2	
18	8.1	1.4	84	2.8	3.7	14	28	5.1	2.6	2.9	1.1	3.5	
19	2.9	1.3	23	3.2	3.6	12	13	20	2.2	5.6	.93	2.2	
20	1.6	1.1	21	4.6	3.4	237	98	6.1	2.0	2.4	.85	.87	
21	.95	1.0	81	6.0	3.3	416	18	4.0	1.8	1.5	.78	.50	
22	.78	1.1	69	9.6	3.1	56	11	2.9	1.6	1.2	.70	.30	
23	.64	1.1	16	11	3.0	60	8.0	86	1.6	1.0	.52	.23	
24	.71	1.2	9.7	9.8	2.8	103	5.6	42	1.8	.80	.33	.10	
25	.90	1.7	9.0	6.7	2.6	66	4.5	134	18	.70	.07	.07	
26	1.3	2.0	9.6	5.6	2.6	26	4.0	232	4.3	.84	.03	.07	
27	1.2	1.7	7.5	9.3	2.6	18	3.5	100	2.3	1.3	.01	.05	
28	1.0	1.3	6.4	32	2.6	15	3.0	19	1.8	1.3	0	.03	
29	.91	.99	5.6	86	2.6	12	2.7	99	1.3	.81	0	.01	
30	.81	66	4.7	314	-----	14	2.5	74	1.0	.52	0	0	
31	.91	-----	4.1	45	-----	107	-----	11	-----	.70	0	-----	
TOTAL	48.41	125.59	1,577.4	595.8	1,223.2	1,407.6	1,025.1	879.4	128.7	166.31	97.61	12.67	
MEAN	1.56	4.19	50.9	19.2	42.2	45.4	34.2	28.4	4.29	5.36	3.15	.42	
MAX	23	66	374	314	682	416	538	232	27	51	29	4.2	
MIN	0	.99	4.1	2.6	2.6	2.6	2.5	1.2	1.0	.13	0	0	
CFSM	.07	.20	2.38	.90	1.97	2.12	1.60	1.33	.20	.25	.15	.02	
IN.	.08	.22	2.74	1.04	2.13	2.45	1.78	1.53	.22	.29	.17	.02	
CAL YR 1967	TOTAL	6,590.89		MEAN	18.1	MAX	532	MIN	0	CFSM	.84	IN	11.45
WTR YR 1968	TOTAL	7,287.79		MEAN	19.9	MAX	682	MIN	0	CFSM	.93	IN	12.67

PEAK DISCHARGE (BASE, 350 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-02	1545	10.78	602	03-21	0300	10.84	816
01-30	0815	10.22	619	04-04	0545	11.13	938
02-02	0200	11.56	1,150	05-25	2315	10.08	548

WABASH RIVER BASIN

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 1968. Discharge measurements and gage readings June 1961 to Sept. 1963, obtained by Indiana Flood Control and Water Resources Commission are available in the district office.

Gage.--Digital water-stage recorder. Datum of gage is 400.00 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Nov. 21, 1963, wire-weight gage on downstream side of bridge 65 ft downstream. Nov. 21, 1963 to Dec. 1, 1966, graphic water-stage recorder at present site. All gages at same datum.

Average discharge.--5 years, 549 cfs.

Extremes.--Maximum discharge during year, 2,840 cfs Feb. 6 (gage height, 22.66 ft); minimum, 4.0 cfs July 7 (gage height, 5.90 ft), regulation caused by construction work above station.

1963-68: Maximum discharge, 15,500 cfs Mar. 13, 1964 (gage height, 28.84 ft); minimum daily, 0.5 cfs Aug. 5, 1964.

Maximum stage known, 28.9 ft in January 1937, from floodmarks, information from Indiana Flood Control and Water Resources Commission.

Remarks.--Record poor. An average of 0.13 cfs is diverted for municipal water supply 100 ft above gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	25	900	882	1,690	100	2,460	414	1,900	62	142	5.6
2	5.0	30	1,200	550	2,530	101	2,380	321	2,090	39	136	5.8
3	5.0	53	1,300	418	2,490	99	2,270	253	2,290	27	107	5.6
4	5.0	120	1,400	319	2,590	97	2,670	202	2,450	19	79	5.5
5	5.1	152	1,450	234	2,740	98	2,760	160	2,530	19	65	22
6	6.2	163	1,500	223	2,810	100	2,650	130	2,520	15	66	165
7	6.1	146	1,500	179	2,800	101	2,580	112	2,410	6.0	87	271
8	6.5	121	1,500	121	2,710	103	2,590	99	2,180	7.8	72	113
9	7.2	101	1,500	139	2,560	107	2,590	89	1,870	8.4	50	44
10	6.1	87	1,550	125	2,350	121	2,510	80	1,560	70	40	20
11	6.0	124	1,600	117	2,090	154	2,380	172	1,260	381	32	28
12	6.5	287	1,650	114	1,780	311	2,240	317	854	395	47	30
13	8.1	300	1,710	117	1,480	637	2,090	449	492	299	148	21
14	9.3	440	1,770	120	1,160	847	1,900	599	278	188	222	15
15	8.9	350	1,790	128	801	937	1,680	672	164	124	343	11
16	9.2	280	1,700	135	560	974	1,470	593	89	126	534	9.2
17	124	230	1,690	140	440	951	1,320	464	67	160	548	15
18	216	170	1,780	143	356	865	1,220	370	62	114	430	278
19	318	150	1,750	143	277	758	1,140	360	56	142	286	707
20	212	130	1,740	154	218	938	1,240	386	49	90	182	712
21	122	110	1,810	183	182	1,640	1,290	400	40	82	118	512
22	59	80	1,930	322	136	1,670	1,280	407	35	74	77	322
23	35	70	1,890	596	140	1,650	1,270	511	33	63	48	214
24	28	70	1,850	822	126	1,700	1,260	833	35	53	31	128
25	32	70	1,830	929	114	1,850	1,260	973	46	37	22	87
26	21	75	1,800	944	102	2,000	1,250	1,450	90	34	12	58
27	5.5	65	1,750	882	103	2,100	1,190	1,710	217	36	9.5	47
28	67	61	1,700	820	102	2,230	1,030	1,590	218	98	9.2	48
29	102	58	1,620	938	102	2,300	798	1,590	157	127	9.2	36
30	45	300	1,480	1,400	-----	2,360	565	1,640	98	88	7.2	26
31	28	-----	1,250	1,570	-----	2,420	-----	1,730	-----	50	5.8	-----
TOTAL	1,519.7	4,418	49,890	13,907	35,539	30,319	53,333	19,076	26,140	3,034.2	3,963.9	3,961.7
MEAN	49.0	147	1,609	449	1,225	978	1,778	615	871	97.9	128	132
MAX	318	440	1,930	1,570	2,810	2,420	2,760	1,730	2,530	395	548	712
MIN	5.0	25	900	114	102	97	565	80	33	6.0	5.8	5.5
CFSM	.08	.24	2.67	.74	2.03	1.62	2.95	1.02	1.44	.16	.21	.22
IN.	.09	.27	3.08	.86	2.19	1.87	3.29	1.18	1.61	.19	.24	.24
CAL YR 1967	TOTAL 218,815.1	MEAN 599	MAX 5,220	MIN 5.0	CFSM .99	IN 13.50						
WTR YR 1968	TOTAL 245,101.5	MEAN 670	MAX 2,810	MIN 5.0	CFSM 1.11	IN 15.12						

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 right bank at 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 1968.

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, 1,130 cfs Apr. 4 (gage height, 10.78 ft); minimum, 3.2 cfs Oct. 1, 2, 5; minimum gage height, 1.22 ft Aug. 26, 27.

1965-68: Maximum discharge, 1,320 cfs Feb. 10, 1965 (gage height, 12.32 ft); minimum, 1.8 cfs Aug. 25, 1965; minimum gage height, 1.21 ft Aug. 25, 1965, Sept. 8, 1966.

Maximum stage known, 13.09 ft March 1964, from floodmark.

Remarks.--Record fair except for the winter period, which is poor. Some slight regulation by coal-washing operation and strip mining above gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	24	70	24	322	18	95	21	84	9.9	84	8.3
2	3.8	18	426	23	486	18	64	19	59	10	16	8.3
3	3.8	21	168	22	139	18	101	18	41	9.6	13	7.4
4	3.8	17	70	21	93	18	521	17	32	9.1	11	63
5	11	11	61	20	75	18	126	17	27	8.9	9.2	25
6	12	9.7	64	19	64	18	85	16	24	8.1	9.1	10
7	5.8	8.7	59	18	57	18	73	15	22	8.0	8.0	8.5
8	11	7.4	45	18	51	20	62	15	21	9.4	7.4	8.0
9	7.4	7.8	40	17	46	22	53	19	20	10	7.7	7.0
10	5.4	7.8	142	17	42	30	50	21	18	91	12	7.3
11	4.4	99	4.7	17	38	28	47	101	17	25	9.9	6.8
12	4.4	43	123	17	36	108	43	45	16	15	8.0	6.0
13	7.8	25	67	17	33	66	41	34	14	12	9.4	6.3
14	8.7	21	260	17	31	51	52	31	14	11	29	5.8
15	6.2	15	137	20	29	45	51	23	14	15	17	6.5
16	15	12	73	19	28	57	42	21	19	14	15	7.1
17	99	13	158	18	26	43	79	22	26	11	11	3.5
18	20	12	171	18	25	36	66	24	17	25	10	36
19	11	11	77	19	24	36	54	42	14	24	9.3	11
20	8.2	11	110	29	23	248	117	24	12	11	8.5	8.4
21	7.8	11	186	43	22	450	58	20	12	8.8	8.1	7.3
22	7.8	11	143	70	21	183	47	18	12	8.1	7.6	6.9
23	7.4	12	65	76	20	146	45	177	12	8.2	7.3	6.7
24	18	13	55	63	19	186	36	83	11	7.9	7.5	6.7
25	16	13	64	45	19	164	40	182	48	7.7	7.6	16
26	9.2	10	53	41	18	100	36	262	19	18	6.6	7.2
27	7.4	9.2	43	41	18	71	31	110	14	46	6.3	6.3
28	7.8	9.2	39	76	18	59	26	62	13	15	7.0	5.4
29	7.0	10	33	166	18	52	23	141	11	9.8	6.8	5.3
30	6.6	232	28	380	-----	48	21	127	11	7.9	6.2	5.5
31	9.7	-----	26	136	-----	103	-----	60	-----	14	6.1	-----
TOTAL	357.5	724.8	3,069.7	1,527	1,840	2,478	2,185	1,787	674	488.3	381.6	355.0
MEAN	11.5	24.2	99.0	49.3	63.4	79.9	72.8	57.6	22.5	15.8	12.3	11.8
MAX	99	232	426	380	486	450	521	262	84	81	84	63
MIN	3.8	7.4	4.7	17	18	18	21	15	11	7.7	6.1	5.3
CFSM	.27	.56	2.30	1.15	1.48	1.86	1.69	1.34	.52	.37	.29	.28
IN.	.31	.63	2.65	1.32	1.59	2.14	1.89	1.55	.58	.42	.33	.31

CAL YR 1967 TOTAL 14,297.0 MEAN 39.2 MAX 489 MIN 3.2 CFSM .91 IN 12.37
WTR YR 1968 TOTAL 15,867.9 MEAN 43.4 MAX 521 MIN 3.8 CFSM 1.01 IN 13.72

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-02	1415	9.46	950	03-21	0200	9.27	995
01-30	0830	6.39	579	04-04	0415	10.78	1,130
02-02	0130	10.20	1,050	05-25	2200	7.54	718

WABASH RIVER BASIN

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 1968. Published as "at Patoka" August 1934 to September 1940. Records published for both sites October 1939 to September 1940 (monthly discharge only at present site, for October, November 1939, published in WSP 1305).

Gage.--Digital water-stage recorder and concrete control. Datum of gage is 394.14 ft above mean sea level, datum of 1929, Parkersburg-Uniontown supplementary adjustment of 1944 (levels by Indiana Flood Control and Water Resources Commission). Aug. 29, 1934 to Sept. 30, 1940, chain gage at site 3 miles downstream at datum 387.15 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Dec. 1, 1939 to Jan. 21, 1941, staff gage, Jan. 22, 1941 to Aug. 17, 1964, graphic water-stage recorder at present site and datum.

Average discharge.--34 years, 964 cfs.

Extremes.--Maximum discharge during year, 3,540 cfs Apr. 7 (gage height, 13.83 ft); minimum, 12 cfs Oct. 4, 5 (gage height, 0.80 ft). 1934-68: Maximum discharge, 18,700 cfs Jan. 26, 1937 (gage height, 26.80 ft, site and datum then in use); no flow Aug. 29 to Sept. 12, 1936.

Remarks.--Record fair. Record of suspended sediment loads for water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	67	1,020	2,230	2,100	174	2,720	1,150	2,240	121	1,040	22
2	16	112	1,450	2,110	2,720	178	2,780	855	2,300	88	558	21
3	15	117	1,690	1,900	2,820	178	2,850	582	2,320	71	284	21
4	14	166	1,730	1,540	2,970	170	3,280	410	2,320	60	211	21
5	16	178	1,830	1,040	3,100	170	3,400	322	2,310	48	139	75
6	49	166	1,900	632	3,180	174	3,500	258	2,310	48	116	91
7	46	158	1,940	480	3,200	170	3,530	218	2,330	41	123	240
8	24	144	1,950	458	3,210	166	3,500	182	2,370	29	122	215
9	28	126	1,940	310	3,220	178	3,420	166	2,390	32	107	117
10	38	115	1,980	206	3,200	210	3,330	158	2,400	35	84	71
11	29	198	2,050	194	3,160	290	3,240	338	2,380	297	91	48
12	20	401	2,150	182	3,100	634	3,170	538	2,330	426	71	49
13	19	413	2,270	178	3,020	933	3,090	522	2,190	405	128	58
14	20	524	2,390	186	2,920	1,000	3,020	618	1,960	316	300	50
15	33	443	2,510	194	2,780	1,090	2,960	724	1,460	275	306	40
16	30	318	2,550	194	2,580	1,230	2,870	787	759	449	481	33
17	668	266	2,620	182	2,300	1,250	2,800	755	356	215	605	29
18	562	230	2,760	210	1,930	1,250	2,700	600	218	231	589	98
19	326	190	2,730	206	1,400	1,230	2,570	530	158	526	446	441
20	294	158	2,660	218	869	1,540	2,630	494	129	252	294	619
21	194	135	2,790	274	528	1,970	2,460	475	109	142	181	625
22	115	120	2,960	463	314	2,000	2,300	473	90	123	124	467
23	80	112	2,850	688	254	2,100	2,150	722	83	109	93	295
24	60	107	2,780	821	238	2,240	2,010	1,020	77	94	72	188
25	90	115	2,720	886	218	2,320	1,890	1,100	135	81	57	128
26	85	115	2,610	977	198	2,450	1,790	1,290	210	93	49	105
27	57	107	2,570	1,060	194	2,480	1,700	1,380	190	140	38	83
28	37	98	2,510	1,170	190	2,500	1,620	1,540	284	167	31	73
29	83	96	2,440	1,380	186	2,510	1,520	1,770	251	149	29	68
30	98	778	2,380	1,780	-----	2,520	1,380	1,960	177	142	26	58
31	67	-----	2,320	1,890	-----	2,590	-----	2,120	-----	263	25	-----
TOTAL	3,223	6,273	71,000	24,239	56,099	37,895	80,180	24,057	36,836	5,468	6,820	4,449
MEAN	104	209	2,290	782	1,934	1,222	2,673	776	1,228	176	220	148
MAX	668	778	2,960	2,230	3,220	2,590	3,530	2,120	2,400	526	1,040	625
MIN	14	67	1,020	178	186	166	1,380	158	77	29	25	21
CFSM	.13	.26	2.81	.96	2.37	1.50	3.28	.95	1.51	.22	.27	.18
IN.	.15	.29	3.24	1.11	2.56	1.73	3.66	1.10	1.68	.25	.31	.20
CAL YR 1967	TOTAL 308,676		MEAN 846		MAX 5,120		MIN 14		CFSM 1.04		IN 14.09	
WTR YR 1968	TOTAL 356,539		MEAN 974		MAX 3,530		MIN 14		CFSM 1.20		IN 16.26	

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 1968. 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.--41 years, 26,150 cfs.

Extremes.--Maximum discharge during year, 154,000 cfs June 1 (gage height, 26.62 ft); minimum, 3,690 cfs Oct. 5, 8 (gage height, 0.57 ft).

1927-68: 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, 1884-68: Maximum discharge, 428,000 cfs (from rating curve extended above 310,000 cfs) Mar. 30, 1913, (gage height, 31.0 ft, present site and datum).

Remarks.--Record good. Natural flow of stream affected by storage reservoirs and power development.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3800	4,850	8,690	82,900	64,200	18,200	53,900	21,700	154,000	39,000	27,100	8,990
2	3830	4,980	10,300	74,300	75,900	17,500	54,700	19,900	152,000	38,100	27,700	8,600
3	3860	5,200	17,000	66,200	87,100	16,900	53,400	18,300	145,000	35,600	29,800	8,240
4	3780	5,370	29,300	60,000	97,400	16,400	57,300	17,000	136,000	32,200	31,200	8,130
5	3750	5,660	38,600	51,400	110,000	15,900	65,200	15,900	123,000	28,500	26,900	8,020
6	3880	5,980	40,600	41,000	122,000	15,400	69,500	15,000	110,000	25,100	27,800	8,010
7	3880	6,280	41,400	32,500	133,000	15,000	72,600	14,400	94,900	22,200	34,300	7,830
8	3880	6,540	43,400	27,600	140,000	14,900	75,500	13,800	79,600	20,100	36,600	7,710
9	3880	6,670	45,600	24,000	143,000	14,600	77,400	13,200	63,100	18,500	34,800	7,560
10	3880	6,570	46,600	20,600	142,000	14,500	78,100	13,100	49,700	16,900	30,000	7,600
11	3970	6,630	45,800	19,800	137,000	14,500	78,700	15,200	40,800	15,500	28,600	7,450
12	3,940	6,630	46,100	18,900	126,000	15,200	78,000	18,500	35,900	15,200	31,400	7,170
13	3,940	6,600	48,300	18,700	113,000	16,900	72,600	23,900	32,800	14,900	32,500	6,910
14	4,000	6,500	51,300	18,200	96,400	17,500	60,800	30,000	30,000	14,100	31,000	6,680
15	4,020	6,470	55,900	17,500	80,800	18,000	48,500	29,700	27,600	13,300	29,200	6,590
16	4,110	6,370	59,100	16,900	70,000	22,100	40,900	29,400	25,600	13,100	27,500	6,520
17	5,170	6,240	61,300	16,400	63,000	29,900	37,500	30,000	24,100	12,300	24,400	6,410
18	6,990	5,890	63,500	16,300	58,000	32,600	36,600	32,400	25,300	11,700	21,200	6,740
19	7,060	5,760	64,600	16,000	53,500	32,800	37,000	39,900	28,400	11,500	19,000	7,120
20	6,830	5,630	64,000	15,600	46,700	35,500	40,900	43,700	28,400	11,100	20,700	7,580
21	6,960	5,560	62,300	15,500	39,300	44,700	46,500	45,100	26,900	10,700	24,500	7,630
22	6,700	5,630	61,800	16,700	32,700	51,100	47,500	45,500	25,100	10,400	24,700	7,430
23	6,110	5,590	64,000	19,300	28,200	53,000	45,000	46,100	23,300	10,700	22,000	7,300
24	5,790	5,590	68,000	23,800	24,700	52,300	40,400	49,600	23,200	11,100	18,700	7,440
25	5,500	5,790	76,400	27,800	21,900	51,500	36,000	58,300	25,100	12,000	16,000	7,370
26	5,270	5,920	86,600	30,000	20,600	50,900	32,500	70,300	24,700	12,800	14,000	7,360
27	5,040	5,790	93,900	30,200	20,100	50,200	29,900	82,100	27,000	13,800	12,600	7,280
28	4,850	5,690	98,100	30,000	19,300	50,100	27,700	93,000	32,700	15,700	11,600	7,190
29	4,780	5,660	101,000	34,100	18,700	50,700	25,700	109,000	36,800	19,000	10,800	7,110
30	4,780	6,700	100,000	45,500	-----	51,500	23,700	130,000	38,500	21,600	10,000	6,890
31	4,680	-----	93,900	56,500	-----	52,100	-----	144,000	-----	22,100	9,410	-----
TOTAL	143,910	178,740	1,787.4M	984,200	2,184.5M	952,400	1,544.0M	1,328.0M	1,689.5M	568,800	746,010	222,860
MEAN	4804	5,958	57,660	31,750	75,330	30,720	51,470	42,840	56,320	18,350	24,060	7,429
MAX	7,060	6,700	101,000	82,900	143,000	53,000	78,700	144,000	154,000	39,000	36,600	8,990
MIN	3,750	4,850	8,690	15,500	18,700	14,500	23,700	13,100	23,200	10,400	9,410	6,410
CFSM	.17	.21	2.02	1.11	2.63	1.07	1.80	1.50	1.97	.64	.84	.26
IN.	.20	.23	2.32	1.28	2.84	1.24	2.01	1.73	2.20	.74	.97	.29
CAL YR 1967	TOTAL	9,459,790	MEAN 25,920	MAX 101,000	MIN 3,640	CFSM .91	IN 12.31					
WYR YR 1968	TOTAL	12,335,320	MEAN 33,700	MAX 154,000	MIN 3,750	CFSM 1.18	IN 16.05					

WABASH RIVER BASIN

3-3780. Bonpas Creek at Browns, Ill.

Location.--Lat 38°22'50", long 87°58'35", in SW¼SE¼ sec. 33, T. 1 S., R. 14 W., at Browns, on left bank 30 ft upstream from concrete dam of Albion municipal water plant, 100 ft upstream from Nigger Creek, 300 ft upstream from bridge on Browns road, and 0.2 mile upstream from Southern Railway bridge.

Drainage area.--228 sq mi.

Records available.--October 1940 to September 1968.

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.--28 years, 210 cfs.

Extremes.--Maximum discharge during year, 2,340 cfs Feb. 2 (gage height, 16.09 ft); no flow Sept. 28-30.
1940-68: Maximum discharge, 7,500 cfs May 9, 1961 (gage height, 24.04 ft); no flow at times in most years.

Remarks.--Record good except those for winter period, which is 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.50	2.8	420	35	1,670	13	588	27	206	6.0	774	1.4
2	.83	3.2	421	29	2,280	13	570	24	104	3.7	1,150	1.4
3	.46	5.1	528	25	2,200	13	499	21	74	2.7	1,500	1.0
4	.25	5.6	479	21	2,000	11	1,150	20.0	33	2.4	1,350	1.7
5	.46	7.5	328	19	1,630	11	1,290	17	30	2.0	1,090	6.0
6	1.2	6.8	195	17	1,160	12	1,420	15	46	2.0	769	16
7	.78	5.6	206	15	758	13	1,200	13	42	2.4	353	7.9
8	.83	5.6	176	14	350	13	832	12	38	2.0	54	3.7
9	.25	4.0	99	13	250	15	430	12	17	1.7	66	2.0
10	.20	3.6	118	13	180	18	217	10	11	1.0	384	1.4
11	.38	5.1	368	13	130	28	107	127	8.6	1.0	83	1.0
12	.76	9.6	502	14	100	201	60	233	6.6	1.0	29	1.4
13	.68	10	496	14	80	359	49	183	5.3	1.4	19	1.4
14	.69	14	544	15	60	338	45	98	4.0	2.4	28	1.0
15	.50	13	664	15	52	367	54	64	3.7	3.0	24	1.0
16	2.1	9.2	631	16	42	725	62	54	3.3	76	17	1.4
17	182	7.1	587	16	24	782	104	196	4.7	110	17	1.0
18	316	5.2	780	16	20	838	232	217	3.7	44	19	1.7
19	222	3.8	720	17	20	817	251	197	3.3	18	13	.70
20	41	3.3	600	19	20	1,110	1,130	151	3.3	7.9	8.6	1.0
21	8.2	3.2	789	76	15	1,350	1,320	86	2.7	4.0	6.6	1.4
22	4.0	3.3	1,010	336	13	1,400	1,370	56	2.7	2.7	4.7	.70
23	2.1	3.4	963	413	12	1,250	1,200	286	2.4	1.7	5.3	.52
24	1.5	3.4	939	408	11	966	855	483	2.4	1.0	3.3	.70
25	1.8	3.5	820	320	11	660	439	520	58	1.0	2.7	.70
26	5.6	3.3	636	174	9.9	362	174	650	104	21	2.4	.35
27	4.5	3.2	347	93	12	201	72	632	56	130	2.0	1.7
28	3.2	3.1	133	322	12	100	47	576	31	66	1.7	0
29	2.1	3.4	71	615	13	74	37	432	17	34	1.7	0
30	2.1	329	60	1,190	-----	66	31	411	9.9	16	1.4	0
31	2.4	-----	45	1,490	-----	282	-----	378	-----	40	1.4	-----
TOTAL	809.37	488.9	14,675	5,793	13,134.9	12,408	15,835	6,201	933.6	608.0	7,780.8	58.64
MEAN	26.1	16.3	473	187	453	400	528	200	31.1	19.6	251	1.95
MAX	316	329	1,010	1,490	2,280	1,400	1,420	650	206	130	1,500	16
MIN	.20	2.8	45	13	9.9	11	31	10	2.4	1.0	1.4	0
CFSM	.11	.07	2.08	.82	1.99	1.76	2.32	.88	.14	.09	1.10	.009
IN	.13	.08	2.39	.94	2.14	2.02	2.58	1.01	.15	.10	1.27	.01
CAL YR 1967	TOTAL	56,501.13	MEAN	155	MAX	1,730	MIN	0	CFSM	.68	IN	9.22
WTR YR 1968	TOTAL	78,726.21	MEAN	215	MAX	2,280	MIN	0	CFSM	.94	IN	12.84

3-3785.5 Big Creek near Wadesville, Ind.

Location.--Lat 38°04'58", long 87°46'10", in SW¼ sec. 16, T. 5 S., R. 12 W., on left bank at downstream side of bridge on U.S. Highway 460 (S.R. 66), 0.6 mile northwest of Blairsville, and 1.6 miles southeast of Wadesville.

Drainage area.--104 sq mi.

Records available.--July 1965 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 370.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during year, 3,600 cfs Dec. 2 (gage height, 18.00 ft); no flow many days.
1965-68: Maximum discharge, 3,690 cfs July 11, 1967 (gage height, 18.13 ft); no flow at times each year.

Remarks.--Record poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	10	205	26	887	14	65	15	109	.64	646	.02
2	.10	18	2,260	22	2,590	14	50	13	66	.53	40	.02
3	.10	25	2,280	21	387	14	90	12	35	.44	4.1	.04
4	.10	37	246	18	143	14	1,100	10	21	.31	2.1	.08
5	7.0	22	125	14	102	14	600	8.9	15	.27	1.1	.10
6	109	15	110	16	80	14	157	8.3	12	.25	.74	.08
7	13	12	109	13	74	14	108	7.9	11	.23	.56	.04
8	6.6	9.9	68	11	62	15	83	7.6	9.3	.21	.42	.02
9	5.6	9.2	55	16	57	17	63	8.0	8.0	.20	141	.03
10	4.8	8.4	668	18	48	22	54	8.8	7.0	.20	1,360	.03
11	3.9	228	452	16	40	21	45	157	6.1	9.0	44	.02
12	3.1	127	565	15	37	105	39	88	5.4	2.1	12	.01
13	4.0	51	139	18	29	90	34	46	4.3	.59	6.1	0
14	6.8	33	1,420	19	27	45	42	68	3.9	7.6	27	0
15	4.7	24	598	19	25	36	49	42	3.6	5.2	25	0
16	44	17	161	16	24	54	35	27	3.4	3.7	4.6	.06
17	1,090	16	404	16	22	38	115	18	3.7	.51	2.1	.13
18	116	13	655	16	21	28	113	19	3.4	.92	1.1	1.5
19	25	11	170	18	20	30	59	62	2.8	4.9	.73	.55
20	13	9.9	132	23	19	350	123	23	2.3	.33	.50	.17
21	9.3	10	442	99	18	2,000	73	16	1.9	.15	.34	.09
22	7.2	10	667	220	17	800	48	15	1.6	.08	.27	.03
23	6.6	9.7	125	194	16	230	42	54	1.4	.04	.22	.10
24	15	9.0	100	109	15	140	31	77	1.1	.01	.19	.05
25	56	11	105	52	15	100	25	92	29	0	.18	1.6
26	14	9.5	102	36	14	90	24	197	13	.02	.11	.48
27	9.9	8.2	62	46	14	60	20	162	3.9	148	.07	.13
28	7.3	7.2	47	126	14	45	18	61	2.3	52	.05	.03
29	6.5	7.6	33	395	14	42	17	40	1.4	3.2	.03	0
30	6.0	1,290	29	1,920	-----	37	16	30	.88	1.2	.03	0
31	6.1	-----	27	415	-----	90	-----	21	-----	2.0	.02	-----
TOTAL	1,600.80	2,068.6	12,561	3,963	4,831	4,583	3,338	1,414.5	388.68	244.83	2,320.66	5.41
MEAN	51.6	69.0	405	128	167	148	111	45.6	13.0	7.90	74.9	.18
MAX	1,090	1,290	2,280	1,920	2,590	2,000	1,100	197	109	148	1,360	1.6
MIN	.10	7.2	27	11	14	14	16	7.6	.88	0	.02	0
CFSM	.50	.66	3.90	1.23	1.60	1.42	1.07	.44	.12	.08	.72	.002
IN.	.57	.74	4.49	1.42	1.73	1.64	1.19	.51	.14	.09	.83	.002

CAL YR 1967 TOTAL 35,123.85 MEAN 96.2 MAX 3,330 MIN .10 CFSM .93 IN 12.56
WTR YR 1968 TOTAL 37,319.48 MEAN 102 MAX 2,590 MIN 0 CFSM .98 IN 13.35

PEAK DISCHARGE (BASE, 2,400 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-02	2245	18.00	3,600	03-21	0930	17.52	2,690
01-30	1315	17.24	2,470	04-04	-----	18.15	3,250
02-02	0630	17.89	3,000	08-10	0715	17.22	2,450

WABASH RIVER BASIN

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 1968.

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.--29 years, 2,409 cfs.

Extremes.--Maximum discharge during year, 18,500 cfs Dec. 29; maximum gage height, 31.68 ft Dec. 30; minimum discharge, 34 cfs Sept. 3, 4.
1939-68: Maximum discharge, 46,900 cfs May 12, 1961; maximum gage height, 36.70 ft May 13, 1961; no flow Sept. 16-17, 1952, result of temporary dam upstream; minimum unregulated discharge, 0.6 cfs Sept. 9, 1953, July 31, 1954.

Remarks.--Record good except those for winter period, which is poor. There was no diversion through McHenry Slough during the year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	216	3,400	15,000	11,400	292	6,900	1,830	7,360	961	945	38
2	102	295	4,660	10,000	12,700	294	7,090	843	7,360	552	2,260	38
3	89	557	5,590	5,500	13,000	285	6,720	536	6,900	341	3,050	36
4	77	845	6,100	3,000	13,200	253	8,090	420	6,490	238	3,240	37
5	75	1,020	6,190	1,500	13,500	257	9,170	351	6,300	186	2,780	49
6	142	906	6,200	900	13,700	274	9,600	307	6,220	151	2,610	261
7	157	740	6,230	700	13,600	268	9,890	273	6,070	123	2,460	279
8	136	601	6,110	550	13,300	268	10,300	250	5,680	101	2,010	170
9	150	515	5,380	450	13,000	280	9,990	239	4,910	92	1,360	101
10	214	444	4,780	400	12,500	294	9,350	226	3,600	467	1,240	71
11	268	410	5,100	400	11,500	313	8,490	587	2,140	320	1,530	60
12	296	414	6,480	400	11,000	632	7,960	1,060	808	145	1,110	47
13	251	396	7,600	400	10,300	1,640	7,200	952	399	85	908	44
14	195	355	8,750	400	9,780	1,930	6,380	1,180	271	73	973	43
15	150	343	9,990	400	9,090	1,950	5,360	1,400	241	84	995	46
16	164	310	10,700	443	7,820	3,620	3,840	1,320	220	115	889	59
17	1,990	279	11,200	430	6,450	5,820	3,150	1,100	206	191	518	61
18	4,340	238	12,000	450	3,520	5,530	4,310	980	183	269	334	82
19	4,790	216	12,300	456	2,370	5,630	5,260	1,130	167	290	273	69
20	4,360	205	12,500	480	1,060	7,610	7,450	1,090	155	249	224	65
21	2,940	197	12,600	680	667	9,310	9,370	928	165	190	179	62
22	1,700	191	13,400	1,770	486	10,500	9,400	716	171	143	148	63
23	1,070	175	13,700	3,590	392	10,800	10,300	653	161	103	121	63
24	650	163	13,900	4,500	371	10,900	10,600	1,480	144	79	105	61
25	484	163	14,500	4,480	364	10,700	10,400	3,090	423	63	93	63
26	634	162	15,500	4,220	350	10,200	9,760	5,200	625	63	84	61
27	582	156	15,400	4,120	336	9,400	9,900	6,720	713	118	67	63
28	416	143	17,600	5,330	326	9,230	7,320	7,310	679	293	56	61
29	303	137	18,200	7,250	316	7,340	6,500	7,470	901	555	52	61
30	246	1,150	19,100	9,380	-----	6,350	4,030	7,440	1,040	916	47	58
31	233	-----	17,800	10,600	-----	5,620	-----	7,430	-----	704	42	-----
TOTAL	27,315	11,942	322,960	99,179	205,398	139,790	233,070	64,511	70,702	9,060	30,703	2,272
MEAN	881	398	10,420	3,167	7,117	4,477	7,769	2,081	2,357	260	990	75.7
MAX	4,790	1,150	18,200	15,000	13,700	10,900	10,600	7,470	7,360	861	3,240	279
MIN	75	137	3,400	400	316	253	3,150	226	144	63	42	36
CFSM	.28	.13	3.35	1.02	2.29	1.44	2.50	.67	.76	.08	.32	.02
IN.	.33	.14	3.86	1.17	2.47	1.66	2.79	.77	.85	.10	.37	.03
CAL YR 1967	TOTAL	878,413	MEAN	2,407	MAX	18,200	MIN	31	CFSM	.77	IN	10.50
WTR YR 1968	TOTAL	1,214,902	MEAN	3,319	MAX	18,200	MIN	36	CFSM	1.07	IN	14.52

4-0875. Hart ditch at Munster, Ind.

Location.--Lat 41°33'40", long 87°28'50", in N½ sec. 20, T. 36 N., R. 9 W., on left bank at city limits of Munster, a quarter of a mile downstream from U. S. Highway 6 and 0.4 mile upstream from mouth.

Drainage area.--69.2 sq mi.

Records available.--September 1942 to September 1968.

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.--26 years, 56.5 cfs.

Extremes.--Maximum discharge during year, about 1,250 cfs Aug. 18; maximum gage height, 5.77 ft Aug. 18; minimum, 3.6 cfs Oct. 4; minimum gage height, 0.50 ft Oct. 4, June 13, 20, Aug. 4.

1942-68: Maximum discharge, 2,670 cfs Apr. 28, 1959; maximum gage height, 7.83 ft Oct. 11, 1954; minimum discharge, 0.8 cfs Sept. 5, 6, 1964; minimum gage height, 0.44 ft Sept. 5, 6, 1964, July 12, 1965.

Remarks.--Record gage. Flow from this ditch discharges into Little Calumet River near Munster.

DISCHARGE, IN CURIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	244	24	26	590	12	28	23	34	62	5.5	17
2	5.5	290	27	23	1,100	12	25	21	49	49	5.5	12
3	4.8	342	29	22	815	12	49	19	33	40	5.5	12
4	4.2	360	28	20	412	12	330	19	25	30	5.5	10
5	5.5	196	28	18	240	14	248	18	22	27	54	9.6
6	5.5	117	33	16	185	16	122	16	17	22	14	9.6
7	5.5	93	44	15	149	14	86	14	15	18	7.8	8.7
8	9.6	70	48	15	114	19	62	14	12	16	7.0	8.7
9	4.8	60	48	14	88	42	46	12	10	14	7.0	19
10	4.8	54	125	14	62	40	38	12	8.7	12	12	10
11	5.5	56	255	13	52	30	36	10	7.8	10	5.5	8.7
12	5.5	66	550	13	40	27	33	10	7.0	10	5.5	7.8
13	7.0	58	500	13	33	21	24	9.6	6.2	8.7	5.5	6.2
14	6.2	50	230	13	32	23	49	24	7.8	7.8	4.8	6.2
15	34	44	159	13	30	27	64	23	17	7.0	14	5.5
16	95	38	90	14	25	30	46	71	21	6.2	108	4.8
17	74	81	81	15	24	43	58	40	12	6.2	1,200	4.8
18	44	117	80	17	24	46	117	30	8.7	10	1,200	16
19	32	77	81	18	24	64	77	32	8.7	7.0	600	21
20	23	60	70	21	21	103	66	27	8.0	6.2	330	17
21	18	56	390	25	19	84	58	22	7.8	4.8	140	14
22	15	56	450	28	18	72	46	21	7.8	4.8	103	24
23	14	50	220	29	16	58	42	42	17	12	66	14
24	22	46	114	27	12	52	38	43	18	17	48	12
25	23	42	86	23	12	50	36	33	566	14	34	9.6
26	18	37	60	19	12	66	33	31	800	10	27	8.7
27	98	33	56	73	12	62	33	30	520	7.0	22	7.8
28	114	25	43	300	12	49	27	28	220	6.2	19	7.0
29	108	25	36	412	12	43	24	24	125	6.2	17	7.0
30	162	24	32	450	-----	37	24	23	84	5.5	15	6.2
31	220	-----	29	280	-----	32	-----	24	-----	7.0	15	-----
TOTAL	1,194.6	2,867	4,046	1,999	4,185	1,212	1,965	765.6	2,695.5	463.6	4,103.1	324.9
MEAN	38.5	95.6	131	64.5	144	39.1	65.5	24.7	89.9	15.0	132	10.8
MAX	220	360	550	450	1,100	103	330	71	800	62	1,200	24
MIN	4.2	24	24	13	12	12	24	9.6	6.2	4.8	4.8	4.8
CFSM	.56	1.38	1.89	.93	2.09	.56	.95	.36	1.30	.22	1.91	.16
IN.	.64	1.54	2.17	1.07	2.25	.65	1.06	.41	1.45	.25	2.21	.17

CAL YR 1967 TOTAL 27,274.0 MEAN 74.7 MAX 900 MIN 3.6 CFSM 1.08 IN 14.66
WTR YR 1968 TOTAL 25,821.3 MEAN 70.6 MAX 1,200 MIN 4.2 CFSM 1.02 IN 13.88

PEAK DISCHARGE (BASE, 800 CFS)

NOTE.--Stage-discharge relation affected by backwater
Dec. 12-14, 22, Jan. 30, 31, Feb. 1-5, Apr. 4,
June 26-28, Aug. 17-21.

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
02-02	----	4.77	• 1,150	08-18	----	5.77	• 1,250
06-26	----	3.92	• 850				

STREAMS TRIBUTARY TO LAKE MICHIGAN

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 1968.

Gage.--Water-stage recorder. Datum of gage is 580.72 ft above mean sea level, datum of 1929.

Average discharge.--10 years, 62.0 cfs.

Extremes.--Maximum discharge, 968 cfs Aug. 18 (gage height, 14.10 ft); minimum daily, 4.3 cfs Oct. 5.

1958-68: Maximum discharge, 1,510 cfs Apr. 28, 1959 (gage height, 13.67 ft); minimum, 0.4 cfs Aug. 31, 1967 (gage height, 2.72 ft as the result of unusual regulation).

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	300	24	32	500	17	27	19	34	98	6.7	18
2	5.3	340	27	28	720	17	26	17	48	68	6.0	14
3	5.0	400	29	25	680	17	50	19	35	48	5.8	13
4	4.5	420	29	22	514	17	280	16	24	37	5.8	12
5	4.3	340	29	20	380	18	290	16	19	31	7.4	13
6	4.8	220	33	19	270	20	160	15	17	26	2.4	12
7	5.4	134	46	18	200	21	86	13	15	20	9.8	11
8	8.4	92	48	17	151	27	62	13	13	19	8.6	9.8
9	10	75	52	16	111	60	48	12	11	17	7.8	27
10	8.6	68	123	15	80	52	39	12	9.5	16	16	13
11	7.4	62	270	15	64	41	35	10	8.5	14	7.2	9.8
12	7.2	68	478	14	50	35	31	11	7.5	13	6.2	8.3
13	8.6	65	523	14	42	31	26	9.8	7.1	10	6.2	7.2
14	8.6	55	430	14	39	29	53	38	10	9.0	5.8	6.5
15	79	48	270	15	37	29	62	27	18	8.5	20	5.5
16	200	41	134	16	33	33	48	43	22	8.1	66	5.2
17	118	86	98	18	35	43	62	41	15	7.6	810	5.2
18	65	118	92	21	31	48	98	24	11	15	943	23
19	43	86	86	25	28	62	80	29	9.5	10	750	32
20	31	65	75	30	27	98	65	22	8.5	7.6	505	25
21	24	60	343	35	26	86	58	18	8.3	6.7	320	13
22	19	60	487	39	23	75	46	16	10	6.0	210	14
23	18	55	370	37	21	60	46	37	51	19	126	16
24	34	48	200	33	19	52	37	43	58	20	80	13
25	39	46	118	31	18	50	32	29	478	15	52	11
26	29	39	75	24	17	58	29	24	760	12	35	9.0
27	134	33	70	169	17	60	27	24	710	8.8	26	7.8
28	142	27	52	270	17	50	26	20	487	7.2	20	7.4
29	111	27	48	390	17	41	22	19	280	6.2	18	6.9
30	170	26	41	460	-----	35	20	19	151	6.2	15	6.9
31	260	-----	36	400	-----	31	-----	20	-----	6.9	14	-----
TOTAL	1,609.9	3,504	4,736	2,282	4,167	1,313	1,971	675.8	3,335.9	596.8	4,199.9	375.5
MEAN	51.9	117	153	73.6	144	42.4	65.7	21.8	111	19.3	135	12.5
MAX	260	420	523	460	720	98	290	43	760	98	943	32
MIN	4.3	26	24	14	17	17	20	9.8	7.1	6.0	5.8	5.2
CAL YR 1967	TOTAL 30,983.9		MEAN 84.9		MAX 622		MIN 4.3					
WTR YR 1968	TOTAL 28,766.8		MEAN 78.6		MAX 943		MIN 4.3					

4-0905. Thorn Creek at Thornton, Ill.

Location.--Lat 41°34'05", long 87°36'30", near center of N $\frac{1}{2}$ 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 1968.

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.--20 years, 91.3 cfs.

Extremes.--Maximum discharge during year, 3,420 cfs Aug. 17 (gage height, 14.43 ft); minimum daily, 24 cfs Sept. 30.
1948-68: 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.--Record good. Some diurnal fluctuation caused by pumping operations above station. Figures of discharge included 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	281	45	46	798	43	52	45	126	138	30	58
2	31	304	46	46	1,440	42	51	42	97	102	29	44
3	31	294	45	46	838	38	100	46	63	85	28	38
4	29	266	44	45	373	39	511	39	54	71	27	38
5	31	178	44	41	250	44	264	33	46	82	134	37
6	30	112	55	40	203	46	153	34	43	76	44	36
7	26	90	63	39	179	44	119	38	41	47	34	35
8	30	76	65	39	153	50	101	41	38	44	31	35
9	27	65	77	41	132	123	92	41	34	43	30	48
10	26	59	265	41	100	77	71	41	33	40	36	41
11	26	67	437	45	85	58	66	40	34	35	28	37
12	26	63	800	42	74	56	58	38	32	36	27	38
13	34	59	580	40	66	49	53	40	29	34	30	33
14	34	55	282	41	63	48	87	59	30	31	31	31
15	145	52	173	51	59	49	84	67	71	33	50	28
16	357	51	119	49	58	59	62	120	34	34	77	30
17	120	110	111	46	47	65	126	56	31	36	2,240	56
18	58	100	113	49	45	70	134	42	31	38	2,460	88
19	45	75	107	54	43	125	93	57	32	36	816	107
20	40	65	96	60	44	169	93	42	30	31	306	90
21	36	66	575	70	42	136	75	39	31	29	178	49
22	32	64	630	72	40	114	62	38	31	31	131	42
23	31	58	232	69	40	95	63	99	72	46	105	36
24	42	54	136	62	36	84	61	64	114	48	87	34
25	49	52	121	59	36	81	53	43	760	35	64	35
26	39	49	79	55	37	110	53	39	1,540	32	57	31
27	152	49	69	162	38	101	49	50	710	30	48	29
28	122	46	63	403	40	85	44	42	331	25	48	30
29	93	44	59	426	42	76	45	38	208	26	44	26
30	216	46	52	481	-----	64	47	36	157	27	42	24
31	266	-----	49	283	-----	54	-----	38	-----	34	38	-----
TOTAL	2,256	2,950	5,632	3,043	5,401	2,294	2,912	1,487	4,883	1,435	7,330	1,284
MEAN	72.8	98.3	182	98.2	186	74.0	97.1	48.0	163	46.3	236	42.8
MAX	357	304	800	481	1,440	169	511	120	1,540	138	2,460	107
MIN	26	44	44	39	36	38	44	33	29	25	27	24
CFSM	.70	.95	1.75	.94	1.79	.71	.93	.46	1.57	.45	2.27	.41
IN.	.81	1.05	2.01	1.09	1.93	.82	1.04	.53	1.75	.51	2.62	.46
CAL YR 1967	TOTAL 40,535		MEAN 111		MAX 1,490	MIN 21		CFSM 1.07		IN 14.50		
WTR YR 1968	TOTAL 40,907		MEAN 112		MAX 2,460	MIN 24		CFSM 1.07		IN 14.63		

PEAK DISCHARGE (BASE, 900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-02	1000	10.90	1,520	08-17	2115	14.43	3,420
06-26	0415	12.44	1,770				

STREAMS TRIBUTARY TO LAKE MICHIGAN

4-0910. Little Calumet River at South Holland, Ill.

Location.--Lat 41°36'05", long 87°34'38", in SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T. 36 N., R. 14 E., on right bank at downstream side of bridge on U.S. Highway 6, 0.6 mile downstream from Thorn Creek, 1.6 miles east of South Holland, and at mile 21.66.

Records available.--October 1947 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 575.00 ft above mean sea level, datum of 1929. Prior to Oct. 27, 1947, wire-weight gage at same site and datum. Auxiliary water-stage recorder at Dixmoor, 6.1 miles downstream; prior to Nov. 17, 1947, auxiliary wire-weight gage at same site read twice daily.

Average discharge.--21 years, 160 cfs.

Extremes.--Maximum discharge during year, 3,060 cfs Aug. 18 (gage height, 18.32 ft); minimum daily, 28 cfs July 29.

1947-68: Maximum discharge, 4,440 cfs July 14, 1957 (gage height, 20.11 ft); minimum daily, 7.9 cfs Oct. 6, 1950. Flood of Apr. 6, 1947, reached a stage of 19.24 ft, from floodmarks (discharge, 4,760 cfs).

Remarks.--Record good except those for winter period, which is poor. Flow from about 330 sq mi of upper Little Calumet River basin above a point in Gary, Ind., is diverted to Lake Michigan by Burns ditch. Calumet Sag Channel, 8 miles below station, usually diverts the entire low flow to the Mississippi River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	538	77	80	1,030	58	86	71	130	319	41	66
2	47	642	78	72	1,780	58	79	68	149	274	36	72
3	48	653	81	72	1,660	55	115	76	107	171	45	52
4	46	667	80	70	997	57	631	81	85	130	40	47
5	47	534	81	66	657	64	574	55	72	110	281	48
6	44	365	94	60	484	64	340	50	65	147	223	48
7	40	260	114	56	382	64	217	52	60	81	53	44
8	50	199	121	56	315	70	170	52	58	70	35	43
9	53	166	127	58	263	179	133	51	51	73	33	79
10	45	148	310	60	185	143	109	48	44	62	62	66
11	41	151	640	64	188	105	99	46	49	52	42	50
12	40	152	1,060	62	147	92	93	43	48	52	32	46
13	48	144	1,060	60	118	77	83	42	49	47	38	43
14	55	133	712	58	102	74	119	93	47	40	40	39
15	213	123	457	57	91	75	148	75	116	38	70	37
16	588	111	285	54	87	83	121	172	77	40	254	35
17	312	203	221	50	77	96	156	116	74	40	1,980	49
18	160	234	212	60	81	107	227	79	109	51	2,900	127
19	111	197	203	70	67	156	184	96	64	57	1,920	193
20	90	151	181	76	65	258	154	74	53	39	959	318
21	79	140	879	101	59	239	143	67	52	34	570	117
22	65	137	1,050	111	57	204	120	59	71	33	405	96
23	59	130	629	103	55	170	112	115	113	57	294	85
24	74	118	361	87	50	146	110	112	344	109	205	73
25	118	112	263	76	50	134	95	84	1,070	58	140	74
26	72	102	175	70	49	162	85	72	2,060	47	105	56
27	264	94	162	165	54	171	82	82	1,690	41	85	50
28	293	85	127	580	54	149	77	74	930	32	74	51
29	211	79	110	714	57	128	73	67	529	28	71	46
30	355	79	97	865	-----	109	74	60	340	32	62	43
31	484	-----	86	681	-----	95	-----	67	-----	39	54	-----
TOTAL	4,204	6,847	10,133	4,814	9,261	3,642	4,809	2,299	3,706	2,403	11,149	2,193
MEAN	136	228	327	155	319	117	160	74.2	290	77.5	360	73.1
MAX	588	667	1,060	865	1,780	258	631	172	2,060	319	2,900	318
MIN	40	79	77	50	49	55	73	42	44	28	32	35
CAL YR 1967	TOTAL	69,249	MEAN	190	MAX	1,720	MIN	28				
WTR YR 1968	TOTAL	70,460	MEAN	193	MAX	2,900	MIN	28				

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 1968.

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.--21 years, 95.3 cfs.

Extremes.--Maximum discharge during year, 1,990 cfs Feb. 2 (gage height, 12.86 ft); minimum, 8.1 cfs June 12, 14 regulated (gage height, 3.71 ft).

1947-68: Maximum discharge, 3,880 cfs Oct. 11, 1954 (gage height, 19.48 ft, present datum, site then in use); minimum, 2.0 cfs (regulated) Oct. 8, 1956; minimum gage height, 3.35 ft Sept. 21, 1956.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	275	60	68	939	42	85	42	33	97	17	41
2	18	347	58	62	1,850	44	76	41	35	129	16	37
3	12	378	62	55	1,560	43	85	42	32	108	14	33
4	12	493	61	50	1,090	45	219	39	29	87	13	29
5	11	478	59	46	756	51	321	35	26	75	69	29
6	11	381	63	44	622	56	281	32	23	64	77	26
7	12	257	77	41	529	54	221	31	21	55	50	23
8	22	141	81	38	464	57	167	31	1	48	32	21
9	20	151	84	38	372	82	125	28		52	34	30
10	17	137	131	38	296	90	105	28	15	83	27	31
11	14	138	271	37	188	84	93	26	15	67	21	29
12	12	164	636	35	145	77	82	27	10	49	18	25
13	14	167	774	34	145	72	70	25	10	40	15	22
14	14	145	640	33	126	64	85	28	12	33	12	20
15	57	123	475	33	111	64	103	29	30	28	13	19
16	126	108	309	33	100	77	101	43	85	24	28	18
17	185	135	211	34	84	101	101	40	63	21	614	16
18	128	206	205	36	74	111	117	40	44	22	1,060	20
19	93	191	190	39	68	120	121	38	36	24	675	27
20	84	157	175	42	63	153	116	37	29	23	618	37
21	63	136	332	47	55	166	103	35	33	20	431	38
22	51	131	630	53	50	158	90	33	41	16	356	51
23	44	124	572	59	46	146	89	40	37	20	250	66
24	46	114	397	57	45	130	70	46	30	47	200	57
25	57	105	282	48	43	135	62	45	182	50	150	43
26	64	94	207	50	43	141	60	43	603	35	110	33
27	133	84	128	59	44	146	58	42	584	27	90	29
28	233	71	115	216	45	130	55	40	423	20	74	25
29	197	65	105	647	43	110	52	36	290	17	61	23
30	220	62	92	822	-----	101	46	33	184	16	51	22
31	246	-----	85	682	-----	90	-----	31	-----	21	45	-----
TOTAL	2,242	5,558	7,567	3,576	9,996	2,940	3,359	1,103	3,018	1,418	5,441	923
MEAN	72.3	185	244	115	345	94.8	112	35.6	101	45.7	176	30.8
MAX	246	493	774	822	1,850	166	321	46	603	129	1,060	66
MIN	11	62	58	33	43	42	46	25	10	16	12	16
CFSM	.58	1.48	1.95	.92	2.76	.76	.90	.28	.80	.37	1.40	.25
IN.	.67	1.65	2.25	1.06	2.97	.87	1.00	.33	.90	.42	1.62	.27

CAL YR 1967 TOTAL 47,471.5 MEAN 130 MAX 1,010 MIN 5.0 CFSM 1.04 IN 14.12
WTR YR 1968 TOTAL 47,141 MEAN 129 MAX 1,850 MIN 10 CFSM 1.03 IN 14.03

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-12	2245	8.80	790	08-18	1115	10.00	1,090
02-02	1430	12.86	1,990				

STREAMS TRIBUTARY TO LAKE MICHIGAN

4-0935.. Burns ditch at Gary, Ind.

Location.--Lat 41°34'30", long 87°17'20", in $\frac{1}{2}$ 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 1968 (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.--20 years (1943-50, 1955-68), 134 cfs.

Extremes.--Maximum discharge during year, 1,980 cfs Feb. 3 (gage height, 12.70 ft); minimum daily, 23 cfs Oct. 7, Aug. 14.

1943-68: Maximum discharge, 3,430 cfs Oct. 11, 1954; maximum gage height, 16.44 ft Mar. 16, 1944, from graph based on gage readings; minimum discharge determined, 1.8 cfs, Oct. 14, 1946.

Remarks.--Record good except for periods of no gage-height record, 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	360	95	118	933	82	137	63	52	170	35	74
2	39	439	99	105	1,680	90	122	64	56	192	30	68
3	33	495	101	96	1,920	79	137	64	53	171	27	59
4	29	569	95	90	1,520	81	338	63	51	137	25	52
5	26	589	92	85	1,180	90	464	58	42	127	70	53
6	25	522	95	88	918	99	452	53	37	106	120	50
7	23	414	107	85	786	99	354	49	34	88	85	42
8	27	239	120	73	682	102	269	48	31	82	60	40
9	27	227	127	68	536	145	205	50	29	85	60	57
10	28	209	169	68	457	148	169	46	33	124	52	58
11	28	202	294	64	444	142	145	42	31	111	40	55
12	26	221	597	61	302	134	129	44	29	74	34	47
13	26	229	835	64	285	125	113	43	27	58	30	42
14	28	217	781	70	242	115	124	44	27	49	23	37
15	55	191	632	91	207	113	146	50	44	41	25	35
16	186	155	480	66	180	125	144	84	103	42	50	34
17	221	183	307	60	160	146	146	74	101	101	900	31
18	209	260	290	61	140	156	167	68	73	90	1,100	39
19	156	269	269	65	130	174	178	73	67	60	1,050	50
20	119	232	247	71	120	208	170	68	53	45	900	70
21	100	200	371	82	110	234	153	66	52	37	630	73
22	80	187	646	91	104	233	133	60	76	30	500	92
23	67	177	710	106	98	218	128	71	72	40	390	120
24	66	163	567	102	96	194	115	74	69	60	300	110
25	83	151	432	82	92	193	90	73	270	80	235	80
26	88	143	331	81	88	208	91	70	623	70	180	65
27	146	132	258	107	87	212	91	71	705	55	145	55
28	259	116	185	256	92	195	82	66	602	40	129	47
29	280	104	174	583	86	171	75	62	457	32	108	43
30	287	99	145	937	-----	154	68	56	337	30	91	40
31	345	-----	132	661	-----	147	-----	50	-----	40	79	-----
TOTAL	3,250	7,694	9,783	4,837	13,735	4,612	5,144	1,867	4,236	2,467	7,503	1,718
MEAN	105	256	316	156	474	149	171	60.2	141	79.6	242	57.3
MAX	345	589	835	937	1,920	234	464	84	705	192	1,100	120
MIN	23	99	92	60	86	79	68	42	27	30	23	31
CFSM	.66	1.60	1.97	.98	2.96	.93	1.07	.38	.88	.50	1.51	.36
IN.	.76	1.79	2.27	1.12	3.19	1.07	1.20	.43	.98	.57	1.74	.40

CAL YR 1967 TOTAL 64,692
WTR YR 1968 TOTAL 60,846

MEAN 177
MEAN 183

MAX 1,130
MAX 1,920

MIN 14
MIN 23

CFSM 1.11
CFSM 1.14

IN 15.04
IN 15.54

NOTE.--No gage-height record July 17 to Aug. 27, Sept. 7-30.

STREAMS TRIBUTARY TO LAKE MICHIGAN

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4-0940. Little Calumet River at Porter, Ind.

Location.--Lat 41°37'18", long 87°05'13", in NE¼ sec. 34, T. 37 N., R. 6 W., on right bank at downstream end of county road bridge, 200 ft upstream from U.S. Highway 20 bridge, three-quarters of a mile northwest of Porter and 4.5 miles upstream from Salt Creek.

Drainage area.--62.9 sq mi.

Records available.--May 1945 to September 1968.

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.--23 years, 69.4 cfs.

Extremes.--Maximum discharge during year, 1,290 cfs Feb. 2 (gage height, 8.72 ft); minimum, 22 cfs Aug. 25 (gage height, 2.60 ft).
1945-68: Maximum discharge, 3,110 cfs Oct. 10, 1954 (gage height, 11.66 ft); minimum, 15 cfs Dec. 6, 1958, result of freezeup; minimum gage height, 2.14 ft Aug. 22, 1949.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	128	52	58	300	56	64	54	44	64	28	26
2	26	203	53	55	1,190	58	60	52	44	58	27	28
3	24	250	61	52	682	56	67	56	40	47	26	26
4	24	321	60	48	390	58	216	54	37	41	27	25
5	24	270	58	46	274	67	329	52	36	39	34	30
6	25	165	63	45	202	76	179	48	35	37	33	27
7	25	112	68	46	171	72	113	46	34	34	28	26
8	28	89	68	47	168	73	86	43	33	34	31	25
9	31	77	64	48	150	124	73	43	31	36	42	27
10	31	70	91	49	109	147	67	42	31	50	32	30
11	31	75	147	49	87	111	66	41	30	38	29	35
12	30	94	272	48	78	92	64	42	30	34	27	29
13	31	87	407	48	73	79	60	41	30	32	27	28
14	33	78	252	47	69	75	75	39	30	31	27	27
15	46	71	165	46	66	76	121	42	30	30	26	26
16	104	65	111	44	64	101	92	69	37	30	30	26
17	140	97	89	42	63	109	86	57	33	29	87	26
18	92	178	91	42	62	101	104	50	32	30	51	31
19	70	158	91	45	60	103	96	56	36	34	35	37
20	61	105	84	48	59	124	86	55	32	30	31	41
21	51	86	147	51	58	112	81	48	32	28	31	34
22	45	79	498	54	56	102	74	45	33	28	29	70
23	43	77	304	54	54	90	69	51	31	27	25	75
24	45	71	166	52	54	89	64	55	31	49	26	50
25	79	67	121	50	54	131	62	47	81	36	25	45
26	75	64	104	65	54	144	63	45	289	31	25	36
27	105	60	86	120	54	120	64	54	334	29	25	32
28	203	54	82	220	56	94	61	52	178	29	25	31
29	178	51	73	400	56	79	57	52	95	27	25	29
30	125	51	66	660	-----	71	56	46	67	26	25	28
31	127	-----	64	470	-----	68	-----	44	-----	28	25	-----
TOTAL	1,980	3,353	4,065	3,149	4,815	2,858	2,755	1,521	1,865	1,096	964	1,006
MEAN	63.9	112	131	102	166	92.2	91.8	49.1	62.2	35.4	31.1	33.5
MAX	203	321	498	660	1,190	147	329	69	334	64	87	75
MIN	24	51	52	42	54	56	56	39	30	26	25	25
CFSM	1.02	1.78	2.08	1.61	2.64	1.47	1.46	.78	.99	.56	.49	.53
IN.	1.17	1.98	2.40	1.86	2.85	1.69	1.63	.90	1.10	.65	.57	.59

CAL YR 1967 TOTAL 29,939 MEAN 82.0 MAX 498 MIN 24 CFSM 1.39 IN 17.70
WTR YR 1968 TOTAL 29,427 MEAN 80.4 MAX 1,190 MIN 24 CFSM 1.28 IN 17.40

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
02-02	0930	8.72	1,290				

STREAMS TRIBUTARY TO LAKE MICHIGAN

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 1968.

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.--23 years, 68.3 cfs.

Extremes.--Maximum discharge during year, 1,780 cfs Feb. 2 (gage height, 10.90 ft); minimum, 26 cfs Jan. 25 as the result of freeze-up; minimum gage height, 2.22 ft Sept. 16, 17.

1945-68: Maximum discharge, 3,180 cfs Oct. 11, 1954 (gage height, 14.12 ft); minimum, 6.3 cfs Aug. 24, 1955; minimum gage height, 2.10 ft Jan. 9, 1967 as the result of freezeup.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	143	46	37	576	46	70	52	42	86	37	32
2	34	211	47	35	1,620	48	67	50	47	75	33	32
3	32	203	56	34	919	45	74	54	40	57	32	31
4	31	256	54	34	452	48	237	53	38	49	32	31
5	30	217	53	34	296	54	295	48	36	44	70	40
6	30	131	58	34	206	58	164	46	35	44	76	32
7	30	98	72	36	171	56	111	45	34	39	43	30
8	34	82	72	40	155	58	89	43	33	36	47	30
9	38	72	65	42	132	97	77	43	33	93	75	31
10	34	67	110	42	99	90	71	42	31	179	46	33
11	32	75	178	41	89	76	66	41	31	128	37	34
12	31	97	268	40	82	69	63	42	31	75	33	32
13	31	83	333	39	72	64	61	40	30	55	32	31
14	37	72	210	37	69	63	82	39	31	45	31	30
15	58	65	119	37	62	64	129	41	71	40	31	30
16	151	59	86	36	57	82	96	70	56	37	37	29
17	148	103	72	37	52	91	89	63	36	35	213	29
18	94	142	74	38	48	88	112	51	34	36	312	33
19	79	99	73	43	47	100	96	56	44	48	193	43
20	73	80	67	44	46	129	87	53	39	38	85	47
21	61	75	161	46	45	115	82	48	36	34	59	37
22	52	73	352	46	45	105	73	46	86	32	47	92
23	45	74	240	46	46	93	68	55	54	38	41	86
24	47	67	120	42	45	91	64	62	43	140	37	65
25	82	62	92	38	45	121	62	51	178	135	34	55
26	72	58	75	41	45	120	61	47	417	70	32	43
27	135	53	58	46	46	112	63	51	380	50	32	38
28	187	48	61	195	47	97	59	50	224	42	31	35
29	129	45	51	450	47	88	57	48	115	36	31	34
30	124	45	46	680	-----	79	55	44	82	34	31	33
31	144	-----	43	439	-----	76	-----	41	-----	36	31	-----
TOTAL	2,145	2,955	3,412	2,829	5,461	2,523	2,780	1,515	2,387	1,886	1,901	1,178
MEAN	69.2	98.5	110	91.3	195	81.4	92.7	48.9	79.6	60.8	61.3	39.3
MAX	187	256	352	680	1,620	129	295	70	417	179	312	92
MIN	30	45	43	34	45	45	55	39	30	32	31	29
CFSM	.88	1.25	1.40	1.16	2.48	1.03	1.18	.62	1.01	.77	.78	.50
IN.	1.01	1.40	1.61	1.34	2.68	1.19	1.31	.72	1.13	.89	.90	.56

CAL YR 1967 TOTAL 28,254 MEAN 77.4 MAX 450 MIN 26 CFSM .98 IN 13.35
WTR YR 1968 TOTAL 31,172 MEAN 85.2 MAX 1,620 MIN 29 CFSM 1.08 IN 14.73

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
01-30	0800	7.42	714	02-02	0930	10.90	1,780

STREAMS TRIBUTARY TO LAKE MICHIGAN

183

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 Sherman Mill Creek.

Drainage area.--192 sq mi.

Records available.--July 1903 to July 1904 (gage height and discharge measurements only), October 1957 to September 1968.

Gage.--Water-stage recorder. Datum of gage is 805.4 ft above mean sea level, datum of 1929.

Average discharge.--11 years, 145 cfs.

Extremes.--Maximum discharge during year, 498 cfs Feb. 5 (gage height, 4.28 ft); minimum, 53 cfs Oct. 5 (gage height, 2.01 ft).
1957-68: Maximum discharge, 498 cfs Feb. 5, 1968 (gage height, 4.28 ft); maximum gage height, 4.65 ft Jan. 9, 1966 (backwater from ice); minimum discharge, 26 cfs Aug. 5, 1964; minimum gage height, 1.72 ft Jan. 10, Sept. 10, 1964.
A daily mean discharge of 750 cfs occurred Mar. 15, 1904.

Remarks.--Record good except for winter period, which is fair. Small diurnal fluctuation caused by powerplants above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	107	163	151	300	337	180	278	221	218	419	167	140
2	95	170	164	290	403	170	273	219	199	373	170	151
3	80	182	166	273	436	212	271	197	201	341	169	143
4	78	187	150	280	475	221	301	201	204	310	167	142
5	59	188	166	260	495	218	323	203	187	286	159	138
6	71	183	159	235	478	223	348	183	192	273	159	135
7	69	180	176	230	456	216	357	178	188	265	155	129
8	73	176	171	230	442	214	353	176	170	255	162	126
9	78	176	175	230	419	233	337	173	173	243	177	124
10	85	178	194	220	387	227	314	183	170	235	180	114
11	73	185	192	220	369	225	299	158	168	229	173	124
12	80	170	225	210	310	235	290	164	151	225	171	129
13	79	168	239	210	300	241	288	161	163	216	156	125
14	80	176	239	200	290	223	286	176	142	204	155	124
15	88	183	247	200	280	223	284	175	158	208	142	120
16	121	163	251	200	280	231	273	173	163	206	154	104
17	168	170	251	200	270	245	267	199	145	199	183	114
18	190	180	253	200	260	249	267	185	143	194	196	106
19	194	185	251	200	240	247	265	187	148	188	197	113
20	192	183	247	200	240	249	263	188	140	180	198	139
21	187	187	267	200	240	255	263	199	132	168	198	146
22	176	183	286	210	230	263	263	185	131	153	200	144
23	159	180	314	210	230	265	261	178	138	156	194	149
24	134	176	334	200	220	269	255	183	148	161	186	169
25	140	176	346	190	220	273	249	175	203	167	183	172
26	142	164	344	190	210	275	247	166	243	179	179	168
27	161	158	340	200	200	275	239	194	295	176	166	162
28	168	161	321	220	200	275	235	197	360	171	162	147
29	170	156	315	240	190	280	231	216	424	170	160	145
30	164	164	310	270	-----	284	212	229	445	173	146	146
31	151	-----	312	295	-----	282	-----	231	-----	171	140	-----
TOTAL	3,812	5,251	7,556	7,013	9,107	7,478	8,392	5,853	5,942	6,894	5,306	4,088
MEAN	123	175	244	226	314	241	280	189	198	222	171	136
MAX	194	188	346	300	495	284	357	231	445	419	200	172
MIN	59	156	150	190	190	170	212	158	131	153	140	104
CFSM	.64	.91	1.27	1.18	1.64	1.26	1.46	.98	1.03	1.16	.89	.71
IN.	.74	1.02	1.46	1.36	1.76	1.45	1.63	1.13	1.15	1.34	1.03	.79

CAL YR 1967 TOTAL 60,277
WTR YR 1968 TOTAL 76,692

MEAN 165
MEAN 210

MAX 346
MAX 495

MIN 42
MIN 59

CFSM .86 IN 11.68
CFSM 1.09 IN 14.86

STREAMS TRIBUTARY TO LAKE MICHIGAN

4-0990. St. Joseph River at Mottville, Mich.

Location.--Lat 41°48'05", long 85°45'15", in SW¼ sec. 6, T. 8 S., R. 12 W., Michigan meridian, on right bank 500 ft upstream from bridge on U.S. Highway 112 at Mottville, 0.4 mile downstream from Michigan Power Co. hydroelectric plant, 4 miles upstream from Pigeon River, and at mile 96.

Drainage area.--1,866 sq mi.

Records available.--October 1923 to September 1968. 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 Power Co. benchmark). Prior to Oct. 1, 1951, at site 0.4 mile upstream at datum 4.2 ft higher. Oct. 1, 1951, to Nov. 20, 1962, graphic water-stage recorder at present site and datum.

Average discharge.--45 years, 1,481 cfs.

Extremes.--Maximum discharge during year, 5,940 cfs Feb. 5 (gage height, 7.60 ft); minimum, 435 cfs Oct. 2 (gage height, 1.93 ft); minimum daily, 541 cfs Oct. 7.

1923-68: 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.--Record good except for winter period, which is fair. Flow regulated by powerplants above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	571	1,560	1,740	3,170	3,010	2,000	2,520	1,920	1,660	4,610	1,770	986
2	774	1,750	1,470	2,700	3,500	1,800	2,450	1,790	1,410	4,510	1,740	1,070
3	845	1,800	1,320	2,450	4,500	1,700	2,380	1,750	1,630	4,070	1,340	1,440
4	872	1,800	1,660	2,200	5,380	1,800	2,360	1,340	1,860	3,820	1,140	1,300
5	866	1,810	1,640	2,100	5,850	1,900	2,730	1,180	1,760	3,470	1,500	1,210
6	845	1,960	1,780	2,000	5,830	1,900	2,820	1,320	1,760	3,360	1,550	1,110
7	541	2,050	1,650	2,000	5,670	1,800	3,180	1,490	1,600	2,780	1,470	755
8	622	1,800	1,770	2,100	5,290	1,800	2,980	1,230	1,440	2,800	1,400	713
9	834	2,020	1,660	2,600	5,000	1,800	2,950	1,320	1,350	2,620	1,730	1,080
10	926	1,910	1,060	2,000	4,700	1,600	2,990	1,470	1,760	2,460	1,600	1,130
11	847	2,080	2,110	2,000	4,300	2,000	2,800	1,260	1,330	2,320	1,240	1,210
12	850	1,700	2,280	1,900	4,000	2,200	2,620	785	1,330	2,070	1,380	1,230
13	834	2,070	2,300	1,800	3,500	2,120	2,350	1,460	1,180	1,970	1,290	1,210
14	556	1,980	2,550	1,900	3,300	1,980	2,300	1,470	1,210	1,550	1,330	685
15	1,010	1,870	2,750	1,900	3,000	2,000	2,430	1,250	899	1,590	1,300	620
16	1,160	1,850	2,970	1,900	2,800	1,870	2,390	1,480	904	1,610	1,330	1,100
17	1,210	1,970	2,720	1,800	2,590	1,860	2,300	1,700	1,380	1,550	1,060	1,170
18	1,660	1,870	2,690	1,900	2,550	2,110	2,330	1,280	1,290	1,470	930	1,170
19	1,490	1,890	2,800	1,900	2,500	2,200	2,340	1,310	1,240	1,580	1,050	1,190
20	1,660	2,160	2,560	1,910	2,500	2,150	2,380	1,550	1,220	1,270	1,350	1,160
21	1,480	2,060	2,840	1,900	2,400	2,210	2,360	1,560	1,250	1,220	1,420	620
22	1,330	2,020	2,970	1,990	2,200	2,240	2,160	1,440	835	1,460	1,470	734
23	1,710	1,890	3,410	1,990	2,300	2,360	2,040	1,470	828	1,340	1,460	1,730
24	1,400	2,160	3,590	2,010	2,400	2,340	2,210	1,480	1,390	1,660	1,320	1,610
25	1,450	1,880	3,790	1,840	2,100	2,270	2,010	1,600	1,890	1,520	1,400	1,530
26	1,490	1,890	3,770	1,690	2,300	2,410	2,170	1,240	2,280	1,710	1,320	1,450
27	1,780	1,940	3,420	1,770	2,300	2,470	1,980	1,530	3,250	1,710	1,390	1,530
28	1,360	1,760	3,580	1,770	2,200	2,470	1,840	1,520	3,600	1,650	1,420	937
29	1,620	1,710	3,560	2,000	2,100	2,530	1,970	1,670	4,110	1,960	1,200	1,150
30	1,510	1,720	3,530	2,490	-----	2,580	1,910	1,800	4,350	1,830	1,270	1,510
31	1,720	-----	3,170	2,660	-----	2,610	-----	1,770	-----	1,820	740	-----
TOTAL	35,823	56,930	79,110	64,340	100,070	65,080	72,250	45,435	51,996	69,360	41,540	34,340
MEAN	1,156	1,898	2,552	2,075	3,451	2,099	2,408	1,466	1,733	2,237	1,339	1,145
MAX	1,780	2,160	3,790	3,170	5,850	2,610	3,180	1,920	4,350	4,610	1,770	1,730
MIN	541	1,560	1,060	1,690	2,100	1,600	1,840	785	828	1,220	740	620
CFSM	.62	1.02	1.37	1.11	1.85	1.13	1.29	.79	.93	1.20	.72	.61
IN.	.71	1.13	1.58	1.28	1.99	1.30	1.44	.91	1.04	1.38	.83	.68
CAL YR 1967	TOTAL 624,685		MEAN 1,711		MAX 4,280	MIN 400		CFSM .92	IN 12.45			
WTR YR 1968	TOTAL 716,244		MEAN 1,957		MAX 5,850	MIN 541		CFSM 1.05	IN 14.27			

4-0995. Pigeon Creek at Hogback Lake Outlet near Angola, Ind.

Location.--Lat 41°37'24", long 85°05'44", in NE 1/4 sec. 36, T. 37 N., R. 12 E., on right bank 200 ft north of lake outlet, 2 miles southeast of Flint, and 5.1 miles west of Angola.

Drainage area.--102 sq mi.

Records available.--October 1945 to September 1968. Prior to October 1947, published as "near Flint."

Gage.--Water-stage recorder. Datum of gage is 940.00 ft above mean sea level, datum of 1929. Prior to October 1947, wire-weight gage at site 1 1/2 miles downstream at different datum. October 1947 to Aug. 3, 1953, staff gage at site 600 ft downstream at same datum.

Average discharge.--23 years, 72.7 cfs.

Extremes.--Maximum discharge during year, 395 cfs Feb. 6, 7 (gage height, 14.00 ft); minimum, 11 cfs Oct. 1 (gage height, 8.11 ft). 1945-68: Maximum discharge, 744 cfs Apr. 8, 1950 (gage height, 14.95 ft); minimum, 3.4 cfs Oct. 25-27, 1964; minimum gage height, 7.24 ft Sept. 9, 10, 1953.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	11	24	45	290	229	64	164	74	100	134	71	35	
2	12	25	45	265	286	62	156	72	101	132	70	36	
3	12	26	47	235	333	61	150	70	100	123	69	35	
4	12	30	47	205	365	60	151	67	96	114	67	34	
5	12	34	48	185	384	59	156	65	90	103	65	33	
6	12	36	51	165	394	58	164	63	84	94	62	32	
7	12	40	56	150	394	58	170	60	80	86	59	31	
8	12	42	62	140	383	58	170	58	75	79	57	30	
9	12	42	71	125	366	60	167	57	71	76	57	30	
10	12	43	84	115	335	61	158	56	67	78	55	29	
11	12	43	102	112	315	62	149	55	64	76	54	28	
12	12	43	133	104	290	65	139	54	61	73	52	28	
13	12	43	168	98	270	67	127	53	58	69	50	28	
14	12	43	199	95	250	67	121	53	55	67	47	27	
15	13	42	231	92	215	68	117	52	53	65	44	26	
16	15	42	239	88	190	74	114	55	51	63	46	26	
17	17	43	239	84	175	86	112	58	48	61	52	25	
18	19	45	233	81	155	104	109	61	46	58	56	26	
19	22	46	223	79	140	126	106	65	45	57	60	26	
20	23	49	207	78	125	136	103	66	43	57	63	26	
21	24	52	207	76	115	141	100	67	41	55	63	26	
22	24	53	247	75	105	145	98	67	40	53	62	26	
23	24	55	282	74	95	147	95	66	40	51	59	27	
24	24	55	318	74	88	146	91	65	43	55	56	28	
25	24	54	336	72	80	144	88	64	49	61	53	27	
26	24	54	355	70	75	146	85	63	61	70	50	27	
27	24	52	360	69	70	154	83	66	77	77	46	26	
28	24	50	360	73	68	163	81	72	98	78	44	24	
29	24	48	360	87	66	168	78	80	116	77	40	24	
30	24	47	350	123	-----	170	76	86	129	74	38	22	
31	24	-----	325	172	-----	169	-----	94	-----	71	36	-----	
TOTAL	540	1,301	6,030	3,751	6,356	3,149	3,678	2,004	2,082	2,387	1,703	848	
MEAN	17.4	43.4	195	121	219	102	123	64.6	69.4	77.0	54.9	28.3	
MAX	24	55	360	290	394	170	170	94	129	134	71	36	
MIN	11	24	45	69	66	58	76	52	40	51	36	22	
CFSM	.17	.43	1.91	1.19	2.15	1.00	1.20	.63	.68	.75	.54	.28	
IN.	.20	.47	2.20	1.37	2.32	1.15	1.34	.73	.76	.87	.62	.31	
CAL YR 1967	TOTAL 26,715.0			MEAN 73.2		MAX 360		MIN 5.2		CFSM .72		IN 9.74	
WTR YR 1968	TOTAL 33,829			MEAN 92.4		MAX 394		MIN 11		CFSM .91		IN 12.33	

STREAMS TRIBUTARY TO LAKE MICHIGAN

4-0996.10 Pretty Lake Inlet near Stroh, Ind.

Location (revised).--Lat 41°34'45", long 85°14'59", in NW¼ sec. 15, T. 36 N., R. 11 E., on left bank 400 ft upstream from mouth, and 2.6 miles west of Stroh.

Drainage area.--1.96 sq mi.

Records available.--June 1963 to September 1968.

Gage.--Water-stage recorder with steel V-notch weir (0.5 cfs notch capacity). Datum of gage is 960.00 ft above mean sea level, datum of 1929.

Average discharge.--5 years, 0.34 cfs.

Extremes.--Maximum discharge during year, 7.0 cfs Dec. 21 (gage height, 7.04 ft); minimum, 0.02 cfs Oct. 3 (gage height, 6.20 ft). 1963-68: Maximum discharge, 21.1 cfs Dec. 25, 1965; no flow for many days in most years.

Remarks.--Record poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.08	.19	.12	.30	2.5	.25	.83	.42	.67	1.2	.54	.35
2	.08	.42	.23	.27	4.8	.25	.67	.40	.62	.95	.37	.42
3	.07	.45	.72	.26	3.3	.25	.67	.37	.54	.83	.33	.33
4	.08	.67	.54	.26	2.1	.25	.95	.35	.48	.78	.29	.31
5	.08	.37	.48	.26	1.7	.25	1.0	.33	.42	.67	.29	.29
6	.08	.31	.72	.26	1.5	.26	.89	.33	.40	.58	.29	.27
7	.08	.35	.83	.27	1.3	.26	.78	.29	.37	.51	.27	.25
8	.09	.23	.67	.29	1.2	.27	.72	.29	.35	.45	.48	.25
9	.09	.20	.54	.33	1.1	.33	.62	.31	.33	.42	.95	.27
10	.08	.19	.89	.36	1.1	.40	.58	.35	.33	.54	.62	.29
11	.08	.25	1.8	.38	.95	.45	.54	.35	.31	.45	.33	.31
12	.08	.31	1.8	.40	.85	.45	.51	.35	.31	.40	.17	.27
13	.08	.29	1.2	.42	.72	.42	.45	.35	.31	.40	.31	.25
14	.09	.27	.95	.45	.63	.42	.45	.33	.29	.37	.29	.25
15	.23	.22	.78	.45	.57	.42	.54	.33	.25	.40	.33	.25
16	.35	.17	.67	.42	.52	1.6	.54	.48	.23	.35	2.2	.25
17	.35	.40	.62	.35	.48	2.0	.54	.62	.23	.31	1.8	.23
18	.27	.72	.67	.30	.44	1.2	.54	.62	.23	.31	1.2	.33
19	.17	.48	.62	.26	.38	1.0	.54	.58	.25	.33	.83	.35
20	.12	.37	.58	.25	.35	.95	.51	.51	.27	.29	.67	.35
21	.10	.35	3.3	.26	.33	.89	.51	.48	.27	.27	.54	.31
22	.08	.33	4.4	.30	.30	.89	.51	.42	.51	.25	.45	.45
23	.08	.33	2.4	.35	.27	.83	.51	.40	.62	.33	.40	.40
24	.08	.29	1.7	.38	.26	.78	.48	.40	.67	1.0	.37	.33
25	.11	.22	1.4	.42	.25	.83	.45	.40	1.2	.78	.35	.33
26	.08	.20	1.1	.27	.25	1.1	.42	.42	4.2	.54	.33	.29
27	.16	.17	.98	.35	.25	1.1	.45	.83	4.4	.40	.31	.27
28	.19	.15	.82	1.6	.25	1.1	.45	1.0	3.3	.35	.31	.25
29	.13	.12	.60	2.5	.25	1.1	.45	1.0	2.2	.31	.27	.23
30	.11	.13	.52	2.6	-----	1.1	.45	.89	1.6	.29	.27	.23
31	.10	-----	.40	1.8	-----	.95	-----	.78	-----	.40	.25	-----
TOTAL	3.85	9.15	33.05	17.37	28.90	22.35	17.55	14.98	26.16	15.46	16.41	8.96
MEAN	.12	.31	1.07	.56	1.00	.72	.59	.48	.87	.50	.53	.30
MAX	.35	.72	4.4	2.6	4.8	2.0	1.0	1.0	4.4	1.2	2.2	.45
MIN	.07	.12	.12	.25	.25	.25	.42	.29	.23	.25	.17	.23
CFSM	.06	.16	.54	.29	.51	.37	.30	.25	.44	.25	.27	.15
IN.	.07	.17	.63	.33	.55	.42	.33	.28	.50	.29	.31	.17
CAL YR 1967	TOTAL 164.24		MEAN .45		MAX 4.4		MIN .07		CFSM .23		IN 3.12	
WTR YR 1968	TOTAL 214.19		MEAN .59		MAX 4.8		MIN .07		CFSM .30		IN 4.06	

4-0997.5 Pigeon River near Scott, Ind.

Location.--Lat 41°44'56", long 85°34'35", in SW¼ sec. 14, T. 38 N., R. 8 E., on right bank 20 ft downstream from bridge on Lagrange County Road 750 North, 1,200 ft downstream from Page ditch, 0.7 mile south of Indiana-Michigan state line, and 1.2 miles north-west of Scott.

Drainage area.--373 sq mi.

Records available.--June to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 815.00 ft above mean sea level, datum of 1929.

Extremes.--Maximum discharge during period, 1,290 cfs June 27, 28 (gage height, 5.98 ft); minimum, 210 cfs Sept. 17, 18 (gage height, 2.89 ft).

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									370	825	361	250
2									384	742	399	290
3									378	667	358	312
4									359	613	328	282
5									343	575	315	270
6									329	542	307	262
7									321	502	297	252
8									319	466	310	242
9									297	436	408	242
10									288	410	487	246
11									283	396	423	245
12									277	380	361	243
13									261	363	351	244
14									250	341	294	237
15									243	338	281	221
16									237	348	404	217
17									229	333	632	212
18									223	307	765	216
19									225	296	706	238
20									219	289	552	263
21									215	277	460	254
22									242	269	414	248
23									297	266	378	285
24									337	336	352	334
25									472	501	328	326
26									756	531	302	295
27									1,170	415	280	253
28									1,240	362	255	233
29									1,080	341	258	223
30									931	323	255	216
31		-----			-----		-----		-----	321	238	-----
TOTAL									12,575	13,111	11,859	7,651
MEAN									419	423	383	255
MAX									1,240	825	765	334
MIN									215	266	238	212
CFSM									1.12	1.13	1.03	.68
IN.									1.25	1.31	1.18	.76

STREAMS TRIBUTARY TO LAKE MICHIGAN

4-1002.2 North Branch Elkhart River near Cosperville, Ind.

Location.--Lat 41°29'32", long 85°26'54", in SW¼NE¼ sec. 14, T. 35 N., R. 9 E., at downstream side of county road bridge over outlet of Waldron Lake at extreme west end of lake, 1.5 miles northeast of Cosperville, and 6.6 miles northwest of Albion.

Drainage area.--133 sq mi.

Records available.--October 1950 to September 1968.

Gage.--Wire-weight gage read twice daily. Datum of gage is 880.00 ft above mean sea level, datum of 1929. Prior to Aug. 7, 1956, staff gage at same site and datum.

Average discharge.--18 years, 108 cfs.

Extremes.--Maximum discharge during year, 394 cfs Feb. 4-6; maximum gage height, 8.49 ft June 29; minimum, 15 cfs Oct. 1, 2 (gage height, 4.75 ft).
1950-68: Maximum discharge observed, 717 cfs May 13, 1956 (gage height, 8.78 ft); minimum, 2.2 cfs Sept. 17, 18, 21, 1959; minimum gage height, 4.43 ft Aug. 11, Sept. 17, 1964.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	55	55	242	230	109	183	109	124	364	79	59
2	16	65	58	230	319	109	183	109	124	349	74	61
3	19	69	69	218	379	104	172	104	124	334	69	57
4	20	79	74	206	394	99	194	99	119	306	65	56
5	23	79	79	194	394	99	206	94	114	293	65	57
6	23	79	84	183	394	104	206	89	114	280	61	53
7	22	74	94	180	379	104	206	84	109	267	58	51
8	24	69	99	172	379	104	206	79	104	242	57	47
9	24	69	104	161	349	114	194	79	99	230	55	47
10	22	66	109	161	334	119	183	79	94	218	53	47
11	22	67	134	150	306	119	183	79	89	194	49	45
12	20	69	161	139	293	119	172	79	79	183	45	45
13	20	69	183	129	280	114	161	74	69	172	42	44
14	21	68	183	119	267	109	161	74	63	150	40	44
15	27	67	183	109	242	109	161	69	55	144	38	42
16	46	63	183	99	230	139	161	84	50	134	69	40
17	61	66	183	89	218	161	150	94	43	124	99	38
18	69	69	172	79	194	172	150	94	36	119	114	40
19	74	74	172	69	183	172	150	99	35	109	114	43
20	69	74	172	66	172	183	150	94	31	109	109	44
21	65	74	194	63	161	183	144	89	26	99	99	44
22	62	74	280	61	150	183	139	84	43	94	94	44
23	57	69	306	61	144	172	134	89	49	89	89	45
24	54	69	319	55	134	183	129	84	109	104	84	45
25	54	68	334	51	129	183	124	84	194	104	79	45
26	51	66	319	45	119	194	124	84	293	99	74	44
27	57	63	306	45	119	206	119	109	349	94	69	42
28	58	61	293	65	114	194	119	119	364	89	65	42
29	57	57	280	129	114	206	119	124	379	84	62	38
30	53	58	267	183	-----	194	114	124	364	79	59	37
31	53	-----	254	206	-----	194	-----	124	-----	74	57	-----
TOTAL	1,258	2,049	5,703	3,959	7,120	4,554	4,797	2,879	3,845	5,330	2,186	1,386
MEAN	40.6	68.3	184	128	246	147	160	92.9	128	172	70.5	46.2
MAX	74	79	334	242	394	206	206	124	379	364	114	61
MIN	15	55	55	45	114	99	114	69	26	74	38	37
CFSM	.31	.51	1.38	.96	1.85	1.10	1.20	.70	.96	1.29	.53	.35
IN.	.35	.57	1.59	1.11	1.99	1.27	1.34	.81	1.08	1.49	.61	.39
CAL YR 1967	TOTAL 37,044.4		MEAN 101		MAX 334		MIN 3.5		CFSM .76		IN 10.36	
WTR YR 1968	TOTAL 45,066		MEAN 123		MAX 394		MIN 15		CFSM .93		IN 12.60	

STREAMS TRIBUTARY TO LAKE MICHIGAN

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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 1968.

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.--37 years, 497 cfs.

Extremes.--Maximum discharge during year, 4,010 cfs Feb. 2 (gage height, 8.81 ft); minimum, 115 cfs Oct. 8, 9 (gage height, 1.90 ft). 1931-68: Maximum discharge, 5,440 cfs Apr. 4, 1950 (gage height, 10.15 ft); maximum gage height, 10.33 ft July 10, 1951; minimum discharge, 6.6 cfs Aug. 11, 1964 (gage height, 1.38 ft).

Remarks.--Record good. The flow is regulated by three powerplants above station. Record of suspended sediment loads for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	315	317	1,160	1,930	544	738	558	536	1,710	379	280
2	140	437	310	1,060	3,470	532	710	538	559	1,600	358	295
3	137	517	356	1,000	3,520	503	723	513	556	1,500	337	276
4	133	524	402	1,190	2,650	502	1,630	507	528	1,420	327	263
5	125	541	411	981	2,240	508	2,190	482	508	1,340	321	278
6	124	470	448	749	2,040	523	1,600	458	480	1,260	321	272
7	119	440	592	879	1,930	529	1,200	437	459	1,180	307	250
8	118	419	636	862	1,850	539	1,020	422	441	1,100	315	241
9	120	402	592	765	1,770	595	919	426	417	1,110	326	242
10	146	392	673	717	1,530	620	849	412	379	1,230	320	234
11	156	388	1,100	727	1,540	600	794	398	362	1,210	297	247
12	141	411	1,430	750	1,460	583	752	391	350	997	278	243
13	146	433	1,440	611	1,390	558	722	371	333	877	268	235
14	140	413	1,190	599	1,410	526	722	360	320	802	260	229
15	149	388	988	589	1,280	533	769	352	313	745	266	216
16	175	370	899	535	1,190	854	738	417	301	691	538	216
17	292	397	860	510	1,120	1,240	703	448	288	644	783	215
18	364	514	844	496	1,090	969	693	435	277	595	693	232
19	347	531	839	480	981	877	670	440	271	563	590	259
20	325	456	829	492	918	833	663	440	282	523	518	273
21	295	421	1,190	504	899	809	663	426	291	474	474	263
22	287	410	2,210	509	867	810	634	422	318	444	441	280
23	263	407	2,230	503	818	812	616	440	347	424	421	265
24	256	396	1,680	455	708	789	600	448	1,250	523	399	273
25	261	384	1,430	444	653	857	584	430	2,610	524	355	271
26	263	372	1,300	443	629	936	573	435	3,030	442	334	255
27	288	359	1,210	461	626	931	587	505	2,800	405	320	247
28	325	342	1,230	731	593	862	574	550	2,380	386	310	234
29	341	317	1,220	1,380	567	814	559	555	2,040	362	294	216
30	310	313	1,180	1,810	-----	779	556	550	1,800	343	282	225
31	292	-----	1,180	1,770	-----	758	-----	534	-----	365	263	-----
TOTAL	6,718	12,479	31,216	24,162	41,669	22,125	24,751	14,100	24,826	25,789	11,695	7,525
MEAN	217	416	1,007	779	1,437	714	825	455	828	832	377	251
MAX	364	541	2,230	1,810	3,520	1,240	2,190	558	3,030	1,710	783	295
MIN	118	313	310	443	567	502	556	352	271	343	260	215
CFSM	.37	.72	1.74	1.34	2.48	1.23	1.42	.78	1.43	1.43	.65	.43
IN.	.43	.80	2.00	1.55	2.67	1.42	1.59	.90	1.59	1.65	.75	.48

CAL YR 1967 TOTAL 196,842 MEAN 539 MAX 2,310 MIN 88 CFSM .93 IN 12.62
WTR YR 1968 TOTAL 247,055 MEAN 675 MAX 3,520 MIN 118 CFSM 1.16 IN 15.84

PEAK DISCHARGE (BASE, 1,800 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	2130	6.59	2,490	04-05	0830	6.21	2,310
02-02	2000	8.81	4,010	06-26	0530	7.62	3,130

STREAMS TRIBUTARY TO LAKE MICHIGAN

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 Christiansa Creek, and ½ mile downstream from Elkhart Hydroelectric Plant.

Drainage area.--3,339 sq mi.

Records available.--August 1947 to September 1968. 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.--21 years, 2,960 cfs.

Extremes.--Maximum discharge during year, 12,400 cfs Feb. 4 (gage height, 24.80 ft); minimum daily, 1,140 cfs Oct. 7. 1947-68: Maximum discharge, 18,400 cfs Apr. 5, 1950 (gage height, 27.82 ft); minimum daily, 336 cfs Aug. 5, 1964.

Remarks.--Record good. The flow is regulated by Elkhart Hydroelectric Plant, 2,400 ft upstream, and by a hydroelectric plant on Elkhart River at Goshen.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,360	2,890	2,940	5,350	7,630	3,900	4,800	3,600	3,280	8,610	3,230	1,960
2	1,170	3,160	2,840	4,810	10,400	3,870	4,640	3,450	3,180	8,440	3,090	2,180
3	1,500	3,470	2,540	5,060	12,100	3,590	4,630	3,280	3,000	7,750	2,800	2,410
4	1,550	3,520	2,790	4,520	11,600	3,420	5,810	3,000	3,570	7,210	2,420	2,540
5	1,550	3,550	2,900	4,440	11,100	3,720	7,210	2,630	3,290	6,710	2,670	2,320
6	1,480	3,620	3,160	4,430	10,700	3,750	6,670	2,740	3,160	6,410	2,720	2,290
7	1,140	3,470	3,180	4,090	10,200	3,740	6,420	2,840	3,090	5,610	2,580	1,700
8	1,250	3,570	3,390	4,420	9,730	3,760	5,930	2,810	2,780	5,530	2,560	1,690
9	1,480	3,320	3,390	4,570	9,270	3,810	5,660	2,550	2,530	5,280	2,960	2,010
10	1,550	3,410	3,150	4,590	8,420	3,520	5,320	2,730	3,010	5,010	2,990	2,150
11	1,540	3,550	4,060	4,480	6,950	4,000	5,300	2,650	2,760	4,880	2,430	2,150
12	1,500	3,230	5,480	4,330	7,630	4,380	4,560	2,310	2,400	4,500	2,730	2,170
13	1,510	3,540	5,590	4,240	7,160	4,010	4,600	2,500	2,440	4,120	2,430	2,110
14	1,180	3,490	5,480	4,010	7,060	3,830	4,470	2,790	2,310	3,490	2,430	1,590
15	1,740	3,380	5,420	3,940	6,710	3,750	4,670	2,720	2,050	3,450	2,420	1,540
16	2,290	3,160	5,510	3,790	6,280	4,330	4,590	2,800	2,330	3,390	2,790	1,800
17	2,230	3,370	5,370	3,630	5,700	4,730	4,460	3,080	3,350	3,220	2,980	2,000
18	2,820	3,650	5,050	3,640	5,360	4,690	4,450	2,940	2,600	3,110	2,940	2,070
19	2,950	3,620	5,180	3,720	5,230	4,790	4,440	2,790	2,370	3,160	3,240	2,140
20	2,740	3,730	5,000	3,750	5,340	4,670	4,820	2,990	2,320	2,750	3,460	2,130
21	2,860	3,610	5,670	3,670	4,680	4,720	4,550	3,000	2,340	2,690	2,980	1,640
22	2,350	3,550	7,470	3,710	4,650	4,600	4,250	2,930	2,340	2,750	3,010	1,640
23	3,130	3,470	7,830	3,830	4,630	4,760	4,060	2,880	2,470	2,750	2,870	2,500
24	2,770	3,550	7,400	3,630	4,760	4,750	3,960	3,050	3,580	3,060	2,580	2,960
25	2,570	3,400	7,250	3,400	4,350	4,680	3,940	3,090	4,890	3,440	2,530	2,280
26	2,520	3,310	7,130	3,480	3,890	5,040	3,800	2,620	7,490	3,120	2,360	2,420
27	2,940	3,260	6,460	3,460	4,330	5,080	3,960	3,040	8,770	3,400	2,570	2,440
28	2,870	3,140	6,150	4,080	4,240	5,020	3,410	3,150	8,540	3,180	2,520	2,240
29	2,770	3,010	6,680	5,170	3,970	4,940	3,250	3,210	8,920	3,290	2,310	1,590
30	2,730	2,950	6,180	6,560	-----	4,940	3,590	3,600	8,690	3,180	2,330	2,290
31	2,640	-----	6,010	6,790	-----	4,930	-----	3,400	-----	3,190	1,790	-----
TOTAL	64,680	101,950	156,650	133,590	204,130	133,720	142,620	91,170	113,850	136,680	83,720	62,950
MEAN	2,086	3,398	5,053	4,309	7,039	4,314	4,754	2,941	3,795	4,409	2,701	2,098
MAX	3,130	3,730	7,830	6,790	12,100	5,080	7,210	3,600	8,920	8,610	3,460	2,960
MIN	1,140	2,890	2,540	3,400	3,890	3,420	3,250	2,310	2,050	2,690	1,790	1,540
CFSM	.62	1.02	1.51	1.29	2.11	1.29	1.42	.88	1.14	1.32	.81	.63
IN.	.72	1.14	1.74	1.49	2.27	1.49	1.59	1.02	1.27	1.52	.93	.70
CAL YR 1967	TOTAL 1,188,485		MEAN 3,256		MAX 8,100		MIN 810		CFSM .98		IN 13.24	
WTR YR 1968	TOTAL 1,425,710		MEAN 3,895		MAX 12,100		MIN 1,140		CFSM 1.17		IN 15.88	

4-1015. St. Joseph River at Niles, Mich.

Location.--Lat 41°49'45", long 84°15'35", in SW 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 1968. 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.--38 years, 3,066 cfs.

Extremes.--Maximum discharge during year, 13,800 cfs Feb. 3 (gage height, 10.10 ft); minimum daily discharge, 1,020 cfs Oct. 2, 1930-68: Maximum discharge, 20,200 cfs Apr. 5, 1950 (gage height, 13.10 ft); minimum daily, 420 cfs Aug. 30, 1931.

Remarks.--Record 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,130	3,250	2,940	5,070	8,030	3,410	4,900	3,430	3,520	8,500	3,100	2,080
2	1,020	3,170	2,990	5,520	11,900	3,960	4,520	3,530	3,260	8,000	3,490	2,380
3	1,230	3,630	2,580	4,950	13,600	3,590	4,540	3,140	2,790	7,600	3,230	2,420
4	1,740	3,790	2,940	4,270	13,000	3,370	5,820	3,070	3,370	7,200	2,700	2,570
5	1,840	3,740	2,760	4,500	12,100	3,710	8,490	2,680	3,090	6,700	2,720	2,560
6	2,030	3,550	3,020	4,080	11,500	3,740	6,950	2,620	3,670	6,400	3,080	2,460
7	1,880	3,600	3,190	4,070	11,000	3,710	6,440	2,720	2,670	6,000	3,010	2,430
8	1,520	3,430	3,210	4,400	10,300	3,750	6,290	3,190	3,070	5,600	2,960	1,700
9	1,660	3,310	3,400	5,360	9,870	4,110	5,680	2,130	2,810	5,300	3,350	1,890
10	1,930	3,500	3,510	4,830	8,850	3,980	5,140	2,900	2,810	5,000	3,580	2,320
11	1,920	3,560	3,490	4,150	7,500	3,760	5,200	2,840	2,870	4,840	2,880	2,460
12	1,900	3,380	5,880	4,360	6,960	4,400	4,970	2,510	2,800	4,490	2,510	2,460
13	1,860	3,410	6,120	4,020	7,790	4,000	4,710	2,510	2,700	4,230	2,760	2,280
14	1,780	3,430	5,760	3,780	6,760	3,970	4,500	2,920	2,500	4,270	2,660	2,270
15	2,100	3,430	5,590	3,900	6,760	3,690	4,590	2,870	2,400	2,940	2,550	1,830
16	3,020	3,820	5,090	3,950	6,450	4,270	4,950	2,770	2,200	3,680	2,940	1,800
17	2,670	3,010	5,250	3,580	6,100	4,870	4,250	3,160	2,200	3,520	3,290	2,310
18	2,980	3,770	5,090	3,680	4,850	4,620	4,550	3,130	2,700	3,490	3,310	2,350
19	3,440	3,700	4,920	3,660	5,550	4,920	4,330	2,870	2,700	3,300	3,220	2,330
20	2,900	3,620	5,050	3,810	4,980	4,630	4,640	2,940	2,500	3,100	3,000	2,620
21	3,350	3,550	5,720	3,630	4,850	4,780	4,590	3,030	2,400	2,860	3,300	2,130
22	2,420	3,510	8,880	3,560	4,400	4,660	4,250	2,890	2,400	3,170	3,100	2,670
23	3,030	3,510	8,850	3,890	4,530	4,520	4,200	2,930	2,100	2,880	3,100	2,720
24	2,840	3,200	8,310	3,680	4,790	4,740	3,840	3,100	2,100	3,080	2,710	3,570
25	2,810	3,410	7,420	3,480	4,400	4,840	3,910	2,970	4,000	3,830	2,760	3,020
26	3,100	3,140	7,370	3,610	3,980	4,780	3,870	3,150	7,000	3,460	2,710	2,720
27	2,670	3,050	6,430	3,370	4,080	5,080	3,400	2,710	10,000	3,550	2,610	2,720
28	3,290	3,150	6,440	4,050	4,250	4,860	3,570	3,220	10,400	3,300	2,670	2,700
29	2,750	3,310	6,580	5,510	4,630	4,990	3,170	3,290	9,700	3,460	2,420	2,880
30	3,020	2,740	6,280	7,340	-----	4,650	3,380	3,450	9,000	3,260	2,490	1,400
31	2,660	-----	6,290	7,600	-----	4,840	-----	3,280	-----	3,530	2,440	-----
TOTAL	72,490	102,670	161,350	135,660	213,760	133,200	143,640	91,950	115,730	140,540	91,370	72,050
MEAN	2,338	3,422	5,205	4,376	7,371	4,297	4,788	2,966	3,858	4,534	2,947	2,402
MAX	3,440	3,820	8,880	7,600	13,600	5,080	8,490	3,530	10,400	8,500	3,660	3,570
MIN	1,020	2,740	2,580	3,370	3,980	3,370	3,170	2,130	2,100	2,860	2,420	1,400
CFSM	.64	.93	1.42	1.19	2.01	1.17	1.31	.81	1.05	1.24	.86	.66
IN.	.74	1.04	1.64	1.38	2.17	1.35	1.46	.93	1.17	1.43	.93	.73
CAL YR 1967	TOTAL 1,270,295	MEAN 3,480	MAX 9,530	MIN 881	CFSM .95	IN 12.89						
WTR YR 1968	TOTAL 1,474,410	MEAN 4,028	MAX 13,600	MIN 1,020	CFSM 1.10	IN 14.96						

STREAMS TRIBUTARY TO LAKE ERIE

4-1780. St. Joseph River near Newville, Ind.

Location.--Lat 41°23'08", long 84°48'06", in Ohio, in SW¼ sec. 18, T. 5 N., R. 1 E., on left bank at bridge on Ohio State Highway 249, 6½ miles northwest of Hicksville, Ohio, and 3½ miles northeast of Newville.

Drainage area.--609 sq mi.

Records available.--October 1946 to September 1968. Monthly discharge only for some periods, published in WSP 1307.

Gage.--Digital water-stage recorder. Datum of gage is 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.--22 years, 496 cfs.

Extremes.--Maximum discharge during year, 5,260 cfs Feb. 3 (gage height, 15.05 ft); minimum, 38 cfs Oct. 7 (gage height, 1.97 ft).
1946-68: Maximum discharge, 9,710 cfs Apr. 6, 1950 (gage height, 17.05 ft); minimum, 14 cfs Sept. 9, 10, 14-16, 1964;
minimum gage height, 1.45 ft Sept. 30, 1953.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	164	173	1,050	3,030	240	824	295	2,080	1,720	175	69
2	51	206	204	760	4,560	235	673	275	1,870	1,440	225	71
3	54	338	451	660	5,210	205	579	256	1,520	1,630	230	68
4	51	596	643	590	5,120	200	1,360	238	1,140	695	191	70
5	45	673	659	500	4,470	225	1,820	232	808	504	161	76
6	43	678	796	450	3,770	241	1,790	219	602	392	150	72
7	40	632	1,010	370	3,140	241	1,670	215	473	323	136	72
8	45	507	1,110	330	1,750	237	1,480	207	394	275	217	69
9	51	397	1,110	315	1,500	249	1,150	206	338	245	677	66
10	42	327	1,230	300	1,050	283	831	228	296	237	391	89
11	41	289	1,790	290	860	325	642	288	263	244	240	80
12	46	287	2,170	280	760	326	526	267	242	241	180	86
13	45	308	2,400	270	710	293	443	242	226	238	145	88
14	45	334	2,580	260	570	258	408	228	214	243	122	79
15	43	310	2,750	255	450	255	462	213	192	506	107	73
16	48	275	2,670	250	470	601	492	542	181	506	306	67
17	73	262	2,320	250	450	1,120	520	928	173	373	706	87
18	156	403	1,870	250	390	1,320	498	968	166	267	769	498
19	254	613	1,410	250	350	1,420	459	900	166	269	587	610
20	338	705	1,090	255	330	1,390	429	737	165	197	411	571
21	294	650	1,690	280	315	1,220	422	594	163	172	299	503
22	221	514	3,460	295	305	1,070	423	483	169	149	233	334
23	172	417	4,210	300	290	963	416	409	152	132	190	259
24	144	367	5,000	300	280	881	387	370	202	169	161	252
25	135	337	4,850	240	275	960	367	337	594	273	137	228
26	122	303	4,540	250	270	1,370	352	354	1,160	523	119	202
27	133	270	3,500	330	265	1,560	361	1,390	1,510	498	106	179
28	140	243	3,100	616	250	1,590	369	1,910	1,700	364	93	155
29	152	209	2,600	1,500	245	1,540	354	2,040	1,800	273	83	133
30	181	192	1,900	2,240	-----	1,380	321	2,050	1,830	222	76	118
31	176	-----	1,350	2,550	-----	1,090	-----	2,110	-----	184	71	-----
TOTAL	3,425	11,806	64,636	16,836	41,435	23,288	20,828	19,771	20,789	12,904	7,694	5,324
MEAN	110	394	2,085	543	1,429	751	694	638	693	416	246	177
MAX	338	705	5,000	2,550	5,210	1,590	1,820	2,110	2,080	1,720	769	610
MIN	40	164	173	240	245	200	321	206	152	132	71	66
CFSM	.18	.65	3.42	.89	2.35	1.23	1.14	1.05	1.14	.68	.41	.25
IN.	.21	.72	3.95	1.03	2.53	1.42	1.27	1.21	1.27	.79	.47	.33
CAL YR 1967	TOTAL 194,747			MEAN 534	MAX 5,000	MIN 16	CFSM .88	IN 11.89				
WTR YR 1968	TOTAL 248,736			MEAN 680	MAX 5,210	MIN 40	CFSM 1.12	IN 15.19				

4-1790. St. Joseph River at Cedarville, Ind.

Location.--Lat 41°11'46", long 85°01'27", in SE¼ sec. 28, T. 32 N., R. 13 E., on left bank 500 ft upstream from highway bridge, 0.4 mile south of Cedarville, 2,700 ft downstream from Cedarville Dam, and 0.5 mile upstream from mouth of Cedar Creek.

Drainage area.--762 sq mi.

Records available.--January 1931 to May 1932, October 1955 to September 1968.

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.--13 years (1955-68), 572 cfs.

Extremes.--Maximum daily discharge during year, 6,880 cfs Feb. 5; maximum gage height, 16.65 ft Feb. 3; minimum daily, 35 cfs Oct. 12.

1931-32, 1955-68: Maximum discharge, 10,100 cfs May 1, 1956 (gage height, 18.07 ft, from flood marks); minimum daily, 1.6 cfs May 22, 27, 1958.

Remarks.--Record good. Flow regulated by reservoir above station. Cedar Creek used as factor during periods of high flows.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	304	238	1,470	3,820	285	1,060	420	2,700	2,230	278	104
2	57	371	252	1,000	4,880	292	850	384	2,620	1,920	208	126
3	48	353	730	910	5,790	258	730	406	2,380	1,590	234	113
4	63	570	940	870	6,720	237	2,920	402	1,830	980	308	96
5	67	750	550	770	6,880	275	2,850	373	1,420	630	273	114
6	67	710	1,240	640	6,200	294	2,550	308	890	570	187	114
7	57	690	1,380	530	5,180	276	2,280	272	680	360	175	124
8	72	610	1,420	480	4,220	291	2,020	276	610	360	226	118
9	96	470	1,440	420	3,460	339	1,810	291	370	360	890	107
10	62	380	1,960	395	2,280	337	1,020	304	430	300	900	112
11	41	400	2,810	380	1,960	348	910	311	430	250	490	126
12	35	370	3,150	370	1,440	381	700	430	345	267	333	123
13	53	364	3,200	360	1,080	376	620	343	255	279	205	122
14	92	326	3,160	355	960	352	630	334	264	301	217	124
15	80	380	3,190	350	850	323	610	320	261	460	200	120
16	105	354	3,340	340	810	1,140	660	1,670	248	1,020	435	114
17	154	400	3,210	340	590	1,540	680	1,860	202	920	1,100	119
18	120	450	2,840	340	500	1,670	650	1,470	187	640	1,300	500
19	179	570	2,190	340	460	1,750	610	1,320	200	570	920	860
20	303	700	1,580	345	430	1,830	550	1,080	194	510	740	720
21	450	750	3,870	350	410	1,720	540	810	188	307	500	640
22	246	700	5,260	390	390	1,560	545	650	227	237	395	550
23	206	550	5,160	390	380	1,320	540	510	216	230	265	430
24	210	410	5,590	390	358	1,290	530	450	670	285	237	340
25	212	400	6,120	390	337	1,470	510	380	1,240	253	220	311
26	125	348	6,230	339	322	2,050	500	630	1,960	333	196	251
27	148	335	5,360	319	313	2,050	445	2,680	2,340	700	175	256
28	162	324	4,000	1,000	294	2,020	440	2,740	2,340	540	128	223
29	208	281	3,280	2,300	288	1,990	470	2,720	2,270	370	102	158
30	219	259	2,380	3,320	-----	1,830	450	2,620	2,300	244	119	165
31	156	-----	2,000	3,600	-----	1,620	-----	2,500	-----	281	118	-----
TOTAL	4,155	13,879	88,470	23,793	61,602	31,518	29,680	29,264	30,267	18,297	12,074	7,380
MEAN	134	463	2,854	768	2,124	1,017	989	944	1,008	590	389	246
MAX	450	750	6,230	3,600	6,880	2,050	2,920	2,740	2,700	2,230	1,300	860
MIN	35	259	238	319	288	237	440	272	187	230	102	96
CFSM	.18	.61	3.75	1.01	2.79	1.33	1.30	1.24	1.32	.77	.51	.32
IN.	.20	.68	4.32	1.16	3.01	1.54	1.45	1.43	1.48	.89	.59	.36
CAL YR 1967	TOTAL 265,175		MEAN 727		MAX 6,230		MIN 15		CFSM .95		IN 12.94	
WTR YR 1968	TOTAL 350,379		MEAN 957		MAX 6,880		MIN 35		CFSM 1.26		IN 17.10	

STREAMS TRIBUTARY TO LAKE ERIE

4-1795. Cedar Creek at Auburn, Ind.

Location.--Lat 41°21'57", long 85°03'08", in NE 1/4 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 1968.

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.--25 years, 68.3 cfs.

Extremes.--Maximum discharge during year, 1,070 cfs Feb. 2 (gage height, 8.88 ft); minimum, 3.4 cfs Oct. 8 (gage height, 0.87 ft).
1943-68: Maximum discharge, 1,520 cfs Apr. 5, 1950 (gage height, 9.90 ft) minimum, 0.5 cfs Nov. 12, 1953; minimum gage height, 0.57 ft Oct. 4, 1964.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	16	14	90	675	32	71	45	100	126	29	16
2	4.7	26	28	80	1,050	31	62	41	90	95	25	17
3	4.9	26	76	71	940	29	73	39	76	76	22	17
4	4.5	35	58	62	615	29	430	37	62	62	20	16
5	4.3	29	58	62	465	31	489	34	54	52	19	17
6	4.3	23	143	54	357	32	225	32	48	43	18	16
7	3.8	20	165	48	285	31	165	31	42	38	17	14
8	4.8	18	116	49	237	33	126	29	38	34	55	13
9	6.6	16	85	45	189	38	100	38	34	35	273	13
10	5.6	15	198	42	148	40	80	37	32	32	165	14
11	5.4	14	429	40	126	38	71	35	31	29	100	14
12	4.7	13	525	37	105	37	62	33	29	26	62	13
13	5.1	14	393	37	90	34	54	32	26	24	40	13
14	4.0	14	285	36	80	32	61	30	26	38	31	12
15	4.2	13	213	35	71	37	85	29	24	102	29	11
16	8.2	13	165	33	66	238	76	250	24	297	280	11
17	18	21	126	32	58	237	71	201	23	201	369	13
18	16	39	116	32	54	177	66	126	24	138	273	16
19	10	34	110	33	52	148	62	95	24	105	177	15
20	9.0	29	100	32	48	132	58	76	22	80	116	15
21	8.0	25	566	35	42	121	62	66	21	62	80	14
22	6.3	23	1,020	42	41	116	58	54	56	45	58	14
23	6.8	21	850	42	39	100	58	54	48	39	44	15
24	7.3	20	563	36	37	100	52	52	188	58	37	15
25	8.0	18	429	35	34	186	47	45	336	76	31	15
26	7.8	17	333	32	34	261	51	90	513	62	28	14
27	9.8	16	249	34	35	201	66	369	429	48	25	13
28	9.2	16	189	250	34	154	58	345	309	38	23	13
29	8.2	14	154	525	33	121	52	249	225	32	20	12
30	9.0	14	121	589	-----	95	48	177	165	28	18	12
31	9.0	-----	105	441	-----	80	-----	121	-----	26	16	-----
TOTAL	222.2	612	7,982	3,011	6,040	2,971	3,039	2,892	3,119	2,147	2,500	423
MEAN	7.17	20.4	257	97.1	208	95.8	101	93.3	104	69.3	80.6	14.1
MAX	18	39	1,020	589	1,050	261	489	369	513	297	369	17
MIN	3.8	13	14	32	33	29	47	29	21	24	16	11
CFSM	.08	.23	2.95	1.11	2.39	1.10	1.16	1.07	1.19	.79	.92	.16
IN.	.09	.26	3.40	1.28	2.57	1.27	1.29	1.23	1.33	.91	1.07	.18

CAL YR 1967 TOTAL 25,990.5 MEAN 71.2 MAX 1,020 MIN 2.7 CFSM .82 IN 11.07
WTR YR 1968 TOTAL 34,958.2 MEAN 95.5 MAX 1,050 MIN 3.8 CFSM 1.09 IN 14.89

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	1600	8.78	1,040	02-02	2200	8.88	1,070

STREAMS TRIBUTARY TO LAKE ERIE

195

4-1800. Cedar Creek near Cedartown, 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 Cedartown, 5.8 miles upstream from mouth, and 10 miles south of Auburn.

Drainage area.--270 sq mi.

Records available.--October 1946 to September 1968.

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.--22 years, 234 cfs.

Extremes.--Maximum discharge during year, 4,170 cfs Dec. 22 (gage height, 10.78 ft); minimum discharge, 21 cfs Oct. 2, 3 (gage height, 1.34 ft).
1946-68: 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. 7-9 1964.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	44	61	282	1,600	106	215	155	300	402	90	62
2	21	99	80	240	3,440	106	192	147	273	327	88	66
3	22	97	365	213	3,730	94	207	166	235	259	80	67
4	22	125	382	200	2,590	97	1,230	155	199	223	75	65
5	22	112	313	190	1,530	102	1,580	143	180	193	73	68
6	22	87	541	175	1,020	106	834	131	160	170	73	64
7	23	72	711	165	772	104	559	126	146	147	69	61
8	26	64	575	155	632	106	426	125	134	132	84	57
9	35	58	414	150	522	128	334	148	122	133	427	56
10	32	56	554	140	419	136	274	191	114	125	319	58
11	29	56	1,260	135	371	128	234	177	110	112	206	59
12	27	57	1,500	125	361	123	208	179	107	100	147	58
13	28	54	1,400	120	284	108	186	161	99	94	118	56
14	29	57	856	115	254	108	182	152	94	94	99	54
15	29	55	596	110	225	113	257	147	89	232	89	52
16	33	54	451	108	210	566	233	1,110	89	560	367	50
17	61	69	360	105	190	713	210	1,310	84	450	656	53
18	83	129	322	100	180	500	208	704	81	342	601	66
19	55	136	317	104	170	410	190	487	86	312	386	69
20	44	113	295	104	160	373	187	387	80	218	267	69
21	36	101	1,320	110	150	351	204	318	76	170	198	61
22	33	95	3,850	135	145	343	187	264	121	145	158	54
23	29	92	3,650	139	135	307	179	246	141	133	131	55
24	29	86	2,440	121	125	291	171	237	511	146	112	58
25	36	83	1,440	115	119	482	155	210	1,140	172	96	58
26	36	78	966	106	117	670	156	212	1,820	153	86	54
27	39	72	702	105	119	574	189	725	1,900	131	80	52
28	46	68	547	507	116	428	178	1,010	1,140	116	74	49
29	39	64	437	1,320	112	346	163	666	720	100	70	46
30	35	63	361	2,160	-----	282	156	480	520	93	67	44
31	36	-----	308	1,870	-----	243	-----	369	-----	87	64	-----
TOTAL	1,062	2,396	27,374	9,726	19,798	8,544	9,684	11,038	10,871	6,071	5,450	1,741
MEAN	34.3	79.9	883	314	683	276	323	356	362	196	176	58.0
MAX	83	136	3,850	2,160	3,730	713	1,580	1,310	1,900	560	656	69
MIN	21	44	61	100	112	94	155	125	76	87	64	44
CFSM	.13	.30	3.27	1.16	2.53	1.02	1.20	1.32	1.34	.73	.65	.21
IN.	.15	.33	3.77	1.34	2.73	1.18	1.33	1.52	1.50	.84	.75	.24

CAL YR 1967 TOTAL 84,135 MEAN 231 MAX 3,850 MIN 21 CFSM .85 IN 11.59
WTR YR 1968 TOTAL 113,755 MEAN 311 MAX 3,850 MIN 21 CFSM 1.15 IN 15.67

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-22	1615	10.78	4,170	06-26	2400	7.09	2,120
02-03	0215	10.47	3,980				

STREAMS TRIBUTARY TO LAKE ERIE

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 Moulhouse ditch, and 1.3 miles north of Decatur.

Drainage area.--621 sq mi.

Records available.--October 1946 to September 1968. 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.--22 years, 481 cfs.

Extremes.--Maximum discharge during year, 5,950 cfs Feb. 3 (gage height, 21.97 ft); minimum, 10 cfs Oct. 15 (gage height, 1.92 ft). 1946-68: Maximum discharge, 11,300 cfs Feb. 10, 11, 1959; maximum gage height, 24.22 ft Feb. 10, 1959 (ice jam); minimum discharge, 4.7 cfs Oct. 19, 1960; minimum gage height, 1.73 ft Sept. 12, 1955.

Remarks.--Record good. Flow regulated by Grand Lake Reservoir. Slight diversion from or into Wabash River and into Miami and Erie Canal.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	36	46	310	3,630	84	852	77	1,990	668	128	44
2	15	106	118	265	5,180	87	583	72	1,520	555	129	42
3	14	98	1,560	220	5,840	87	430	68	1,170	399	87	38
4	14	103	1,880	197	5,010	87	1,650	65	876	258	248	34
5	15	91	1,410	160	3,800	89	1,960	63	682	159	649	34
6	16	93	1,610	140	2,840	95	1,090	59	542	108	553	31
7	16	105	1,990	130	1,850	85	801	55	415	80	425	28
8	20	103	2,230	120	1,110	90	752	52	289	65	615	27
9	17	95	2,090	115	761	84	664	56	195	54	1,630	33
10	17	83	2,010	110	535	79	543	55	147	51	1,720	45
11	15	76	2,760	100	405	70	422	66	120	45	1,070	50
12	12	68	2,920	95	320	64	317	100	100	40	769	41
13	12	59	2,620	92	250	51	241	105	85	55	758	37
14	12	50	2,310	88	215	54	194	91	74	132	753	33
15	15	44	2,080	86	185	61	184	91	66	123	680	38
16	13	39	1,730	85	165	229	178	136	62	173	513	41
17	30	61	1,270	84	150	1,100	199	139	56	133	1,040	41
18	32	109	1,000	84	135	947	210	116	55	143	1,160	45
19	31	92	999	85	128	774	187	105	56	167	527	45
20	21	69	730	90	120	733	180	107	50	148	345	42
21	16	56	1,180	158	112	787	198	106	44	110	257	34
22	14	60	2,800	564	105	889	180	96	40	83	181	30
23	14	79	2,610	831	98	844	163	102	40	74	131	30
24	20	84	1,960	737	94	776	163	309	105	105	99	33
25	27	75	1,540	556	88	1,370	145	565	796	204	76	35
26	26	66	1,280	458	84	2,180	124	765	1,700	527	63	35
27	29	59	1,020	420	84	1,920	107	2,540	1,230	332	54	31
28	23	49	890	1,960	84	1,510	94	2,870	793	360	48	33
29	20	46	637	2,940	84	1,490	85	2,760	673	306	44	26
30	18	50	515	3,600	-----	1,460	80	2,510	697	191	46	26
31	20	-----	382	3,640	-----	1,210	-----	2,340	-----	135	46	-----
TOTAL	580	2,206	48,177	18,520	33,462	19,386	12,976	16,641	14,668	5,983	14,844	1,082
MEAN	18.7	73.5	1,554	597	1,154	625	433	537	489	193	479	36.1
MAX	32	109	2,920	3,640	5,840	2,180	1,960	2,870	1,990	668	1,720	50
MIN	12	36	46	84	84	51	80	52	40	40	44	26
CFSM	.03	.12	2.50	.96	1.86	1.01	.70	.86	.79	.31	.77	.06
IN.	.03	.13	2.89	1.11	2.00	1.16	.78	1.00	.88	.36	.89	.06
CAL YR 1967	TOTAL 193,266	MEAN 529	MAX 3,640	MIN 11	CFSM .85	IN 11.57						
WTR YR 1968	TOTAL 188,525	MEAN 515	MAX 5,840	MIN 12	CFSM .83	IN 11.29						

PEAK DISCHARGE (BASE, 2,900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-12	0730	16.78	2,960	05-28	1815	16.60	2,900
02-03	0500	21.97	5,950				

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 1968. 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.--38 years, 547 cfs.

Extremes.--Maximum discharge during year, 7,680 cfs Feb. 4 (gage height, 15.20 ft); minimum discharge, 14 cfs Oct. 4-6 (gage height, 0.73 ft).
1930-68: Maximum discharge, 13,600 cfs Feb. 11, 1959; maximum gage height, 19.42 ft Feb. 11, 1959 (ice jam); minimum observed, 3.4 cfs Oct. 19, 1934 (gage height, 0.28 ft).

Remarks.--Record good. The flow is sometimes regulated by Grand Lake. There is slight diversion from or into Wabash River basin and into Miami and Erie Canal.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	34	67	460	4,780	110	1,150	94	2,560	854	169	52
2	17	80	180	360	6,260	110	823	89	2,010	753	159	50
3	15	124	1,670	310	7,330	110	614	85	1,420	583	140	47
4	15	130	2,360	260	7,490	110	2,570	79	1,050	404	130	43
5	15	117	1,980	225	6,180	112	2,830	76	805	264	636	43
6	15	38	1,960	190	4,520	115	1,800	72	636	174	853	44
7	18	130	2,190	160	2,970	120	1,100	67	507	124	566	41
8	21	111	2,510	140	1,620	115	975	63	387	95	666	38
9	23	111	2,540	125	1,080	109	868	66	288	78	1,420	36
10	24	105	2,560	120	768	102	726	69	217	67	2,110	41
11	22	98	3,330	115	797	94	579	78	169	61	1,560	55
12	22	111	3,720	112	626	85	440	131	142	54	1,020	58
13	20	36	3,470	110	480	83	332	144	120	49	921	50
14	18	79	2,970	108	340	68	266	128	103	72	918	45
15	16	67	2,590	108	250	68	258	112	91	186	878	42
16	18	57	2,220	107	230	249	234	1,720	83	296	731	43
17	29	72	1,660	107	210	1,210	223	671	76	257	1,020	48
18	45	136	1,320	106	190	1,340	254	334	71	171	1,700	51
19	45	153	1,340	108	170	1,090	243	233	71	203	962	54
20	40	117	1,070	110	150	989	227	189	68	205	534	54
21	31	89	1,920	250	140	1,020	253	167	62	167	380	50
22	24	77	4,430	592	130	1,140	246	148	58	122	276	42
23	20	84	3,780	1,160	125	1,120	217	147	52	97	198	38
24	19	101	2,880	1,220	115	1,040	203	363	306	106	143	37
25	21	122	2,030	925	110	1,630	191	733	669	143	109	39
26	32	31	1,590	733	110	2,780	164	958	1,970	561	86	38
27	34	80	1,310	658	110	2,660	141	3,430	1,870	571	72	37
28	36	73	1,050	2,410	110	1,980	122	3,680	1,170	393	62	36
29	32	67	850	4,490	110	1,710	107	3,510	883	468	54	34
30	27	63	700	5,070	-----	1,690	99	3,170	853	312	50	33
31	26	-----	550	4,890	-----	1,500	-----	2,880	-----	207	51	-----
TOTAL	757	2,823	62,797	25,839	47,501	24,659	18,255	23,686	18,767	8,097	18,574	1,319
MEAN	24.4	94.1	2,026	834	1,638	795	609	764	626	261	599	44.0
MAX	45	153	4,430	5,070	7,490	2,780	2,830	3,680	2,560	854	2,110	58
MIN	15	34	67	106	110	68	99	63	52	49	50	33
CFSM	.03	.12	2.66	1.09	2.15	1.04	.80	1.00	.82	.34	.79	.06
IN.	.04	.14	3.06	1.26	2.32	1.20	.89	1.16	.92	.40	.91	.06
CAL YR 1967	TOTAL 247,504			MEAN 678		MAX 4,430	MIN 14			CFSM .89	IN 12.08	
WTR YR 1968	TOTAL 253,074			MEAN 691		MAX 7,490	MIN 15			CFSM .91	IN 12.35	

PEAK DISCHARGE (BASE, 4,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-22	0700	11.95	4,620	02-04	0145	15.20	7,680

STREAMS TRIBUTARY TO LAKE ERIE

4-1825.9 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 1968. 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, 718 cfs May 16 (gage height, 11.30 ft); minimum, 0.20 cfs Oct. 1, 2, 4 (gage height, 1.72 ft).
1964-68: Maximum discharge, 718 cfs May 16, 1968 (gage height, 11.30 ft); minimum, 0.1 cfs several days in September to November 1964; minimum gage height, 1.59 ft Nov. 1, 1964.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	11	1.3	5.8	249	2.5	9.7	2.9	22	6.4	2.0	.80
2	.40	6.1	68	5.0	449	2.5	8.8	2.3	20	5.1	.90	.70
3	.70	7.1	133	4.3	129	2.5	20	3.3	15	3.3	.90	1.2
4	.60	5.1	49	3.7	59	2.5	357	2.5	11	2.3	3.8	.60
5	1.0	3.3	67	3.4	35	3.1	116	2.2	8.5	2.2	5.3	3.1
6	.50	2.3	96	3.0	26	3.3	50	1.8	7.6	2.0	7.0	.70
7	.40	1.8	56	2.7	23	2.9	26	1.7	7.0	1.7	3.6	.50
8	3.1	1.7	33	2.5	17	2.4	19	2.0	5.6	1.8	5.1	.40
9	1.3	1.6	24	2.3	14	1.8	14	4.3	4.6	2.5	4.3	.40
10	.70	1.6	112	2.2	11	1.5	12	2.5	3.6	1.2	4.8	.70
11	.70	6.2	180	2.1	9.0	1.2	9.4	7.9	4.1	1.3	2.0	.50
12	.50	3.6	200	2.0	7.5	1.0	8.8	5.1	2.9	1.1	1.2	.40
13	1.3	2.5	58	1.9	6.0	.90	7.3	3.3	2.2	1.0	1.2	.40
14	1.0	2.2	32	1.8	5.2	2.7	11	2.9	2.3	.90	.90	.40
15	.40	1.8	22	1.7	4.4	5.6	8.8	3.8	2.0	2.7	3.3	.40
16	3.9	1.6	16	1.7	3.8	56	7.6	468	2.7	4.3	8.1	.50
17	20	12	15	1.7	3.4	54	7.3	134	1.4	3.1	99	.50
18	5.6	7.3	30	1.7	3.2	37	6.4	62	1.6	1.7	47	3.3
19	3.3	4.3	39	1.8	3.0	26	5.3	33	2.7	9.8	15	1.0
20	1.8	3.1	23	10	2.9	30	8.2	23	1.7	2.2	7.9	.70
21	1.4	2.9	306	30	2.8	33	7.0	17	1.3	1.1	4.3	1.0
22	1.2	3.3	372	26	2.7	30	5.3	14	2.7	.90	2.2	.50
23	1.2	3.1	300	21	2.6	24	5.3	17	4.0	2.3	1.1	.60
24	3.4	2.7	39	16	2.6	38	4.8	49	72	2.0	.90	2.5
25	3.4	2.2	23	12	2.6	111	4.1	28	107	1.1	.70	.90
26	1.3	1.8	17	9.1	2.5	105	3.6	44	99	.90	.60	.50
27	4.1	1.8	14	18	2.5	45	2.9	204	50	1.0	.60	.60
28	1.7	1.6	11	232	2.5	26	2.5	130	20	.80	.50	.60
29	1.3	1.4	9.8	312	2.5	19	2.5	56	12	.70	.50	.40
30	1.2	1.4	8.0	288	-----	14	2.5	26	7.6	.50	.50	.40
31	2.0	-----	6.6	140	-----	13	-----	18	-----	5.4	.40	-----
TOTAL	69.70	108.4	2,360.7	1,165.4	1,083.7	697.40	753.1	1,371.5	504.1	73.30	235.60	25.20
MEAN	2.25	3.61	76.2	37.6	37.4	22.5	25.1	44.2	16.8	2.36	7.60	.84
MAX	20	12	372	312	449	111	357	468	107	9.8	99	3.3
MIN	.30	1.4	1.3	1.7	2.5	.90	2.5	1.7	1.3	.50	.40	.40
CFSM	.10	.16	3.48	1.72	1.71	1.03	1.15	2.02	.77	.11	.35	.04
IN.	.12	.18	4.01	1.98	1.84	1.18	1.28	2.33	.86	.12	.40	.04
CAL YR 1967	TOTAL 8,527.20		MEAN 23.4		MAX 372		MIN .20		CFSM 1.07		IN 14.48	
WTR YR 1968	TOTAL 8,448.10		MEAN 23.1		MAX 468		MIN .30		CFSM 1.05		IN 14.35	

PEAK DISCHARGE (BASE, 250 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-21	2000	10.68	628	05-16	0830	11.30	718
01-29	2130	8.96	420	05-27	1430	7.42	303
02-02	0600	10.30	572	06-24	1900	6.67	255
04-04	0600	10.08	544				

STREAMS TRIBUTARY TO LAKE ERIE

199

4-1830. Maumee River at New Haven, Ind.

Location.--Lat 41°05'06", long 85°01'19", in SE¼NE¼ sec. 2, T. 30 N., R. 13 E., on left bank 600 ft upstream from a new county bridge on Landin Road, 1400 ft upstream from the Wabash Railroad bridge, 3/4 mile north of New Haven in Allen County, 2.8 miles upstream from Sixmile Creek, and 5.8 miles downstream from the gaging station on the Maumee River at Anthony Boulevard in Ft. Wayne.

Drainage area.--1,966 sq mi.

Records available.--December 1946 to September 1956 (high-water records only), October 1956 to September 1968.

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.--12 years (1956-68), 1,460 cfs.

Extremes.--Maximum discharge during year, 17,400 cfs Feb. 4 (gage height, 21.04 ft); minimum, 78 cfs Oct. 4; minimum gage height, 2.70 ft Sept. 30.

1946-68: Maximum discharge, 19,100 cfs Feb. 16, 1950 (gage height, 21.4 ft at site in use).

1956-68: Minimum daily discharge, 48 cfs Oct. 6, 13, 1963.

Remarks.--Record good. Flow regulated at low stage by powerplant above station. Flow slightly regulated by upstream reservoirs.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	101	480	314	2,530	11,400	539	3,010	795	6,160	3,560	707	290
2	114	727	800	1,500	14,600	536	2,270	691	5,500	3,170	495	320
3	96	750	2,940	1,200	16,600	510	2,020	713	4,520	2,650	446	267
4	88	776	3,980	1,050	17,300	462	8,050	684	3,430	1,920	632	250
5	107	860	3,800	950	16,500	519	9,090	700	2,630	1,320	783	394
6	115	910	4,100	900	14,200	562	6,930	612	2,040	1,020	1,260	273
7	109	815	4,400	850	11,300	527	4,750	525	1,530	758	924	254
8	153	786	4,600	800	8,160	534	3,900	510	1,360	630	998	262
9	224	668	4,600	740	5,880	703	3,260	610	1,010	643	1,990	216
10	138	574	5,300	720	4,080	638	2,680	575	780	588	3,830	222
11	99	601	7,800	680	2,960	584	2,030	751	812	474	2,750	243
12	96	614	8,800	650	2,400	641	1,760	795	733	432	1,750	278
13	105	512	8,300	620	1,770	708	1,320	819	513	438	1,390	255
14	136	468	7,400	600	1,860	566	1,400	723	490	471	1,320	231
15	131	416	6,500	580	1,500	577	1,370	684	469	1,020	1,300	252
16	185	448	6,000	560	1,300	2,210	1,250	8,370	540	2,180	2,340	235
17	679	614	5,300	550	1,100	3,930	1,320	7,130	444	1,890	3,190	232
18	421	696	4,500	550	880	4,240	1,310	3,730	335	1,350	4,240	513
19	261	722	4,550	580	800	3,600	1,210	2,680	433	1,150	2,780	988
20	291	800	3,500	609	720	3,570	1,230	2,260	399	1,040	1,790	1,180
21	429	860	6,880	751	670	3,520	1,090	1,610	318	767	1,360	776
22	380	845	16,000	929	621	3,350	1,130	1,470	400	554	950	825
23	225	745	14,900	1,450	698	3,230	1,060	1,150	441	609	760	603
24	247	610	13,100	1,550	682	2,980	1,010	1,260	1,450	758	572	544
25	351	538	11,000	1,330	625	4,160	978	1,440	3,810	634	496	482
26	204	508	9,630	1,130	605	6,170	949	2,060	6,300	988	479	444
27	274	432	8,080	1,100	588	6,390	911	7,210	7,450	1,270	351	340
28	247	404	6,240	3,840	582	5,240	821	8,790	5,640	1,250	346	397
29	240	376	5,000	8,340	555	4,480	823	8,030	4,270	1,030	245	287
30	298	332	3,780	11,700	-----	4,150	805	7,210	3,790	755	253	248
31	230	-----	2,960	11,900	-----	3,840	-----	6,330	-----	627	255	-----
TOTAL	6,774	18,887	195,054	61,239	140,936	73,666	69,737	80,917	67,997	35,946	40,982	12,101
MEAN	219	630	6,292	1,975	4,860	2,376	2,325	2,610	2,267	1,160	1,322	403
MAX	679	910	16,000	11,900	17,300	6,390	9,090	8,790	7,450	3,560	4,240	1,180
MIN	88	332	314	550	555	462	805	510	318	432	245	216
CFSM	.11	.32	3.20	1.00	2.47	1.21	1.18	1.33	1.15	.59	.67	.21
IN.	.13	.36	3.69	1.16	2.67	1.39	1.32	1.53	1.29	.68	.78	.23
CAL YR 1967	TOTAL 655,320			MEAN 1,795	MAX 16,000	MIN 71		CFSM .91	IN 12.40			
WTR YR 1968	TOTAL 804,236			MEAN 2,197	MAX 17,300	MIN 88		CFSM 1.12	IN 15.21			

PEAK DISCHARGE (BASE, 9,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	1315	20.44	16,400	04-04	2245	15.18	9,680
02-04	0015	21.04	17,400	05-16	1545	16.77	11,300

4-1835. Maumee River at Antwerp, Ohio

Location.--Lat 41°11'56", long 84°44'40", in sec. 22, T. 3 N., R. 1 E., on left bank 425 ft downstream from bridge on State Highway 49, 1 mile north of Antwerp, Paulding County, 7 miles downstream from Indiana State line, and 10 miles upstream from Marie DeLarme Creek.

Drainage area.--2,128 sq mi.

Records available.--September 1921 to December 1935, April 1939 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 694.90 ft above mean sea level, datum of 1929, supplemented by 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.--43 years, 1,641 cfs.

Extremes.--Maximum discharge during year, 17,500 cfs Feb. 4 (gage height, 17.74 ft); minimum, 94 cfs Oct. 5, 6 (gage height, 0.75 ft).
1921-35, 1939-68: 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.--Record 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 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	297	430	2,900	12,600	550	3,300	828	5,970	3,630	694	269
2	129	834	450	2,200	14,500	550	2,530	789	5,730	3,370	688	318
3	121	934	2,390	1,700	16,600	500	1,990	769	4,870	2,850	507	337
4	130	930	4,020	1,300	17,200	500	6,700	760	3,820	2,260	486	273
5	100	993	4,250	1,100	17,300	495	10,100	740	2,900	1,740	660	274
6	109	1,060	4,540	1,000	16,300	557	8,210	678	2,230	1,220	923	372
7	131	1,040	4,910	900	13,900	600	5,640	601	1,730	1,030	1,190	274
8	150	963	4,950	800	9,940	560	4,200	521	1,450	766	921	255
9	163	911	4,890	750	6,600	635	3,460	543	1,260	676	1,120	267
10	276	772	5,310	700	4,880	714	2,970	639	932	700	2,940	260
11	176	693	7,910	700	3,170	667	2,150	604	880	599	3,290	250
12	139	835	9,010	650	2,700	625	1,870	870	826	498	2,230	254
13	105	765	9,260	650	2,110	667	1,530	858	714	460	1,590	272
14	114	642	8,400	600	1,940	657	1,310	787	542	470	1,330	263
15	153	571	7,220	600	1,840	589	1,500	710	521	814	1,290	247
16	170	525	6,470	550	1,520	1,250	1,330	5,540	516	1,630	2,020	248
17	293	590	5,910	550	1,410	3,660	1,290	10,900	566	2,050	2,720	246
18	943	977	5,280	550	1,130	4,430	1,340	5,540	459	1,690	3,900	436
19	503	910	4,820	550	1,000	3,900	1,270	3,260	395	1,260	3,580	861
20	335	928	4,020	550	900	3,630	1,220	2,490	449	1,170	2,310	1,110
21	365	1,010	6,070	500	850	3,550	1,210	1,970	418	1,030	1,610	1,030
22	528	1,040	15,600	600	800	3,520	1,120	1,540	353	763	1,220	822
23	436	1,020	17,100	650	800	3,280	1,130	1,410	424	570	938	780
24	281	888	15,300	750	750	2,990	1,100	1,170	674	763	728	587
25	337	746	13,100	700	700	3,920	1,030	1,380	2,370	809	577	555
26	410	674	10,500	700	650	5,950	985	1,690	5,160	712	479	468
27	275	617	8,500	700	600	6,590	974	6,760	7,720	1,030	462	421
28	340	531	7,700	3,440	600	5,750	905	9,340	6,700	1,380	365	347
29	304	504	6,500	8,190	550	4,680	839	8,580	4,930	1,180	344	381
30	289	466	5,130	12,100	-----	4,210	842	7,460	3,980	1,010	260	288
31	356	-----	3,670	13,000	-----	3,890	-----	6,530	-----	751	261	-----
TOTAL	8,287	23,666	213,610	60,630	153,840	74,066	74,045	86,257	69,489	38,881	41,633	12,765
MEAN	267	789	6,891	1,956	5,305	2,389	2,468	2,782	2,316	1,254	1,343	426
MAX	943	1,060	17,100	13,000	17,300	6,590	10,100	10,900	7,720	3,630	3,900	1,110
MIN	100	297	430	500	550	495	839	521	353	460	260	246
CFSM	.13	.37	3.24	.92	2.49	1.12	1.16	1.31	1.09	.59	.63	.20
IN.	.14	.41	3.73	1.06	2.69	1.29	1.29	1.51	1.21	.68	.73	.22
CAL YR 1967	TOTAL 713,240			MEAN 1,954	MAX 17,100	MIN 74		CFSM .92	IN 12.46			
WTR YR 1968	TOTAL 857,169			MEAN 2,342	MAX 17,300	MIN 100		CFSM 1.10	IN 14.98			

PEAK DISCHARGE (BASE, 8,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-12	2200	12.52	9,420	05-17	0500	14.70	12,400
12-23	0400	17.77	17,400	05-28	1000	12.63	9,560
02-04	2400	17.79	17,500	06-27	1200	11.34	8,070
04-05	0700	13.35	10,500				

ILLINOIS RIVER BASIN

201

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 1968.

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 26, 1956 to Dec. 13, 1965, graphic water-stage recorder at same site and datum.

Average discharge.--17 years, 143 cfs.

Extremes.--Maximum discharge during year, 629 cfs June 27 (gage height, 9.04 ft); minimum, 81 cfs Sept. 15 (gage height, 3.01 ft). 1951-68: Maximum discharge, 686 cfs Oct. 10, 1954; maximum gage height, 9.04 ft June 27, 1968; minimum discharge, 44 cfs Sept. 9, 10, 1964; minimum gage height, 1.60 ft Aug. 19, 1957.

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	204	145	168	467	160	171	146	132	368	106	96
2	102	276	145	163	601	150	166	137	131	309	106	96
3	97	251	144	160	607	150	169	127	127	264	96	94
4	94	275	142	159	558	160	283	136	121	229	95	92
5	93	247	142	150	492	160	302	134	112	208	113	90
6	92	220	145	150	443	170	259	133	108	192	103	88
7	93	206	150	150	411	180	233	132	98	181	83	88
8	96	199	151	140	383	200	213	132	113	172	107	88
9	99	198	149	140	353	210	196	129	113	158	144	90
10	99	192	173	140	324	230	187	127	102	158	126	92
11	98	199	225	137	302	240	181	130	104	153	120	92
12	98	223	291	135	283	240	177	134	104	152	110	91
13	100	208	300	136	264	227	173	129	102	146	100	88
14	101	196	262	137	253	214	179	135	102	144	100	86
15	112	185	230	136	240	209	194	136	130	129	120	84
16	168	176	207	133	230	233	184	167	122	129	130	84
17	181	211	194	133	220	237	181	150	108	126	130	88
18	169	248	191	133	210	223	183	143	95	146	120	98
19	179	221	190	136	210	213	177	145	109	140	110	116
20	171	202	183	137	200	208	176	142	110	131	110	118
21	153	192	242	138	190	201	172	137	106	126	100	112
22	143	185	359	139	190	196	166	134	115	115	98	131
23	138	181	299	139	180	193	163	137	109	123	94	158
24	137	175	257	137	180	190	162	136	145	145	92	144
25	150	171	240	136	170	207	161	131	297	125	90	146
26	149	164	223	134	170	208	158	132	593	119	90	133
27	182	158	205	135	160	197	157	137	625	115	90	124
28	238	154	193	233	160	188	154	136	607	115	88	118
29	223	149	186	358	160	180	151	141	534	113	86	113
30	200	148	178	433	-----	175	148	138	450	107	86	110
31	189	-----	174	385	-----	175	-----	133	-----	108	90	-----
TOTAL	4,250	6,014	6,315	5,240	8,611	6,124	5,576	4,236	5,824	4,946	3,233	3,148
MEAN	137	200	204	169	297	198	186	137	194	160	104	105
MAX	238	276	359	433	607	240	302	167	625	368	144	158
MIN	92	148	142	133	160	150	148	127	95	107	83	84
CFSM	.90	1.32	1.34	1.11	1.95	1.30	1.22	.90	1.28	1.05	.69	.69
IN.	1.04	1.47	1.55	1.28	2.11	1.50	1.36	1.04	1.42	1.21	.79	.77
CAL YR 1967	TOTAL 63,928		MEAN 175		MAX 465		MIN 63		CFSM 1.15		IN 15.64	
WTR YR 1968	TOTAL 63,517		MEAN 174		MAX 625		MIN 83		CFSM 1.14		IN 15.54	

5-5155. Kankakee River at Davis, Ind.

Location.--Lat 41°24'00", long 86°42'04", in NE¼ 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 1968. 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 half 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.--44 years (1924-68), 480 cfs.

Extremes.--Maximum discharge during year, 1,260 cfs June 29 (gage height, 11.43 ft); minimum, 296 cfs Sept. 16, 17, (gage height, 6.01 ft).

1905-6, 1924-29, 1931-68: Maximum discharge observed, about 1,700 cfs Dec. 15, 1927 (gage height, 9.50 ft, site and datum then in use), from rating curve extended above 520 cfs; maximum gage height at present site and datum, 11.76 ft Oct. 16-18, 1954; minimum discharge observed, 154 cfs Aug. 30 to Sept. 3, 1941; minimum gage height observed, 2.97 ft Aug. 14, 1934.

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	325	530	430	730	963	586	617	495	502	1,250	403	315
2	323	613	430	680	1,080	580	600	483	493	1,200	387	354
3	316	660	440	630	1,140	570	621	474	475	1,140	374	346
4	308	631	450	600	1,140	566	870	468	451	1,050	363	328
5	305	682	450	570	1,150	577	1,030	459	426	934	382	322
6	303	653	460	530	1,160	610	1,030	451	415	821	432	318
7	301	617	470	510	1,160	638	1,000	444	401	724	401	311
8	303	593	490	490	1,150	655	961	443	394	654	380	305
9	314	562	510	480	1,130	704	897	441	409	626	525	307
10	316	545	550	470	1,100	753	835	435	394	591	583	317
11	314	544	620	460	1,060	754	775	434	386	559	517	333
12	313	572	730	450	1,020	741	712	440	387	526	456	328
13	315	583	780	450	982	723	666	435	379	504	424	319
14	323	569	830	440	950	700	646	431	371	480	401	311
15	337	552	840	440	918	685	681	442	382	469	378	305
16	416	532	820	430	887	720	674	500	401	453	389	301
17	471	549	780	430	855	771	649	534	386	438	483	300
18	476	611	700	430	815	778	642	506	370	439	507	324
19	474	623	650	420	784	769	628	500	369	466	460	372
20	476	600	617	420	759	762	615	492	371	442	424	397
21	462	577	620	420	732	744	605	478	364	421	400	392
22	437	540	680	420	707	730	580	464	368	407	376	407
23	418	520	770	420	687	712	562	470	363	403	354	479
24	406	500	920	430	667	694	545	480	362	511	345	491
25	427	490	980	430	647	699	539	467	508	559	333	490
26	438	470	1,000	440	629	703	537	456	1,060	497	327	472
27	471	460	980	454	615	699	541	472	1,190	455	325	442
28	551	450	950	551	603	685	525	482	1,240	429	320	417
29	575	440	920	756	595	666	516	477	1,260	412	316	398
30	554	440	850	880	-----	640	507	500	1,260	397	310	385
31	531	-----	800	919	-----	631	-----	528	-----	397	306	-----
TOTAL	12,299	16,748	21,517	16,180	26,085	21,245	20,606	14,581	16,137	18,654	12,381	10,886
MEAN	397	558	694	522	899	685	687	470	538	602	399	363
MAX	575	682	1,000	919	1,160	778	1,030	534	1,260	1,250	583	491
MIN	301	440	430	420	595	566	507	431	362	397	306	300
CFSM	.78	1.10	1.37	1.03	1.77	1.35	1.35	.93	1.06	1.18	.79	.71
IN.	.70	1.23	1.58	1.18	1.91	1.56	1.51	1.07	1.18	1.37	.91	.80
CAL YR 1967	TOTAL 209,608			MEAN 574	MAX 1,120	MIN 249	CFSM 1.13	IN 15.35				
WTR YR 1968	TOTAL 207,319			MEAN 566	MAX 1,260	MIN 300	CFSM 1.12	IN 15.18				

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 1968.

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.--13 years, 96.4 cfs.

Extremes.--Maximum discharge during year, 1,370 cfs Feb. 3 (gage height, 13.67 ft); minimum, 6.8 cfs Sept. 16; minimum gage height, 1.41 Oct. 2, 3.
1955-68: Maximum discharge, 1,650 cfs Dec. 26, 1965 (gage height, 13.99 ft); minimum, 6.2 cfs Aug. 23 and Oct. 11-13, 1957, Oct. 17, 1964; minimum gage height, 0.81 ft Sept. 10, 1955.

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.6	36	36	97	871	38	76	38	43	206	18	19
2	7.4	104	37	90	1,170	39	69	40	45	151	12	19
3	7.4	98	43	85	1,340	33	89	37	37	114	9.4	18
4	7.3	136	44	77	1,190	36	895	34	32	91	8.6	13
5	7.5	106	44	71	957	49	1,030	31	28	76	12	16
6	7.3	76	62	62	661	64	856	29	25	64	10	14
7	7.3	63	92	61	495	61	512	27	23	53	8.6	13
8	7.6	61	87	56	376	62	310	27	21	45	12	12
9	7.7	65	75	52	298	147	203	27	28	40	141	11
10	7.7	61	216	48	234	152	153	25	25	43	100	9.6
11	7.5	63	532	43	198	120	120	25	22	41	78	9.0
12	7.5	103	818	40	168	106	99	26	20	32	60	8.5
13	7.9	94	837	41	141	91	82	23	18	27	45	7.8
14	7.9	77	575	42	123	79	94	24	16	22	60	7.4
15	10	66	337	40	113	83	90	25	16	20	150	7.1
16	15	57	208	38	100	473	82	60	14	18	320	7.0
17	21	93	153	37	84	411	76	60	14	15	220	8.1
18	21	170	141	37	72	267	70	44	13	16	140	16
19	25	112	148	37	69	207	76	41	13	18	100	19
20	24	84	134	37	67	173	82	39	13	14	75	18
21	17	74	551	37	57	153	72	33	12	13	56	17
22	13	68	1,050	37	56	151	68	31	14	12	45	48
23	12	64	1,060	37	49	137	62	36	18	13	35	125
24	11	59	818	37	46	134	58	41	280	27	30	74
25	13	55	499	36	43	228	58	35	522	38	25	78
26	13	49	327	54	42	212	62	36	848	23	23	57
27	26	45	237	71	43	170	62	55	881	17	21	39
28	51	41	189	538	43	137	54	54	728	14	19	29
29	40	39	155	825	40	113	49	49	476	12	17	22
30	30	78	129	942	-----	95	43	53	294	11	17	19
31	24	-----	114	857	-----	88	-----	46	-----	13	18	-----
TOTAL	472.0	2,257	9,748	4,562	9,146	4,309	5,652	1,150	4,539	1,299	1,885.6	760.5
MEAN	15.2	75.2	314	147	315	139	188	37.1	151	41.9	60.8	25.4
MAX	51	170	1,060	942	1,340	473	1,030	60	881	206	320	125
MIN	7.3	36	36	36	40	33	43	23	12	11	8.6	7.0
CFSM	.12	.57	2.38	1.11	2.39	1.05	1.43	.28	1.15	.32	.46	.19
IN.	.13	.64	2.75	1.29	2.58	1.21	1.59	.32	1.28	.37	.53	.21
CAL YR 1967	TOTAL 40,460.3	MEAN 111	MAX 1,060	MIN 7.1	CFSM .84	IN 11.40						
WTR YR 1968	TOTAL 45,780.1	MEAN 125	MAX 1,340	MIN 7.0	CFSM .95	IN 12.90						

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G. HT.	DISCHARGE	DATE	TIME	G. HT.	DISCHARGE
12-12	2300	11.29	875	04-05	0645	12.57	1,040
12-22	2300	12.77	1,100	06-27	0215	11.19	899
02-03	0815	13.67	1,370				

ILLINOIS RIVER BASIN

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 1968.

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.--20 years, 241 cfs.

Extremes.--Maximum discharge during year, 2,270 cfs Feb. 4 (gage height, 13.48 ft); minimum, 17 cfs Oct. 4, 5; minimum gage height, 4.00 ft Oct. 13-15.

1948-68: Maximum discharge, 5,390 cfs Oct. 12, 13, 1954 (gage height, 17.13 ft); minimum, 12 cfs in the period Nov. 20 to Dec. 9, 1964; minimum gage height observed, 3.49 ft Jan. 11, 14, 1954.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	103	98	222	1,670	102	195	155	212	649	128	97
2	21	310	100	200	1,960	102	184	138	210	418	125	97
3	20	356	120	190	2,180	91	235	141	181	316	115	92
4	18	408	120	175	2,240	93	1,120	142	152	249	112	86
5	28	385	147	165	2,150	104	1,590	130	125	212	123	86
6	20	320	222	160	1,900	122	1,780	115	112	181	130	85
7	18	250	360	155	1,480	124	1,640	111	105	163	119	84
8	18	200	324	154	1,110	129	1,250	106	100	153	128	82
9	18	150	254	154	820	194	766	106	97	146	237	81
10	18	100	445	151	558	251	456	105	97	152	259	81
11	18	130	871	138	525	211	350	104	96	156	183	81
12	18	180	1,200	130	351	186	309	104	91	146	142	77
13	18	250	1,370	131	302	166	271	101	88	134	128	73
14	18	200	1,400	130	264	157	269	99	85	130	118	70
15	28	160	1,200	130	245	173	320	109	85	130	131	66
16	42	140	848	127	219	639	288	223	85	121	476	65
17	44	230	518	120	186	958	263	235	82	118	601	68
18	51	350	440	120	172	800	243	178	84	115	458	97
19	30	470	433	120	166	548	231	161	91	115	259	106
20	81	220	410	120	157	434	241	155	86	116	186	103
21	62	196	789	120	129	379	265	138	89	116	152	96
22	50	181	1,370	110	129	377	225	127	94	112	132	91
23	43	170	1,660	110	124	348	210	131	118	110	120	193
24	41	162	1,730	110	117	339	191	138	284	270	110	179
25	46	152	1,520	110	108	471	191	134	951	229	99	148
26	46	137	1,110	120	105	526	191	125	1,280	171	95	135
27	78	124	675	166	105	460	206	199	1,460	150	95	114
28	173	110	459	710	105	359	204	206	1,570	140	94	94
29	151	104	377	1,140	104	292	178	214	1,480	132	89	82
30	109	103	324	1,420	-----	245	164	307	1,140	123	88	73
31	88	-----	288	1,560	-----	227	-----	253	-----	116	89	-----
TOTAL	1,438	6,351	21,182	8,668	19,681	9,607	14,026	4,690	10,730	5,589	5,321	2,882
MEAN	46.4	212	683	280	679	310	468	151	358	180	172	96.1
MAX	173	470	1,730	1,560	2,240	958	1,780	307	1,570	649	601	193
MIN	18	100	98	110	104	91	164	99	82	110	86	65
CFSM	.16	.75	2.41	.98	2.39	1.09	1.65	.53	1.26	.63	.60	.34
IN.	.19	.83	2.77	1.14	2.58	1.26	1.84	.61	1.41	.73	.70	.38
CAL YR 1967	TOTAL 102,265			MEAN 280	MAX 1,730	MIN 18	CFSM .99	IN 13.39				
WTR YR 1968	TOTAL 110,165			MEAN 301	MAX 2,240	MIN 18	CFSM 1.06	IN 14.43				

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 1968.

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.--25 years (1943-68), 377 cfs.

Extremes.--Maximum discharge during year, 3,490 cfs Feb. 5 (gage height, 10.03 ft); minimum, 48 cfs Oct. 25; minimum gage height, 3.96 ft Oct. 27.
1905-6, 1943-68: 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, 3.96 ft Oct. 27, 1967.

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	320	312	481	2,110	270	385	326	416	1,470	222	220
2	96	370	316	412	2,670	268	356	312	403	994	221	230
3	112	420	364	390	3,090	265	356	305	380	662	216	220
4	150	470	403	370	3,280	258	946	302	344	519	222	200
5	157	520	416	350	3,460	263	1,580	290	316	435	221	200
6	173	450	440	330	3,350	273	1,940	278	290	385	250	200
7	175	350	548	310	2,960	284	2,260	268	275	356	270	200
8	174	300	610	299	2,340	284	2,230	263	265	340	290	290
9	174	230	578	290	1,710	316	1,770	265	258	330	350	290
10	145	200	590	280	1,270	380	1,130	263	253	320	470	290
11	94	230	804	280	902	394	734	260	250	350	390	190
12	92	260	1,120	280	707	364	597	265	244	330	340	190
13	89	300	1,420	270	616	340	519	260	240	310	300	187
14	88	330	1,530	270	530	319	503	260	235	290	270	185
15	91	290	1,610	270	481	316	554	263	233	280	300	185
16	121	250	1,510	270	455	455	560	348	231	270	550	183
17	160	220	1,160	270	421	790	525	450	227	270	930	184
18	178	300	783	284	394	978	492	412	226	260	800	192
19	165	450	662	287	372	938	445	360	233	260	580	215
20	158	640	636	270	356	714	430	340	229	260	450	222
21	125	530	776	270	340	610	455	323	226	260	340	222
22	93	470	1,230	270	340	560	440	305	258	260	300	214
23	81	440	1,640	270	319	542	398	302	268	260	280	212
24	73	420	1,530	260	299	503	385	312	319	400	250	255
25	67	394	2,120	260	290	525	368	316	946	530	230	253
26	100	380	2,000	270	284	649	360	305	1,730	410	220	238
27	170	356	1,630	300	278	688	398	344	1,870	370	220	229
28	260	337	1,040	496	275	610	403	394	1,750	320	210	217
29	210	323	707	994	273	508	364	389	1,770	280	210	206
30	170	316	590	1,410	-----	445	340	398	1,700	260	210	200
31	150	-----	525	1,730	-----	403	-----	460	-----	240	210	-----
TOTAL	4,193	10,866	30,000	12,783	34,172	14,512	22,223	9,938	16,385	12,281	10,322	6,519
MEAN	135	362	968	412	1,178	468	741	321	546	396	333	217
MAX	260	640	2,120	1,730	3,460	978	2,260	460	1,870	1,470	930	290
MIN	67	200	312	260	273	258	340	260	226	240	210	183
CFSM	.32	.85	2.28	.97	2.77	1.10	1.74	.75	1.29	.93	.78	.51
IN.	.37	.95	2.63	1.12	2.99	1.27	1.94	.87	1.43	1.07	.90	.57
CAL YR 1967	TOTAL 161,597	MEAN 443	MAX 2,120	MIN 67	CFSM 1.04	IN 14.14						
WTR YR 1968	TOTAL 184,194	MEAN 503	MAX 3,460	MIN 67	CFSM 1.18	IN 16.12						

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-15	1615	8.17	1,630	04-07	2330	8.87	2,330
12-25	1430	8.70	2,160	06-27	0345	8.40	1,930
02-05	1030	10.03	3,490				

ILLINOIS RIVER BASIN

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 1968.

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.--20 years, 1,240 cfs.

Extremes.--Maximum discharge during year, 4,120 cfs Feb. 8 (gage height, 12.03 ft); minimum, 475 cfs Oct. 12 (gage height, 2.54 ft). 1948-68: Maximum discharge, 5,300 cfs Oct. 22, 1954 (gage height, 13.20 ft); minimum daily discharge, 280 cfs Jan. 25-29, 1963, result of freezeup; minimum gage height, 1.87 ft Sept. 9-19, 1964.

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	533	969	990	1,830	2,840	1,420	1,790	1,370	1,380	3,630	900	718
2	530	1,060	1,020	1,710	3,220	1,400	1,700	1,320	1,350	3,610	886	749
3	515	1,210	1,030	1,600	3,470	1,360	1,650	1,290	1,310	3,490	853	753
4	500	1,340	1,020	1,500	3,650	1,390	2,080	1,270	1,240	3,290	878	723
5	488	1,410	1,020	1,400	3,810	1,380	2,510	1,220	1,170	3,090	928	715
6	488	1,420	1,050	1,300	3,980	1,460	2,730	1,170	1,100	2,820	941	691
7	483	1,390	1,120	1,250	4,060	1,540	2,900	1,140	1,050	2,540	907	670
8	478	1,320	1,200	1,200	4,110	1,580	3,040	1,110	1,010	2,240	839	656
9	488	1,250	1,280	1,150	4,090	1,620	3,140	1,100	975	2,050	875	649
10	495	1,210	1,330	1,150	4,020	1,720	3,170	1,090	959	1,920	1,030	658
11	493	1,190	1,500	1,100	4,000	1,770	3,100	1,070	927	1,710	1,040	682
12	480	1,230	1,860	1,100	3,800	1,780	2,900	1,080	898	1,570	954	672
13	480	1,260	2,210	1,100	3,500	1,750	2,660	1,060	861	1,460	873	656
14	500	1,260	2,420	1,090	3,300	1,700	2,430	1,050	847	1,380	824	627
15	535	1,240	2,530	1,090	3,100	1,660	2,260	1,060	831	1,290	796	611
16	618	1,190	2,590	1,080	2,900	1,760	2,140	1,190	836	1,260	844	603
17	753	1,180	2,560	1,070	2,700	1,940	2,060	1,390	826	1,190	1,380	594
18	800	1,250	2,420	1,060	2,500	2,100	1,990	1,470	801	1,150	1,710	617
19	827	1,310	2,190	1,050	2,400	2,220	1,910	1,430	802	1,160	1,680	701
20	840	1,340	2,010	1,050	2,200	2,280	1,840	1,360	798	1,130	1,500	765
21	833	1,320	2,010	1,040	2,100	2,280	1,790	1,320	787	1,070	1,360	782
22	793	1,280	2,290	1,050	2,000	2,240	1,740	1,260	818	998	1,190	791
23	755	1,240	2,550	1,050	1,900	2,170	1,670	1,240	860	969	1,060	851
24	725	1,200	2,680	1,050	1,800	2,090	1,590	1,270	941	1,030	971	918
25	735	1,160	2,770	1,060	1,700	2,040	1,520	1,260	1,900	1,190	902	970
26	774	1,120	2,830	1,090	1,660	2,060	1,490	1,220	2,760	1,210	842	945
27	814	1,070	2,850	1,100	1,570	2,090	1,500	1,230	3,080	1,110	802	899
28	916	1,030	2,800	1,320	1,510	2,100	1,500	1,290	3,320	1,030	767	851
29	1,010	1,000	2,630	1,860	1,460	2,070	1,460	1,320	3,480	963	761	808
30	1,020	993	2,350	2,340	-----	1,990	1,420	1,290	3,580	925	737	782
31	982	-----	2,130	2,600	-----	1,890	-----	1,350	-----	901	720	-----
TOTAL	20,681	36,442	61,240	40,440	83,350	56,850	63,680	38,290	41,497	53,376	30,750	22,107
MEAN	667	1,215	1,975	1,305	2,874	1,834	2,123	1,235	1,383	1,722	992	737
MAX	1,020	1,420	2,850	2,600	4,110	2,280	3,170	1,470	3,580	3,630	1,710	970
MIN	478	969	990	1,040	1,460	1,360	1,420	1,050	787	901	720	594
CFSM	.51	.93	1.51	1.00	2.20	1.40	1.62	.94	1.06	1.32	.76	.56
IN.	.59	1.04	1.74	1.15	2.37	1.62	1.81	1.09	1.18	1.52	.87	.63
CAL YR 1967	TOTAL 544,946		MEAN 1,493		MAX 3,600		MIN 408		CFSM 1.14		IN 15.49	
WTR YR 1968	TOTAL 548,703		MEAN 1,499		MAX 4,110		MIN 478		CFSM 1.15		IN 15.60	

5-5179. State ditch near Kouts, Ind.

Location.--Lat 41°19'08", long 87°04'55", in SW¼SW¼ sec. 11, T. 33 N., R. 6 W., on left bank 15 ft upstream from bridge on State Highway 8, 700 ft upstream from mouth, and 3 miles West of Kouts.

Drainage area.--31.7 sq mi.

Records available.--July to September 1968.

Gage.--Water-stage recorder. Datum of gage is 652.00 ft (State Highway Commission bench mark).

Extremes.--Maximum discharge during period, 194 cfs Aug. 17 (gage height, 8.03 ft); minimum, 14 cfs June 14 (gage height, 2.61 ft).

Remarks.--Record good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1										36	20	19
2										32	19	19
3										30	19	18
4										28	19	18
5										27	19	17
6										26	19	17
7										25	19	16
8										25	18	16
9										36	18	16
10										39	18	17
11										28	18	18
12										25	18	17
13										24	18	17
14										23	18	17
15										22	18	17
16										21	19	16
17										21	154	16
18										21	75	17
19										22	45	18
20										20	35	18
21										20	30	16
22										20	27	17
23										23	25	17
24										39	24	17
25										25	22	16
26										22	21	16
27										21	20	16
28										20	20	16
29										20	20	16
30										19	19	16
31		-----			-----		-----		-----	20	19	-----
TOTAL										780	853	507
MEAN										25.2	27.5	16.9
MAX										39	154	19
MIN										19	18	16
CFSM										.79	.87	.53
IN.										.92	1.00	.59

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
06-25	1800	7.69	182	08-17	1100	8.03	194

ILLINOIS RIVER BASIN

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 1968. Monthly discharge only for some periods, published in WSP 1308.

Gage.--Digital water-stage recorder. Datum of gage is 628.13 ft above mean sea level, datum of 1929. Prior to Dec. 19, 1934, chain gage at highway bridge about 400 ft upstream, Dec. 19, 1934 to Oct. 4, 1965, graphic water-stage recorder on left bank 50 ft downstream, and Oct. 5, 1965 to Sept. 21, 1966, staff gage on right bank, 200 ft upstream, all at same datum.

Average discharge.--46 years, 1,522 cfs.

Extremes.--Maximum discharge during year, 5,020 cfs Feb. 9 (gage height, 10.71 ft); minimum 587 cfs Oct. 7 (gage height, 2.84 ft). 1922-68: Maximum discharge, 7,200 cfs Dec. 21, 1927 (gage height, 11.40 ft, present datum, site then in use), from rating curve extended above 3,000 cfs by gage-height relation study with site below railroad bridge; minimum daily, 260 cfs Jan. 13-15, 1954, result of freezeup; minimum gage height, 0.80 ft (present datum, site then in use) Aug. 4, 5, 1934.

Remarks.--Record good. Record of suspended sediment loads for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	647	1,260	1,270	2,610	3,640	1,970	2,380	1,750	1,640	4,740	1,130	1,020
2	644	1,350	1,260	2,330	4,280	1,930	2,230	1,670	1,640	4,740	1,110	1,010
3	638	1,490	1,310	2,100	4,700	1,850	2,140	1,620	1,600	4,680	1,080	1,020
4	620	1,700	1,300	1,950	4,820	1,820	2,510	1,580	1,540	4,550	1,090	996
5	605	1,780	1,300	1,800	4,990	1,870	3,110	1,530	1,460	4,380	1,130	979
6	593	1,770	1,330	1,650	4,900	1,950	3,300	1,480	1,360	4,160	1,150	964
7	590	1,730	1,400	1,550	4,970	2,020	3,400	1,440	1,300	3,850	1,150	936
8	596	1,670	1,470	1,500	5,000	2,090	3,480	1,390	1,250	3,540	1,140	913
9	599	1,570	1,540	1,450	5,010	2,170	3,530	1,370	1,200	3,260	1,170	903
10	605	1,520	1,640	1,400	4,900	2,260	3,570	1,360	1,170	3,110	1,220	899
11	608	1,500	1,840	1,400	4,700	2,290	3,580	1,340	1,140	2,860	1,270	907
12	602	1,510	2,190	1,400	4,400	2,290	3,550	1,340	1,100	2,540	1,230	908
13	599	1,540	2,610	1,350	4,100	2,260	3,440	1,320	1,060	2,290	1,140	895
14	608	1,550	2,820	1,350	3,900	2,210	3,270	1,300	1,030	2,090	1,080	876
15	644	1,530	2,930	1,350	3,600	2,160	3,120	1,300	1,020	1,910	1,030	851
16	758	1,480	2,990	1,300	3,400	2,220	2,940	1,430	1,010	1,770	1,060	837
17	806	1,480	3,020	1,300	3,200	2,380	2,820	1,620	1,000	1,660	2,150	824
18	956	1,540	3,010	1,300	3,000	2,530	2,750	1,750	986	1,570	3,190	834
19	930	1,580	2,930	1,300	2,800	2,680	2,650	1,790	975	1,530	3,080	883
20	976	1,610	2,750	1,300	2,700	2,840	2,550	1,730	965	1,490	2,820	963
21	931	1,630	2,700	1,300	2,500	2,950	2,460	1,650	954	1,430	2,510	991
22	957	1,610	2,980	1,350	2,400	2,950	2,350	1,590	959	1,350	2,190	993
23	928	1,580	3,100	1,350	2,300	2,900	2,260	1,580	985	1,270	1,880	1,020
24	911	1,550	3,160	1,400	2,300	2,820	2,140	1,590	1,030	1,280	1,630	1,100
25	908	1,490	3,230	1,450	2,200	2,730	2,020	1,590	1,680	1,370	1,450	1,160
26	921	1,450	3,280	1,500	2,200	2,700	1,960	1,560	3,490	1,440	1,310	1,170
27	987	1,330	3,290	1,600	2,100	2,690	1,930	1,550	4,170	1,400	1,220	1,150
28	1,090	1,340	3,280	1,850	2,000	2,680	1,900	1,570	4,380	1,310	1,150	1,100
29	1,170	1,300	3,310	2,510	2,000	2,650	1,880	1,610	4,580	1,230	1,110	1,050
30	1,240	1,290	3,070	3,080	-----	2,590	1,810	1,600	4,680	1,170	1,070	1,010
31	1,270	-----	2,850	3,350	-----	2,490	-----	1,580	-----	1,140	1,040	-----
TOTAL	25,097	45,800	75,180	52,430	102,910	73,940	81,030	47,580	51,354	75,110	45,980	29,162
MEAN	810	1,527	2,425	1,691	3,549	2,385	2,701	1,535	1,712	2,423	1,483	972
MAX	1,270	1,780	3,310	3,350	5,010	2,950	3,580	1,790	4,680	4,740	3,190	1,170
MIN	590	1,260	1,270	1,300	2,000	1,820	1,810	1,300	954	1,140	1,030	824
CFSM	.46	.87	1.38	.96	2.02	1.36	1.54	.88	.98	1.38	.85	.55
IN.	.53	.97	1.59	1.11	2.18	1.57	1.72	1.01	1.09	1.59	.98	.62
CAL YR 1967	TOTAL 654,557		MEAN 1,793		MAX 4,760		MIN 520		CFSM 1.02		IN 13.89	
WTR YR 1968	TOTAL 705,573		MEAN 1,928		MAX 5,010		MIN 590		CFSM 1.10		IN 14.97	

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, $\frac{1}{2}$ 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 1968.

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.--20 years, 94.1 cfs.

Extremes.--Maximum discharge during year, 1,140 cfs Feb. 1 (gage height, 11.12 ft); minimum, 12 cfs Oct. 6, 7; minimum gage height, 1.48 ft Oct. 7.
1948-68: Maximum discharge, 1,120 cfs Feb. 14, 1959 (gage height, 10.45 ft); maximum gage height, 10.58 ft Dec. 24, 1965; minimum discharge, 3.0 cfs Sept. 7, 1964 (gage height, 1.13 ft).

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	135	62	90	908	68	83	58	51	239	32	56
2	15	187	62	80	1,040	66	75	55	51	202	30	53
3	14	184	63	75	980	64	77	54	49	158	29	49
4	13	282	62	70	900	64	353	52	45	128	30	45
5	14	225	63	65	802	66	302	49	43	116	30	45
6	12	173	72	62	706	80	222	47	42	102	31	45
7	12	146	92	60	641	76	183	45	40	91	28	42
8	15	139	96	58	558	77	160	45	39	90	30	40
9	16	120	92	56	488	90	134	44	38	89	43	42
10	15	103	142	56	405	95	116	42	37	84	36	44
11	14	106	227	55	344	87	103	42	36	76	32	50
12	14	142	494	54	286	83	98	42	35	71	29	43
13	14	125	476	54	237	78	90	40	34	65	27	40
14	15	112	338	54	209	81	104	40	34	61	26	34
15	18	97	262	53	189	80	149	42	52	57	24	32
16	59	86	209	52	160	103	121	55	44	55	27	31
17	73	108	177	52	140	119	122	56	38	52	821	31
18	68	158	169	52	130	117	144	50	35	51	927	35
19	44	135	168	51	115	133	132	52	34	50	698	43
20	37	115	158	51	105	180	126	50	32	46	507	48
21	34	108	424	51	100	173	121	48	31	44	362	42
22	32	105	562	52	95	165	105	44	31	41	263	42
23	30	103	369	52	90	161	97	53	30	40	201	44
24	30	99	270	52	85	138	100	65	31	42	160	41
25	40	91	232	56	80	135	90	57	469	40	125	43
26	41	84	195	64	80	137	89	56	690	38	99	41
27	64	76	167	83	75	130	84	58	490	36	87	38
28	93	71	150	405	75	125	76	57	371	34	78	36
29	79	67	130	513	70	112	68	55	269	32	66	32
30	89	65	120	575	-----	100	64	52	208	31	59	30
31	120	-----	100	453	-----	93	-----	50	-----	32	57	-----
TOTAL	1,149	3,747	6,203	3,556	10,093	3,276	3,788	1,555	3,429	2,293	4,994	1,237
MEAN	37.1	125	200	115	348	106	126	50.2	114	74.0	161	41.2
MAX	120	282	562	575	1,040	180	353	65	690	239	927	56
MIN	12	65	62	51	70	64	64	40	30	31	24	30
CFSM	.30	1.02	1.64	.94	2.85	.87	1.03	.41	.94	.61	1.32	.34
IN.	.35	1.14	1.89	1.08	3.08	1.00	1.15	.47	1.05	.70	1.52	.38
CAL YR 1967	TOTAL 47,110.7		MEAN 129		MAX 945		MIN 9.2		CFSM 1.06		IN 14.36	
WTR YR 1968	TOTAL 45,320		MEAN 124		MAX 1,040		MIN 12		CFSM 1.02		IN 13.82	

PEAK DISCHARGE (BASE, 730 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
02-01	1430	11.12	1,140	08-17	1330	10.97	1,120
06-25	2100	9.87	854				

ILLINOIS RIVER BASIN

5-5195. West Creek near Schneider, Ind.

Location.--Lat 41°12'52", long 87°29'36", in NW 1/4 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 1968.

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.--17 years, 40.2 cfs.

Extremes.--Maximum discharge during year, 1,760 cfs Aug. 17 (gage height, 7.94 ft); minimum, 10 cfs Oct. 3, Sept. 14; minimum gage height, 0.93 ft Aug. 15.

1948-51, 1954-68: Maximum discharge, 1,840 cfs Oct. 10, 11, 1954 (gage height, 8.06 ft, from graph based on gage readings); minimum, 1.3 cfs Feb. 17, 1957 (gage height, 0.32 ft), result of freezeup.

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	100	21	22	1,120	18	26	20	22	70	13	18
2	11	136	22	21	1,430	18	25	19	24	51	12	17
3	10	131	22	21	682	18	27	19	21	39	12	16
4	11	170	21	20	335	19	150	19	20	32	12	15
5	11	114	21	20	200	20	101	19	19	28	12	15
6	11	82	23	20	143	20	68	18	18	25	13	14
7	11	64	31	19	117	19	49	18	17	22	12	13
8	12	52	34	19	99	20	38	18	17	22	12	13
9	12	45	33	19	85	25	32	18	17	20	12	16
10	12	39	84	18	67	26	29	17	16	19	12	15
11	12	44	150	18	60	23	27	18	16	18	12	14
12	12	61	581	18	49	23	26	18	15	17	12	16
13	12	50	311	18	43	20	25	17	15	17	12	13
14	13	42	185	17	37	21	29	18	15	16	11	11
15	15	36	128	17	34	21	32	19	17	15	11	12
16	45	32	92	17	30	28	29	24	17	14	12	11
17	47	55	76	17	27	35	37	21	17	14	1,470	12
18	33	77	69	17	25	31	51	20	16	15	1,220	12
19	26	57	71	17	23	48	40	21	16	14	464	13
20	21	46	68	17	22	66	37	20	15	14	198	15
21	18	41	393	16	21	52	33	20	15	14	105	13
22	17	38	236	16	20	46	29	19	15	13	68	13
23	16	36	93	17	19	39	27	24	14	14	51	13
24	16	33	60	17	19	36	26	27	15	18	41	12
25	17	31	49	17	18	36	25	25	778	16	35	14
26	18	29	38	18	18	37	24	23	477	15	31	12
27	38	26	34	36	17	37	23	24	184	14	27	12
28	60	25	29	230	17	34	22	23	117	13	24	12
29	47	22	27	218	18	32	21	22	75	12	22	11
30	75	22	25	260	-----	29	20	22	56	12	20	11
31	99	-----	23	139	-----	28	-----	21	-----	13	19	-----
TOTAL	769	1,736	3,050	1,356	4,795	925	1,128	631	2,096	636	3,987	404
MEAN	24.8	57.9	98.4	43.7	165	29.8	37.6	20.4	69.9	20.5	129	13.5
MAX	99	170	581	260	1,430	66	150	27	778	70	1,470	18
MIN	10	22	21	16	17	18	20	17	14	12	11	11
CFSM	.46	1.06	1.81	.80	3.03	.55	.69	.37	1.28	.38	2.36	.25
IN.	.52	1.18	2.08	.93	3.27	.63	.77	.43	1.43	.43	2.72	.28

CAL YR 1967 TOTAL 20,739.6 MEAN 56.8 MAX 786 MIN 7.8 CFSM 1.04 IN 14.15
WTR YR 1968 TOTAL 21,513 MEAN 58.8 MAX 1,470 MIN 10 CFSM 1.08 IN 14.68

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-12	1245	5.82	782	06-25	1700	7.38	1,440
12-21	1715	5.57	805	08-17	1000	7.94	1,760
02-01	1245	7.87	1,720				

5-5200. Singleton ditch at Illinois, Ill

Location.--Lat 41°11'20", long 87°31'35", in SW 1/4 sec. 8, T. 31 N., R. 15 E., on left bank 50 ft downstream from county highway bridge at Illinois, 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 1968.

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.--24 years, 165 cfs.

Extremes.--Maximum discharge during year, 1,850 cfs Feb. 1 (gage height, 10.10 ft); minimum, 23 cfs Oct. 7 (gage height, 1.61 ft).
1944-68: Maximum discharge, 2,040 cfs Feb. 14, 23, 1959; maximum gage height, 10.11 ft Mar. 4, 1963 (backwater from ice); minimum, 4.5 cfs Sept. 8, 1964; minimum gage height, 0.71 ft Oct. 21, 1948.

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

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	233	114	160	1,330	120	151	109	100	444	62	90
2	26	336	115	145	1,710	115	143	104	103	379	58	87
3	24	328	116	130	1,620	114	143	103	98	282	56	82
4	24	490	113	125	1,500	115	492	100	93	229	57	77
5	24	386	113	120	1,340	120	465	97	89	199	57	77
6	24	287	120	115	1,160	121	340	94	87	172	57	74
7	23	230	144	110	1,030	117	277	91	82	140	54	72
8	25	206	156	110	907	119	240	90	79	137	53	69
9	27	193	152	105	797	136	208	90	75	142	69	74
10	26	163	217	105	674	146	183	88	72	143	64	74
11	25	163	420	100	584	138	166	88	71	142	59	76
12	24	215	911	100	482	134	156	88	70	125	55	74
13	25	197	915	96	384	124	148	86	68	116	53	69
14	26	180	612	97	333	129	163	86	67	109	48	61
15	29	161	452	95	304	128	215	88	85	104	47	59
16	89	148	357	94	273	156	186	106	79	96	50	57
17	121	173	301	94	250	184	193	104	72	95	1,260	57
18	112	259	278	94	220	180	238	97	68	90	1,580	62
19	95	218	277	93	200	200	212	100	70	87	1,210	71
20	86	186	265	93	190	280	199	97	66	81	861	80
21	79	175	642	92	175	264	190	94	62	77	618	75
22	75	168	935	92	165	251	168	90	60	86	452	75
23	72	165	553	94	155	230	154	104	57	81	334	75
24	71	157	393	98	164	211	159	121	60	85	243	70
25	79	150	335	105	145	203	146	111	900	81	186	74
26	84	140	318	122	139	205	139	109	1,350	76	150	70
27	106	133	290	145	134	200	134	111	953	69	133	67
28	152	124	260	588	131	190	124	110	715	64	120	64
29	136	120	230	745	125	180	118	106	522	61	108	60
30	154	118	200	876	-----	165	113	103	395	59	99	57
31	212	-----	180	668	-----	160	-----	100	-----	61	94	-----
TOTAL	2,102	6,192	10,484	5,808	16,626	5,135	5,963	3,065	6,668	4,112	8,347	2,129
MEAN	67.8	206	339	187	573	166	199	98.9	222	133	269	71.0
MAX	212	490	935	876	1,710	280	492	121	1,350	444	1,580	90
MIN	23	118	113	92	125	114	113	86	57	59	47	57
CFSM	.31	.94	1.54	.86	2.62	.76	.91	.45	1.01	.61	1.23	.32
IN.	.36	1.05	1.78	.99	2.82	.87	1.01	.52	1.13	.70	1.42	.36

CAL YR 1967 TOTAL 78,820 MEAN 216 MAX 1,660 MIN 19 CFSM .99 IN 13.39
WTR YR 1968 TOTAL 76,631 MEAN 209 MAX 1,710 MIN 23 CFSM .96 IN 13.01

PEAK DISCHARGE (BASE, 1,100 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-12	1915	7.50	1,170	06-25	2215	9.57	1,660
12-22	0015	7.77	1,130	08-17	1545	9.94	1,810
02-01	1515	10.10	1,850				

ILLINOIS RIVER BASIN

5-5205. Kankakee River at Mokence, 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 Mokence 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 1968.

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.--53 years (1915-68), 1,848 cfs.

Extremes.--Maximum discharge during year, 8,240 cfs Feb. 2 (gage height, 4.10 ft); maximum gage height, 6.04 ft Jan. 4 (ice jam); minimum discharge, 620 cfs Oct. 14.

1905-6, 1914-68: 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.--Record good except those for winter periods, which are poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	669	1,770	1,580	3,700	6,430	2,570	2,930	2,390	1,930	5,510	1,240	1,250
2	669	1,980	1,550	3,400	8,100	2,450	2,850	2,330	1,980	5,460	1,190	1,220
3	669	2,110	1,570	3,100	7,750	2,290	2,730	2,270	1,960	5,310	1,180	1,210
4	662	2,390	1,580	2,800	7,750	2,260	3,370	2,220	1,910	5,160	1,170	1,170
5	655	2,410	1,580	2,600	7,700	2,240	3,680	2,140	1,820	5,050	1,190	1,140
6	641	2,410	1,610	2,400	7,540	2,220	3,810	2,030	1,730	4,910	1,210	1,120
7	634	2,350	1,720	2,200	7,380	2,220	4,020	1,980	1,610	4,690	1,210	1,060
8	634	2,270	1,800	2,100	7,170	2,240	4,130	1,930	1,520	4,500	1,220	1,040
9	634	2,160	1,910	2,000	6,940	2,370	4,300	1,870	1,420	4,410	1,260	1,050
10	634	2,070	2,180	1,900	6,780	2,470	4,350	1,780	1,360	4,130	1,310	1,040
11	627	2,000	2,690	1,800	6,400	2,490	4,400	1,750	1,310	3,850	1,340	1,030
12	627	2,070	3,710	1,800	6,000	2,510	4,400	1,720	1,240	3,640	1,350	1,030
13	627	2,090	4,500	1,800	5,600	2,530	4,300	1,680	1,170	3,290	1,340	1,020
14	620	2,070	5,000	1,750	5,200	2,530	4,200	1,650	1,140	3,120	1,250	995
15	655	2,050	5,300	1,750	4,900	2,490	4,020	1,630	1,140	2,670	1,170	962
16	824	1,980	5,500	1,700	4,600	2,530	3,870	1,680	1,100	2,470	1,170	940
17	951	2,020	5,500	1,700	4,300	2,670	3,730	1,770	1,080	2,220	3,060	951
18	995	2,160	5,400	1,700	4,000	2,770	3,710	1,890	1,060	2,050	4,720	920
19	995	2,140	5,000	1,700	3,800	2,970	3,580	2,030	1,020	1,930	4,690	962
20	995	2,120	4,600	1,700	3,600	3,240	3,410	2,110	1,010	1,780	4,580	1,040
21	995	2,120	4,430	1,750	3,400	3,480	3,310	2,090	984	1,660	4,250	1,100
22	984	2,120	4,980	1,800	3,300	3,580	3,080	2,020	951	1,600	3,810	1,120
23	962	2,120	5,300	1,900	3,200	3,640	2,990	1,980	940	1,500	3,330	1,140
24	962	2,110	5,700	2,000	3,100	3,580	2,850	2,000	973	1,470	2,890	1,180
25	962	2,030	6,000	2,100	3,000	3,520	2,750	2,000	2,650	1,420	2,450	1,250
26	962	1,940	6,000	2,200	2,900	3,450	2,650	1,960	4,650	1,440	2,070	1,310
27	1,050	1,840	5,900	2,500	2,800	3,350	2,550	1,940	4,760	1,500	1,820	1,320
28	1,250	1,750	5,600	3,000	2,700	3,260	2,470	1,930	5,180	1,500	1,630	1,310
29	1,280	1,680	5,200	3,940	2,600	3,200	2,450	1,930	5,350	1,420	1,490	1,260
30	1,470	1,610	4,700	4,520	-----	3,080	2,450	1,960	5,380	1,340	1,410	1,210
31	1,720	-----	4,200	4,740	-----	3,030	-----	1,960	-----	1,260	1,320	-----
TOTAL	27,014	61,940	122,290	74,050	148,940	87,230	103,340	60,620	60,328	92,260	63,320	33,350
MEAN	871	2,065	3,945	2,389	5,136	2,814	3,445	1,955	2,011	2,976	2,043	1,112
MAX	1,720	2,410	6,000	4,740	8,100	3,640	4,400	2,390	5,380	5,510	4,720	1,320
MIN	620	1,610	1,550	1,700	2,600	2,220	2,450	1,630	940	1,260	1,170	920
CFSM	.37	.88	1.69	1.02	2.19	1.20	1.47	.84	.86	1.27	.87	.48
IN.	.43	.98	1.94	1.18	2.37	1.39	1.64	.96	.96	1.47	1.01	.53
CAL YR 1967	TOTAL 946,475		MEAN 2,593		MAX 7,540		MIN 560		CFSM 1.11		IN 15.04	
WTR YR 1968	TOTAL 934,682		MEAN 2,554		MAX 8,100		MIN 620		CFSM 1.09		IN 14.86	

5-5210. Iroquois River at Rosebud, Ind.

Location.--Lat 41°02'00", long 87°10'49", in SW $\frac{1}{4}$ 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 1968.

Gage.--Digital water-stage recorder. Datum of gage is 661.47 ft above mean sea level, datum of 1929 (levels by Indiana Flood Control and Water Resources Commission). Prior to Oct. 1, 1953, wire-weight gage on downstream side of county bridge at same datum. Oct. 1, 1953 to Oct. 21, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--20 years, 24.0 cfs.

Extremes.--Maximum discharge during year, 346 cfs June 25 (gage height, 7.68 ft); minimum, 2.4 cfs Oct. 3, 4 (gage height, 0.99 ft). 1948-68: Maximum discharge, 422 cfs Apr. 4, 1950; maximum gage height, 8.86 ft Feb. 10, 1959; minimum discharge, 0.2 cfs Oct. 11, 1964.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	10	7.6	24	189	11	23	21	31	64	6.9	10
2	3.0	12	9.4	22	306	12	22	19	30	51	6.6	9.0
3	2.9	13	12	20	251	11	39	20	27	41	6.6	8.5
4	2.8	17	15	18	178	11	278	18	24	35	6.9	8.4
5	3.2	14	18	16	134	12	239	17	21	31	6.7	8.4
6	3.1	12	31	17	104	11	170	16	20	26	6.4	7.9
7	3.1	11	32	16	89	10	117	16	18	23	6.2	7.5
8	3.3	10	25	15	78	10	82	16	17	21	7.1	7.3
9	3.4	9.6	26	15	65	17	60	16	16	25	8.4	7.6
10	3.2	9.0	48	16	52	16	50	16	16	28	8.9	7.6
11	3.1	10	56	14	42	14	42	18	15	21	7.3	7.4
12	3.0	10	97	14	32	13	38	17	14	19	6.7	7.1
13	3.4	9.6	71	15	29	12	35	16	13	16	5.9	7.5
14	3.5	9.4	50	15	26	14	40	16	13	15	5.5	7.6
15	3.8	8.8	39	16	25	21	41	27	13	16	5.8	7.2
16	5.5	8.3	33	15	23	82	36	141	12	17	7.6	6.9
17	6.1	10	31	15	21	61	40	96	12	15	158	7.1
18	8.0	9.8	32	15	18	52	42	63	11	15	118	8.3
19	5.7	10	31	15	17	51	37	55	11	14	56	9.7
20	5.2	9.2	29	17	16	54	40	46	11	13	38	11
21	6.7	9.4	125	20	14	48	36	40	10	12	27	10
22	5.3	9.4	172	23	13	44	30	35	10	12	22	9.8
23	4.8	9.6	99	24	13	38	28	52	10	9.9	22	8.8
24	5.3	9.4	63	26	12	34	25	54	12	11	18	9.7
25	6.1	8.8	56	33	11	35	23	45	183	9.9	15	8.9
26	5.3	8.5	42	18	11	44	27	44	316	9.2	14	8.1
27	8.5	7.8	37	37	12	41	30	44	247	8.9	13	7.7
28	8.2	8.2	32	124	11	34	27	39	171	7.2	12	7.3
29	7.3	7.8	28	148	11	30	25	36	116	6.8	12	7.1
30	7.0	8.2	26	149	-----	26	23	33	81	6.5	11	7.0
31	8.0	-----	25	108	-----	26	-----	29	-----	7.2	11	-----
TOTAL	150.8	299.8	1,398.0	1,040	1,803	895	1,745	1,121	1,501	606.6	656.5	246.4
MEAN	4.86	9.99	45.1	33.5	62.2	28.9	58.2	36.2	50.0	19.6	21.2	8.21
MAX	8.5	17	172	149	306	82	278	141	316	64	158	11
MIN	2.8	7.8	7.6	14	11	10	22	16	10	6.5	5.5	6.9
CFSM	.16	.33	1.49	1.11	2.05	.95	1.92	1.19	1.65	.65	.70	.27
IN.	.19	.37	1.72	1.28	2.21	1.10	2.14	1.38	1.84	.74	.81	.30
CAL YR 1967	TOTAL 11,803.6	MEAN 32.3	MAX 185	MIN 2.6	CFSM 1.07	IN 14.49						
WTR YR 1968	TOTAL 11,463.1	MEAN 31.3	MAX 316	MIN 2.8	CFSM 1.03	IN 14.07						

PEAK DISCHARGE (BASE, 150 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	2130	5.79	206	04-04	1130	7.10	300
01-29	2200	5.19	169	06-25	2300	7.68	346
02-02	0815	7.28	314	08-17	1500	5.73	202

ILLINOIS RIVER BASIN

5-5220. Iroquois River near North Marion, Ind.

Location.--Lat 40°58'12", long 77°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 1968.

Gage.--Digital water-stage recorder. Datum of gage is 646.68 ft above mean sea level, datum of 1929. Prior to Sept. 6, 1955, wire-weight gage, Sept. 6, 1955 to Oct. 20, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--19 years (1949-68) 116 cfs.

Extremes.--Maximum discharge during year, 1,280 cfs Feb. 3 (gage height, 13.57 ft); minimum, 9.0 cfs Oct. 2; minimum gage height, 1.45 ft Oct. 2, 8.
1948-68: Maximum discharge, 2,040 cfs June 10, 1958 (gage height, 15.09 ft); minimum, 1.5 cfs Sept. 8, 1964.

Remarks.--Record fair. Water is diverted from Oliver ditch, an upstream tributary, into Ryan ditch.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	43	37	134	799	62	117	109	148	630	21	40
2	9.4	61	47	126	1,080	62	103	100	149	500	18	37
3	10	67	70	117	1,260	58	133	91	121	355	20	34
4	12	87	80	102	1,220	62	730	91	100	280	44	30
5	14	77	80	92	1,070	59	1,090	79	90	220	29	27
6	12	62	131	95	925	58	1,140	72	77	180	28	27
7	14	66	180	90	806	52	1,040	67	63	150	23	24
8	9.8	54	166	82	700	54	901	62	59	120	26	22
9	11	46	150	83	585	74	756	68	61	103	34	23
10	11	43	197	84	434	74	598	64	58	90	19	24
11	11	43	281	80	359	66	421	70	57	95	12	25
12	11	50	406	78	260	64	275	76	53	70	13	23
13	11	49	475	80	180	59	211	70	47	66	14	21
14	12	53	417	83	160	68	190	68	40	65	14	21
15	13	46	320	86	140	82	200	171	40	58	16	20
16	22	42	234	81	130	307	194	521	41	58	50	19
17	32	49	183	81	120	393	178	555	41	52	500	18
18	27	57	171	82	110	335	196	449	38	62	560	19
19	24	55	170	86	100	283	196	331	34	47	440	20
20	22	51	166	90	90	270	187	243	25	43	260	22
21	20	51	463	96	82	254	207	191	25	52	170	28
22	18	49	812	110	76	248	187	168	27	28	130	26
23	15	49	852	125	72	218	164	221	24	34	90	24
24	15	48	758	110	66	185	151	252	33	41	94	35
25	20	46	635	102	62	175	125	220	284	28	66	27
26	20	43	494	95	62	159	117	200	731	29	58	26
27	35	41	325	179	62	217	147	197	919	35	52	24
28	48	43	200	402	64	242	155	179	959	32	44	22
29	37	50	160	612	63	175	141	163	904	21	42	20
30	30	40	150	740	-----	135	125	160	792	19	40	18
31	31	-----	140	741	-----	118	-----	138	-----	27	37	-----
TOTAL	587.2	1,561	8,950	5,144	11,137	4,668	10,375	5,446	6,040	3,590	2,964	746
MEAN	18.9	52.0	289	166	384	151	346	176	201	116	95.6	24.9
MAX	48	87	852	741	1,260	393	1,140	555	959	630	560	40
MIN	9.4	40	37	78	62	52	103	62	24	19	12	18
CFSM	.14	.39	2.15	1.24	2.87	1.12	2.58	1.31	1.50	.86	.71	.19
IN.	.16	.43	2.48	1.43	3.09	1.30	2.88	1.51	1.68	1.00	.82	.21
CAL YR 1967	TOTAL 55,751.7			MEAN 153		MAX 852	MIN 5.9	CFSM 1.14	IN 15.47			
WTR YR 1968	TOTAL 61,208.2			MEAN 167		MAX 1,260	MIN 9.4	CFSM 1.25	IN 16.99			

PEAK DISCHARGE (BASE, 420 CFS)

DATE	TIME	G. HT.	DISCHARGE	DATE	TIME	G. HT.	DISCHARGE
12-13	0945	7.42	482	04-06	0145	13.07	1,150
12-23	0145	11.19	863	05-17	-----	8.39	579
02-03	1330	13.57	1,280	06-28	0800	12.02	963
03-17	0500	7.01	441				

5-5225. Iroquois River at Rensselaer, Ind.

Location.--Lat 40°56'00", long 87°07'44", in NE¼NW¼SE¼ sec. 29 T. 29 N., R. 6 W., on right bank, 20 ft downstream from bridge on State Highway 114, three-quarters of a mile east of Rensselaer, 1.5 miles downstream from Ryan ditch and 5.5 miles upstream from Slough Creek.

Drainage area.--194 sq mi.

Records available.--July 1948 to September 1968.

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.--20 years, 152 cfs.

Extremes.--Maximum discharge during year, 1,730 cfs Feb. 3 (gage height, 14.27 ft); minimum, 9.6 cfs Oct. 2, 3 (gage height, 3.19 ft).

1948-68: Maximum discharge, 2,550 cfs June 10, 1958 (gage height, 16.54 ft); minimum, 1.7 cfs Oct. 29, 30, 1964; minimum gage height, 2.73 ft Sept. 15, 1948.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	48	40	168	1,180	80	165	115	162	816	31	47
2	10	68	49	158	1,550	80	149	103	183	623	26	40
3	10	74	80	150	1,720	74	208	99	158	430	30	38
4	13	95	93	132	1,650	79	1,260	94	127	274	54	36
5	18	84	91	110	1,490	84	1,540	81	107	197	44	37
6	14	68	152	120	1,290	83	1,540	77	91	163	38	33
7	16	68	210	112	1,090	75	1,420	70	77	141	33	33
8	11	59	193	100	909	77	1,200	67	70	119	36	35
9	11	49	174	100	733	103	954	71	70	122	44	33
10	12	45	243	100	492	104	706	70	66	109	48	38
11	12	46	354	98	375	94	458	75	64	99	25	35
12	12	52	530	94	290	92	302	83	60	85	21	33
13	12	52	598	96	229	83	231	74	54	79	18	30
14	14	55	507	101	194	96	213	72	47	76	18	32
15	16	50	385	104	181	112	225	81	47	68	21	29
16	28	44	284	98	175	434	208	559	47	67	32	27
17	39	49	218	98	156	513	196	728	47	69	400	28
18	33	61	203	100	140	438	221	603	43	65	580	32
19	28	59	201	105	130	378	211	442	40	52	620	42
20	26	54	196	110	112	359	216	326	30	57	330	45
21	24	54	729	122	104	344	232	249	30	52	200	41
22	21	53	1,280	140	101	335	196	201	32	45	110	54
23	17	52	1,260	145	93	294	176	228	30	40	86	55
24	19	51	1,040	138	86	249	154	305	51	54	70	47
25	26	49	837	128	82	239	133	286	421	45	62	51
26	27	46	614	112	80	236	138	247	988	40	56	46
27	50	43	402	161	82	303	172	238	1,190	47	56	41
28	53	36	291	537	81	323	169	221	1,240	43	48	37
29	41	43	216	874	80	238	148	196	1,160	36	47	35
30	33	44	190	1,050	-----	187	132	186	998	27	43	33
31	39	-----	171	1,010	-----	168	-----	171	-----	33	43	-----
TOTAL	697	1,651	11,831	6,671	14,875	6,354	13,273	6,418	7,730	4,173	3,270	1,143
MEAN	22.5	55.0	382	215	513	205	442	207	258	135	105	38.1
MAX	53	95	1,280	1,050	1,720	513	1,540	728	1,240	816	620	55
MIN	10	36	40	94	80	74	132	67	30	27	18	27
CFSM	.12	.28	1.97	1.11	2.64	1.06	2.28	1.07	1.33	.69	.54	.20
IN.	.13	.32	2.27	1.28	2.85	1.22	2.54	1.23	1.48	.80	.63	.22
CAL YR 1967	TOTAL 70,444.5			MEAN 193	MAX 1,280	MIN 4.9	CFSM .99	IN 13.50				
WTR YR 1968	TOTAL 78,086			MEAN 213	MAX 1,720	MIN 10	CFSM 1.10	IN 14.97				

PEAK DISCHARGE (BASE, 650 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-22	2030	12.55	1,340	05-17	0530	9.36	745
02-03	1245	14.27	1,730	06-28	0645	12.09	1,250
04-05	2000	13.68	1,570				

ILLINOIS RIVER BASIN

5-5230. Bice ditch near South Marion, Ind.

Location.--Lat 40°52'00", long 87°05'32", on line between secs. 15 and 22, T. 28 N., R. 6 W., on left bank at upstream side of bridge on State Highway 16, 2 miles upstream from Big Slough Creek, 3 miles southeast of South Marion, and 5 miles southeast of Rensselaer.

Drainage area.--22.6 sq mi.

Records available.--December 1948 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 651.30 ft above mean sea level, datum of 1929. Prior to Aug. 5, 1955, wire-weight gage, and Aug. 5, 1955 to Sept. 30, 1965, graphic water-stage recorder, at present site and datum 2.00 ft higher. Oct. 1, 1965 to Oct. 20, 1966, graphic water-stage recorder at present site and datum.

Average discharge.--19 years (1949-68), 15.8 cfs.

Extremes.--Maximum discharge during year, 958 cfs Dec. 21 (gage height, 10.89 ft); minimum, 0.35 cfs Oct. 4; minimum gage height, 1.41 ft Oct. 2-5.
1948-68: Maximum discharge, that of Dec. 21, 1967; no flow at times during 1952, 1955, and 1964.

Remarks.--Record good.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.43	1.1	1.3	12	330	1.6	4.9	4.9	17	20	3.9	1.6
2	.39	2.0	6.0	12	424	1.6	4.5	4.1	19	17	1.7	1.4
3	.39	2.5	27	11	145	1.4	17	4.3	12	10	1.3	1.2
4	.35	4.0	21	8.9	93	1.7	364	3.8	8.3	7.7	1.4	1.3
5	.51	2.8	22	6.9	69	1.7	109	3.2	6.5	6.1	1.3	1.5
6	.47	1.7	56	6.0	57	1.6	66	2.8	5.6	4.9	1.1	1.8
7	.51	1.3	49	5.0	55	1.2	49	2.5	5.1	4.1	.93	1.4
8	.51	1.1	32	4.3	50	1.5	32	2.6	4.7	3.7	.98	1.1
9	.47	1.1	36	3.9	35	2.0	20	3.2	4.4	3.3	3.7	1.3
10	.47	1.1	70	3.5	22	2.0	15	3.0	4.0	3.0	5.7	1.3
11	.43	1.3	82	3.2	15	1.6	12	4.0	3.6	2.5	2.3	1.9
12	.43	1.4	145	3.0	9.6	1.6	9.9	3.9	3.1	2.3	1.2	1.5
13	.47	1.3	82	3.1	6.9	1.8	8.1	3.1	2.5	2.0	1.1	1.4
14	.51	1.2	59	3.2	6.0	1.6	10	3.0	2.1	1.7	.97	1.3
15	.51	1.1	46	3.2	5.6	5.8	12	4.0	2.5	1.5	.88	1.1
16	.81	1.1	33	2.9	5.3	41	9.6	48	3.7	1.4	.91	.94
17	.93	1.6	27	2.6	4.0	26	12	27	4.6	1.3	140	1.5
18	.87	2.3	31	2.7	3.4	25	15	17	3.9	1.4	59	1.8
19	.81	1.9	33	2.7	3.0	25	12	16	3.1	1.4	30	2.0
20	.63	1.6	30	2.5	3.4	23	21	12	2.4	1.2	13	2.3
21	.51	1.7	646	7.0	2.5	27	17	9.1	2.0	1.1	6.8	1.9
22	.47	2.1	533	21	2.1	23	12	7.8	9.4	1.0	4.7	2.1
23	.43	2.3	141	23	2.0	16	9.9	17	7.1	1.2	3.9	1.6
24	.51	2.0	81	21	1.9	14	7.1	25	23	2.1	2.7	1.8
25	.63	1.9	71	16	1.9	16	5.8	19	209	1.9	2.1	1.5
26	.55	1.5	48	11	1.7	27	8.1	21	139	1.5	1.7	1.4
27	.93	1.1	31	36	1.7	21	9.4	22	76	1.3	2.1	1.4
28	.87	1.1	24	112	1.9	13	7.6	17	57	1.1	1.5	1.2
29	.75	1.1	19	209	1.6	9.4	6.7	14	32	.93	1.5	1.4
30	.67	1.3	16	184	-----	7.1	5.6	13	21	1.0	1.4	1.4
31	.81	-----	13	105	-----	6.9	-----	10	-----	2.8	1.5	-----
TOTAL	18.03	49.6	2,511.3	847.6	1,359.5	349.1	892.2	347.3	686.6	112.43	301.27	45.34
MEAN	.58	1.65	81.0	27.3	46.9	11.3	29.7	11.2	22.9	3.63	9.72	1.51
MAX	.93	4.0	646	209	424	41	364	48	209	20	140	2.3
MIN	.35	1.1	1.3	2.5	1.6	1.2	4.5	2.5	2.0	.93	.88	.94
CFSM	.03	.77	3.58	1.21	2.07	.50	1.32	.50	1.01	.16	.43	.77
IN.	.03	.08	4.13	1.39	2.24	.57	1.47	.57	1.13	.19	.50	.07

CAL YR 1967 TOTAL 6,479.86 MEAN 17.8 MAX 646 MIN .35 CFSM .79 IN 17.66
WTR YR 1968 TOTAL 7,520.27 MEAN 20.5 MAX 646 MIN .35 CFSM .91 IN 12.38

PEAK DISCHARGE (BASE, 340 CFS)

DATE	TIME	G. HT.	DISCHARGE	DATE	TIME	G. HT.	DISCHARGE
12-21	1700	10.89	958	04-04	0315	8.56	602
02-02	0545	8.21	555	06-25	1500	6.90	390

5-5235. Slough Creek near Collegeville, Ind.

Location.--Lat 40°53'30", long 87°09'17", in SW¼ sec. 7, T. 28 N., R. 6 W., on right bank at downstream side of bridge on State Highway 53, 1½ miles south of Collegeville, 2½ miles upstream from mouth, and 2 ¾ miles downstream from Bice ditch.

Drainage area.--84.1 sq mi.

Records available.--July 1948 to December 1951, October 1952 to September 1968. Prior to October 1965, published as Big Slough Creek near Collegeville.

Gage.--Digital water-stage recorder. Datum of gage is 634.75 ft above mean sea level, datum of 1929. Prior to Aug. 5, 1955, wire-weight gage and Aug. 5, 1955 to Oct. 8, 1958, graphic water-stage recorder at same site at datum 3.00 ft higher. Oct. 9, 1958 to Oct. 22, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 65.1 cfs.

Extremes.--Maximum discharge during year, 2,390 cfs Dec. 22 (gage height, 16.88 ft); minimum, 2.9 cfs Oct. 2-4 (gage height, 3.31 ft). 1948-51, 1952-68: Maximum discharge, 2,390 cfs Dec. 22, 1967; (gage height, 16.88 ft); minimum daily discharge, 0.7 cfs Dec. 20-26, 1963.

Remarks.--Record poor.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	8.0	6.8	85	1,370	13	47	36	64	140	14	8.6
2	3.3	9.0	25	65	1,970	10	40	33	83	90	8.7	8.1
3	3.1	11	75	53	1,300	11	700	28	58	65	7.5	7.4
4	3.1	13	66	48	800	9.4	1,600	26	44	52	7.6	7.1
5	4.0	10	60	45	530	9.8	800	24	38	44	7.5	7.2
6	3.8	8.6	165	42	380	9.8	400	22	34	38	6.5	7.1
7	3.8	7.9	180	36	300	8.0	300	21	31	32	5.8	6.6
8	4.0	7.3	108	30	240	7.3	210	22	28	29	6.1	6.0
9	3.8	6.7	120	25	175	9.8	130	24	27	26	8.3	6.4
10	3.7	6.7	210	21	130	11	100	21	25	24	18	6.5
11	3.5	7.7	330	18	100	10	80	25	23	21	9.7	6.6
12	3.5	8.4	500	17	82	9.4	65	25	22	19	6.7	6.3
13	3.8	8.0	320	18	69	9.0	56	22	20	18	5.9	5.8
14	3.8	7.9	230	19	58	9.4	58	21	20	17	5.4	5.5
15	4.3	7.3	175	19	50	16	59	24	22	15	5.1	4.6
16	6.4	7.0	135	16	45	173	52	320	25	14	5.0	4.8
17	6.7	8.0	111	14	40	150	59	324	24	13	34.3	4.8
18	5.8	8.0	105	15	33	128	60	270	22	13	351	6.3
19	5.0	8.0	113	15	28	120	58	213	20	13	259	8.8
20	4.0	7.4	99	13	24	118	90	139	18	11	154	8.2
21	3.5	7.4	1,180	20	21	115	89	82	17	10	52	7.1
22	3.3	7.4	2,240	74	18	113	72	56	21	9.9	20	6.4
23	3.3	7.4	1,400	84	16	107	60	86	26	10	16	12
24	3.8	7.4	950	83	15	87	55	135	59	13	14	9.8
25	4.5	7.1	580	97	13	89	51	110	796	13	13	8.3
26	4.0	5.8	400	46	12	115	51	101	1,070	10	12	7.2
27	6.6	6.5	290	90	12	113	55	114	500	10	11	6.6
28	6.2	6.2	215	508	12	92	50	91	290	8.9	10	6.1
29	5.7	6.0	160	926	12	77	45	75	190	7.8	9.7	5.8
30	5.5	6.0	132	1,160	-----	62	40	63	140	7.5	9.1	5.4
31	6.2	-----	98	1,000	-----	60	-----	53	-----	11	8.5	-----
TOTAL	135.3	234.1	10,778.8	4,702	7,855	1,871.9	5,532	2,606	3,757	805.1	1,410.1	207.4
MEAN	4.36	7.80	348	152	271	60.4	184	84.1	125	26.0	45.5	6.91
MAX	6.7	13	2,240	1,160	1,970	173	1,600	374	1,070	140	351	12
MIN	3.1	6.0	6.8	13	12	7.3	40	21	17	7.5	5.0	4.6
CFSM	.05	.09	4.13	1.80	3.22	.72	2.19	1.00	1.49	.31	.54	.08
IN.	.06	.10	4.77	2.08	3.47	.83	2.45	1.15	1.66	.76	.62	.09
CAL YR 1967	TOTAL 31,040.4	MEAN 85.0	MAX 2,240	MIN 3.1	CFSM 1.01	IN 13.73						
WTR YR 1968	TOTAL 39,894.7	MEAN 109	MAX 2,240	MIN 3.1	CFSM 1.30	IN 17.64						

ILLINOIS RIVER BASIN

5-5240. Carpenter Creek at Egypt, Ind.

Location.--Lat 40°51'58", long 87°12'20", on line between SW¼ sec. 15 and NW¼ sec. 22, T. 28 N., R. 7 W., on left bank on downstream side of bridge on State Highway 16, 0.5 mile north of Egypt, 2 3/4 miles upstream from mouth, and 4 miles southwest of Collegeville.

Drainage area.--48.1 sq mi.

Records available.--July 1948 to December 1951, October 1952 to September 1968.

Gage.--Digital water-stage recorder. Datum of gage is 641.79 ft above mean sea level, datum of 1929. Prior to Sept. 6, 1955, wire-weight gage, and Sept. 6, 1955 to Oct. 21, 1966, graphic water-stage recorder at same site and datum.

Average discharge.--19 years, 34.4 cfs.

Extremes.--Maximum discharge during year, 1,850 cfs Dec. 21 (gage height, 10.69 ft); minimum, 0.16 cfs Oct. 4; minimum gage height, 1.78 ft Sept. 16, 17.
1948-51, 1952-68: Maximum discharge, 3,720 cfs June 10, 1958 (gage height, 11.66 ft); no flow at times most years.

Remarks.--Record fair.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.31	2.3	1.5	29	524	6.5	14	14	36	48	12	2.4
2	.26	4.1	6.1	25	955	6.0	12	12	42	38	7.0	2.2
3	.20	3.8	31	22	403	5.5	34	11	33	23	4.9	2.0
4	.20	5.2	25	19	345	5.0	715	11	25	17	4.4	1.8
5	.20	3.2	23	17	223	5.2	324	8.8	21	14	4.3	1.8
6	.72	2.3	78	16	176	5.0	201	7.8	17	11	3.5	1.7
7	.44	1.9	92	14	148	4.5	141	7.3	15	9.4	2.9	1.5
8	.25	1.5	52	12	128	4.0	94	7.1	13	8.3	2.8	1.4
9	.34	1.3	55	11	95	4.5	60	7.5	12	7.8	14	1.5
10	.46	1.3	131	10	66	5.0	45	7.1	10	7.1	42	1.6
11	.40	1.5	178	9.5	54	4.6	35	7.9	12	6.2	16	1.5
12	.34	1.7	301	9.0	41	4.2	29	8.3	9.9	5.5	7.9	1.3
13	.40	1.6	223	9.5	33	4.0	24	6.8	7.9	5.0	5.7	1.3
14	.52	1.4	138	10	28	4.0	25	6.4	7.1	4.4	4.8	1.2
15	.68	1.4	95	11	26	7.8	26	8.1	9.2	3.9	3.1	1.0
16	1.3	1.3	69	10	24	84	22	137	14	3.6	2.9	.97
17	2.5	2.0	57	9.6	20	56	24	78	17	3.2	466	.97
18	2.5	3.1	55	9.2	17	48	26	48	14	3.3	331	1.2
19	1.2	2.1	54	10	15	49	23	40	12	3.2	108	1.7
20	.80	1.8	51	11	13	48	33	30	9.9	2.9	47	2.5
21	.66	2.0	955	20	11	50	34	24	8.3	2.4	26	2.0
22	.52	2.3	1,040	40	10	48	27	23	9.9	2.3	15	2.0
23	.44	2.4	520	47	9.0	39	25	36	7.9	4.2	10	2.1
24	.44	2.1	250	43	8.4	30	22	54	21	24	8.0	1.8
25	.60	2.0	154	38	7.6	31	20	49	261	55	6.0	1.6
26	1.0	1.7	102	27	6.4	44	20	50	348	44	5.0	1.4
27	1.7	1.8	67	65	6.2	44	21	50	177	21	4.0	1.3
28	2.2	1.5	50	312	6.2	33	20	41	109	13	3.3	1.3
29	1.3	1.3	39	485	6.2	25	18	35	73	7.7	2.8	1.2
30	1.0	1.3	33	538	-----	20	16	37	48	5.8	2.7	1.1
31	1.3	-----	30	292	-----	20	-----	29	-----	14	2.4	-----
TOTAL	25.16	63.2	4,955.6	2,180.8	3,405.0	744.8	2,130	892.1	1,400.1	418.2	1,175.4	47.34
MEAN	.81	2.11	160	70.3	117	24.0	71.0	28.8	46.7	13.5	37.9	1.58
MAX	2.5	5.2	1,040	538	955	84	715	137	348	55	466	2.5
MIN	.20	1.3	1.5	9.0	6.2	4.0	12	6.4	7.1	2.3	2.4	.97
CFSM	.02	.04	3.32	1.46	2.44	.50	1.48	.60	.97	.28	.79	.03
IN.	.02	.05	3.83	1.69	2.63	.58	1.65	.69	1.08	.32	.91	.04

CAL YR 1967 TOTAL 15,026.75 MEAN 41.2 MAX 1,040 MIN .10 CFSM .86 IN 11.62
WTR YR 1968 TOTAL 17,437.70 MEAN 47.6 MAX 1,040 MIN .20 CFSM .99 IN 13.48

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
12-21	2145	10.69	1,850	04-04	0800	9.52	870
02-02	0845	9.86	1,070	08-17	1700	9.14	686

5-5245. Iroquois River near Foresman, Ind.

Location.--Lat 40°52'14", long 87°18'24", on line between secs. 14 and 15, T. 28 N., R. 8 W., on right bank at downstream side of bridge on State Highway 55, a quarter of a mile north of intersection of Highway 16 and 55, 0.6 miles west of Foresman, and 3 miles east of Brook.

Drainage area.--452 sq mi.

Records available.--December 1948 to September 1968.

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.--19 years, 340 cfs.

Extremes.--Maximum discharge during year, 4,900 cfs Feb. 3 (gage height, 21.35 ft); minimum daily, 18 cfs Oct. 4, 5; minimum gage height, 3.40 ft Oct. 4, 5.

1948-68: Maximum discharge, 5,930 cfs June 14, 1958 (gage height, 24.42 ft); minimum discharge, 6.1 cfs Sept. 10, 1964; minimum gage height, 2.92 ft Sept. 27-29, 1956.

Remarks.--Record fair. Record of suspended sediment loads for the water year 1968 is published in Part 2 of this report.

DISCHARGE, IN CFS, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	66	75	553	3,120	145	327	252	352	1,830	99	64
2	21	95	81	430	4,490	143	291	224	377	1,610	89	63
3	19	124	149	360	4,880	140	305	209	373	1,370	72	56
4	18	149	220	310	4,680	140	1,810	201	319	1,100	66	54
5	18	161	227	260	4,280	145	2,820	185	266	807	78	53
6	22	144	295	270	3,820	144	3,040	169	229	449	76	52
7	22	122	446	250	3,290	130	2,940	161	202	340	70	49
8	23	113	483	230	2,880	148	2,690	153	179	250	65	48
9	22	98	444	210	2,420	167	2,300	152	167	230	77	48
10	21	86	538	210	1,930	188	1,920	156	160	298	139	49
11	20	81	718	183	1,500	181	1,560	156	153	250	127	51
12	21	85	1,010	177	1,170	170	1,250	168	147	195	89	49
13	21	92	1,260	174	897	159	950	167	135	164	68	47
14	22	92	1,310	181	626	164	706	156	124	148	57	45
15	24	93	1,240	190	442	182	572	161	122	137	52	45
16	32	86	1,080	184	357	523	478	627	129	127	60	42
17	49	82	878	177	288	760	416	1,000	134	122	631	42
18	55	91	706	179	250	826	415	1,080	131	117	1,110	44
19	48	108	601	190	225	830	417	1,030	121	121	1,170	51
20	42	106	538	206	205	817	420	906	108	110	1,040	61
21	39	101	1,420	241	190	787	460	742	93	94	810	61
22	36	99	3,670	321	180	767	438	580	86	97	514	59
23	33	98	4,180	397	170	713	387	498	104	98	274	74
24	31	98	3,940	402	160	626	341	553	216	150	166	71
25	32	96	3,450	364	154	560	291	602	960	198	127	65
26	37	91	2,940	339	148	548	273	594	1,730	176	107	65
27	44	84	2,390	360	152	593	306	580	2,110	136	90	61
28	70	70	1,870	881	151	594	322	552	2,230	114	81	56
29	76	63	1,450	1,480	148	548	305	490	2,180	98	72	53
30	63	77	1,100	2,220	-----	444	280	430	2,020	92	67	51
31	57	-----	794	2,570	-----	373	-----	384	-----	90	63	-----
TOTAL	1,060	2,951	39,503	14,499	43,203	12,655	29,020	13,308	15,557	11,088	7,606	1,629
MEAN	34.2	98.4	1,274	468	1,490	408	967	429	519	358	245	54.3
MAX	76	161	4,180	2,570	4,880	830	3,040	1,080	2,230	1,830	1,170	74
MIN	18	63	75	174	148	130	273	152	86	90	52	42
CFSM	.08	.22	2.82	1.04	3.30	.90	2.14	.95	1.15	.79	.54	.12
IN.	.09	.24	3.25	1.20	3.56	1.04	2.39	1.09	1.28	.91	.62	.13
CAL YR 1967	TOTAL	166,653	MEAN	457	MAX	4,180	MIN	18	CFSM	1.01	IN	13.70
WTR YR 1968	TOTAL	192,079	MEAN	525	MAX	4,880	MIN	18	CFSM	1.16	IN	15.80

ILLINOIS RIVER BASIN

5-5250. Iroquois River at Iroquois, Ill.

Location.--Lat 40°49'25", long 87°34'55", in SE $\frac{1}{4}$ 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 1968.

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.--24 years, 501 cfs.

Extremes.--Maximum discharge during year, 6,390 cfs Feb. 2 (gage height, 23.35 ft); minimum, 20 cfs Oct. 3-7.
1944-68: Maximum discharge, 10,400 cfs June 13, 1958 (gage height, 26.31 ft); minimum, 5.2 cfs Sept. 13, 1964.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	89	75	1,000	4,100	180	558	400	588	2,250	132	75
2	21	122	88	700	5,950	185	498	356	551	2,060	128	73
3	20	146	130	500	6,290	190	541	325	554	1,850	113	71
4	20	159	223	400	6,030	195	2,450	302	535	1,640	94	65
5	20	152	307	360	5,650	200	3,480	280	514	1,370	81	60
6	20	132	382	340	5,170	200	3,790	256	455	1,050	80	57
7	20	117	550	320	4,670	190	3,860	237	392	733	82	55
8	24	103	621	300	4,190	220	3,700	224	339	521	76	51
9	26	94	638	280	3,680	250	3,390	218	289	570	133	50
10	26	86	780	260	3,140	300	2,970	210	261	797	287	49
11	25	81	986	240	2,500	280	2,510	213	244	730	253	50
12	23	80	1,360	230	2,000	260	2,050	217	229	532	183	52
13	23	80	1,640	230	1,500	250	1,680	219	213	396	125	52
14	22	85	1,700	250	1,100	270	1,330	217	198	308	91	49
15	23	88	1,690	270	800	300	1,030	227	189	256	67	46
16	29	89	1,600	260	600	800	826	1,010	183	236	61	45
17	39	89	1,430	240	500	1,200	707	1,540	184	214	376	44
18	50	89	1,220	240	420	1,300	639	1,560	188	189	1,140	44
19	61	91	1,020	260	350	1,300	621	1,510	183	172	1,290	48
20	58	101	882	300	300	1,300	629	1,410	168	161	1,280	57
21	50	106	1,980	385	260	1,250	640	1,240	150	144	1,150	67
22	41	104	4,490	490	230	1,200	652	1,050	134	123	952	71
23	37	103	4,840	620	215	1,090	623	891	122	120	638	69
24	34	102	4,800	662	205	999	561	847	184	346	375	78
25	36	102	4,590	640	195	902	492	900	626	539	233	83
26	44	100	4,220	583	190	853	441	937	1,650	466	168	76
27	56	97	3,940	648	185	870	424	926	2,080	353	135	74
28	78	91	3,340	1,460	180	879	443	883	2,340	260	114	71
29	82	83	2,590	1,970	180	845	453	823	2,440	195	99	64
30	80	71	2,000	2,830	-----	760	435	740	2,400	153	88	69
31	76	-----	1,500	3,260	-----	650	-----	647	-----	133	81	-----
TOTAL	1,188	3,032	55,612	20,528	60,780	19,668	42,423	20,815	18,583	18,797	10,105	1,805
MEAN	38.3	101	1,794	662	2,096	634	1,414	671	619	606	326	60.2
MAX	82	159	4,840	3,260	6,290	1,300	3,860	1,560	2,440	2,250	1,290	83
MIN	20	71	75	230	180	180	424	210	122	120	61	44
CFSM	.06	.15	2.63	.97	3.07	.93	2.07	.98	.91	.89	.48	.09
IN.	.06	.17	3.03	1.12	3.31	1.07	2.31	1.14	1.01	1.03	.55	.10
CAL YR 1967	TOTAL 229,150		MEAN 628		MAX 4,840	MIN 18		CFSM .92	IN 12.50			
WTR YR 1968	TOTAL 273,336		MEAN 747		MAX 6,290	MIN 20		CFSM 1.10	IN 14.91			

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, 300 ft downstream from Mud Creek and 1 mile west of Milford.

Drainage area.--430 sq mi.

Records available.--July 1948 to September 1968.

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.--20 years, 323 cfs.

Extremes.--Maximum discharge during year, 10,600 cfs Feb. 2 (gage height, 21.00 ft, from graph based on gage readings); minimum, 5.0 cfs Oct. 1.

1948-68: 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, 2.6 cfs Oct. 9, 1966.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.5	24	18	300	3,980	82	170	146	395	295	143	18
2	6.5	23	26	260	8,960	130	171	134	355	259	134	22
3	5.8	25	209	220	7,660	82	401	130	331	215	111	19
4	5.5	27	213	190	4,350	152	3,420	120	303	175	90	20
5	6.0	22	233	170	2,760	108	4,830	120	293	163	239	18
6	7.1	21	387	160	2,010	110	4,320	100	283	179	204	15
7	8.3	19	901	150	1,570	96	2,070	92	271	155	171	13
8	9.5	15	695	140	1,190	94	1,200	92	239	399	87	13
9	12	21	695	130	1,020	108	991	90	188	560	62	13
10	9.8	22	964	120	620	111	883	90	179	530	327	14
11	8.9	19	1,450	120	371	105	538	93	165	448	565	14
12	8.3	17	1,890	125	300	98	371	103	142	403	315	16
13	9.8	14	2,030	132	250	69	331	93	122	259	148	13
14	13	17	1,490	136	210	94	271	89	116	122	103	15
15	16	13	940	146	180	110	311	90	132	108	82	13
16	18	15	575	126	160	808	319	1,160	271	87	83	6.6
17	18	17	580	122	140	785	287	2,420	295	73	82	9.8
18	16	20	452	112	125	705	299	1,770	295	75	159	14
19	14	20	450	110	115	595	337	1,000	215	67	115	17
20	12	18	450	108	105	525	403	470	171	59	75	22
21	16	18	2,560	112	100	540	295	438	146	51	42	24
22	14	20	5,970	157	97	615	275	387	117	49	38	23
23	9.2	19	4,720	208	94	500	251	565	115	96	38	30
24	9.2	19	3,120	210	91	379	206	1,360	117	327	40	29
25	11	25	1,880	122	88	331	188	1,740	307	192	32	27
26	19	22	1,220	135	86	323	203	1,600	1,300	155	35	28
27	19	18	823	277	84	243	185	1,380	1,100	203	31	24
28	19	21	635	1,700	83	210	165	904	620	206	22	17
29	16	16	472	3,640	82	210	155	725	430	127	23	15
30	16	14	399	5,750	-----	188	155	535	327	116	28	16
31	19	-----	359	4,140	-----	195	-----	475	-----	118	22	-----
TOTAL	377.4	581	36,806	19,528	36,881	8,701	24,001	18,511	9,340	6,271	3,646	538.4
MEAN	12.2	19.4	1,187	630	1,272	281	800	597	311	202	118	17.9
MAX	19	27	5,970	5,750	8,960	808	4,830	2,420	1,300	560	565	30
MIN	5.5	13	18	108	82	69	155	89	115	49	22	6.6
CFSM	.03	.05	2.76	1.46	2.96	.65	1.86	1.39	.72	.47	.27	.04
IN.	.03	.05	3.18	1.69	3.19	.75	2.08	1.60	.81	.54	.32	.05
CAL YR 1967	TOTAL 117,994.6	MEAN 323	MAX 5,970	MIN 4.0	CFSM .75	IN 10.21						
WTR YR 1968	TOTAL 165,181.8	MEAN 451	MAX 8,960	MIN 5.5	CFSM 1.05	IN 14.29						

PEAK DISCHARGE (BASE, 2,500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
12-22	0730	19.03	6,850	04-04	2300	18.44	6,030
01-30	1100	18.50	6,100	05-17	0730	14.41	2,580
02-02	1630	21.00	10,600				

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 1968

Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Blue River Basin						
3-3029	Spring Creek near White Cloud, Ind.	Lat 38°14'20", long 86°13'45", in SE 1/4 sec. 19, T. 3 S., R. 3 E., at county highway bridge, 0.8 mile north of White Cloud, and at mouth of Harrison Spring.		1951-52 1954-68	10-11-67 11-14-67 12-13-67 01-18-68 02-21-68 03-28-68 05-08-68 06-18-68 07-25-68 09-05-68	9.39 94.9 198 69.4 95.0 265 77.3 72.2 18.7 48.1
Wabash River Basin						
3-3232	Rock Creek near Markle, Ind.	Lat 40°47'47", long 85°21'28", in NE 1/4 sec. 14, T. 27 N., R. 10 E., at bridge on State Highway 3, 2 1/4 miles southwest of Markle.	a 92	1954 1960-68	10-16-67	0.69
3-3261	Big Lick Creek near Wheeling, Ind.	Lat 40°22'37", long 85°26'52", in NE 1/4 sec. 12, T. 22 N., R. 9 E., at county highway bridge, three-eighths of a mile upstream from mouth, and 1 1/4 miles northwest of Wheeling.	a 83	1954 1961-68	11-02-67	12.2
3-3277.7	Blue River near Columbia City, Ind.	Lat 41°10'52", long 85°27'24", in SW 1/4 sec. 35, T. 32 N., R. 9 E., at county highway bridge, 0.6 mile east of State Highway 9, 2 1/4 miles northeast of Columbia City, and 2 1/2 miles downstream from Thorn Creek.	a 60	1961-68	10-16-67	5.21
3-3284.5	Eel River at Mexico, Ind.	Lat 40°49'20", long 86°06'47", on line between sec. 31, T. 28 N., R. 4 E., and sec. 6, T. 27 N., R. 4 E., at bridge on county road east of Mexico.		1968	07-31-68	235
3-3291	Crooked Creek near Royal Center, Ind.	Lat 40°48'23", long 86°29'31", in NW 1/4 sec. 11, T. 27 N., R. 1 W., at culverts on Cass County 625 West Road, 4 miles south of Royal Center.		1968	07-18-68 09-10-68	11.0 8.92
3-3291.5	Crooked Creek near Logansport, Ind.	Lat 40°45'51", long 86°29'54", in NW 1/4 sec. 26, T. 27 N., R. 1 W., at bridge on U.S. Highway 24, 6 1/2 miles west of Logansport.		1968	07-18-68 09-10-68	26.5 22.3
3-3293	Rock Creek at Rockfield, Ind.	Lat 40°39'10", long 86°33'30", in SE 1/4 sec. 32, T. 26 N., R. 1 W., at bridge on State Highway 25, 1 1/4 miles northeast of Rockfield.	a 81	1954 1960-66 1968	10-19-67	4.26
3-3295.1	Deer Creek near Lincoln, Ind.	Lat 40°36'11", long 86°12'10", in NW 1/4 sec. 21, T. 25 N., R. 3 E., at bridge on U. S. Highway 35, one mile south of Lincoln.		1968	09-09-68	1.88
3-3295.3	South Fork Deer Creek at Galveston, Ind.	Lat 40°34'54", long 86°11'23", in SE 1/4 sec. 28, T. 25 N., R. 3 E., at bridge on U. S. Highway 35, at Galveston.		1968	09-09-68	1.56
3-3314.3	Mud Creek near Bruce Lake, Ind.	Lat 41°03'10", long 86°19'39", on line between secs. 8 and 17, T. 30 N., R. 2 E., at bridge on State Highway 14, 4 1/2 miles east of Bruce Lake, and 5 1/2 miles west of Rochester.	a 69	1960-68	10-26-67	12.0
3-3322.5	Indian Creek near Thornhope, Ind.	Lat 40°55'12", long 86°31'42", in NE 1/4 sec. 33, T. 29 N., R. 1 W., at bridge on U. S. Highway 35, 0.3 mile south of Thornhope.		1968	09-09-68	12.9

Discharge measurements made at low-flow partial-record stations during water year 1968--Continued

Discharge measurements made at low-flow partial-record stations during water year 1968--Continued						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Wabash River Basin--continued						
3-3328	Big Creek near Monticello, Ind.	Lat 40°40'16", long 86°47'14", in SW 1/4 sec. 29, T. 26 N., R. 3 W., at county road bridge, 4.8 miles east of Chalmers.		1968	09-06-68	13.4
3-3334	Mud Creek near Windfall, Ind.	Lat 40°24'36", long 85°54'18", in NW 1/4 NE 1/4 sec. 34, T. 23 N., R. 5 E., at bridge on east-west county road along Tipton-Howard County line, 1/2 mile east of State Highway 213, 1/2 mile downstream from Turkey Creek, and 3 miles north of Windfall.	a 75	1960-64 1967-68	10-06-67	0.36
3-3358	Big Shawnee Creek near Attica, Ind.	Lat 40°14'30", long 87°14'12", in NW 1/4 sec. 29, T. 21 N., R. 7 W., at county road bridge, 0.5 mile northeast of Rob Roy, and 3.7 miles southeast of Attica.	38.2	1968	08-26-68	22.0
3-3467	White River near Harrisville, Ind.	Lat 40°10'32", long 84°53'23", in sec. 19, T. 20 N., R. 15 E., at bridge on State Highway 32, 3/4 mile southwest of Harrisville.	21.3	1961-65 1967-68	11-01-67 11-27-67	1.81 1.78
3-3483	Pipe Creek near Alexandria, Ind.	Lat 40°16'40", long 85°38'34", on line between secs. 8 and 17, T. 21 N., R. 8 E., at bridge on State Highway 28, 1 1/2 miles east of State Highway 9, and 2 miles northeast of Alexandria.	44.7	1960-65 1967-68	11-02-67 05-08-68 08-22-68	7.18 1.75 8.35
3-3484	Duck Creek near Strawtown, Ind.	Lat 40°08'17", long 85°56'22", on line between secs. 34 and 35, T. 20 N., R. 5 E., at bridge on State Highway 213, 0.6 mile north of State Highway 37, and 1.1 miles north of Strawtown.	98.9	1946 1965 1968	08-23-68	7.44
3-3492	Cicero Creek at Tipton, Ind.	Lat 40°16'16", long 86°03'02", on line between secs. 14 and 15, T. 21 N., R. 4 E., at county road bridge, 1/2 mile southwest of Tipton.		1968	08-23-68	3.02
3-3536.65	Stotts Creek near Martinsville, Ind.	Lat 39°30'02", long 86°19'57", in NE 1/4 sec. 8, T. 12 N., R. 2 E., at bridge on State Highway 37, 250 ft above mouth, 7.2 miles northeast of Martinsville.	60.1	1954 1968	08-23-68	3.38
3-3539	East Fork White Lick Creek at Mooresville, Ind.	Lat 39°38'47", long 86°20'47", in SE 1/4 sec. 18, T. 14 N., R. 2 E., at bridge on Mooresville Road, 0.8 mile west of Friendswood, 3 miles northeast of Mooresville.		1964 1968	08-23-68	5.09
3-3602.25	Plummer Creek near Bloomfield, Ind.	Lat 38°59'33", long 86°55'44", in NE 1/4 sec. 2, T. 6 N., R. 5 W., at bridge on U. S. Highway 231, 2.3 miles south of Bloomfield.		1954 1968	09-23-68	2.96
3-3617	Sugar Creek near Pleasant View, Ind.	Lat 39°38'49", long 85°55'09", in E 1/2 sec. 24, T. 14 N., R. 5 E., at bridge on Interstate Highway 74, 1 3/4 miles southeast of Pleasant View.	130	1954 1960-68	03-18-68	129
3-3618	Buck Creek near New Bethel, Ind.	Lat 39°43'34", long 85°58'21", on line between secs. 21 and 28, T. 15 N., R. 5 E., at bridge on county highway on East Troy Avenue, 2.4 miles northeast of New Bethel.	51.0	1960-65 1967-68	03-18-68	47.1
3-3643	Haw Creek near Columbus, Ind.	Lat 39°14'44", long 85°52'51", in W 1/2 SE 1/4 sec. 5, T. 9 N., R. 6 E., at bridge on county highway, 1.1 miles north of corporate limits of Columbus.	50.6	1960-65 1967-68	03-08-68	11.5

Streams Tributary to Lake Erie

4-1778	Fish Creek near Artic, Ind.	Lat 41°29'15", long 84°50'13", in SE 1/4 sec. 18, T. 35 N., R. 15 E., at bridge on Dekalb County Road No. 12, 1.7 miles northwest of Arctic.		1968	09-17-68	9.33
4-1779	Big Run at Butler, Ind.	Lat 41°26'09", long 84°52'08", in NE 1/4 sec. 1, T. 34 N., R. 14 E., at bridge on State Highway 1, 0.6 mile north of Butler.		1968	09-17-68	1.52
4-1793.1	Cedar Creek at Waterloo, Ind.	Lat 41°26'14", long 85°01'03", in NW 1/4 sec. 3, T. 34 N., R. 13 E., at bridge on U. S. Highway 27, 0.3 mile northeast of Waterloo.		1968	09-17-68	5.65
4-1816	Holthouse ditch at Decatur, Ind.	Lat 40°50'48", long 84°56'44", in NW 1/4 sec. 4, T. 28 N., R. 14 E., at bridge on Winchester Road, 0.4 mile above mouth, and 1 mile northwest of Decatur.		1968	09-16-68	0.12
4-1819	Houk ditch near Hassen Cassel, Ind.	Lat 40°59'27", long 85°05'32", in SW 1/4 sec. 5, T. 29 N., R. 13 E., at bridge on U. S. Highway 27 and 33, 0.4 mile above mouth, and 1.2 miles northwest of Hassen Cassel.		1968	09-16-68	0

Discharge measurements made at low-flow partial-record stations during water year 1968--Continued

Discharge measurements made at low-flow partial-record stations during water year 1960--continued						
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Measurements	
					Date	Discharge (cfs)
Streams Tributary to Lake Erie--continued						
4-1913.4	Flatrock Creek near Townley, Ind.	Lat 41°00'51", long 84°51'06", in SE 1/4 sec. 32, T. 30 N., R. 15 E., at bridge on U. S. Highway 30, 1.2 miles southeast of Townley.		1968	09-16-68	0.22
4-1913.6	Hoffman Creek at Townley, Ind.	Lat 41°01'16", long 84°52'16", in NE 1/4 sec. 31, T. 30 N., R. 15 E., at bridge on U. S. Highway 30, at Townley.		1968	09-16-68	0
Illinois River Basin						
5-5151	Little Kankakee River near Mill Creek, Ind.	Lat 41°34', long 86°35', in sec. 18, T. 36 N., R. 1 W., at bridge on State Highway 4, 2 1/2 miles west of Mill Creek.	a 39	1960-65 1968	05-06-68	30.6
5-5163	Dausman ditch near Bremen, Ind.	Lat 41°22'58", long 86°07'02", on line between sec. 19, T. 34 N., R. 4 E., and sec. 24, T. 34 N., R. 3 E., at bridge on State Highway 331, 4 1/2 miles south of Bremen.		1956 1961-65 1967-68	10-26-67 05-06-68	8.03 8.83
5-5175.5	Reeves ditch near La Crosse, Ind.	Lat 41°19'03", long 86°55'49", at intersection of secs. 12 and 13, T. 33 N., R. 5 W., at bridge on State Highway 8, 2.0 miles west of La Crosse.		1961-65 1967-68	09-05-68	24.6

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DISCHARGE AT PARTIAL-RECORD STATIONS AND MISCELLANEOUS SITES
Measurements at miscellaneous sites

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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 1968

Discharge measurements made at miscellaneous sites during water year 1968						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Wabash River Basin						
Antrim ditch	Big Monon Creek	Lat 41°03'21", long 86°51'36", on line between secs. 10 and 15, T. 30 N., R. 4 W., at bridge on State Highway 14, 2 1/2 miles southeast of Medaryville.			09-05-68	5.10
Little Killbuck Creek	Killbuck Creek	Lat 40°11'37", long 85°39'14", in NE 1/4 NE 1/4 sec. 18, T. 20 N., R. 8 E., at bridge on Madison County Road 600 North, 1 1/2 miles east of Linwood.			11-28-67	0.65
Streams Tributary to Lake Michigan						
Little Calumet River	Lake Michigan	Lat 41°34'41", long 86°57'07", in SE 1/4 SE 1/4 sec. 11, T. 36 N., R. 5 W., 700 ft upstream from bridge on Interstate 80, 2 miles southeast of Burdick.			10-11-67	0.11
Unnamed tributary	Little Calumet River	Lat 41°34'56", long 86°56'59", in NE 1/4 SW 1/4 sec. 12, T. 36 N., R. 5 W., below spring, 200 ft above mouth, 1 3/4 miles southeast of Burdick.			10-11-67	0.06
Little Calumet River	Lake Michigan	Lat 41°35'09", long 86°57'09", in SE 1/4 NE 1/4 sec. 11, T. 36 N., R. 5 W., below spring, 2600 ft upstream from Porter County 1100 North Road, 1 1/2 miles southeast of Burdick.			10-11-67	0.51
Unnamed tributary	Little Calumet River	Lat 41°34'52", long 86°55'54", in NE 1/4 SE 1/4 sec. 12, T. 36 N., R. 5 W., at downstream side of La Porte-Porter County Line Road, 1 3/4 miles southwest of Otis.			10-11-67	0
...Do.....	Unnsmed tributary to Little Calumet River	Lat 41°35'38", long 86°55'54", in SE 1/4 SE 1/4 sec. 1, T. 36 N., R. 5 W., at downstream side of La Porte-Porter County Line Road, 3000 ft above mouth, and 1 1/4 miles west southwest of Otis.			10-11-67	2.44
Little Calumet River	Lake Michigan	Lat 41°37'04", long 86°56'46", in SE 1/4 NW 1/4 sec. 36, T. 37 N., R. 5 W., 150 ft downstream from bridge on La Porte County 1275 North Road, 1 3/4 miles northeast of Burdick.			10-11-67	4.53
Pigeon Creek	St. Joseph River	Lat 41°35'48", long 84°59'24", in NE 1/4 sec. 11, T. 36 N., R. 13 E., at bridge on Meridian Road, 3500 ft downstream from Mud Creek, 1.8 miles northeast of Pleasant Lake, 3 miles south of Angola.			12-06-67 01-10-68 02-14-68 03-12-68 04-04-68 08-28-68	45.5 28.7 58.1 26.0 82.4 8.13

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	-	1950-68
Wabash River basin					
Banning Lake near North Webster.....	Kosciusko	0.58	12	837.50	1945-68
Baugh 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	1945-68
Big Chapman Lake near Warsaw a/.....	Kosciusko	4.59	*581	827.75	1945-68
Big Lake near Wolflake.....	Noble	6.77	228	898.18	1943-68
Blue Lake near Churubusco.....	Whitley	3.47	239	850.28	1946-68
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	1945-68
Crooked Lake near Wolflake.....	Noble	1.32	206	905.69	1943-53
Crystal Lake near Atwood.....	Kosciusko	0.38	76	789.69	1945-51
Diamond Lake near Silver Lake.....	Kosciusko	5.35	79	-	1954-68
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	-	1954-68
Goose Lake near Lorane.....	Whitley	1.42	84	910.96	1945-53
Hill Lake near Silver Lake.....	Kosciusko	0.56	67	871.50	1952-68
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	1945-68
James Lake at Oswego.....	Kosciusko	-	282	836.40	1943-68
Kuhn Lake near North Webster.....	Kosciusko	3.74	137	837.50	1945-68
Lake Manitou at Rochester.....	Fulton	38.1	631	778.41	1943-68
Langenbaum Lake near Monterey.....	Starke	0.98	48	717.96	1954-66
Little Barbee Lake near North Webster.....	Kosciusko	48.8	74	837.50	1945-68
Little Chapman Lake near Warsaw.....	Kosciusko	7.78	*177	827.75	1945-68
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	1954-68
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	1943-68
Muskelonge Lake near Warsaw.....	Kosciusko	11.1	32	842.67	1943-53
New Lake near Etna.....	Whitley	0.49	50	903.91	1959-68
North Little Lake at Silver Lake.....	Kosciusko	2.81	12	861.73	1945-53
Nyona Lake near Greenoak.....	Fulton	6.47	104	793.91	1947-68
Ogle Lake near Nashville.....	Brown	1.03	20	-	1946-68
Old Lake near Etna.....	Whitley	3.13	32	898.07	1954-68
Oswego Lake at Oswego.....	Kosciusko	115.0	83	836.40	1949-66
Palestine Lake at Palestine.....	Kosciusko	29.9	290	-	1943-68
Pike Lake at Warsaw.....	Kosciusko	40.4	203	805.64	1954-68
Ridinger Lake near Piercetown.....	Kosciusko	34.9	136	843.12	1943-68
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	26	837.50	1945-68

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	1945-68
Sherburn Lake near Pierceton <u>a/</u>	Kosciusko	5.42	15	-	1954-68
Shoe Lake near Oswego.....	Kosciusko	0.47	40	841.57	1946-53
Shriner Lake at Tri-Lakes.....	Whitley	1.12	111	907.04	1943-68
Silver Lake at Silver Lake.....	Kosciusko	4.47	102	861.73	1947-68
Smalley Lake near Washington Center.....	Noble	32.6	69	-	1943-68
South Mud Lake near Fulton.....	Fulton	4.74	94	793.42	1946-66
Starve Hollow Lake near Vallonia.....	Jackson	6.14	145	-	1946-61
					1963-68
Tippecanoe Lake at Oswego.....	Kosciusko	115.0	768	836.40	1943-68
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	-	1957-68
Webster Lake at North Webster.....	Kosciusko	54.0	774	852.75	1943-68
Wilmot Pond at Wilmot <u>b/</u>	Noble	39.7	10	-	1945-51
Wilson Lake near Larwill.....	Whitley	0.49	29	865.39	1946-52
Winona Lake at Warsaw.....	Kosciusko	32.1	562	811.06	1943-68
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	1964-68
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	1943-68
Big Long Lake near Stroh.....	Lagrange	4.13	388	956.21	1954-68
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	1945-68
Blackman Lake near Wolcottville.....	Lagrange	1.4	67	974.20	1953-59
Bower Lake near Pleasant Lake.....	Steuben	87.5	25	948.50	1946-68
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	1946-68
Dallas Lake near Wolcottville.....	Lagrange	39.4	283	897.36	1945-68
Dewart Lake near Leesburg.....	Kosciusko	7.88	551	867.70	1945-68
Diamond Lake near Wawaka.....	Noble	2.82	105	-	1946-68
Duely Lake near Cromwell <u>c/</u>	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	-	1956-68
Fish Lake near Plato.....	Lagrange	10.8	100	936.50	1945-68
Fish Lake near Scott.....	Lagrange	6.14	135	814.42	1954-68
Flatbelly Lake near Syracuse.....	Kosciusko	4.4	326	-	1964-68
Fox Lake near Angola.....	Steuben	1.13	142	1,018.83	1946-53
Golden Lake near Pleasant Lake.....	Steuben	92.4	119	948.50	1946-68
Gordy Lake near Cromwell.....	Noble	8.82	31	876.68	1953-66
Hackenburg Lake near Wolcottville.....	Lagrange	54.8	42	897.36	1945-68
Harper Lake near Washington Center.....	Noble	2.67	11	878.25	1946-68
Heaton Lake near Elkhart.....	Elkhart	8.78	87	767.30	1946-53
High Lake near Wolf Lake.....	Noble	4.75	123	896.35	1961-68
Hindman Lake near Washington Center.....	Noble	8.00	13	878.25	1946-68
Hogback Lake near Angola.....	Steuben	102.0	146	948.50	1946-68
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 <u>f/</u>	Steuben	47.0	283	964.66	1946-68
Knapp Lake near Washington Center.....	Noble	5.64	88	878.25	1946-68
Lake Gage at Panama.....	Steuben	17.2	324	954.25	1946-68
Lake George at Hobart.....	Lake	125.0	282	602.23	1946-68
Lake George at Jamestown.....	Steuben	12.3	488	985.28	1946-68
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	1951-68
Lake Pleasant near Nevada Mills.....	Steuben	2.51	424	-	1954-68
Latta Lake near Rome City.....	Noble	4.37	42	918.71	1954-66
Lime Lake at Panama.....	Steuben	17.4	44	954.25	1946-68
Little Long Lake at Kendallville.....	Noble	4.34	71	-	1954-68
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	-	1946-68
Long Lake near Burr Oak.....	Noble	12.0	40	895.82	1954-68
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	1951-68
Marsh Lake near Fremont.....	Steuben	14.8	-	-	1967
Martin Lake near Valentine.....	Lagrange	5.36	26	*899.45	1945-68
Messick Lake near Wolcottville.....	Lagrange	55.8	68	897.36	1945-68
Moss Lake near Washington Center.....	Noble	5.90	9	878.25	1946-68
Mud Lake near Orland.....	Steuben	1.64	25	939.01	1956-67
Muncie Lake near Burr Oak.....	Noble	43.4	47	-	1954-68
North Twin Lake near Howe.....	Lagrange	1.99	135	843.56	1953-68
Olin Lake near Valentine.....	Lagrange	6.12	103	899.45	1945-68
Oliver Lake near Valentine.....	Lagrange	11.3	362	899.45	1945-68
Otter Lake near Flint.....	Steuben	6.82	118	934.15	1954-66
Papakee Lake near Syracuse.....	Kosciusko	5.3	300	-	1964-68
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
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	-	1954-68
Royer Lake near Plato.....	Lagrange	4.91	69	936.50	1952-66
Sacard 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	-	1948-68
Shipshewana Lake near Shipshewana.....	Lagrange	4.00	202	852.04	1951-68
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	1946-68
Skinner Lake near Albion.....	Noble	13.8	125	927.74	1945-68
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	*885.55	1948-68
Stone Lake near Scott.....	Lagrange	1.32	152	818.76	1954-68
Story Lake near Hudson.....	DeKalb	2.48	77	942.20	1946
Sylvan Lake at Rome City.....	Noble	31.5	575	916.20	1954-66
Syracuse Lake at Syracuse.....	Kosciusko	37.4	414	858.87	1943-68
Tamarack Lake near Cosperville.....	Noble	15.1	50	*885.55	1948-68
Upper Long Lake near Wolf Lake.....	Noble	2.03	86	-	1956-68
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	*885.55	1948-68
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	1945-68
Witmer Lake near Wolcottville.....	Lagrange	35.8	204	897.36	1945-68
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	-	1961-68
Clear Lake at Clear Lake.....	Steuben	6.86	800	1,037.38	1943-68
Hamilton Lake at Hamilton.....	Steuben	16.5	802	898.83	1943-68
Long Lake near Ray.....	Steuben	2.80	154	-	1961-63
Round Lake at Clear Lake.....	Steuben	7.25	30	1,037.38	1943-68

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	1943-68
Cedar Lake at Cedar Lake.....	Lake	8.05	781	-	1943-68
Clear Lake at LaPorte.....	LaPorte	0.35	106	798.20	1942-49
Dalecarlia Lake near Creston.....	Lake	19.4	193	-	1952-68
Eagle Lake near Ober.....	Starke	26.2	24	713.25	1947-52
Eliza Lake near Beatrice.....	Porter	2.69	45	-	1946-53
					1954-68

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	1946-68
Hudson Lake at Hudson Lake.....	LaPorte	3.06	432	763.09	1946-68
J. C. Murphy Lake near Morocco.....	Newton	16.7	1,515	-	1952-61
Koontz Lake at Koontz Lake.....	Starke	6.46	346	714.56	1943-68
Lake of the Woods near Bremen.....	Marshall	11.6	416	803.85	1945-68
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	1946-68
Pretty Lake near Plymouth.....	Marshall	0.91	97	787.36	1954-66
Riddles Lake near Lakeville.....	St. Joseph	13.5	77	817.50	1946-68
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	1946-68
Upper Fish Lake near Stillwell.....	LaPorte	9.71	139	688.22	1946-53
Wauhob Lake near Valparaiso.....	Porter	0.29	21	-	1946-68
Wharton Lake near South Bend.....	St. Joseph	1.75	-	-	1960-68

* 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

1968

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

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Part 2. Water Quality Records

(Symbols after station name designate type of data: c, chemical;
t, water temperature; s, sediment)

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WATER RESOURCES DATA FOR INDIANA, 1968

Part 2. Water Quality Records

INTRODUCTION

Water-resources investigations of the U.S. Geological Survey include the collection of water quality data on the chemical and physical characteristics of surface- and ground-water supplies of the Nation. These data for the 1968 water year for the quality of surface water in Indiana are presented in this report. The data were collected and computed by the Water Resources Division of the U.S. Geological Survey, under the direction of John J. Malloy, 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.

Water-quality information is presented for chemical quality, water temperatures, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics such as hardness, sodium adsorption ratio, specific conductance, and pH. Water-temperature data represent once-daily observations except for stations where a continuous temperature recorder furnishes information from which daily minimums and maximums are obtained. Fluvial-sediment information is given for suspended-sediment discharges and concentrations and for particle size distribution of suspended sediment and bed material.

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.

Prior to the 1968 water year, data for chemical constituents and concentration of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967 the U.S. Geological Survey began to use the metric system; data for chemical constituents and concentrations of suspended sediment are now recorded in milligrams per liter (mg/l) and water

temperatures are given in degrees Celsius (centigrade, °C). In waters with a density of 1.000 g/ml (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a greater than 1.000 g/ml, values in parts per million should be multiplied by the density to convert to milligrams per liter. To convert temperatures in degrees Fahrenheit to degrees Celsius, subtract 32° and divide by 1.8. (See section "Definition of Terms and Abbreviations" for further information.)

COOPERATION

Compilation of this report was done under cooperative agreements between the U.S. Geological Survey and the following organizations:

Indiana Department of Natural Resources, F. Perley Provost, 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, Ruel W. Steele, chairman, Russel H. Harrell, executive director, and 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 below:

Acre-foot (ac-ft) is a quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or 325,851 gallons.

Biochemical oxygen demand (BOD) is the amount of oxygen required by bacteria while stabilizing decomposable organic matter under aerobic conditions.

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.

Chemical oxygen demand (COD) indicates the quantity of oxidizable compounds present in a water and will vary with water compositions, concentration of reagent, temperature, period of contact, and other factors.

Coliform organisms are a group of bacteria used as an indicator of the sanitary quality of the water. The number of coliform colonies per 100 milliliters is determined by the delayed incubation membrane filter method.

Cubic foot per second (cfs) is the rate of discharge through a cross-sectional area of 1 square foot of a stream at an average velocity of 1 foot per second.

Discharge, in its simplest concept, means outflow; therefore, the use of this term is not restricted as to course or location. In this report it represents the total fluids measured in the stream.

Mean discharge is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at time of sampling. If this discharge is reported instead of the daily mean, the heading of the discharge column is "Discharge (cfs)."

Drainage area of a stream above a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

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.

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.

Methylene blue active substance (MBAS) is a measure of apparent detergents. This determination depends on the formation of a blue color when methylene blue dye reacts with synthetic detergent compounds.

Milligrams per liter (mg/l) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume of water. Milligrams per liter may be converted to milliequivalents per liter by multiplying by the factors in table 1, page . Concentration of suspended sediment expressed in milligrams per liter is based on the weight of sediment in a liter of water-sediment mixture. Sediment concentrations that are expressed in parts per million may be converted to milligrams per liter by using the factors in table 2, page

Most probable number (MPN) is computed from probability analysis based on the number of positive findings of coliform group organisms resulting from multiple-dilution decimal dilutions. (Standard Methods, 12th edition, p. 604)

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

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined by sieve and sedimentation methods.

Particle size classification, used in this report agrees closely with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology (Lane and others, 1947, p. 937). The classification is as follows:

Clay:	Smaller than 0.0004 mm.
Silt:	Between 0.004 and 0.062 mm.
Sand:	Between 0.062 and 2.0 mm.
Gravel:	Between 2.0 and 64.0 mm.

The particle size distributions given in this report are not necessarily representative of the particle sizes of sediment in transport in the natural stream. Most of the organic matter is removed and the sample is subjected to mechanical and chemical dispersion before analysis of the silt and clay.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material such as humus. The quantity, 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 quantity 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.

Table 1.--Factors for conversion of chemical constituents in milligrams per liter to milliequivalents per liter

Ion	Multi- ply by	Ion	Multi- ply by
Aluminum (Al).....	0.11119	Iodide (I).....	0.00788
Ammonia as NH ₄05544	Iron (Fe).....	.05372
Barium (Ba).....	.01456	Lead (Pb).....	.00965
Bicarbonate (HCO ₃)...	.01639	Lithium (Li).....	.14411
Bromide (Br).....	.01251	Magnesium (Mg).....	.08226
Calcium (Ca).....	.04990	Manganese (Mn).....	.03640
Carbonate (CO ₃).....	.03333	Nickel (Ni).....	.03406
Chloride (Cl).....	.02821	Nitrate (NO ₃).....	.01613
Chromium (Cr).....	.11539	Nitrite (NO ₂).....	.02174
Cobalt (Co).....	.03394	Phosphate (PO ₄).....	.03159
Copper (Cu).....	.03148	Potassium (K).....	.02557
Cyanide (CN).....	.03844	Sodium (Na).....	.04350
Fluoride (F).....	.05264	Strontium (Sr).....	.02283
Hydrogen (H).....	.99209	Sulfate (SO ₄).....	.02082
Hydroxide (OH).....	.05880	Zinc (Zn).....	.03060

Table 2.--Factors for conversion of sediment concentration in parts per million to milligrams per liter* (All values calculated to three significant figures)

Range of concentration (ppm)	Multi- ply by	Range of concentration (ppm)	Multi- ply by
0 - 15,900	1.00	322,000 - 341,000	1.26
16,000 - 46,800	1.02	342,000 - 361,000	1.28
46,900 - 76,500	1.04	362,000 - 380,000	1.30
76,600 - 105,000	1.06	381,000 - 399,000	1.32
106,000 - 133,000	1.08	400,000 - 416,000	1.34
134,000 - 159,000	1.10	417,000 - 434,000	1.36
160,000 - 185,000	1.12	435,000 - 451,000	1.38
186,000 - 210,000	1.14	452,000 - 467,000	1.40
211,000 - 233,000	1.16	468,000 - 483,000	1.42
234,000 - 256,000	1.18	484,000 - 498,000	1.44
257,000 - 279,000	1.20	499,000 - 514,000	1.46
280,000 - 300,000	1.22	515,000 - 528,000	1.48
301,000 - 321,000	1.24	529,000 - 542,000	1.50

*Based on water density of 1.000 g/ml and sediment density of 2.65 g/cc.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks and is 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 dissolved-solids content in the water. Commonly, the amount of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream or from well to well, and it may even vary in the same source with changes in the composition of the water.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigating farmland.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

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 that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the location of the thermograph.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the water year.

Tons per acre-foot indicates the dry weight of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Water year in Geological Survey reports dealing with surface water supply is the 12-month period, October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1968, is called the "1968 water year."

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

STATION NUMBERS

A station number has been assigned as an added means of identification for each stream location where regular measurements of streamflow and determination of water quality have been made. The numbers have been assigned to conform with the standard downstream order of listing gaging stations. The numbering system consists of 2 digits followed by a hyphen and a 6-digit number. The notation to the left of the hyphen identifies the Part or hydrologic region used by the Geological Survey for reporting hydrologic data. The number to the right of the hyphen represents the position of the location in the standard downstream order listing the stations within each of the parts. The assigned numbers are in numerical order but are not consecutive. They are so selected from the complete 6-digit-number scale that intervening numbers will be available for future assignments to new locations. The identification number for each station in this report is printed to the left of the station name and contains only the essential digits. For example, the number is printed as 3-3355 for a station whose complete identification number is 03-3355.00.

SPECIAL NETWORKS

Some of the stations for which data are published in this report are included in special networks. These stations are identified by the network title, set in parentheses, under the station name. These networks are as follows:

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

Pesticide program is a network of regularly sampled water-quality stations where additional monthly samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

Radiochemical program is a network of regularly sampled water-quality stations where additional samples are collected twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

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 for determining the kinds and concentrations of solutes are described by Rainwater and Thatcher (1960). One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge depending on the source of material and the turbulence and the mixing of the stream. Some streams must be sampled at several verticals across the channel to determine accurately the solute load.

The daily chemical quality data in this report generally represent equal-volume composites for 2- to 30-day periods; the composite periods are selected on the basis of specific conductance of the daily samples and fluctuation of water discharge.

Temperature

Water temperatures were measured at most of the water-quality stations. For daily stations, the water temperatures were taken at about the same time each day in order that the data would not reflect diurnal variations in water temperature. Most large streams have a small diurnal temperature change; small, shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature.

At stations where thermographs are located, the records consist of maximum and minimum temperatures for each day and the monthly averages.

Sediment

At some stations, suspended-sediment samples were collected daily with depth-integrating cable-suspended samplers from a fixed sampling point at one vertical in the cross section. A hand sampler was used at many stations during periods of low flow. Depth-integrated samples were collected periodically at many verticals in the cross section to determine the ratio of the cross sectional distribution of the concentration of suspended sediment to the daily sampling vertical.

During periods of high or rapidly changing flow, samples were taken twice or more often throughout the day at most stations. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of periodic measurements of the particle size distribution of the suspended sediment and bed material are included.

Temperature conversion table, degrees Fahrenheit (°F)
to degrees Celsius (°C)
(Report temperature to nearest °C)

°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
32	0	45	7	58	14	71	22	84	29	97	36	110	43
33	1	46	8	59	15	72	22	85	29	98	37	111	44
34	1	47	8	60	16	73	23	86	30	99	37	112	44
35	2	48	9	61	16	74	23	87	31	100	38	113	45
36	2	49	9	62	17	75	24	88	31	101	38	114	46
37	3	50	10	63	17	76	24	89	32	102	39	115	46
38	3	51	11	64	18	77	25	90	32	103	39	116	47
39	4	52	11	65	18	78	26	91	33	104	40	117	47
40	4	53	12	66	19	79	26	92	33	105	41	118	48
41	5	54	12	67	19	80	27	93	34	106	41	119	48
42	6	55	13	68	20	81	27	94	34	107	42	120	49
43	6	56	13	69	21	82	28	95	35	108	42	121	49
44	7	57	14	70	21	83	28	96	36	109	43	122	50

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, 3 1/4 miles upstream from mouth of Little River, and at mile 409.

DRAINAGE AREA. --710 square miles.

RECORDS AVAILABLE. --Water temperatures: October 1, 1963 to September 1968.

EXTREMES, 1967-68. --Water temperatures: Maximum, 27° C between Aug. 21-25; minimum, 1° C (recorded) Dec. 25-27, Jan. 23-30.

EXTREMES, 1963-68. --Water temperatures: Maximum, 32° C July 27, 1964; minimum, freezing point on several days most winters.

Temperature (°C) of water, water year October 1967 to September 1968
(Continuous ethyl alcohol-actuated thermograph)

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																																	
MAXIMUM	--	16	17	19	18	17	14	13	13	11	11	11	12	13	13	13	13	11	10	9	9	10	11	11	9	8	8	7	8	9	11		
MINIMUM	11	13	15	16	17	14	12	13	11	11	10	9	10	10	12	13	13	11	10	9	8	9	10	9	8	7	7	7	8	10			
NOVEMBER																																	
MAXIMUM	9	9	9	9	6	6	6	6	6	7	7	7	7	6	4	4	4	4	5	5	4	4	4	4	4	4	4	3	2	2	--	5	
MINIMUM	9	9	9	6	6	6	5	5	6	6	7	7	6	4	3	3	4	4	4	4	4	4	4	4	4	4	4	3	2	2	--	4	
DECEMBER																																	
MAXIMUM	2	2	2	2	2	2	3	4	4	4	4	4	4	4	4	3	2	3	3	4	7	7	6	3	2	1	1	--	--	--	--	3	
MINIMUM	2	2	2	2	2	2	3	4	4	4	4	4	4	4	3	2	2	3	3	4	6	6	3	2	1	1	1	--	--	--	--	2	
JANUARY																																	
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	2	2	4	4	1	2	2	--
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1	1	1	1	1	1	1	2	--	
FEBRUARY																																	
MAXIMUM	3	4	3	3	3	3	3	3	3	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3	3	3	--	3		
MINIMUM	2	3	3	3	3	3	3	2	2	4	4	4	4	4	4	4	3	4	4	3	4	4	4	3	3	3	3	3	2	--	--	3	
MARCH																																	
MAXIMUM	3	3	4	3	3	3	3	4	6	6	7	6	4	4	5	7	7	6	7	8	8	7	4	5	6	7	9	11	13	13	12	6	
MINIMUM	2	2	3	2	2	2	2	2	4	6	5	3	3	3	4	5	5	5	6	7	7	4	4	3	4	6	7	9	11	12	12	4	
APRIL																																	
MAXIMUM	12	12	11	12	12	11	11	12	12	12	12	14	15	15	14	14	14	14	15	17	17	19	20	18	14	13	16	17	18	17	--	14	
MINIMUM	11	11	11	11	10	10	11	12	12	12	12	14	14	14	13	14	14	14	15	16	17	18	14	13	13	13	15	16	17	--	13		
MAY																																	
MAXIMUM	19	19	19	18	18	18	19	19	21	19	18	17	19	21	22	21	16	16	16	14	15	16	16	16	16	16	16	16	16	17	17		
MINIMUM	16	17	18	17	16	16	17	18	18	17	16	17	16	17	19	21	16	15	14	14	14	15	16	15	15	15	15	16	16	16	16		
JUNE																																	
MAXIMUM	17	18	18	17	19	20	22	23	24	26	26	24	21	22	22	22	21	22	22	23	24	25	24	23	20	20	19	18	19	--	21		
MINIMUM	17	16	17	17	18	20	22	22	23	24	21	20	19	20	19	20	19	19	19	20	21	22	23	20	20	20	19	18	17	--	19		
JULY																																	
MAXIMUM	20	21	20	21	21	22	23	24	24	24	23	24	25	26	26	26	26	26	26	26	26	26	26	26	24	24	24	23	22	22	23		
MINIMUM	19	20	19	19	20	20	22	22	22	22	22	23	24	25	24	25	25	24	24	24	24	24	24	24	24	24	23	22	21	21	21	22	
AUGUST																																	
MAXIMUM	23	23	23	22	22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	21	21	22	22	--
MINIMUM	21	21	22	21	21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	18	19	19	19	--
SEPTEMBER																																	
MAXIMUM	22	22	23	23	22	21	21	23	22	22	19	20	21	22	22	22	20	18	21	22	22	23	23	22	19	18	18	18	18	--	20		
MINIMUM	21	19	20	21	21	19	19	19	21	19	18	16	17	18	19	20	20	18	17	17	19	21	21	22	19	17	16	17	16	16	--	18	

WABASH RIVER BASIN--Continued

3-3355. Wabash River at Lafayette, Ind.

LOCATION.--Lat 40°25'19"N, long 86°53'49"W, temperature recorder at gaging station on right bank 20 ft downstream from Brown Street Bridge in Lafayette, Tippecanoe County, 5.1 miles downstream from Wildcat Creek, and at mile 311.9.

DRAINAGE AREA.--7,247 square miles.

RECORDS AVAILABLE.--Water temperatures: July 1954 to September 1964, August 1967 to September 1968.

EXTREMES, 1967-68.--Water temperatures: Maximum, 25° C (recorded) July 16-31; minimum, freezing point Jan. 2-20.

EXTREMES, 1954-64, 1967-68.--Water temperatures: Maximum, 32° C July 30, 31, 1954; minimum, freezing point on many days during winter months.

REMARKS.--Some regulation at low stages caused by powerplants above station.

Temperature (°C) of water, water year October 1967 to September 1968
(Continuous ethyl alcohol-actuated thermograph)

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																																		
MAXIMUM	17	19	20	21	20	19	18	17	16	14	14	14	14	15	16	16	16	16	14	14	14	14	13	14	14	14	13	12	12	11	12	12	15	
MINIMUM	16	17	19	20	20	19	18	17	16	14	14	13	14	14	15	16	16	14	14	14	14	13	13	14	13	12	12	11	11	11	12	14		
NOVEMBER																																		
MAXIMUM	13	13	12	12	11	9	9	8	9	9	10	10	10	9	9	8	8	8	8	8	8	8	7	7	7	7	7	8	7	6	5	--	8	
MINIMUM	12	12	12	11	9	8	8	8	8	8	9	10	9	9	8	8	8	8	8	8	8	7	7	7	7	7	7	7	6	5	--	8		
DECEMBER																																		
MAXIMUM	5	5	4	4	4	5	5	5	5	5	5	5	5	6	6	4	4	4	4	4	4	4	6	6	4	3	3	2	1	1	1	4		
MINIMUM	5	5	4	4	4	4	5	5	5	5	5	5	5	6	4	4	4	4	4	4	4	4	6	4	3	3	2	1	1	1	1	3		
JANUARY																																		
MAXIMUM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	--		
MINIMUM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	--		
FEBRUARY																																		
MAXIMUM	3	4	4	3	3	3	3	3	3	2	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	2	2	2	--	--	2		
MINIMUM	2	3	4	3	3	3	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	--	--	1		
MARCH																																		
MAXIMUM	2	2	2	3	4	5	5	5	6	6	6	6	3	4	4	6	7	7	8	8	7	8	7	6	5	6	7	8	9	11	12	6		
MINIMUM	2	2	2	3	4	5	5	5	6	6	6	3	3	3	4	4	6	7	8	8	7	8	7	6	5	6	7	8	9	11	12	5		
APRIL																																		
MAXIMUM	12	12	11	12	11	10	11	11	11	11	11	12	12	12	12	12	12	12	12	12	12	13	13	14	14	13	12	12	12	13	--	12		
MINIMUM	11	11	11	11	10	10	10	11	11	11	11	11	11	12	12	12	12	12	12	12	12	13	13	13	13	13	12	12	12	12	--	11		
MAY																																		
MAXIMUM	13	14	14	14	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	13	13	14	14	13	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JUNE																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
JULY																																		
MAXIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MINIMUM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
AUGUST																																		
MAXIMUM	24	24	23	23	23	24	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23	23	23	24	24	25	25	25	25	25	25	25	--	
MINIMUM	24	23	23	23	23	23	24	24	24	24	24	24	23	23	23	23	23	23	23	23	23	23	23	24	24	25	25	25	25	25	25	25	25	--
SEPTEMBER																																		
MAXIMUM	21	21	21	21	21	21	21	21	21	20	19	19	19	19	19	19	19	19	19	19	19	19	19	20	20	20	20	20	19	19	--	19		
MINIMUM	21	21	21	21	21	21	21	21	21	20	19	19	19	19	19	19	19	19	19	19	19	19	19	20	20	20	20	19	19	19	--	19		

WABASH RIVER BASIN--Continued

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

LOCATION.--Lat 39°48'45", long 86°57'14", in SW 1/4 sec. 22, T. 16 N., R. 5 W., Putnam County, at gaging station at county road bridge, 8,350 feet upstream from Ramp Creek, and 3.1 miles northwest of Fincastle.

DRAINAGE AREA.--132 sq mi.

RECORDS AVAILABLE.--Water temperatures: July 1965 to September 1968.

Sediment records: August 1959 to September 1968.

EXTREMES, 1967-68.--Water temperatures: Maximum, 30°C Aug. 10, 13, 15; minimum, freezing point Jan. 11-20.

Sediment concentration: Maximum daily, 15,000 mg/l Dec. 22; minimum daily, 2 mg/l Jan. 11-20.

Sediment loads: Maximum daily, 295,000 tons Dec. 22; minimum daily, 0.05 ton Oct. 3.

EXTREMES, 1959-68.--Water temperatures (1965-68): Maximum, 31°C July 16, 1966; minimum, freezing point on many days during winter months.

Sediment concentrations: Maximum daily, 19,100 mg/l Mar. 21, 1962; minimum daily, 2 mg/l on several days during 1965, 1967, and 1968.

Sediment loads: Maximum daily, 295,000 tons Dec. 22, 1967; minimum daily, 0.03 ton Sept. 15, 1964.

REMARKS.--Flow affected by ice Jan. 2-19, Feb. 11-23. Daily loads were computed by subdivision on Oct. 16, 17, Dec. 1, 3, 10-12, 21-23, Jan. 21, 22, 29, 31, Feb. 1, 3, Apr. 3-5, 20, May 9, 15-17, 23, June 22, 24-26, Aug. 4, 10, 11, 17-19.

Temperature (°C) of water, water year October 1967 to September 1968
(Once-daily measurements between 1600 and 1900)

MONTH	DAY																															AVER- AGE	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
OCTOBER..	--	18	18	21	21	21	21	--	20	21	21	20	18	--	--	16	--	15	14	16	14	15	16	14	13	13	12	13	13	13	13	13	13
NOVEMBER.	--	--	--	12	12	13	12	12	--	--	12	--	11	--	11	9	9	9	--	6	7	7	--	6	6	--	5	4	4	5	--	--	--
DECEMBER.	4	--	6	--	4	3	3	4	4	--	--	--	7	4	3	3	3	4	4	--	--	--	3	4	--	--	--	1	--	--	--	--	--
JANUARY..	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	3	--	3	3	3	2	--	4	5	6	1	--	--
FEBRUARY.	4	--	--	--	4	3	3	4	3	4	4	5	4	4	3	4	4	4	4	3	3	3	--	--	--	--	--	--	--	--	--	--	--
MARCH....	3	4	3	4	4	4	4	--	--	--	--	--	--	--	--	--	--	--	--	MARCH	--	--	--	--	--	--	--	--	--	--	--	--	--
APRIL.....	--	6	--	13	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY.....	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	14	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JUNE.....	--	--	--	--	--	17	16	18	--	--	21	21	22	--	19	21	--	23	24	26	--	--	22	--	24	--	--	--	--	--	16	16	--
JULY.....	--	--	--	22	--	--	--	26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AUGUST...	--	--	--	29	--	29	--	29	--	30	--	--	30	--	30	--	30	--	27	--	--	--	--	--	--	--	--	25	--	21	--	--	--
SEPTEMBER	--	20	20	--	20	--	21	--	23	--	--	--	--	--	--	--	--	--	17	--	--	--	--	--	20	--	21	--	--	--	--	--	--

WABASH RIVER BASIN

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)
1	3.4	8	.07	12	7	.23	17	20	1.2
2	3.4	7	.06	14	8	.30	338	3190	7510
3	3.3	6	.05	20	9	.49	1970	7730	39000
4	3.4	13	.12	61	10	1.6	790	1530	3530
5	3.7	9	.09	70	112	21	513	830	1150
6	5.1	8	.11	50	98	13	410	690	764
7	8.0	12	.26	37	59	5.9	355	429	411
8	8.3	36	.81	29	58	4.5	268	260	192
9	7.8	41	.86	24	56	3.6	210	198	112
10	6.6	34	.61	21	6	.34	298	179	170
11	5.9	33	.53	20	4	.22	640	492	950
12	5.5	32	.48	20	7	.38	1710	2930	15100
13	5.8	30	.47	19	10	.51	637	278	478
14	6.5	128	2.2	17	6	.37	493	235	313
15	7.0	152	2.9	16	18	.78	440	185	220
16	10	312	9.2	15	23	.03	295	153	122
17	42	466	49	15	11	.45	240	182	118
18	74	478	96	16	7	.30	475	243	312
19	42	458	52	15	7	.28	413	283	310
20	22	160	9.5	15	12	.49	283	206	159
21	14	82	3.1	15	14	.57	3000	13000	204000
22	11	65	1.9	16	6	.26	5690	15000	295000
23	9.2	21	.52	18	5	.24	808	1220	3070
24	8.8	8	.19	19	21	1.1	443	700	837
25	11	16	.42	20	26	1.4	338	314	287
26	12	12	.39	19	13	.67	252	227	154
27	15	7	.28	17	26	1.2	182	199	98
28	15	13	.53	15	37	1.5	150	40	16
29	13	13	.46	14	37	1.4	121	7	2.3
30	11	7	.21	15	37	1.5	110	7	2.1
31	11	6	.18	--	--	--	100	8	2.2
TOTAL	404.7	--	233.56	674	--	65.51	21998	--	574396.6
DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)
1	80	8	1.7	997	975	3660	41	8	.69
2	74	8	1.6	2590	7620	53300	43	7	.81
3	68	8	1.5	930	2830	7370	38	6	.62
4	63	22	3.7	523	1080	1530	39	5	.53
5	58	19	3.0	392	1660	1760	40	7	.76
6	55	22	3.3	306	1540	1270	42	7	.79
7	51	17	2.3	262	1070	757	40	3	.32
8	50	8	1.1	223	990	596	39	6	.63
9	52	7	.98	190	372	191	43	37	4.3
10	54	3	.44	127	38	13	46	50	6.2
11	48	2	.26	110	18	5.3	43	46	5.3
12	45	2	.24	90	20	4.9	42	36	4.1
13	47	2	.25	80	60	13	40	30	3.2
14	48	2	.26	70	86	16	39	30	3.2
15	45	2	.24	66	82	15	43	30	3.5
16	40	2	.22	61	51	8.4	105	141	40
17	35	2	.19	57	33	5.1	223	561	350
18	33	2	.18	54	52	7.6	182	467	200
19	33	2	.18	52	45	6.3	151	294	120
20	57	2	.31	50	20	2.7	204	508	280
21	329	87	115	48	13	1.7	231	609	380
22	516	212	46	46	8	.99	233	620	370
23	540	229	334	45	5	.61	193	461	240
24	284	202	155	44	4	.48	182	427	210
25	200	211	114	44	6	.71	343	134	124
26	145	158	62	43	13	1.5	267	82	59
27	131	174	62	44	17	2.0	183	85	42
28	402	141	153	44	10	1.2	137	83	31
29	620	90	2720	43	10	1.2	113	80	24
30	2180	4250	25000	--	--	--	97	78	20
31	1000	1570	4460	--	--	--	140	78	29
TOTAL	7583	--	33408.95	7631	--	70541.69	3602	--	2574.15

WABASH RIVER BASIN

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	APRIL			MAY			JUNE		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)
1	267	78	56	47	68	8.6	309	336	280
2	191	76	39	45	18	2.2	330	427	386
3	187	121	67	43	23	2.7	263	292	207
4	2370	775C	55700	42	24	2.7	243	237	155
5	816	340C	8260	39	23	2.4	184	358	178
6	455	100C	1230	37	36	3.6	148	384	153
7	325	45C	395	36	83	8.1	128	308	106
8	233	364	229	35	30	2.8	114	208	64
9	159	312	134	66	192	39	104	67	19
10	125	273	92	69	266	50	95	20	5.1
11	107	248	72	78	243	51	88	22	5.4
12	96	228	59	94	346	88	79	38	8.1
13	87	215	51	72	74	14	71	57	1.1
14	91	207	51	64	32	5.5	64	50	8.6
15	99	202	54	256	1480	2760	62	30	5.0
16	81	191	42	682	2630	5130	76	15	3.1
17	82	184	41	290	753	641	70	10	1.9
18	82	169	37	195	129	68	56	7	1.1
19	74	115	23	153	83	34	49	6	.75
20	117	205	75	144	68	26	43	15	1.7
21	136	318	117	125	57	19	38	87	8.9
22	96	166	43	107	51	15	128	971	8.3
23	84	52	12	1580	2780	14600	128	1000	346
24	75	18	3.6	3050	614C	50600	169	3360	2310
25	66	14	2.5	1050	165C	4680	551	675C	11800
26	60	18	2.9	694	110C	2060	394	1050	1210
27	57	26	4.0	757	920	1880	220	426	253
28	52	20	2.8	535	142C	2050	159	308	132
29	50	90	12	444	2150	2580	119	210	67
30	49	115	15	415	80C	896	95	113	25
31	--	--	--	324	337	295	--	--	--
TOTAL	6765	--	66921.8	11568	--	88614.6	4577	--	18372.49
DAY	JULY			AUGUST			SEPTEMBER		
	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)	MEAN DISCHARGE (CFS)	MEAN CONCEN- TRATION (MG/L)	LOAD (TONS)
1	76	44	9.0	18	172	8.4	15	27	1.1
2	64	119	21	14	126	4.8	14	28	1.1
3	53	73	10	13	73	2.6	13	51	1.8
4	47	38	4.8	109	1150	478	12	98	3.2
5	42	34	3.9	102	823	227	12	132	4.3
6	36	50	5.1	50	224	30	12	143	4.0
7	34	63	5.8	28	48	3.6	11	145	4.3
8	31	64	5.4	24	25	1.6	11	141	3.3
9	28	52	3.9	20	24	1.3	10	35	.94
10	26	32	2.2	308	320C	6870	10	37	1.0
11	25	27	1.8	309	1480	1390	10	55	1.5
12	24	25	1.6	143	400	154	9.0	36	.90
13	23	25	1.6	84	160	36	9.8	33	.67
14	20	25	1.4	57	78	12	9.6	30	.93
15	21	25	1.4	43	45	5.2	9.4	26	.71
16	20	25	1.4	36	35	3.4	9.0	27	.66
17	18	25	1.2	91	468	272	9.6	37	.90
18	18	25	1.2	261	173C	1280	12	53	1.7
19	17	25	1.1	143	623	269	14	70	2.0
20	15	25	1.0	80	352	76	14	79	3.0
21	14	25	.94	53	295	43	12	73	.64
22	12	25	.81	40	253	27	11	60	1.0
23	12	25	.81	31	193	16	11	44	.13
24	11	25	.74	25	127	8.6	9.7	28	.73
25	11	25	.74	22	61	3.6	9.9	32	.60
26	11	25	.74	18	20	.97	9.7	62	1.0
27	15	100	4.0	16	7	.30	8.9	70	1.4
28	15	264	11	15	13	.53	8.4	70	1.7
29	13	215	7.5	14	19	.72	7.9	63	1.3
30	11	209	6.2	13	22	.77	7.7	55	1.1
31	15	196	7.9	13	24	.84	--	--	--
TOTAL	780	--	126.18	2253	--	11226.23	323.5	--	24.22

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)
TOTAL LOAD FOR YEAR (TONS)

60163.2
800000.10

WABASH RIVER BASIN

3-3408. BIG RACCOON CREEK NEAR FINCASTLE, IND. --Continued

INSTANTANEOUS SUSPENDED SEDIMENT AND PARTICLE SIZE, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968
 (METHODS OF ANALYSIS: B, BOTTOM WITHDRAWAL TUBE; C, CHEMICALLY DISPERSED; N, IN NATIVE WATER; P, PIPET; S, SIEVE;
 V, VISUAL ACCUMULATION TUBE; W, IN DISTILLED WATER)

DATE	TIME	WATER TEMP- TURE (C)	DISCHARGE (CFS)	CONCEN- TRATION (MG/L)	LOAD TRANSPORT RATE (TONS PER DAY)	SUSPENDED SEDIMENT					METHOD OF ANALY- SIS
						PERCENT FINER THAN THE SIZE (IN MILLIMETERS)	INDICATED				
						.002 .004 .008 .016 .031 .062 .125 .250 .500 1.00 2.00					
DEC 22, 1967	0800		7220	20600	402000	9 18 27 40 59 72 85 99 100	--	--	--	--	SBWC
JUN 24, 1968	1800		288	9660	7510	31 47 64 86 96 100	--	--	--	--	SBWC
AUG 10.....	1800		884	8660	20700	32 63 74 93 98 100	--	--	--	--	SBWC

WABASH RIVER BASIN--Continued

3-3485. White River near Noblesville, Ind.

LOCATION.--Lat 40°07'46", long 85°57'46", temperature recorder at gaging station on downstream side of center pier of highway bridge, 1 mile west of Strawtown, 7 miles northeast of Noblesville, 9.5 miles upstream from Cicero Creek, and at mile 277.4.

DRAINAGE AREA.--828 square miles (revised).

RECORDS AVAILABLE.--Water temperatures: October 1953 to July 1957, October 1962 to September 1968.

EXTREMES, 1967-68.--Water temperatures: Maximum, 27° C Aug. 21-25; freezing point Jan. 15, 16, 18-21, 26.

EXTREMES, 1953-57, 1962-68.--Water temperatures: Maximum, 31° C July 14, 1954; minimum, freezing point many days during winter months.

Temperature (°C) of water, water year October 1967 to September 1968

(Continuous ethyl alcohol-actuated thermograph)

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																																
MAXIMUM	14	17	18	19	19	17	16	16	14	12	12	12	13	14	16	16	16	14	12	12	11	12	13	13	11	10	9	9	10	11	13	
MINIMUM	13	14	17	18	19	17	16	16	14	12	12	9	11	12	13	14	16	14	12	11	11	10	11	12	11	10	9	8	9	10	12	
NOVEMBER																																
MAXIMUM	11	11	11	10	8	7	6	6	7	8	8	9	9	8	7	6	6	7	7	6	6	6	6	6	6	6	4	3	3	--	7	
MINIMUM	11	11	10	8	7	6	6	6	7	8	8	8	7	6	5	5	6	6	6	6	6	6	6	5	5	6	4	3	3	2	--	6
DECEMBER																																
MAXIMUM	3	3	4	4	5	6	7	8	8	8	8	8	8	8	7	6	4	6	6	6	6	10	10	6	4	4	3	2	2	2	2	5
MINIMUM	2	3	3	3	3	5	6	7	8	8	8	8	8	7	6	4	4	4	6	6	6	6	4	3	4	3	2	2	2	2	2	4
JANUARY																																
MAXIMUM	2	2	2	2	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	2	2	1	1	2	3	4	4	1	
MINIMUM	2	2	2	2	1	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	1	1	1	1	1	0	1	2	3	4	1	
FEBRUARY																																
MAXIMUM	6	7	6	4	4	4	4	4	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	--	--	3	
MINIMUM	4	6	4	3	4	4	4	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	--	2	
MARCH																																
MAXIMUM	3	3	3	4	5	6	6	6	8	8	8	8	4	5	5	7	7	8	9	10	10	8	6	5	7	8	9	12	13	13	7	
MINIMUM	3	3	2	3	4	5	5	6	6	8	7	4	3	3	4	5	5	7	8	9	8	6	4	4	5	7	8	9	12	12	6	
APRIL																																
MAXIMUM	12	11	10	11	11	9	10	12	12	12	13	14	14	14	13	13	13	14	16	17	19	18	13	13	14	16	16	17	--	--	13	
MINIMUM	11	10	10	10	9	8	8	10	12	12	11	12	13	14	12	12	13	12	13	14	16	16	17	13	12	12	13	15	14	--	12	
MAY																																
MAXIMUM	18	19	18	18	17	16	16	17	17	17	16	17	17	19	19	19	17	17	14	16	17	17	14	14	14	14	14	14	13	15	16	
MINIMUM	16	16	18	17	14	14	16	17	17	16	14	15	17	19	19	17	14	13	14	15	14	14	14	14	14	14	14	13	13	13	15	
JUNE																																
MAXIMUM	15	16	18	19	20	21	22	23	24	24	24	23	23	23	22	22	22	22	23	23	23	24	24	24	23	21	21	18	20	23	--	21
MINIMUM	15	15	16	18	19	20	21	21	22	23	23	23	21	20	21	21	21	21	21	22	22	23	23	22	21	20	18	18	20	--	20	
JULY																																
MAXIMUM	24	24	23	22	22	23	23	24	24	24	24	25	26	26	26	24	24	25	25	25	25	25	25	25	24	23	23	23	22	22	24	
MINIMUM	22	23	21	20	21	21	22	22	23	23	23	24	24	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	22	21	21	22
AUGUST																																
MAXIMUM	22	23	22	22	24	26	26	26	24	22	21	20	22	22	24	24	24	25	26	27	27	27	27	27	27	24	22	21	20	20	21	23
MINIMUM	21	22	22	22	23	25	25	24	22	21	20	20	20	22	22	23	23	24	26	25	26	26	26	26	24	22	21	19	19	19	22	22
SEPTEMBER																																
MAXIMUM	21	20	22	21	21	21	21	21	20	18	19	19	20	21	21	21	19	19	21	21	22	22	21	20	18	18	18	18	18	--	--	20
MINIMUM	20	19	20	21	21	19	19	20	18	18	17	17	18	19	20	20	19	18	18	19	21	21	21	21	20	18	17	16	--	--	--	18

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, 1½ miles upstream from Cicero Creek, 3½ miles downstream from dam at Clare, and at mile 269.0.

DRAINAGE AREA.--858 square miles (revised).

RECORDS AVAILABLE.--Water temperatures: November 1952 to September 1968.

EXTREMES, 1967-68.--Water temperatures: Maximum, 30° C July 14-16; minimum, freezing point Jan. 25, 26, Feb. 13-16, 18-20.

EXTREMES, 1952-68.--Water temperatures: Maximum, 34° C Aug. 1, 1953; minimum, freezing point on many days during most winters.

REMARKS.--Flow regulated by powerplant above station.

Temperature (°C) of water, water year October 1967 to September 1968

(Continuous ethyl alcohol-actuated thermograph)

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																																	
MAXIMUM	15	17	19	21	20	19	18	17	16	14	13	12	12	14	15	15	17	17	15	14	14	12	13	14	14	11	12	11	10	11	11	14	
MINIMUM	12	14	17	18	18	16	16	14	13	12	12	11	12	12	15	15	15	14	12	12	11	11	13	11	10	10	10	8	9	11	12	12	
NOVEMBER																																	
MAXIMUM	12	12	13	12	9	8	7	7	8	8	9	9	9	8	7	8	8	7	7	8	7	8	8	7	6	8	7	6	6	5	--	8	
MINIMUM	11	11	12	9	8	6	7	7	7	8	8	8	8	7	7	7	7	6	6	7	6	7	7	6	5	6	5	6	4	4	--	7	
DECEMBER																																	
MAXIMUM	6	5	5	5	6	7	8	8	8	8	8	8	8	8	8	7	5	6	7	7	11	11	7	4	4	4	3	2	2	2	1	6	
MINIMUM	4	4	4	4	4	6	7	8	8	8	8	8	8	8	7	5	4	4	6	7	7	7	4	4	4	3	2	1	1	1	1	5	
JANUARY																																	
MAXIMUM	1	1	1	1	2	2	1	1	2	3	2	3	3	3	3	3	3	3	3	3	2	2	2	2	1	2	2	3	4	3	3	2	
MINIMUM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	1	2	3	3	3	1	
FEBRUARY																																	
MAXIMUM	4	6	6	3	3	3	4	4	4	3	1	1	1	1	2	1	1	1	1	2	3	3	4	3	3	6	6	5	5	--	--	3	
MINIMUM	3	4	3	2	2	3	3	4	3	1	1	1	0	0	0	0	1	0	0	1	1	1	1	1	1	1	1	2	3	3	--	--	1
MARCH																																	
MAXIMUM	5	4	3	6	6	7	8	7	7	8	7	6	6	6	7	7	8	9	11	11	9	7	5	8	9	11	13	14	14	14	14	8	
MINIMUM	2	3	2	2	3	4	5	4	6	7	6	4	2	2	4	4	6	7	8	9	9	7	5	3	6	7	10	11	13	13	13	6	
APRIL																																	
MAXIMUM	13	12	12	12	10	11	13	13	13	13	14	16	16	14	14	14	14	15	17	18	20	20	18	16	16	16	17	18	18	--	--	14	
MINIMUM	12	12	11	11	10	9	9	11	12	13	12	13	14	14	13	13	13	13	14	17	17	18	16	13	13	13	13	15	16	--	--	13	
MAY																																	
MAXIMUM	19	21	19	18	17	18	17	18	18	18	16	18	21	22	22	19	17	16	16	17	17	17	16	14	14	14	14	14	14	16	17		
MINIMUM	16	16	18	17	15	14	16	17	17	16	15	16	17	19	19	17	16	15	14	14	15	15	13	13	14	14	14	13	13	14	15		
JUNE																																	
MAXIMUM	16	17	18	20	21	--	--	--	--	--	--	--	--	--	--	--	--	--	26	26	26	26	27	28	26	23	22	20	21	24	--	--	
MINIMUM	16	16	17	17	19	--	--	--	--	--	--	--	--	--	--	--	--	--	22	22	23	24	24	25	23	22	19	19	20	21	--	--	
JULY																																	
MAXIMUM	27	27	26	24	24	26	26	27	28	28	28	29	29	30	30	30	30	29	28	29	29	28	29	28	27	26	26	24	24	24	27		
MINIMUM	24	25	23	21	21	22	22	23	24	26	26	27	27	26	27	26	26	26	26	26	26	26	26	27	26	26	25	24	23	22	24		
AUGUST																																	
MAXIMUM	23	23	23	22	25	27	28	28	27	24	21	19	19	22	21	23	23	26	26	27	27	28	28	27	22	19	18	18	19	19	23		
MINIMUM	21	21	22	22	22	24	26	26	24	21	19	18	18	19	21	21	22	22	23	24	24	25	25	22	19	17	16	16	16	21	21		
SEPTEMBER																																	
MAXIMUM	19	19	21	21	22	21	21	21	21	19	19	20	20	20	21	21	20	20	22	22	22	25	26	24	23	22	22	20	19	--	21		
MINIMUM	17	17	17	19	21	18	19	18	18	19	18	16	17	17	18	19	20	19	18	19	21	21	21	24	23	21	20	18	17	--	18		

WABASH RIVER BASIN--Continued

3-3510. White River near Nora, Ind.

LOCATION.--Lat 39°54'35", long 86°06'20", temperature recorder at gaging station on downstream side of center pier of bridge on State Highway 100, 2 miles east of Nora, Marion County, 14 miles upstream from Fall Creek, and at mile 253.4.

DRAINAGE AREA.--1,219 square miles (revised).

RECORDS AVAILABLE.--Water temperature: June 1954 to May 1960, October 1962 to September 1968.

EXTREMES, 1967-68.--Water temperatures: Maximum, 27° C Aug. 24; minimum, freezing point Jan. 5-21, 25-27.

EXTREMES, 1954-60, 1962-68.--Water temperatures: Maximum, 32° C July 14, 1954; minimum, freezing point on many days during winter months.

REMARKS.--Flow regulated by powerplant above station.

Temperature (°C) of water, water year October 1967 to September 1968
(Continuous ethyl alcohol-actuated thermograph)

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	13	15	16	17	17	17	17	16	16	14	13	12	12	12	13	14	14	13	13	12	12	11	12	12	11	10	10	9	9	10	13	
	MINIMUM	13	13	15	16	17	17	16	16	14	13	12	12	12	12	13	14	13	13	12	12	11	11	11	11	10	10	9	9	9	12	
NOVEMBER	10	10	10	10	9	8	7	7	7	7	8	8	8	7	7	6	7	7	6	6	6	6	6	6	6	6	6	4	3	--	7	
	MAXIMUM	10	10	9	8	7	7	6	6	7	7	8	8	7	7	6	6	6	6	6	6	6	6	6	6	6	6	4	3	--	6	
MAXIMUM	3	3	3	3	4	4	6	6	6	6	6	6	6	6	6	5	4	5	5	7	8	7	5	3	3	3	2	2	2	2	4	
	MINIMUM	3	3	3	3	4	4	6	6	6	6	6	6	6	6	5	4	4	5	5	5	7	5	3	3	3	2	2	2	1	4	
DECEMBER	2	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	1	1	2	2	--
	MINIMUM	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	1	1	2	2	--
JANUARY	3	3	3	3	2	2	3	3	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	--	--	1	
	MINIMUM	2	3	3	2	2	2	3	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	3	3	--	1	
FEBRUARY	3	3	3	3	4	4	5	6	6	6	6	4	3	4	3	3	4	5	6	6	7	7	7	6	5	4	6	8	9	10	11	5
	MINIMUM	3	3	3	3	4	4	5	6	6	6	4	3	3	3	4	5	6	6	6	7	7	7	6	5	4	4	6	8	9	10	11
MARCH	11	11	10	10	10	9	8	10	11	11	11	12	12	12	12	11	11	11	12	13	14	15	16	16	13	12	12	13	13	14	--	11
	MINIMUM	11	10	10	9	9	8	8	10	11	11	11	11	11	11	11	11	11	11	12	13	14	15	16	13	12	12	12	13	13	--	11
APRIL	16	16	16	16	16	15	16	16	16	17	17	16	17	16	17	18	19	19	18	17	16	16	17	17	16	15	15	14	14	15	16	
	MINIMUM	14	15	16	16	15	14	15	16	16	16	16	16	17	18	19	19	18	17	16	16	17	17	17	16	15	15	14	14	14	15	
MAY	16	16	17	18	19	20	21	22	23	23	25	24	23	22	22	22	22	22	23	23	23	23	23	22	22	22	21	19	19	21	--	21
	MINIMUM	15	16	17	18	19	20	21	22	23	23	24	22	22	22	22	22	22	21	22	23	23	23	21	21	22	21	19	18	19	--	20
JUNE	22	22	22	21	21	21	21	22	22	22	23	23	23	24	24	24	24	24	24	24	24	24	24	24	24	24	23	23	22	22	22	
	MINIMUM	21	22	21	21	21	21	22	22	22	23	23	23	24	24	24	24	24	24	24	24	24	24	24	24	23	23	23	22	22	22	
JULY	22	22	22	22	23	24	24	24	24	24	23	22	21	22	22	23	23	24	26	26	26	26	26	26	26	26	24	22	22	22	22	23
	MINIMUM	22	22	22	22	23	24	24	24	23	22	21	21	22	22	23	23	24	26	26	26	26	26	26	26	24	22	22	22	22	22	
AUGUST	22	22	22	22	22	21	21	21	19	19	19	20	21	21	21	21	21	20	19	21	22	22	22	22	22	20	20	19	--	--	20	
	MINIMUM	22	21	21	22	22	21	21	21	21	19	19	19	20	21	21	20	19	21	22	22	22	22	22	20	20	19	19	--	--	20	

WABASH RIVER BASIN--Continued

3-3655. East Fork White River at Seymour, Ind.

LOCATION.---Lat 38°58'57", long 85°53'57", at gaging station on left bank 1,700 feet downstream from highway bridge, 1 mile north of Seymour, Jackson County, 9.6 miles downstream from Sand Creek, and at mile 219.2.

DRAINAGE AREA.---2,341 square miles (revised).

RECORDS AVAILABLE.---Water temperatures: October 1954 to September 1968.

Sediment records: July 1966 to September 1968.

EXTREMES, 1967-68.---Water temperatures: Maximum, 27° C July 21-25, Aug. 21-25; minimum, freezing poing Jan. 7-12, 26.

Sediment concentrations: Maximum daily, 1,200 mg/l May 25, June 25; minimum daily, 9 mg/l Oct. 6, Nov. 13, Mar. 1, 2.

Sediment loads: Maximum daily, 179,000 tons May 25; minimum daily, 5 tons Oct. 6.

EXTREMES, 1954-68.---Water temperatures: Maximum, 31° C July 13, 14, 1966; minimum, freezing point on many days during winter months. Maximum temperature known, 32° C July 19, 1954.

Sediment concentrations (July 1966 to September 1968): Maximum daily, 1,200 mg/l May 25, June 25, 1968; minimum daily, 4 mg/l Nov. 5, 1966.

Sediment loads (July 1966 to September 1968): Maximum daily, 179,000 tons May 25, 1968; minimum daily, 3 tons Nov. 5, 1966.

REMARKS.---Regulation at low flow by pumping plant 1,200 feet upstream from recorder. Sediment samples collected at highway bridge, 1,700 feet upstream from gaging station. Intermittent operation of dredge upstream is believed to affect low-water loads. Sediment loads were computed from subdivided days on Dec. 2, 3, 22, 23, Jan. 30, Apr. 4, May 11, 16, 17, 23, June 16, 24, July 25.

Temperature (°C) of water, water year October 1967 to September 1968
(Continuous ethyl alcohol-actuated thermograph)

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																																	
	16	17	18	19	20	19	18	17	16	15	13	12	12	13	14	14	14	14	13	12	12	12	13	13	12	11	10	9	10	11	13		
NOVEMBER	14	16	17	18	19	18	17	16	15	13	12	12	12	13	14	14	14	14	13	12	12	12	12	12	11	10	9	9	10	11	13		
DECEMBER	11	11	11	9	7	7	6	6	7	8	9	8	7	7	7	7	7	7	7	7	7	7	7	6	6	6	5	4	--	7			
	11	11	11	9	7	7	6	6	6	7	8	7	7	6	6	7	7	7	7	7	7	7	6	6	6	5	4	4	--	6			
JANUARY	4	4	5	5	4	5	6	7	7	7	7	7	7	7	7	7	6	5	6	6	7	8	8	5	4	3	3	2	2	2	5		
	4	4	4	4	4	4	5	6	7	7	7	7	7	7	7	6	4	4	5	6	6	7	5	4	3	3	2	2	2	2	4		
FEBRUARY	2	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	1	1	2	3	3	1		
	1	1	1	1	1	1	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	1	1	1	0	1	2	3	3	1		
MARCH	5	5	4	4	3	3	3	3	3	2	2	1	1	2	2	2	2	2	2	2	2	2	1	1	2	3	3	3	--	--	2		
	3	5	4	4	3	3	3	3	3	2	2	1	1	1	1	1	2	2	2	2	2	2	1	1	1	2	2	3	3	--	2		
APRIL	3	3	3	3	4	5	5	6	7	7	7	6	5	5	7	8	8	9	10	10	9	7	6	6	5	5	6	7	9	11	12	13	7
	3	3	3	3	3	4	4	5	6	7	7	6	4	4	5	7	8	8	9	9	7	6	5	5	6	7	9	11	12	13	6		
MAY	13	12	11	12	12	10	9	11	12	12	13	14	14	13	13	13	13	13	14	16	17	17	18	17	16	14	14	15	16	--	13		
	12	11	11	10	9	9	9	11	12	12	13	13	13	13	13	13	13	12	13	14	15	16	17	16	14	13	13	14	14	15	--	12	
JUNE	17	18	18	17	16	16	16	16	16	15	15	14	15	17	18	19	17	16	14	15	15	15	16	16	16	16	16	16	14	15	16	15	
	16	17	17	16	15	16	16	16	16	15	14	14	15	17	18	17	17	16	14	14	14	14	14	14	14	16	16	16	14	14	14	15	
JULY	16	17	18	19	19	20	21	21	22	23	23	23	22	21	21	21	21	21	21	22	22	22	22	22	22	22	20	21	22	--	21		
	15	16	17	18	19	20	21	21	22	23	23	23	21	21	21	21	21	21	21	21	21	21	21	22	22	22	20	19	21	--	20		
AUGUST	23	23	22	22	22	22	22	22	23	23	24	24	24	24	24	24	25	26	26	26	27	27	27	27	27	26	24	24	23	23	24		
	22	23	22	21	21	22	22	22	22	23	23	24	24	24	24	24	24	25	25	25	26	26	27	27	27	26	24	24	23	22	23		
SEPTEMBER	22	22	22	22	23	24	24	24	24	24	23	22	22	22	22	22	24	25	25	26	26	27	27	27	27	26	24	22	22	22	23		
	22	22	22	22	23	24	24	24	24	24	23	22	22	22	22	22	24	25	26	26	27	27	27	27	26	24	22	22	22	22	23		
OCTOBER	22	22	22	22	22	22	22	22	22	20	19	20	20	21	21	21	21	21	20	20	21	22	22	23	23	22	20	19	19	--	21		
	22	21	22	22	21	21	21	21	22	20	19	19	20	20	21	21	21	20	19	19	20	21	22	22	22	20	19	19	19	--	20		

WABASH RIVER BASIN

3-3655. EAST FORK WHITE RIVER AT SEYMOUR, IND.--Continued

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DAY	OCTOBER			NOVEMBER			DECEMBER		
	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)
1	211	15	9	326	14	12	659	45	80
2	212	15	9	338	14	13	940	112	460
3	213	15	9	360	16	16	5,080	775	11,000
4	211	14	8	450	16	19	6,220	265	4,450
5	215	12	7	483	10	13	5,980	144	2,330
6	220	9	5	473	10	13	4,680	93	1,180
7	221	10	6	466	14	18	3,560	68	654
8	236	12	8	440	11	13	2,980	56	451
9	254	15	10	417	11	12	2,580	48	334
10	255	16	11	396	15	16	2,280	46	283
11	254	18	12	397	13	14	3,150	84	714
12	257	18	12	395	10	11	5,230	148	2,090
13	254	17	12	375	9	9	6,490	152	2,660
14	260	15	11	380	15	15	5,990	100	1,620
15	250	14	9	371	20	20	5,420	80	1,170
16	249	13	9	367	22	22	4,750	56	718
17	291	14	11	367	23	23	3,900	40	421
18	317	14	12	363	26	25	3,960	67	716
19	315	15	13	358	30	29	4,410	67	798
20	344	16	15	358	34	33	4,030	62	675
21	342	16	15	370	40	40	3,600	86	836
22	313	17	14	374	46	46	7,130	443	9,590
23	296	17	14	372	52	52	11,200	486	14,500
24	298	16	13	370	53	53	9,380	213	5,390
25	311	16	13	377	55	56	6,110	132	2,180
26	292	15	12	378	56	57	4,510	75	913
27	296	15	12	380	56	57	3,870	83	867
28	309	14	12	378	57	58	3,210	84	728
29	300	13	11	371	56	56	2,740	75	555
30	295	12	10	486	54	71	2,410	86	560
31	306	13	11	--	--	--	2,190	90	532
TOTAL	8,397	--	335	11,736	--	892	138,639	--	69,455

DAY	JANUARY			FEBRUARY			MARCH		
	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)	MEAN DISCHARGE (CFS)	MEAN SEDIMENT CONCENTRATION (MG/L)	SEDIMENT LOAD (TONS PER DAY)
1	1,920	78	404	15,500	198	8,290	1,160	9	28
2	1,700	70	321	17,800	152	7,300	1,140	9	28
3	1,690	60	274	21,100	193	11,000	1,120	10	30
4	1,640	68	301	21,500	250	14,500	1,080	21	61
5	1,400	71	268	19,800	136	7,270	1,060	20	57
6	1,370	71	263	12,200	86	2,830	1,050	34	96
7	1,320	60	214	7,160	76	1,470	1,040	40	112
8	1,130	49	150	5,610	59	894	1,040	30	84
9	1,180	41	130	4,660	42	528	1,020	28	77
10	1,200	37	120	3,930	33	350	1,020	27	74
11	1,160	32	100	3,270	37	327	1,040	24	67
12	1,130	26	80	2,800	24	181	1,080	33	96
13	1,120	25	76	2,550	32	220	1,100	35	104
14	1,100	15	45	2,340	26	164	1,060	36	103
15	1,090	11	32	2,150	20	116	1,060	32	92
16	1,070	28	81	2,020	30	164	1,240	32	107
17	995	33	89	1,910	24	124	1,770	32	153
18	984	67	178	1,760	25	119	2,130	32	184
19	984	37	98	1,610	20	87	2,150	28	163
20	965	52	135	1,420	21	81	2,100	57	323
21	978	33	87	1,280	15	52	3,020	174	1,420
22	1,530	58	240	1,300	21	74	4,120	67	745
23	2,380	53	341	1,380	24	89	4,150	57	639
24	2,600	52	365	1,350	12	44	3,920	58	614
25	2,320	48	301	1,320	18	64	5,450	229	3,370
26	2,010	21	114	1,260	20	68	6,470	118	2,060
27	1,800	18	87	1,240	12	40	6,370	82	1,410
28	1,640	15	66	1,220	11	36	5,380	65	944
29	2,140	50	289	1,200	12	39	4,180	58	655
30	5,000	295	4,400	--	--	--	3,700	107	1,070
31	12,100	298	9,740	--	--	--	3,510	80	758
TOTAL	59,646	--	17,389	157,640	--	56,521	75,730	--	15,724

WABASH RIVER BASIN

3-3655. EAST FORK WHITE RIVER AT SEYMOUR, IND.--Continued

PARTICLE-SIZE ANALYSIS OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

(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	WATER TEM- PERA- TURE (C)	WATER DISCHARGE (CFS)	SEDIMENT CONCEN- TRATION (MG/L)	SUSPENDED SEDIMENT											METHOD OF ANALY- SIS
				PERCENT FINER THAN SIZE INDICATED, IN MILLIMETERS											
	TIME			.002	.004	.008	.016	.031	.062	.125	.250	.500	1.00	2.00	
June 25, 1968	0700	6,060	1,210	54	78	89	95	98	99	100	--	--	--	--	SWBC
July 26.....	1710	9,530	1,220	48	66	80	94	98	100	--	--	--	--	--	SWBC
July 26.....	1710	9,530	1,220	26	38	57	75	96	97	100	--	--	--	--	SBN

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 ft downstream from bridge on State Highway 61, 0.4 mile upstream from Prides Creek, 1 mile north of Petersburg, and at mile 47.7.
DRAINAGE AREA.--11,125 square miles (revised).

RECORDS AVAILABLE.--Water temperatures: June 1964 to September 1968.

EXTREMES, 1967-68.--Water temperatures: Maximum 29° C July 21-27, Aug. 9, 10, 21-26; minimum, 2° C Jan. 2-15, 24-28, Feb. 10-24.

EXTREMES, 1964-68.--Water temperatures: Maximum, 31° C July 14, 15, 1966; minimum, freezing point on many days during winter months.

REMARKS.--Flow slightly regulated by reservoirs.

Temperature (°C) of water, water year October 1967 to September 1968
(Continuous ethyl alcohol-actuated thermometer)

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																																
	19	20	21	22	23	23	22	21	19	17	16	16	16	17	19	19	19	18	17	16	16	15	15	15	15	13	13	13	12	13	13	17
	17	19	20	21	22	22	21	19	17	16	15	14	15	16	17	19	18	17	16	15	14	14	14	13	13	13	12	12	12	13	16	
NOVEMBER																																
	13	13	13	12	11	9	9	9	9	10	11	11	11	11	9	9	9	9	8	8	8	8	8	7	6	7	7	7	7	7	9	
	13	13	12	11	9	9	9	8	8	9	10	11	11	9	9	8	8	9	8	8	8	8	7	6	6	6	6	7	6	6	8	
DECEMBER																																
	6	6	7	7	7	7	7	7	7	7	8	8	8	8	7	7	6	6	6	7	7	7	7	7	7	6	4	3	3	3	6	
	6	6	6	7	7	7	7	7	7	7	8	8	8	7	7	6	6	6	6	6	7	7	7	7	7	6	4	3	3	3	6	
JANUARY																																
	3	3	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	3	3	4	2	
	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	3	2	2	2	2	3	4	2	
FEBRUARY																																
	6	7	6	6	5	4	4	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	4	4	4	4	3	
	4	6	6	6	5	4	4	4	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	4	4	4	4	3	
MARCH																																
	4	4	3	5	6	6	6	7	8	8	8	6	5	6	6	6	6	7	8	8	8	8	7	6	6	6	6	7	8	10	12	6
	4	3	3	3	5	6	6	6	7	8	8	6	4	4	5	6	6	6	7	8	8	7	6	6	6	6	6	7	8	10	12	6
APRIL																																
	12	12	12	12	11	11	11	11	12	12	13	13	13	14	14	14	14	14	15	16	16	17	17	17	16	16	16	16	17	17	17	14
	12	12	12	12	11	11	11	11	12	12	13	13	13	14	14	14	14	14	15	16	16	17	17	16	16	16	16	16	16	16	16	13
MAY																																
	18	19	19	19	19	18	19	19	19	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	17	17	17	17	17	17	18	
	17	18	19	19	18	18	18	19	19	18	18	18	18	18	18	18	18	19	19	18	18	18	18	18	17	17	17	17	17	17	17	
JUNE																																
	18	19	21	21	22	22	22	23	23	23	23	23	23	23	23	23	23	23	23	23	23	24	24	23	23	23	22	22	23	22	22	22
	17	18	19	19	21	21	22	22	22	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	22	21	21	22	22	21
JULY																																
	23	23	23	23	24	24	24	24	25	25	26	26	27	27	27	27	27	27	28	28	29	29	29	29	29	29	29	28	28	27	26	
	23	23	23	23	24	24	24	24	25	25	26	26	27	27	27	27	27	27	27	27	28	28	29	29	29	29	29	29	28	28	27	26
AUGUST																																
	27	26	26	26	26	27	27	28	29	29	28	26	25	24	24	24	26	27	27	28	29	29	29	29	29	29	29	28	28	27	26	
	26	26	26	26	26	27	27	28	28	26	25	24	24	24	24	24	26	27	27	28	29	29	29	29	29	29	29	28	26	24	23	26
SEPTEMBER																																
	23	23	23	23	23	23	23	23	23	22	21	21	22	22	22	22	22	21	21	22	22	23	24	24	23	23	22	22	22	22	22	22
	23	23	23	23	23	23	23	23	23	22	21	21	21	22	22	22	22	21	21	21	22	22	23	24	24	23	22	22	22	22	22	22

MISCELLANEOUS ANALYSES OF STREAMS IN OHIO RIVER BASIN

PERIODIC INSTANTANEOUS DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND DISCHARGE,
WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE OF COLLECTION	TIME	WATER DISCHARGE (CFS)	SEDIMENT CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS PER DAY)	DATE OF COLLECTION	TIME	WATER DISCHARGE (CFS)	SEDIMENT CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS PER DAY)
GREAT MIAMI RIVER BASIN									
3-2750. WHITEWATER RIVER NEAR ALPINE, IND. (LAT 39 34 23 LONG 085 09 27)									
July 8, 1968	1225	306	18	15	Sept. 4....	1525	209	8	4.5
July 24.....	1915	374	78	79					
3-2756. EAST FORK WHITEWATER RIVER AT ABINGTON, IND. (LAT 39 43 57 LONG 084 57 35)									
Oct. 30, 1967	1340	34	4	.37	Apr. 8.....	1440	258	32	22
Dec. 12.....	1620	854	86	198	May 3.....	0930	80	10	2.2
Jan. 17, 1968	1520	80	5	1.1	June 17....	1750	320	56	48
Jan. 30.....	1245	3090	752	6270	July 8.....	1025	87	18	4.2
Jan. 31.....	1325	891	182	438	July 25....	1600	536	727	1050
Feb. 21.....	1240	70	8	1.5	Sept. 5....	1415	78	7	1.5
3-2760. EAST FORK WHITEWATER RIVER AT BROOKVILLE, IND. (LAT 39 26 02 LONG 085 00 12)									
Oct. 31, 1967	1440	60	13	2.1	Mar. 29....	0955	558	86	130
Dec. 14.....	1145	882	85	202	May 2.....	1025	171	12	5.5
Jan. 16, 1968	1600	168	6	2.7	June 20....	1005	306	99	82
Feb. 20.....	1555	194	10	5.2					
BLUE RIVER BASIN									
3-3030. BLUE RIVER NEAR WHITE CLOUD, IND. (LAT 38 14 04 LONG 086 13 38)									
July 9, 1968	0848	78	12	2.5					
ANDERSON RIVER BASIN									
3-3033. MIDDLE FORK ANDERSON RIVER AT BRISTOW, IND. (LAT 38 08 19 LONG 086 43 16)									
Nov. 13, 1967	1045	20	21	1.1	Apr. 18....	0930	96	26	6.7
Dec. 13.....	0920	69	29	5.4	May 14.....	1205	46	18	2.2
Jan. 22, 1968	1050	83	27	6.1	July 1.....	0915	.45	3	0
Feb. 19.....	1200	41	24	2.7	July 31....	0930	.19	8	0
Mar. 28.....	0930	102	30	8.3	Sept. 11...	1050	.80	5	.01
WABASH RIVER BASIN									
3-3230. WABASH RIVER AT BLUFFTON, IND. (LAT 40 44 30 LONG 085 10 19)									
July 11, 1968	1610	43	54	6.2					
Aug. 19.....	1500	331	270	241					
3-3243. SALAMONIE RIVER NEAR WARREN, IND. (LAT 40 42 45 LONG 085 27 13)									
Oct. 2, 1967	1005	10	28	.76	Mar. 18....	0945	1330	176	632
Oct. 7.....	1645	15	36	1.5	May 13.....	0915	98	94	25
Oct. 30.....	0955	20	88	4.8	June 10....	0925	78	46	9.7
Nov. 10.....	1610	20	8	.43	July 8.....	1000	48	80	10
Nov. 27.....	1040	32	42	3.6	July 15....	1000	175	128	60
Dec. 9.....	1415	405	10	11	Aug. 19....	0920	311	226	190
Feb. 8, 1968	0700	396	50	53					
3-3285. EEL RIVER NEAR LOGANSPOET, IND. (LAT 40 46 55 LONG 086 15 50)									
July 10, 1968	1725	442	40	48					
3-3315. TIPPECANOE RIVER NEAR ORA, IND. (LAT 41 09 26 LONG 086 33 49)									
July 10, 1968	1520	1190	42	135					
July 11.....	1500	1130	58	177					
3-3350. WILDCAT CREEK NEAR LAFAYETTE, IND. (LAT 40 26 26 LONG 086 49 46)									
July 10, 1968	0745	178	29	14					
Aug. 23.....	1240	200	66	36					
3-3355. WABASH RIVER AT LAFAYETTE, IND. (LAT 40 25 19 LONG 086 53 49)									
Oct. 4, 1967	1125	1190	36	116	Mar. 25....	1125	9280	29	727
Nov. 14.....	0820	1840	56	278	June 12....	1300	3400	113	1040
Feb. 2, 1968	1430	58100	148	23200					
3-3400. SUGAR CREEK NEAR BYRON, IND. (LAT 39 55 52 LONG 087 07 33)									
July 9, 1968	1755	148	38	15					
3-3470. WHITE RIVER AT MUNCIE, IND. (LAT 40 12 15 LONG 085 23 14)									
Jan. 5, 1968	1540	64	70	12	May 18....	0805	172	56	26
Feb. 5.....	1500	526	14	20	June 13....	1110	118	48	15
Feb. 28.....	1400	82	6	1.3	July 10....	0815	37	17	1.7
Mar. 20.....	1035	225	46	28	Aug. 21....	1300	113	49	15
3-3485. WHITE RIVER NEAR NOBLESVILLE, IND. (LAT 40 07 46 LONG 085 57 46)									
July 11, 1968	1005	256	36	25					

MISCELLANEOUS ANALYSES OF STREAMS IN OHIO RIVER BASIN--Continued

PERIODIC INSTANTANEOUS DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND DISCHARGE,
WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968--Continued

DATE OF COLLECTION	TIME	WATER DISCHARGE (CFS)	SEDIMENT CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS PER DAY)	DATE OF COLLECTION	TIME	WATER DISCHARGE (CFS)	SEDIMENT CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS PER DAY)
WABASH RIVER BASIN--Continued									
3-3515. FALL CREEK NEAR FORTVILLE, IND. (LAT 39 57 15 LONG 085 52 05)									
Oct. 31, 1967	1400	38	32	3.3	Feb. 28....	0945	96	66	17
Nov. 30.....	1430	43	14	1.6	Mar. 28....	1520	261	58	41
Jan. 2, 1968	1045	113	11	3.4	Apr. 29....	1530	97	68	18
Jan. 31.....	1120	1780	117	562					
3-3540. WHITE RIVER NEAR CENTERTON, IND. (LAT 39 30 02 LONG 086 24 24)									
Oct. 2, 1967	1100	288	13	10	Apr. 1.....	1340	4730	518	6620
Nov. 1.....	1030	508	14	19	May 1.....	1040	1100	34	101
Dec. 27.....	1030	4080	102	1120	May 31.....	0910	6960	143	2690
Feb. 1, 1968	1218	15100	132	5380	July 1.....	1300	1630	74	326
Mar. 1.....	0935	905	24	59					
3-3615. BIG BLUE RIVER AT SHELBYVILLE, IND. (LAT 39 31 45 LONG 085 46 55)									
July 8, 1968	1530	156	14	5.9					
Aug. 22.....	1022	216	76	44					
3-3625. SUGAR CREEK NEAR EDINBURG, IND. (LAT 39 21 39 LONG 085 59 51)									
July 8, 1968	1740	118	61	19					
Aug. 27.....	1130	128	82	28					
3-3665. MUSCATATUCK RIVER NEAR DEPUTY, IND. (LAT 38 48 15 LONG 085 40 26)									
July 8, 1968	2030	5.8	14	.22	Sept. 4....	1050	7.8	20	.42
July 29.....	1205	115	94	29					
3-3680. BRUSH CREEK NEAR NEBRASKA, IND. (LAT 39 04 13 LONG 085 29 10)									
Nov. 13, 1967	1210	.27	34	.02	Mar. 25....	1700	164	150	66
Dec. 11.....	1155	14	35	1.3	May 7.....	1705	.82	24	.05
Jan. 16, 1968	1250	.82	19	.04	June 19....	0915	.57	28	.04
Feb. 19.....	1330	.92	38	.09					
3-3765. PATOKA RIVER NEAR PRINCETON, IND. (LAT 38 23 30 LONG 087 32 55)									
Oct. 12, 1967	1350	23	5	.31	Mar. 25....	1345	2480	69	462
Nov. 15.....	1220	450	115	140	Apr. 16....	1345	2880	42	327
Dec. 14.....	1015	2280	86	529	May 20.....	1230	493	172	229
Jan. 29, 1968	1100	1410	49	187	June 27....	0940	158	10	4.3
Feb. 6.....	1515	3150	132	1120					

MISCELLANEOUS ANALYSES OF LAKES AND STREAMS IN ST. LAWRENCE RIVER BASIN

PERIODIC INSTANTANEOUS DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND DISCHARGE,
WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE OF COLLECTION	TIME	WATER DISCHARGE (CFS)	SEDIMENT CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS PER DAY)	DATE OF COLLECTION	TIME	WATER DISCHARGE (CFS)	SEDIMENT CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS PER DAY)
STREAMS TRIBUTARY TO LAKE MICHIGAN									
4-1005. ELKHART RIVER AT GOSHEN, IND. (LAT 41 35 36 LONG 085 50 55)									
Oct. 13, 1967	0920	144	33	13	Mar. 18....	1410	994	33	89
Nov. 9.....	1630	394	11	12	May 7.....	1210	440	102	121
Dec. 8.....	1030	630	9	15	June 27....	1325	2810	21	159
Feb. 12, 1968	1750	1380	6	22					
STREAMS TRIBUTARY TO LAKE ERIE									
4-1820. ST. MARYS RIVER NEAR FORT WAYNE, IND. (LAT 40 59 16 LONG 085 06 03)									
Oct. 1, 1967	1526	17	44	2.0	Nov. 6.....	1810	93	16	4.0
Oct. 2.....	1817	17	72	3.3	Nov. 7.....	1710	103	22	6.1
Oct. 3.....	1828	16	65	2.8	Nov. 8.....	1635	112	17	5.1
Oct. 4.....	1805	15	78	3.2	Nov. 9.....	1805	109	19	5.6
Oct. 5.....	1742	15	80	3.2	Nov. 10....	1725	103	11	3.1
Oct. 6.....	1652	15	74	3.0	Nov. 10....	1728	103	13	3.6
Oct. 7.....	1745	18	60	2.9	Nov. 11....	1720	98	18	4.8
Oct. 7.....	1800	18	53	2.6	Nov. 12....	1810	114	48	15
Oct. 8.....	1300	20	49	2.6	Nov. 13....	2123	88	54	13
Oct. 9.....	1700	23	60	3.7	Nov. 14....	1840	76	36	7.4
Oct. 10.....	1821	25	48	3.2	Nov. 15....	1730	64	18	3.1
Oct. 11.....	1812	22	38	2.3	Nov. 16....	1830	55	16	2.4
Oct. 12.....	1800	22	33	2.0	Nov. 17....	1650	84	112	25
Oct. 13.....	1840	20	37	2.0	Nov. 18....	1447	142	72	28
Oct. 14.....	1340	17	48	2.2	Nov. 19....	2008	145	42	16
Oct. 15.....	1340	16	60	2.6	Nov. 20....	1850	108	56	16
Oct. 16.....	1820	19	34	1.7	Nov. 21....	1758	84	32	7.3
Oct. 17.....	1815	34	51	4.7	Nov. 22....	1715	76	22	4.5
Oct. 18.....	1830	52	96	13	Nov. 23....	1447	85	20	4.6
Oct. 19.....	1830	42	52	5.9	Nov. 24....	2136	105	17	4.8
Oct. 20.....	1730	39	34	3.6	Nov. 25....	1442	101	17	4.6
Oct. 21.....	1825	29	26	2.0	Nov. 26....	1229	91	20	4.9
Oct. 22.....	1800	23	31	1.9	Nov. 26....	1730	88	11	2.6
Oct. 23.....	1805	20	41	2.2	Nov. 28....	1905	71	11	2.1
Oct. 25.....	1845	22	58	3.4	Nov. 29....	1650	62	12	2.0
Oct. 26.....	1730	34	29	2.7	Nov. 30....	1703	59	10	1.6
Oct. 27.....	2110	34	44	4.0	Dec. 1.....	1710	66	9	1.6
Oct. 28.....	1340	37	28	2.8	Dec. 2.....	1652	168	276	125
Oct. 29.....	1350	30	26	2.1	Dec. 3.....	1751	2080	360	2020
Oct. 30.....	1910	27	40	2.9	Dec. 3.....	2350	2300	306	1900
Oct. 31.....	1709	26	60	4.2	Dec. 4.....	1703	2350	172	1090
Nov. 1.....	1747	40	54	5.8	Dec. 5.....	1803	1900	82	421
Nov. 2.....	1956	95	63	16	Dec. 6.....	1705	1980	104	556
Nov. 3.....	1745	131	48	17	Dec. 7.....	1805	2290	92	569
Nov. 4.....	1340	128	60	21	Dec. 8.....	1635	2560	87	601
Nov. 5.....	1305	118	36	11					

MISCELLANEOUS ANALYSES OF LAKES AND STREAMS IN HUDSON BAY AND UPPER MISSISSIPPI RIVER BASIN

PERIODIC INSTANTANEOUS DETERMINATIONS OF SUSPENDED-SEDIMENT CONCENTRATION AND DISCHARGE,
WATER YEAR OCTOBER 1967 TO SEPTEMBER 1968

DATE OF COLLECTION	TIME	WATER DISCHARGE (CFS)	SEDIMENT CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS PER DAY)	DATE OF COLLECTION	TIME	WATER DISCHARGE (CFS)	SEDIMENT CONCEN- TRATION (MG/L)	SEDIMENT DISCHARGE (TONS PER DAY)
ILLINOIS RIVER BASIN									
5-5180. KANKAKEE RIVER AT SHELBY, IND. (LAT 41 10 58 LONG 087 20 33)									
Oct. 18, 1967	1115	975	14	37	Mar. 4, 1968	1520	1820	100	491
Nov. 13.....	1630	1550	72	301	Apr. 2.....	1015	2240	54	327
Dec. 12.....	1530	2230	181	1090	May 29.....	1040	1670	75	338
5-5245. IROQUOIS RIVER NEAR FORESMAN, IND. (LAT 40 52 14 LONG 087 18 24)									
July 10, 1968	1110	296	87	70	Aug. 28....	0915	82	134	30
July 10.....	1210	296	86	69					

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